Clouds and the Earth's Radiant Energy System
CERES Publications for 2015

Adebiyi, A. A., Zuidema, P., & Abel, S. J. (2015). The Convolution of Dynamics and Moisture with the Presence of Shortwave Absorbing Aerosols over the Southeast Atlantic. *Journal of Climate*, *28*(5), 1997–2024. http://doi.org/10.1175/JCLI-D-14-00352.1

Badgley, G., Fisher, J. B., Jiménez, C., Tu, K. P., & Vinukollu, R. (2015). On uncertainty in global terrestrial evapotranspiration estimates from choice of input forcing datasets. *Journal of Hydrometeorology*. http://doi.org/10.1175/JHM-D-14-0040.1

Bellomo, K., Clement, A. C., Mauritsen, T., Rädel, G., & Stevens, B. (2015). The influence of cloud feedbacks on equatorial Atlantic variability. *Journal of Climate* (In Press). http://doi.org/10.1175/JCLI-D-14-00495.1

Boyle, J. S., Klein, S. A., Lucas, D. D., Ma, H.-Y., Tannahill, J., & Xie, S. (2015). The parametric sensitivity of CAM5's MJO. *Journal of Geophysical Research: Atmospheres*, *120*(4), 2014JD022507. http://doi.org/10.1002/2014JD022507

Brindley, H., Bantges, R., Russell, J., Murray, J., Dancel, C., Belotti, C., & Harries, J. (2015). Spectral Signatures of Earth's Climate Variability over 5 Years from IASI. *Journal of Climate*, *28*(4), 1649–1660. http://doi.org/10.1175/JCLI-D-14-00431.1

Cao, Y., Liang, S., Chen, X., & He, T. (2015). Assessment of Sea Ice Albedo Radiative Forcing and Feedback over the Northern Hemisphere from 1982 to 2009 Using Satellite and Reanalysis Data. *Journal of Climate*, *28*(3), 1248–1259. http://doi.org/10.1175/JCLI-D-14-00389.1

Chiacchio, M., Solmon, F., Giorgi, F., Stackhouse, P., & Wild, M. (2015). Evaluation of the radiation budget with a regional climate model over Europe and inspection of dimming and brightening. *Journal of Geophysical Research: Atmospheres*, 2014JD022497. http://doi.org/10.1002/2014JD022497

Farmer, G. T. (2015). Status of Climate Change Research. In *Modern Climate Change Science* (pp. 43–99). Springer International Publishing.

García-Díez, M., Fernández, J., & Vautard, R. (2015). An RCM multi-physics ensemble over Europe: multi-variable evaluation to avoid error compensation. *Climate Dynamics*, 1–16. http://doi.org/10.1007/s00382-015-2529-x

Gettelman, A., Morrison, H., Santos, S., Bogenschutz, P., & Caldwell, P. M. (2015). Advanced Two-Moment Bulk Microphysics for Global Models. Part II: Global Model Solutions and Aerosol–Cloud Interactions. *Journal of Climate*, *28*(3), 1288–1307. http://doi.org/10.1175/JCLI-D-14-00103.1

Guillod, B. P., Orlowsky, B., Miralles, D. G., Teuling, A. J., & Seneviratne, S. I. (2015). Reconciling spatial and temporal soil moisture effects on afternoon rainfall. *Nature Communications*, *6*. http://doi.org/10.1038/ncomms7443

Ham, S.-H., Kato, S., Barker, H. W., Rose, F. G., & Sun-Mack, S. (2015). Improving the modelling of short-wave radiation through the use of a 3D scene construction algorithm. *Quarterly Journal of the Royal Meteorological Society*, (In Press). http://doi.org/10.1002/qj.2491

Harikishan, G., Padmakumari, B., Maheskumar, R. S., & Kulkarni, J. R. (2015). Radiative effect of dust aerosols on cloud microphysics and meso-scale dynamics during monsoon breaks over Arabian sea. *Atmospheric Environment*, *105*, 22–31. http://doi.org/10.1016/j.atmosenv.2015.01.037

He, J., Zhang, Y., Glotfelty, T., He, R., Bennartz, R., Rausch, J., & Sartelet, K. (2015). Decadal simulation and comprehensive evaluation of CESM/CAM5.1 with advanced chemistry, aerosol microphysics, and aerosol-cloud interactions. *Journal of Advances in Modeling Earth Systems*, (In Press). http://doi.org/10.1002/2014MS000360

Hogrefe, C., Pouliot, G., Wong, D., Torian, A., Roselle, S., Pleim, J., & Mathur, R. (2015). Annual application and evaluation of the online coupled WRF–CMAQ system over North America under AQMEII phase 2. *Atmospheric Environment*, (In Press). http://doi.org/10.1016/j.atmosenv.2014.12.034

Illingworth, A. J., Barker, H. W., Beljaars, A., Ceccaldi, M., Chepfer, H., Cole, J., … van Zadelhoff, G.-J. (2015). THE EARTHCARE SATELLITE: The next step forward in global measurements of clouds, aerosols, precipitation and radiation. *Bulletin of the American Meteorological Society*, (In Press). http://doi.org/10.1175/BAMS-D-12-00227.1

Johansson, E., Devasthale, A., L'Ecuyer, T., Ekman, A. M. L., & Tjernström, M. (2015). The vertical structure of cloud radiative heating over the Indian subcontinent during summer monsoon. *Atmos. Chem. Phys. Discuss.*, *15*(4), 5423–5459. http://doi.org/10.5194/acpd-15-5423-2015

Johnson, R. H., Ciesielski, P. E., Ruppert, J. H., & Katsumata, M. (2015). Sounding-Based Thermodynamic Budgets for DYNAMO. *Journal of the Atmospheric Sciences*, *72*(2), 598–622. http://doi.org/10.1175/JAS-D-14-0202.1

Keellings, D., Engström, J., & Waylen, P. (2015). The sunshine state: investigating external drivers of sky conditions. *Physical Geography*, (In Press). http://doi.org/10.1080/02723646.2015.1004995

Kubar, T. L., Stephens, G. L., Lebsock, M., Larson, V. E., & Bogenschutz, P. A. (2015). Regional Assessments of Low Clouds against Large-Scale Stability in CAM5 and CAM-CLUBB Using MODIS and ERA-Interim Reanalysis Data. *Journal of Climate*, *28*(4), 1685–1706. http://doi.org/10.1175/JCLI-D-14-00184.1

Li, Y., Han, W., & Lee, T. (2015). Intraseasonal sea surface salinity variability in the equatorial Indo-Pacific Ocean induced by Madden-Julian oscillations. *Journal of Geophysical Research: Oceans*, (In Press). http://doi.org/10.1002/2014JC010647

Loeb, N. G., & Wielicki, B. A. (2015). SATELLITES AND SATELLITE REMOTE SENSING | Earth's Radiation Budget. In G. R. N. P. Zhang (Ed.), *Encyclopedia of Atmospheric Sciences (Second Edition)* (pp. 67–76). Oxford: Academic Press.

Maroon, E. A., Frierson, D. M. W., & Battisti, D. S. (2015). The Tropical Precipitation Response to Andes Topography and Ocean Heat Fluxes in an Aquaplanet Model. *Journal of Climate*, *28*(1), 381–398. http://doi.org/10.1175/JCLI-D-14-00188.1

Matsui, T., Tao, W.-K., Munchak, S. J., Grecu, M., & Huffman, G. J. (2015). "Satellite View of Quasi-Equilibrium States in Tropical Convection and Precipitation Microphysics." *Geophysical Research Letters*, (In Press). http://doi.org/10.1002/2015GL063261

Meyers, P. C., Ferraro, R. R., & Wang, N.-Y. (2015). Updated Screening Procedures for GPROF2010 over Land: Utilization for AMSR-E. *Journal of Atmospheric and Oceanic Technology*. http://doi.org/10.1175/JTECH-D-14-00149.1

Myers, T. A., & Norris, J. R. (2015). On the relationships between subtropical clouds and meteorology in observations and CMIP3 and CMIP5 models. *Journal of Climate*, (In Press). http://doi.org/10.1175/JCLI-D-14-00475.1

Naud, C. M., Rangwala, I., Xu, M., & Miller, J. R. (2015). A Satellite View of the Radiative Impact of Clouds on Surface Downward Fluxes in the Tibetan Plateau. *Journal of Applied Meteorology and Climatology*, *54*(2), 479–493. http://doi.org/10.1175/JAMC-D-14-0183.1

Obregón, M. A., Pereira, S., Salgueiro, V., Costa, M. J., Silva, A. M., Serrano, A., & Bortoli, D. (2015). Aerosol radiative effects during two desert dust events in August 2012 over the Southwestern Iberian Peninsula. *Atmospheric Research*, *153*, 404–415. http://doi.org/10.1016/j.atmosres.2014.10.007

Painemal, D., Xu, K.-M., Cheng, A., Minnis, P., & Palikonda, R. (2015). Mean Structure and Diurnal Cycle of Southeast Atlantic Boundary Layer Clouds: Insights from Satellite Observations and Multiscale Modeling Framework Simulations. *Journal of Climate*, *28*(1), 324–341. http://doi.org/10.1175/JCLI-D-14-00368.1

Park, M.-S., Ho, C.-H., Cho, H., & Choi, Y.-S. (2015). Retrieval of outgoing longwave radiation from COMS narrowband infrared imagery. *Advances in Atmospheric Sciences*, *32*(3), 375–388. http://doi.org/10.1007/s00376-014-4013-7

Pyrina, M., Hatzianastassiou, N., Matsoukas, C., Fotiadi, A., Papadimas, C. D., Pavlakis, K. G., & Vardavas, I. (2015). Cloud effects on the solar and thermal radiation budgets of the Mediterranean basin. *Atmospheric Research*, *152*, 14–28. http://doi.org/10.1016/j.atmosres.2013.11.009

Rob Roebeling, B. B. (2015). Summary of the Fourth Cloud Retrieval Evaluation Workshop. *Bulletin of the American Meteorological Society*, (In Press). http://doi.org/10.1175/BAMS-D-14-00184.1

Rondanelli, R., Molina, A., & Falvey, M. (2015). The Atacama Surface Solar Maximum. *Bulletin of the American Meteorological Society*, (In Press). http://doi.org/10.1175/BAMS-D-13-00175.1

Rutan, D. A., Kato, S., Doelling, D. R., Rose, F. G., Nguyen, L. T., Caldwell, T. E., & Loeb, N. G. (2015). CERES Synoptic Product: Methodology and Validation of Surface Radiant Flux. *Journal of Atmospheric and Oceanic Technology*, (In Press). http://doi.org/10.1175/JTECH-D-14-00165.1

Santer, B. D., Solomon, S., Bonfils, C., Zelinka, M. D., Painter, J. F., Beltran, F., … Wentz, F. J. (2015). Observed multivariable signals of late 20th and early 21st century volcanic activity. *Geophysical Research Letters*, *42*(2), 2014GL062366. http://doi.org/10.1002/2014GL062366

Seiki, T., Kodama, C., Noda, A. T., & Satoh, M. (2015). Improvement in Global Cloud-System-Resolving Simulations by Using a Double-Moment Bulk Cloud Microphysics Scheme. *Journal of Climate*, *28*(6), 2405–2419. http://doi.org/10.1175/JCLI-D-14-00241.1

Shi, X., Liu, X., & Zhang, K. (2015). Effects of pre-existing ice crystals on cirrus clouds and comparison between different ice nucleation parameterizations with the Community Atmosphere Model (CAM5). *Atmos. Chem. Phys.*, *15*(3), 1503–1520. http://doi.org/10.5194/acp-15-1503-2015

Smith, D. M., Allan, R. P., Coward, A. C., Eade, R., Hyder, P., Liu, C., … Scaife, A. A. (2015). Earth's energy imbalance since 1960 in observations and CMIP5 models. *Geophysical Research Letters*, (In Press). http://doi.org/10.1002/2014GL062669

Smith, G. L., Wong, T., & Bush, K. A. (2015). Time-Sampling Errors of Earth Radiation From Satellites: Theory for Outgoing Longwave Radiation. *IEEE Transactions on Geoscience and Remote Sensing*, *53*(3), 1656–1665. http://doi.org/10.1109/TGRS.2014.2338793

Soon, W., & Legates, D. R. (n.d.). Response to the comment on: "Soon, W., and Legates, D.R., solar irradiance modulation of equator-to-pole (Arctic) temperature gradients: empirical evidence for climate variation on multi-decadal timescales. Journal of Atmospheric and solar-terrestrial physics, 93, (2013) 45–56" by F. Meunier and A. H. Reis. *Journal of Atmospheric and Solar-Terrestrial Physics*. http://doi.org/10.1016/j.jastp.2015.01.013

Stanfield, R. E., Dong, X., Xi, B., Del Genio, A. D., Minnis, P., Doelling, D., & Loeb, N. (2015). Assessment of NASA GISS CMIP5 and Post-CMIP5 Simulated Clouds and TOA Radiation Budgets Using Satellite Observations. Part II: TOA Radiation Budget and CREs. *Journal of Climate*, *28*(5), 1842–1864. http://doi.org/10.1175/JCLI-D-14-00249.1

Stephens, G. L., O'Brien, D., Webster, P. J., Pilewski, P., Kato, S., & Li, J. (2015). The albedo of Earth. *Reviews of Geophysics*, (In Press). http://doi.org/10.1002/2014RG000449

Stevens, B. (2015). Rethinking the lower bound on aerosol radiative forcing. *Journal of Climate*. http://doi.org/10.1175/JCLI-D-14-00656.1

Sundström, A.-M., Arola, A., Kolmonen, P., Xue, Y., de Leeuw, G., & Kulmala, M. (2015). On the use of a satellite remote-sensing-based approach for determining aerosol direct radiative effect over land: a case study over China. *Atmos. Chem. Phys.*, *15*(1), 505–518. http://doi.org/10.5194/acp-15-505-2015

Tomasi, C., Lanconelli, C., Lupi, A., & Mazzola, M. (2015). Diurnally averaged direct aerosol-induced radiative forcing from cloud-free sky field measurements performed during seven regional experiments. In A. A. Kokhanovsky (Ed.), *Light Scattering Reviews 9* (pp. 297–425). Springer Berlin Heidelberg.

Tonttila, J., Järvinen, H., & Räisänen, P. (2015). Explicit representation of subgrid variability in cloud microphysics yields weaker aerosol indirect effect in the ECHAM5-HAM2 climate model. *Atmos. Chem. Phys.*, *15*(2), 703–714. http://doi.org/10.5194/acp-15-703-2015

Viúdez-Mora, A., Costa-Surós, M., Calbó, J., & González, J. A. (2015). Modeling atmospheric longwave radiation at the surface during overcast skies: The role of cloud base height. *Journal of Geophysical Research: Atmospheres*, *120*(1), 2014JD022310. http://doi.org/10.1002/2014JD022310

Wang, K., Yahya, K., Zhang, Y., Hogrefe, C., Pouliot, G., Knote, C., … Bennartz, R. (2015). A multi-model assessment for the 2006 and 2010 simulations under the Air Quality Model Evaluation International Initiative (AQMEII) Phase 2 over North America: Part II. Evaluation of column variable predictions using satellite data. *Atmospheric Environment*, (In Press). http://doi.org/10.1016/j.atmosenv.2014.07.044

Wang, K., Zhang, Y., Yahya, K., Wu, S.-Y., & Grell, G. (2015). Implementation and initial application of new chemistry-aerosol options in WRF/Chem for simulating secondary organic aerosols and aerosol indirect effects for regional air quality. *Atmospheric Environment*, (In Press). http://doi.org/10.1016/j.atmosenv.2014.12.007

Wang, M., Larson, V. E., Ghan, S., Ovchinnikov, M., Schanen, D. P., Xiao, H., … Guo, Z. (2015). A multiscale modeling framework model (superparameterized CAM5) with a higher-order turbulence closure: Model description and low-cloud simulations. *Journal of Advances in Modeling Earth Systems*, (In Press). http://doi.org/10.1002/2014MS000375

Wang, S., Sobel, A. H., Zhang, F., Sun, Y. Q., Yue, Y., & Zhou, L. (2014). Regional Simulation of the October and November MJO Events Observed during the CINDY/DYNAMO Field Campaign at Gray Zone Resolution. *Journal of Climate*, *28*(6), 2097–2119. http://doi.org/10.1175/JCLI-D-14-00294.1

Wei, G., Li, X., & Wang, S. (2015). Effect of terrestrial radiation on brightness temperature at lunar nearside: Based on theoretical calculation and data analysis. *Advances in Space Research*, *55*(4), 1234–1240. http://doi.org/10.1016/j.asr.2014.11.011

Yahya, K., Wang, K., Gudoshava, M., Glotfelty, T., & Zhang, Y. (2015). Application of WRF/Chem over North America under the AQMEII Phase 2: Part I. Comprehensive evaluation of 2006 simulation. *Atmospheric Environment*, (In Press). http://doi.org/10.1016/j.atmosenv.2014.08.063

Yang, F., Han, Y.-G., & Xuan, Y.-M. (2015). Large-scale earth surface thermal radiative features in space observation. *Optics Communications*. (In Press) http://doi.org/10.1016/j.optcom.2015.03.017

Yi, B., Yang, P., Dessler, A., & da Silva, A. M. (2015). Response of Aerosol Direct Radiative Effect to the East Asian Summer Monsoon. *IEEE Geoscience and Remote Sensing Letters*, *12*(3), 597–600. http://doi.org/10.1109/LGRS.2014.2352630

Yokoi, S. (2015). Multireanalysis Comparison of Variability in Column Water Vapor and Its Analysis Increment Associated with the Madden–Julian Oscillation. *Journal of Climate*, *28*(2), 793–808. http://doi.org/10.1175/JCLI-D-14-00465.1

Yoshimura, H., Mizuta, R., & Murakami, H. (2015). A Spectral Cumulus Parameterization Scheme Interpolating between Two Convective Updrafts with Semi-Lagrangian Calculation of Transport by Compensatory Subsidence. *Monthly Weather Review*, *143*(2), 597–621. http://doi.org/10.1175/MWR-D-14-00068.1

Yu, H., Ciesielski, P. E., Wang, J., Kuo, H.-C., Vömel, H., & Dirksen, R. (2015). Evaluation of Humidity Correction Methods for Vaisala RS92 Tropical Sounding Data. *Journal of Atmospheric and Oceanic Technology*, *32*(3), 397–411. http://doi.org/10.1175/JTECH-D-14-00166.1

Zhang, T., Stackhouse Jr., P. W., Gupta, S. K., Cox, S. J., & Mikovitz, J. C. (2015). The validation of the GEWEX SRB surface longwave flux data products using BSRN measurements. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *150*, 134–147. http://doi.org/10.1016/j.jqsrt.2014.07.013

Zhang, Y., Chen, H., & Yu, R. (2015). Simulations of Stratus Clouds over Eastern China in CAM5: Sources of Errors. *Journal of Climate*, *28*(1), 36–55. http://doi.org/10.1175/JCLI-D-14-00350.1

Zhou, L., Bao, Q., Liu, Y., Wu, G., Wang, W.-C., Wang, X., … Li, J. (2015). Global energy and water balance: Characteristics from Finite-volume Atmospheric Model of the IAP/LASG (FAMIL1). *Journal of Advances in Modeling Earth Systems*, (In Press). http://doi.org/10.1002/2014MS000349

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CERES Publications for 2014

Ahlgrimm, M., & Forbes, R. (2014). Improving the Representation of Low Clouds and Drizzle in the ECMWF Model Based on ARM Observations from the Azores. *Monthly Weather Review*, *142*(2), 668–685. http://dx.doi.org/10.1175/MWR-D-13-00153.1

Allan, R. P., Liu, C., Loeb, N. G., Palmer, M. D., Roberts, M., Smith, D., & Vidale, P.-L. (2014). Changes in global net radiative imbalance 1985–2012. *Geophysical Research Letters*, *41*(15), 5588–5597. http://dx.doi.org/10.1002/2014GL060962

Andrews, T. (2014). Using an AGCM to Diagnose Historical Effective Radiative Forcing and Mechanisms of Recent Decadal Climate Change. *Journal of Climate*, *27*(3), 1193–1209. http://dx.doi.org/10.1175/JCLI-D-13-00336.1

Ansell, C., Brindley, H. E., Pradhan, Y., & Saunders, R. (2014). Mineral dust aerosol net direct radiative effect during GERBILS field campaign period derived from SEVIRI and GERB. *Journal of Geophysical Research: Atmospheres*, *119*(7), 4070–4086. http://dx.doi.org/10.1002/2013JD020681

Bacmeister, J. T., Wehner, M. F., Neale, R. B., Gettelman, A., Hannay, C., Lauritzen, P. H., … Truesdale, J. E. (2013). Exploratory High-Resolution Climate Simulations using the Community Atmosphere Model (CAM). *Journal of Climate*, *27*(9), 3073–3099. http://dx.doi.org/10.1175/JCLI-D-13-00387.1

Banks, J. R., Brindley, H. E., Hobby, M., & Marsham, J. H. (2014). The daytime cycle in dust aerosol direct radiative effects observed in the central Sahara during the Fennec campaign in June 2011. *Journal of Geophysical Research: Atmospheres*, *119*(24), 2014JD022077. http://doi.org/10.1002/2014JD022077

Baran, A. J., Hill, P., Furtado, K., Field, P., & Manners, J. (2014). A Coupled Cloud Physics–Radiation Parameterization of the Bulk Optical Properties of Cirrus and Its Impact on the Met Office Unified Model Global Atmosphere 5.0 Configuration. *Journal of Climate*, *27*(20), 7725–7752. http://dx.doi.org/10.1175/JCLI-D-13-00700.1

Battisti, D. S., Ding, Q., & Roe, G. H. (2014). Coherent pan-Asian climatic and isotopic response to orbital forcing of tropical insolation. *Journal of Geophysical Research: Atmospheres*, *119*(21), 11,997–12,020. http://dx.doi.org/10.1002/2014JD021960

Bellomo, K., Clement, A. C., Norris, J. R., & Soden, B. J. (2014). Observational and Model Estimates of Cloud Amount Feedback over the Indian and Pacific Oceans. *Journal of Climate*, *27*(2), 925–940. http://dx.doi.org/10.1175/JCLI-D-13-00165.1

Bellomo, K., Clement, A., Mauritsen, T., Rädel, G., & Stevens, B. (2014). Simulating the Role of Subtropical Stratocumulus Clouds in Driving Pacific Climate Variability. *Journal of Climate*, *27*(13), 5119–5131. http://dx.doi.org/10.1175/JCLI-D-13-00548.1

Berry, E., & Mace, G. G. (2014). Cloud properties and radiative effects of the Asian summer monsoon derived from A-Train data. *Journal of Geophysical Research: Atmospheres*, *119*(15), 2014JD021458. http://dx.doi.org/10.1002/2014JD021458

Bhatt, R., Doelling, D. R., Wu, A., Xiong, X. (Jack), Scarino, B. R., Haney, C. O., & Gopalan, A. (2014). Initial Stability Assessment of S-NPP VIIRS Reflective Solar Band Calibration Using Invariant Desert and Deep Convective Cloud Targets. *Remote Sensing*, *6*(4), 2809–2826. http://dx.doi.org/10.3390/rs6042809

Blunden, J., & Arndt, D. S. (2014). State of the Climate in 2013. *Bulletin of the American Meteorological Society*, *95*(7), S1–S279. http://dx.doi.org/10.1175/2014BAMSStateoftheClimate.1

Bodas-Salcedo, A., Williams, K. D., Ringer, M. A., Beau, I., Cole, J. N. S., Dufresne, J.-L., … Yokohata, T. (2014). Origins of the Solar Radiation Biases over the Southern Ocean in CFMIP2 Models*. *Journal of Climate*, *27*(1), 41–56. http://dx.doi.org/10.1175/JCLI-D-13-00169.1

Bretherton, C. S., Blossey, P. N., & Stan, C. (2014). Cloud feedbacks on greenhouse warming in the superparameterized climate model SP-CCSM4. *Journal of Advances in Modeling Earth Systems*, *6*(4), 1185–1204. http://doi.org/10.1002/2014MS000355

Burls, N. J., & Fedorov, A. V. (2014). What Controls the Mean East–West Sea Surface Temperature Gradient in the Equatorial Pacific: The Role of Cloud Albedo. *Journal of Climate*, *27*(7), 2757–2778. http://dx.doi.org/10.1175/JCLI-D-13-00255.1

Calisto, M., Folini, D., Wild, M., & Bengtsson, L. (2014). Cloud radiative forcing intercomparison between fully coupled CMIP5 models and CERES satellite data. *Ann. Geophys.*, *32*(7), 793–807. http://dx.doi.org/10.5194/angeo-32-793-2014

Chen, M., Zhuang, Q., & He, Y. (2014). An Efficient Method of Estimating Downward Solar Radiation Based on the MODIS Observations for the Use of Land Surface Modeling. *Remote Sensing*, *6*(8), 7136–7157. http://dx.doi.org/10.3390/rs6087136

Chen, Y.-C., Christensen, M. W., Stephens, G. L., & Seinfeld, J. H. (2014). Satellite-based estimate of global aerosol–cloud radiative forcing by marine warm clouds. *Nature Geoscience*, *7*(9), 643–646. http://dx.doi.org/10.1038/ngeo2214

Cheng, J., Liang, S., Yao, Y., Ren, B., Shi, L., & Liu, H. (2013). A Comparative Study of Three Land Surface Broadband Emissivity Datasets from Satellite Data. *Remote Sensing*, *6*(1), 111–134. http://dx.doi.org/10.3390/rs6010111

Chepfer, H., Noel, V., Winker, D., & Chiriaco, M. (2014). Where and when will we observe cloud changes due to climate warming? *Geophysical Research Letters*, *41*(23), 2014GL061792. http://doi.org/10.1002/2014GL061792

Cheruy, F., Dufresne, J. L., Hourdin, F., & Ducharne, A. (2014). Role of clouds and land-atmosphere coupling in midlatitude continental summer warm biases and climate change amplification in CMIP5 simulations. *Geophysical Research Letters*, *41*(18), 6493–6500. http://dx.doi.org/10.1002/2014GL061145

Choi, Y.-S., Cho, H., Ho, C.-H., Lindzen, R. S., Park, S. K., & Yu, X. (2014). Influence of non-feedback variations of radiation on the determination of climate feedback. *Theoretical and Applied Climatology*, *115*(1-2), 355–364. http://dx.doi.org/10.1007/s00704-013-0998-6

Choi, Y.-S., Kim, B.-M., Hur, S.-K., Kim, S.-J., Kim, J.-H., & Ho, C.-H. (2014). Connecting early summer cloud-controlled sunlight and late summer sea ice in the Arctic. *Journal of Geophysical Research: Atmospheres*, *119*(19), 2014JD022013. http://dx.doi.org/10.1002/2014JD022013

Cho, M.-H., Boo, K.-O., Lee, J., Cho, C., & Lim, G.-H. (2014). Regional climate response to land surface changes after harvest in the North China Plain under present and possible future climate conditions. *Journal of Geophysical Research: Atmospheres*, *119*(8), 2013JD020111. http://dx.doi.org/10.1002/2013JD020111

Coakley, J., A., & Yang, P. (2014). Atmospheric Radiation: A Primer with Illustrative Solutions. John Wiley & Sons.

Ćulibrk, D., Vukobratovic, D., Minic, V., Fernandez, M. A., Osuna, J. A., & Crnojevic, V. (2014). Sources of Remote Sensing Data for Precision Irrigation. In *Sensing Technologies For Precision Irrigation* (pp. 53–67). Springer New York

Daniels, J., Smith, G. L., Priestler, K. J., & Thomas, S. (2014). Using lunar observations to validate pointing accuracy and geolocation, detector sensitivity stability and static point response of the CERES instruments (Vol. 9242, p. 92420X–92420X–12). http://dx.doi.org/10.1117/12.2065256

Dee, D. P., Balmaseda, M., Balsamo, G., Engelen, R., Simmons, A. J., & Thépaut, J.-N. (2014). Toward a Consistent Reanalysis of the Climate System. *Bulletin of the American Meteorological Society*, *95*(8), 1235–1248. http://dx.doi.org/10.1175/BAMS-D-13-00043.1

Dolinar, E. K., Dong, X., Xi, B., Jiang, J. H., & Su, H. (2014). Evaluation of CMIP5 simulated clouds and TOA radiation budgets using NASA satellite observations. *Climate Dynamics*, 1–19. http://dx.doi.org/10.1007/s00382-014-2158-9

Dong, X., Xi, B., Kennedy, A., Minnis, P., & Wood, R. (2014). A 19-Month Record of Marine Aerosol–Cloud–Radiation Properties Derived from DOE ARM Mobile Facility Deployment at the Azores. Part I: Cloud Fraction and Single-Layered MBL Cloud Properties. *Journal of Climate*, *27*(10), 3665–3682. http://dx.doi.org/10.1175/JCLI-D-13-00553.1

Dong, X., Xi, B., & Wu, P. (2014). Investigation of the Diurnal Variation of Marine Boundary Layer Cloud Microphysical Properties at the Azores. *Journal of Climate*, *27*(23), 8827–8835. http://dx.doi.org/10.1175/JCLI-D-14-00434.1

Donohoe, A., Marshall, J., Ferreira, D., Armour, K., & McGee, D. (2014). The Interannual Variability of Tropical Precipitation and Interhemispheric Energy Transport. *Journal of Climate*, *27*(9), 3377–3392. http://dx.doi.org/10.1175/JCLI-D-13-00499.1

English, J. M., Kay, J. E., Gettelman, A., Liu, X., Wang, Y., Zhang, Y., & Chepfer, H. (2014). Contributions of Clouds, Surface Albedos, and Mixed-Phase Ice Nucleation Schemes to Arctic Radiation Biases in CAM5. *Journal of Climate*, *27*(13), 5174–5197. http://dx.doi.org/10.1175/JCLI-D-13-00608.1

Engström, A., Bender, F. A.-M., & Karlsson, J. (2014). Improved Representation of Marine Stratocumulus Cloud Shortwave Radiative Properties in the CMIP5 Climate Models. *Journal of Climate*, *27*(16), 6175–6188. http://dx.doi.org/10.1175/JCLI-D-13-00755.1

Evans, K. J., Mahajan, S., Branstetter, M., McClean, J. L., Caron, J., Maltrud, M. E., … Leifeld, J. K. (2014). A spectral transform dynamical core option within the Community Atmosphere Model (CAM4). *Journal of Advances in Modeling Earth Systems*, *6*(3), 902–922. http://dx.doi.org/10.1002/2014MS000329

Feng, N., & Christopher, S. A. (2014). Clear sky direct radiative effects of aerosols over Southeast Asia based on satellite observations and radiative transfer calculations. *Remote Sensing of Environment*, *152*, 333–344. http://dx.doi.org/10.1016/j.rse.2014.07.006

Fermepin, S., & Bony, S. (2014). Influence of low-cloud radiative effects on tropical circulation and precipitation. *Journal of Advances in Modeling Earth Systems*, *6*(3), 513–526. http://dx.doi.org/10.1002/2013MS000288

Folkins, I., Mitovski, T., & Pierce, J. R. (2014). A simple way to improve the diurnal cycle in convective rainfall over land in climate models. *Journal of Geophysical Research: Atmospheres*, *119*(5), 2113–2130. http://dx.doi.org/10.1002/2013JD020149

Forbes, R. M., & Ahlgrimm, M. (2014). On the Representation of High-Latitude Boundary Layer Mixed-Phase Cloud in the ECMWF Global Model. *Monthly Weather Review*, *142*(9), 3425–3445. http://dx.doi.org/10.1175/MWR-D-13-00325.1

Gastineau, G., Soden, B. J., Jackson, D. L., & O'Dell, C. W. (2014). Satellite-Based Reconstruction of the Tropical Oceanic Clear-Sky Outgoing Longwave Radiation and Comparison with Climate Models. *Journal of Climate*, *27*(2), 941–957. http://dx.doi.org/10.1175/JCLI-D-13-00047.1

Gettelman, A., Morrison, H., Santos, S., Bogenschutz, P., & Caldwell, P. M. (2014). Advanced Two-Moment Bulk Microphysics for Global Models. Part II: Global model solutions and Aerosol-Cloud Interactions. *Journal of Climate*. http://dx.doi.org/10.1175/JCLI-D-14-00103.1

Giglio, D., & Roemmich, D. (2014). Climatological monthly heat and freshwater flux estimates on a global scale from Argo. *Journal of Geophysical Research: Oceans*, *119*(10), 6884–6899. http://dx.doi.org/10.1002/2014JC010083

Grise, K. M., & Polvani, L. M. (2014). Southern Hemisphere Cloud–Dynamics Biases in CMIP5 Models and Their Implications for Climate Projections. *Journal of Climate*, *27*(15), 6074–6092. http://dx.doi.org/10.1175/JCLI-D-14-00113.1

Guo, H., Golaz, J.-C., Donner, L. J., Ginoux, P., & Hemler, R. S. (2014). Multivariate Probability Density Functions with Dynamics in the GFDL Atmospheric General Circulation Model: Global Tests. *Journal of Climate*, *27*(5), 2087–2108. http://dx.doi.org/10.1175/JCLI-D-13-00347.1

Hakuba, M. Z., Folini, D., Sanchez-Lorenzo, A., & Wild, M. (2014). Spatial representativeness of ground-based solar radiation measurements—Extension to the full Meteosat disk. *Journal of Geophysical Research: Atmospheres*, *119*(20), 11,760–11,771. http://dx.doi.org/10.1002/2014JD021946

Hakuba, M. Z., Folini, D., Schaepman-Strub, G., & Wild, M. (2014). Solar absorption over Europe from collocated surface and satellite observations. *Journal of Geophysical Research: Atmospheres*, *119*(6), 3420–3437. http://dx.doi.org/10.1002/2013JD021421

Hamann, U., Walther, A., Baum, B., Bennartz, R., Bugliaro, L., Derrien, M., … Wind, G. (2014). Remote sensing of cloud top pressure/height from SEVIRI: analysis of ten current retrieval algorithms. *Atmos. Meas. Tech.*, *7*(9), 2839–2867. http://dx.doi.org/10.5194/amt-7-2839-2014

Ham, S.-H., Kato, S., Barker, H. W., Rose, F. G., & Sun-Mack, S. (2014). Effects of 3-D clouds on atmospheric transmission of solar radiation: Cloud type dependencies inferred from A-train satellite data. *Journal of Geophysical Research: Atmospheres*, *119*(2), 943–963. http://dx.doi.org/10.1002/2013JD020683

Hartmann, D. L., & Ceppi, P. (2014). Trends in the CERES Dataset, 2000–13: The Effects of Sea Ice and Jet Shifts and Comparison to Climate Models. *Journal of Climate*, *27*(6), 2444–2456. http://dx.doi.org/10.1175/JCLI-D-13-00411.1

Herwehe, J. A., Alapaty, K., Spero, T. L., & Nolte, C. G. (2014). Increasing the credibility of regional climate simulations by introducing subgrid-scale cloud-radiation interactions. *Journal of Geophysical Research: Atmospheres*, *119*(9), 2014JD021504. http://dx.doi.org/10.1002/2014JD021504

He, T., Liang, S., & Song, D.-X. (2014). Analysis of global land surface albedo climatology and spatial-temporal variation during 1981–2010 from multiple satellite products. *Journal of Geophysical Research: Atmospheres*, *119*(17), 2014JD021667. http://dx.doi.org/10.1002/2014JD021667

Huang, X., Chen, X., Potter, G. L., Oreopoulos, L., Cole, J. N. S., Lee, D., & Loeb, N. G. (2014). A Global Climatology of Outgoing Longwave Spectral Cloud Radiative Effect and Associated Effective Cloud Properties. *Journal of Climate*, *27*(19), 7475–7492. http://dx.doi.org/10.1175/JCLI-D-13-00663.1

Itterly, K. F., & Taylor, P. C. (2014). Evaluation of the Tropical TOA Flux Diurnal Cycle in MERRA and ERA-Interim Retrospective Analyses. *Journal of Climate*, *27*(13), 4781–4796. http://dx.doi.org/10.1175/JCLI-D-13-00737.1

Jin, Z., Lukachin, C., Roberts, Y., Wielicki, B., Feldman, D., & Collins, W. (2014). Interannual variability of the Earth's spectral solar reflectance from measurements and simulations. *Journal of Geophysical Research: Atmospheres*, *119*(8), 2013JD021056. http://dx.doi.org/10.1002/2013JD021056

Johnston, M. S., Eliasson, S., Eriksson, P., Forbes, R. M., Gettelman, A., Räisänen, P., & Zelinka, M. D. (2014). Diagnosing the average spatio-temporal impact of convective systems – Part 2: A model intercomparison using satellite data. *Atmos. Chem. Phys.*, *14*(16), 8701–8721. http://dx.doi.org/10.5194/acp-14-8701-2014

Kay, J. E., Medeiros, B., Hwang, Y.-T., Gettelman, A., Perket, J., & Flanner, M. G. (2014). Processes controlling Southern Ocean shortwave climate feedbacks in CESM. *Geophysical Research Letters*, *41*(2), 616–622. http://dx.doi.org/10.1002/2013GL058315

Koren, I., Dagan, G., & Altaratz, O. (2014). From aerosol-limited to invigoration of warm convective clouds. *Science*, *344*(6188), 1143–1146. http://dx.doi.org/10.1126/science.1252595

Kratz, D. P., Stackhouse, P. W., Gupta, S. K., Wilber, A. C., Sawaengphokhai, P., & McGarragh, G. R. (2013). The Fast Longwave and Shortwave Flux (FLASHFlux) Data Product: Single-Scanner Footprint Fluxes. *Journal of Applied Meteorology and Climatology*, *53*(4), 1059–1079. http://dx.doi.org/10.1175/JAMC-D-13-061.1

Kuebbeler, M., Lohmann, U., Hendricks, J., & Kärcher, B. (2014). Dust ice nuclei effects on cirrus clouds. *Atmos. Chem. Phys.*, *14*(6), 3027–3046. http://dx.doi.org/10.5194/acp-14-3027-2014

Lacagnina, C., Selten, F., & Siebesma, A. P. (2014). Impact of changes in the formulation of cloud-related processes on model biases and climate feedbacks. *Journal of Advances in Modeling Earth Systems*, *6*(4), 1224–1243. http://doi.org/10.1002/2014MS000341

Lee, J., Kim, J., & Lee, Y. G. (2014). Simultaneous retrieval of aerosol properties and clear-sky direct radiative effect over the global ocean from MODIS. *Atmospheric Environment*, *92*, 309–317. http://dx.doi.org/10.1016/j.atmosenv.2014.04.021

Lee, M.-I., Kang, H.-S., Kim, D., Kim, D., Kim, H., & Kang, D. (2014). Validation of the experimental hindcasts produced by the GloSea4 seasonal prediction system. *Asia-Pacific Journal of Atmospheric Sciences*, *50*(3), 307–326. http://dx.doi.org/10.1007/s13143-014-0019-4

Legates, D. R., Eschenbach, W., & Soon, W. (2014). Arctic albedo changes are small compared with changes in cloud cover in the tropics. *Proceedings of the National Academy of Sciences*, *111*(21), E2157–E2158. http://dx.doi.org/10.1073/pnas.1404997111

Li, G., & Xie, S.-P. (2014). Tropical Biases in CMIP5 Multimodel Ensemble: The Excessive Equatorial Pacific Cold Tongue and Double ITCZ Problems*. *Journal of Climate*, *27*(4), 1765–1780. http://dx.doi.org/10.1175/JCLI-D-13-00337.1

Li, J.-L. F., Forbes, R. M., Waliser, D. E., Stephens, G., & Lee, S. (2014). Characterizing the radiative impacts of precipitating snow in the ECMWF Integrated Forecast System global model. *Journal of Geophysical Research: Atmospheres*, *119*(16), 2014JD021450. http://dx.doi.org/10.1002/2014JD021450

Li, J.-L. F., Lee, W.-L., Waliser, D. E., David Neelin, J., Stachnik, J. P., & Lee, T. (2014). Cloud-precipitation-radiation-dynamics interaction in global climate models: A snow and radiation interaction sensitivity experiment. *Journal of Geophysical Research: Atmospheres*, *119*(7), 2013JD021038. http://dx.doi.org/10.1002/2013JD021038

Li, J.-L. F., Lee, W.-L., Waliser, D. E., Stachnik, J. P., Fetzer, E., Wong, S., & Yue, Q. (2014). Characterizing tropical Pacific water vapor and radiative biases in CMIP5 GCMs: Observation-based analyses and a snow and radiation interaction sensitivity experiment. *Journal of Geophysical Research: Atmospheres*, *119*(19), 2014JD021924. http://dx.doi.org/10.1002/2014JD021924

Li, Y., Thompson, D. W. J., Huang, Y., & Zhang, M. (2014). Observed linkages between the northern annular mode/North Atlantic Oscillation, cloud incidence, and cloud radiative forcing. *Geophysical Research Letters*, *41*(5), 1681–1688. http://doi.org/10.1002/2013GL059113

Li, Y., Han, W., Shinoda, T., Wang, C., Ravichandran, M., & Wang, J.-W. (2014). Revisiting the Wintertime Intraseasonal SST Variability in the Tropical South Indian Ocean: Impact of the Ocean Interannual Variation. *Journal of Physical Oceanography*, *44*(7), 1886–1907. http://doi.org/10.1175/JPO-D-13-0238.1

Li, Y., Han, W., Wilkin, J. L., Zhang, W. G., Arango, H., Zavala-Garay, J., … Castruccio, F. S. (2014). Interannual variability of the surface summertime eastward jet in the South China Sea. *Journal of Geophysical Research: Oceans*, *119*(10), 7205–7228. http://doi.org/10.1002/2014JC010206

Liang, S., Zhang, X., Xiao, Z., Cheng, J., Liu, Q., & Zhao, X. (2014). Incident Shortwave Radiation. In *Global LAnd Surface Satellite (GLASS) Products* (pp. 123–142). Springer International Publishing.

