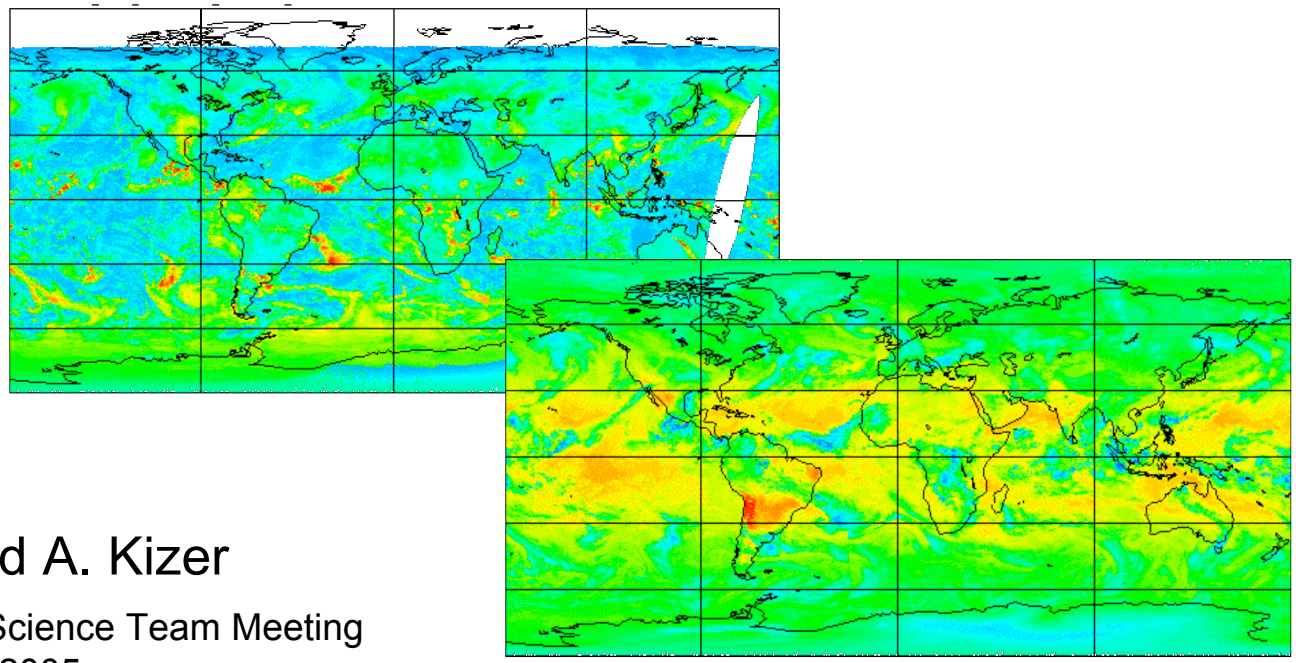
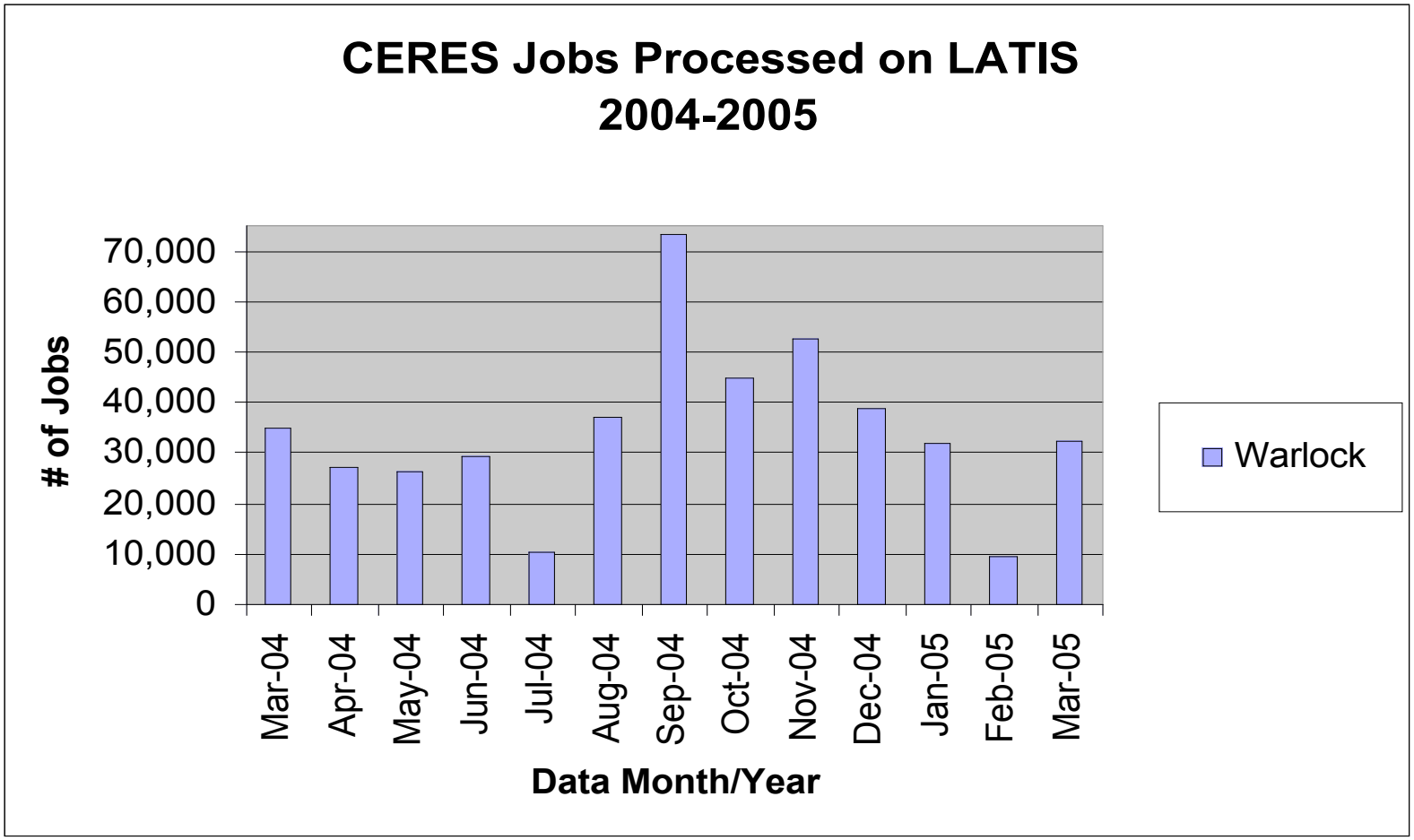
Atmospheric Sciences Data Center

