SARB WG Presentation at CERES GEOS 5 Meeting

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Thomas P. Charlock

Fred G. Rose

Thomas E. Caldwell

Series of Terra runs have tested by Tom Caldwell, analyzed by Fred:

C4G4 = Collection 4 MODIS, GEOS4 using Terra algorithm

C5G4o = Collection 5 MODIS with GEOS4 using Terra-like algorithm

Terra Ed2B algorithm used questionable MODIS Daily AOT

C5G4 = Collection 5 MODIS with GEOS4 using Aqua AOT algorithm

C5G5 = Collection 5 MODIS with GEOS5 using Aqua AOT algorithm

Aqua Ed2B algorithm used no MODIS Daily AOT

Other tests have included new MATCH that ingests Collection 5 MODIS

C4G4   = Collection 4 MODIS, GEOS4 using Terra algorithm

C5G4o = Collection 5 MODIS with GEOS4 using Terra-like algorithm

Terra Ed2B algorithm used questionable MODIS Daily AOT

C5G4 = Collection 5 MODIS with GEOS4 using Aqua AOT algorithm

C5G5 = Collection 5 MODIS with GEOS5 using Aqua AOT algorithm

Aqua Ed2B algorithm used no MODIS Daily AOT

Use C5G4 and C5G5 for present test of GEOS4 versus GEOS5

SW bias at TOA for 20060106:

C4G4   6.1 Wm-2

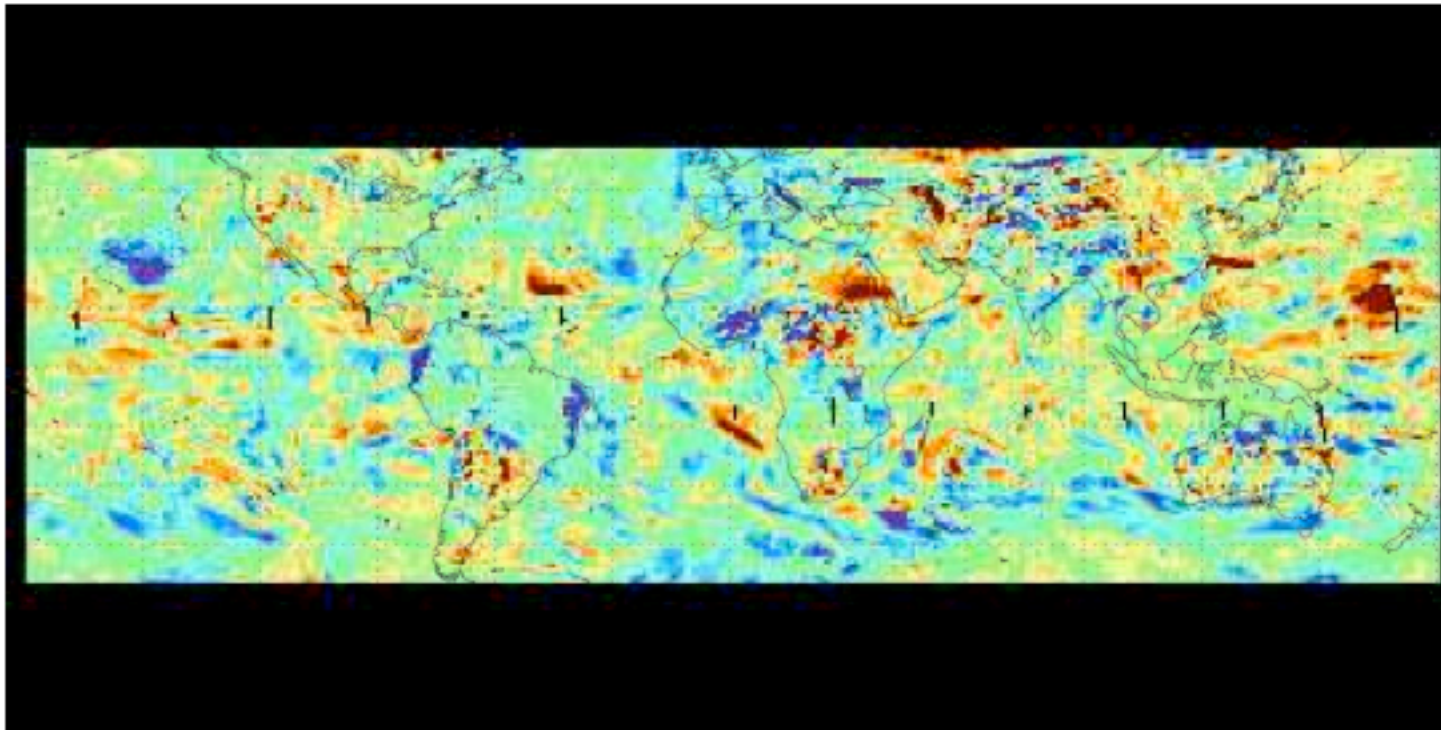C5G4o   6.1 Wm-2

C5G4   4.9 Wm-2

C5G5   4..9 Wm-2

C5G4 = Collection 5 MODIS with GEOS4 using Aqua AOT algorithm

C5G5 = Collection 5 MODIS with GEOS5 using Aqua AOT algorithm

Difference of untuned LW at TOA

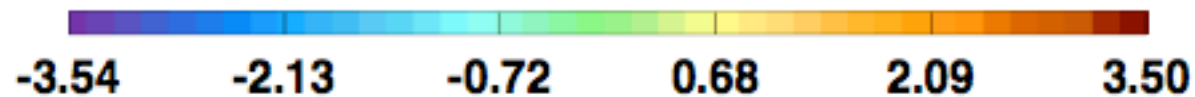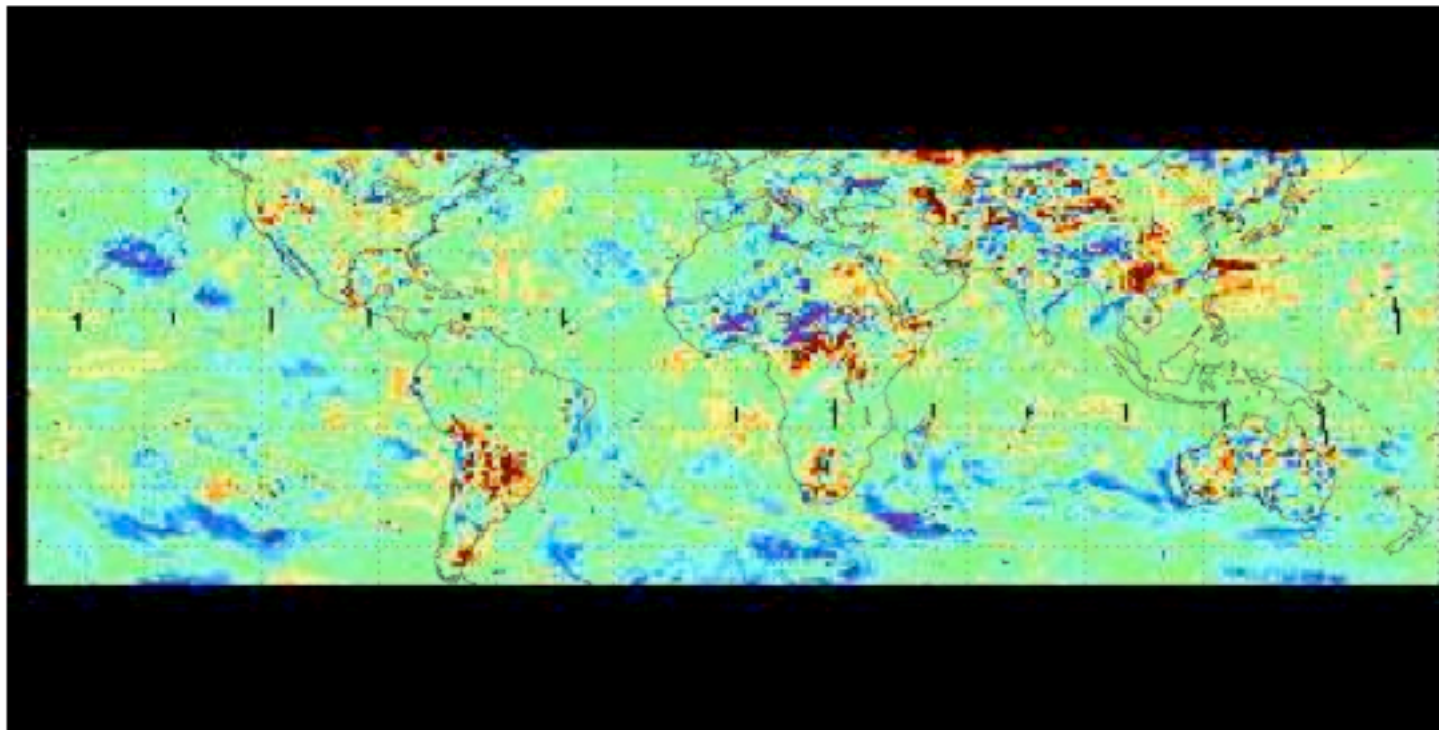[c5g5-c5g4]55NS UTLWUP 6
Mean= -0.117 StdDev= 2.814 N=39518