Lim, K.-S. S., Fan, J., Leung, L. R., Ma, P.-L., Singh, B., Zhao, C., … Song, X. (2014). Investigation of aerosol indirect effects using a cumulus microphysics parameterization in a regional climate model. *Journal of Geophysical Research: Atmospheres*, *119*(2), 2013JD020958. http://dx.doi.org/10.1002/2013JD020958

Lin, J.-L., Qian, T., & Shinoda, T. (2014). Stratocumulus Clouds in Southeastern Pacific Simulated by Eight CMIP5–CFMIP Global Climate Models. *Journal of Climate*, *27*(8), 3000–3022. http://dx.doi.org/10.1175/JCLI-D-13-00376.1

Lin, N.-H., Sayer, A. M., Wang, S.-H., Loftus, A. M., Hsiao, T.-C., Sheu, G.-R., … Chantara, S. (2014). Interactions between biomass-burning aerosols and clouds over Southeast Asia: Current status, challenges, and perspectives. *Environmental Pollution*, *195*, 292–307. http://dx.doi.org/10.1016/j.envpol.2014.06.036

Lindsay, R., Wensnahan, M., Schweiger, A., & Zhang, J. (2014). Evaluation of Seven Different Atmospheric Reanalysis Products in the Arctic*. *Journal of Climate*, *27*(7), 2588–2606. http://doi.org/10.1175/JCLI-D-13-00014.1

Liu, C., Yang, P., Minnis, P., Loeb, N., Kato, S., Heymsfield, A., & Schmitt, C. (2014). A two-habit model for the microphysical and optical properties of ice clouds. *Atmos. Chem. Phys. Discuss.*, *14*(13), 19545–19586. http://dx.doi.org/10.5194/acpd-14-19545-2014

Liu, Q., & Boukabara, S. (2014). Community Radiative Transfer Model (CRTM) applications in supporting the Suomi National Polar-orbiting Partnership (SNPP) mission validation and verification. *Remote Sensing of Environment*, *140*, 744–754. http://dx.doi.org/10.1016/j.rse.2013.10.011

Loeb, N. G., Rutan, D. A., Kato, S., & Wang, W. (2014). Observing Interannual Variations in Hadley Circulation Atmospheric Diabatic Heating and Circulation Strength. *Journal of Climate*, *27*(11), 4139–4158. http://dx.doi.org/10.1175/JCLI-D-13-00656.1

Loginov, S. V., Ippolitov, I. I., & Kharyutkina, E. V. (2014). The relationship of surface air temperature, heat balance at the surface, and radiative balance at the top of atmosphere over the Asian territory of Russia using reanalysis and remote-sensing data. *International Journal of Remote Sensing*, *35*(15), 5878–5898. http://dx.doi.org/10.1080/01431161.2014.945007

Luo, T., Yuan, R., & Wang, Z. (2014). On factors controlling marine boundary layer aerosol optical depth. *Journal of Geophysical Research: Atmospheres*, *119*(6), 2013JD020936. http://dx.doi.org/10.1002/2013JD020936

Ma, H.-Y., Xie, S., Klein, S. A., Williams, K. D., Boyle, J. S., Bony, S., … Williamson, D. (2014). On the Correspondence between Mean Forecast Errors and Climate Errors in CMIP5 Models. *Journal of Climate*, *27*(4), 1781–1798. http://dx.doi.org/10.1175/JCLI-D-13-00474.1

Marshall, J., Donohoe, A., Ferreira, D., & McGee, D. (2014). The ocean's role in setting the mean position of the Inter-Tropical Convergence Zone. *Climate Dynamics*, *42*(7-8), 1967–1979. http://dx.doi.org/10.1007/s00382-013-1767-z

Mason, S., Jakob, C., Protat, A., & Delanoë, J. (2014). Characterizing Observed Midtopped Cloud Regimes Associated with Southern Ocean Shortwave Radiation Biases. *Journal of Climate*, *27*(16), 6189–6203. http://dx.doi.org/10.1175/JCLI-D-14-00139.1

Mateos, D., Antón, M., Valenzuela, A., Cazorla, A., Olmo, F. J., & Alados-Arboledas, L. (2014). Efficiency of clouds on shortwave radiation using experimental data. *Applied Energy*, *113*, 1216–1219. http://dx.doi.org/10.1016/j.apenergy.2013.08.060

Mateos, D., Sanchez-Lorenzo, A., Antón, M., Cachorro, V. E., Calbó, J., Costa, M. J., … Wild, M. (2014). Quantifying the respective roles of aerosols and clouds in the strong brightening since the early 2000s over the Iberian Peninsula. *Journal of Geophysical Research: Atmospheres*, *119*(17), 2014JD022076. http://dx.doi.org/10.1002/2014JD022076

Ma, H.-Y., Xie, S., Klein, S. A., Williams, K. D., Boyle, J. S., Bony, S., … Williamson, D. (2014). On the Correspondence between Mean Forecast Errors and Climate Errors in CMIP5 Models. *Journal of Climate*, *27*(4), 1781–1798. http://dx.doi.org/10.1175/JCLI-D-13-00474.1

Ma, X., Yu, F., & Quaas, J. (2014). Reassessment of satellite-based estimate of aerosol climate forcing. *Journal of Geophysical Research: Atmospheres*, *119*(17), 2014JD021670. http://dx.doi.org/10.1002/2014JD021670

Marshall, J., Donohoe, A., Ferreira, D., & McGee, D. (2014). The ocean's role in setting the mean position of the Inter-Tropical Convergence Zone. *Climate Dynamics*, *42*(7-8), 1967–1979. http://dx.doi.org/10.1007/s00382-013-1767-z

Mason, S., Jakob, C., Protat, A., & Delanoë, J. (2014). Characterizing Observed Midtopped Cloud Regimes Associated with Southern Ocean Shortwave Radiation Biases. *Journal of Climate*, *27*(16), 6189–6203. http://dx.doi.org/10.1175/JCLI-D-14-00139.1

Mateos, D., Antón, M., Valenzuela, A., Cazorla, A., Olmo, F. J., & Alados-Arboledas, L. (2014). Efficiency of clouds on shortwave radiation using experimental data. *Applied Energy*, *113*, 1216–1219. http://dx.doi.org/10.1016/j.apenergy.2013.08.060

Mateos, D., Sanchez-Lorenzo, A., Antón, M., Cachorro, V. E., Calbó, J., Costa, M. J., … Wild, M. (2014). Quantifying the respective roles of aerosols and clouds in the strong brightening since the early 2000s over the Iberian Peninsula. *Journal of Geophysical Research: Atmospheres*, *119*(17), 2014JD022076. http://dx.doi.org/10.1002/2014JD022076

Mayer, M., Haimberger, L., & Balmaseda, M. A. (2014). On the Energy Exchange between Tropical Ocean Basins Related to ENSO. *Journal of Climate*, *27*(17), 6393–6403. http://dx.doi.org/10.1175/JCLI-D-14-00123.1

McCoy, D. T., Hartmann, D. L., & Grosvenor, D. P. (2014a). Observed Southern Ocean Cloud Properties and Shortwave Reflection. Part I: Calculation of SW Flux from Observed Cloud Properties. *Journal of Climate*, *27*(23), 8836–8857. http://dx.doi.org/10.1175/JCLI-D-14-00287.1

McCoy, D. T., Hartmann, D. L., & Grosvenor, D. P. (2014b). Observed Southern Ocean Cloud Properties and Shortwave Reflection. Part II: Phase Changes and Low Cloud Feedback. *Journal of Climate*, *27*(23), 8858–8868. http://dx.doi.org/10.1175/JCLI-D-14-00288.1

Mills, M. J., Toon, O. B., Lee-Taylor, J., & Robock, A. (2014). Multidecadal global cooling and unprecedented ozone loss following a regional nuclear conflict. *Earth's Future*, *2*(4), 2013EF000205. http://dx.doi.org/10.1002/2013EF000205

Muhlbauer, A., McCoy, I. L., & Wood, R. (2014). Climatology of stratocumulus cloud morphologies: microphysical properties and radiative effects. *Atmos. Chem. Phys.*, *14*(13), 6695–6716. http://dx.doi.org/10.5194/acp-14-6695-2014

Muri, H., Kristjánsson, J. E., Storelvmo, T., & Pfeffer, M. A. (2014). The climatic effects of modifying cirrus clouds in a climate engineering framework. *Journal of Geophysical Research: Atmospheres*, *119*(7), 4174–4191. http://dx.doi.org/10.1002/2013JD021063

Naud, C. M., Booth, J. F., & Del Genio, A. D. (2014). Evaluation of ERA-Interim and MERRA Cloudiness in the Southern Ocean. *Journal of Climate*, *27*(5), 2109–2124. http://dx.doi.org/10.1175/JCLI-D-13-00432.1

Ningombam, S. S., Bagare, S. P., Sinha, N., Singh, R. B., Srivastava, A. K., Larson, E., & Kanawade, V. P. (2014). Characterization of aerosol optical properties over the high-altitude station Hanle, in the trans-Himalayan region. *Atmospheric Research*, *138*, 308–323. http://dx.doi.org/10.1016/j.atmosres.2013.11.025

Noda, A. T., Satoh, M., Yamada, Y., Kodama, C., & Seiki, T. (2014). Responses of Tropical and Subtropical High-Cloud Statistics to Global Warming. *Journal of Climate*, *27*(20), 7753–7768. http://dx.doi.org/10.1175/JCLI-D-14-00179.1

Oreopoulos, L., Cho, N., Lee, D., Kato, S., & Huffman, G. J. (2014). An examination of the nature of global MODIS cloud regimes. *Journal of Geophysical Research: Atmospheres*, *119*(13), 2013JD021409. http://dx.doi.org/10.1002/2013JD021409

Painemal, D., Kato, S., & Minnis, P. (2014). Boundary layer regulation in the southeast Atlantic cloud microphysics during the biomass burning season as seen by the A-train satellite constellation. *Journal of Geophysical Research: Atmospheres*, *119*(19), 2014JD022182. http://dx.doi.org/10.1002/2014JD022182

Park, S. (2014). A Unified Convection Scheme (UNICON). Part II: Simulation. *Journal of the Atmospheric Sciences*, *71*(11), 3931–3973. http://dx.doi.org/10.1175/JAS-D-13-0234.1

Park, S., Bretherton, C. S., & Rasch, P. J. (2014). Integrating Cloud Processes in the Community Atmosphere Model, Version 5. *Journal of Climate*, *27*(18), 6821–6856. http://dx.doi.org/10.1175/JCLI-D-14-00087.1

Patadia, F., & Christopher, S. A. (2014). Assessment of smoke shortwave radiative forcing using empirical angular distribution models. *Remote Sensing of Environment*, *140*, 233–240. http://dx.doi.org/10.1016/j.rse.2013.08.034

Phojanamongkolkij, N., Kato, S., Wielicki, B. A., Taylor, P. C., & Mlynczak, M. G. (2014). A Comparison of Climate Signal Trend Detection Uncertainty Analysis Methods. *Journal of Climate*, *27*(9), 3363–3376. http://dx.doi.org/10.1175/JCLI-D-13-00400.1

Pistone, K., Eisenman, I., & Ramanathan, V. (2014). Observational determination of albedo decrease caused by vanishing Arctic sea ice. *Proceedings of the National Academy of Sciences*, *111*(9), 3322–3326. http://dx.doi.org/10.1073/pnas.1318201111

Protat, A., Young, S. A., McFarlane, S. A., L'Ecuyer, T., Mace, G. G., Comstock, J. M., … Delanoë, J. (2014). Reconciling Ground-Based and Space-Based Estimates of the Frequency of Occurrence and Radiative Effect of Clouds around Darwin, Australia. *Journal of Applied Meteorology and Climatology*, *53*(2), 456–478. http://dx.doi.org/10.1175/JAMC-D-13-072.1

Qu, X., & Hall, A. (2014). On the persistent spread in snow-albedo feedback. *Climate Dynamics*, *42*(1-2), 69–81. http://dx.doi.org/10.1007/s00382-013-1774-0

Radley, C., Fueglistaler, S., & Donner, L. (2014). Cloud and Radiative Balance Changes in Response to ENSO in Observations and Models. *Journal of Climate*, *27*(9), 3100–3113. http://dx.doi.org/10.1175/JCLI-D-13-00338.1

Roberts, Y. L., Pilewskie, P., Feldman, D. R., Kindel, B. C., & Collins, W. D. (2014). Temporal variability of observed and simulated hyperspectral reflectance. *Journal of Geophysical Research: Atmospheres*, *119*(17), 10,262–10,280. http://dx.doi.org/10.1002/2014JD021566

Roithmayr, C. M., Lukashin, C., Speth, P. W., Kopp, G., Thome, K., Wielicki, B. A., & Young, D. F. (2014). CLARREO Approach for Reference Intercalibration of Reflected Solar Sensors: On-Orbit Data Matching and Sampling. *IEEE Transactions on Geoscience and Remote Sensing*, *52*(10), 6762–6774. http://dx.doi.org/10.1109/TGRS.2014.2302397

Roithmayr, C. M., Lukashin, C., Speth, P. W., Young, D. F., Wielicki, B. A., Thome, K. J., & Kopp, G. (2014). Opportunities to Intercalibrate Radiometric Sensors from International Space Station. *Journal of Atmospheric and Oceanic Technology*, *31*(4), 890–902. http://dx.doi.org/10.1175/JTECH-D-13-00163.1

Rosenfeld, Daniel, M. O. A. (2014). Global observations of aerosol-cloud-precipitation-climate interactions. *Reviews of Geophysics*, 52(4), 750-808. http://dx.doi.org/10.1002/2013RG000441

Rosenzweig, C., Horton, R. M., Bader, D. A., Brown, M. E., DeYoung, R., Dominguez, O., … Toufectis, K. (2014). Enhancing Climate Resilience at NASA Centers: A Collaboration between Science and Stewardship. *Bulletin of the American Meteorological Society*, *95*(9), 1351–1363. http://dx.doi.org/10.1175/BAMS-D-12-00169.1

Rutan, D. A., Smith, G. L., & Wong, T. (2014). Diurnal Variations of Albedo Retrieved from Earth Radiation Budget Experiment Measurements. *Journal of Applied Meteorology and Climatology*, *53*(12), 2747–2760. http://dx.doi.org/10.1175/JAMC-D-13-0119.1

Santer, B. D., Bonfils, C., Painter, J. F., Zelinka, M. D., Mears, C., Solomon, S., … Wentz, F. J. (2014). Volcanic contribution to decadal changes in tropospheric temperature. *Nature Geoscience*, *7*(3), 185–189. http://dx.doi.org/10.1038/ngeo2098

Schmidt, G. A., Kelley, M., Nazarenko, L., Ruedy, R., Russell, G. L., Aleinov, I., … Zhang, J. (2014). Configuration and assessment of the GISS ModelE2 contributions to the CMIP5 archive. *Journal of Advances in Modeling Earth Systems*, *6*(1), 141–184. http://dx.doi.org/10.1002/2013MS000265

Schneider, T., Bischoff, T., & Haug, G. H. (2014). Migrations and dynamics of the intertropical convergence zone. *Nature*, *513*(7516), 45–53. http://dx.doi.org/10.1038/nature13636

Seidel, D. J., Feingold, G., Jacobson, A. R., & Loeb, N. (2014). Detection limits of albedo changes induced by climate engineering. *Nature Climate Change*, *4*(2), 93–98. http://dx.doi.org/10.1038/nclimate2076

Sena, E. T., & Artaxo, P. (2014). A novel methodology using MODIS and CERES for assessing the daily radiative forcing of smoke aerosols in large scale over the Amazonia. *Atmos. Chem. Phys. Discuss.*, *14*(22), 31515–31550. http://dx.doi.org/10.5194/acpd-14-31515-2014

Shrestha, A. K., Kato, S., Wong, T., Rutan, D. A., Miller, W. F., Rose, F. G., … Fernandez, J. R. (2014). Unfiltering Earth Radiation Budget Experiment (ERBE) Scanner Radiances Using the CERES Algorithm and Its Evaluation with Nonscanner Observations. *Journal of Atmospheric and Oceanic Technology*, *31*(4), 843–859. http://dx.doi.org/10.1175/JTECH-D-13-00072.1

Sicard, M., Bertolín, S., Mallet, M., Dubuisson, P., & Comerón, A. (2014). Estimation of mineral dust long-wave radiative forcing: sensitivity study to particle properties and application to real cases in the region of Barcelona. *Atmos. Chem. Phys.*, *14*(17), 9213–9231. http://dx.doi.org/10.5194/acp-14-9213-2014

Sicard, M., Bertolín, S., Muñoz, C., Rodríguez, A., Rocadenbosch, F., & Comerón, A. (2014). Separation of aerosol fine- and coarse-mode radiative properties: Effect on the mineral dust longwave, direct radiative forcing. *Geophysical Research Letters*, *41*(19), 2014GL060946. http://dx.doi.org/10.1002/2014GL060946

Smith, G. L., & Doelling, D. R. (2014). Computation of Radiation Budget on an Oblate Earth. *Journal of Climate*, *27*(19), 7203–7206. http://dx.doi.org/10.1175/JCLI-D-14-00058.1

Smith, G. L., Harrison, E. F., & Gibson, G. G. (2014). *Earth Radiation Budget Research at the NASA Langley Research Center*. Retrieved from http://ntrs.nasa.gov/search.jsp?R=20140006546

Smith, G. Louis, G., Daniels, J. L., Priestley, K. J., & Thomas, S. (2014). Point response function of the Clouds and Earth Radiant Energy System scanning radiometer. *Journal of Applied Remote Sensing*, *8*(1), 084991–084991. http://dx.doi.org/10.1117/1.JRS.8.084991

Smith, G. L., Priestley, K. J., & Loeb, N. G. (2014). Clouds and Earth Radiant Energy System: From Design to Data. *IEEE Transactions on Geoscience and Remote Sensing*, *52*(3), 1729–1738. http://dx.doi.org/10.1109/TGRS.2013.2253782

Sobel, A., Wang, S., & Kim, D. (2014). Moist Static Energy Budget of the MJO during DYNAMO. *Journal of the Atmospheric Sciences*, *71*(11), 4276–4291. http://dx.doi.org/10.1175/JAS-D-14-0052.1

Spero, T. L., Otte, M. J., Bowden, J. H., & Nolte, C. G. (2014). Improving the representation of clouds, radiation, and precipitation using spectral nudging in the Weather Research and Forecasting model. *Journal of Geophysical Research: Atmospheres*, *119*(20), 2014JD022173. http://dx.doi.org/10.1002/2014JD022173

Stan, C., & Xu, L. (2014). Climate simulations and projections with a super-parameterized climate model. *Environmental Modelling & Software*, *60*, 134–152. http://dx.doi.org/10.1016/j.envsoft.2014.06.013

Stanfield, R. E., Dong, X., Xi, B., Kennedy, A., Del Genio, A. D., Minnis, P., & Jiang, J. H. (2014). Assessment of NASA GISS CMIP5 and Post-CMIP5 Simulated Clouds and TOA Radiation Budgets Using Satellite Observations. Part I: Cloud Fraction and Properties. *Journal of Climate*, *27*(11), 4189–4208. http://dx.doi.org/10.1175/JCLI-D-13-00558.1

Storelvmo, T., & Herger, N. (2014). Cirrus cloud susceptibility to the injection of ice nuclei in the upper troposphere. *Journal of Geophysical Research: Atmospheres*, *119*(5), 2375–2389. http://dx.doi.org/10.1002/2013JD020816

Sun, W., Lin, B., Baize, R. R., Videen, G., & Hu, Y. (2014). Sensing Hadley cell with space-borne lidar. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *148*, 38–41. http://dx.doi.org/10.1016/j.jqsrt.2014.06.017

Sun, Z., Zeng, X., Liu, J., Liang, H., & Li, J. (2014). Parametrization of instantaneous global horizontal irradiance: clear-sky component. *Quarterly Journal of the Royal Meteorological Society*, *140*(678), 267–280. http://dx.doi.org/10.1002/qj.2126

Sun-Mack, S., Minnis, P., Chen, Y., Kato, S., Yi, Y., Gibson, S. C., … Winker, D. M. (2014). Regional Apparent Boundary Layer Lapse Rates Determined from CALIPSO and MODIS Data for Cloud-Height Determination. *Journal of Applied Meteorology and Climatology*, *53*(4), 990–1011. http://dx.doi.org/10.1175/JAMC-D-13-081.1

Sunny Lim, K.-S., Hong, S.-Y., Yoon, J.-H., & Han, J. (2014). Simulation of the Summer Monsoon Rainfall over East Asia Using the NCEP GFS Cumulus Parameterization at Different Horizontal Resolutions. *Weather and Forecasting*, *29*(5), 1143–1154. http://dx.doi.org/10.1175/WAF-D-13-00143.1

Taylor, P. C. (2014a). Variability of Monthly Diurnal Cycle Composites of TOA Radiative Fluxes in the Tropics. *Journal of the Atmospheric Sciences*, *71*(2), 754–766. http://dx.doi.org/10.1175/JAS-D-13-0112.1

Taylor, P. C. (2014b). Variability of Regional TOA Flux Diurnal Cycle Composites at the Monthly Time Scale. *Journal of the Atmospheric Sciences*, *71*(9), 3484–3498. http://dx.doi.org/10.1175/JAS-D-13-0336.1

Teixeira, J., Waliser, D., Ferraro, R., Gleckler, P., Lee, T., & Potter, G. (2014). Satellite Observations for CMIP5: The Genesis of Obs4MIPs. *Bulletin of the American Meteorological Society*, *95*(9), 1329–1334. http://dx.doi.org/10.1175/BAMS-D-12-00204.1

Thampi, B. V., & Roca, R. (2014). Investigation of negative cloud radiative forcing over the Indian subcontinent and adjacent oceans during the summer monsoon season. *Atmos. Chem. Phys.*, *14*(13), 6739–6758. http://dx.doi.org/10.5194/acp-14-6739-2014

Trenberth, K. E., Fasullo, J. T., & Balmaseda, M. A. (2014). Earth's Energy Imbalance. *Journal of Climate*, *27*(9), 3129–3144. http://dx.doi.org/10.1175/JCLI-D-13-00294.1

Tsushima, Y., Iga, S., Tomita, H., Satoh, M., Noda, A. T., & Webb, M. J. (2014). High cloud increase in a perturbed SST experiment with a global nonhydrostatic model including explicit convective processes. *Journal of Advances in Modeling Earth Systems*, *6*(3), 571–585. http://dx.doi.org/10.1002/2013MS000301

Turner, E. C., & Tett, S. F. B. (2014). Using longwave HIRS radiances to test climate models. *Climate Dynamics*, *43*(3-4), 1103–1127. http://dx.doi.org/10.1007/s00382-013-1959-6

Voigt, A., Stevens, B., Bader, J., & Mauritsen, T. (2014). Compensation of Hemispheric Albedo Asymmetries by Shifts of the ITCZ and Tropical Clouds. *Journal of Climate*, *27*(3), 1029–1045. http://dx.doi.org/10.1175/JCLI-D-13-00205.1

Vuilleumier, L., Hauser, M., Félix, C., Vignola, F., Blanc, P., Kazantzidis, A., & Calpini, B. (2014). Accuracy of ground surface broadband shortwave radiation monitoring. *Journal of Geophysical Research: Atmospheres*, *119*(24), 2014JD022335. http://doi.org/10.1002/2014JD022335

Wang, A., & Zeng, X. (2014). Range of monthly mean hourly land surface air temperature diurnal cycle over high northern latitudes. *Journal of Geophysical Research: Atmospheres*, *119*(10), 2014JD021602. http://dx.doi.org/10.1002/2014JD021602

Wang, F., Yang, S., & Wu, T. (2014). Radiation budget biases in AMIP5 models over the East Asian monsoon region. *Journal of Geophysical Research: Atmospheres*, *119*(23), 2014JD022243. http://dx.doi.org/10.1002/2014JD022243

Wang, M., Liu, X., Zhang, K., & Comstock, J. M. (2014). Aerosol effects on cirrus through ice nucleation in the Community Atmosphere Model CAM5 with a statistical cirrus scheme. *Journal of Advances in Modeling Earth Systems*, *6*(3), 756–776. http://dx.doi.org/10.1002/2014MS000339

Wang, P., Sneep, M., Veefkind, J. P., Stammes, P., & Levelt, P. F. (2014). Evaluation of broadband surface solar irradiance derived from the Ozone Monitoring Instrument. *Remote Sensing of Environment*, *149*, 88–99. http://dx.doi.org/10.1016/j.rse.2014.03.036

Wang, S., Sobel, A. H., Zhang, F., Sun, Y. Q., Yue, Y., & Zhou, L. (2014). Regional simulation of the October and November MJO events observed during the CINDY/DYNAMO field campaign at gray zone resolution. *Journal of Climate*. http://dx.doi.org/10.1175/JCLI-D-14-00294.1

Wang, Z., Zhang, H., & Lu, P. (2014). Improvement of cloud microphysics in the aerosol-climate model BCC_AGCM2.0.1_CUACE/Aero, evaluation against observations, and updated aerosol indirect effect. *Journal of Geophysical Research: Atmospheres*, *119*(13), 2014JD021886. http://dx.doi.org/10.1002/2014JD021886

Wild, M., Folini, D., Hakuba, M. Z., Schär, C., Seneviratne, S. I., Kato, S., … König-Langlo, G. (2014). The energy balance over land and oceans: an assessment based on direct observations and CMIP5 climate models. *Climate Dynamics*, 1–37. http://dx.doi.org/10.1007/s00382-014-2430-z

Xi, B., Dong, X., Minnis, P., & Sun-Mack, S. (2014). Comparison of marine boundary layer cloud properties from CERES-MODIS Edition 4 and DOE ARM AMF measurements at the Azores. *Journal of Geophysical Research: Atmospheres*, *119*(15), 2014JD021813. http://dx.doi.org/10.1002/2014JD021813

Yan, H., Huang, J., Minnis, P., Yi, Y., Sun-Mack, S., Wang, T., & Nakajima, T. Y. (2014.). Comparison of CERES-MODIS cloud microphysical properties with surface observations over Loess Plateau. *Journal of Quantitative Spectroscopy and Radiative Transfer*. http://dx.doi.org/10.1016/j.jqsrt.2014.09.009

Yang, Y., Palm, S. P., Marshak, A., Wu, D. L., Yu, H., & Fu, Q. (2014). First satellite-detected perturbations of outgoing longwave radiation associated with blowing snow events over Antarctica. *Geophysical Research Letters*, *41*(2), 2013GL058932. http://dx.doi.org/10.1002/2013GL058932

Yin, D., Roderick, M. L., Leech, G., Sun, F., & Huang, Y. (2014). The contribution of reduction in evaporative cooling to higher surface air temperatures during drought. *Geophysical Research Letters*, *41*(22), 2014GL062039. http://dx.doi.org/10.1002/2014GL062039

Yu, S., Alapaty, K., Mathur, R., Pleim, J., Zhang, Y., Nolte, C., … Nagashima, T. (2014). Attribution of the United States "warming hole": Aerosol indirect effect and precipitable water vapor. *Scientific Reports*, *4*. http://dx.doi.org/10.1038/srep06929

Zhang, D., Luo, T., Liu, D., & Wang, Z. (2014). Spatial scales of altocumulus clouds observed with collocated CALIPSO and CloudSat measurements. *Atmospheric Research*, *149*, 58–69. http://dx.doi.org/10.1016/j.atmosres.2014.05.023

Zhang, X., Liang, S., Zhou, G., Wu, H., & Zhao, X. (2014). Generating Global LAnd Surface Satellite incident shortwave radiation and photosynthetically active radiation products from multiple satellite data. *Remote Sensing of Environment*, *152*, 318–332. http://dx.doi.org/10.1016/j.rse.2014.07.003

Zhang, Y., Chen, H., & Yu, R. (2014). Simulations of Stratus Clouds over Eastern China in CAM5: Sensitivity to Horizontal Resolution. *Journal of Climate*, *27*(18), 7033–7052. http://dx.doi.org/10.1175/JCLI-D-13-00732.1

Zhou, L., Tian, Y., Myneni, R. B., Ciais, P., Saatchi, S., Liu, Y. Y., … Hwang, T. (2014). Widespread decline of Congo rainforest greenness in the past decade. *Nature*, *509*(7498), 86–90. http://dx.doi.org/10.1038/nature13265

Clouds and the Earth's Radiant Energy System
CERES Publications for 2013

Alexandri, G., Meleti, C., Georgoulias, A. K., & Balis, D. (2013). Trends of Shortwave and Longwave Surface Radiation in Europe: Spatiotemporal Analysis and Comparison of Satellite and Ground-Based Observations. In C. G. Helmis & P. T. Nastos (Eds.), *Advances in Meteorology, Climatology and Atmospheric Physics* (pp. 857–864). Springer Berlin Heidelberg. Retrieved from http://link.springer.com/chapter/10.1007/978-3-642-29172-2_120

Bardeen, C. G., Gettelman, A., Jensen, E. J., Heymsfield, A., Conley, A. J., Delanoë, J., … Toon, O. B. (2013). Improved cirrus simulations in a general circulation model using CARMA sectional microphysics. *Journal of Geophysical Research: Atmospheres*, *118*(20), 11,679–11,697. http://dx.doi.org/10.1002/2013JD020193

Benedict, J. J., Maloney, E. D., Sobel, A. H., Frierson, D. M., & Donner, L. J. (2013). Tropical Intraseasonal Variability in Version 3 of the GFDL Atmosphere Model. *Journal of Climate*, *26*(2), 426–449. http://dx.doi.org/10.1175/JCLI-D-12-00103.1

Bengtsson, L., Hodges, K. I., Koumoutsaris, S., Zahn, M., & Berrisford, P. (2012). The Changing Energy Balance of the Polar Regions in a Warmer Climate. *Journal of Climate*, *26*(10), 3112–3129. http://dx.doi.org/10.1175/JCLI-D-12-00233.1

Berry, E., & Mace, G. G. (2013). Cirrus Cloud Properties and the Large-Scale Meteorological Environment: Relationships Derived from A-Train and NCEP–NCAR Reanalysis Data. *Journal of Applied Meteorology and Climatology*, *52*(5), 1253–1276. http://dx.doi.org/10.1175/JAMC-D-12-0102.1

Bizard, A., Caillault, K., Lavigne, C., Roblin, A., & Chervet, P. (2013). Application of Cloud Occurrence Climatology from CALIOP to Evaluate Performances of Airborne and Satellite Electro-Optical Sensors. *Journal of Atmospheric and Oceanic Technology*, *30*(10), 2406–2416. http://dx.doi.org/10.1175/JTECH-D-12-00276.1

Blunden, J., & Arndt, D. S. (2013). State of the Climate in 2012. *Bulletin of the American Meteorological Society*, *94*(8), S1–S258. http://dx.doi.org/10.1175/2013BAMSStateoftheClimate.1

Bogenschutz, P. A., Gettelman, A., Morrison, H., Larson, V. E., Craig, C., & Schanen, D. P. (2013). Higher-Order Turbulence Closure and Its Impact on Climate Simulations in the Community Atmosphere Model. *Journal of Climate*, *26*(23), 9655–9676. http://dx.doi.org/10.1175/JCLI-D-13-00075.1

Bourassa, M. A., Gille, S. T., Bitz, C., Carlson, D., Cerovecki, I., Clayson, C. A., … Wick, G. A. (2013). High-Latitude Ocean and Sea Ice Surface Fluxes: Challenges for Climate Research. *Bulletin of the American Meteorological Society*, *94*(3), 403–423. http://dx.doi.org/10.1175/BAMS-D-11-00244.1

Cheng, A., & Xu, K.-M. (2013). Evaluating Low-Cloud Simulation from an Upgraded Multiscale Modeling Framework Model. Part III: Tropical and Subtropical Cloud Transitions over the Northern Pacific. *Journal of Climate*, *26*(16), 5761–5781. http://dx.doi.org/10.1175/JCLI-D-12-00650.1

Chen, S., Huang, J., Zhao, C., Qian, Y., Leung, L. R., & Yang, B. (2013). Modeling the transport and radiative forcing of Taklimakan dust over the Tibetan Plateau: A case study in the summer of 2006. *Journal of Geophysical Research: Atmospheres*, *118*(2), 797–812. http://dx.doi.org/10.1002/jgrd.50122

Chepfer, H., Cesana, G., Winker, D., Getzewich, B., Vaughan, M., & Liu, Z. (2013). Comparison of Two Different Cloud Climatologies Derived from CALIOP-Attenuated Backscattered Measurements (Level 1): The *CALIPSO* -ST and the *CALIPSO* -GOCCP. *Journal of Atmospheric and Oceanic Technology*, *30*(4), 725–744. http://dx.doi.org/10.1175/JTECH-D-12-00057.1

Christensen, M. W., Stephens, G. L., & Lebsock, M. D. (2013). Exposing biases in retrieved low cloud properties from CloudSat: A guide for evaluating observations and climate data. *Journal of Geophysical Research: Atmospheres*, *118*(21), 12,120–12,131. http://dx.doi.org/10.1002/2013JD020224

Decoster, I., Clerbaux, N., Baudrez, E., Dewitte, S., Ipe, A., Nevens, S., … Cornelis, J. (2013). A Spectral Aging Model for the *Meteosat-7* Visible Band. *Journal of Atmospheric and Oceanic Technology*, *30*(3), 496–509. http://dx.doi.org/10.1175/JTECH-D-12-00124.1

Dessler, A. E. (2013). Observations of Climate Feedbacks over 2000–10 and Comparisons to Climate Models*. *Journal of Climate*, *26*(1), 333–342. http://dx.doi.org/10.1175/JCLI-D-11-00640.1

Dessler, A. E., & Loeb, N. g. (2013). Impact of dataset choice on calculations of the short-term cloud feedback. *Journal of Geophysical Research: Atmospheres*, *118*(7), 2821–2826. http://dx.doi.org/10.1002/jgrd.50199

Doelling, D. R., Loeb, N. G., Keyes, D. F., Nordeen, M. L., Morstad, D., Nguyen, C., … Sun, M. (2013). Geostationary Enhanced Temporal Interpolation for CERES Flux Products. *Journal of Atmospheric and Oceanic Technology*, *30*(6), 1072–1090. http://dx.doi.org/10.1175/JTECH-D-12-00136.1

Donohoe, A., & Battisti, D. S. (2013). The Seasonal Cycle of Atmospheric Heating and Temperature. *Journal of Climate*, *26*(14), 4962–4980. http://dx.doi.org/10.1175/JCLI-D-12-00713.1

Donohoe, A., Marshall, J., Ferreira, D., & Mcgee, D. (2013). The Relationship between ITCZ Location and Cross-Equatorial Atmospheric Heat Transport: From the Seasonal Cycle to the Last Glacial Maximum. *Journal of Climate*, *26*(11), 3597–3618. http://dx.doi.org/10.1175/JCLI-D-12-00467.1

Evans, K. J., Lauritzen, P. H., Mishra, S. K., Neale, R. B., Taylor, M. A., & Tribbia, J. J. (2013). AMIP Simulation with the CAM4 Spectral Element Dynamical Core. *Journal of Climate*, *26*(3), 689–709. http://dx.doi.org/10.1175/JCLI-D-11-00448.1

Feng, N., & Christopher, S. A. (2013). Satellite and surface-based remote sensing of Southeast Asian aerosols and their radiative effects. *Atmospheric Research*, *122*, 544–554. http://dx.doi.org/10.1016/j.atmosres.2012.02.018

Feulner, G., Rahmstorf, S., Levermann, A., & Volkwardt, S. (2013). On the Origin of the Surface Air Temperature Difference between the Hemispheres in Earth's Present-Day Climate. *Journal of Climate*, *26*(18), 7136–7150. http://dx.doi.org/10.1175/JCLI-D-12-00636.1

Franklin, C. N., Sun, Z., Bi, D., Dix, M., Yan, H., & Bodas-Salcedo, A. (2013). Evaluation of clouds in ACCESS using the satellite simulator package COSP: Global, seasonal, and regional cloud properties. *Journal of Geophysical Research: Atmospheres*, *118*(2), 732–748. http://dx.doi.org/10.1029/2012JD018469

Frierson, D. M. W., Hwang, Y.-T., Fučkar, N. S., Seager, R., Kang, S. M., Donohoe, A., … Battisti, D. S. (2013). Contribution of ocean overturning circulation to tropical rainfall peak in the Northern Hemisphere. *Nature Geoscience*, *6*(11), 940–944. http://dx.doi.org/10.1038/ngeo1987

Gautam, R., Hsu, N. C., Eck, T. F., Holben, B. N., Janjai, S., Jantarach, T., … Lau, W. K. (2013). Characterization of aerosols over the Indochina peninsula from satellite-surface observations during biomass burning pre-monsoon season. *Atmospheric Environment*, *78*, 51–59. http://dx.doi.org/10.1016/j.atmosenv.2012.05.038

Goldberg, M. D., Kilcoyne, H., Cikanek, H., & Mehta, A. (2013). Joint Polar Satellite System: The United States next generation civilian polar-orbiting environmental satellite system. *Journal of Geophysical Research: Atmospheres*, *118*(24), 13,463–13,475. http://dx.doi.org/10.1002/2013JD020389

Guan, B., Waliser, D. E., Li, J.-L. F., & da Silva, A. (2013). Evaluating the impact of orbital sampling on satellite–climate model comparisons. *Journal of Geophysical Research: Atmospheres*, *118*(2), 355–369. http://dx.doi.org/10.1029/2012JD018590

Gustafson, W. I., Ma, P.-L., Xiao, H., Singh, B., Rasch, P. J., & Fast, J. D. (2013). The Separate Physics and Dynamics Experiment (SPADE) framework for determining resolution awareness: A case study of microphysics. *Journal of Geophysical Research: Atmospheres*, *118*(16), 9258–9276. http://dx.doi.org/10.1002/jgrd.50711

Hagemann, S., Loew, A., & Andersson, A. (2013). Combined evaluation of MPI-ESM land surface water and energy fluxes. *Journal of Advances in Modeling Earth Systems*, *5*(2), 259–286. http://dx.doi.org/10.1029/2012MS000173

Hakuba, M. Z., Folini, D., Sanchez-Lorenzo, A., & Wild, M. (2013). Spatial representativeness of ground-based solar radiation measurements. *Journal of Geophysical Research: Atmospheres*, *118*(15), 8585–8597. http://dx.doi.org/10.1002/jgrd.50673

Haynes, J. M., Vonder Haar, T. H., L'Ecuyer, T., & Henderson, D. (2013). Radiative heating characteristics of Earth's cloudy atmosphere from vertically resolved active sensors. *Geophysical Research Letters*, *40*(3), 624–630. http://dx.doi.org/10.1002/grl.50145

Henderson, D. S., L'Ecuyer, T., Stephens, G., Partain, P., & Sekiguchi, M. (2012). A Multisensor Perspective on the Radiative Impacts of Clouds and Aerosols. *Journal of Applied Meteorology and Climatology*, *52*(4), 853–871. http://dx.doi.org/10.1175/JAMC-D-12-025.1

Herman, J., DeLand, M. T., Huang, L.-K., Labow, G., Larko, D., Lloyd, S. A., … Weaver, C. (2013). A net decrease in the Earth's cloud, aerosol, and surface 340 nm reflectivity during the past 33 yr (1979–2011). *Atmos. Chem. Phys.*, *13*(16), 8505–8524. http://dx.doi.org/10.5194/acp-13-8505-2013

Huang, X., Cole, J. N. S., He, F., Potter, G. L., Oreopoulos, L., Lee, D., … Loeb, N. G. (2012). Longwave Band-By-Band Cloud Radiative Effect and Its Application in GCM Evaluation. *Journal of Climate*, *26*(2), 450–467. http://dx.doi.org/10.1175/JCLI-D-12-00112.1

Huang, Y. (2013). A Simulated Climatology of Spectrally Decomposed Atmospheric Infrared Radiation. *Journal of Climate*, *26*(5), 1702–1715. http://dx.doi.org/10.1175/JCLI-D-12-00438.1

Jia, B., Xie, Z., Dai, A., Shi, C., & Chen, F. (2013). Evaluation of satellite and reanalysis products of downward surface solar radiation over East Asia: Spatial and seasonal variations. *Journal of Geophysical Research: Atmospheres*, *118*(9), 3431–3446. http://dx.doi.org/10.1002/jgrd.50353

Jin, Z., Lukashin, C., Qiao, Y., & Gopalan, A. (2013). An efficient and effective method to simulate the earth spectral reflectance over large temporal and spatial scales. *Geophysical Research Letters*, *40*(2), 374–379. http://dx.doi.org/10.1002/grl.50116

Johnston, M. S., Eliasson, S., Eriksson, P., Forbes, R. M., Wyser, K., & Zelinka, M. D. (2013). Diagnosing the average spatio-temporal impact of convective systems – Part 1: A methodology for evaluating climate models. *Atmos. Chem. Phys.*, *13*(23), 12043–12058. http://dx.doi.org/10.5194/acp-13-12043-2013

Lauer, A., & Hamilton, K. (2013). Simulating Clouds with Global Climate Models: A Comparison of CMIP5 Results with CMIP3 and Satellite Data. *Journal of Climate*, *26*(11), 3823–3845. http://dx.doi.org/10.1175/JCLI-D-12-00451.1

Lin, B., Stackhouse, J., Paul, Sun, W., Hu, Y., Liu, Z., & Fan, T.-F. (Alice). (2013). Is Oklahoma getting drier? *Journal of Quantitative Spectroscopy and Radiative Transfer*, *122*, 208–213. http://dx.doi.org/10.1016/j.jqsrt.2012.07.024

Li, Y., Han, W., Shinoda, T., Wang, C., Lien, R.-C., Moum, J. N., & Wang, J.-W. (2013). Effects of the diurnal cycle in solar radiation on the tropical Indian Ocean mixed layer variability during wintertime Madden-Julian Oscillations. *Journal of Geophysical Research: Oceans*, *118*(10), 4945–4964. http://dx.doi.org/10.1002/jgrc.20395

Masunaga, H. (2013). A Satellite Study of Tropical Moist Convection and Environmental Variability: A Moisture and Thermal Budget Analysis. *Journal of the Atmospheric Sciences*, *70*(8), 2443–2466. http://dx.doi.org/10.1175/JAS-D-12-0273.1

McCarthy, J. K., Bitting, H., Evert, T. A., Frink, M. E., Hedman, T. R., Sakaguchi, P., & Folkman, M. (2013). Performance and Long-Term Stability of the Prelaunch Radiometric Calibration Facility for the Clouds and the Earth's Radiant Energy System Instruments. *IEEE Transactions on Geoscience and Remote Sensing*, *51*(1), 684–694. http://dx.doi.org/10.1109/TGRS.2012.2195726

Myers, T. A., & Norris, J. R. (2013). Observational Evidence That Enhanced Subsidence Reduces Subtropical Marine Boundary Layer Cloudiness. *Journal of Climate*, *26*(19), 7507–7524. http://dx.doi.org/10.1175/JCLI-D-12-00736.1

Myhre, G., Samset, B. H., Schulz, M., Balkanski, Y., Bauer, S., Berntsen, T. K., … Zhou, C. (2013). Radiative forcing of the direct aerosol effect from AeroCom Phase II simulations. *Atmos. Chem. Phys.*, *13*(4), 1853–1877. http://dx.doi.org/10.5194/acp-13-1853-2013

Naeger, A. R., Christopher, S. A., & Johnson, B. T. (2013). Multiplatform analysis of the radiative effects and heating rates for an intense dust storm on 21 June 2007. *Journal of Geophysical Research: Atmospheres*, *118*(16), 9316–9329. http://dx.doi.org/10.1002/jgrd.50713

Neale, R. B., Richter, J., Park, S., Lauritzen, P. H., Vavrus, S. J., Rasch, P. J., & Zhang, M. (2013). The Mean Climate of the Community Atmosphere Model (CAM4) in Forced SST and Fully Coupled Experiments. *Journal of Climate*, *26*(14), 5150–5168. http://dx.doi.org/10.1175/JCLI-D-12-00236.1

Oh, H.-R., Choi, Y.-S., Ho, C.-H., & Jeong, M.-J. (2013). Estimation of aerosol direct radiative effects for all-sky conditions from CERES and MODIS observations. *Journal of Atmospheric and Solar-Terrestrial Physics*, *102*, 311–320. http://dx.doi.org/10.1016/j.jastp.2013.06.009

Ollinaho, P., Laine, M., Solonen, A., Haario, H., & Järvinen, H. (2013). NWP model forecast skill optimization via closure parameter variations. *Quarterly Journal of the Royal Meteorological Society*, *139*(675), 1520–1532. http://dx.doi.org/10.1002/qj.2044

Painemal, D., Minnis, P., & O'Neill, L. (2013). The Diurnal Cycle of Cloud-Top Height and Cloud Cover over the Southeastern Pacific as Observed by *GOES-10*. *Journal of the Atmospheric Sciences*, *70*(8), 2393–2408. http://dx.doi.org/10.1175/JAS-D-12-0325.1

Painemal, D., Minnis, P., & Sun-Mack, S. (2013). The impact of horizontal heterogeneities, cloud fraction, and liquid water path on warm cloud effective radii from CERES-like Aqua MODIS retrievals. *Atmos. Chem. Phys.*, *13*(19), 9997–10003. http://dx.doi.org/10.5194/acp-13-9997-2013

Painemal, D., & Zuidema, P. (2013). The first aerosol indirect effect quantified through airborne remote sensing during VOCALS-REx. *Atmos. Chem. Phys.*, *13*(2), 917–931. http://dx.doi.org/10.5194/acp-13-917-2013

Parkinson, C. L. (2013). Summarizing the First Ten Years of NASA's Aqua Mission. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, *6*(3), 1179–1188. http://dx.doi.org/10.1109/JSTARS.2013.2239608

Petropoulos, G. P. (2013). Remote Sensing of Energy Fluxes and Soil Moisture Content. CRC Press.