Processing, archiving, and distributing Earth Science data

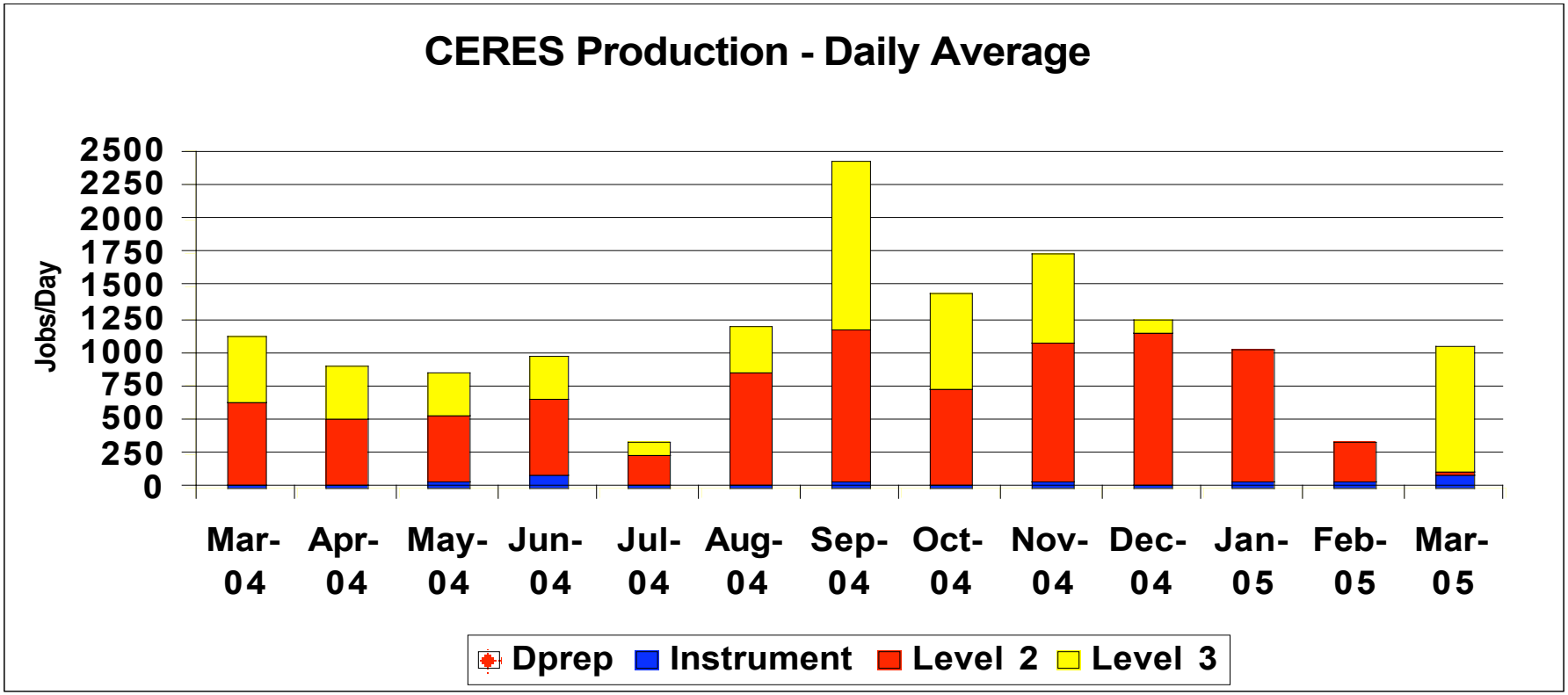


Edward A. Kizer

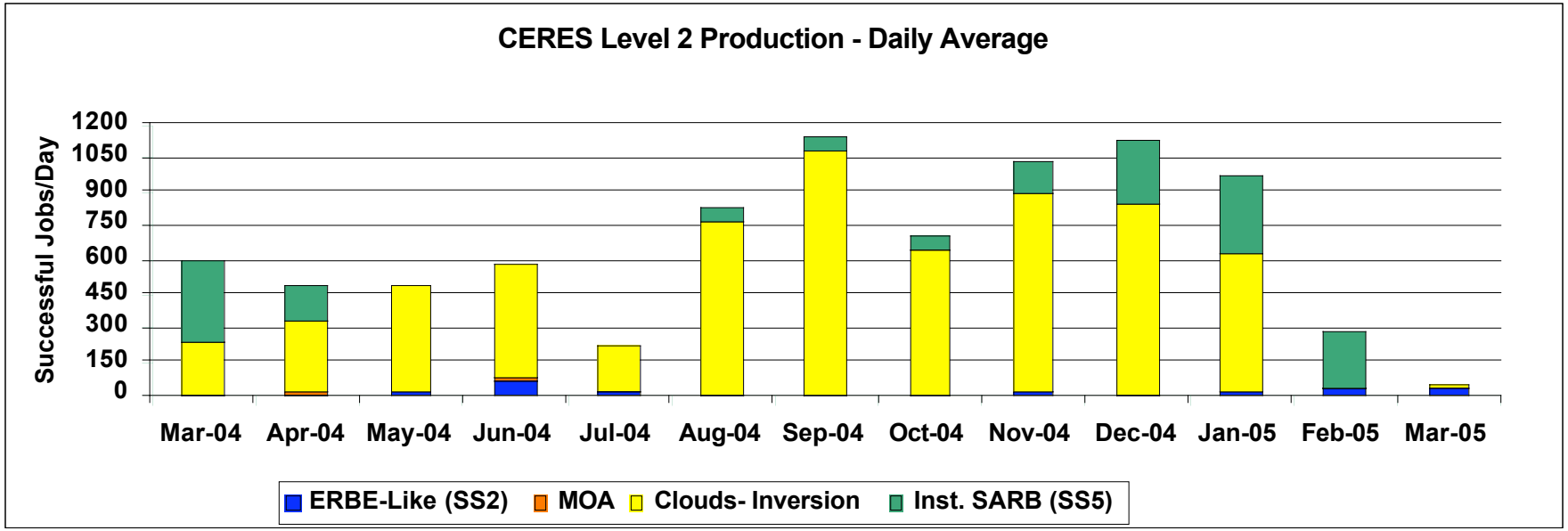
CERES Science Team Meeting