-8.3   -5.1   -1.8   1.5   4.8   8.0

[c5g5-c5g4]55NS UTWN 8
Mean= -0.188 StdDev=   1.082   N=39518

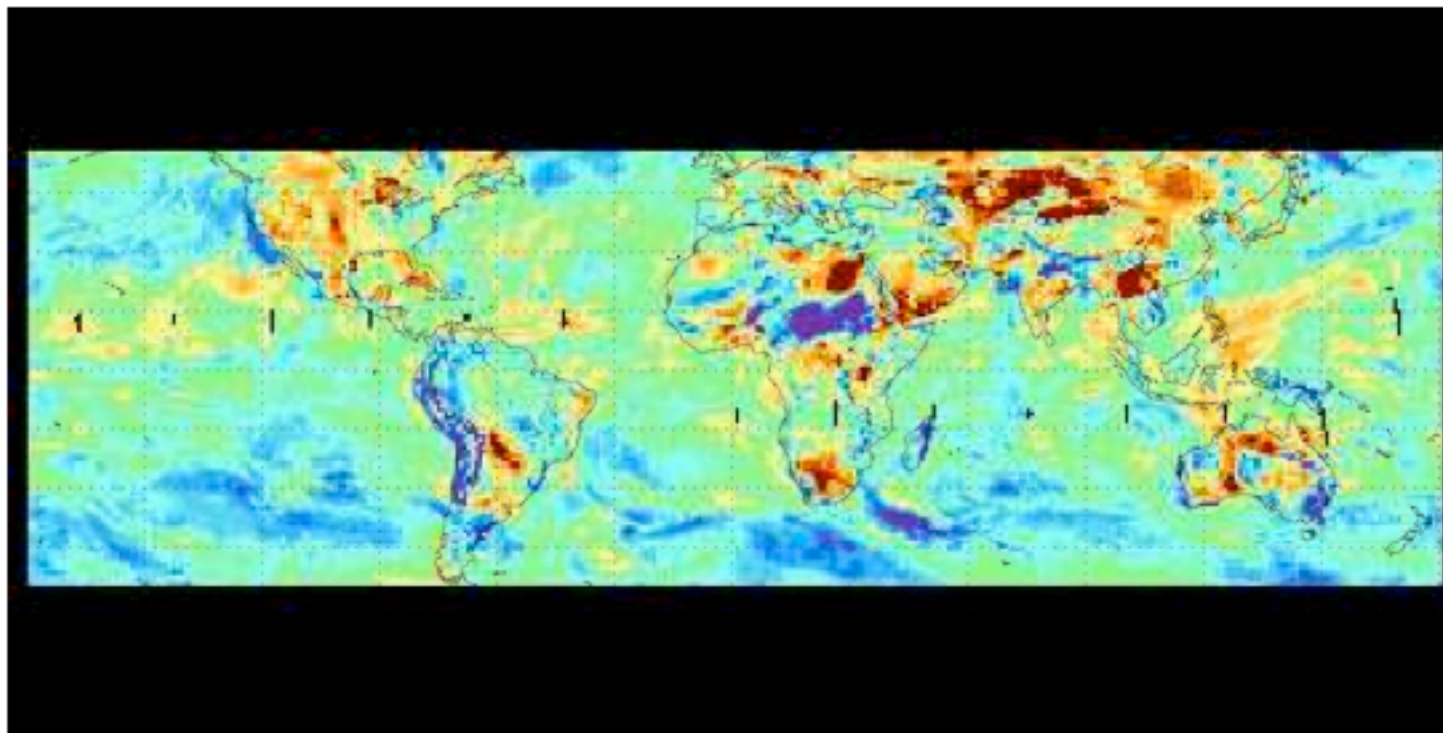-3.54   -2.13   -0.72   0.68   2.09   3.50