Phakamas, N., Jintrawet, A., Patanothai, A., Sringam, P., & Hoogenboom, G. (2013). Estimation of solar radiation based on air temperature and application with the DSSAT v4.5 peanut and rice simulation models in Thailand. *Agricultural and Forest Meteorology*, *180*, 182–193. http://dx.doi.org/10.1016/j.agrformet.2013.06.015

Previdi, M., Smith, K. L., & Polvani, L. M. (2013). The Antarctic Atmospheric Energy Budget. Part I: Climatology and Intraseasonal-to-Interannual Variability. *Journal of Climate*, *26*(17), 6406–6418. http://dx.doi.org/10.1175/JCLI-D-12-00640.1

Radkevich, A., Khlopenkov, K., Rutan, D., & Kato, S. (2012). A Supplementary Clear-Sky Snow and Ice Recognition Technique for CERES Level 2 Products. *Journal of Atmospheric and Oceanic Technology*, *30*(3), 557–568. http://dx.doi.org/10.1175/JTECH-D-12-00100.1

Roehrig, R., Bouniol, D., Guichard, F., Hourdin, F., & Redelsperger, J.-L. (2013). The Present and Future of the West African Monsoon: A Process-Oriented Assessment of CMIP5 Simulations along the AMMA Transect. *Journal of Climate*, *26*(17), 6471–6505. http://dx.doi.org/10.1175/JCLI-D-12-00505.1

Rose, F. G., Rutan, D. A., Charlock, T., Smith, G. L., & Kato, S. (2013). An Algorithm for the Constraining of Radiative Transfer Calculations to CERES-Observed Broadband Top-of-Atmosphere Irradiance. *Journal of Atmospheric and Oceanic Technology*, *30*(6), 1091–1106. http://dx.doi.org/10.1175/JTECH-D-12-00058.1

Sathiyamoorthy, V., Mahesh, C., Gopalan, K., Prakash, S., Shukla, B. P., & Mathur, A. K. (2013). Characteristics of low clouds over the Arabian Sea. *Journal of Geophysical Research: Atmospheres*, *118*(24), 13,489–13,503. http://dx.doi.org/10.1002/2013JD020553

Sathiyamoorthy, V., Shukla, B. P., Sikhakolli,R., Chaurasia, S., Simon, B., Gohil, B.S., & Pal, P.K. (2013). Top of atmosphere flux from the Megha-Tropiques ScaRaB. *Current Science*, *104*(12), 1656–1661.

Scarino, B., Minnis, P., Palikonda, R., Reichle, R. H., Morstad, D., Yost, C., … Liu, Q. (2013). Retrieving Clear-Sky Surface Skin Temperature for Numerical Weather Prediction Applications from Geostationary Satellite Data. *Remote Sensing*, *5*(1), 342–366. http://dx.doi.org/10.3390/rs5010342

Sena, E. T., Artaxo, P., & Correia, A. L. (2013). Spatial variability of the direct radiative forcing of biomass burning aerosols and the effects of land use change in Amazonia. *Atmos. Chem. Phys.*, *13*(3), 1261–1275. http://dx.doi.org/10.5194/acp-13-1261-2013

Shi, Q., & Liang, S. (2013). Characterizing the surface radiation budget over the Tibetan Plateau with ground-measured, reanalysis, and remote sensing data sets: 1. Methodology. *Journal of Geophysical Research: Atmospheres*, *118*(17), 9642–9657. http://dx.doi.org/10.1002/jgrd.50720

Smith, K. L., Previdi, M., & Polvani, L. M. (2013). The Antarctic Atmospheric Energy Budget. Part II: The Effect of Ozone Depletion and its Projected Recovery. *Journal of Climate*, *26*(24), 9729–9744. http://dx.doi.org/10.1175/JCLI-D-13-00173.1

Song, X., & Yu, L. (2013). How much net surface heat flux should go into the Western Pacific Warm Pool? *Journal of Geophysical Research: Oceans*, *118*(7), 3569–3585. http://dx.doi.org/10.1002/jgrc.20246

Stevens, B., Giorgetta, M., Esch, M., Mauritsen, T., Crueger, T., Rast, S., … Roeckner, E. (2013). Atmospheric component of the MPI-M Earth System Model: ECHAM6. *Journal of Advances in Modeling Earth Systems*, *5*(2), 146–172. http://dx.doi.org/10.1002/jame.20015

Stubenrauch, C. J., Rossow, W. B., Kinne, S., Ackerman, S., Cesana, G., Chepfer, H., … Zhao, G. (2013). Assessment of Global Cloud Datasets from Satellites: Project and Database Initiated by the GEWEX Radiation Panel. *Bulletin of the American Meteorological Society*, *94*(7), 1031–1049. http://dx.doi.org/10.1175/BAMS-D-12-00117.1

Su, H., & Jiang, J. H. (2013). Tropical Clouds and Circulation Changes during the 2006/07 and 2009/10 El Niños. *Journal of Climate*, *26*(2), 399–413. http://dx.doi.org/10.1175/JCLI-D-12-00152.1

Su, W., Loeb, N. G., Schuster, G. L., Chin, M., & Rose, F. G. (2013). Global all-sky shortwave direct radiative forcing of anthropogenic aerosols from combined satellite observations and GOCART simulations. *Journal of Geophysical Research: Atmospheres*, *118*(2), 655–669. http://dx.doi.org/10.1029/2012JD018294

Tang, Q., & Leng, G. (2013). Changes in Cloud Cover, Precipitation, and Summer Temperature in North America from 1982 to 2009. *Journal of Climate*, *26*(5), 1733–1744. http://dx.doi.org/10.1175/JCLI-D-12-00225.1

Taylor, P. C. (2013). Variability of Monthly Diurnal Cycle Composites of TOA Radiative Fluxes in the Tropics. *Journal of the Atmospheric Sciences*, *71*(2), 754–766. http://dx.doi.org/10.1175/JAS-D-13-0112.1

Tett, S. F. B., Mineter, M. J., Cartis, C., Rowlands, D. J., & Liu, P. (2013). Can Top-of-Atmosphere Radiation Measurements Constrain Climate Predictions? Part I: Tuning. *Journal of Climate*, *26*(23), 9348–9366. http://dx.doi.org/10.1175/JCLI-D-12-00595.1

Thorsen, T. J., Fu, Q., & Comstock, J. M. (2013). Cloud effects on radiative heating rate profiles over Darwin using ARM and A-train radar/lidar observations. *Journal of Geophysical Research: Atmospheres*, *118*(11), 5637–5654. http://dx.doi.org/10.1002/jgrd.50476

Trenberth, K. E., & Fasullo, J. T. (2013). Regional Energy and Water Cycles: Transports from Ocean to Land. *Journal of Climate*, *26*(20), 7837–7851. http://dx.doi.org/10.1175/JCLI-D-13-00008.1

Tsushima, Y., & Manabe, S. (2013). Assessment of radiative feedback in climate models using satellite observations of annual flux variation. *Proceedings of the National Academy of Sciences*, *110*(19), 7568–7573. http://dx.doi.org/10.1073/pnas.1216174110

Vázquez-Navarro, M., Mayer, B., & Mannstein, H. (2013). A fast method for the retrieval of integrated longwave and shortwave top-of-atmosphere upwelling irradiances from MSG/SEVIRI (RRUMS). *Atmos. Meas. Tech.*, *6*(10), 2627–2640. http://dx.doi.org/10.5194/amt-6-2627-2013

Virts, K. S., Wallace, J. M., Hutchins, M. L., & Holzworth, R. H. (2013). Diurnal Lightning Variability over the Maritime Continent: Impact of Low-Level Winds, Cloudiness, and the MJO. *Journal of the Atmospheric Sciences*, *70*(10), 3128–3146. http://dx.doi.org/10.1175/JAS-D-13-021.1

Voigt, A., Stevens, B., Bader, J., & Mauritsen, T. (2013). The Observed Hemispheric Symmetry in Reflected Shortwave Irradiance. *Journal of Climate*, *26*(2), 468–477. http://dx.doi.org/10.1175/JCLI-D-12-00132.1

Von Salzen, K., Scinocca, J. F., McFarlane, N. A., Li, J., Cole, J. N. S., Plummer, D., … Solheim, L. (2013). The Canadian Fourth Generation Atmospheric Global Climate Model (CanAM4). Part I: Representation of Physical Processes. *Atmosphere-Ocean*, *51*(1), 104–125. http://dx.doi.org/10.1080/07055900.2012.755610

Wang, H., & Su, W. (2013). Evaluating and understanding top of the atmosphere cloud radiative effects in Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Coupled Model Intercomparison Project Phase 5 (CMIP5) models using satellite observations. *Journal of Geophysical Research: Atmospheres*, *118*(2), 683–699. http://dx.doi.org/10.1029/2012JD018619

Wang, K., & Dickinson, R. E. (2013). Global atmospheric downward longwave radiation at the surface from ground-based observations, satellite retrievals, and reanalyses. *Reviews of Geophysics*, *51*(2), 150–185. http://dx.doi.org/10.1002/rog.20009

Wang, W., Huang, J., Zhou, T., Bi, J., Lin, L., Chen, Y., … Su, J. (2013). Estimation of radiative effect of a heavy dust storm over northwest China using Fu–Liou model and ground measurements. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *122*, 114–126. http://dx.doi.org/10.1016/j.jqsrt.2012.10.018

Watanabe, M., Kamae, Y., Yoshimori, M., Oka, A., Sato, M., Ishii, M., … Kimoto, M. (2013). Strengthening of ocean heat uptake efficiency associated with the recent climate hiatus. *Geophysical Research Letters*, *40*(12), 3175–3179. http://dx.doi.org/10.1002/grl.50541

Wen, G., Marshak, A., Levy, R. C., Remer, L. A., Loeb, N. G., Várnai, T., & Cahalan, R. F. (2013). Improvement of MODIS aerosol retrievals near clouds. *Journal of Geophysical Research: Atmospheres*, *118*(16), 9168–9181. http://dx.doi.org/10.1002/jgrd.50617

Wielicki, B. A., Young, D. F., Mlynczak, M. G., Thome, K. J., Leroy, S., Corliss, J., … Xiong, X. (2013). Achieving Climate Change Absolute Accuracy in Orbit. *Bulletin of the American Meteorological Society*, 130308154356007. http://dx.doi.org/10.1175/BAMS-D-12-00149.1

Williams, K. D., Bodas-Salcedo, A., Déqué, M., Fermepin, S., Medeiros, B., Watanabe, M., … Williamson, D. L. (2013). The Transpose-AMIP II Experiment and Its Application to the Understanding of Southern Ocean Cloud Biases in Climate Models. *Journal of Climate*, *26*(10), 3258–3274. http://dx.doi.org/10.1175/JCLI-D-12-00429.1

Xie, S., Liu, X., Zhao, C., & Zhang, Y. (2013). Sensitivity of CAM5-Simulated Arctic Clouds and Radiation to Ice Nucleation Parameterization. *Journal of Climate*, *26*(16), 5981–5999. http://dx.doi.org/10.1175/JCLI-D-12-00517.1

Xu, K.-M., & Cheng, A. (2013a). Evaluating Low Cloud Simulation from an Upgraded Multiscale Modeling Framework Model. Part II: Seasonal Variations over the Eastern Pacific. *Journal of Climate*, 130130122615008. http://dx.doi.org/10.1175/JCLI-D-12-00276.1

Xu, K.-M., & Cheng, A. (2013b). Evaluating Low-Cloud Simulation from an Upgraded Multiscale Modeling Framework Model. Part I: Sensitivity to Spatial Resolution and Climatology. *Journal of Climate*, *26*(16), 5717–5740. http://dx.doi.org/10.1175/JCLI-D-12-00200.1

Xu, Y., Bahadur, R., Zhao, C., & Ruby Leung, L. (2013). Estimating the radiative forcing of carbonaceous aerosols over California based on satellite and ground observations. *Journal of Geophysical Research: Atmospheres*, *118*(19), 11,148–11,160. http://dx.doi.org/10.1002/jgrd.50835

Yang, B., Qian, Y., Lin, G., Leung, L. R., Rasch, P. J., Zhang, G. J., … Liu, X. (2013). Uncertainty quantification and parameter tuning in the CAM5 Zhang-McFarlane convection scheme and impact of improved convection on the global circulation and climate. *Journal of Geophysical Research: Atmospheres*, *118*(2), 395–415. http://dx.doi.org/10.1029/2012JD018213

Zhang, F., Liang, X.-Z., Q. Z., Gu, Y., & Su, S. (2013). Cloud-Aerosol-Radiation (CAR) ensemble modeling system: Overall accuracy and efficiency. *Advances in Atmospheric Sciences*, *30*(4), 955–973. http://dx.doi.org/10.1007/s00376-012-2171-z

Zhang, T., Stackhouse Jr., P. W., Gupta, S. K., Cox, S. J., Colleen Mikovitz, J., & Hinkelman, L. M. (2013). The validation of the GEWEX SRB surface shortwave flux data products using BSRN measurements: A systematic quality control, production and application approach. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *122*, 127–140. http://dx.doi.org/10.1016/j.jqsrt.2012.10.004

Zhang, Y., Yu, R., Li, J., Yuan, W., & Zhang, M. (2013). Dynamic and Thermodynamic Relations of Distinctive Stratus Clouds on the Lee Side of the Tibetan Plateau in the Cold Season. *Journal of Climate*, *26*(21), 8378–8391. http://dx.doi.org/10.1175/JCLI-D-13-00009.1

Zhou, C., Zelinka, M. D., Dessler, A. E., & Yang, P. (2013). An Analysis of the Short-Term Cloud Feedback Using MODIS Data. *Journal of Climate*, *26*(13), 4803–4815. http://dx.doi.org/10.1175/JCLI-D-12-00547.1

Zhou, T., Huang, J., Huang, Z., Liu, J., Wang, W., & Lin, L. (2013). The depolarization–attenuated backscatter relationship for dust plumes. *Optics Express*, *21*(13), 15195–15204. http://dx.doi.org/10.1364/OE.21.015195

Clouds and the Earth's Radiant Energy System

CERES Publications for 2012

Aumann, H. H., Ruzmaikin, A., & Behrangi, A. (2012). On the Surface Temperature Sensitivity of the Reflected Shortwave, Outgoing Longwave, and Net Incident Radiation. *Journal of Climate*, *25*(19), 6585–6593. http://dx.doi.org/10.1175/JCLI-D-11-00607.1

Barker, H. W., Kato, S., & Wehr, T. (2012). Computation of Solar Radiative Fluxes by 1D and 3D Methods Using Cloudy Atmospheres Inferred from A-train Satellite Data. *Surveys in Geophysics*, *33*(3-4), 657–676. http://dx.doi.org/10.1007/s10712-011-9164-9

Behrangi, A., Kubar, T., & Lambrigtsen, B. (2012). Phenomenological Description of Tropical Clouds Using CloudSat Cloud Classification. *Monthly Weather Review*, *140*(10), 3235–3249. http://dx.doi.org/10.1175/MWR-D-11-00247.1

Bender, F. A.-M., Ramanathan, V., & Tselioudis, G. (2012). Changes in extratropical storm track cloudiness 1983–2008: observational support for a poleward shift. *Climate Dynamics*, *38*(9-10), 2037–2053. http://dx.doi.org/10.1007/s00382-011-1065-6

Blunden, J., & Arndt, D. S. (2012). State of the Climate in 2011. *Bulletin of the American Meteorological Society*, *93*(7), S1–S282. http://dx.doi.org/10.1175/2012BAMSStateoftheClimate.1

Bodas-Salcedo, A., Williams, K. D., Field, P. R., & Lock, A. P. (2012). The Surface Downwelling Solar Radiation Surplus over the Southern Ocean in the Met Office Model: The Role of Midlatitude Cyclone Clouds. *Journal of Climate*, *25*(21), 7467–7486. http://dx.doi.org/10.1175/JCLI-D-11-00702.1

Boening, C., Willis, J. K., Landerer, F. W., Nerem, R. S., & Fasullo, J. (2012). The 2011 La Niña: So strong, the oceans fell. *Geophysical Research Letters*, *39*(19), L19602. http://dx.doi.org/10.1029/2012GL053055

Brient, F., & Bony, S. (2012). How may low-cloud radiative properties simulated in the current climate influence low-cloud feedbacks under global warming? *Geophysical Research Letters*, *39*(20), L20807. http://dx.doi.org/10.1029/2012GL053265

Cesana, G., & Chepfer, H. (2012). How well do climate models simulate cloud vertical structure? A comparison between CALIPSO-GOCCP satellite observations and CMIP5 models. *Geophysical Research Letters*, *39*(20), L20803. http://dx.doi.org/10.1029/2012GL053153

Chen, L., Yan, G., Wang, T., Ren, H., Calbó, J., Zhao, J., & McKenzie, R. (2012). Estimation of surface shortwave radiation components under all sky conditions: Modeling and sensitivity analysis. *Remote Sensing of Environment*, *123*, 457–469. http://dx.doi.org/10.1016/j.rse.2012.04.006

Christopher, S. A., Feng, N., Naeger, A., Johnson, B., & Marenco, F. (2012). Satellite remote sensing analysis of the 2010 Eyjafjallajökull volcanic ash cloud over the North Sea during 4–18 May 2010. *Journal of Geophysical Research: Atmospheres*, *117*(D20), D00U20. http://dx.doi.org/10.1029/2011JD016850

Corbett, J. G., Su, W., & Loeb, N. G. (2012). Observed effects of sastrugi on CERES top-of-atmosphere clear-sky reflected shortwave flux over Antarctica. *Journal of Geophysical Research: Atmospheres*, *117*(D18), D18104. http://dx.doi.org/10.1029/2012JD017529

Cullather, R. I., & Bosilovich, M. G. (2012). The Energy Budget of the Polar Atmosphere in MERRA. *Journal of Climate*, *25*(1), 5–24. http://dx.doi.org/10.1175/2011JCLI4138.1

De Boer, G., Chapman, W., Kay, J. E., Medeiros, B., Shupe, M. D., Vavrus, S., & Walsh, J. (2012). A Characterization of the Present-Day Arctic Atmosphere in CCSM4. *Journal of Climate*, *25*(8), 2676–2695. http://dx.doi.org/10.1175/JCLI-D-11-00228.1

Domenech, C., & Lopez-Baeza, E. (2012b). Analysis of broadband surface BRDFs derived from TOA SW CERES measurements for surfaces classified by the IGBP land cover. *International Journal of Remote Sensing*, *33*(14), 4374–4392. http://dx.doi.org/10.1080/01431161.2011.648282

Domenech, C., Lopez-Baeza, E., Donovan, D. P., & Wehr, T. (2012). Radiative Flux Estimation from a Broadband Radiometer Using Synthetic Angular Models in the EarthCARE Mission Framework. Part II: Evaluation. *Journal of Applied Meteorology and Climatology*, *51*(9), 1714–1731. http://dx.doi.org/10.1175/JAMC-D-11-0268.1

Donohoe, A., & Battisti, D. S. (2012). What Determines Meridional Heat Transport in Climate Models? *Journal of Climate*, *25*(11), 3832–3850. http://dx.doi.org/10.1175/JCLI-D-11-00257.1

Douglass, D. H., & Knox, R. S. (2012). Ocean heat content and Earth's radiation imbalance. II. Relation to climate shifts. *Physics Letters A*, *376*(14), 1226–1229. http://dx.doi.org/10.1016/j.physleta.2012.02.027

Eckman, R. S., & Stackhouse Jr., P. W. (2012). CEOS contributions to informing energy management and policy decision making using space-based Earth observations. *Applied Energy*, *90*(1), 206–210. http://dx.doi.org/10.1016/j.apenergy.2011.03.001

Feng, Z., Dong, X., Xi, B., McFarlane, S. A., Kennedy, A., Lin, B., & Minnis, P. (2012). Life cycle of midlatitude deep convective systems in a Lagrangian framework. *Journal of Geophysical Research: Atmospheres*, *117*(D23), D23201. http://dx.doi.org/10.1029/2012JD018362

Ferguson, C. R., Wood, E. F., & Vinukollu, R. K. (2012). A Global Intercomparison of Modeled and Observed Land–Atmosphere Coupling*. *Journal of Hydrometeorology*, *13*(3), 749–784. http://dx.doi.org/10.1175/JHM-D-11-0119.1

Fridlind, A. M., Ackerman, A. S., Chaboureau, J.-P., Fan, J., Grabowski, W. W., Hill, A. A., … Zhang, M. (2012). A comparison of TWP-ICE observational data with cloud-resolving model results. *Journal of Geophysical Research: Atmospheres*, *117*(D5). http://dx.doi.org/10.1029/2011JD016595

Fu, P., Zhong, S., Huang, J., & Song, G. (2012). An observational study of aerosol and turbulence properties during dust storms in northwest China. *Journal of Geophysical Research: Atmospheres*, *117*(D90. http://dx.doi.org/10.1029/2011JD016696

Garnier, A., Pelon, J., Dubuisson, P., Faivre, M., Chomette, O., Pascal, N., & Kratz, D. P. (2012). Retrieval of Cloud Properties Using CALIPSO Imaging Infrared Radiometer. Part I: Effective Emissivity and Optical Depth. *Journal of Applied Meteorology and Climatology*, *51*(7), 1407–1425. http://dx.doi.org/10.1175/JAMC-D-11-0220.1

Gettelman, A., Liu, X., Barahona, D., Lohmann, U., & Chen, C. (2012). Climate impacts of ice nucleation. *Journal of Geophysical Research: Atmospheres*, *117*(D20). http://dx.doi.org/10.1029/2012JD017950

Harrop, B. E., & Hartmann, D. L. (2012). Testing the Role of Radiation in Determining Tropical Cloud-Top Temperature. *Journal of Climate*, *25*(17), 5731–5747. http://dx.doi.org/10.1175/JCLI-D-11-00445.1

Hong, G., Minnis, P., Doelling, D., Ayers, J. K., & Sun-Mack, S. (2012). Estimating effective particle size of tropical deep convective clouds with a look-up table method using satellite measurements of brightness temperature differences. *Journal of Geophysical Research: Atmospheres*, *117*(D6), D06207. http://dx.doi.org/10.1029/2011JD016652

Huang, X., Loeb, N. G., & Chuang, H. (2012). Assessing Stability of CERES-FM3 Daytime Longwave Unfiltered Radiance with AIRS Radiances. *Journal of Atmospheric and Oceanic Technology*, *29*(3), 375–381. http://dx.doi.org/10.1175/JTECH-D-11-00066.1

Ichikawa, H., Masunaga, H., Tsushima, Y., & Kanzawa, H. (2012). Reproducibility by Climate Models of Cloud Radiative Forcing Associated with Tropical Convection. *Journal of Climate*, *25*(4), 1247–1262. http://dx.doi.org/10.1175/JCLI-D-11-00114.1

Imaoka, K., & Nakamura, K. (2012). Statistical Analysis of the Life Cycle of Isolated Tropical Cold Cloud Systems Using MTSAT-1R and TRMM Data. *Monthly Weather Review*, *140*(11), 3552–3572. http://dx.doi.org/10.1175/MWR-D-11-00364.1

Jiménez-Muñoz, J. C., Sobrino, J. A., & Mattar, C. (2012). Recent trends in solar exergy and net radiation at global scale. *Ecological Modelling*, *228*, 59–65. http://dx.doi.org/10.1016/j.ecolmodel.2011.12.027

Jin, Z., Lukachin, C., Gopalan, A., & Sun, W. (2012). Correlation between SCIAMACHY, MODIS, and CERES reflectance measurements: Implications for CLARREO. *Journal of Geophysical Research: Atmospheres*, *117*(D5), D05114. http://dx.doi.org/10.1029/2011JD017051

Johnston, M. S., Eriksson, P., Eliasson, S., Jones, C. G., Forbes, R. M., & Murtagh, D. P. (2012). The representation of tropical upper tropospheric water in EC Earth V2. *Climate Dynamics*, *39*(11), 2713–2731. http://dx.doi.org/10.1007/s00382-012-1511-0

Kandel, R. (2012). Understanding and Measuring Earth's Energy Budget: From Fourier, Humboldt, and Tyndall to CERES and Beyond. *Surveys in Geophysics*, *33*(3-4), 337–350. http://dx.doi.org/10.1007/s10712-011-9162-y

Kato, S., Loeb, N. G., Rutan, D. A., Rose, F. G., Sun-Mack, S., Miller, W. F., & Chen, Y. (2012). Uncertainty Estimate of Surface Irradiances Computed with MODIS-, CALIPSO-, and CloudSat-Derived Cloud and Aerosol Properties. *Surveys in Geophysics*, *33*(3-4), 395–412. http://dx.doi.org/10.1007/s10712-012-9179-x

Kay, J. E., Hillman, B. R., Klein, S. A., Zhang, Y., Medeiros, B., Pincus, R., … Ackerman, T. P. (2012). Exposing Global Cloud Biases in the Community Atmosphere Model (CAM) Using Satellite Observations and Their Corresponding Instrument Simulators. *Journal of Climate*, *25*(15), 5190–5207. http://dx.doi.org/10.1175/JCLI-D-11-00469.1

Kay, J. E., Holland, M. M., Bitz, C. M., Blanchard-Wrigglesworth, E., Gettelman, A., Conley, A., & Bailey, D. (2012). The Influence of Local Feedbacks and Northward Heat Transport on the Equilibrium Arctic Climate Response to Increased Greenhouse Gas Forcing. *Journal of Climate*, *25*(16), 5433–5450. http://dx.doi.org/10.1175/JCLI-D-11-00622.1

Kim, D., & Ramanathan, V. (2012). Improved estimates and understanding of global albedo and atmospheric solar absorption. *Geophysical Research Letters*, *39*(24), L24704. http://dx.doi.org/10.1029/2012GL053757

Konsta, D., Chepfer, H., & Dufresne, J.-L. (2012). A process oriented characterization of tropical oceanic clouds for climate model evaluation, based on a statistical analysis of daytime A-train observations. *Climate Dynamics*, *39*(9-10), 2091–2108. http://dx.doi.org/10.1007/s00382-012-1533-7

Kubar, T. L., Waliser, D. E., Li, J.-L., & Jiang, X. (2012). On the Annual Cycle, Variability, and Correlations of Oceanic Low-Topped Clouds with Large-Scale Circulation Using Aqua MODIS and ERA-Interim. *Journal of Climate*, *25*(18), 6152–6174. http://dx.doi.org/10.1175/JCLI-D-11-00478.1

Lauer, A., Bennartz, R., Hamilton, K., & Wang, Y. (2012). Modeling the Response of Marine Boundary Layer Clouds to Global Warming: The Impact of Subgrid-Scale Precipitation Formation. *Journal of Climate*, *25*(19), 6610–6626. http://dx.doi.org/10.1175/JCLI-D-11-00623.1

Leahy, L. V., Wood, R., Charlson, R. J., Hostetler, C. A., Rogers, R. R., Vaughan, M. A., & Winker, D. M. (2012). On the nature and extent of optically thin marine low clouds. *Journal of Geophysical Research: Atmospheres*, *117*(D22), D22201. http://dx.doi.org/10.1029/2012JD017929

Li, J.-L. F., Waliser, D. E., Chen, W.-T., Guan, B., Kubar, T., Stephens, G., … Horowitz, L. (2012). An observationally based evaluation of cloud ice water in CMIP3 and CMIP5 GCMs and contemporary reanalyses using contemporary satellite data. *Journal of Geophysical Research: Atmospheres*, *117*(D16), D16105. http://dx.doi.org/10.1029/2012JD017640

Liu, Y., & Liu, R. (2012). Evaluation of the Spatial and Temporal Uncertainties Distribution of Daily-Integrated Shortwave Downward Radiation Estimated from Polar-Orbiting Satellite Observation. *Journal of Atmospheric and Oceanic Technology*, *29*(10), 1481–1491. http://dx.doi.org/10.1175/JTECH-D-11-00142.1

Loeb, N. G., Kato, S., Su, W., Wong, T., Rose, F. G., Doelling, D. R., … Huang, X. (2012). Advances in Understanding Top-of-Atmosphere Radiation Variability from Satellite Observations. *Surveys in Geophysics*, *33*(3-4), 359–385. http://dx.doi.org/10.1007/s10712-012-9175-1

Loeb, N. G., Lyman, J. M., Johnson, G. C., Allan, R. P., Doelling, D. R., Wong, T., … Stephens, G. L. (2012). Observed changes in top-of-the-atmosphere radiation and upper-ocean heating consistent within uncertainty. *Nature Geoscience*, *5*(2), 110–113. http://dx.doi.org/10.1038/ngeo1375

Lu, Y., & Kueppers, L. M. (2012). Surface energy partitioning over four dominant vegetation types across the United States in a coupled regional climate model (Weather Research and Forecasting Model 3–Community Land Model 3.5). *Journal of Geophysical Research: Atmospheres*, *117*(D6), D06111. http://dx.doi.org/10.1029/2011JD016991

Masters, T. (2012). On the determination of the global cloud feedback from satellite measurements. *Earth System Dynamics*, *3*(2), 97–107. http://dx.doi.org/10.5194/esd-3-97-2012

Mayer, M., & Haimberger, L. (2012). Poleward Atmospheric Energy Transports and Their Variability as Evaluated from ECMWF Reanalysis Data. *Journal of Climate*, *25*(2), 734–752. http://dx.doi.org/10.1175/JCLI-D-11-00202.1

Ma, Y., & Gong, W. (2012). Evaluating the Performance of SVM in Dust Aerosol Discrimination and Testing its Ability in an Extended Area. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, *5*(6), 1849–1858. http://dx.doi.org/10.1109/JSTARS.2012.2206572

Ma, Y., & Pinker, R. T. (2012). Modeling shortwave radiative fluxes from satellites. *Journal of Geophysical Research: Atmospheres*, *117*(D23), D23202. http://dx.doi.org/10.1029/2012JD018332

Merrelli, A., & Turner, D. D. (2012). Comparing Information Content of Upwelling Far-Infrared and Midinfrared Radiance Spectra for Clear Atmosphere Profiling. *Journal of Atmospheric and Oceanic Technology*, *29*(4), 510–526. http://dx.doi.org/10.1175/JTECH-D-11-00113.1

Nam, C., Bony, S., Dufresne, J.-L., & Chepfer, H. (2012). The "too few, too bright" tropical low-cloud problem in CMIP5 models. *Geophysical Research Letters*, *39*(21), L21801. http://dx.doi.org/10.1029/2012GL053421

Nam, C. C. W., & Quaas, J. (2012). Evaluation of Clouds and Precipitation in the ECHAM5 General Circulation Model Using CALIPSO and CloudSat Satellite Data. *Journal of Climate*, *25*(14), 4975–4992. http://dx.doi.org/10.1175/JCLI-D-11-00347.1

Naud, C. M., Miller, J. R., & Landry, C. (2012). Using satellites to investigate the sensitivity of longwave downward radiation to water vapor at high elevations. *Journal of Geophysical Research: Atmospheres*, *117*(D5), D05101. http://dx.doi.org/10.1029/2011JD016917

Niu, X., & Pinker, R. T. (2012). Revisiting satellite radiative flux computations at the top of the atmosphere. *International Journal of Remote Sensing*, *33*(5), 1383–1399. http://dx.doi.org/10.1080/01431161.2011.571298

Oreopoulos, L., Mlawer, E., Delamere, J., Shippert, T., Cole, J., Fomin, B., … Rossow, W. B. (2012). The Continual Intercomparison of Radiation Codes: Results from Phase I. *Journal of Geophysical Research: Atmospheres*, *117*(D6), D06118. http://dx.doi.org/10.1029/2011JD016821

Painemal, D., & Minnis, P. (2012a). Correction to "On the dependence of albedo on cloud microphysics over marine stratocumulus clouds regimes determined from Clouds and the Earth's Radiant Energy System (CERES) data." *Journal of Geophysical Research: Atmospheres*, *117*(D9), D09299. http://dx.doi.org/10.1029/2012JD017902

Painemal, D., & Minnis, P. (2012b). On the dependence of albedo on cloud microphysics over marine stratocumulus clouds regimes determined from Clouds and the Earth's Radiant Energy System (CERES) data. *Journal of Geophysical Research: Atmospheres*, *117*(D6), D06203. http://dx.doi.org/10.1029/2011JD017120

Palmer, M. D. (2012). Climate and Earth's Energy Flows. *Surveys in Geophysics*, *33*(3-4), 351–357. http://dx.doi.org/10.1007/s10712-011-9165-8

Penner, J. E., Zhou, C., & Xu, L. (2012). Consistent estimates from satellites and models for the first aerosol indirect forcing. *Geophysical Research Letters*, *39*(13), L13810. http://dx.doi.org/10.1029/2012GL051870

Pincus, R., Platnick, S., Ackerman, S. A., Hemler, R. S., & Patrick Hofmann, R. J. (2012). Reconciling Simulated and Observed Views of Clouds: MODIS, ISCCP, and the Limits of Instrument Simulators. *Journal of Climate*, *25*(13), 4699–4720. http://dx.doi.org/10.1175/JCLI-D-11-00267.1

Posselt, D. J., Jongeward, A. R., Hsu, C.-Y., & Potter, G. L. (2012). Object-Based Evaluation of MERRA Cloud Physical Properties and Radiative Fluxes during the 1998 El Niño–La Niña Transition. *Journal of Climate*, *25*(21), 7313–7327. http://dx.doi.org/10.1175/JCLI-D-11-00724.1

Prasad, A. A., & Davies, R. (2012). Detecting tropical thin cirrus using Multiangle Imaging SpectroRadiometer's oblique cameras and modeled outgoing longwave radiation. *Journal of Geophysical Research: Atmospheres*, *117*(D6), D06208. http://dx.doi.org/10.1029/2011JD016798

Qiu, H., Hu, L., Zhang, Y., Lu, D., & Qi, J. (2012). Absolute Radiometric Calibration of Earth Radiation Measurement on FY-3B and Its Comparison With CERES/Aqua Data. *IEEE Transactions on Geoscience and Remote Sensing*, *50*(12), 4965–4974. http://dx.doi.org/10.1109/TGRS.2012.2202668

Riihimaki, L. D., McFarlane, S. A., Liang, C., Massie, S. T., Beagley, N., & Toth, T. D. (2012). Comparison of methods to determine Tropical Tropopause Layer cirrus formation mechanisms. *Journal of Geophysical Research: Atmospheres*, *117*(D6), D06218. http://dx.doi.org/10.1029/2011JD016832

Rodriguez-Solano, C. J., Hugentobler, U., & Steigenberger, P. (2012). Impact of Albedo Radiation on GPS Satellites. In S. Kenyon, M. C. Pacino, & U. Marti (Eds.), *Geodesy for Planet Earth* (pp. 113–119). Springer Berlin Heidelberg.

Smith, G. L., Mlynczak, P. E., & Potter, G. L. (2012). A technique using principal component analysis to compare seasonal cycles of Earth radiation from CERES and model computations. *Journal of Geophysical Research: Atmospheres*, *117*(D9), D09116. http://dx.doi.org/10.1029/2011JD017343

Smith, W. L., Minnis, P., Fleeger, C., Spangenberg, D., Palikonda, R., & Nguyen, L. (2012). Determining the Flight Icing Threat to Aircraft with Single-Layer Cloud Parameters Derived from Operational Satellite Data. *Journal of Applied Meteorology and Climatology*, *51*(10), 1794–1810. http://dx.doi.org/10.1175/JAMC-D-12-057.1

Stephens, G. L., Li, J., Wild, M., Clayson, C. A., Loeb, N., Kato, S., … Andrews, T. (2012). An update on Earth's energy balance in light of the latest global observations. *Nature Geoscience*, *5*(10), 691–696. http://dx.doi.org/10.1038/ngeo1580

Stephens, G. L., Wild, M., Stackhouse, P. W., L'Ecuyer, T., Kato, S., & Henderson, D. S. (2012). The Global Character of the Flux of Downward Longwave Radiation. *Journal of Climate*, *25*(7), 2329–2340. http://dx.doi.org/10.1175/JCLI-D-11-00262.1

Sun, M., Cess, R. D., & Doelling, D. R. (2012). Interpretation of cloud structure anomalies over the tropical Pacific during the 1997/98 El Niño. *Journal of Geophysical Research: Atmospheres*, *117*(D16), D16114. http://dx.doi.org/10.1029/2011JD015861

Susskind, J., Molnar, G., Iredell, L., & Loeb, N. G. (2012). Interannual variability of outgoing longwave radiation as observed by AIRS and CERES. *Journal of Geophysical Research: Atmospheres*, *117*(D23), D23107. http://dx.doi.org/10.1029/2012JD017997

Tang, Q., & Leng, G. (2012). Changes in cloud cover, precipitation, and summer temperature in North America from 1982 to 2009. *Journal of Climate*, 120917145047009. http://dx.doi.org/10.1175/JCLI-D-12-00225.1

Taylor, P. C. (2012a). The Role of Clouds: An Introduction and Rapporteur Report. *Surveys in Geophysics*, *33*(3-4), 609–617. http://dx.doi.org/10.1007/s10712-012-9182-2

Taylor, P. C. (2012b). Tropical Outgoing Longwave Radiation and Longwave Cloud Forcing Diurnal Cycles from CERES. *Journal of the Atmospheric Sciences*, *69*(12), 3652–3669. http://dx.doi.org/10.1175/JAS-D-12-088.1

Tobin, I., Bony, S., & Roca, R. (2012). Observational Evidence for Relationships between the Degree of Aggregation of Deep Convection, Water Vapor, Surface Fluxes, and Radiation. *Journal of Climate*, *25*(20), 6885–6904. http://dx.doi.org/10.1175/JCLI-D-11-00258.1

Trenberth, K. E., & Fasullo, J. T. (2012). Tracking Earth's Energy: From El Niño to Global Warming. *Surveys in Geophysics*, *33*(3-4), 413–426. http://dx.doi.org/10.1007/s10712-011-9150-2

Weng, F., Liu, Q., & Zou, X. (2012). On the environmental information for solar and wind energy facilities. *Science China Earth Sciences*, *55*(5), 796–801. http://dx.doi.org/10.1007/s11430-012-4365-8

Wong, T. M., Stackhouse Jr, P., Kratz, D. P., Wilber, A. C., & Loeb, N. G. (2012). Earth Radiation Budget at Top-of-atmosphere [in "State of the Climate in 2011"]. *Bulletin of the American Meteorological Society*, *93*(7), S38–S40. http://dx.doi.org/10.1175/2012BAMSStateoftheClimate.1

Wu, L., Su, H., Jiang, J. H., & Read, W. G. (2012). Hydration or dehydration: competing effects of upper tropospheric cloud radiation on the TTL water vapor. *Atmos. Chem. Phys.*, *12*(16), 7727–7735. http://dx.doi.org/10.5194/acp-12-7727-2012

Xie, S., Ma, H.-Y., Boyle, J. S., Klein, S. A., & Zhang, Y. (2012). On the Correspondence between Short- and Long-Time-Scale Systematic Errors in CAM4/CAM5 for the Year of Tropical Convection. *Journal of Climate*, *25*(22), 7937–7955. http://dx.doi.org/10.1175/JCLI-D-12-00134.1

Yang, W., Marshak, A., Várnai, T., & Liu, Z. (2012). Effect of CALIPSO cloud–aerosol discrimination (CAD) confidence levels on observations of aerosol properties near clouds. *Atmospheric Research*, *116*, 134–141. http://dx.doi.org/10.1016/j.atmosres.2012.03.013

Yao, M.-S., & Cheng, Y. (2012). Cloud Simulations in Response to Turbulence Parameterizations in the GISS Model E GCM. *Journal of Climate*, *25*(14), 4963–4974. http://dx.doi.org/10.1175/JCLI-D-11-00399.1

Yu, S., Mathur, R., Pleim, J., Wong, D., Carlton, A. G., Roselle, S., … Shao, Y. (2012). Simulation of the Indirect Radiative Forcing of Climate Due to Aerosols by the Two-Way Coupled WRF-CMAQ over the Eastern United States. In D. G. Steyn & S. T. Castelli (Eds.), *Air Pollution Modeling and its Application XXI* (pp. 579–583). Springer Netherlands. Retrieved from http://link.springer.com/chapter/10.1007/978-94-007-1359-8_96

Zib, B. J., Dong, X., Xi, B., & Kennedy, A. (2012). Evaluation and Intercomparison of Cloud Fraction and Radiative Fluxes in Recent Reanalyses over the Arctic Using BSRN Surface Observations. *Journal of Climate*, *25*(7), 2291–2305. http://dx.doi.org/10.1175/JCLI-D-11-00147.1

Clouds and the Earth's Radiant Energy System

CERES Publications for 2011

Allan, R. P. (2011). Combining satellite data and models to estimate cloud radiative effect at the surface and in the atmosphere. *Meteorological Applications*, *18*(3), 324–333. http://dx.doi.org/10.1002/met.285

Allan, R. P., Woodage, M. J., Milton, S. F., Brooks, M. E., & Haywood, J. M. (2011). Examination of long-wave radiative bias in general circulation models over North Africa during May–July. *Quarterly Journal of the Royal Meteorological Society*, *137*(658), 1179–1192. http://dx.doi.org/10.1002/qj.717

Barker, H. W., Jerg, M. P., Wehr, T., Kato, S., Donovan, D. P., & Hogan, R. J. (2011). A 3D cloud-construction algorithm for the EarthCARE satellite mission. *Quarterly Journal of the Royal Meteorological Society*, *137*(657), 1042–1058. http://dx.doi.org/10.1002/qj.824