May 3-5, 2005

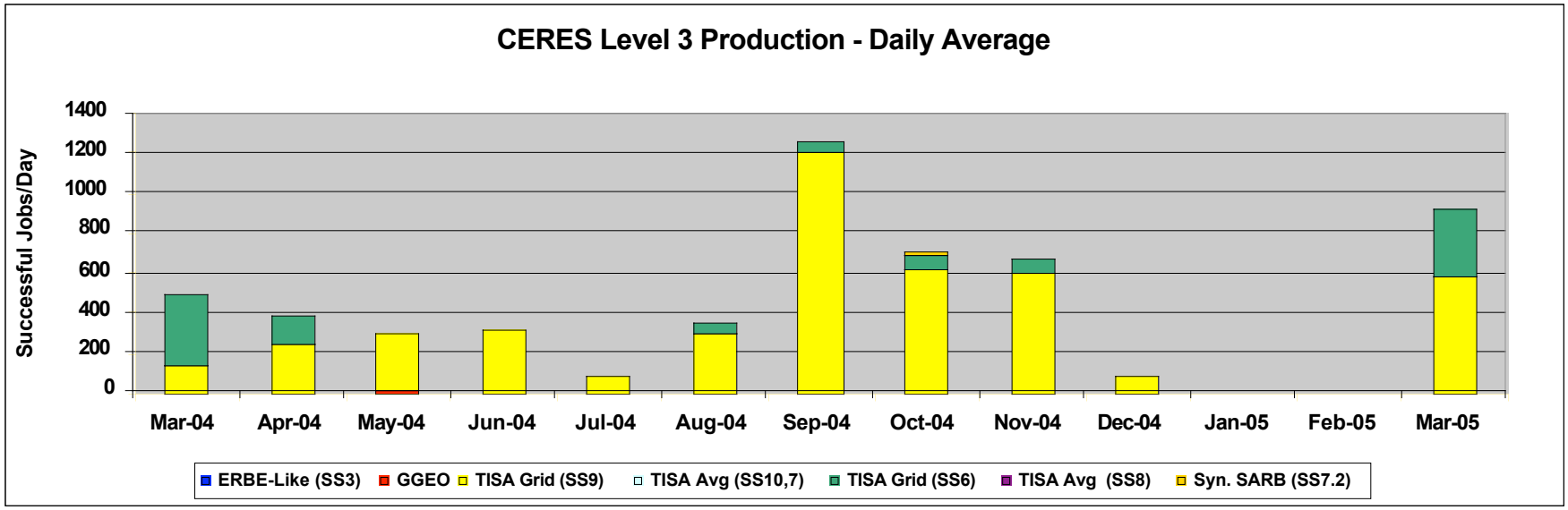

CERES Jobs Processed on LATIS
2004-2005
# of Jobs
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Data Month/Year
Warlock