C5G4 = Collection 5 MODIS with GEOS4 using Aqua AOT algorithm

C5G5 = Collection 5 MODIS with GEOS5 using Aqua AOT algorithm
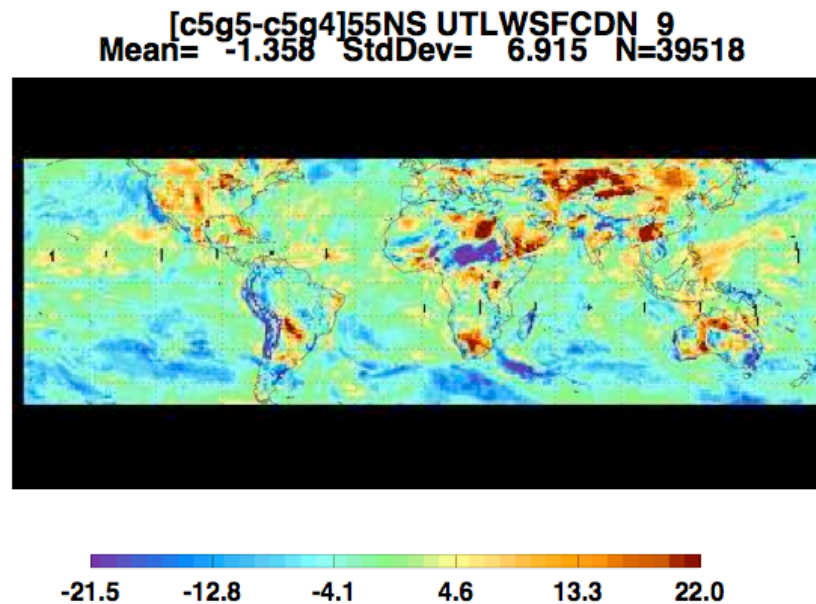
Difference of untuned LW Down at SFC

[c5g5-c5g4]55NS UTLWSFCDN 9
Mean= -1.358 StdDev= 6.915 N=39518

-21.5   -12.8   -4.1   4.6   13.3   22.0

C5G4 = Collection 5 MODIS with GEOS4 using Aqua AOT algorithm = 331.0 Wm-2

C5G5 = Collection 5 MODIS with GEOS5 using Aqua AOT algorithm = 332.3 Wm-2

Difference of untuned LW Down at SFC

[c5g5-c5g4]55NS UTLWSFCDN 9
Mean= -1.358 StdDev= 6.915 N=39518

-21.5   -12.8   -4.1   4.6   13.3   22.0

Difference of untuned LW Down at SFC

C5 G4	C5G5	
340.3	339.6	day global
335.3	333.6	nite global
351.5	349.3	ocean
322.1	322.3	land
210.6	211.0	cryosphere
293.3	291.9	clear

CRS Ed2b DLF is biased low at most CAVE sites.

Expect little change with GEOS5 for global mean DLF, but some improvement over CAVE (mostly land).