Bender, F. A.-M., Charlson, R. J., Ekman, A. M. L., & Leahy, L. V. (2011). Quantification of Monthly Mean Regional-Scale Albedo of Marine Stratiform Clouds in Satellite Observations and GCMs. *Journal of Applied Meteorology and Climatology*, *50*(10), 2139–2148. http://dx.doi.org/10.1175/JAMC-D-11-049.1

Berrisford, P., Kållberg, P., Kobayashi, S., Dee, D., Uppala, S., Simmons, A. J., … Sato, H. (2011). Atmospheric conservation properties in ERA-Interim. *Quarterly Journal of the Royal Meteorological Society*, *137*(659), 1381–1399. http://dx.doi.org/10.1002/qj.864

Blunden, J., Arndt, D. S., & Baringer, M. O. (2011). State of the Climate in 2010. *Bulletin of the American Meteorological Society*, *92*(6), S1–S236. http://dx.doi.org/10.1175/1520-0477-92.6.S1

Bosilovich, M. G., Robertson, F. R., & Chen, J. (2011). Global Energy and Water Budgets in MERRA. *Journal of Climate*, *24*(22), 5721–5739. http://dx.doi.org/10.1175/2011JCLI4175.1

Chen, L., Guangyu Shi, Shiguang Qin, Su Yang, & Peng Zhang. (2011). Direct radiative forcing of anthropogenic aerosols over oceans from satellite observations. *Advances in Atmospheric Sciences*, *28*(4), 973–984. http://dx.doi.org/10.1007/s00376-010-9210-4

Chou, M.-D., Wu, C.-H., & Kau, W.-S. (2011). Large-Scale Control of Summer Precipitation in Taiwan. *Journal of Climate*, *24*(19), 5081–5093. http://dx.doi.org/10.1175/2011JCLI4057.1

Christopher, S. A. (2011). Satellite remote sensing methods for estimating clear Sky shortwave Top of atmosphere fluxes used for aerosol studies over the global oceans. *Remote Sensing of Environment*, *115*(12), 3002–3006. http://dx.doi.org/10.1016/j.rse.2011.06.003

Cole, J., Barker, H. W., Loeb, N. G., & von Salzen, K. (2011). Assessing Simulated Clouds and Radiative Fluxes Using Properties of Clouds Whose Tops are Exposed to Space. *Journal of Climate*, *24*(11), 2715–2727. http://dx.doi.org/10.1175/2011JCLI3652.1

Domenech, C., Lopez-Baeza, E., Donovan, D. P., & Wehr, T. (2011). Radiative Flux Estimation from a Broadband Radiometer Using Synthetic Angular Models in the EarthCARE Mission Framework. Part I: Methodology. *Journal of Applied Meteorology and Climatology*, *50*(5), 974–993. http://dx.doi.org/10.1175/2010JAMC2526.1

Domenech, C., Wehr, T., & Fischer, J. (2011). Toward an Earth Clouds, Aerosols and Radiation Explore (EarthCARE) thermal flux determination: Evaluation using Clouds and the Earth's Radiant Energy System (CERES) true along-track data. *Journal of Geophysical Research: Atmospheres*, *116*(D6), D06115. http://dx.doi.org/10.1029/2010JD015212

Dong, X., Xi, B., Kennedy, A., Feng, Z., Entin, J. K., Houser, P. R., … Jiang, T. (2011). Investigation of the 2006 drought and 2007 flood extremes at the Southern Great Plains through an integrative analysis of observations. *Journal of Geophysical Research: Atmospheres*, *116*(D3), D03204. http://dx.doi.org/10.1029/2010JD014776

Donner, L. J., Wyman, B. L., Hemler, R. S., Horowitz, L. W., Ming, Y., Zhao, M., … Zeng, F. (2011). The Dynamical Core, Physical Parameterizations, and Basic Simulation Characteristics of the Atmospheric Component AM3 of the GFDL Global Coupled Model CM3. *Journal of Climate*, *24*(13), 3484–3519. http://dx.doi.org/10.1175/2011JCLI3955.1

Donohoe, A., & Battisti, D. S. (2011). Atmospheric and Surface Contributions to Planetary Albedo. *Journal of Climate*, *24*(16), 4402–4418. http://dx.doi.org/10.1175/2011JCLI3946.1

Eitzen, Z. A., Xu, K.-M., & Wong, T. (2011). An Estimate of Low-Cloud Feedbacks from Variations of Cloud Radiative and Physical Properties with Sea Surface Temperature on Interannual Time Scales. *Journal of Climate*, *24*(4), 1106–1121. http://dx.doi.org/10.1175/2010JCLI3670.1

Feldman, D. R., Algieri, C. A., Collins, W. D., Roberts, Y. L., & Pilewskie, P. A. (2011). Simulation studies for the detection of changes in broadband albedo and shortwave nadir reflectance spectra under a climate change scenario. *Journal of Geophysical Research: Atmospheres*, *116*(D24), D24103. http://dx.doi.org/10.1029/2011JD016407

Ferguson, C. R., & Wood, E. F. (2011). Observed Land–Atmosphere Coupling from Satellite Remote Sensing and Reanalysis. *Journal of Hydrometeorology*, *12*(6), 1221–1254. http://dx.doi.org/10.1175/2011JHM1380.1

Golaz, J.-C., Salzmann, M., Donner, L. J., Horowitz, L. W., Ming, Y., & Zhao, M. (2011). Sensitivity of the Aerosol Indirect Effect to Subgrid Variability in the Cloud Parameterization of the GFDL Atmosphere General Circulation Model AM3. *Journal of Climate*, *24*(13), 3145–3160. http://dx.doi.org/10.1175/2010JCLI3945.1

Goldberg, M., Ohring, G., Butler, J., Cao, C., Datla, R., Doelling, D., … Zhu, T. (2011). The Global Space-Based Inter-Calibration System. *Bulletin of the American Meteorological Society*, *92*(4), 467–475. http://dx.doi.org/10.1175/2010BAMS2967.1

Greuell, W., van Meijgaard, E., Clerbaux, N., & Meirink, J. F. (2011). Evaluation of Model-Predicted Top-of-Atmosphere Radiation and Cloud Parameters over Africa with Observations from GERB and SEVIRI. *Journal of Climate*, *24*(15), 4015–4036. http://dx.doi.org/10.1175/2011JCLI3856.1

Griffies, S. M., Winton, M., Donner, L. J., Horowitz, L. W., Downes, S. M., Farneti, R., … Zadeh, N. (2011). The GFDL CM3 Coupled Climate Model: Characteristics of the Ocean and Sea Ice Simulations. *Journal of Climate*, *24*(13), 3520–3544. http://dx.doi.org/10.1175/2011JCLI3964.1

Huber, M., Mahlstein, I., Wild, M., Fasullo, J., & Knutti, R. (2011). Constraints on Climate Sensitivity from Radiation Patterns in Climate Models. *Journal of Climate*, *24*(4), 1034–1052. http://dx.doi.org/10.1175/2010JCLI3403.1

Hudson, S. R. (2011). Estimating the global radiative impact of the sea ice–albedo feedback in the Arctic. *Journal of Geophysical Research: Atmospheres*, *116*(D16), D16102. http://dx.doi.org/10.1029/2011JD015804

Jin, Z., Wielicki, B. A., Loukachine, C., Charlock, T. P., Young, D., & Noël, S. (2011). Spectral kernel approach to study radiative response of climate variables and interannual variability of reflected solar spectrum. *Journal of Geophysical Research: Atmospheres*, *116*(D10), D10113. http://dx.doi.org/10.1029/2010JD015228

Jones, T. A., & Christopher, S. A. (2011). A reanalysis of MODIS fine mode fraction over ocean using OMI and daily GOCART simulations. *Atmos. Chem. Phys.*, *11*(12), 5805–5817. http://dx.doi.org/10.5194/acp-11-5805-2011

Kato, S., Rose, F. G., Sun-Mack, S., Miller, W. F., Chen, Y., Rutan, D. A., … Collins, W. D. (2011). Improvements of top-of-atmosphere and surface irradiance computations with CALIPSO-, CloudSat-, and MODIS-derived cloud and aerosol properties. *Journal of Geophysical Research: Atmospheres*, *116*(D19), D19209. http://dx.doi.org/10.1029/2011JD016050

Kay, J. E., Raeder, K., Gettelman, A., & Anderson, J. (2011). The Boundary Layer Response to Recent Arctic Sea Ice Loss and Implications for High-Latitude Climate Feedbacks. *Journal of Climate*, *24*(2), 428–447. http://dx.doi.org/10.1175/2010JCLI3651.1

Kelektsoglou, K., Kourtidis, K., Balis, D. S., & Rapsomanikis, S. (2011). A 1-year remote sensing study of radiative effects of aerosol and clouds over the NE Mediterranean. *International Journal of Remote Sensing*, *32*(23), 8747–8762. http://dx.doi.org/10.1080/01431161.2010.549524

Kennedy, A. D., Dong, X., Xi, B., Xie, S., Zhang, Y., & Chen, J. (2011). A Comparison of MERRA and NARR Reanalyses with the DOE ARM SGP Data. *Journal of Climate*, *24*(17), 4541–4557. http://dx.doi.org/10.1175/2011JCLI3978.1

Klocke, D., Pincus, R., & Quaas, J. (2011). On Constraining Estimates of Climate Sensitivity with Present-Day Observations through Model Weighting. *Journal of Climate*, *24*(23), 6092–6099. http://dx.doi.org/10.1175/2011JCLI4193.1

Kratz, D. P., Stackhouse, P.W., Wong, T, Sawaengphokhai, P., Wilber, A. C., & Loeb, N. G. (2011). Earth Radiation Budget at top-of-atmosphere in "State of the Climate 2010." *Bulletin of the American Meterological Society*, *92*(6). http://dx.doi.org/10.1175/1520-0477-92.6.S1

Krüger, O., & Graßl, H. (2011). Southern Ocean phytoplankton increases cloud albedo and reduces precipitation. *Geophysical Research Letters*, *38*(8), L08809. http://dx.doi.org/10.1029/2011GL047116

Li, J., Yi, Y., Minnis, P., Huang, J., Yan, H., Ma, Y., … Kirk Ayers, J. (2011). Radiative effect differences between multi-layered and single-layer clouds derived from CERES, CALIPSO, and CloudSat data. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *112*(2), 361–375. http://dx.doi.org/10.1016/j.jqsrt.2010.10.006

Lin, B., Min, Q., Sun, W., Hu, Y., & Fan, T.-F. (2011). Can climate sensitivity be estimated from short-term relationships of top-of-atmosphere net radiation and surface temperature? *Journal of Quantitative Spectroscopy and Radiative Transfer*, *112*(2), 177–181. http://dx.doi.org/10.1016/j.jqsrt.2010.03.012

Lindzen, R. S., & Choi, Y.-S. (2011). On the observational determination of climate sensitivity and its implications. *Asia-Pacific Journal of Atmospheric Sciences*, *47*(4), 377–390. http://dx.doi.org/10.1007/s13143-011-0023-x

Lin, Y., Donner, L. J., & Colle, B. A. (2011). Parameterization of Riming Intensity and Its Impact on Ice Fall Speed Using ARM Data. *Monthly Weather Review*, *139*(3), 1036–1047. http://dx.doi.org/10.1175/2010MWR3299.1

Lu, P., Zhang, H., & Li, J. (2011). Correlated k-Distribution Treatment of Cloud Optical Properties and Related Radiative Impact. *Journal of the Atmospheric Sciences*, *68*(11), 2671–2688. http://dx.doi.org/10.1175/JAS-D-10-05001.1

Minnis, P., Sun-Mack, S., Chen, Y., Khaiyer, M. M., Yi, Y., Ayers, J. K., … Xi, B. (2011). CERES Edition-2 Cloud Property Retrievals Using TRMM VIRS and Terra and Aqua MODIS Data #x2014;Part II: Examples of Average Results and Comparisons With Other Data. *IEEE Transactions on Geoscience and Remote Sensing*, *49*(11), 4401–4430. http://dx.doi.org/10.1109/TGRS.2011.2144602

Minnis, P., Sun-Mack, S., Young, D. F., Heck, P. W., Garber, D. P., Chen, Y., … Yang, P. (2011). CERES Edition-2 Cloud Property Retrievals Using TRMM VIRS and Terra and Aqua MODIS Data #x2014;Part I: Algorithms. *IEEE Transactions on Geoscience and Remote Sensing*, *49*(11), 4374–4400. http://dx.doi.org/10.1109/TGRS.2011.2144601

Mlynczak, P. E., Smith, G. L., & Doelling, D. R. (2011). The Annual Cycle of Earth Radiation Budget from Clouds and the Earth's Radiant Energy System (CERES) Data. *Journal of Applied Meteorology and Climatology*, *50*(12), 2490–2503. http://dx.doi.org/10.1175/JAMC-D-11-050.1

Mlynczak, P. E., Smith, G. L., Wilber, A. C., & Stackhouse, P. W. (2011). Annual Cycle of Surface Longwave Radiation. *Journal of Applied Meteorology and Climatology*, *50*(6), 1212–1224. http://dx.doi.org/10.1175/2011JAMC2663.1

Mo, K. C., Long, L. N., Xia, Y., Yang, S. K., Schemm, J. E., & Ek, M. (2011). Drought Indices Based on the Climate Forecast System Reanalysis and Ensemble NLDAS. *Journal of Hydrometeorology*, *12*(2), 181–205. http://dx.doi.org/10.1175/2010JHM1310.1

Parding, K., Hinkelman, L. M., Ackerman, T. P., & McFarlane, S. A. (2011). Shortwave absorptance in a tropical cloudy atmosphere: Reconciling calculations and observations. *Journal of Geophysical Research: Atmospheres*, *116*(D19), D19202. http://dx.doi.org/10.1029/2011JD015639

Patadia, F., Christopher, S. A., & Zhang, J. (2011). Development of empirical angular distribution models for smoke aerosols: Methods. *Journal of Geophysical Research: Atmospheres*, *116*(D14), D14203. http://dx.doi.org/10.1029/2010JD015033

Porter, D. F., Cassano, J. J., & Serreze, M. C. (2011). Analysis of the Arctic atmospheric energy budget in WRF: A comparison with reanalyses and satellite observations. *Journal of Geophysical Research: Atmospheres*, *116*(D22), D22108. http://dx.doi.org/10.1029/2011JD016622

Priestley, K. J., Smith, G. L., Thomas, S., Cooper, D., Lee, R. B., Walikainen, D., … Wilson, R. (2011). Radiometric Performance of the CERES Earth Radiation Budget Climate Record Sensors on the EOS Aqua and Terra Spacecraft through April 2007. *Journal of Atmospheric and Oceanic Technology*, *28*(1), 3–21. http://dx.doi.org/10.1175/2010JTECHA1521.1

Ritz, S. P., Stocker, T. F., & Joos, F. (2010). A Coupled Dynamical Ocean–Energy Balance Atmosphere Model for Paleoclimate Studies. *Journal of Climate*, *24*(2), 349–375. http://dx.doi.org/10.1175/2010JCLI3351.1

Roberts, Y. L., Pilewskie, P., & Kindel, B. C. (2011). Evaluating the observed variability in hyperspectral Earth-reflected solar radiance. *Journal of Geophysical Research: Atmospheres*, *116*(D24), D24119. http://dx.doi.org/10.1029/2011JD016448

Sanderson, B. M. (2011). A Multimodel Study of Parametric Uncertainty in Predictions of Climate Response to Rising Greenhouse Gas Concentrations. *Journal of Climate*, *24*(5), 1362–1377. http://dx.doi.org/10.1175/2010JCLI3498.1

Smith, G. L., Priestley, K. J., Loeb, N. G., Wielicki, B. A., Charlock, T. P., Minnis, P., … Rutan, D. A. (2011). Clouds and Earth Radiant Energy System (CERES), a review: Past, present and future. *Advances in Space Research*, *48*(2), 254–263. http://dx.doi.org/10.1016/j.asr.2011.03.009

Stackhouse Jr, P., Gupta, S., Cox, S., Zhang, T., Mikovitz, J. C., & Hinkelman, L. (2011). The NASA/GEWEX surface radiation budget release 3.0: 24.5-year dataset. *GEWEX News*, *21*(1), 10–12.

Sun, W., Lin, B., Hu, Y., Lukashin, C., Kato, S., & Liu, Z. (2011). On the consistency of CERES longwave flux and AIRS temperature and humidity profiles. *Journal of Geophysical Research: Atmospheres*, *116*(D17), D17101. http://dx.doi.org/10.1029/2011JD016153

Sun, W., Videen, G., Kato, S., Lin, B., Lukashin, C., & Hu, Y. (2011). A study of subvisual clouds and their radiation effect with a synergy of CERES, MODIS, CALIPSO, and AIRS data. *Journal of Geophysical Research: Atmospheres*, *116*(D22), D22207. http://dx.doi.org/10.1029/2011JD016422

Szewczyk, Z. P., Priestley, K. J., Walikainen, D. R., Loeb, N. G., & Smith, G. L. (2011). Putting all CERES instruments (Terra/Aqua) on the same radiometric scale Proc. SPIE Remote Sensing of Clouds and the Atmosphere XVI (Vol. 8177, pp. 817704–817704–11). http://dx.doi.org/10.1117/12.896897

Taylor, P. C., Ellingson, R. G., & Cai, M. (2011). Seasonal Variations of Climate Feedbacks in the NCAR CCSM3. *Journal of Climate*, *24*(13), 3433–3444. http://dx.doi.org/10.1175/2011JCLI3862.1

Teixeira, J., Cardoso, S., Bonazzola, M., Cole, J., DelGenio, A., DeMott, C., … Zhao, M. (2011). Tropical and Subtropical Cloud Transitions in Weather and Climate Prediction Models: The GCSS/WGNE Pacific Cross-Section Intercomparison (GPCI). *Journal of Climate*, *24*(20), 5223–5256. http://dx.doi.org/10.1175/2011JCLI3672.1

Trenberth, K. E., Fasullo, J. T., & Mackaro, J. (2011). Atmospheric Moisture Transports from Ocean to Land and Global Energy Flows in Reanalyses. *Journal of Climate*, *24*(18), 4907–4924. http://dx.doi.org/10.1175/2011JCLI4171.1

Wang, L., Wang, Y., Lauer, A., & Xie, S.-P. (2011). Simulation of Seasonal Variation of Marine Boundary Layer Clouds over the Eastern Pacific with a Regional Climate Model*. *Journal of Climate*, *24*(13), 3190–3210. http://dx.doi.org/10.1175/2010JCLI3935.1

White, J. W., Hoogenboom, G., Wilkens, P. W., Stackhouse, P. W., & Hoel, J. M. (2011). Evaluation of Satellite-Based, Modeled-Derived Daily Solar Radiation Data for the Continental United States. *Agronomy Journal*, *103*(4), 1242. http://dx.doi.org/10.2134/agronj2011.0038

Yang, Q., W. I. Gustafson Jr., Fast, J. D., Wang, H., Easter, R. C., Morrison, H., … Mena-Carrasco, M. A. (2011). Assessing regional scale predictions of aerosols, marine stratocumulus, and their interactions during VOCALS-REx using WRF-Chem. *Atmos. Chem. Phys.*, *11*(23), 11951–11975 http://dx.doi.org/10.5194/acp-11-11951-2011

Yan, H., Huang, J., Minnis, P., Wang, T., & Bi, J. (2011). Comparison of CERES surface radiation fluxes with surface observations over Loess Plateau. *Remote Sensing of Environment*, *115*(6), 1489–1500. http://dx.doi.org/10.1016/j.rse.2011.02.008

Zhao, T. X.-P., Loeb, N. G., Laszlo, I., & Zhou, M. (2011). Global component aerosol direct radiative effect at the top of atmosphere. *International Journal of Remote Sensing*, *32*(3), 633–655. http://dx.doi.org/10.1080/01431161.2010.517790

Clouds and the Earth's Radiant Energy System

CERES Publications for 2010

Anantharaj, V. G., Nair, U. S., Lawrence, P., Chase, T. N., Christopher, S., & Jones, T. (2010). Comparison of satellite-derived TOA shortwave clear-sky fluxes to estimates from GCM simulations constrained by satellite observations of land surface characteristics. *International Journal of Climatology*, *30*(13), 2088–2104. http://dx.doi.org/10.1002/joc.2107

Arndt, D. S., Baringer, M. O., & Johnson, M. R. (2010). State of the Climate in 2009. *Bulletin of the American Meteorological Society*, *91*(7), s1–s222. http://dx.doi.org/10.1175/BAMS-91-7-StateoftheClimate

Bedka, K. M., & Minnis, P. (2010). GOES 12 observations of convective storm variability and evolution during the Tropical Composition, Clouds and Climate Coupling Experiment field program. *Journal of Geophysical Research: Atmospheres*, *115*(D10), D00J13. http://dx.doi.org/10.1029/2009JD013227

Bryan, F. O., Tomas, R., Dennis, J. M., Chelton, D. B., Loeb, N. G., & McClean, J. L. (2010). Frontal Scale Air–Sea Interaction in High-Resolution Coupled Climate Models. *Journal of Climate*, *23*(23), 6277–6291. http://dx.doi.org/10.1175/2010JCLI3665.1

Chang, F.-L., Minnis, P., Ayers, J. K., McGill, M. J., Palikonda, R., Spangenberg, D. A., … Yost, C. R. (2010). Evaluation of satellite-based upper troposphere cloud top height retrievals in multilayer cloud conditions during TC4. *Journal of Geophysical Research: Atmospheres*, *115*(D10), D00J05. http://dx.doi.org/10.1029/2009JD013305

Chang, F.-L., Minnis, P., Lin, B., Khaiyer, M. M., Palikonda, R., & Spangenberg, D. A. (2010). A modified method for inferring upper troposphere cloud top height using the GOES 12 imager 10.7 and 13.3 μm data. *Journal of Geophysical Research: Atmospheres*, *115*(D6), D06208. http://dx.doi.org/10.1029/2009JD012304

Chen, B., Huang, J., Minnis, P., Hu, Y., Yi, Y., Liu, Z., … Wang, X. (2010). Detection of dust aerosol by combining CALIPSO active lidar and passive IIR measurements. *Atmos. Chem. Phys.*, *10*(9), 4241–4251. http://dx.doi.org/10.5194/acp-10-4241-2010

Chen, Y., Peng, K., Huang, J., Kang, Y., Zhang, H., & Jiang, X. (2010). Seasonal and regional variability of cloud liquid water path in northwestern China derived from MODIS/CERES observations. *International Journal of Remote Sensing*, *31*(4), 1037–1042. http://dx.doi.org/10.1080/01431160903154309

Christopher, S. A., & Jones, T. A. (2010). Satellite and surface-based remote sensing of Saharan dust aerosols. *Remote Sensing of Environment*, *114*(5), 1002–1007. http://dx.doi.org/10.1016/j.rse.2009.12.007

Chung, E.-S., Soden, B. J., & Sohn, B.-J. (2010). Revisiting the determination of climate sensitivity from relationships between surface temperature and radiative fluxes. *Geophysical Research Letters*, *37*(10), L10703. http://dx.doi.org/10.1029/2010GL043051

Chung, E.-S., Yeomans, D., & Soden, B. J. (2010). An assessment of climate feedback processes using satellite observations of clear-sky OLR. *Geophysical Research Letters*, *37*(2), L02702. http://dx.doi.org/10.1029/2009GL041889

Dessler, A. E. (2010). A Determination of the Cloud Feedback from Climate Variations over the Past Decade. *Science*, *330*(6010), 1523–1527. http://dx.doi.org/10.1126/science.1192546

Di Biagio, C., di Sarra, A., & Meloni, D. (2010). Large atmospheric shortwave radiative forcing by Mediterranean aerosols derived from simultaneous ground-based and spaceborne observations and dependence on the aerosol type and single scattering albedo. *Journal of Geophysical Research: Atmospheres*, *115*(D10), D10209. http://dx.doi.org/10.1029/2009JD012697

Dong, X., Xi, B., Crosby, K., Long, C. N., Stone, R. S., & Shupe, M. D. (2010). A 10 year climatology of Arctic cloud fraction and radiative forcing at Barrow, Alaska. *Journal of Geophysical Research: Atmospheres*, *115*(D17), D17212. http://dx.doi.org/10.1029/2009JD013489

Gautam, R., Hsu, N. C., & Lau, K.-M. (2010). Premonsoon aerosol characterization and radiative effects over the Indo-Gangetic Plains: Implications for regional climate warming. *Journal of Geophysical Research: Atmospheres*, *115*(D17), D17208. http://dx.doi.org/10.1029/2010JD013819

Ge, J. M., Su, J., Ackerman, T. P., Fu, Q., Huang, J. P., & Shi, J. S. (2010). Dust aerosol optical properties retrieval and radiative forcing over northwestern China during the 2008 China-U.S. joint field experiment. *Journal of Geophysical Research: Atmospheres*, *115*(D7), D00K12. http://dx.doi.org/10.1029/2009JD013263

Gui, S., Liang, S., & Li, L. (2010). Evaluation of satellite-estimated surface longwave radiation using ground-based observations. *Journal of Geophysical Research: Atmospheres*, *115*(D18), D18214. http://dx.doi.org/10.1029/2009JD013635

Gui, S., Liang, S., Wang, K., Li, L., & Zhang, X. (2010). Assessment of Three Satellite-Estimated Land Surface Downwelling Shortwave Irradiance Data Sets. *IEEE Geoscience and Remote Sensing Letters*, *7*(4), 776–780. http://dx.doi.org/10.1109/LGRS.2010.2048196

Gupta, S. K., Kratz, D. P., Stackhouse, P. W., Wilber, A. C., Zhang, T., & Sothcott, V. E. (2010). Improvement of Surface Longwave Flux Algorithms Used in CERES Processing. *Journal of Applied Meteorology and Climatology*, *49*(7), 1579–1589. http://dx.doi.org/10.1175/2010JAMC2463.1

Harries, J. E., & Belotti, C. (2010). On the Variability of the Global Net Radiative Energy Balance of the Nonequilibrium Earth. *Journal of Climate*, *23*(6), 1277–1290. http://dx.doi.org/10.1175/2009JCLI2797.1

Huang, J., Minnis, P., Yan, H., Yi, Y., Chen, B., Zhang, L., & Ayers, J. K. (2010). Dust aerosol effect on semi-arid climate over Northwest China detected from A-Train satellite measurements. *Atmos. Chem. Phys.*, *10*(14), 6863–6872. http://dx.doi.org/10.5194/acp-10-6863-2010

Huang, X., Loeb, N. G., & Yang, W. (2010). Spectrally resolved fluxes derived from collocated AIRS and CERES measurements and their application in model evaluation: 2. Cloudy sky and band-by-band cloud radiative forcing over the tropical oceans. *Journal of Geophysical Research: Atmospheres*, *115*(D21), D21101. http://dx.doi.org/10.1029/2010JD013932

Hudson, S. R., Kato, S., & Warren, S. G. (2010). Evaluating CERES angular distribution models for snow using surface reflectance observations from the East Antarctic Plateau. *Journal of Geophysical Research: Atmospheres*, *115*(D3), D03101. http://dx.doi.org/10.1029/2009JD012624

Hudson, S. R., Warren, S. G., & Kato, S. (2010). A comparison of shortwave reflectance over the East Antarctic Plateau observed by CERES to that estimated from surface reflectance observations. *Journal of Geophysical Research: Atmospheres*, *115*(D20), D20110. http://dx.doi.org/10.1029/2010JD013912

Kandel, R., & Viollier, M. (2010). Observation of the Earth's radiation budget from space. *Comptes Rendus Geoscience*, *342*(4–5), 286–300. http://dx.doi.org/10.1016/j.crte.2010.01.005

Kato, S., Sun-Mack, S., Miller, W. F., Rose, F. G., Chen, Y., Minnis, P., & Wielicki, B. A. (2010). Relationships among cloud occurrence frequency, overlap, and effective thickness derived from CALIPSO and CloudSat merged cloud vertical profiles. *Journal of Geophysical Research: Atmospheres*, *115*(D4), D00H28. http://dx.doi.org/10.1029/2009JD012277

Kennedy, A. D., Dong, X., Xi, B., Minnis, P., Del Genio, A. D., Wolf, A. B., & Khaiyer, M. M. (2010). Evaluation of the NASA GISS Single-Column Model Simulated Clouds Using Combined Surface and Satellite Observations. *Journal of Climate*, *23*(19), 5175–5192. http://dx.doi.org/10.1175/2010JCLI3353.1

Kratz, D. P., Gupta, S. K., Wilber, A. C., & Sothcott, V. E. (2010). Validation of the CERES Edition 2B Surface-Only Flux Algorithms. *Journal of Applied Meteorology and Climatology*, *49*(1), 164–180. http://dx.doi.org/10.1175/2009JAMC2246.1

Lebsock, M. D., Kummerow, C., & Stephens, G. L. (2010). An Observed Tropical Oceanic Radiative–Convective Cloud Feedback. *Journal of Climate*, *23*(8), 2065–2078. http://dx.doi.org/10.1175/2009JCLI3091.1

L'Ecuyer, T. S., & McGarragh, G. (2010). A 10-Year Climatology of Tropical Radiative Heating and Its Vertical Structure from TRMM Observations. *Journal of Climate*, *23*(3), 519–541. http://dx.doi.org/10.1175/2009JCLI3018.1

Lin, B., Chambers, L., P. Stackhouse Jr., Wielicki, B., Hu, Y., Minnis, P., … Fan, T.-F. (2010). Estimations of climate sensitivity based on top-of-atmosphere radiation imbalance. *Atmos. Chem. Phys.*, *10*(4), 1923–1930. http://dx.doi.org/10.5194/acp-10-1923-2010

Lin, B., Minnis, P., Fan, T.-F., Hu, Y., & Sun, W. (2010). Radiation characteristics of low and high clouds in different oceanic regions observed by CERES and MODIS. *International Journal of Remote Sensing*, *31*(24), 6473–6492. http://dx.doi.org/10.1080/01431160903548005

Lin, W., Zhang, M., & Loeb, N. G. (2010). Reply to Comments on "Seasonal Variation of the Physical Properties of Marine Boundary Layer Clouds off the California Coast." *Journal of Climate*, *23*(12), 3421–3423. http://dx.doi.org/10.1175/2010JCLI3483.1

Li, R., Min, Q.-L., & Harrison, L. C. (2010). A Case Study: The Indirect Aerosol Effects of Mineral Dust on Warm Clouds. *Journal of the Atmospheric Sciences*, *67*(3), 805–816. http://dx.doi.org/10.1175/2009JAS3235.1

Liu, Y. (2010). Comments on "Seasonal Variation of the Physical Properties of Marine Boundary Layer Clouds off the California Coast." *Journal of Climate*, *23*(12), 3416–3420. http://dx.doi.org/10.1175/2010JCLI3407.1

Loeb, N. G., & Su, W. (2010). Direct Aerosol Radiative Forcing Uncertainty Based on a Radiative Perturbation Analysis. *Journal of Climate*, *23*(19), 5288–5293. http://dx.doi.org/10.1175/2010JCLI3543.1

Logan, T., Xi, B., Dong, X., Obrecht, R., Li, Z., & Cribb, M. (2010). A study of Asian dust plumes using satellite, surface, and aircraft measurements during the INTEX-B field experiment. *Journal of Geophysical Research: Atmospheres*, *115*(D7), D00K25. http://dx.doi.org/10.1029/2010JD014134

Mauger, G. S., & Norris, J. R. (2010). Assessing the Impact of Meteorological History on Subtropical Cloud Fraction. *Journal of Climate*, *23*(11), 2926–2940. http://dx.doi.org/10.1175/2010JCLI3272.1

Ma, X., von Salzen, K., & Cole, J. (2010). Constraints on interactions between aerosols and clouds on a global scale from a combination of MODIS-CERES satellite data and climate simulations. *Atmos. Chem. Phys.*, *10*(20), 9851–9861. http://dx.doi.org/10.5194/acp-10-9851-2010

Medvigy, D., Walko, R. L., Otte, M. J., & Avissar, R. (2010). The Ocean–Land–Atmosphere Model: Optimization and Evaluation of Simulated Radiative Fluxes and Precipitation. *Monthly Weather Review*, *138*(5), 1923–1939. http://dx.doi.org/10.1175/2009MWR3131.1

Moy, L. A., Knuteson, R. O., Tobin, D. C., Revercomb, H. E., Borg, L. A., & Susskind, J. (2010). Comparison of measured and modeled outgoing longwave radiation for clear-sky ocean and land scenes using coincident CERES and AIRS observations. *Journal of Geophysical Research: Atmospheres*, *115*(D15), D15110. http://dx.doi.org/10.1029/2009JD012758

Murphy, D. M. (2010). Constraining climate sensitivity with linear fits to outgoing radiation. *Geophysical Research Letters*, *37*(9), L09704. http://dx.doi.org/10.1029/2010GL042911

Murphy, D. M., & Forster, P. M. (2010). On the Accuracy of Deriving Climate Feedback Parameters from Correlations between Surface Temperature and Outgoing Radiation. *Journal of Climate*, *23*(18), 4983–4988. http://dx.doi.org/10.1175/2010JCLI3657.1

Nezlin, N. P., Polikarpov, I. G., Al-Yamani, F. Y., Subba Rao, D. V., & Ignatov, A. M. (2010). Satellite monitoring of climatic factors regulating phytoplankton variability in the Arabian (Persian) Gulf. *Journal of Marine Systems*, *82*(1–2), 47–60. http://dx.doi.org/10.1016/j.jmarsys.2010.03.003

Porter, D. F., Cassano, J. J., Serreze, M. C., & Kindig, D. N. (2010). New estimates of the large-scale Arctic atmospheric energy budget. *Journal of Geophysical Research: Atmospheres*, *115*(D8), D08108. http://dx.doi.org/10.1029/2009JD012653

Priestley, K. J., Thomas, S., & Smith, G. L. (2010). Validation of Point Spread Functions of CERES Radiometers by the Use of Lunar Observations. *Journal of Atmospheric and Oceanic Technology*, *27*(6), 1005–1011. http://dx.doi.org/10.1175/2010JTECHA1322.1

Spencer, R. W., & Braswell, W. D. (2010). On the diagnosis of radiative feedback in the presence of unknown radiative forcing. *Journal of Geophysical Research: Atmospheres*, *115*(D16), D16109. http://dx.doi.org/10.1029/2009JD013371

Stackhouse Jr, P., Wong, T., Loeb, N. G., Kratz, D. P., Wilber, A. C., Doelling, D. R., & Nguyen, L. C. (n.d.). Earth Radiation Budget at top-of-atmosphere [in "State of the Climate in 2009"]. *Bulletin of the American Meteorological Society*, *91*(7), S41. http://dx.doi.org/10.1175/BAMS-91-7-StateoftheClimate

Sun, F., Goldberg, M. D., Liu, X., & Bates, J. J. (2010). Estimation of outgoing longwave radiation from Atmospheric Infrared Sounder radiance measurements. *Journal of Geophysical Research: Atmospheres*, *115*(D9), D09103. http://dx.doi.org/10.1029/2009JD012799

Su, W., Bodas-Salcedo, A., Xu, K.-M., & Charlock, T. P. (2010). Comparison of the tropical radiative flux and cloud radiative effect profiles in a climate model with Clouds and the Earth's Radiant Energy System (CERES) data. *Journal of Geophysical Research: Atmospheres*, *115*(D1), D01105. http://dx.doi.org/10.1029/2009JD012490

Su, W., Loeb, N. G., Xu, K.-M., Schuster, G. L., & Eitzen, Z. A. (2010). An estimate of aerosol indirect effect from satellite measurements with concurrent meteorological analysis. *Journal of Geophysical Research: Atmospheres*, *115*(D18), D18219. http://dx.doi.org/10.1029/2010JD013948

Trenberth, K. E., & Fasullo, J. T. (2010a). Simulation of Present-Day and Twenty-First-Century Energy Budgets of the Southern Oceans. *Journal of Climate*, *23*(2), 440–454. http://dx.doi.org/10.1175/2009JCLI3152.1

Trenberth, K. E., & Fasullo, J. T. (2010b). Tracking Earth's Energy. *Science*, *328*(5976), 316–317. http://dx.doi.org/10.1126/science.1187272

Trenberth, K. E., Fasullo, J. T., O'Dell, C., & Wong, T. (2010). Relationships between tropical sea surface temperature and top-of-atmosphere radiation. *Geophysical Research Letters*, *37*(3), L03702. http://dx.doi.org/10.1029/2009GL042314

Trigo, I. F., Barroso, C., Viterbo, P., Freitas, S. C., & Monteiro, I. T. (2010). Estimation of downward long-wave radiation at the surface combining remotely sensed data and NWP data. *Journal of Geophysical Research: Atmospheres*, *115*(D24), D24118. http://dx.doi.org/10.1029/2010JD013888

Viollier, M., & Raberanto, P. (2010). Radiometric and Spectral Characteristics of the ScaRaB-3 Instrument on Megha-Tropiques: Comparisons with ERBE, CERES, and GERB. *Journal of Atmospheric and Oceanic Technology*, *27*(3), 428–442. http://dx.doi.org/10.1175/2009JTECHA1307.1

Wang, W., Huang, J., Minnis, P., Hu, Y., Li, J., Huang, Z., … Wang, T. (2010). Dusty cloud properties and radiative forcing over dust source and downwind regions derived from A-Train data during the Pacific Dust Experiment. *Journal of Geophysical Research: Atmospheres*, *115*(D4), D00H35. http://dx.doi.org/10.1029/2010JD014109

Wang, X., & Zender, C. S. (2010). Constraining MODIS snow albedo at large solar zenith angles: Implications for the surface energy budget in Greenland. *Journal of Geophysical Research: Earth Surface*, *115*(F4), F04015. http://dx.doi.org/10.1029/2009JF001436

Watanabe, M., Suzuki, T., O'ishi, R., Komuro, Y., Watanabe, S., Emori, S., … Kimoto, M. (2010). Improved Climate Simulation by MIROC5: Mean States, Variability, and Climate Sensitivity. *Journal of Climate*, *23*(23), 6312–6335. http://dx.doi.org/10.1175/2010JCLI3679.1

Winker, D. M., Pelon, J., Coakley, J. A., Ackerman, S. A., Charlson, R. J., Colarco, P. R., … Wielicki, B. A. (2010). The CALIPSO Mission: A Global 3D View of Aerosols and Clouds. *Bulletin of the American Meteorological Society*, *91*(9), 1211–1229. http://dx.doi.org/10.1175/2010BAMS3009.1

Xi, B., Dong, X., Minnis, P., & Khaiyer, M. M. (2010). A 10 year climatology of cloud fraction and vertical distribution derived from both surface and GOES observations over the DOE ARM SPG site. *Journal of Geophysical Research: Atmospheres*, *115*(D12), D12124. http://dx.doi.org/10.1029/2009JD012800

Xu, K.-M., Cheng, A., & Zhang, M. (2010). Cloud-Resolving Simulation of Low-Cloud Feedback to an Increase in Sea Surface Temperature. *Journal of the Atmospheric Sciences*, *67*(3), 730–748. http://dx.doi.org/10.1175/2009JAS3239.1

Yost, C. R., Minnis, P., Ayers, J. K., Spangenberg, D. A., Heymsfield, A. J., Bansemer, A., … Hlavka, D. L. (2010). Comparison of GOES-retrieved and in situ measurements of deep convective anvil cloud microphysical properties during the Tropical Composition, Cloud and Climate Coupling Experiment (TC4). *Journal of Geophysical Research: Atmospheres*, *115*(D10), D00J06. http://dx.doi.org/10.1029/2009JD013313

Zelinka, M. D., & Hartmann, D. L. (2010). Why is longwave cloud feedback positive? *Journal of Geophysical Research: Atmospheres*, *115*(D16), D16117. http://dx.doi.org/10.1029/2010JD013817

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CERES Publications for 2009

Allan, R. P. (2009). Examination of Relationships between Clear-Sky Longwave Radiation and Aspects of the Atmospheric Hydrological Cycle in Climate Models, Reanalyses, and Observations. *Journal of Climate*, *22*(11), 3127–3145. http://dx.doi.org/10.1175/2008JCLI2616.1

Andronova, N., Penner, J. E., & Wong, T. (2009). Observed and modeled evolution of the tropical mean radiation budget at the top of the atmosphere since 1985. *Journal of Geophysical Research: Atmospheres*, *114*(D14), D14106. http://dx.doi.org/10.1029/2008JD011560

Clerbaux, N., Russell, J. E., Dewitte, S., Bertrand, C., Caprion, D., De Paepe, B., … Brindley, H. E. (2009). Comparison of GERB instantaneous radiance and flux products with CERES Edition-2 data. *Remote Sensing of Environment*, *113*(1), 102–114. http://dx.doi.org/10.1016/j.rse.2008.08.016

Eitzen, Z. A., Xu, K.-M., & Wong, T. (2009). Cloud and Radiative Characteristics of Tropical Deep Convective Systems in Extended Cloud Objects from CERES Observations. *Journal of Climate*, *22*(22), 5983–6000. http://dx.doi.org/10.1175/2009JCLI3038.1

Feng, Z., Dong, X., & Xi, B. (2009). A Method to Merge WSR-88D Data with ARM SGP Millimeter Cloud Radar Data by Studying Deep Convective Systems. *Journal of Atmospheric and Oceanic Technology*, *26*(5), 958–971. http://dx.doi.org/10.1175/2008JTECHA1190.1

Forman, B. A., & Margulis, S. A. (2009). High-resolution satellite-based cloud-coupled estimates of total downwelling surface radiation for hydrologic modelling applications. *Hydrol. Earth Syst. Sci.*, *13*(7), 969–986. http://dx.doi.org/10.5194/hess-13-969-2009

Gui, S., Liang, S., & Li, L. (2009). Validation of surface radiation data provided by the CERES over the Tibetan Plateau. In *2009 17th International Conference on Geoinformatics* (pp. 1–6). http://dx.doi.org/10.1109/GEOINFORMATICS.2009.5292880

Ham, S.-H., Sohn, B.-J., Yang, P., & Baum, B. A. (2009). Assessment of the Quality of MODIS Cloud Products from Radiance Simulations. *Journal of Applied Meteorology and Climatology*, *48*(8), 1591–1612. http://dx.doi.org/10.1175/2009JAMC2121.1

Hinkelman, L. M., Stackhouse, P. W., Wielicki, B. A., Zhang, T., & Wilson, S. R. (2009). Surface insolation trends from satellite and ground measurements: Comparisons and challenges. *Journal of Geophysical Research: Atmospheres*, *114*(D10), D00D20. http://dx.doi.org/10.1029/2008JD011004

Huang, J., Fu, Q., Su, J., Tang, Q., Minnis, P., Hu, Y., … Zhao, Q. (2009). Taklimakan dust aerosol radiative heating derived from CALIPSO observations using the Fu-Liou radiation model with CERES constraints. *Atmos. Chem. Phys.*, *9*(12), 4011–4021. http://dx.doi.org/10.5194/acp-9-4011-2009