5/9/05

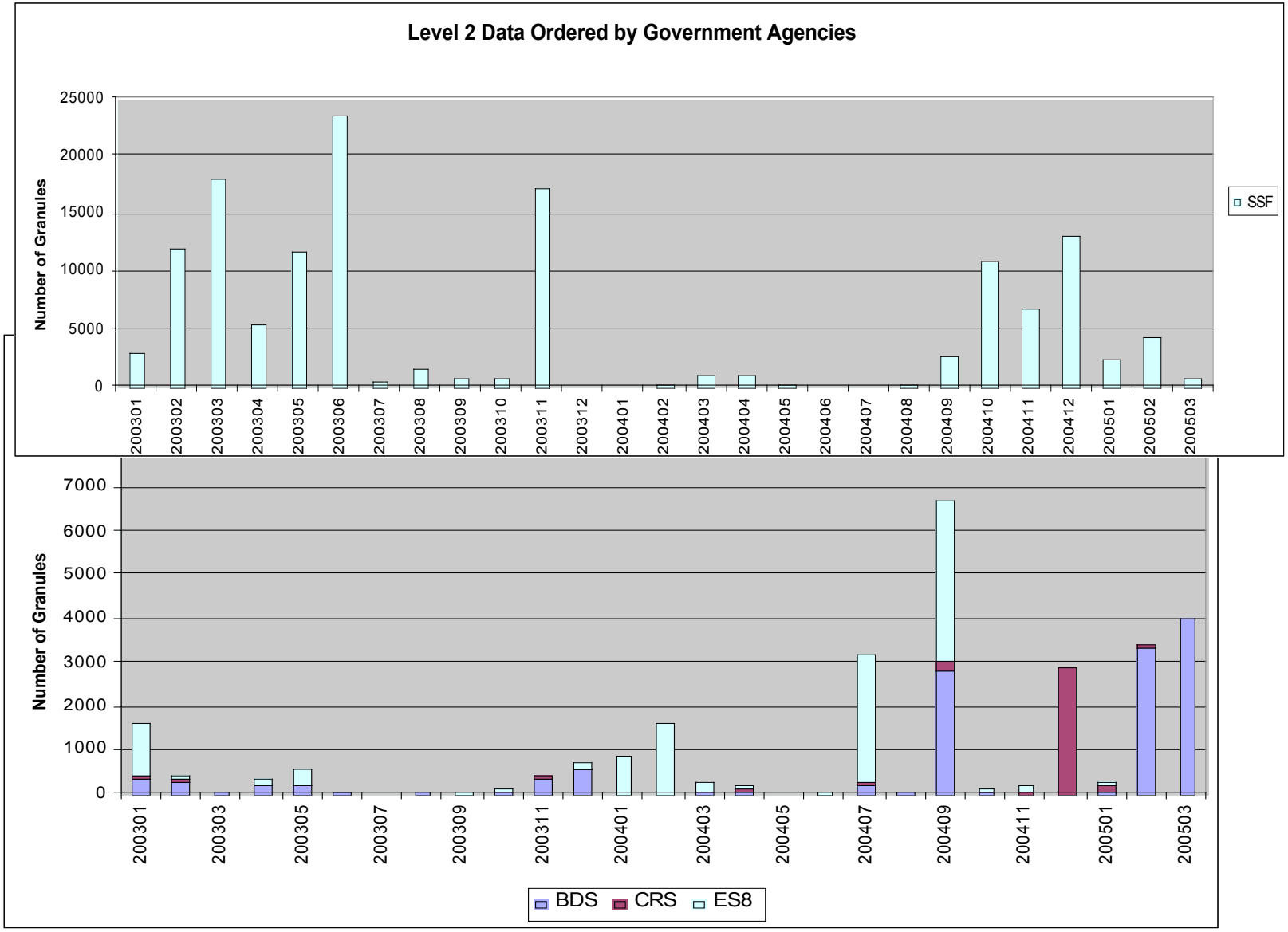

CERES Production - Daily Average
Jobs/Day
2500
2250
2000
1750
1500
1250
1000
750
500
250
0
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
Dprep
Instrument
Level 2
Level 3

5/9/05


CERES Level 2 Production - Daily Average
Successful Jobs/Day
1200
1050
900
750
600
450
300
150
0
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
ERBE-Like (SS2)
MOA
Clouds- Inversion
Inst. SARB (SS5)


CERES Level 3 Production - Daily Average
Successful Jobs/Day
1400
1200
1000
800
600
400
200
0
Mar-04
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04
Nov-04
Dec-04
Jan-05
Feb-05
Mar-05
ERBE-Like (SS3)
GGEO
TISA Grid (SS9)
TISA Avg (SS10,7)
TISA Grid (SS6)
TISA Avg (SS8)
Syn. SARB (SS7.2)

5/9/05


Level 2 Data Ordered by Government Agencies
Number of Granules
25000
20000
15000
10000
5000
0
200301
200302
200303
200304
200305
200306
200307
200308
200309
200310
200311
200312
200401
200402
200403
200404
200405
200406
200407
200408
200409
200410
200411
200412
200501
200502
200503
SSF
Number of Granules
7000
6000
5000
4000
3000
2000
1000
0
200301
200303
200305
200307
200309
200311
200401
200403
200405
200407
200409
200411
200501
200503
BDS
CRS
ES8