Jones, T. A., Christopher, S. A., & Quaas, J. (2009). A six year satellite-based assessment of the regional variations in aerosol indirect effects. *Atmos. Chem. Phys.*, *9*(12), 4091–4114. http://dx.doi.org/10.5194/acp-9-4091-2009

Kato, S. (2009). Interannual Variability of the Global Radiation Budget. *Journal of Climate*, *22*(18), 4893–4907. http://dx.doi.org/10.1175/2009JCLI2795.1

Kato, S., & Marshak, A. (2009). Solar zenith and viewing geometry-dependent errors in satellite retrieved cloud optical thickness: Marine stratocumulus case. *Journal of Geophysical Research: Atmospheres*, *114*(D1), D01202. http://dx.doi.org/10.1029/2008JD010579

Lin, W., Zhang, M., & Loeb, N. G. (2009). Seasonal Variation of the Physical Properties of Marine Boundary Layer Clouds off the California Coast. *Journal of Climate*, *22*(10), 2624–2638. http://dx.doi.org/10.1175/2008JCLI2478.1

Loeb, N. G., Wielicki, B. A., Doelling, D. R., Smith, G. L., Keyes, D. F., Kato, S., … Wong, T. (2009). Toward Optimal Closure of the Earth's Top-of-Atmosphere Radiation Budget. *Journal of Climate*, *22*(3), 748–766. http://dx.doi.org/10.1175/2008JCLI2637.1

Loeb, N. G., Wielicki, B. A., Wong, T., & Parker, P. A. (2009). Impact of data gaps on satellite broadband radiation records. *Journal of Geophysical Research: Atmospheres*, *114*(D11), D11109. http://dx.doi.org/10.1029/2008JD011183

Marshak, A., Knyazikhin, Y., Chiu, J. C., & Wiscombe, W. J. (2009). Spectral invariant behavior of zenith radiance around cloud edges observed by ARM SWS. *Geophysical Research Letters*, *36*(16), L16802. http://dx.doi.org/10.1029/2009GL039366

Matthews, G. (2009). In-Flight Spectral Characterization and Calibration Stability Estimates for the Clouds and the Earth's Radiant Energy System (CERES). *Journal of Atmospheric and Oceanic Technology*, *26*(9), 1685–1716. http://dx.doi.org/10.1175/2009JTECHA1243.1

Murphy, D. M., Solomon, S., Portmann, R. W., Rosenlof, K. H., Forster, P. M., & Wong, T. (2009). An observationally based energy balance for the Earth since 1950. *Journal of Geophysical Research: Atmospheres*, *114*(D17), D17107. http://dx.doi.org/10.1029/2009JD012105

Myhre, G., Berglen, T. F., Hoyle, C. R., Christopher, S. a., Coe, H., Crosier, J., … Remer, L. a. (2009). Modelling of chemical and physical aerosol properties during the ADRIEX aerosol campaign. *Quarterly Journal of the Royal Meteorological Society*, *135*(638), 53–66. http://dx.doi.org/10.1002/qj.350

Myhre, G., Berglen, T. F., Johnsrud, M., Hoyle, C. R., Berntsen, T. K., Christopher, S. A., … Yttri, K. E. (2009). Modelled radiative forcing of the direct aerosol effect with multi-observation evaluation. *Atmos. Chem. Phys.*, *9*(4), 1365–1392. http://dx.doi.org/10.5194/acp-9-1365-2009

Pallé, E., Goode, P. R., & Montañés-Rodríguez, P. (2009). Interannual variations in Earth's reflectance 1999–2007. *Journal of Geophysical Research: Atmospheres*, *114*(D10), D00D03. http://dx.doi.org/10.1029/2008JD010734

Peterson, T. C., & Baringer, M. O. (2009). State of the Climate in 2008. *Bulletin of the American Meteorological Society*, *90*(8), S1–S196. http://dx.doi.org/10.1175/BAMS-90-8-StateoftheClimate

Pinker, R. T., Wang, H., & Grodsky, S. A. (2009). How good are ocean buoy observations of radiative fluxes? *Geophysical Research Letters*, *36*(10), L10811. http://dx.doi.org/10.1029/2009GL037840

Rutan, D., Rose, F., Roman, M., Manalo-Smith, N., Schaaf, C., & Charlock, T. (2009). Development and assessment of broadband surface albedo from Clouds and the Earth's Radiant Energy System Clouds and Radiation Swath data product. *Journal of Geophysical Research: Atmospheres*, *114*(D8), D08125. http://dx.doi.org/10.1029/2008JD010669

Saunders, W., Lawrence, J. S., Storey, J. W. V., Ashley, M. C. B., Kato, S., Minnis, P., … Kulesa, C. (2009). Where Is the Best Site on Earth? Domes A, B, C, and F, and Ridges A and B. *Publications of the Astronomical Society of the Pacific*, *121*(883), 976–992. http://dx.doi.org/10.1086/605780

Slingo, A., White, H. E., Bharmal, N. A., & Robinson, G. J. (2009). Overview of observations from the RADAGAST experiment in Niamey, Niger: 2. Radiative fluxes and divergences. *Journal of Geophysical Research: Atmospheres*, *114*(D13), D00E04. http://dx.doi.org/10.1029/2008JD010497

Smith, G. L., Priestley, K. J., Hess, P. C., Currey, C., & Spence, P. (2009). Validation of Geolocation of Measurements of the Clouds and the Earth's Radiant Energy System (CERES) Scanning Radiometers aboard Three Spacecraft. *Journal of Atmospheric and Oceanic Technology*, *26*(11), 2379–2391. http://dx.doi.org/10.1175/2009JTECHA1207.1

Sorensen, I. J., & Mahan, J. R. (2009). Enhancing the simulation of radiometric instrument models using genetic algorithms. *Journal of Applied Remote Sensing*, *3*(1), 033509–033509–20. http://dx.doi.org/10.1117/1.3096955

Trenberth, K. E., & Fasullo, J. T. (2009a). Changes in the flow of energy through the Earth's climate system. *Meteorologische Zeitschrift*, *18*(4), 369–377. http://dx.doi.org/10.1127/0941-2948/2009/0388

Trenberth, K. E., & Fasullo, J. T. (2009b). Global warming due to increasing absorbed solar radiation. *Geophysical Research Letters*, *36*(7), L07706. http://dx.doi.org/10.1029/2009GL037527

Trenberth, K. E., Fasullo, J. T., & Kiehl, J. (2009). Earth's Global Energy Budget. *Bulletin of the American Meteorological Society*, *90*(3), 311–323. http://dx.doi.org/10.1175/2008BAMS2634.1

Várnai, T., & Marshak, A. (2009). MODIS observations of enhanced clear sky reflectance near clouds. *Geophysical Research Letters*, *36*(6), L06807. http://dx.doi.org/10.1029/2008GL037089

Viollier, M., Standfuss, C., Chomette, O., & Quesney, A. (2009). Top-of-Atmosphere Radiance-to-Flux Conversion in the SW Domain for the ScaRaB-3 Instrument on Megha-Tropiques. *Journal of Atmospheric and Oceanic Technology*, *26*(10), 2161–2171. http://dx.doi.org/10.1175/2009JTECHA1264.1

Waliser, D. E., Li, J.-L. F., Woods, C. P., Austin, R. T., Bacmeister, J., Chern, J., … Wu, D. (2009). Cloud ice: A climate model challenge with signs and expectations of progress. *Journal of Geophysical Research: Atmospheres*, *114*(D8), D00A21. http://dx.doi.org/10.1029/2008JD010015

Wang, H., & Pinker, R. T. (2009). Shortwave radiative fluxes from MODIS: Model development and implementation. *Journal of Geophysical Research: Atmospheres*, *114*(D20), D20201. http://dx.doi.org/10.1029/2008JD010442

Wang, W., Liang, S., & Augustine, J. A. (2009). Estimating High Spatial Resolution Clear-Sky Land Surface Upwelling Longwave Radiation From MODIS Data. *IEEE Transactions on Geoscience and Remote Sensing*, *47*(5), 1559–1570. http://dx.doi.org/10.1109/TGRS.2008.2005206

Wild, M. (2009). Global dimming and brightening: A review. *Journal of Geophysical Research: Atmospheres*, *114*(D10), D00D16. http://dx.doi.org/10.1029/2008JD011470

Wong, T., Stackhouse Jr, P., Kratz, D. P., & Wilber, A. C. (2009). Earth Radiation Budget at top-of-atmosphere [in "State of the Climate in 2008"]. *Bulletin of the American Meteorological Society*. http://dx.doi.org/10.1175/BAMS-90-8-StateoftheClimate

Xia, X., & Zong, X. (2009). Shortwave versus longwave direct radiative forcing by Taklimakan dust aerosols. *Geophysical Research Letters*, *36*(7), L07803. http://dx.doi.org/10.1029/2009GL037237

Xu, K.-M. (2009). Evaluation of Cloud Physical Properties of ECMWF Analysis and Re-Analysis (ERA) against CERES Tropical Deep Convective Cloud Object Observations. *Monthly Weather Review*, *137*(1), 207–223. http://dx.doi.org/10.1175/2008MWR2633.1

Yang, E.-S., Gupta, P., & Christopher, S. A. (2009). Net radiative effect of dust aerosols from satellite measurements over Sahara. *Geophysical Research Letters*, *36*(18), L18812. http://dx.doi.org/10.1029/2009GL039801

Yang, S.-K., Long, C. S., Miller, A. J., He, X., Yang, Y., Wuebbles, D. J., & Tiao, G. (2009). Modulation of natural variability on a trend analysis of the updated cohesive SBUV(/2) total ozone. *International Journal of Remote Sensing*, *30*(15-16), 3975–3986. http://dx.doi.org/10.1080/01431160902821924

Yorks, J. E., McGill, M., Rodier, S., Vaughan, M., Hu, Y., & Hlavka, D. (2009). Radiative effects of African dust and smoke observed from Clouds and the Earth's Radiant Energy System (CERES) and Cloud-Aerosol Lidar with Orthogonal Polarization (CALIOP) data. *Journal of Geophysical Research: Atmospheres*, *114*(D4), D00H04. http://dx.doi.org/10.1029/2009JD012000

Clouds and the Earth's Radiant Energy System

CERES Publications for 2008

Bender, F. a.-M. (2008). A note on the effect of GCM tuning on climate sensitivity. *Environmental Research Letters*, *3*(1), 014001. http://dx.doi.org/10.1088/1748-9326/3/1/014001

Chen, Y., Bai, H., Huang, J., Zhang, H., Ge, J., Guan, X., & Mao, X. (2008). Seasonal variability of cloud optical depth over northwestern China derived from CERES/MODIS satellite measurements. *Chinese Optics Letters*, *6*(6), 454–457.

Christopher, S. A., & Jones, T. A. (2008). Sample Bias Estimation for Cloud-Free Aerosol Effects Over Global Oceans. *IEEE Transactions on Geoscience and Remote Sensing*, *46*(6), 1728–1732. http://dx.doi.org/10.1109/TGRS.2008.916218

Christopher, S. A., & Jones, T. A. (2008). Short-wave aerosol radiative efficiency over the global oceans derived from satellite data. *Tellus B*, *60*(4), 636–640. http://dx.doi.org/10.1111/j.1600-0889.2008.00353.x

Clerbaux, N., Dewitte, S., Bertrand, C., Caprion, D., De Paepe, B., Gonzalez, L., … Brindley, H. (2008). Unfiltering of the Geostationary Earth Radiation Budget (GERB) Data. Part I: Shortwave Radiation. *Journal of Atmospheric and Oceanic Technology*, *25*(7), 1087–1105. http://dx.doi.org/10.1175/2007JTECHA1001.1

Clerbaux, N., Dewitte, S., Bertrand, C., Caprion, D., De Paepe, B., Gonzalez, L., … Russell, J. E. (2008). Unfiltering of the Geostationary Earth Radiation Budget (GERB) data. Part II: Longwave radiation. *Journal of Atmospheric and Oceanic Technology*, *25*(7), 1106–1117. http://dx.doi.org/10.1175/2008jtecha1002.1

Dessler, A. E., Yang, P., Lee, J., Solbrig, J., Zhang, Z., & Minschwaner, K. (2008). An analysis of the dependence of clear-sky top-of-atmosphere outgoing longwave radiation on atmospheric temperature and water vapor. *Journal of Geophysical Research: Atmospheres*, *113*(D17), D17102. http://dx.doi.org/10.1029/2008JD010137

Dong, X., Minnis, P., Xi, B., Sun-Mack, S., & Chen, Y. (2008). Comparison of CERES-MODIS stratus cloud properties with ground-based measurements at the DOE ARM Southern Great Plains site. *Journal of Geophysical Research: Atmospheres*, *113*(D3), D03204. http://dx.doi.org/10.1029/2007JD008438

Dong, X., Wielicki, B. A., Xi, B., Hu, Y., Mace, G. G., Benson, S., … Minnis, P. (2008). Using observations of deep convective systems to constrain atmospheric column absorption of solar radiation in the optically thick limit. *Journal of Geophysical Research: Atmospheres*, *113*(D10), D10206. http://dx.doi.org/10.1029/2007JD009769

Eitzen, Z. A., & Xu, K.-M. (2008). Sensitivity of a Large Ensemble of Tropical Convective Systems to Changes in the Thermodynamic and Dynamic Forcings. *Journal of the Atmospheric Sciences*, *65*(6), 1773–1794. http://dx.doi.org/10.1175/2007JAS2446.1

Eitzen, Z., Xu, K., & Wong, T. (2008). Statistical Analyses of Satellite Cloud Object Data from CERES. Part V: Relationships between Physical Properties of Marine Boundary Layer Clouds. *JOURNAL OF CLIMATE*, *21*(24), 6668–6688. http://dx.doi.org/10.1175/2008JCLI2307.1

Fasullo, J. T., & Trenberth, K. E. (2008a). The Annual Cycle of the Energy Budget. Part I: Global Mean and Land–Ocean Exchanges. *Journal of Climate*, *21*(10), 2297–2312. http://dx.doi.org/10.1175/2007JCLI1935.1

Fasullo, J. T., & Trenberth, K. E. (2008b). The Annual Cycle of the Energy Budget. Part II: Meridional Structures and Poleward Transports. *Journal of Climate*, *21*(10), 2313–2325. http://dx.doi.org/10.1175/2007JCLI1936.1

Guo, S., & Leighton, H. (2008). Satellite- derived aerosol radiative forcing from the 2004 British Columbia wildfires. *Atmosphere-Ocean*, *46*(2), 203–212. http://dx.doi.org/10.3137/ao.460201

Gupta, P., Patadia, F., & Christopher, S. A. (2008). Multisensor Data Product Fusion for Aerosol Research. *IEEE Transactions on Geoscience and Remote Sensing*, *46*(5), 1407–1415. http://dx.doi.org/10.1109/TGRS.2008.916087

Huang, X., Yang, W., Loeb, N. G., & Ramaswamy, V. (2008). Spectrally resolved fluxes derived from collocated AIRS and CERES measurements and their application in model evaluation: Clear sky over the tropical oceans. *Journal of Geophysical Research: Atmospheres*, *113*(D9), D09110. http://dx.doi.org/10.1029/2007JD009219

Huang, Y., & Ramaswamy, V. (2008). Observed and simulated seasonal co-variations of outgoing longwave radiation spectrum and surface temperature. *Geophysical Research Letters*, *35*(17), L17803. http://dx.doi.org/10.1029/2008GL034859

Jones, T. A., & Christopher, S. A. (2008). Multispectral Analysis of Aerosols Over Oceans Using Principal Components. *IEEE Transactions on Geoscience and Remote Sensing*, *46*(9), 2659–2665. http://dx.doi.org/10.1109/TGRS.2008.920019

Jones, T. A., & Christopher, S. A. (2008). Seasonal variation in satellite-derived effects of aerosols on clouds in the Arabian Sea. *Journal of Geophysical Research: Atmospheres*, *113*(D9), D09207. http://dx.doi.org/10.1029/2007JD009118

Kato, S., Rose, F. G., Rutan, D. A., & Charlock, T. P. (2008). Cloud Effects on the Meridional Atmospheric Energy Budget Estimated from Clouds and the Earth's Radiant Energy System (CERES) Data. *Journal of Climate*, *21*(17), 4223–4241. http://dx.doi.org/10.1175/2008JCLI1982.1

Kim, D., & Ramanathan, V. (2008). Solar radiation budget and radiative forcing due to aerosols and clouds. *Journal of Geophysical Research: Atmospheres*, *113*(D2), D02203. http://dx.doi.org/10.1029/2007JD008434

Laszlo, I., Liu, H., & Ignatov, A. (2008). Comparison of single-channel and multichannel aerosol optical depths derived from MAPSS data. *Journal of Geophysical Research: Atmospheres*, *113*(D19), D19S90. http://dx.doi.org/10.1029/2007JD009664

L'Ecuyer, T. S., Wood, N. B., Haladay, T., Stephens, G. L., & Stackhouse, P. W. (2008). Impact of clouds on atmospheric heating based on the R04 CloudSat fluxes and heating rates data set. *Journal of Geophysical Research: Atmospheres*, *113*(D8), D00A15. http://dx.doi.org/10.1029/2008JD009951

Li, G., & Zhang, G. J. (2008). Understanding biases in shortwave cloud radiative forcing in the National Center for Atmospheric Research Community Atmosphere Model (CAM3) during El Niño. *Journal of Geophysical Research: Atmospheres*, *113*(D2), D02103. http://dx.doi.org/10.1029/2007JD008963

Lin, B., Stackhouse, P. W., Minnis, P., Wielicki, B. A., Hu, Y., Sun, W., … Hinkelman, L. M. (2008). Assessment of global annual atmospheric energy balance from satellite observations. *Journal of Geophysical Research: Atmospheres*, *113*(D16), D16114. http://dx.doi.org/10.1029/2008JD009869

Lin, B., Sun, W., Min, Q., & Hu, Y. (2008). Numerical Studies of Scattering Properties of Leaves and Leaf Moisture Influences on the Scattering at Microwave Wavelengths. *IEEE Transactions on Geoscience and Remote Sensing*, *46*(2), 353–360. http://dx.doi.org/10.1109/TGRS.2007.912434

Loeb, N. G., & Schuster, G. L. (2008). An observational study of the relationship between cloud, aerosol and meteorology in broken low-level cloud conditions. *Journal of Geophysical Research: Atmospheres*, *113*(D14), D14214. http://dx.doi.org/10.1029/2007JD009763

Marshak, A., Wen, G., Coakley, J. A., Remer, L. A., Loeb, N. G., & Cahalan, R. F. (2008). A simple model for the cloud adjacency effect and the apparent bluing of aerosols near clouds. *Journal of Geophysical Research: Atmospheres*, *113*(D14), D14S17. http://dx.doi.org/10.1029/2007JD009196

Matthews, G. (2008). Celestial body irradiance determination from an underfilled satellite radiometer: application to albedo and thermal emission measurements of the Moon using CERES. *Applied Optics*, *47*(27), 4981. http://dx.doi.org/10.1364/AO.47.004981

Menon, S., Del Genio, A. D., Kaufman, Y., Bennartz, R., Koch, D., Loeb, N., & Orlikowski, D. (2008). Analyzing signatures of aerosol-cloud interactions from satellite retrievals and the GISS GCM to constrain the aerosol indirect effect. *Journal of Geophysical Research: Atmospheres*, *113*(D14), D14S22. http://dx.doi.org/10.1029/2007JD009442

Milton, S. F., Greed, G., Brooks, M. E., Haywood, J., Johnson, B., Allan, R. P., … Grey, W. M. F. (2008). Modeled and observed atmospheric radiation balance during the West African dry season: Role of mineral dust, biomass burning aerosol, and surface albedo. *Journal of Geophysical Research: Atmospheres*, *113*(D23), D00C02. http://dx.doi.org/10.1029/2007JD009741

Minnis, P., Trepte, Q. Z., Sun-Mack, S., Chen, Y., Doelling, D. R., Young, D. F., … Geier, E. B. (2008). Cloud Detection in Nonpolar Regions for CERES Using TRMM VIRS and Terra and Aqua MODIS Data. *Ieee Transactions on Geoscience and Remote Sensing*, *46*(11), 3857–3884. http://dx.doi.org/10.1109/tgrs.2008.2001351

Patadia, F., Gupta, P., & Christopher, S. A. (2008). First observational estimates of global clear sky shortwave aerosol direct radiative effect over land. *Geophysical Research Letters*, *35*(4), L04810. http://dx.doi.org/10.1029/2007GL032314

Patadia, F., Gupta, P., Christopher, S. A., & Reid, J. S. (2008). A Multisensor satellite-based assessment of biomass burning aerosol radiative impact over Amazonia. *Journal of Geophysical Research: Atmospheres*, *113*(D12), D12214. http://dx.doi.org/10.1029/2007JD009486

Pfister, G. G., Hess, P. G., Emmons, L. K., Rasch, P. J., & Vitt, F. M. (2008). Impact of the summer 2004 Alaska fires on top of the atmosphere clear-sky radiation fluxes. *Journal of Geophysical Research: Atmospheres*, *113*(D2), D02204. http://dx.doi.org/10.1029/2007JD008797

Pincus, R., Batstone, C. P., Hofmann, R. J. P., Taylor, K. E., & Glecker, P. J. (2008). Evaluating the present-day simulation of clouds, precipitation, and radiation in climate models. *Journal of Geophysical Research: Atmospheres*, *113*(D14), D14209. http://dx.doi.org/10.1029/2007JD009334

Quaas, J., Boucher, O., Bellouin, N., & Kinne, S. (2008). Satellite-based estimate of the direct and indirect aerosol climate forcing. *Journal of Geophysical Research: Atmospheres*, *113*(D5), D05204. http://dx.doi.org/10.1029/2007JD008962

Rondanelli, R., & Lindzen, R. S. (2008). Observed variations in convective precipitation fraction and stratiform area with sea surface temperature. *Journal of Geophysical Research: Atmospheres*, *113*(D16), D16119. http://dx.doi.org/10.1029/2008JD010064

Stone, R. S., Anderson, G. P., Shettle, E. P., Andrews, E., Loukachine, K., Dutton, E. G., … Roman, M. O. (2008). Radiative impact of boreal smoke in the Arctic: Observed and modeled. *Journal of Geophysical Research: Atmospheres*, *113*(D14), D14S16. http://dx.doi.org/10.1029/2007JD009657

Su, J., Jianping Huang, Qiang Fu, Minnis, P., Jinming Ge, & Jianrong Bi. (2008). Estimation of Asian dust aerosol effect on cloud radiation forcing using Fu-Liou radiative model and CERES measurements. *Atmos. Chem. Phys.*, *8*(10), 2763–2771. http://dx.doi.org/10.5194/acp-8-2763-2008

Sun, W. B., Hu, Y. X., Loeb, N. G., Lin, B., & Mlynczak, M. G. (2008). Using CERES data to evaluate the infrared flux derived from diffusivity approximation. *Ieee Geoscience and Remote Sensing Letters*, *5*(1), 17–20. http://dx.doi.org/10.1109/lgrs.2007.905198

Su, W., Dutton, E., Charlock, T. P., & Wiscombe, W. (2008). Performance of Commercial Radiometers in Very Low Temperature and Pressure Environments Typical of Polar Regions and of the Stratosphere: A Laboratory Study. *Journal of Atmospheric and Oceanic Technology*, *25*(4), 558–569. http://dx.doi.org/10.1175/2007JTECHA1005.1

Su, W., Schuster, G. L., Loeb, N. G., Rogers, R. R., Ferrare, R. A., Hostetler, C. A., … Obland, M. D. (2008). Aerosol and cloud interaction observed from high spectral resolution lidar data. *Journal of Geophysical Research: Atmospheres*, *113*(D24), D24202. http://dx.doi.org/10.1029/2008JD010588

Trenberth, K. E., & Fasullo, J. T. (2008). An Observational Estimate of Inferred Ocean Energy Divergence. *Journal of Physical Oceanography*, *38*(5), 984–999. http://dx.doi.org/10.1175/2007JPO3833.1

Trenberth, K. E., & Smith, L. (2008). Atmospheric Energy Budgets in the Japanese Reanalysis : Evaluation and Variability. *Journal of the Meteorological Society of Japan. Ser. II*, *86*(5), 579–592.

Xu, K. M., Wong, T., Wielicki, B. A., & Parker, L. (2008). Statistical analyses of satellite cloud object data from CERES. Part IV: Boundary layer cloud objects during 1998 El Nino. *Journal of Climate*, *21*(7), 1500–1521. http://dx.doi.org/10.1175/2007jcli1710.1

Yang, K., Pinker, R. T., Ma, Y., Koike, T., Wonsick, M. M., Cox, S. J., … Stackhouse, P. (2008). Evaluation of satellite estimates of downward shortwave radiation over the Tibetan Plateau. *Journal of Geophysical Research: Atmospheres*, *113*(D17), D17204. http://dx.doi.org/10.1029/2007JD009736

Yuan, J., & Hartmann, D. L. (2008). Spatial and temporal dependence of clouds and their radiative impacts on the large-scale vertical velocity profile. *Journal of Geophysical Research: Atmospheres*, *113*(D19), D19201. http://dx.doi.org/10.1029/2007JD009722

Yuan, J., Hartmann, D. L., & Wood, R. (2008). Dynamic Effects on the Tropical Cloud Radiative Forcing and Radiation Budget. *Journal of Climate*, *21*(11), 2337–2351. http://dx.doi.org/10.1175/2007JCLI1857.1

Zhao, T. X.-P., Laszlo, I., Guo, W., Heidinger, A., Cao, C., Jelenak, A., … Sullivan, J. (2008). Study of long-term trend in aerosol optical thickness observed from operational AVHRR satellite instrument. *Journal of Geophysical Research: Atmospheres*, *113*(D7), D07201. http://dx.doi.org/10.1029/2007JD009061

Zhao, T. X. P., Yu, H. B., Laszlo, I., Chin, M., & Conant, W. C. (2008). Derivation of component aerosol direct radiative forcing at the top of atmosphere for clear-sky oceans. *Journal of Quantitative Spectroscopy & Radiative Transfer*, *109*(7), 1162–1186. http://dx.doi.org/10.1016/j.jqsrt.2007.10.006

Clouds and the Earth's Radiant Energy System

CERES Publications for 2007

Allan, R. P. (2007). Improved simulation of water vapour and clear-sky radiation using 24-hour forecasts from ERA40. *Tellus A*, *59*(3), 336–343. http://dx.doi.org/10.1111/j.1600-0870.2007.00229.x

Allan, R. P. (2007). Monitoring present day changes in water vapour and the radiative energy balance using satellite data, reanalyses and models. *Joint 2007 EUMETSAT Meteorological Satellite Conference and the 15th Satellite Meteorology & Oceanography Conference of the American Meteorological Society, P.50*

Baumgardner, D., Minnis, P., Charlock, T. P., Zhou, D. K., Rose, F. G., Smith, W. L., … Nguyen, L. (2007). Real-time mesoscale forecast support during the CLAMS field campaign. *Advances in Atmospheric Sciences*, *24*(4), 599–605. http://dx.doi.org/10.1007/s00376-007-0599-3

Ben Rehouma, A., Viollier, M., & Desbois, M. (2007). Radiation budget estimates over Africa and surrounding oceans: inter-annual comparisons. *Atmos. Chem. Phys.*, *7*(10), 2617–2629. http://dx.doi.org/10.5194/acp-7-2617-2007

Buriez, J.-C., Parol, F., Poussi, Z., & Viollier, M. (2007). An improved derivation of the top-of-atmosphere albedo from POLDER/ADEOS-2: 2. Broadband albedo. *Journal of Geophysical Research: Atmospheres*, *112*(D19), D19201. http://dx.doi.org/10.1029/2006JD008257

Chen, Y., Li, Q., Kahn, R., Randerson, J., & Diner, D. (2009). Quantifying aerosol direct radiative effect with Multiangle Imaging Spectroradiometer observations: Top-of-atmosphere albedo change by aerosols based on land surface types. *JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES*, *114*. http://dx.doi.org/10.1029/2008JD010754

Chepfer, H., Minnis, P., Dubuisson, P., Chiriaco, M., Sun-Mack, S., & Rivière, E. D. (2007). Nitric acid particles in cold thick ice clouds observed at global scale: Link with lightning, temperature, and upper tropospheric water vapor. *Journal of Geophysical Research: Atmospheres*, *112*(D5), D05212. http://dx.doi.org/10.1029/2005JD006602

Chiriaco, M., Chepfer, H., Minnis, P., Haeffelin, M., Platnick, S., Baumgardner, D., … Wind, G. (2007). Comparison of CALIPSO-Like, LaRC, and MODIS Retrievals of Ice-Cloud Properties over SIRTA in France and Florida during CRYSTAL-FACE. *Journal of Applied Meteorology and Climatology*, *46*(3), 249–272. http://dx.doi.org/10.1175/JAM2435.1

Christopher, S. A., & Jones, T. (2007). Satellite-based assessment of cloud-free net radiative effect of dust aerosols over the Atlantic Ocean. *Geophysical Research Letters*, *34*(2), L02810. http://dx.doi.org/10.1029/2006GL027783

Fitzpatrick, M. F., & Warren, S. G. (2007). The Relative Importance of Clouds and Sea Ice for the Solar Energy Budget of the Southern Ocean. *Journal of Climate*, *20*(6), 941–954. http://dx.doi.org/10.1175/JCLI4040.1

Huang, Y., Ramaswamy, V., Huang, X., Fu, Q., & Bardeen, C. (2007). A strict test in climate modeling with spectrally resolved radiances: GCM simulation versus AIRS observations. *Geophysical Research Letters*, *34*(24), L24707. http://dx.doi.org/10.1029/2007GL031409

Jones, T. A., & Christopher, S. A. (2007). Is the top of atmosphere dust net radiative effect different between Terra and Aqua? *Geophysical Research Letters*, *34*(2), L02812. http://dx.doi.org/10.1029/2006GL028262

Jones, T. A., & Christopher, S. A. (2007). Statistical variability of top of atmosphere cloud-free shortwave aerosol radiative effect. *Atmos. Chem. Phys.*, *7*(11), 2937–2948. http://dx.doi.org/10.5194/acp-7-2937-2007

Lee, H.-T., Gruber, A., Ellingson, R. G., & Laszlo, I. (2007). Development of the HIRS Outgoing Longwave Radiation Climate Dataset. *Journal of Atmospheric and Oceanic Technology*, *24*(12), 2029–2047. http://dx.doi.org/10.1175/2007JTECHA989.1

Lin, B., Xu, K.-M., Minnis, P., Wielicki, B. A., Hu, Y., Chambers, L., … Sun, W. (2007). Coincident occurrences of tropical individual cirrus clouds and deep convective systems derived from TRMM observations. *Geophysical Research Letters*, *34*(14), L14804. http://dx.doi.org/10.1029/2007GL029768

Lin, X., Zhang, S. Q., & Hou, A. Y. (2007). Variational Assimilation of Global Microwave Rainfall Retrievals: Physical and Dynamical Impact on GEOS Analyses. *Monthly Weather Review*, *135*(8), 2931–2957. http://dx.doi.org/10.1175/MWR3434.1

Loeb, N. G., Kato, S., Loukachine, K., Manalo-Smith, N., & Doelling, D. R. (2007). Angular distribution models for top-of-atmosphere radiative flux estimation from the Clouds and the Earth's Radiant Energy System instrument on the Terra satellite. Part II: Validation. *Journal of Atmospheric and Oceanic Technology*, *24*(4), 564–584. http://dx.doi.org/10.1175/jtech1983.1

Loeb, N. G., Wielicki, B. A., Rose, F. G., & Doelling, D. R. (2007). Variability in global top-of-atmosphere shortwave radiation between 2000 and 2005. *Geophysical Research Letters*, *34*(3), L03704. http://dx.doi.org/10.1029/2006GL028196

Loeb, N. G., Wielicki, B. A., Su, W., Loukachine, K., Sun, W., Wong, T., … Davies, R. (2007). Multi-Instrument Comparison of Top-of-Atmosphere Reflected Solar Radiation. *Journal of Climate*, *20*(3), 575–591. http://dx.doi.org/10.1175/JCLI4018.1

Luo, Y. L., Xu, K. M., Wielicki, B. A., Wong, T., & Eitzen, Z. A. (2007). Statistical analyses of satellite cloud object data from CERES. Part III: Comparison with cloud-resolving model simulations of tropical convective clouds. *Journal of the Atmospheric Sciences*, *64*(3), 762–785. http://dx.doi.org/10.1175/jas3871.1

Lyapustin, A., Wang, Y., Kahn, R., Xiong, J., Ignatov, A., Wolfe, R., … Bruegge, C. (2007). Analysis of MODIS-MISR calibration differences using surface albedo around AERONET sites and cloud reflectance. *REMOTE SENSING OF ENVIRONMENT*, *107*(1-2), 12–21. http://dx.doi.org/10.1016/j.rse.2006.09.028

Matthews, G., Priestley, K., & Thomas, S. (2007a). Spectral balancing of a broadband Earth observing radiometer with co-aligned Short Wave channel to ensure accuracy and stability of broadband daytime Outgoing Long-Wave Radiance measurements: Application to CERES . In *Optical Engineering+ Applications* (Vol. 6678, p. 66781H–66781H–10)). International Society for Optics and Photonics.. http://dx.doi.org/10.1117/12.734492

Matthews, G., Priestley, K., & Thomas, S. (2007b). Transfer of radiometric standards between multiple low earth orbit climate observing broadband radiometers: application to CERES In *Optical Engineering+ Applications* (Vol. 6677, p. 66770I–66770I–10)). International Society for Optics and Photonics.. http://dx.doi.org/10.1117/12.734478

Mazzola, M., Lanconelli, C., Lupi, A., Vitale, V., & Tomasi, C. (2007). Short-wave direct aerosol forcing over the Mediterranean Sea region using MISR data. In *Il Nuovo Cimento B* (pp. 719–728). http://dx.doi.org/10.1393/ncb/i2007-10407-6

Minnis, P., Huang, J., Lin, B., Yi, Y., Arduini, R. F., Fan, T.-F., … Mace, G. G. (2007). Ice cloud properties in ice-over-water cloud systems using Tropical Rainfall Measuring Mission (TRMM) visible and infrared scanner and TRMM Microwave Imager data. *Journal of Geophysical Research: Atmospheres*, *112*(D6), D06206. http://dx.doi.org/10.1029/2006JD007626

Nair, U. S., Ray, D. K., Wang, J., Christopher, S. A., Lyons, T. J., Welch, R. M., & Pielke, R. A. (2007). Observational estimates of radiative forcing due to land use change in southwest Australia. *Journal of Geophysical Research: Atmospheres*, *112*(D9), D09117. http://dx.doi.org/10.1029/2006JD007505

Pallé, E., Goode, P. R., & Montañés-Rodríguez, P. (2009). Interannual variations in Earth's reflectance 1999–2007. *Journal of Geophysical Research: Atmospheres*, *114*(D10), D00D03. http://dx.doi.org/10.1029/2008JD010734

Priestley, K. J., Smith, G. L., Thomas, S., Cooper, D., Lee III, R. B., Walikainen, D., … Wilson, R. (2007). Radiometric performance of the CERES Earth radiation budget climate record sensors on the EOS Aqua and Terra spacecraft In *Optical Engineering+ Applications* (Vol. 6677, p. 66770H–66770H–12). http://dx.doi.org/10.1117/12.735294

Priestley, K. J., Smith, G. L., Thomas, S., & Matthews, G. (2007). Validation protocol for climate quality CERES measurements. In *Optical Engineering+ Applications* (Vol. 6678, p. 66781I–66781I–12) International Society for Optics and Photonics. http://dx.doi.org/10.1117/12.735312

Spencer, R. W., Braswell, W. D., Christy, J. R., & Hnilo, J. (2007). Cloud and radiation budget changes associated with tropical intraseasonal oscillations. *Geophysical Research Letters*, *34*(15), L15707. http://dx.doi.org/10.1029/2007GL029698

Sun, W., Videen, G., Lin, B., & Hu, Y. (2007). Modeling light scattered from and transmitted through dielectric periodic structures on a substrate. *Applied Optics*, *46*(7), 1150–1156. http://dx.doi.org/10.1364/AO.46.001150

Su, W., Charlock, T. P., Rose, F. G., & Rutan, D. (2007). Photosynthetically active radiation from Clouds and the Earth's Radiant Energy System (CERES) products. *Journal of Geophysical Research: Biogeosciences*, *112*(G2), G02022. http://dx.doi.org/10.1029/2006JG000290

Thomas, S., Priestley, K. J., & Matthews, G. M. (2007). Analysis of clouds and the Earth's radiant energy system (CERES) lunar measurements. In *Optical Engineering+ Applications* (Vol. 6677, pp. 667715–667715–8) International Society for Optics and Photonics. http://dx.doi.org/10.1117/12.735839

Turner, D. D., Vogelmann, A. M., Johnson, K., Miller, M., Austin, R. T., Barnard, J. C., … Wiscombe, W. (2007). Thin Liquid Water Clouds: Their Importance and Our Challenge. *Bulletin of the American Meteorological Society*, *88*(2), 177–190. http://dx.doi.org/10.1175/BAMS-88-2-177

Verlinde, J., Harrington, J. Y., Yannuzzi, V. T., Avramov, A., Greenberg, S., Richardson, S. J., … Schofield, R. (2007). The Mixed-Phase Arctic Cloud Experiment. *Bulletin of the American Meteorological Society*, *88*(2), 205–221. http://dx.doi.org/10.1175/BAMS-88-2-205

Wang, D., Minnis, P., Charlock, T. P., Zhou, D. K., Rose, F. G., Smith, W. L., … Nguyen, L. (2007). Real-time mesoscale forecast support during the CLAMS field campaign. *Advances in Atmospheric Sciences*, *24*(4), 599–605. http://dx.doi.org/10.1007/s00376-007-0599-3

Wang, Z., Zeng, X., & Barlage, M. (2007). Moderate Resolution Imaging Spectroradiometer bidirectional reflectance distribution function–based albedo parameterization for weather and climate models. *Journal of Geophysical Research: Atmospheres*, *112*(D2), D02103. http://dx.doi.org/10.1029/2005JD006736

Xia, X., Li, Z., Holben, B., Wang, P., Eck, T., Chen, H., … Zhao, Y. (2007). Aerosol optical properties and radiative effects in the Yangtze Delta region of China. *Journal of Geophysical Research: Atmospheres*, *112*(D22), D22S12. http://dx.doi.org/10.1029/2007JD008859

Xu, K. M., Wong, T., Wielicki, B. A., Parker, L., Lin, B., Eitzen, Z. A., & Branson, M. (2007). Statistical analyses of satellite cloud object data from CERES. Part II: Tropical convective cloud objects during 1998 El Nino and evidence for supporting the fixed anvil temperature hypothesis. *Journal of Climate*, *20*(5), 819–842. http://dx.doi.org/10.1175/jcli4069.1

Zhou, Y., Kratz, D. P., Wilber, A. C., Gupta, S. K., & Cess, R. D. (2007). An improved algorithm for retrieving surface downwelling longwave radiation from satellite measurements. *Journal of Geophysical Research: Atmospheres*, *112*(D15), D15102. http://dx.doi.org/10.1029/2006JD008159

Clouds and the Earth's Radiant Energy System

CERES Publications for 2006

Allan, R. P. (2006). Variability in clear-sky longwave radiative cooling of the atmosphere. *Journal of Geophysical Research: Atmospheres*, *111*(D22), D22105. http://dx.doi.org/10.1029/2006JD007304

Bender, F. a-M., Rodhe, H., Charlson, R. J., Ekman, A. M. L., & Loeb, N. (2006). 22 views of the global albedo—comparison between 20 GCMs and two satellites. *Tellus A*, *58*(3), 320–330. http://dx.doi.org/10.1111/j.1600-0870.2006.00181.x

Bertrand, C., Clerbaux, N., Ipe, A., Dewitte, S., & Gonzalez, L. (2006). Angular distribution models anisotropic correction factors and sun glint: a sensitivity study. *International Journal of Remote Sensing*, *27*(9), 1741–1757. http://dx.doi.org/10.1080/01431160500107015

Bertrand, C., Futyan, J., Ipe, A., Gonzalez, L., & Clerbaux, N. (2006). Diurnal Asymmetry in the GERB SW Fluxes. *IEEE Transactions on Geoscience and Remote Sensing*, *44*(12), 3585–3600. http://dx.doi.org/10.1109/TGRS.2006.881119

Capderou, M., & Viollier, M. (2006). True Along-Track Scan to Improve Radiation Budget Estimations. *Journal of Atmospheric and Oceanic Technology*, *23*(8), 1093–1103. http://dx.doi.org/10.1175/JTECH1907.1

Choi, Y.-S., & Ho, C.-H. (2006). Radiative effect of cirrus with different optical properties over the tropics in MODIS and CERES observations. *Geophysical Research Letters*, *33*(21), L21811. http://dx.doi.org/10.1029/2006GL027403

Christopher, S. A., Zhang, J., Kaufman, Y. J., & Remer, L. A. (2006). Satellite-based assessment of top of atmosphere anthropogenic aerosol radiative forcing over cloud-free oceans. *Geophysical Research Letters*, *33*(15), L15816. http://dx.doi.org/10.1029/2005GL025535

Clement, A. C. (2006). The Role of the Ocean in the Seasonal Cycle of the Hadley Circulation. *Journal of the Atmospheric Sciences*, *63*(12), 3351–3365. http://dx.doi.org/10.1175/JAS3811.1

Dong, X., Xi, B., & Minnis, P. (2006a). A Climatology of Midlatitude Continental Clouds from the ARM SGP Central Facility. Part II: Cloud Fraction and Surface Radiative Forcing. *Journal of Climate*, *19*(9), 1765–1783. http://dx.doi.org/10.1175/JCLI3710.1

Dong, X., Xi, B., & Minnis, P. (2006b). Observational evidence of changes in water vapor, clouds, and radiation at the ARM SGP site. *Geophysical Research Letters*, *33*(19), L19818. http://dx.doi.org/10.1029/2006GL027132

Huang, J., Lin, B., Minnis, P., Wang, T., Wang, X., Hu, Y., … Ayers, J. K. (2006). Satellite-based assessment of possible dust aerosols semi-direct effect on cloud water path over East Asia. *Geophysical Research Letters*, *33*(19), L19802. http://dx.doi.org/10.1029/2006GL026561

Huang, J., Minnis, P., Lin, B., Wang, T., Yi, Y., Hu, Y., … Ayers, K. (2006). Possible influences of Asian dust aerosols on cloud properties and radiative forcing observed from MODIS and CERES. *Geophysical Research Letters*, *33*(6), L06824. http://dx.doi.org/10.1029/2005GL024724

Huang, J., Minnis, P., Lin, B., Yi, Y., Fan, T.-F., Sun-Mack, S., & Ayers, J. K. (2006). Determination of ice water path in ice-over-water cloud systems using combined MODIS and AMSR-E measurements. *Geophysical Research Letters*, *33*(21), L21801. http://dx.doi.org/10.1029/2006GL027038

Huang, J. P., Yujie, W., Tianhe, W., & Yuhong, Y. (2006). Dusty cloud radiative forcing derived from satellite data for middle latitude regions of East Asia. *Progress in Natural Science*, *16*(10), 1084–1089. http://dx.doi.org/10.1080/10020070612330114

Ignatov, A., Minnis, P., Miller, W. F., Wielicki, B. A., & Remer, L. (2006). Consistency of global MODIS aerosol optical depths over ocean on Terra and Aqua CERES SSF data sets. *Journal of Geophysical Research: Atmospheres*, *111*(D14), D14202. http://dx.doi.org/10.1029/2005JD006645

Jin, Z., Charlock, T. P., Rutledge, K., Stamnes, K., & Wang, Y. (2006). Analytical solution of radiative transfer in the coupled atmosphere-ocean system with a rough surface. *Applied Optics*, *45*(28), 7443. http://dx.doi.org/10.1364/AO.45.007443

Kato, S., Hinkelman, L. M., & Cheng, A. (2006). Estimate of satellite-derived cloud optical thickness and effective radius errors and their effect on computed domain-averaged irradiances. *Journal of Geophysical Research: Atmospheres*, *111*(D17), D17201. http://dx.doi.org/10.1029/2005JD006668

Kato, S., Loeb, N. G., Minnis, P., Francis, J. A., Charlock, T. P., Rutan, D. A., … Sun-Mack, S. (2006). Seasonal and interannual variations of top-of-atmosphere irradiance and cloud cover over polar regions derived from the CERES data set. *Geophysical Research Letters*, *33*(19), L19804. http://dx.doi.org/10.1029/2006GL026685

Kiehl, J. T., & Ramanathan, V. (2006). *Frontiers of Climate Modeling*. Cambridge University Press.