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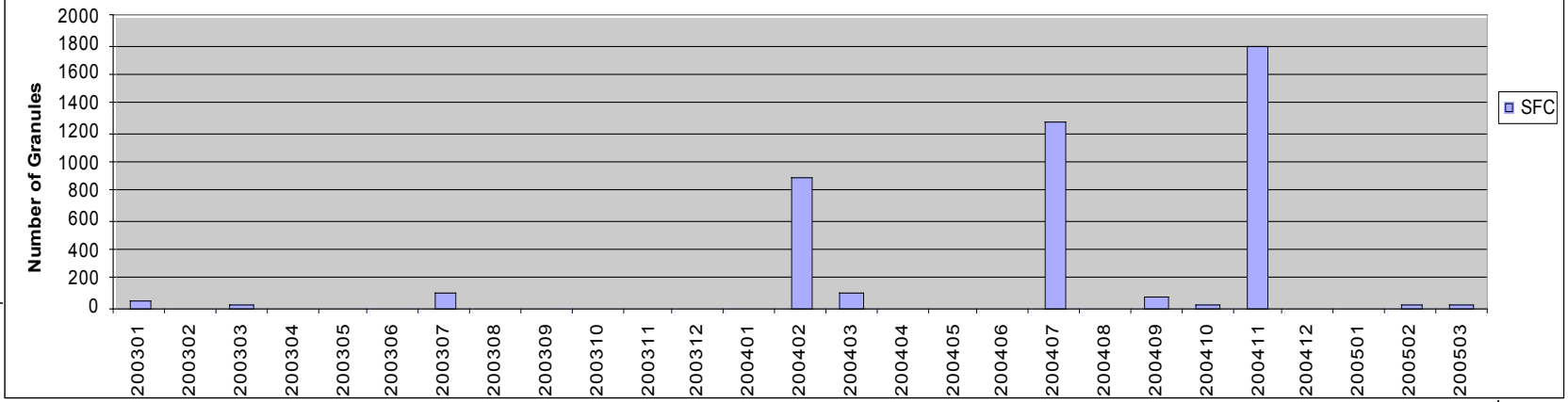
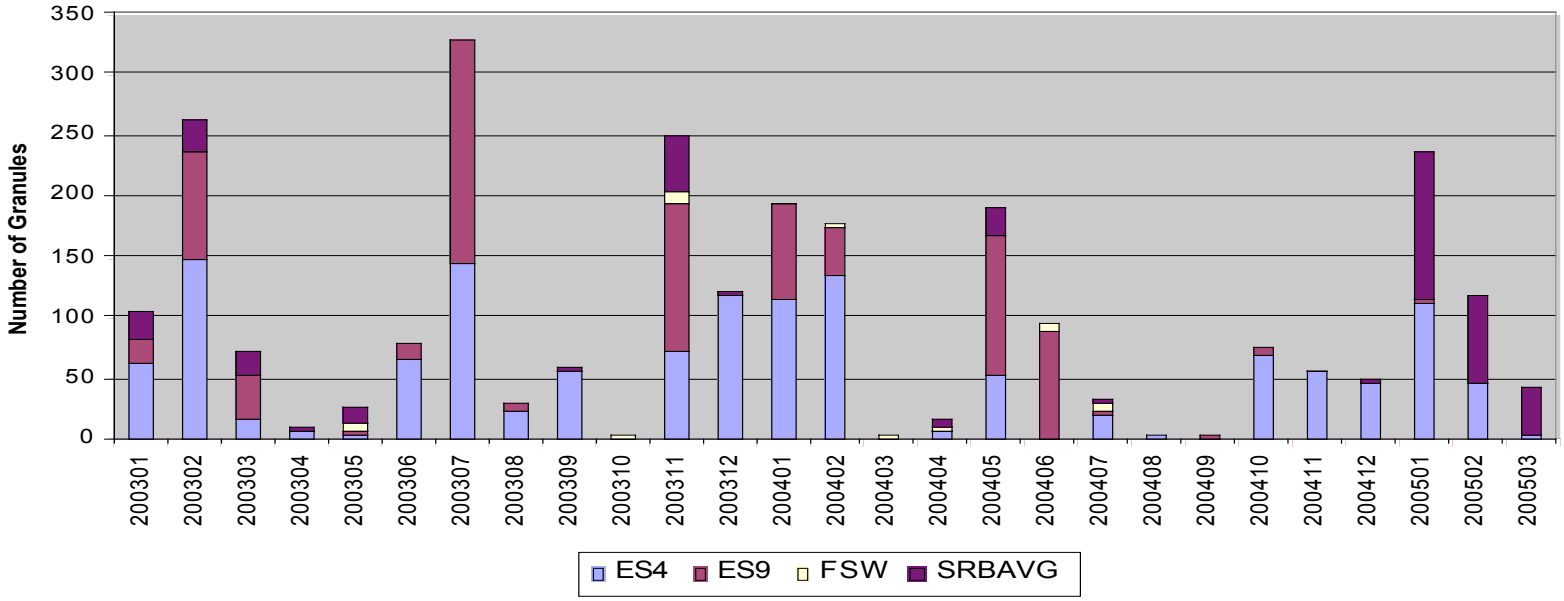
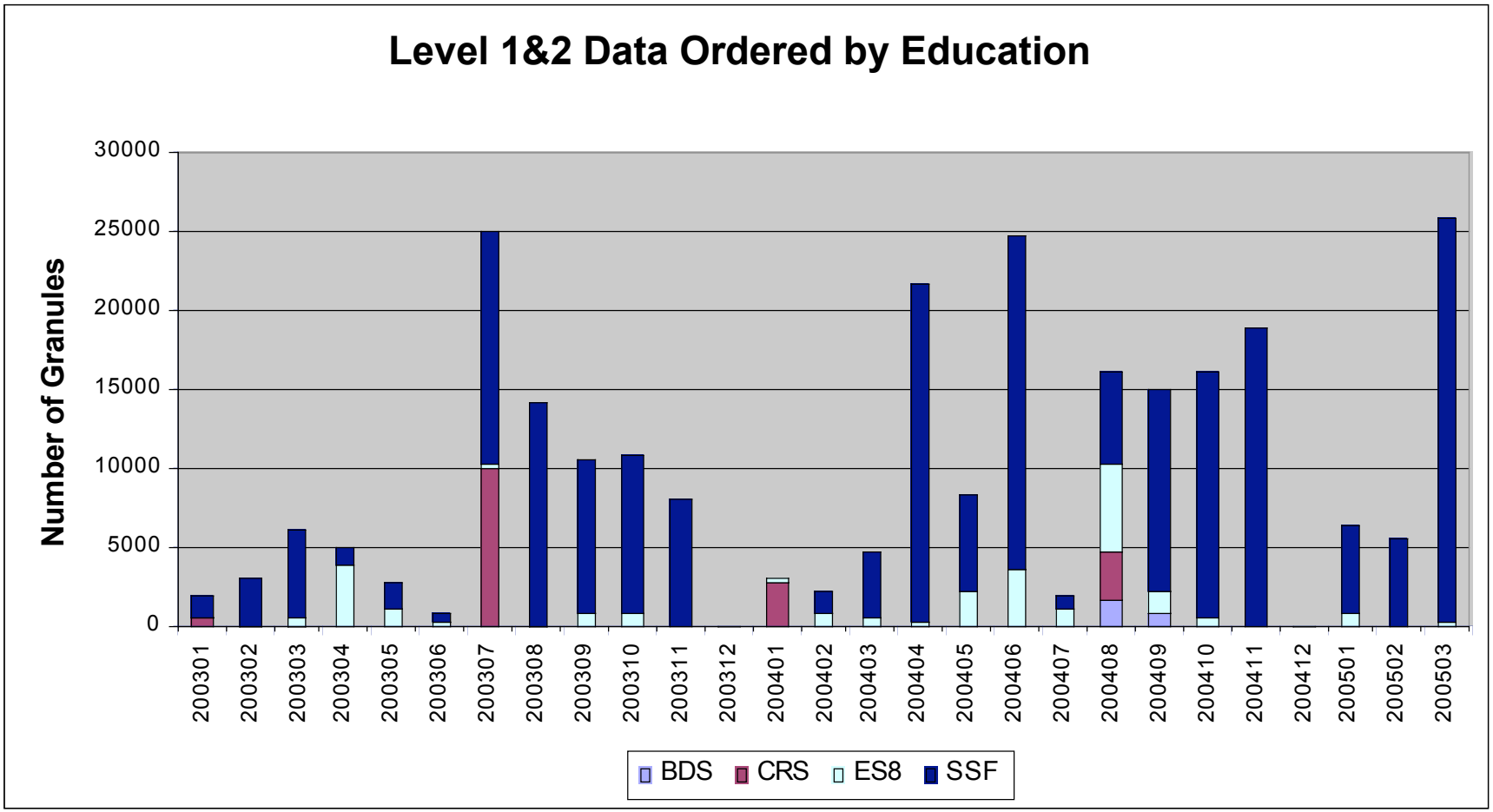
Level 3 Data Ordered by Government Agencies