Lee, Y.-K., Yang, P., Hu, Y., Baum, B. A., Loeb, N. G., & Gao, B.-C. (2006). Potential nighttime contamination of CERES clear-sky fields of view by optically thin cirrus during the CRYSTAL-FACE campaign. *Journal of Geophysical Research: Atmospheres*, *111*(D9), D09203. http://dx.doi.org/10.1029/2005JD006372

Li, J., Scinocca, J., Lazare, M., McFarlane, N., von Salzen, K., & Solheim, L. (2006). Ocean Surface Albedo and Its Impact on Radiation Balance in Climate Models. *Journal of Climate*, *19*(24), 6314–6333. http://dx.doi.org/10.1175/JCLI3973.1

Lin, B., Wielicki, B. A., Minnis, P., Chambers, L., Xu, K.-M., Hu, Y., & Fan, A. (2006). The Effect of Environmental Conditions on Tropical Deep Convective Systems Observed from the TRMM Satellite. *Journal of Climate*, *19*(22), 5745–5761. http://dx.doi.org/10.1175/JCLI3940.1

Loeb, N. G., Sun, W., Miller, W. F., Loukachine, K., & Davies, R. (2006). Fusion of CERES, MISR, and MODIS measurements for top-of-atmosphere radiative flux validation. *Journal of Geophysical Research: Atmospheres*, *111*(D18), D18209. http://dx.doi.org/10.1029/2006JD007146

Mace, G. G., Benson, S., & Kato, S. (2006). Cloud radiative forcing at the Atmospheric Radiation Measurement Program Climate Research Facility: 2. Vertical redistribution of radiant energy by clouds. *Journal of Geophysical Research: Atmospheres*, *111*(D11), D11S91. http://dx.doi.org/10.1029/2005JD005922

Mace, G. G., Benson, S., Sonntag, K. L., Kato, S., Min, Q., Minnis, P., … Doelling, D. R. (2006). Cloud radiative forcing at the Atmospheric Radiation Measurement Program Climate Research Facility: 1. Technique, validation, and comparison to satellite-derived diagnostic quantities. *Journal of Geophysical Research: Atmospheres*, *111*(D11), D11S90. http://dx.doi.org/10.1029/2005JD005921

Michalsky, J. J., Anderson, G. P., Barnard, J., Delamere, J., Gueymard, C., Kato, S., … Ricchiazzi, P. (2006). Shortwave radiative closure studies for clear skies during the Atmospheric Radiation Measurement 2003 Aerosol Intensive Observation Period. *Journal of Geophysical Research: Atmospheres*, *111*(D14), D14S90. http://dx.doi.org/10.1029/2005JD006341

Min, Q., & Lin, B. (2006a). Determination of spring onset and growing season leaf development using satellite measurements. *Remote Sensing of Environment*, *104*(1), 96–102. http://dx.doi.org/10.1016/j.rse.2006.05.006

Min, Q., & Lin, B. (2006b). Remote sensing of evapotranspiration and carbon uptake at Harvard Forest. *Remote Sensing of Environment*, *100*(3), 379–387. http://dx.doi.org/10.1016/j.rse.2005.10.020

Mitas, C. M., & Clement, A. (2006). Recent behavior of the Hadley cell and tropical thermodynamics in climate models and reanalyses. *Geophysical Research Letters*, *33*(1), L01810. http://dx.doi.org/10.1029/2005GL024406

Randall, D. A., Schlesinger, M. E., & Galin, V. (2006). Cloud Feedbacks. In *Frontiers in the Science of Climate Modeling* (pp. 217–250). Cambridge University Press.

Remer, L. A., & Kaufman, Y. J. (2006). Aerosol direct radiative effect at the top of the atmosphere over cloud free ocean derived from four years of MODIS data. *Atmos. Chem. Phys.*, *6*(1), 237–253. http://dx.doi.org/10.5194/acp-6-237-2006

Rutledge, C. K., Schuster, G. L., Charlock, T. P., Denn, F. M., Smith, W. L., Fabbri, B. E., … Knapp, R. J. (2006). Offshore Radiation Observations for Climate Research at the CERES Ocean Validation Experiment: A New "Laboratory" for Retrieval Algorithm Testing. *Bulletin of the American Meteorological Society*, *87*(9), 1211–1222. http://dx.doi.org/10.1175/BAMS-87-9-1211

Schuster, G. L., Dubovik, O., & Holben, B. N. (2006). Angstrom exponent and bimodal aerosol size distributions. *Journal of Geophysical Research: Atmospheres*, *111*(D7), D07207. http://dx.doi.org/10.1029/2005JD006328

Sharon, T. M., Albrecht, B. A., Jonsson, H. H., Minnis, P., Khaiyer, M. M., van Reken, T. M., … Flagan, R. (2006). Aerosol and Cloud Microphysical Characteristics of Rifts and Gradients in Maritime Stratocumulus Clouds. *Journal of the Atmospheric Sciences*, *63*(3), 983–997. http://dx.doi.org/10.1175/JAS3667.1

Slingo, A., Ackerman, T. P., Allan, R. P., Kassianov, E. I., McFarlane, S. A., Robinson, G. J., … Dewitte, S. (2006). Observations of the impact of a major Saharan dust storm on the atmospheric radiation balance. *Geophysical Research Letters*, *33*(24), L24817. http://dx.doi.org/10.1029/2006GL027869

Smirnov, A., Holben, B. N., Sakerin, S. M., Kabanov, D. M., Slutsker, I., Chin, M., … Kopelevich, O. V. (2006). Ship-based aerosol optical depth measurements in the Atlantic Ocean: Comparison with satellite retrievals and GOCART model. *Geophysical Research Letters*, *33*(14), L14817. http://dx.doi.org/10.1029/2006GL026051

Smith, G. L., Szewczyk, Z. P., Rutan, D. A., & Lee, R. B. (2006). Comparison of measurements from satellite radiation budget instruments. *Journal of Geophysical Research: Atmospheres*, *111*(D4), D04101. http://dx.doi.org/10.1029/2005JD006307

Soden, B. J., & Held, I. M. (2006). An Assessment of Climate Feedbacks in Coupled Ocean–Atmosphere Models. *Journal of Climate*, *19*(14), 3354–3360. http://dx.doi.org/10.1175/JCLI3799.1

Sun, W., & Lin, B. (2006). Optical characterization of metallic aerosols. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *100*(1–3), 359–372. http://dx.doi.org/10.1016/j.jqsrt.2005.11.075

Sun, W., Loeb, N. G., Davies, R., Loukachine, K., & Miller, W. F. (2006). Comparison of MISR and CERES top-of-atmosphere albedo. *Geophysical Research Letters*, *33*(23), L23810. http://dx.doi.org/10.1029/2006GL027958

Tang, B., Li, Z.-L., & Zhang, R. (2006). A direct method for estimating net surface shortwave radiation from MODIS data. *Remote Sensing of Environment*, *103*(1), 115–126. http://dx.doi.org/10.1016/j.rse.2006.04.008

Wong, T., Wielicki, B. A., Lee, R. B., Smith, G. L., Bush, K. A., & Willis, J. K. (2006). Reexamination of the Observed Decadal Variability of the Earth Radiation Budget Using Altitude-Corrected ERBE/ERBS Nonscanner WFOV Data. *Journal of Climate*, *19*(16), 4028–4040. http://dx.doi.org/10.1175/JCLI3838.1

Yu, H., Kaufman, Y. J., Chin, M., Feingold, G., Remer, L. A., Anderson, T. L., … Zhou, M. (2006). A review of measurement-based assessments of the aerosol direct radiative effect and forcing. *Atmos. Chem. Phys.*, *6*(3), 613–666. http://dx.doi.org/10.5194/acp-6-613-2006

Clouds and the Earth's Radiant Energy System

CERES Publications for 2005

Allan, R. P., Slingo, A., Milton, S. F., & Culverwell, I. (2005). Exploitation of Geostationary Earth Radiation Budget data using simulations from a numerical weather prediction model: Methodology and data validation. *Journal of Geophysical Research: Atmospheres*, *110*(D14), D14111. http://dx.doi.org/10.1029/2004JD005698

Anderson, T. L., Charlson, R. J., Bellouin, N., Boucher, O., Chin, M., Christopher, S. A., … Yu, H. (2005). An "A-Train" Strategy for Quantifying Direct Climate Forcing by Anthropogenic Aerosols. *Bulletin of the American Meteorological Society*, *86*(12), 1795–1809. http://dx.doi.org/10.1175/BAMS-86-12-1795

Bertrand, C., Clerbaux, N., Ipe, A., Dewitte, S., & Gonzalez, L. (2005). Angular distribution models, anisotropic correction factors, and mixed clear-scene types: A sensitivity study. *Ieee Transactions on Geoscience and Remote Sensing*, *43*(1), 92–102. http://dx.doi.org/10.1109/tgrs.2004.838361

Cess, R. D. (2005). Water Vapor Feedback in Climate Models. *Science*, *310*(5749), 795–796. http://dx.doi.org/10.1126/science.1119258

Chepfer, H., Noel, V., Minnis, P., Baumgardner, D., Nguyen, L., Raga, G., … Yang, P. (2005). Particle habit in tropical ice clouds during CRYSTAL-FACE: Comparison of two remote sensing techniques with in situ observations. *Journal of Geophysical Research: Atmospheres*, *110*(D16), D16204. http://dx.doi.org/10.1029/2004JD005455

Chou, M.-D., & Lindzen, R. S. (2005). Comments on "Examination of the Decadal Tropical Mean ERBS Nonscanner Radiation Data for the Iris Hypothesis." *Journal of Climate*, *18*(12), 2123–2127. http://dx.doi.org/10.1175/JCLI3406.1

Clement, A. C., Seager, R., & Murtugudde, R. (2005). Why Are There Tropical Warm Pools? *Journal of Climate*, *18*(24), 5294–5311. http://dx.doi.org/10.1175/JCLI3582.1

Clement, A. C., & Soden, B. (2005). The Sensitivity of the Tropical-Mean Radiation Budget. *Journal of Climate*, *18*(16), 3189–3203. http://dx.doi.org/10.1175/JCLI3456.1

Coakley, J. A., Friedman, M. A., & Tahnk, W. R. (2005). Retrieval of Cloud Properties for Partly Cloudy Imager Pixels. *Journal of Atmospheric and Oceanic Technology*, *22*(1), 3–17. http://dx.doi.org/10.1175/JTECH-1681.1

Diner, D. J., Braswell, B. H., Davies, R., Gobron, N., Hu, J. N., Jin, Y. F., … Stroeve, J. (2005). The value of multiangle measurements for retrieving structurally and radiatively consistent properties of clouds, aerosols, and surfaces. *Remote Sensing of Environment*, *97*(4), 495–518. http://dx.doi.org/10.1016/j.rse.2005.06.006

Dong, X. (2005). The impact of surface albedo on the retrievals of low-level stratus cloud properties: An updated parameterization. *Geophysical Research Letters*, *32*(10), L10802. http://dx.doi.org/10.1029/2005GL022548

Dong, X., Minnis, P., & Xi, B. (2005). A Climatology of Midlatitude Continental Clouds from the ARM SGP Central Facility: Part I: Low-Level Cloud Macrophysical, Microphysical, and Radiative Properties. *Journal of Climate*, *18*(9), 1391–1410. http://dx.doi.org/10.1175/JCLI3342.1

Eitzen, Z. A., & Xu, K. M. (2005). A statistical comparison of deep convective cloud objects observed by an Earth Observing System satellite and simulated by a cloud-resolving model. *Journal of Geophysical Research-Atmospheres*, *110*(D15). http://dx.doi.org/10.1029/2004JD005086

Futyan, J. M., & Russell, J. E. (2005). Developing Clear-Sky Flux Products for the Geostationary Earth Radiation Budget Experiment. *Journal of Applied Meteorology*, *44*(9), 1361–1374. http://dx.doi.org/10.1175/JAM2291.1

Halthore, R. N., Crisp, D., Schwartz, S. E., Anderson, G. P., Berk, A., Bonnel, B., … Wiscombe, W. (2005). Intercomparison of shortwave radiative transfer codes and measurements. *Journal of Geophysical Research: Atmospheres*, *110*(D11), D11206. http://dx.doi.org/10.1029/2004JD005293

Han, Q., Zeng, J., Kuo, K.-S., Chen, H., & Smith, E. (2005). Effect of particle size distributions on the retrieval of ice cloud properties. *Geophysical Research Letters*, *32*(13), L13818. http://dx.doi.org/10.1029/2005GL022659

Hansen, J., Sato, M., Ruedy, R., Nazarenko, L., Lacis, A., Schmidt, G. A., … Zhang, S. (2005). Efficacy of climate forcings. *Journal of Geophysical Research: Atmospheres*, *110*(D18), D18104. http://dx.doi.org/10.1029/2005JD005776

Harries, J. E., Russell, J. E., Hanafin, J. A., Brindley, H., Futyan, J., Rufus, J., … Ringer, M. A. (2005). The Geostationary Earth Radiation Budget Project. *Bulletin of the American Meteorological Society*, *86*(7), 945–960. http://dx.doi.org/10.1175/BAMS-86-7-945

Huang, J., Minnis, P., Lin, B., Yi, Y., Khaiyer, M. M., Arduini, R. F., … Mace, G. G. (2005). Advanced retrievals of multilayered cloud properties using multispectral measurements. *Journal of Geophysical Research: Atmospheres*, *110*(D15), D15S18. http://dx.doi.org/10.1029/2004JD005101

Ignatov, A., Minnis, P., Loeb, N., Wielicki, B., Miller, W., Sun-Mack, S., … Geier, E. (2005). Two MODIS Aerosol Products over Ocean on the Terra and Aqua CERES SSF Datasets. *Journal of the Atmospheric Sciences*, *62*(4), 1008–1031. http://dx.doi.org/10.1175/JAS3383.1

Jin, Z., Charlock, T. P., Rutledge, K., Cota, G., Kahn, R., Redemann, J., … Rose, F. (2005). Radiative Transfer Modeling for the CLAMS Experiment. *Journal of the Atmospheric Sciences*, *62*(4), 1053–1071. http://dx.doi.org/10.1175/JAS3351.1

Kandel, R., & Viollier, M. (2005). Planetary radiation budgets. *Space Science Reviews*, *120*(1-2), 1–26. http://dx.doi.org/10.1007/s11214-005-6482-6

Kato, S., & Loeb, N. G. (2005). Top-of-atmosphere shortwave broadband observed radiance and estimated irradiance over polar regions from Clouds and the Earth's Radiant Energy System (CERES) instruments on Terra. *Journal of Geophysical Research: Atmospheres*, *110*(D7), D07202. http://dx.doi.org/10.1029/2004JD005308

Kato, S., Rose, F. G., & Charlock, T. P. (2005). Computation of Domain-Averaged Irradiance Using Satellite-Derived Cloud Properties. *Journal of Atmospheric and Oceanic Technology*, *22*(2), 146–164. http://dx.doi.org/10.1175/JTECH-1694.1

Kratz, D. P., Mlynczak, M. G., Mertens, C. J., Brindley, H., Gordley, L. L., Martin-Torres, J., … Turner, D. D. (2005). An inter-comparison of far-infrared line-by-line radiative transfer models. *Journal of Quantitative Spectroscopy & Radiative Transfer*, *90*(3-4), 323–341. http://dx.doi.org/10.1016/j.jqsrt.2004.04.006

Levy, R. C., Remer, L. A., Martins, J. V., Kaufman, Y. J., Plana-Fattori, A., Redemann, J., & Wenny, B. (2005). Evaluation of the MODIS Aerosol Retrievals over Ocean and Land during CLAMS. *Journal of the Atmospheric Sciences*, *62*(4), 974–992. http://dx.doi.org/10.1175/JAS3391.1

Lin, B., Wong, T., Wielicki, B. A., & Hu, Y. (2005). Comments on "Examination of the decadal tropical mean ERBS nonscanner radiation data for the iris hypothesis" - Reply. *Journal of Climate*, *18*(12), 2128–2131. http://dx.doi.org/10.1175/JCLI3393.1

Loeb, N. G., Kato, S., Loukachine, K., & Manalo-Smith, N. (2005). Angular Distribution Models for Top-of-Atmosphere Radiative Flux Estimation from the Clouds and the Earth's Radiant Energy System Instrument on the Terra Satellite. Part I: Methodology. *Journal of Atmospheric and Oceanic Technology*, *22*(4), 338–351. http://dx.doi.org/10.1175/JTECH1712.1

Loeb, N. G., & Manalo-Smith, N. (2005). Top-of-Atmosphere Direct Radiative Effect of Aerosols over Global Oceans from Merged CERES and MODIS Observations. *Journal of Climate*, *18*(17), 3506–3526. http://dx.doi.org/10.1175/JCLI3504.1

Luderer, G., Coakley, J. A., & Tahnk, W. R. (2005). Using Sun Glint to Check the Relative Calibration of Reflected Spectral Radiances. *Journal of Atmospheric and Oceanic Technology*, *22*(10), 1480–1493. http://dx.doi.org/10.1175/JTECH1774.1

Mace, G. G., Zhang, Y., Platnick, S., King, M. D., Minnis, P., & Yang, P. (2005). Evaluation of Cirrus Cloud Properties Derived from MODIS Data Using Cloud Properties Derived from Ground-Based Observations Collected at the ARM SGP Site. *Journal of Applied Meteorology*, *44*(2), 221–240. http://dx.doi.org/10.1175/JAM2193.1

Mitas, C. M., & Clement, A. (2005). Has the Hadley cell been strengthening in recent decades? *Geophysical Research Letters*, *32*(3), L03809. http://dx.doi.org/10.1029/2004GL021765

Myhre, G., Stordal, F., Johnsrud, M., Diner, D. J., Geogdzhayev, I. V., Haywood, J. M., … Wang, M. (2005). Intercomparison of satellite retrieved aerosol optical depth over ocean during the period September 1997 to December 2000. *Atmos. Chem. Phys.*, *5*(6), 1697–1719. http://dx.doi.org/10.5194/acp-5-1697-2005

Palikonda, R., Minnis, P., Duda, D. P., & Mannstein, H. (2005). Contrail coverage derived from 2001 AVHRR data over the continental United States of America and surrounding areas. *Meteorologische Zeitschrift*, *14*(4), 525–536. http://dx.doi.org/10.1127/0941-2948/2005/0051

Ramachandran, R., Christopher, S. A., Movva, S., Li, X., Conover, H. T., Keiser, K. R., … McNider, R. T. (2005). Earth Science Markup Language: A Solution to Address Data Format Heterogeneity Problems in Atmospheric Sciences. *Bulletin of the American Meteorological Society*, *86*(6), 791–794. http://dx.doi.org/10.1175/BAMS-86-6-791

Redemann, J., Schmid, B., Eilers, J. A., Kahn, R., Levy, R. C., Russell, P. B., … Holben, B. N. (2005). Suborbital Measurements of Spectral Aerosol Optical Depth and Its Variability at Subsatellite Grid Scales in Support of CLAMS 2001. *Journal of the Atmospheric Sciences*, *62*(4), 993–1007. http://dx.doi.org/10.1175/JAS3387.1

Schuster, G. L., Dubovik, O., Holben, B. N., & Clothiaux, E. E. (2005). Inferring black carbon content and specific absorption from Aerosol Robotic Network (AERONET) aerosol retrievals. *Journal of Geophysical Research: Atmospheres*, *110*(D10), D10S17. http://dx.doi.org/10.1029/2004JD004548

Smith, W. L., Charlock, T. P., Kahn, R., Martins, J. V., Remer, L. A., Hobbs, P. V., … Rutledge, C. K. (2005). EOS Terra Aerosol and Radiative Flux Validation: An Overview of the Chesapeake Lighthouse and Aircraft Measurements for Satellites (CLAMS) Experiment. *Journal of the Atmospheric Sciences*, *62*(4), 903–918. http://dx.doi.org/10.1175/JAS3398.1

Sun, M., & Cess, R. D. (2005). Improvements in cloud identification over snow/ice surfaces from ERBE to CERES. *Geophysical Research Letters*, *32*(5), L05801. http://dx.doi.org/10.1029/2004GL022009

Sun, W., Loeb, N. G., & Lin, B. (2005). Light Scattering by an Infinite Circular Cylinder Immersed in an Absorbing Medium. *Applied Optics*, *44*(12), 2338–2342. http://dx.doi.org/10.1364/AO.44.002338

Su, W., Charlock, T. P., & Rose, F. G. (2005). Deriving surface ultraviolet radiation from CERES surface and atmospheric radiation budget: Methodology. *Journal of Geophysical Research: Atmospheres*, *110*(D14), D14209. http://dx.doi.org/10.1029/2005JD005794

Szewczyk, Z. P., Smith, G. L., & Priestley, K. J. (2005). Validation of Clouds and Earth Radiant Energy System instruments aboard the Terra and Aqua satellites. *Journal of Geophysical Research: Atmospheres*, *110*(D2), D02103. http://dx.doi.org/10.1029/2004JD004776

Vant-Hull, B., Li, Z., Taubman, B. F., Levy, R., Marufu, L., Chang, F.-L., … Dickerson, R. R. (2005). Smoke over haze: Comparative analysis of satellite, surface radiometer, and airborne in situ measurements of aerosol optical properties and radiative forcing over the eastern United States. *Journal of Geophysical Research: Atmospheres*, *110*(D10), D10S21. http://dx.doi.org/10.1029/2004JD004518

Wielicki, B. A., Wong, T. M., Loeb, N., Minnis, P., Priestley, K., & Kandel, R. (2005). Changes in Earth's albedo measured by satellite. *Science*, *308*(5723), 825–825. http://dx.doi.org/10.1126/science.1106484

Xu, K.-M., Wong, T., Wielicki, B. A., Parker, L., & Eitzen, Z. A. (2005). Statistical Analyses of Satellite Cloud Object Data from CERES. Part I: Methodology and Preliminary Results of the 1998 El Niño/2000 La Niña. *Journal of Climate*, *18*(13), 2497–2514. http://dx.doi.org/10.1175/JCLI3418.1

Zhang, J., Christopher, S. A., Remer, L. A., & Kaufman, Y. J. (2005a). Shortwave aerosol radiative forcing over cloud-free oceans from Terra: 1. Angular models for aerosols. *Journal of Geophysical Research: Atmospheres*, *110*(D10), D10S23. http://dx.doi.org/10.1029/2004JD005008

Zhang, J., Christopher, S. A., Remer, L. A., & Kaufman, Y. J. (2005b). Shortwave aerosol radiative forcing over cloud-free oceans from Terra: 2. Seasonal and global distributions. *Journal of Geophysical Research: Atmospheres*, *110*(D10), D10S24. http://dx.doi.org/10.1029/2004JD005009

Zhang, M. H., Lin, W. Y., Klein, S. A., Bacmeister, J. T., Bony, S., Cederwall, R. T., … Zhang, J. H. (2005). Comparing clouds and their seasonal variations in 10 atmospheric general circulation models with satellite measurements. *Journal of Geophysical Research: Atmospheres*, *110*(D15), D15S02. http://dx.doi.org/10.1029/2004JD005021

Zhao, T. X.-P., Laszlo, I., Minnis, P., & Remer, L. (2005a). Comparison and analysis of two aerosol retrievals over the ocean in the Terra/Clouds and the Earth's Radiant Energy System–Moderate Resolution Imaging Spectroradiometer single scanner footprint data: 1. Global evaluation. *Journal of Geophysical Research: Atmospheres*, *110*(D21), D21208. http://dx.doi.org/10.1029/2005JD005851

Zhao, T. X.-P., Laszlo, I., Minnis, P., & Remer, L. (2005b). Comparison and analysis of two aerosol retrievals over the ocean in the Terra/Clouds and the Earth's Radiant Energy System–Moderate Resolution Imaging Spectroradiometer single scanner footprint data: 2. Regional evaluation. *Journal of Geophysical Research: Atmospheres*, *110*(D21), D21209. http://dx.doi.org/10.1029/2005JD005852

Clouds and the Earth's Radiant Energy System

CERES Publications for 2004

Allan, R. P., Ringer, M. A., Pamment, J. A., & Slingo, A. (2004). Simulation of the Earth's radiation budget by the European Centre for Medium-Range Weather Forecasts 40-year reanalysis (ERA40). *Journal of Geophysical Research: Atmospheres*, *109*(D18), D18107. http://dx.doi.org/10.1029/2004JD004816

Anderson, J., Balaji, V., Broccoli, A., Cooke, W., Delworth, T., Dixon, K., … Wyman, B. (2004). The new GFDL global atmosphere and land model AM2-LM2: Evaluation with prescribed SST simulations. *JOURNAL OF CLIMATE*, *17*(24), 4641–4673. http://dx.doi.org/10.1175/JCLI-3223.1

Ba, M. B., Ellingson, R. G., & Gruber, A. (2004). Enhancement of ERBS data by using data from sounders onboard NPP/NPOESS and METOP satellites. *Advances in Space Research*, *33*(7), 1132–1135. http://dx.doi.org/10.1016/S0273-1177(03)00751-8

Chandler, W. S., Whitlock, C. H., & Stackhouse, J., Paul W. (2004). NASA Climatological Data for Renewable Energy Assessment. *Journal of Solar Energy Engineering*, *126*(3), 945–949. http://dx.doi.org/10.1115/1.1748466

Christopher, S. A., & Zhang, J. (2004). Cloud-free shortwave aerosol radiative effect over oceans: Strategies for identifying anthropogenic forcing from Terra satellite measurements. *Geophysical Research Letters*, *31*(18), L18101. http://dx.doi.org/10.1029/2004GL020510

Costa, M. J., Levizzani, V., & Silva, A. M. (2004). Aerosol Characterization and Direct Radiative Forcing Assessment over the Ocean. Part II: Application to Test Cases and Validation. *Journal of Applied Meteorology*, *43*(12), 1818–1833. http://dx.doi.org/10.1175/JAM2157.1

Futyan, J. M., Russell, J. E., & Harries, J. E. (2004). Cloud Radiative Forcing in Pacific, African, and Atlantic Tropical Convective Regions. *Journal of Climate*, *17*(16), 3192–3202. http://dx.doi.org/10.1175/1520-0442(2004)017<3192:CRFIPA>2.0.CO;2

Govaerts, Y. M., Clerici, M., & Clerbaux, N. (2004). Operational calibration of the Meteosat radiometer VIS band. *IEEE Transactions on Geoscience and Remote Sensing*, *42*(9), 1900–1914. http://dx.doi.org/10.1109/TGRS.2004.831882

Gupta, S. K., Kratz, D. P., Wilber, A. C., & Nguyen, L. C. (2004). Validation of Parameterized Algorithms Used to Derive TRMM–CERES Surface Radiative Fluxes. *Journal of Atmospheric and Oceanic Technology*, *21*(5), 742–752. http://dx.doi.org/10.1175/1520-0426(2004)021<0742:VOPAUT>2.0.CO;2

Hu, Y., Wielicki, B. A., Yang, P., Stackhouse, J., P.W., Lin, B., & Young, D. F. (2004). Application of deep convective cloud albedo observation to satellite-based study of the terrestrial atmosphere: monitoring the stability of spaceborne measurements and assessing absorption anomaly. *IEEE Transactions on Geoscience and Remote Sensing*, *42*(11), 2594–2599. http://dx.doi.org/10.1109/TGRS.2004.834765

Ignatov, A., Laszlo, I., Harrod, E. D., Kidwell, K. B., & Goodrum, G. P. (2004). Equator crossing times for NOAA, ERS and EOS sun-synchronous satellites. *International Journal of Remote Sensing*, *25*(23), 5255–5266. http://dx.doi.org/10.1080/01431160410001712981

Ignatov, A., Sapper, J., Cox, S., Laszlo, I., Nalli, N. R., & Kidwell, K. B. (2004). Operational Aerosol Observations (AEROBS) from AVHRR/3 On Board NOAA-KLM Satellites. *Journal of Atmospheric and Oceanic Technology*, *21*(1), 3–26. http://dx.doi.org/10.1175/1520-0426(2004)021<0003:OAOAFO>2.0.CO;2

Inamdar, A. K., Ramanathan, V., & Loeb, N. G. (2004). Satellite observations of the water vapor greenhouse effect and column longwave cooling rates: Relative roles of the continuum and vibration-rotation to pure rotation bands. *Journal of Geophysical Research: Atmospheres*, *109*(D6), D06104. http://dx.doi.org/10.1029/2003JD003980

Ipe, A., Bertrand, C., Clerbaux, N., Dewitte, S., & Gonzalez, L. (2004). Validation and homogenization of cloud optical depth and cloud fraction retrievals for GERB/SEVIRI scene identification using Meteosat-7 data. *Atmospheric Research*, *72*(1–4), 17–37. http://dx.doi.org/10.1016/j.atmosres.2004.03.010

Jin, Z., Charlock, T. P., Smith, W. L., & Rutledge, K. (2004). A parameterization of ocean surface albedo. *Geophysical Research Letters*, *31*(22), L22301. http://dx.doi.org/10.1029/2004GL021180

Le Borgne, P., Legendre, G., & Marsouin, A. (2004). Meteosat and GOES-East Imager Visible Channel Calibration. *Journal of Atmospheric and Oceanic Technology*, *21*(11), 1701–1709. http://dx.doi.org/10.1175/JTECHJTECH-1675.1

Li, F., Vogelmann, A. M., & Ramanathan, V. (2004). Saharan Dust Aerosol Radiative Forcing Measured from Space. *Journal of Climate*, *17*(13), 2558–2571. http://dx.doi.org/10.1175/1520-0442(2004)017<2558:SDARFM>2.0.CO;2

Lin, B., Wong, T., Wielicki, B. A., & Hu, Y. (2004). Examination of the Decadal Tropical Mean ERBS Nonscanner Radiation Data for the Iris Hypothesis. *Journal of Climate*, *17*(6), 1239–1246. http://dx.doi.org/10.1175/1520-0442(2004)017<1239:EOTDTM>2.0.CO;2

Lin, J.-L., & Mapes, B. E. (2004). Radiation Budget of the Tropical Intraseasonal Oscillation. *Journal of the Atmospheric Sciences*, *61*(16), 2050–2062. http://dx.doi.org/10.1175/1520-0469(2004)061<2050:RBOTTI>2.0.CO;2

Loukachine, K., & Loeb, N. G. (2004). Top-of-atmosphere flux retrievals from CERES using artificial neural networks. *Remote Sensing of Environment*, *93*(3), 381–390. http://dx.doi.org/10.1016/j.rse.2004.08.005

Lu, R., Dong, B., Cess, R. D., & Potter, G. L. (2004). The 1997/98 El Niño: A test for climate models. *Geophysical Research Letters*, *31*(12), L12216. http://dx.doi.org/10.1029/2004GL019956

Marsden, D., & Valero, F. P. J. (2004). Observation of Water Vapor Greenhouse Absorption over the Gulf of Mexico Using Aircraft and Satellite Data. *Journal of the Atmospheric Sciences*, *61*(6), 745–753. http://dx.doi.org/10.1175/1520-0469(2004)061<0745:OOWVGA>2.0.CO;2

Matthews, G. (2004). Calculation of the static in-flight telescope-detector response by deconvolution applied to point-spread function for the Geostationary Earth Radiation Budget experiment. *Applied Optics*, *43*(34), 6313–6322. http://dx.doi.org/10.1364/AO.43.006313

Minnis, P., Gambheer, A. V., & Doelling, D. R. (2004). Azimuthal anisotropy of longwave and infrared window radiances from the Clouds and the Earth's Radiant Energy System on the Tropical Rainfall Measuring Mission and Terra satellites. *Journal of Geophysical Research: Atmospheres*, *109*(D8), D08202. http://dx.doi.org/10.1029/2003JD004471

Min, Q., Minnis, P., & Khaiyer, M. M. (2004). Comparison of cirrus optical depths derived from GOES 8 and surface measurements. *Journal of Geophysical Research: Atmospheres*, *109*(D15), D15207. http://dx.doi.org/10.1029/2003JD004390

Myhre, G., Stordal, F., Johnsrud, M., Ignatov, A., Mishchenko, M. I., Geogdzhayev, I. V., … Holben, B. (2004). Intercomparison of Satellite Retrieved Aerosol Optical Depth over the Ocean. *Journal of the Atmospheric Sciences*, *61*(5), 499–513. http://dx.doi.org/10.1175/1520-0469(2004)061<0499:IOSRAO>2.0.CO;2

Parol, F., Buriez, J. C., Vanbauce, C., Riedi, J., C.-Labonnote, L., Doutriaux-Boucher, M., … Bréon, F. M. (2004). Review of capabilities of multi-angle and polarization cloud measurements from POLDER. *Advances in Space Research*, *33*(7), 1080–1088. http://dx.doi.org/10.1016/S0273-1177(03)00734-8

Penner, J. E., Dong, X., & Chen, Y. (2004). Observational evidence of a change in radiative forcing due to the indirect aerosol effect. *Nature*, *427*(6971), 231–234. http://dx.doi.org/10.1038/nature02234

Potter, G. L., & Cess, R. D. (2004). Testing the impact of clouds on the radiation budgets of 19 atmospheric general circulation models. *Journal of Geophysical Research: Atmospheres*, *109*(D2), D02106. http://dx.doi.org/10.1029/2003JD004018

Sherwood, S. C., Chae, J.-H., Minnis, P., & McGill, M. (2004). Underestimation of deep convective cloud tops by thermal imagery. *Geophysical Research Letters*, *31*(11), L11102. http://dx.doi.org/10.1029/2004GL019699

Smith, G. L., Wielicki, B. A., Barkstrom, B. R., Lee, R. B., Priestley, K. J., Charlock, T. P., … Young, D. F. (2004). Clouds and Earth radiant energy system: an overview. *Advances in Space Research*, *33*(7), 1125–1131. http://dx.doi.org/10.1016/S0273-1177(03)00739-7

Stephens, G. L., Webster, P. J., Johnson, R. H., Engelen, R., & L'Ecuyer, T. (2004). Observational Evidence for the Mutual Regulation of the Tropical Hydrological Cycle and Tropical Sea Surface Temperatures. *Journal of Climate*, *17*(11), 2213–2224. http://dx.doi.org/10.1175/1520-0442(2004)017<2213:OEFTMR>2.0.CO;2

Sun, M., & Cess, R. D. (2004). A procedure for evaluating feedback mechanisms in coupled atmosphere/ocean climate models. *Geophysical Research Letters*, *31*(12), L12215. http://dx.doi.org/10.1029/2004GL019876

Sun, W., G Loeb, N., & Fu, Q. (2004). Light scattering by coated sphere immersed in absorbing medium: a comparison between the FDTD and analytic solutions. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *83*(3–4), 483–492. http://dx.doi.org/10.1016/S0022-4073(03)00101-8

Sun, W., Loeb, N. G., & Kato, S. (2004). Estimation of instantaneous TOA albedo at 670 nm over ice clouds from POLDER multidirectional measurements. *Journal of Geophysical Research: Atmospheres*, *109*(D2), D02210. http://dx.doi.org/10.1029/2003JD003801

Sutter, M., Dürr, B., & Philipona, R. (2004). Comparison of two radiation algorithms for surface-based cloud-free sky detection. *Journal of Geophysical Research: Atmospheres*, *109*(D17), D17202. http://dx.doi.org/10.1029/2004JD004582

Valero, F. P. J., Cess, R. D., & Pope, S. K. (2004). Disagreements Over Cloud Absorption. *Science*, *305*(5688), 1239–1240. http://dx.doi.org/10.1126/science.305.5688.1239

Viollier, M., Kandel, R., & Raberanto, P. (2004). Combination of ScaRaB-2 and CERES with Meteosat-5 to remove time sampling bias and improve radiation budget estimations in the INDOEX region. *Journal of Geophysical Research: Atmospheres*, *109*(D5), D05105. http://dx.doi.org/10.1029/2003JD003947

Zhang, Y., Rossow, W. B., Lacis, A. A., Oinas, V., & Mishchenko, M. I. (2004). Calculation of radiative fluxes from the surface to top of atmosphere based on ISCCP and other global data sets: Refinements of the radiative transfer model and the input data. *Journal of Geophysical Research: Atmospheres*, *109*(D19), D19105. http://dx.doi.org/10.1029/2003JD004457

Clouds and the Earth's Radiant Energy System
CERES Publications for 2003

Allan, R. P., & Ringer, M. A. (2003). Inconsistencies between satellite estimates of longwave cloud forcing and dynamical fields from reanalyses. *Geophysical Research Letters*, *30*(9), 1491. http://dx.doi.org/10.1029/2003GL017019

Allan, R. P., Ringer, M. A., & Slingo, A. (2003). Evaluation of moisture in the Hadley Centre climate model using simulations of HIRS water-vapour channel radiances. *Quarterly Journal of the Royal Meteorological Society*, *129*(595), 3371–3389. http://dx.doi.org/10.1256/qj.02.217

Ba, M. B., Ellingson, R. G., & Gruber, A. (2003). Validation of a Technique for Estimating OLR with the GOES Sounder. *Journal of Atmospheric and Oceanic Technology*, *20*(1), 79–89. http://dx.doi.org/10.1175/1520-0426(2003)020<0079:VOATFE>2.0.CO;2

Bertrand, C., Clerbaux, N., Ipe, A., & Gonzalez, L. (2003). Estimation of the 2002 Mount Etna eruption cloud radiative forcing from Meteosat-7 data. *Remote Sensing of Environment*, *87*(2–3), 257–272. http://dx.doi.org/10.1016/S0034-4257(03)00183-4

Bodas-Salcedo, A., Gimeno-Ferrer, J. F., & Lopez-Baeza, E. (2003). Flux retrieval optimization with a nonscanner along-track broadband radiometer. *Journal of Geophysical Research-Atmospheres*, *108*(D2). http://dx.doi.org/10.1029/2002JD002162

Cess, R. D., & Udelhofen, P. M. (2003). Climate change during 1985–1999: Cloud interactions determined from satellite measurements. *Geophysical Research Letters*, *30*(1), 1019. http://dx.doi.org/10.1029/2002GL016128

Chambers, L. H., Young, D. F., Costulis, P. K., Detweiler, P. T., Fischer, J. D., Sepulveda, R., … Falcone, A. (2003). The CERES S'COOL Project. *Bulletin of the American Meteorological Society*, *84*(6), 759–765. http://dx.doi.org/10.1175/BAMS-84-6-759

Chambers, Lin, L. (2003, January 16). NASA: Practical Uses of Math And Science (PUMAS) [Text.Journal].

Christopher, S. A., Wang, J., Ji, Q., & Tsay, S.-C. (2003). Estimation of diurnal shortwave dust aerosol radiative forcing during PRIDE. *Journal of Geophysical Research: Atmospheres*, *108*(D19), 8596. http://dx.doi.org/10.1029/2002JD002787

Clerbaux, N., Dewitte, S., Gonzalez, L., Bertrand, C., Nicula, B., & Ipe, A. (2003). Outgoing longwave flux estimation: improvement of angular modelling using spectral information. *Remote Sensing of Environment*, *85*(3), 389–395. http://dx.doi.org/10.1016/s0034-4257(03)00015-4

Cooper, S. J., L'Ecuyer, T. S., & Stephens, G. L. (2003). The impact of explicit cloud boundary information on ice cloud microphysical property retrievals from infrared radiances. *Journal of Geophysical Research: Atmospheres*, *108*(D3), 4107. http://dx.doi.org/10.1029/2002JD002611

Dong, X., & Mace, G. G. (2003a). Arctic Stratus Cloud Properties and Radiative Forcing Derived from Ground-Based Data Collected at Barrow, Alaska. *Journal of Climate*, *16*(3), 445–461. http://dx.doi.org/10.1175/1520-0442(2003)016<0445:ASCPAR>2.0.CO;2

Dong, X., & Mace, G. G. (2003b). Profiles of Low-Level Stratus Cloud Microphysics Deduced from Ground-Based Measurements. *Journal of Atmospheric and Oceanic Technology*, *20*(1), 42–53. http://dx.doi.org/10.1175/1520-0426(2003)020<0042:POLLSC>2.0.CO;2

Donner, L. (2003). Multiple scales in cumulus convection and their implications for cumulus parameterizations in large-scale models. In *EGS - AGU - EUG Joint Assembly* (Vol. -1, p. 2917).