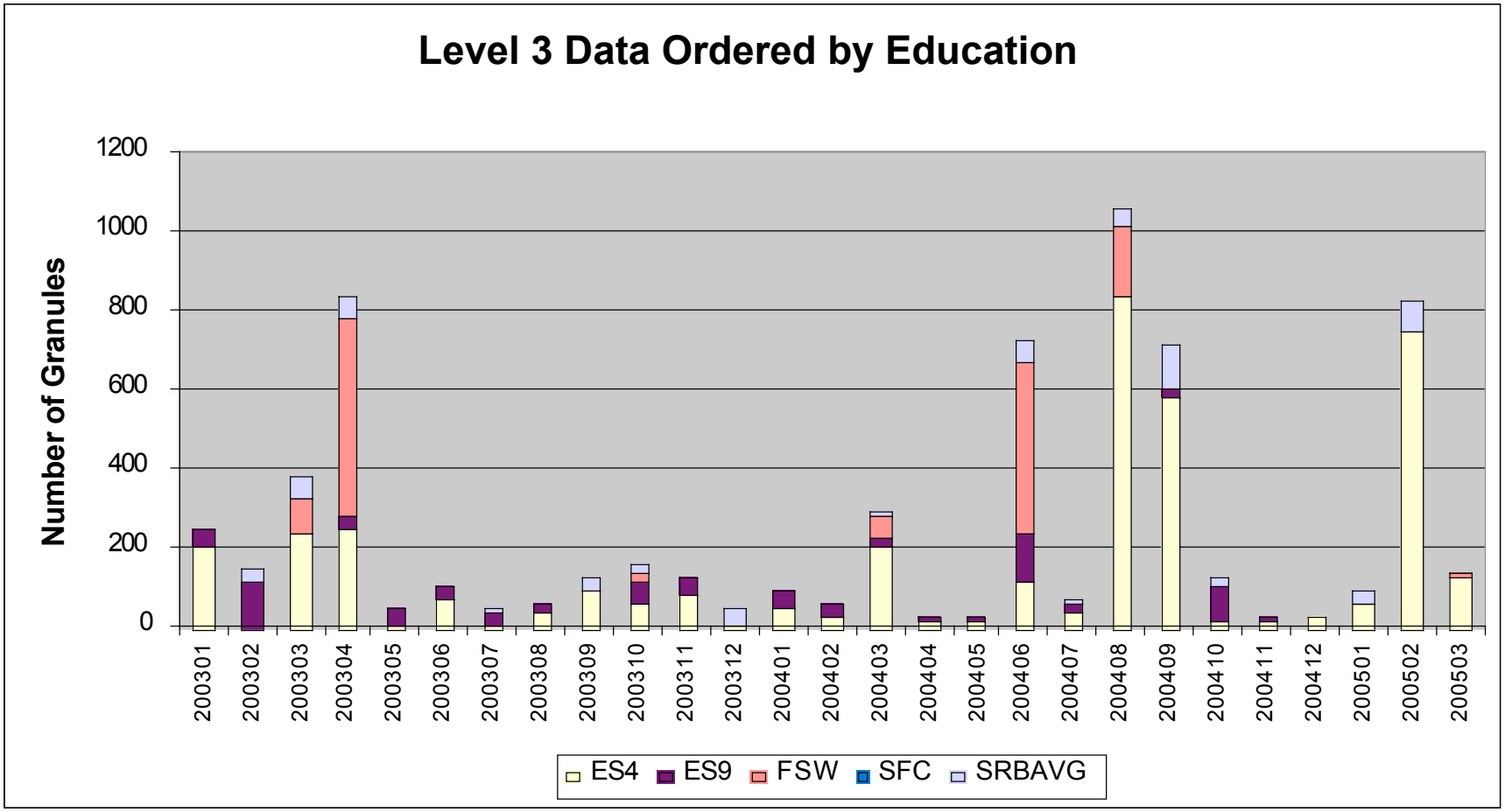




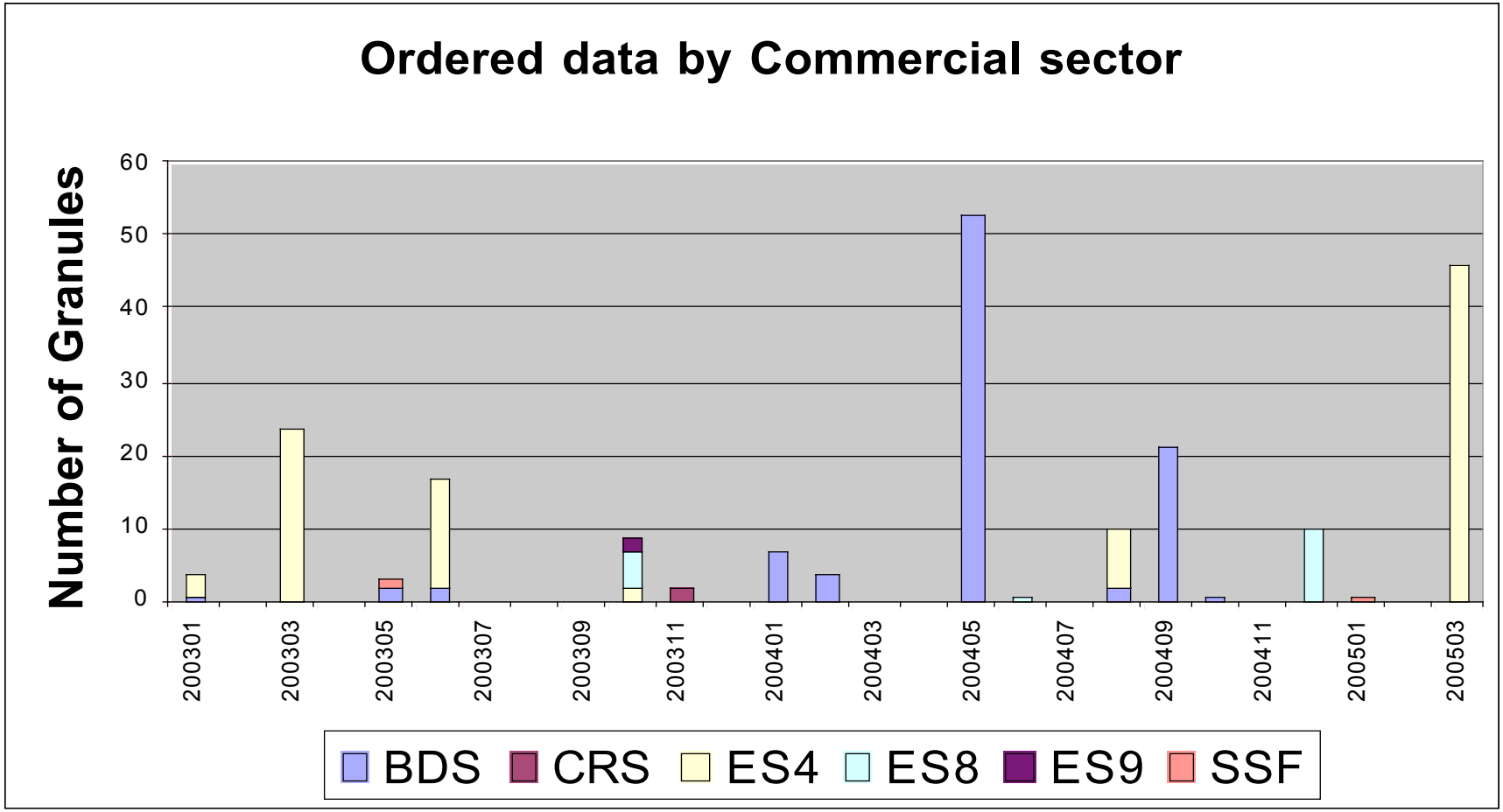
5/9/05


Level 1&2 Data Ordered by Education
Number of Granules
30000
25000
20000
15000
10000
5000
0
200301
200302
200303
200304
200305
200306
200307
200308
200309
200310
200311
200312
200401
200402
200403
200404
200405
200406
200407
200408
200409
200410
200411
200412
200501
200502
200503
BDS
CRS
ES8