Donner, L. J., & Phillips, V. T. (2003). Boundary layer control on convective available potential energy: Implications for cumulus parameterization. *Journal of Geophysical Research: Atmospheres*, *108*(D22), 4701. http://dx.doi.org/10.1029/2003JD003773

Ellingson, R. G., & Ba, M. B. (2003). A Study of Diurnal Variation of OLR from the GOES Sounder. *Journal of Atmospheric and Oceanic Technology*, *20*(1), 90–98. http://dx.doi.org/10.1175/1520-0426(2003)020<0090:ASODVO>2.0.CO;2

Haywood, J., Francis, P., Osborne, S., Glew, M., Loeb, N., Highwood, E., … Hirst, E. (2003). Radiative properties and direct radiative effect of Saharan dust measured by the C-130 aircraft during SHADE: 1. Solar spectrum. *Journal of Geophysical Research-Atmospheres*, *108*(D18). http://dx.doi.org/10.1029/2002JD002687

Ho, S., Lin, B., Minnis, P., & Fan, T.-F. (2003). Estimates of cloud vertical structure and water amount over tropical oceans using VIRS and TMI data. *Journal of Geophysical Research: Atmospheres*, *108*(D14), 4419. http://dx.doi.org/10.1029/2002JD003298

Hsu, N. C., Herman, J. R., & Tsay, S. C. (2003). Radiative impacts from biomass burning in the presence of clouds during boreal spring in southeast Asia. *Geophysical Research Letters*, *30*(5). http://dx.doi.org/10.1029/2002GL016485

Ignatov, A. (2003). Spurious Signals in TRMM/VIRS Reflectance Channels and Their Effect on Aerosol Retrievals. *Journal of Atmospheric and Oceanic Technology*, *20*(8), 1120–1137. http://dx.doi.org/10.1175/1520-0426(2003)020<1120:SSIVRC>2.0.CO;2

Ipe, A., Clerbaux, N., Bertrand, C., Dewitte, S., & Gonzalez, L. (2003). Pixel-scale composite top-of-the-atmosphere clear-sky reflectances for Meteosat-7 visible data. *Journal of Geophysical Research: Atmospheres*, *108*(D19), 4612. http://dx.doi.org/10.1029/2002JD002771

Jensen, M. P., & Del Genio, A. D. (2003). Radiative and Microphysical Characteristics of Deep Convective Systems in the Tropical Western Pacific. *Journal of Applied Meteorology*, *42*(9), 1234–1254. http://dx.doi.org/10.1175/1520-0450(2003)042<1234:RAMCOD>2.0.CO;2

Jin, Y., Schaaf, C. B., Woodcock, C. E., Gao, F., Li, X., Strahler, A. H., … Liang, S. (2003). Consistency of MODIS surface bidirectional reflectance distribution function and albedo retrievals: 2. Validation. *Journal of Geophysical Research: Atmospheres*, *108*(D5), 4159. http://dx.doi.org/10.1029/2002JD002804

Kato, S. (2003). Computation of Domain-Averaged Shortwave Irradiance by a One-Dimensional Algorithm Incorporating Correlations between Optical Thickness and Direct Incident Radiation. *Journal of the Atmospheric Sciences*, *60*(1), 182–193. http://dx.doi.org/10.1175/1520-0469(2003)060<0182:CODASI>2.0.CO;2

Kato, S., & Loeb, N. G. (2003). Twilight Irradiance Reflected by the Earth Estimated from Clouds and the Earth's Radiant Energy System (CERES) Measurements. *Journal of Climate*, *16*(15), 2646–2650. http://dx.doi.org/10.1175/1520-0442(2003)016<2646:TIRBTE>2.0.CO;2

L'Ecuyer, T. S., & Stephens, G. L. (2003). The Tropical Oceanic Energy Budget from the TRMM Perspective. Part I: Algorithm and Uncertainties. *Journal of Climate*, *16*(12), 1967–1985. http://dx.doi.org/10.1175/1520-0442(2003)016<1967:TTOEBF>2.0.CO;2

Lin, B., Minnis, P., & Fan, A. (2003). Cloud liquid water path variations with temperature observed during the Surface Heat Budget of the Arctic Ocean (SHEBA) experiment. *Journal of Geophysical Research: Atmospheres*, *108*(D14), 4427. http://dx.doi.org/10.1029/2002JD002851

Liu, X., Wang, J., & Christopher, S. (2003). Shortwave direct radiative forcing of Saharan dust aerosols over the Atlantic Ocean. *International Journal of Remote Sensing*, *24*(24), 5147–5160. http://dx.doi.org/10.1080/0143116031000114824

Loeb, N. G., Loukachine, K., Manalo-Smith, N., Wielicki, B. A., & Young, D. F. (2003). Angular Distribution Models for Top-of-Atmosphere Radiative Flux Estimation from the Clouds and the Earth's Radiant Energy System Instrument on the Tropical Rainfall Measuring Mission Satellite. Part II: Validation. *Journal of Applied Meteorology*, *42*(12), 1748–1769. http://dx.doi.org/10.1175/1520-0450(2003)042<1748:ADMFTR>2.0.CO;2

Loeb, N. G., Manalo-Smith, N., Kato, S., Miller, W. F., Gupta, S. K., Minnis, P., & Wielicki, B. A. (2003). Angular Distribution Models for Top-of-Atmosphere Radiative Flux Estimation from the Clouds and the Earth's Radiant Energy System Instrument on the Tropical Rainfall Measuring Mission Satellite. Part I: Methodology. *Journal of Applied Meteorology*, *42*(2), 240–265. http://dx.doi.org/10.1175/1520-0450(2003)042<0240:ADMFTO>2.0.CO;2

Loukachine, K., & Loeb, N. G. (2003). Application of an Artificial Neural Network Simulation for Top-of-Atmosphere Radiative Flux Estimation from CERES. *Journal of Atmospheric and Oceanic Technology*, *20*(12), 1749–1757. http://dx.doi.org/10.1175/1520-0426(2003)020<1749:AOAANN>2.0.CO;2

Markowicz, K. M., Flatau, P. J., Quinn, P. K., Carrico, C. M., Flatau, M. K., Vogelmann, A. M., … Rood, M. J. (2003). Influence of relative humidity on aerosol radiative forcing: An ACE-Asia experiment perspective. *Journal of Geophysical Research: Atmospheres*, *108*(D23), 8662. http://dx.doi.org/10.1029/2002JD003066

Markowicz, K. M., Flatau, P. J., Vogelmann, A. M., Quinn, P. K., & Welton, E. J. (2003). Clear-sky infrared aerosol radiative forcing at the surface and the top of the atmosphere. *Quarterly Journal of the Royal Meteorological Society*, *129*(594), 2927–2947. http://dx.doi.org/10.1256/qj.02.224

Matrosov, S. Y., Shupe, M. D., Heymsfield, A. J., & Zuidema, P. (2003). Ice Cloud Optical Thickness and Extinction Estimates from Radar Measurements. *Journal of Applied Meteorology*, *42*(11), 1584–1597. http://dx.doi.org/10.1175/1520-0450(2003)042<1584:ICOTAE>2.0.CO;2

Miller, A. J., Zhou, S., & Yang, S.-K. (2003). Relationship of the Arctic and Antarctic Oscillations to the Outgoing Longwave Radiation. *Journal of Climate*, *16*(10), 1583–1592. http://dx.doi.org/10.1175/1520-0442(2003)016<1583:ROTAAA>2.0.CO;2

Parkinson, C. L. (2003). Aqua: an Earth-Observing Satellite mission to examine water and other climate variables. *IEEE Transactions on Geoscience and Remote Sensing*, *41*(2), 173–183. http://dx.doi.org/10.1109/TGRS.2002.808319

Pilewskie, P., Pommier, J., Bergstrom, R., Gore, W., Howard, S., Rabbette, M., … Tsay, S. C. (2003). Solar spectral radiative forcing during the Southern African Regional Science Initiative. *Journal of Geophysical Research: Atmospheres*, *108*(D13), 8486. http://dx.doi.org/10.1029/2002JD002411

Ruddiman, W. F. (2003). The Anthropogenic Greenhouse Era Began Thousands of Years Ago. *Climatic Change*, *61*(3), 261–293. http://dx.doi.org/10.1023/B:CLIM.0000004577.17928.fa

Smith, G. L., & Rutan, D. A. (2003). The Diurnal Cycle of Outgoing Longwave Radiation from Earth Radiation Budget Experiment Measurements. *Journal of the Atmospheric Sciences*, *60*(13), 1529–1542. http://dx.doi.org/10.1175/2997.1

Tanré, D., Haywood, J., Pelon, J., Léon, J. F., Chatenet, B., Formenti, P., … Myhre, G. (2003). Measurement and modeling of the Saharan dust radiative impact: Overview of the Saharan Dust Experiment (SHADE). *Journal of Geophysical Research: Atmospheres*, *108*(D18), 8574. http://dx.doi.org/10.1029/2002JD003273

Tian, B., & Ramanathan, V. (2003). A Simple Moist Tropical Atmosphere Model: The Role of Cloud Radiative Forcing. *Journal of Climate*, *16*(12), 2086–2092. http://dx.doi.org/10.1175/1520-0442(2003)016<2086:ASMTAM>2.0.CO;2

Valero, F. P. J., Pope, S. K., Bush, B. C., Nguyen, Q., Marsden, D., Cess, R. D., … Udelhofen, P. M. (2003). Absorption of solar radiation by the clear and cloudy atmosphere during the Atmospheric Radiation Measurement Enhanced Shortwave Experiments (ARESE) I and II: Observations and models. *Journal of Geophysical Research: Atmospheres*, *108*(D1), 4016. http://dx.doi.org/10.1029/2001JD001384

Vogelmann, A. M., Flatau, P. J., Szczodrak, M., Markowicz, K. M., & Minnett, P. J. (2003). Observations of large aerosol infrared forcing at the surface. *Geophysical Research Letters*, *30*(12), 1655. http://dx.doi.org/10.1029/2002GL016829

Wang, J., Christopher, S. A., Reid, J. S., Maring, H., Savoie, D., Holben, B. N., … Yang, S.-K. (2003). GOES 8 retrieval of dust aerosol optical thickness over the Atlantic Ocean during PRIDE. *Journal of Geophysical Research: Atmospheres*, *108*(D19), 8595. http://dx.doi.org/10.1029/2002JD002494

Wang, P.-H., Minnis, P., Wielicki, B. A., Wong, T., Cess, R. D., Zhang, M., … Kent, G. S. (2003). Characteristics of the 1997/1998 El Niño cloud distributions from SAGE II observations. *Journal of Geophysical Research: Atmospheres*, *108*(D1), 4009. http://dx.doi.org/10.1029/2002JD002501

Wilcox, E. M. (2003). Spatial and Temporal Scales of Precipitating Tropical Cloud Systems in Satellite Imagery and the NCAR CCM3*. *Journal of Climate*, *16*(22), 3545–3559. http://dx.doi.org/10.1175/1520-0442(2003)016<3545:SATSOP>2.0.CO;2

Yano, J. I., Donner, L. J., Yin, Y., Lawrence, M. J., Mari, C., & Stohl, A. (2003). Multidisciplinary discussions of convective chemical transport. *Eos, Transactions American Geophysical Union*, *84*(34), 327–330. http://dx.doi.org/10.1029/2003EO340005

Zhang, J., & Christopher, S. A. (2003). Longwave radiative forcing of Saharan dust aerosols estimated from MODIS, MISR, and CERES observations on Terra. *Geophysical Research Letters*, *30*(23), 2188. http://dx.doi.org/10.1029/2003GL018479

Zhao, T. X.-P., Laszlo, I., Dubovik, O., Holben, B. N., Sapper, J., Tanré, D., & Pietras, C. (2003). A study of the effect of non-spherical dust particles on the AVHRR aerosol optical thickness retrievals. *Geophysical Research Letters*, *30*(6), 1317. http://dx.doi.org/10.1029/2002GL016379

Zhao, T. X.-P., Laszlo, I., Holben, B. N., Pietras, C., & Voss, K. J. (2003). Validation of two-channel VIRS retrievals of aerosol optical thickness over ocean and quantitative evaluation of the impact from potential subpixel cloud contamination and surface wind effect. *Journal of Geophysical Research: Atmospheres*, *108*(D3), 4106. http://dx.doi.org/10.1029/2002JD002346

Clouds and the Earth's Radiant Energy System
CERES Publications for 2002

Allan, R. P., Ramaswamy, V., & Slingo, A. (2002). Diagnostic analysis of atmospheric moisture and clear-sky radiative feedback in the Hadley Centre and Geophysical Fluid Dynamics Laboratory (GFDL) climate models. *Journal of Geophysical Research: Atmospheres*, *107*(D17), 4329. http://dx.doi.org/10.1029/2001JD001131

Allan, R. P., & Slingo, A. (2002). Can current climate model forcings explain the spatial and temporal signatures of decadal OLR variations? *Geophysical Research Letters*, *29*(7), 45–1. http://dx.doi.org/10.1029/2001GL014620

Allan, R. P., Slingo, A., & Ringer, M. A. (2002). Influence of Dynamics on the Changes in Tropical Cloud Radiative Forcing during the 1998 El Niño. *Journal of Climate*, *15*(14), 1979–1986. http://dx.doi.org/10.1175/1520-0442(2002)015<1979:IODOTC>2.0.CO;2

Almasri, M., Celik-Butler, Z., Butler, D. P., Yaradanakul, A., & Yildiz, A. (2002). Uncooled multimirror broad-band infrared microbolometers. *Journal of Microelectromechanical Systems*, *11*(5), 528–535. http://dx.doi.org/10.1109/jmems.2002.803413

Andronache, C., Donner, L. J., Seman, C. J., & Hemler, R. S. (2002). A study of the impact of the Intertropical Convergence Zone on aerosols during INDOEX. *Journal of Geophysical Research: Atmospheres*, *107*(D19), 8027. http://dx.doi.org/10.1029/2001JD900248

Chambers, L. H., Lin, B., & Young, D. F. (2002). Examination of New CERES Data for Evidence of Tropical Iris Feedback. *Journal of Climate*, *15*(24), 3719–3726. http://dx.doi.org/10.1175/1520-0442(2002)015<3719:EONCDF>2.0.CO;2

Chambers, L., Lin, B., Wielicki, B., Hu, Y., & Xu, K.-M. (2002). Comments on "The iris hypothesis: A negative or positive cloud feedback?" - Reply. *Journal of Climate*, *15*(18), 2716–2717. http://dx.doi.org/10.1175/1520-0442(2002)015<2716:R>2.0.CO;2

Chen, J., Carlson, B. E., & Genio, A. D. D. (2002). Evidence for Strengthening of the Tropical General Circulation in the 1990s. *Science*, *295*(5556), 838–841. http://dx.doi.org/10.1126/science.1065835

Chen, T., & Rossow, W. B. (2002). Determination of top-of-atmosphere longwave radiative fluxes: A comparison between two approaches using ScaRaB data. *Journal of Geophysical Research: Atmospheres*, *107*(D8), ACL 6–1. http://dx.doi.org/10.1029/2001JD000914

Chepfer, H., Minnis, P., Young, D., Nguyen, L., & Arduini, R. F. (2002). Estimation of cirrus cloud effective ice crystal shapes using visible reflectances from dual-satellite measurements. *Journal of Geophysical Research: Atmospheres*, *107*(D23), 4730. http://dx.doi.org/10.1029/2000JD000240

Chiacchio, M., Francis, J., & Stackhouse, P. (2002). Evaluation of Methods to Estimate the Surface Downwelling Longwave Flux during Arctic Winter. *Journal of Applied Meteorology*, *41*(3), 306–318. http://dx.doi.org/10.1175/1520-0450(2002)041<0306:EOMTET>2.0.CO;2

Chou, M.-D., Chan, P.-K., & Wang, M. (2002). Aerosol Radiative Forcing Derived from SeaWiFS-Retrieved Aerosol Optical Properties. *Journal of the Atmospheric Sciences*, *59*(3), 748–757. http://dx.doi.org/10.1175/1520-0469(2002)059<0748:ARFDFS>2.0.CO;2

Chou, M.-D., & Lindzen, R. S. (2002). Comments on "Tropical Convection and the Energy Balance at the Top of the Atmosphere." *Journal of Climate*, *15*(17), 2566–2570. http://dx.doi.org/10.1175/1520-0442(2002)015<2566:COTCAT>2.0.CO;2

Chou, M.-D., Lindzen, R. S., & Hou, A. Y. (2002). Comments on "The Iris Hypothesis: A Negative or Positive Cloud Feedback?." *Journal of Climate*, *15*(18), 2713–2715. http://dx.doi.org/10.1175/1520-0442(2002)015<2713:COTIHA>2.0.CO;2

Christopher, S. A., & Zhang, J. (2002a). Daytime Variation of Shortwave Direct Radiative Forcing of Biomass Burning Aerosols from GOES-8 Imager. *Journal of the Atmospheric Sciences*, *59*(3), 681–691. http://dx.doi.org/10.1175/1520-0469(2002)059<0681:DVOSDR>2.0.CO;2

Christopher, S. A., & Zhang, J. (2002b). Shortwave Aerosol Radiative Forcing from MODIS and CERES observations over the oceans. *Geophysical Research Letters*, *29*(18), 1859. http://dx.doi.org/10.1029/2002GL014803

Christopher, S. A., Zhang, J., Holben, B. N., & Yang, S.-K. (2002). GOES-8 and NOAA-14 AVHRR retrieval of smoke aerosol optical thickness during SCAR-B. *International Journal of Remote Sensing*, *23*(22), 4931–4944. http://dx.doi.org/10.1080/01431160110111045

Coakley, J. A., Tahnk, W. R., Jayaraman, A., Quinn, P. K., Devaux, C., & Tanré, D. (2002). Aerosol optical depths and direct radiative forcing for INDOEX derived from AVHRR: Theory. *Journal of Geophysical Research: Atmospheres*, *107*(D19), INX2 8–1. http://dx.doi.org/10.1029/2000JD000182

Del Genio, A. D., & Kovari, W. (2002). Climatic Properties of Tropical Precipitating Convection under Varying Environmental Conditions. *Journal of Climate*, *15*(18), 2597–2615. http://dx.doi.org/10.1175/1520-0442(2002)015<2597:CPOTPC>2.0.CO;2

Dong, X., Mace, G. G., Minnis, P., Smith, W. L., Poellot, M., Marchand, R. T., & Rapp, A. D. (2002). Comparison of Stratus Cloud Properties Deduced from Surface, GOES, and Aircraft Data during the March 2000 ARM Cloud IOP. *Journal of the Atmospheric Sciences*, *59*(23), 3265–3284. http://dx.doi.org/10.1175/1520-0469(2002)059<3265:COSCPD>2.0.CO;2

Duda, D. P., & Minnis, P. (2002). Observations of Aircraft Dissipation Trails from GOES. *Monthly Weather Review*, *130*(2), 398–406. http://dx.doi.org/10.1175/1520-0493(2002)130<0398:OOADTF>2.0.CO;2

Fowler, L. D., & Randall, D. A. (2002). Interactions between Cloud Microphysics and Cumulus Convection in a General Circulation Model. *Journal of the Atmospheric Sciences*, *59*(21), 3074–3098. http://dx.doi.org/10.1175/1520-0469(2002)059<3074:IBCMAC>2.0.CO;2

Han, Q., Rossow, W. B., Zeng, J., & Welch, R. (2002). Three Different Behaviors of Liquid Water Path of Water Clouds in Aerosol–Cloud Interactions. *Journal of the Atmospheric Sciences*, *59*(3), 726–735. http://dx.doi.org/10.1175/1520-0469(2002)059<0726:TDBOLW>2.0.CO;2

Ignatov, A. (2002). Sensitivity and information content of aerosol retrievals from the Advanced Very High Resolution Radiometer: radiometric factors. *Applied Optics*, *41*(6), 991–1011. http://dx.doi.org/10.1364/AO.41.000991

Ignatov, A., & Nalli, N. R. (2002). Aerosol Retrievals from the Multiyear Multisatellite AVHRR Pathfinder Atmosphere (PATMOS) Dataset for Correcting Remotely Sensed Sea Surface Temperatures. *Journal of Atmospheric and Oceanic Technology*, *19*(12), 1986–2008. http://dx.doi.org/10.1175/1520-0426(2002)019<1986:ARFTMM>2.0.CO;2

Ignatov, A., & Stowe, L. (2002a). Aerosol Retrievals from Individual AVHRR Channels. Part II: Quality Control, Probability Distribution Functions, Information Content, and Consistency Checks of Retrievals. *Journal of the Atmospheric Sciences*, *59*(3), 335–362. http://dx.doi.org/10.1175/1520-0469(2002)059<0335:ARFIAC>2.0.CO;2

Ignatov, A., & Stowe, L. (2002b). Aerosol Retrievals from Individual AVHRR Channels. Part I: Retrieval Algorithm and Transition from Dave to 6S Radiative Transfer Model. *Journal of the Atmospheric Sciences*, *59*(3), 313–334. http://dx.doi.org/10.1175/1520-0469(2002)059<0313:ARFIAC>2.0.CO;2

Inoue, T., & Ackerman, S. A. (2002). Radiative Effects of Various Cloud Types as Classified by the Split Window Technique over the Eastern Sub-tropical Pacific Derived from Collocated ERBE and AVHRR Data. *Journal of the Meteorological Society of Japan. Ser. II*, *80*(6), 1383–1394. http://dx.doi.org/10.2151/jmsj.80.1383

Intrieri, J. M., Fairall, C. W., Shupe, M. D., Persson, P. O. G., Andreas, E. L., Guest, P. S., & Moritz, R. E. (2002). An annual cycle of Arctic surface cloud forcing at SHEBA. *Journal of Geophysical Research: Oceans*, *107*(C10), 8039. http://dx.doi.org/10.1029/2000JC000439

Intrieri, J. M., Shupe, M. D., Uttal, T., & McCarty, B. J. (2002). An annual cycle of Arctic cloud characteristics observed by radar and lidar at SHEBA. *Journal of Geophysical Research: Oceans*, *107*(C10), SHE 5–1. http://dx.doi.org/10.1029/2000JC000423

Jin, Z., Charlock, T. P., & Rutledge, K. (2002). Analysis of Broadband Solar Radiation and Albedo over the Ocean Surface at COVE. *Journal of Atmospheric and Oceanic Technology*, *19*(10), 1585–1601. http://dx.doi.org/10.1175/1520-0426(2002)019<1585:AOBSRA>2.0.CO;2

Kanamitsu, M., Ebisuzaki, W., Woollen, J., Yang, S.-K., Hnilo, J. J., Fiorino, M., & Potter, G. L. (2002). NCEP–DOE AMIP-II Reanalysis (R-2). *Bulletin of the American Meteorological Society*, *83*(11), 1631–1643. http://dx.doi.org/10.1175/BAMS-83-11-1631

Kato, S., Loeb, N. G., & Rutledge, C. K. (2002). Estimate of top-of-atmosphere albedo for a molecular atmosphere over ocean using Clouds and the Earth's Radiant Energy System measurements. *Journal of Geophysical Research: Atmospheres*, *107*(D19), 4396. http://dx.doi.org/10.1029/2001JD001309

Kaufman, Y. J., Tanré, D., & Boucher, O. (2002). A satellite view of aerosols in the climate system. *Nature*, *419*(6903), 215–223. http://dx.doi.org/10.1038/nature01091

Key, J. R., Yang, P., Baum, B. A., & Nasiri, S. L. (2002). Parameterization of shortwave ice cloud optical properties for various particle habits. *Journal of Geophysical Research: Atmospheres*, *107*(D13), AAC 7–1. http://dx.doi.org/10.1029/2001JD000742

Kratz, D. P., Priestley, K. J., & Green, R. N. (2002). Establishing the relationship between the CERES window and total channel measured radiances for conditions involving deep convective clouds at night. *Journal of Geophysical Research: Atmospheres*, *107*(D15), ACL 5–1. http://dx.doi.org/10.1029/2001JD001170

Li, F., & Ramanathan, V. (2002). Winter to summer monsoon variation of aerosol optical depth over the tropical Indian Ocean. *Journal of Geophysical Research: Atmospheres*, *107*(D16), AAC 2–1. http://dx.doi.org/10.1029/2001JD000949

Lin, B., Wielicki, B. A., Chambers, L. H., Hu, Y., & Xu, K.-M. (2002). The Iris Hypothesis: A Negative or Positive Cloud Feedback? *Journal of Climate*, *15*(1), 3–7. http://dx.doi.org/10.1175/1520-0442(2002)015<0003:TIHANO>2.0.CO;2

Lin, X., Fowler, L. D., & Randall, D. A. (2002). Flying the TRMM Satellite in a general circulation model. *Journal of Geophysical Research: Atmospheres*, *107*(D16), ACH 4–1. http://dx.doi.org/10.1029/2001JD000619

Loeb, N. G., & Kato, S. (2002). Top-of-Atmosphere Direct Radiative Effect of Aerosols over the Tropical Oceans from the Clouds and the Earth's Radiant Energy System (CERES) Satellite Instrument. *Journal of Climate*, *15*(12), 1474–1484. http://dx.doi.org/10.1175/1520-0442(2002)015<1474:TOADRE>2.0.CO;2

Loeb, N. G., Kato, S., & Wielicki, B. A. (2002). Defining Top-of-the-Atmosphere Flux Reference Level for Earth Radiation Budget Studies. *Journal of Climate*, *15*(22), 3301–3309. http://dx.doi.org/10.1175/1520-0442(2002)015<3301:DTOTAF>2.0.CO;2

Lynch, D. K., Sassen, K, Del Genio, Heymsfield, A, Minnis, P, Platt, M, … Sundqvist, H. (2002). Cirrus: The Future, Chapter 21. In *Cirrus* (pp. 449–455). Oxford University Press.

Marécal, V., & Mahfouf, J.-F. (2002). Four-Dimensional Variational Assimilation of Total Column Water Vapor in Rainy Areas. *Monthly Weather Review*, *130*(1), 43–58. http://dx.doi.org/10.1175/1520-0493(2002)130<0043:FDVAOT>2.0.CO;2

Matrosov, S. Y., Korolev, A. V., & Heymsfield, A. J. (2002). Profiling Cloud Ice Mass and Particle Characteristic Size from Doppler Radar Measurements. *Journal of Atmospheric and Oceanic Technology*, *19*(7), 1003–1018. http://dx.doi.org/10.1175/1520-0426(2002)019<1003:PCIMAP>2.0.CO;2

Minnis, P. (2002). Satellite Remote Sensing of Cirrus, Chapter 7. In *Cirrus* (pp. 147–167). Oxford University Press.

Minnis, P., Nguyen, L., Doelling, D. R., Young, D. F., Miller, W. F., & Kratz, D. P. (2002a). Rapid Calibration of Operational and Research Meteorological Satellite Imagers. Part I: Evaluation of Research Satellite Visible Channels as References. *Journal of Atmospheric and Oceanic Technology*, *19*(9), 1233–1249. http://dx.doi.org/10.1175/1520-0426(2002)019<1233:RCOOAR>2.0.CO;2

Minnis, P., Nguyen, L., Doelling, D. R., Young, D. F., Miller, W. F., & Kratz, D. P. (2002b). Rapid Calibration of Operational and Research Meteorological Satellite Imagers. Part II: Comparison of Infrared Channels. *Journal of Atmospheric and Oceanic Technology*, *19*(9), 1250–1266. http://dx.doi.org/10.1175/1520-0426(2002)019<1250:RCOOAR>2.0.CO;2

Mlynczak, M. (2002). A comparison of space-based observations of the energy budgets of the mesosphere and the troposphere. *Journal of Atmospheric and Solar-Terrestrial Physics*, *64*(8–11), 877–887. http://dx.doi.org/10.1016/S1364-6826(02)00043-3

Nasiri, S. L., Baum, B. A., Heymsfield, A. J., Yang, P., Poellot, M. R., Kratz, D. P., & Hu, Y. (2002). The Development of Midlatitude Cirrus Models for MODIS Using FIRE-I, FIRE-II, and ARM In Situ Data. *Journal of Applied Meteorology*, *41*(3), 197–217. http://dx.doi.org/10.1175/1520-0450(2002)041<0197:TDOMCM>2.0.CO;2

Pope, S. K., Valero, F. P. J., Collins, W. D., & Minnis, P. (2002). Comparison of ScaRaB, GOES 8, aircraft, and surface observations of the absorption of solar radiation by clouds. *Journal of Geophysical Research: Atmospheres*, *107*(D11), ACL 1–1. http://dx.doi.org/10.1029/2001JD001139

Priestley, K. J., Wielicki, B. A., Green, R. N., Haeffelin, M. P. A., Lee, R. B., & Loeb, N. G. (2002). Early radiometric validation results of the CERES Flight Model 1 and 2 instruments onboard NASA's Terra Spacecraft. *Advances in Space Research*, *30*(11), 2371–2376. http://dx.doi.org/10.1016/S0273-1177(02)80278-2

Rajeev, K., & Ramanathan, V. (2002). The Indian ocean experiment: aerosol forcing obtained from satellite data. *Advances in Space Research*, *29*(11), 1731–1740. http://dx.doi.org/10.1016/S0273-1177(02)00086-8

Randall, D., Curry, J., Duynkerke, P., Krueger, S., Moncrieff, M., Ryan, B., … al, et. (2002, January 1). *Confronting Models with Data: The GEWEX Cloud Systems Study*. Retrieved from http://ntrs.nasa.gov/search.jsp?R=20020080868

Roca, R., Viollier, M., Picon, L., & Desbois, M. (2002). A multisatellite analysis of deep convection and its moist environment over the Indian Ocean during the winter monsoon. *Journal of Geophysical Research: Atmospheres*, *107*(D19), INX2 11–1. http://dx.doi.org/10.1029/2000JD000040

Satheesh, S. K., Ramanathan, V., Holben, B. N., Moorthy, K. K., Loeb, N. G., Maring, H., … Savoie, D. (2002). Chemical, microphysical, and radiative effects of Indian Ocean aerosols. *Journal of Geophysical Research: Atmospheres*, *107*(D23), 4725. http://dx.doi.org/10.1029/2002JD002463

Smith, G. L., Bess, T. D., Manalo-Smith, N., Ramanathan, V., Lee III, R. B., & Barkstrom, B. R. (2002). The CERES 8–12 micron window channel. *Advances in Space Research*, *30*(11), 2377–2382. http://dx.doi.org/10.1016/S0273-1177(02)80280-0

Smith, G. L., Pandey, D. K., Lee, R. B., Barkstrom, B. R., & Priestley, K. J. (2002). Numerical Filtering of Spurious Transients in a Satellite Scanning Radiometer: Application to CERES. *Journal of Atmospheric and Oceanic Technology*, *19*(2), 172–182. http://dx.doi.org/10.1175/1520-0426(2002)019<0172:NFOSTI>2.0.CO;2

Smith, G. L., Wilber, A. C., Gupta, S. K., & Stackhouse, P. W. (2002). Surface Radiation Budget and Climate Classification. *Journal of Climate*, *15*(10), 1175–1188. http://dx.doi.org/10.1175/1520-0442(2002)015<1175:SRBACC>2.0.CO;2

Stackhouse Jr, P. W., Whitlock, C. H., DiPasquale, R. C., Brown, D., & Chandler, W. S. (2002). Meeting Energy-Sector Needs with NASA Climate Datasets. *Earth Observation Magazine*, *11*(8), 6–10.

Stephens, G. L., Vane, D. G., Boain, R. J., Mace, G. G., Sassen, K., Wang, Z., … CloudSat Science Team, T. (2002). The cloudsat mission and the a-train. *Bulletin of the American Meteorological Society*, *83*(12), 1771–1790. http://dx.doi.org/10.1175/BAMS-83-12-1771

Su, W., Charlock, T. P., & Rutledge, K. (2002). Observations of reflectance distribution around sunglint from a coastal ocean platform. *Applied Optics*, *41*(35), 7369–7383. http://dx.doi.org/10.1364/AO.41.007369

Sun, W., Loeb, N. G., & Fu, Q. (2002). Finite-difference time-domain solution of light scattering and absorption by particles in an absorbing medium. *Applied Optics*, *41*(27), 5728–5743. http://dx.doi.org/10.1364/AO.41.005728

Tahnk, W. R., & Coakley, J. A. (2002). Aerosol optical depth and direct radiative forcing for INDOEX derived from AVHRR: Observations, January–March 1996–2000. *Journal of Geophysical Research: Atmospheres*, *107*(D19), INX2 9–1. http://dx.doi.org/10.1029/2000JD000183

Tian, B., & Ramanathan, V. (2002). Role of Tropical Clouds in Surface and Atmospheric Energy Budget. *Journal of Climate*, *15*(3), 296–305. http://dx.doi.org/10.1175/1520-0442(2002)015<0296:ROTCIS>2.0.CO;2

Trenberth, K. E. (2002). Changes in Tropical Clouds and Radiation. *Science*, *296*(5576), 2095–2095. http://dx.doi.org/10.1126/science.296.5576.2095a

Viollier, M., Standfuss, C., & Parol, F. (2002). Monthly means of reflected solar flux from POLDER (ADEOS-1) and comparison with ERBE, ScaRaB and CERES. *Geophysical Research Letters*, *29*(10), 141–1. http://dx.doi.org/10.1029/2001GL014255

Wang, P.-H., Minnis, P., Wielicki, B. A., Wong, T., & Vann, L. B. (2002). Satellite observations of long-term changes in tropical cloud and outgoing longwave radiation from 1985 to 1998. *Geophysical Research Letters*, *29*(10), 37–1. http://dx.doi.org/10.1029/2001GL014264

Wielicki, B. A., Wong, T., Allan, R. P., Slingo, A., Kiehl, J. T., Soden, B. J., … Jacobowitz, H. (2002). Evidence for Large Decadal Variability in the Tropical Mean Radiative Energy Budget. *Science*, *295*(5556), 841–844. http://dx.doi.org/10.1126/science.1065837

Wielicki, B., Del Genio, A., Wong, T., Chen, J., Carlson, B., Allan, R., … Susskind, J. (2002). Changes in tropical clouds and radiation - Response. *SCIENCE*, *296*(5576). http://dx.doi.org/10.1126/science.296.5576.2095a

Wilcox, E. M.; 2002: Spatial and Temporal Scales of Precipitating Tropical Cloud Systems, Ph.D. Thesis, UCSD, La Jolla.

Woick, H., Dewitte, S., Feijt, A., Gratzki, A., Hechler, P., Hollmann, R., … Wollenweber, G. (2002). The satellite application facility on climate monitoring. *Advances in Space Research*, *30*(11), 2405–2410. http://dx.doi.org/10.1016/S0273-1177(02)80290-3

Xu, K.-M., Cederwall, R. T., Donner, L. J., Grabowski, W. W., Guichard, F., Johnson, D. E., … Zhang, M.-H. (2002). An intercomparison of cloud-resolving models with the atmospheric radiation measurement summer 1997 intensive observation period data. *Quarterly Journal of the Royal Meteorological Society*, *128*(580), 593–624. http://dx.doi.org/10.1256/003590002321042117

Yang, P., Gao, B.-C., Wiscombe, W. J., Mishchenko, M. I., Platnick, S. E., Huang, H.-L., … Park, S. K. (2002). Inherent and apparent scattering properties of coated or uncoated spheres embedded in an absorbing host medium. *Applied Optics*, *41*(15), 2740–2759. http://dx.doi.org/10.1364/AO.41.002740

Zhang, J., Lohmann, U., & Lin, B. (2002). A new statistically based autoconversion rate parameterization for use in large-scale models. *Journal of Geophysical Research: Atmospheres*, *107*(D24), 4750. http://dx.doi.org/10.1029/2001JD001484

Zhang, Y., Li, Z., & Macke, A. (2002). Retrieval of Surface Solar Radiation Budget under Ice Cloud Sky: Uncertainty Analysis and Parameterization. *Journal of the Atmospheric Sciences*, *59*(20), 2951–2965. http://dx.doi.org/10.1175/1520-0469(2002)059<2951:ROSSRB>2.0.CO;2

Zhao, T. X.-P., Stowe, L. L., Smirnov, A., Crosby, D., Sapper, J., & McClain, C. R. (2002). Development of a Global Validation Package for Satellite Oceanic Aerosol Optical Thickness Retrieval Based on AERONET Observations and Its Application to NOAA/NESDIS Operational Aerosol Retrievals. *Journal of the Atmospheric Sciences*, *59*(3), 294–312. http://dx.doi.org/10.1175/1520-0469(2002)059<0294:DOAGVP>2.0.CO;2

Clouds and the Earth's Radiant Energy System

CERES Publications for 2001

Buriez, J.-C., Doutriaux-Boucher, M., Parol, F., & Loeb, N. G. (2001). Angular Variability of the Liquid Water Cloud Optical Thickness Retrieved from ADEOS–POLDER. *Journal of the Atmospheric Sciences*, *58*(20), 3007–3018. http://dx.doi.org/10.1175/1520-0469(2001)058<3007:AVOTLW>2.0.CO;2

Cess, R. D., Zhang, M., Wang, P.-H., & Wielicki, B. A. (2001). Cloud structure anomalies over the tropical Pacific during the 1997/98 El Niño. *Geophysical Research Letters*, *28*(24), 4547–4550. http://dx.doi.org/10.1029/2001GL013750

Cess, R. D., Zhang, M., Wielicki, B. A., Young, D. F., Zhou, X.-L., & Nikitenko, Y. (2001). The Influence of the 1998 El Niño upon Cloud-Radiative Forcing over the Pacific Warm Pool. *Journal of Climate*, *14*(9), 2129–2137. http://dx.doi.org/10.1175/1520-0442(2001)014<2129:TIOTEN>2.0.CO;2

Chambers, L. H., Wielicki, B. A., & Loeb, N. G. (2001). Shortwave Flux from Satellite-Measured Radiance: A Theoretical Study over Marine Boundary Layer Clouds. *Journal of Applied Meteorology*, *40*(12), 2144–2161. http://dx.doi.org/10.1175/1520-0450(2001)040<2144:SFFSMR>2.0.CO;2

Chou, M.-D., Chan, P.-K., & Yan, M. M.-H. (2001). A sea surface radiation data set for climate applications in the tropical western Pacific and South China Sea. *Journal of Geophysical Research: Atmospheres*, *106*(D7), 7219–7228. http://dx.doi.org/10.1029/2000JD900661

Clarke, A. D., Collins, W. G., Rasch, P. J., Kapustin, V. N., Moore, K., Howell, S., & Fuelberg, H. E. (2001). Dust and pollution transport on global scales: Aerosol measurements and model predictions. *Journal of Geophysical Research: Atmospheres*, *106*(D23), 32555–32569. http://dx.doi.org/10.1029/2000JD900842

Collins, W. D., Rasch, P. J., Eaton, B. E., Khattatov, B. V., Lamarque, J.-F., & Zender, C. S. (2001). Simulating aerosols using a chemical transport model with assimilation of satellite aerosol retrievals: Methodology for INDOEX. *Journal of Geophysical Research: Atmospheres*, *106*(D7), 7313–7336. http://dx.doi.org/10.1029/2000JD900507

Davis, A. B., & Marshak, A. (2001). Multiple Scattering in Clouds: Insights from Three-Dimensional Diffusion/P_1 Theory. *Nuclear Science and Engineering*, *137*(3), 251–280.

Dewitte, S., Joukoff, A., Crommelynck, D., Lee, R. B., Helizon, R., & Wilson, R. S. (2001). Contribution of the Solar Constant (SOLCON) program to the long-term total solar irradiance observations. *Journal of Geophysical Research: Space Physics*, *106*(A8), 15759–15765. http://dx.doi.org/10.1029/2000JA900160

Doelling, D. R., Minnis, P., Spangenberg, D. A., Chakrapani, V., Mahesh, A., Pope, S. K., & Valero, F. P. J. (2001). Cloud radiative forcing at the top of the atmosphere during FIRE ACE derived from AVHRR data. *Journal of Geophysical Research: Atmospheres*, *106*(D14), 15279–15296. http://dx.doi.org/10.1029/2000JD900455

Dong, X., Mace, G. G., Minnis, P., & Young, D. F. (2001). Arctic stratus cloud properties and their effect on the surface radiation budget: Selected cases from FIRE ACE. *Journal of Geophysical Research: Atmospheres*, *106*(D14), 15297–15312. http://dx.doi.org/10.1029/2000JD900404

Donner, L. J., Seman, C. J., Hemler, R. S., & Fan, S. (2001). A Cumulus Parameterization Including Mass Fluxes, Convective Vertical Velocities, and Mesoscale Effects: Thermodynamic and Hydrological Aspects in a General Circulation Model. *Journal of Climate*, *14*(16), 3444–3463. http://dx.doi.org/10.1175/1520-0442(2001)014<3444:ACPIMF>2.0.CO;2

Duda, D. P., Minnis, P., & Nguyen, L. (2001). Estimates of cloud radiative forcing in contrail clusters using GOES imagery. *Journal of Geophysical Research: Atmospheres*, *106*(D5), 4927–4937. http://dx.doi.org/10.1029/2000JD900393

Duvel, J.-P., Viollier, M., Raberanto, P., Kandel, R., Haeffelin, M., Pakhomov, L. A., … Scientific Working Group, I. S. R. B. (2001). The ScaRaB–Resurs Earth Radiation Budget Dataset and First Results. *Bulletin of the American Meteorological Society*, *82*(7), 1397–1408. http://dx.doi.org/10.1175/1520-0477(2001)082<1397:TSRERB>2.3.CO;2

Garreaud, R., Rutllant, J., Quintana, J., Carrasco, J., & Minnis, P. (2001). CIMAR–5: A Snapshot of the Lower Troposphere over the Subtropical Southeast Pacific. *Bulletin of the American Meteorological Society*, *82*(10), 2193–2207. http://dx.doi.org/10.1175/1520-0477(2001)082<2193:CASOTL>2.3.CO;2

Gupta, S. K., Kratz, D. P., Stackhouse, P. W., & Wilber, A. C. (2001). *The Langley Parameterized Shortwave Algorithm (LPSA) for Surface Radiation Budget Studies. 1.0*. Retrieved from http://ntrs.nasa.gov/search.jsp?R=20020022720

Haeffelin, M., Kato, S., Smith, A. M., Rutledge, C. K., Charlock, T. P., & Mahan, J. R. (2001). Determination of the thermal offset of the Eppley precision spectral pyranometer. *Applied Optics*, *40*(4), 472–484. http://dx.doi.org/10.1364/AO.40.000472

Haeffelin, M., Wielicki, B., Duvel, J. P., Priestley, K., & Viollier, M. (2001). Inter-calibration of CERES and ScaRaB Earth Radiation Budget datasets using temporally and spatially collocated radiance measurements. *Geophysical Research Letters*, *28*(1), 167–170. http://dx.doi.org/10.1029/2000GL012233

Herring, D. (2001, October 5). NASA Earth Observatory : [Text.Article]. Retrieved March 2, 2015, from http://earthobservatory.nasa.gov/Features/RenewableEnergy/renewable_energy.php

Hobbs, P. V., Rangno, A. L., Shupe, M., & Uttal, T. (2001). Airborne studies of cloud structures over the Arctic Ocean and comparisons with retrievals from ship-based remote sensing measurements. *Journal of Geophysical Research: Atmospheres*, *106*(D14), 15029–15044. http://dx.doi.org/10.1029/2000JD900323

Hou, A. Y., Zhang, S. Q., da Silva, A. M., Olson, W. S., Kummerow, C. D., & Simpson, J. (2001). Improving Global Analysis and Short–Range Forecast Using Rainfall and Moisture Observations Derived from TRMM and SSM/I Passive Microwave Sensors. *Bulletin of the American Meteorological Society*, *82*(4), 659–679. http://dx.doi.org/10.1175/1520-0477(2001)082<0659:IGAASF>2.3.CO;2

Hu, Y.-X., Winker, D., Yang, P., Baum, B., Poole, L., & Vann, L. (2001). Identification of cloud phase from PICASSO-CENA lidar depolarization: a multiple scattering sensitivity study. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *70*(4–6), 569–579. http://dx.doi.org/10.1016/S0022-4073(01)00030-9

Kato, S., Mace, G. G., Clothiaux, E. E., Liljegren, J. C., & Austin, R. T. (2001). Doppler Cloud Radar Derived Drop Size Distributions in Liquid Water Stratus Clouds. *Journal of the Atmospheric Sciences*, *58*(19), 2895–2911. http://dx.doi.org/10.1175/1520-0469(2001)058<2895:DCRDDS>2.0.CO;2

Kato, S., Smith, G. L., & Barker, H. W. (2001). Gamma-Weighted Discrete Ordinate Two-Stream Approximation for Computation of Domain-Averaged Solar Irradiance. *Journal of the Atmospheric Sciences*, *58*(24), 3797–3803. http://dx.doi.org/10.1175/1520-0469(2001)058<3797:GWDOTS>2.0.CO;2

Kelly, M. A., & Randall, D. A. (2001). A Two-Box Model of a Zonal Atmospheric Circulation in the Tropics. *Journal of Climate*, *14*(19), 3944–3964. http://dx.doi.org/10.1175/1520-0442(2001)014<3944:ATBMOA>2.0.CO;2

Khairoutdinov, M. F., & Randall, D. A. (2001). A cloud resolving model as a cloud parameterization in the NCAR Community Climate System Model: Preliminary results. *Geophysical Research Letters*, *28*(18), 3617–3620. http://dx.doi.org/10.1029/2001GL013552

Liljegren, J. C., Clothiaux, E. E., Mace, G. G., Kato, S., & Dong, X. (2001). A new retrieval for cloud liquid water path using a ground-based microwave radiometer and measurements of cloud temperature. *Journal of Geophysical Research: Atmospheres*, *106*(D13), 14485–14500. http://dx.doi.org/10.1029/2000JD900817

Lin, B., Minnis, P., Fan, A., Curry, J. A., & Gerber, H. (2001). Comparison of cloud liquid water paths derived from in situ and microwave radiometer data taken during the SHEBA/FIREACE. *Geophysical Research Letters*, *28*(6), 975–978. http://dx.doi.org/10.1029/2000GL012386

Li, Z., & Trishchenko, A. P. (2001). Quantifying Uncertainties in Determining SW Cloud Radiative Forcing and Cloud Absorption due to Variability in Atmospheric Conditions. *Journal of the Atmospheric Sciences*, *58*(4), 376–389. http://dx.doi.org/10.1175/1520-0469(2001)058<0376:QUIDSC>2.0.CO;2

Loeb, N. G., Priestley, K. J., Kratz, D. P., Geier, E. B., Green, R. N., Wielicki, B. A., … Nolan, S. K. (2001). Determination of Unfiltered Radiances from the Clouds and the Earth's Radiant Energy System Instrument. *Journal of Applied Meteorology*, *40*(4), 822–835. http://dx.doi.org/10.1175/1520-0450(2001)040<0822:DOURFT>2.0.CO;2

Lucas, L. E., Waliser, D. E., Xie, P., Janowiak, J. E., & Liebmann, B. (2001). Estimating the Satellite Equatorial Crossing Time Biases in the Daily, Global Outgoing Longwave Radiation Dataset. *Journal of Climate*, *14*(12), 2583–2605. http://dx.doi.org/10.1175/1520-0442(2001)014<2583:ETSECT>2.0.CO;2

Miller, S. D., & Stephens, G. L. (2001). CloudSat instrument requirements as determined from ECMWF forecasts of global cloudiness. *Journal of Geophysical Research: Atmospheres*, *106*(D16), 17713–17733. http://dx.doi.org/10.1029/2000JD900645

Minnis, P., Chakrapani, V., Doelling, D. R., Nguyen, L., Palikonda, R., Spangenberg, D. A., … Shupe, M. (2001). Cloud coverage and height during FIRE ACE derived from AVHRR data. *Journal of Geophysical Research: Atmospheres*, *106*(D14), 15215–15232. http://dx.doi.org/10.1029/2000JD900437

Nordeen, M. L., Minnis, P., Doelling, D. R., Pethick, D., & Nguyen, L. (2001). Satellite observations of cloud plumes generated by Nauru. *Geophysical Research Letters*, *28*(4), 631–634. http://dx.doi.org/10.1029/2000GL012409

Rajeev, K., & Ramanathan, V. (2001). Direct observations of clear-sky aerosol radiative forcing from space during the Indian Ocean Experiment. *Journal of Geophysical Research: Atmospheres*, *106*(D15), 17221–17235. http://dx.doi.org/10.1029/2000JD900723

Ramanathan, V., Crutzen, P. J., Lelieveld, J., Mitra, A. P., Althausen, D., Anderson, J., … Valero, F. P. J. (2001). Indian Ocean Experiment: An integrated analysis of the climate forcing and effects of the great Indo-Asian haze. *Journal of Geophysical Research: Atmospheres*, *106*(D22), 28371–28398. http://dx.doi.org/10.1029/2001JD900133

Rasch, P. J., Collins, W. D., & Eaton, B. E. (2001). Understanding the Indian Ocean Experiment (INDOEX) aerosol distributions with an aerosol assimilation. *Journal of Geophysical Research: Atmospheres*, *106*(D7), 7337–7355. http://dx.doi.org/10.1029/2000JD900508

Shupe, M. D., Uttal, T., Matrosov, S. Y., & Frisch, A. S. (2001). Cloud water contents and hydrometeor sizes during the FIRE Arctic Clouds Experiment. *Journal of Geophysical Research: Atmospheres*, *106*(D14), 15015–15028. http://dx.doi.org/10.1029/2000JD900476

Standfuss, C., Viollier, M., Kandel, R. S., & Duvel, J. P. (2001). Regional Diurnal Albedo Climatology and Diurnal Time Extrapolation of Reflected Solar Flux Observations: Application to the ScaRaB Record. *Journal of Climate*, *14*(6), 1129–1146. http://dx.doi.org/10.1175/1520-0442(2001)014<1129:RDACAD>2.0.CO;2

Trishchenko, A. P., Li, Z., Chang, F.-L., & Barker, H. (2001). Cloud optical depths and TOA fluxes: Comparison between satellite and surface retrievals from multiple platforms. *Geophysical Research Letters*, *28*(6), 979–982. http://dx.doi.org/10.1029/2000GL012067

Udelhofen, P. M., & Cess, R. D. (2001). Cloud cover variations over the United States: An influence of cosmic rays or solar variability? *Geophysical Research Letters*, *28*(13), 2617–2620. http://dx.doi.org/10.1029/2000GL012659

Wang, P.-H., Veiga, R. E., Vann, L. B., Minnis, P., & Kent, G. S. (2001). A further study of the method for estimation of SAGE II opaque cloud occurrence. *Journal of Geophysical Research: Atmospheres*, *106*(D12), 12603–12613. http://dx.doi.org/10.1029/2001JD900138

Whitlock, C. H., Brown, D. E., Chandler, W. S., DiPasquale, R. C., Ritchey, N. A., Gupta, S. K., … Stackhouse, P. W. (2001). Global Surface Solar Energy Anomalies Including El Niño and La Niña Years*. *Journal of Solar Energy Engineering*, *123*(3), 211–215. http://dx.doi.org/10.1115/1.1384570

Wilcox, E. M., & Ramanathan, V. (2001). Scale Dependence of the Thermodynamic Forcing of Tropical Monsoon Clouds: Results from TRMM Observations. *Journal of Climate*, *14*(7), 1511–1524. http://dx.doi.org/10.1175/1520-0442(2001)014<1511:SDOTTF>2.0.CO;2

Wu, M. L. C., Schubert, S., Lin, C. I., & Štajner, I. (2001). A method for assessing the quality of model-based estimates of ground temperature and atmospheric moisture using satellite data. *Journal of Geophysical Research: Atmospheres*, *106*(D10), 10129–10144. http://dx.doi.org/10.1029/2000JD900478

Yang, P., Gao, B.-C., Baum, B. A., Hu, Y. X., Wiscombe, W. J., Mishchenko, M. I., … Nasiri, S. L. (2001). Asymptotic solutions for optical properties of large particles with strong absorption. *Applied Optics*, *40*(9), 1532–1547. http://dx.doi.org/10.1364/AO.40.001532

Yang, P., Gao, B.-C., Baum, B. A., Hu, Y. X., Wiscombe, W. J., Tsay, S.-C., … Nasiri, S. L. (2001). Radiative properties of cirrus clouds in the infrared (8–13 μm) spectral region. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *70*(4–6), 473–504. http://dx.doi.org/10.1016/S0022-4073(01)00024-3

Yang, P., Gao, B.-C., Baum, B. A., Wiscombe, W. J., Hu, Y. X., Nasiri, S. L., … Miloshevich, L. M. (2001). Sensitivity of cirrus bidirectional reflectance to vertical inhomogeneity of ice crystal habits and size distributions for two Moderate-Resolution Imaging Spectroradiometer (MODIS) bands. *Journal of Geophysical Research: Atmospheres*, *106*(D15), 17267–17291. http://dx.doi.org/10.1029/2000JD900618

Zhou, Y., & Cess, R. D. (2001). Algorithm development strategies for retrieving the downwelling longwave flux at the Earth's surface. *Journal of Geophysical Research: Atmospheres*, *106*(D12), 12477–12488. http://dx.doi.org/10.1029/2001JD900144

Zhou, Y. P., Rutledge, K. C., Charlock, T. P., Loeb, N. G., & Kato, S. (2001). Atmospheric corrections using MODTRAN for TOA and surface BRDF characteristics from high resolution spectroradiometric/angular measurements from a helicopter platform (Vol. 18(5), pp. 984–1004). Presented at the Advances in Atmospheric Sciences.

Clouds and the Earth's Radiant Energy System
CERES Publications for 2000

Cess, R. D., Qian, T., & Sun, M. (2000). Consistency tests applied to the measurement of total, direct, and diffuse shortwave radiation at the surface. *Journal of Geophysical Research: Atmospheres*, *105*(D20), 24881–24887. http://dx.doi.org/10.1029/2000JD900402

Chambers, L. H., Costulis, P. K., Young, D. F., Green, C. J., Stoddard, D. B., & Haberer, S. J. (2000). *What is Success? Evaluating S'COOL, an Educational Outreach Project Focused on NASA's CERES Program*. Retrieved from http://ntrs.nasa.gov/search.jsp?R=20040086628

Chang, F.-L., Li, Z., & Ackerman, S. A. (2000). Examining the Relationship between Cloud and Radiation Quantities Derived from Satellite Observations and Model Calculations. *Journal of Climate*, *13*(21), 3842–3859. http://dx.doi.org/10.1175/1520-0442(2000)013<3842:ETRBCA>2.0.CO;2

Chang, F.-L., Li, Z., & Trishchenko, A. P. (2000). The Dependence of TOA Reflectance Anisotropy on Cloud Properties Inferred from ScaRaB Satellite Data. *Journal of Applied Meteorology*, *39*(12), 2480–2493. http://dx.doi.org/10.1175/1520-0450(2000)039<2480:TDOTRA>2.0.CO;2

Chevallier, F., & Morcrette, J.-J. (2000). Comparison of Model Fluxes with Surface and Top-of-the-Atmosphere Observations. *Monthly Weather Review*, *128*(11), 3839–3852. http://dx.doi.org/10.1175/1520-0493(2001)129<3839:COMFWS>2.0.CO;2

Christopher, S. A., Chou, J., Zhang, J., Li, X., Berendes, T. A., & Welch, R. M. (2000). Shortwave direct radiative forcing of biomass burning aerosols estimated using VIRS and CERES data. *Geophysical Research Letters*, *27*(15), 2197–2200. http://dx.doi.org/10.1029/1999GL010923

Christopher, S. A., Li, X., Welch, R. M., Reid, J. S., Hobbs, P. V., Eck, T. F., & Holben, B. (2000). Estimation of Surface and Top-of-Atmosphere Shortwave Irradiance in Biomass-Burning Regions during SCAR-B. *Journal of Applied Meteorology*, *39*(10), 1742–1753. http://dx.doi.org/10.1175/1520-0450-39.10.1742

Dong, X., Minnis, P., Ackerman, T. P., Clothiaux, E. E., Mace, G. G., Long, C. N., & Liljegren, J. C. (2000). A 25-month database of stratus cloud properties generated from ground-based measurements at the Atmospheric Radiation Measurement Southern Great Plains Site. *Journal of Geophysical Research: Atmospheres*, *105*(D4), 4529–4537. http://dx.doi.org/10.1029/1999JD901159

Duvel, J. P., Bouffiès-Cloché, S., & Viollier, M. (2000). Determination of Shortwave Earth Reflectances from Visible Radiance Measurements: Error Estimate Using ScaRaB Data. *Journal of Applied Meteorology*, *39*(7), 957–970. http://dx.doi.org/10.1175/1520-0450(2000)039<0957:DOSERF>2.0.CO;2

Duvel, J. P., & Raberanto, P. (2000). A Geophysical Cross-Calibration Approach for Broadband Channels: Application to the ScaRaB Experiment. *Journal of Atmospheric and Oceanic Technology*, *17*(12), 1609–1617. http://dx.doi.org/10.1175/1520-0426(2000)017<1609:AGCCAF>2.0.CO;2

Fowler, L. D., Wielicki, B. A., Randall, D. A., Branson, M. D., Gibson, G. G., & Denn, F. M. (2000). Use of a GCM to explore sampling issues in connection with satellite remote sensing of the Earth radiation budget. *Journal of Geophysical Research: Atmospheres*, *105*(D16), 20757–20772. http://dx.doi.org/10.1029/2000JD900239

Frisch, A. S., Martner, B. E., Djalalova, I., & Poellot, M. R. (2000). Comparison of radar/radiometer retrievals of stratus cloud liquid-water content profiles with in situ measurements by aircraft. *Journal of Geophysical Research: Atmospheres*, *105*(D12), 15361–15364. http://dx.doi.org/10.1029/2000JD900128

Grant, I. F., Prata, A. J., & Cechet, R. P. (2000). The Impact of the Diurnal Variation of Albedo on the Remote Sensing of the Daily Mean Albedo of Grassland. *Journal of Applied Meteorology*, *39*(2), 231–244. http://dx.doi.org/10.1175/1520-0450(2000)039<0231:TIOTDV>2.0.CO;2

Han, Q., Rossow, W. B., Chou, J., & Welch, R. M. (2000). Near-global survey of cloud column susceptibilities using ISCCP data. *Geophysical Research Letters*, *27*(19), 3221–3224. http://dx.doi.org/10.1029/2000GL011543

Hou, A. Y., Zhang, S. Q., da Silva, A. M., & Olson, W. S. (2000). Improving Assimilated Global Datasets Using TMI Rainfall and Columnar Moisture Observations. *Journal of Climate*, *13*(23), 4180–4195. http://dx.doi.org/10.1175/1520-0442(2000)013<4180:IAGDUT>2.0.CO;2

Ignatov, A., & Stowe, L. (2000). Physical Basis, Premises, and Self-Consistency Checks of Aerosol Retrievals from TRMM VIRS. *Journal of Applied Meteorology*, *39*(12), 2259–2277. http://dx.doi.org/10.1175/1520-0450(2001)040<2259:PBPASC>2.0.CO;2

Karlsson, K.-G. (2000). Satellite sensing techniques and applications for the purpose of BALTEX. In *Meteorologische Zeitschrift* (Vol. 9, pp. 111–116). Gebrüder Borntraeger

Kato, S., Bergin, M. H., Ackerman, T. P., Charlock, T. P., Clothiaux, E. E., Ferrare, R. A., … Turner, D. D. (2000). A comparison of the aerosol thickness derived from ground-based and airborne measurements. *Journal of Geophysical Research: Atmospheres*, *105*(D11), 14701–14717. http://dx.doi.org/10.1029/2000JD900013

Legrand, M., Pietras, C., Brogniez, G., Haeffelin, M., Abuhassan, N. K., & Sicard, M. (2000). A High-Accuracy Multiwavelength Radiometer for In Situ Measurements in the Thermal Infrared. Part I: Characterization of the Instrument. *Journal of Atmospheric and Oceanic Technology*, *17*(9), 1203–1214. http://dx.doi.org/10.1175/1520-0426(2000)017<1203:AHAMRF>2.0.CO;2

Lin, X., Randall, D. A., & Fowler, L. D. (2000). Diurnal Variability of the Hydrologic Cycle and Radiative Fluxes: Comparisons between Observations and a GCM. *Journal of Climate*, *13*(23), 4159–4179. http://dx.doi.org/10.1175/1520-0442(2000)013<4159:DVOTHC>2.0.CO;2

Li, X., Christopher, S. A., Chou, J., & Welch, R. M. (2000). Estimation of Shortwave Direct Radiative Forcing of Biomass-Burning Aerosols Using New Angular Models. *Journal of Applied Meteorology*, *39*(12), 2278–2291. http://dx.doi.org/10.1175/1520-0450(2001)040<2278:EOSDRF>2.0.CO;2

Loeb, N. G., Parol, F., Buriez, J.-C., & Vanbauce, C. (2000). Top-of-Atmosphere Albedo Estimation from Angular Distribution Models Using Scene Identification from Satellite Cloud Property Retrievals. *Journal of Climate*, *13*(7), 1269–1285. http://dx.doi.org/10.1175/1520-0442(2000)013<1269:TOAAEF>2.0.CO;2

Matrosov, S. Y., & Heymsfield, A. J. (2000). Use of Doppler radar to assess ice cloud particle fall velocity-size relations for remote sensing and climate studies. *Journal of Geophysical Research: Atmospheres*, *105*(D17), 22427–22436. http://dx.doi.org/10.1029/2000JD900353

Minomura, M., Ru, J., Kuze, H., & Takeuchi, N. (2000). Atmospheric correction of satellite data using multi-wavelength lidar data with MODTRAN3 code. *Advances in Space Research*, *25*(5), 1033–1036. http://dx.doi.org/10.1016/S0273-1177(99)00468-8

O'Neill, N. T., Ignatov, A., Holben, B. N., & Eck, T. F. (2000). The lognormal distribution as a reference for reporting aerosol optical depth statistics; Empirical tests using multi-year, multi-site AERONET Sunphotometer data. *Geophysical Research Letters*, *27*(20), 3333–3336. http://dx.doi.org/10.1029/2000GL011581

Podgorny, I. A., Conant, W., Ramanathan, V., & Satheesh, S. K. (2000). Aerosol modulation of atmospheric and surface solar heating over the tropical Indian Ocean. *Tellus B*, *52*(3), 947–958. http://dx.doi.org/10.1034/j.1600-0889.2000.d01-4.x

Priestley, K. J., Barkstrom, B. R., Lee, R. B., Green, R. N., Thomas, S., Wilson, R. S., … Al-Hajjah, A. (2000). Postlaunch Radiometric Validation of the Clouds and the Earth's Radiant Energy System (CERES) Proto-Flight Model on the Tropical Rainfall Measuring Mission (TRMM) Spacecraft through 1999. *Journal of Applied Meteorology*, *39*(12), 2249–2258. http://dx.doi.org/10.1175/1520-0450(2001)040<2249:PRVOTC>2.0.CO;2

Randall, D., Curry, J., Duynkerke, P., Krueger, S., Miller, M., Moncrieff, M., … others. (2000). The second GEWEX cloud system study science and implementation plan. *IGPO Publication Series*, *34*, 45.

Redelsperger, J.-L., Brown, P. R. A., Guichard, F., How, C., Kawasima, M., Lang, S., … Donner, L. J. (2000). A gcss model intercomparison for a tropical squall line observed during toga-coare. I: Cloud-resolving models. *Quarterly Journal of the Royal Meteorological Society*, *126*(564), 823–863. http://dx.doi.org/10.1002/qj.49712656404

Satheesh, S. K., & Ramanathan, V. (2000). Large differences in tropical aerosol forcing at the top of the atmosphere and Earth's surface. *Nature*, *405*(6782), 60–63. http://dx.doi.org/10.1038/35011039

Stephens, G. L., Miller, S. D., Benedetti, A., McCoy, R. B., McCoy, R. F., Ellingson, R. G., … Bambha, R. (2000). The Department of Energy's Atmospheric Radiation Measurement (ARM) Unmanned Aerospace Vehicle (UAV) Program. *Bulletin of the American Meteorological Society*, *81*(12), 2915–2938. http://dx.doi.org/10.1175/1520-0477(2000)081<2915:TDOESA>2.3.CO;2

Su, W., Mao, J., Ji, F., & Qin, Y. (2000). Outgoing longwave radiation and cloud radiative forcing of the Tibetan Plateau. *Journal of Geophysical Research: Atmospheres*, *105*(D11), 14863–14872. http://dx.doi.org/10.1029/2000JD900201

Wong, T., Young, D. F., Haeffelin, M., & Weckmann, S. (2000). Validation of the CERES/TRMM ERBE-Like Monthly Mean Clear-Sky Longwave Dataset and the Effects of the 1998 ENSO Event. *Journal of Climate*, *13*(24), 4256–4267. http://dx.doi.org/10.1175/1520-0442(2000)013<4256:VOTCTE>2.0.CO;2

Zhou, Y. P., & Cess, R. D. (2000). Validation of longwave atmospheric radiation models using Atmospheric Radiation Measurement data. *Journal of Geophysical Research: Atmospheres*, *105*(D24), 29703–29716. http://dx.doi.org/10.1029/2000JD900557

Clouds and the Earth's Radiant Energy System

CERES Publications for 1999

Andronache, C., Donner, L. J., Seman, C. J., Ramaswamy, V., & Hemler, R. S. (1999). Atmospheric sulfur and deep convective clouds in tropical Pacific: A model study. *Journal of Geophysical Research: Atmospheres*, *104*(D4), 4005–4024. http://dx.doi.org/10.1029/1998JD200085

Barkstrom, B. R. (1999). CERES: The start of the next generation of radiation measurements. *Advances in Space Research*, *24*(7), 907–914. http://dx.doi.org/10.1016/S0273-1177(99)00354-3

Chambers, L. H., Barkstrom, B. R., & Smith, G. L. (n.d.). Degrees of Freedom of Anisotropic Functions for Non-Plane-Parallel Clouds. *Eos, Transactions American Geophysical Union*, *80*(17).

Dewitte, S., & Clerbaux, N. (1999). First experience with GERB ground segment processing software: Validation with CERES PFM data. *Advances in Space Research*, *24*(7), 925–929. http://dx.doi.org/10.1016/S0273-1177(99)00357-9

Diner, D. J., Asner, G. P., Davies, R., Knyazikhin, Y., Muller, J.-P., Nolin, A. W., … Stroeve, J. (1999). New Directions in Earth Observing: Scientific Applications ofMultiangle Remote Sensing. http://dx.doi.org/10.1175/1520-0477(1999)080<2209:NDIEOS>2.0.CO;2

Donner, L. J., Seman, C. J., & Hemler, R. S. (1999). Three-Dimensional Cloud-System Modeling of GATE Convection. *Journal of the Atmospheric Sciences*, *56*(12), 1885–1912. http://dx.doi.org/10.1175/1520-0469(1999)056<1885:TDCSMO>2.0.CO;2

Fowler, L. D., & Randall, D. A. (1999). Simulation of upper tropospheric clouds with the Colorado State University general circulation model. *Journal of Geophysical Research: Atmospheres*, *104*(D6), 6101–6121. http://dx.doi.org/10.1029/1998JD200074

Gupta, S. K., Ritchey, N. A., Wilber, A. C., Whitlock, C. H., Gibson, G. G., & Stackhouse, P. W. (1999). A Climatology of Surface Radiation Budget Derived from Satellite Data. *Journal of Climate*, *12*(8), 2691–2710. http://dx.doi.org/10.1175/1520-0442(1999)012<2691:ACOSRB>2.0.CO;2

Haeffelin, M., Kandel, R., & Stubenrauch, C. (1999). Improved Diurnal Interpolation of Reflected Broadband Shortwave Observations Using ISCCP Data. *Journal of Atmospheric and Oceanic Technology*, *16*(1), 38–54. http://dx.doi.org/10.1175/1520-0426(1999)016<0038:IDIORB>2.0.CO;2

Han, Q., Rossow, W. B., Chou, J., Kuo, K.-S., & Welch, R. M. (1999). The effects of aspect ratio and surface roughness on satellite retrievals of ice-cloud properties. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *63*(2–6), 559–583. http://dx.doi.org/10.1016/S0022-4073(99)00039-4

Hollmann, R., Müller, J., Rockel, B., & Stuhlmann, R. (1999). Satellite retrieved clouds

and the radiation budget in support of BALTEX regional studies. *Physics and Chemistry of the Earth, Part B: Hydrology, Oceans and Atmosphere*, *24*(1–2), 111–115. http://dx.doi.org/10.1016/S1464-1909(98)00020-3

Kato, S., Ackerman, T. P., Dutton, E. G., Laulainen, N., & Larson, N. (1999). A Comparison Of Modeled And Measured Surface Shortwave Irradiance For A Molecular Atmosphere. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *61*(4), 493–502. http://dx.doi.org/10.1016/S0022-4073(98)00032-6

Kato, S., Ackerman, T. P., Mather, J. H., & Clothiaux, E. E. (1999). The k-distribution method and correlated-k approximation for a shortwave radiative transfer model. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *62*(1), 109–121. http://dx.doi.org/10.1016/S0022-4073(98)00075-2

Kratz, D. P., & Rose, F. G. (1999). Accounting For Molecular Absorption Within The Spectral Range Of The Ceres Window Channel. *Journal of Quantitative Spectroscopy and Radiative Transfer*, *61*(1), 83–95. http://dx.doi.org/10.1016/S0022-4073(97)00203-3

Li, Z., & Trishchenko, A. (1999). A Study toward an Improved Understanding of the Relationship between Visible and Shortwave Measurements. *Journal of Atmospheric and Oceanic Technology*, *16*(3), 347–360. http://dx.doi.org/10.1175/1520-0426(1999)016<0347:ASTAIU>2.0.CO;2

Loeb, N. G., Hinton, P. O., & Green, R. N. (1999). Top-of-atmosphere albedo estimation from angular distribution models: A comparison between two approaches. *Journal of Geophysical Research: Atmospheres*, *104*(D24), 31255–31260. http://dx.doi.org/10.1029/1999JD900935

Masutani, M., Campana, K., Lord, S., & Yang, S. K. (1999). *Note on cloud cover of the ECMWF Nature Run used for OSSE/NPOESS project* (No. NCEP Office Note 427).

Mavromatis, T., & Jones, P. D. (1999). Evaluation of HadCM2 and Direct Use of Daily GCM Data in Impact Assessment Studies. *Climatic Change*, *41*(3-4), 583–614. http://dx.doi.org/10.1023/A:1005336608651

Satheesh, S. K., Ramanathan, V., Li-Jones, X., Lobert, J. M., Podgorny, I. A., Prospero, J. M., … Loeb, N. G. (1999). A model for the natural and anthropogenic aerosols over the tropical Indian Ocean derived from Indian Ocean Experiment data. *Journal of Geophysical Research: Atmospheres*, *104*(D22), 27421–27440. http://dx.doi.org/10.1029/1999JD900478

Smith, G. L. (1999). Critical overview of radiation budget estimates from satellites. *Advances in Space Research*, *24*(7), 887–895. http://dx.doi.org/10.1016/S0273-1177(99)00359-2

Volkov, Y. A., Plakhina, I. N., & Repina, I. A. (1999). Parametrization of the surface radiative budget on the basis of the CAGEX-1 experiment within the program of atmospheric radiation measurements. *Izvestiya Akademii Nauk Fizika Atmosfery I Okeana*, *35*(1), 66–72.

Waliser, D. E., Weller, R. A., & Cess, R. D. (1999). Comparisons between buoy-

observed, satellite-derived, and modeled surface shortwave flux over the subtropical North Atlantic during the Subduction Experiment. *Journal of Geophysical Research: Atmospheres*, *104*(D24), 31301–31320. http://dx.doi.org/10.1029/1999JD900946

Wilber, A. C., Kratz, D. P., & Gupta, S. K. (1999). *Surface Emissivity Maps for Use in Satellite Retrievals of Longwave Radiation*. Retrieved from http://ntrs.nasa.gov/search.jsp?R=19990100634

Yang, S.-K., Hou, Y.-T., Miller, A. J., & Campana, K. A. (1999). Evaluation of the Earth Radiation Budget in NCEP–NCAR Reanalysis with ERBE. *Journal of Climate*, *12*(2), 477–493. http://dx.doi.org/10.1175/1520-0442(1999)012<0477:EOTERB>2.0.CO;2

Clouds and the Earth's Radiant Energy System

CERES Publications for 1998

Boucher, O., Schwartz, S. E., Ackerman, T. P., Anderson, T. L., Bergstrom, B., Bonnel, B., … Yang, F. (1998). Intercomparison of models representing direct shortwave radiative forcing by sulfate aerosols. *Journal of Geophysical Research: Atmospheres*, *103*(D14), 16979–16998. http://dx.doi.org/10.1029/98JD00997

Capderou, M. (1998). Confirmation of Helmholtz Reciprocity Using ScaRaB Satellite Data. *Remote Sensing of Environment*, *64*(3), 266–285. http://dx.doi.org/10.1016/S0034-4257(98)00004-2

Christopher, S. A., Wang, M., Berendes, T. A., Welch, R. M., & Yang, S.-K. (1998). The 1985 Biomass Burning Season in South America: Satellite Remote Sensing of Fires, Smoke, and Regional Radiative Energy Budgets. *Journal of Applied Meteorology*, *37*(7), 661–678.

http://dx.doi.org/10.1175/1520-0450(1998)037<0661:TBBSIS>2.0.CO;2

Di Girolamo, L., Várnai, T., & Davies, R. (1998). Apparent breakdown of reciprocity in reflected solar radiances. *Journal of Geophysical Research: Atmospheres*, *103*(D8), 8795–8803. http://dx.doi.org/10.1029/98JD00345

Inamdar, A. K., & Ramanathan, V. (1998). Tropical and global scale interactions among water vapor, atmospheric greenhouse effect, and surface temperature. *Journal of Geophysical Research: Atmospheres*, *103*(D24), 32177–32194. http://dx.doi.org/10.1029/1998JD900007

Kandel, R., Viollier, M., Raberanto, P., Duvel, J. P., Pakhomov, L. A., Golovko, V. A., … Scientific Working Group (ISSWG), I. S. R. B. (1998). The ScaRaB Earth Radiation Budget Dataset. *Bulletin of the American Meteorological Society*, *79*(5), 765–783. http://dx.doi.org/10.1175/1520-0477(1998)079<0765:TSERBD>2.0.CO;2

Kaufman, Y. J., Herring, D. D., Ranson, K. J., & Collatz, G. J. (1998). Earth Observing System AM1 mission to Earth. *IEEE Transactions on Geoscience and Remote Sensing*, *36*(4), 1045–1055. http://dx.doi.org/10.1109/36.700989

Kummerow, C., Barnes, W., Kozu, T., Shiue, J., & Simpson, J. (1998). The Tropical Rainfall Measuring Mission (TRMM) Sensor Package. *Journal of Atmospheric and Oceanic Technology*, *15*(3), 809–817. http://dx.doi.org/10.1175/1520-0426(1998)015<0809:TTRMMT>2.0.CO;2

Lee, R. B., Barkstrom, B. R., Bitting, H. C., Crommelynck, D. A. H., Paden, J., Pandey, D. K., … Wilson, R. S. (1998). Prelaunch calibrations of the Clouds and the Earth's Radiant Energy System (CERES) Tropical Rainfall Measuring Mission and Earth Observing System morning (EOS-AM1) spacecraft thermistor bolometer sensors. *IEEE Transactions on Geoscience and Remote Sensing*, *36*(4), 1173–1185. http://dx.doi.org/10.1109/36.701024

Mace, G. G., Ackerman, T. P., Minnis, P., & Young, D. F. (1998). Cirrus layer microphysical properties derived from surface-based millimeter radar and infrared interferometer data. *Journal of Geophysical Research: Atmospheres*, *103*(D18), 23207–23216. http://dx.doi.org/10.1029/98JD02117

Manalo-Smith, N., Smith, G. L., Tiwari, S. N., & Staylor, W. F. (1998). Analytic forms of bidirectional reflectance functions for application to Earth radiation budget studies. *Journal of Geophysical Research: Atmospheres*, *103*(D16), 19733–19751. http://dx.doi.org/10.1029/98JD00279

Mather, J. H., Ackerman, T. P., Clements, W. E., Barnes, F. J., Ivey, M. D., Hatfield, L. D., & Reynolds, R. M. (1998). An Atmospheric Radiation and Cloud Station in the Tropical Western Pacific. *Bulletin of the American Meteorological Society*, *79*(4), 627–642. http://dx.doi.org/10.1175/1520-0477(1998)079<0627:AARACS>2.0.CO;2

Minnis, P., Garber, D. P., Young, D. F., Arduini, R. F., & Takano, Y. (1998). Parameterizations of Reflectance and Effective Emittance for Satellite Remote Sensing of Cloud Properties. *Journal of the Atmospheric Sciences*, *55*(22), 3313–3339. http://dx.doi.org/10.1175/1520-0469(1998)055<3313:PORAEE>2.0.CO;2

Moran, K. P., Martner, B. E., Post, M. J., Kropfli, R. A., Welsh, D. C., & Widener, K. B. (1998). An Unattended Cloud-Profiling Radar for Use in Climate Research. *Bulletin of the American Meteorological Society*, *79*(3), 443–455. http://dx.doi.org/10.1175/1520-0477(1998)079<0443:AUCPRF>2.0.CO;2

Ohmura, A., Gilgen, H., Hegner, H., Müller, G., Wild, M., Dutton, E. G., … Dehne, K. (1998). Baseline Surface Radiation Network (BSRN/WCRP): New Precision Radiometry for Climate Research. *Bulletin of the American Meteorological Society*, *79*(10), 2115–2136. http://dx.doi.org/10.1175/1520-0477(1998)079<2115:BSRNBW>2.0.CO;2

Rice, J. P., & Johnson, B. C. (1998). The NIST EOS thermal-infrared transfer radiometer. *Metrologia*, *35*(4), 505. http://dx.doi.org/10.1088/0026-1394/35/4/51

Trishchenko, A., & Li, Z. (1998). Use of ScaRaB Measurements for Validating a GOES-Based TOA Radiation Product. *Journal of Applied Meteorology*, *37*(6), 591–605. http://dx.doi.org/10.1175/1520-0450(1998)037<0591:UOSMFV>2.0.CO;2

Wielicki, B. A., Barkstrom, B. R., Baum, B. A., Charlock, T. P., Green, R. N., Kratz, D. P., … Welch, R. M. (1998). Clouds and the Earth's Radiant Energy System (CERES): algorithm overview. *IEEE Transactions on Geoscience and Remote Sensing*, *36*(4), 1127–1141. http://dx.doi.org/10.1109/36.701020

Young, D. F., Minnis, P., Baumgardner, D., & Gerber, H. (1998). Comparison of in situ and satellite-derived cloud properties during SUCCESS. *Geophysical Research Letters*, *25*(8), 1125–1128. http://dx.doi.org/10.1029/98GL00116

Young, D. F., Minnis, P., Doelling, D. R., Gibson, G. G., & Wong, T. (1998). Temporal Interpolation Methods for the Clouds and the Earth's Radiant Energy System (CERES) Experiment. *Journal of Applied Meteorology*, *37*(6), 572–590. http://dx.doi.org/10.1175/1520-0450(1998)037<0572:TIMFTC>2.0.CO;2

Clouds and the Earth's Radiant Energy System

CERES Publications for 1997

Chambers, L. H., Wielicki, B. A., & Evans, K. F. (1997a). Accuracy of the independent pixel approximation for satellite estimates of oceanic boundary layer cloud optical depth. *Journal of Geophysical Research: Atmospheres*, *102*(D2), 1779–1794. http://dx.doi.org/10.1029/96JD02995

Chambers, L. H., Wielicki, B. A., & Evans, K. F. (1997b). Independent Pixel and Two-Dimensional Estimates of Landsat-Derived Cloud Field Albedo. *Journal of the Atmospheric Sciences*, *54*(11), 1525–1532. http://dx.doi.org/10.1175/1520-0469(1997)054<1525:IPATDE>2.0.CO;2

Haeffelin, M. P. A., Mahan, J. R., & Priestley, K. J. (1997). Predicted dynamic electrothermal performance of thermistor bolometer radiometers for Earth radiation budget applications. *Applied Optics*, *36*(28), 7129–7142. http://dx.doi.org/10.1364/AO.36.007129

Inamdar, A. K., & Ramanathan, V. (1997b). On monitoring the atmospheric greenhouse effect from space. *Tellus B*, *49*(2), 216–230. http://dx.doi.org/10.1034/j.1600-0889.49.issue2.8.x

Kato, S., Ackerman, T. P., Clothiaux, E. E., Mather, J. H., Mace, G. G., Wesely, M. L., … Michalsky, J. (1997). Uncertainties in modeled and measured clear-sky surface shortwave irradiances. *Journal of Geophysical Research: Atmospheres*, *102*(D22), 25881–25898. http://dx.doi.org/10.1029/97JD01841

Minnis, P., Mayor, S., Smith, W. L., & Young, D. F. (1997). Asymmetry in the diurnal variation of surface albedo. *IEEE Transactions on Geoscience and Remote Sensing*, *35*(4), 879–890. http://dx.doi.org/10.1109/36.602530

Otterman, J., Starr, D., Brakke, T., Davies, R., Jacobowitz, H., Mehta, A., … Prabhakara, C. (1997). Modeling zenith-angle dependence of outgoing longwave radiation: Implication for flux measurements. *Remote Sensing of Environment*, *62*(1), 90–100. http://dx.doi.org/10.1016/S0034-4257(97)00084-9

Wong, T., Harrison, E. F., Gibson, G. G., & Denn, F. M. (1997). On the Determination of the Optimal Scan Mode Sequence for the TRMM CERES Instrument. *Journal of Atmospheric and Oceanic Technology*, *14*(5), 1230–1236. http://dx.doi.org/10.1175/1520-0426(1997)014<1230:OTDOTO>2.0.CO;2

Zhang, Y.-C., & Rossow, W. B. (1997). Estimating Meridional Energy Transports by the Atmospheric and Oceanic General Circulations Using Boundary Fluxes. *Journal of Climate*, *10*(9), 2358–2373. http://dx.doi.org/10.1175/1520-0442(1997)010<2358:EMETBT>2.0.CO;2

Clouds and the Earth's Radiant Energy System

CERES Publications for 1996

Charlock, T. P., & Alberta, T. L. (1996). The CERES/ARM/GEWEX Experiment (CAGEX) for the Retrieval of Radiative Fluxes with Satellite Data. *Bulletin of the American Meteorological Society*, *77*(11), 2673–2683. http://dx.doi.org/10.1175/1520-0477(1996)077<2673:TCEFTR>2.0.CO;2

Hucek, R., Stowe, L., & Joyce, R. (1996). Evaluating the Design of an Earth Radiation Budget Instrument with System Simulations. Part III: CERES-I Diurnal Sampling Error. *Journal of Atmospheric and Oceanic Technology*, *13*(2), 383–399. http://dx.doi.org/10.1175/1520-0426(1996)013<0383:ETDOAE>2.0.CO;2

Lee, R. B., Barkstrom, B. R., Smith, G. L., Cooper, J. E., Kopia, L. P., Lawrence, R. W., … Crommelynck, D. A. H. (1996). The Clouds and the Earth's Radiant Energy System (CERES) Sensors and Preflight Calibration Plans. *Journal of Atmospheric and Oceanic Technology*, *13*(2), 300–313. http://dx.doi.org/10.1175/1520-0426(1996)013<0300:TCATER>2.0.CO;2

Wielicki, B. A., Barkstrom, B. R., Harrison, E. F., Lee, R. B., Louis Smith, G., & Cooper, J. E. (1996). Clouds and the Earth's Radiant Energy System (CERES): An Earth Observing System Experiment. *Bulletin of the American Meteorological Society*, *77*(5), 853–868. http://dx.doi.org/10.1175/1520-0477(1996)077<0853:CATERE>2.0.CO;2

Clouds and the Earth's Radiant Energy System

CERES Publications for 1995

Thomas, D., Duvel, J. P., & Kandel, R. (1995). Diurnal bias in calibration of broad-band radiance measurements from space. *IEEE Transactions on Geoscience and Remote Sensing*, *33*(3), 670–683. http://dx.doi.org/10.1109/36.387582

Wielicki, B. A., Harrison, E. F., Cess, R. D., King, M. D., & Randall, D. A. (1995). Mission to Planet Earth: Role of Clouds and Radiation in Climate. *Bulletin of the American Meteorological Society*, *76*(11), 2125–2153. http://dx.doi.org/10.1175/1520-0477(1995)076<2125:MTPERO>2.0.CO;2

Clouds and the Earth's Radiant Energy System

CERES Publications for 1994

Smith, G. L. (1994). Effects of time response on the point spread function of a scanning radiometer. *Applied Optics*, *33*(30), 7031. http://dx.doi.org/10.1364/AO.33.007031

Smith, G. L., Barkstrom, B. R., Harrison, E. F., Lee III, R. B., & Wielicki, B. A. (1994). Radiation budget measurements for the eighties and nineties. *Advances in Space Research*, *14*(1), 81–84. http://dx.doi.org/10.1016/0273-1177(94)90351-4

Stowe, L., Hucek, R., Ardanuy, P., & Joyce, R. (1994). Evaluating the Design of an Earth Radiation Budget Instrument with System Simulations. Part II: Minimization of Instantaneous Sampling Errors for CERES-I. *Journal of Atmospheric and Oceanic Technology*, *11*(5), 1169–1183. http://dx.doi.org/10.1175/1520-0426(1994)011<1169:ETDOAE>2.0.CO;2

Stubenrauch, C., Duvel, J.-P., & Kandel, R. S. (1994). Determination of longwave anisotropic emission factors from combined broad- and narrow-band radiance measurements. *Advances in Space Research*, *14*(1), 103–107. http://dx.doi.org/10.1016/0273-1177(94)90356-5

Clouds and the Earth's Radiant Energy System

CERES Publications for 1993

Foukal, P. V., & Jauniskis, L. (1993). Application of Cryogenic Electrical Substitution Radiometers in the Calibration of Solar-Terrestrial Remote Sensing Instruments. *Metrologia*, *30*(4), 279. http://dx.doi.org/10.1088/0026-1394/30/4/012

Jarecke, P. J., Folkman, M. A., Hedman, T. R., & Frink, M. E. (1993). Clouds and the Earth's Radiant Energy System (CERES): Long-wave Calibration Plan and Radiometric Test Model (RTM) Calibration Results. *Metrologia*, *30*(4), 223. http://dx.doi.org/10.1088/0026-1394/30/4/003

Morel, M., Jegou, R., Readings, C., & Tabarie, N. (1993). ENVISATS EARTH RADIATION-BUDGET INSTRUMENT - SCARAB. *Esa Bulletin-European Space Agency*, (76), 53–57.

Stowe, L., Ardanuy, P., Hucek, R., Abel, P., & Jacobowitz, H. (1993). Evaluating the Design of an Earth Radiation Budget Instrument with System Simulations. Part I: Instantaneous Estimates. *Journal of Atmospheric and Oceanic Technology*, *10*(6), 809–826. http://dx.doi.org/10.1175/1520-0426(1993)010<0809:ETDOAE>2.0.CO;2