SSF

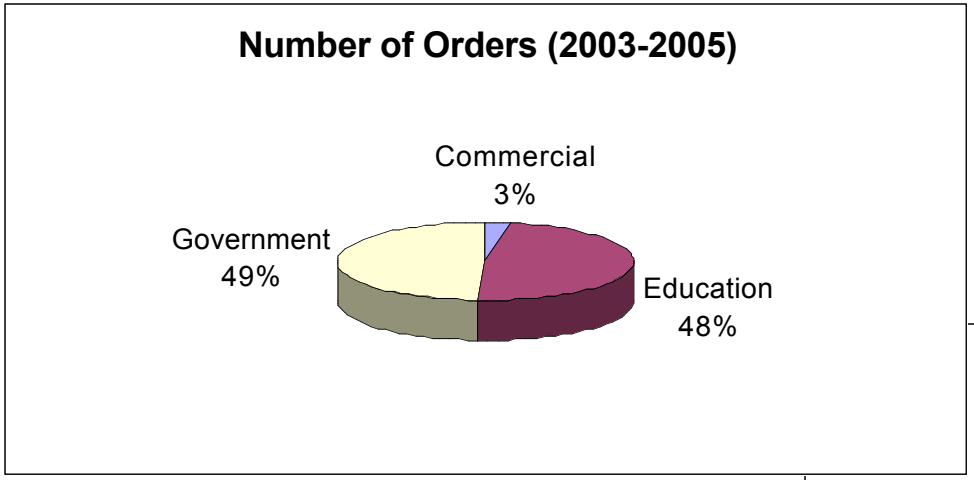
5/9/05

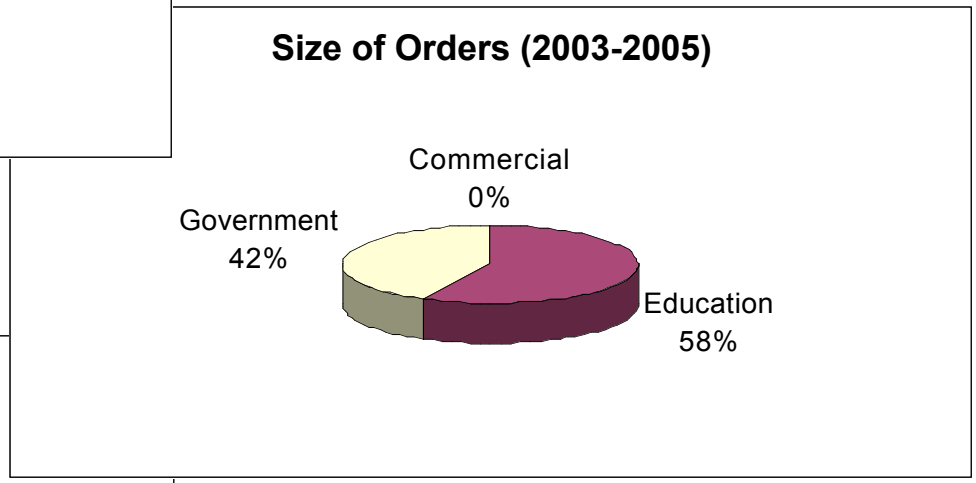

Level 3 Data Ordered by Education
Number of Granules
1200
1000
800
600
400
200
0
200301
200302
200303
200304
200305
200306
200307
200308
200309
200310
200311
200312
200401
200402
200403
200404
200405
200406
200407
200408
200409
200410
200411
200412
200501
200502
200503
ES4
ES9
FSW
SFC
SRBAVG

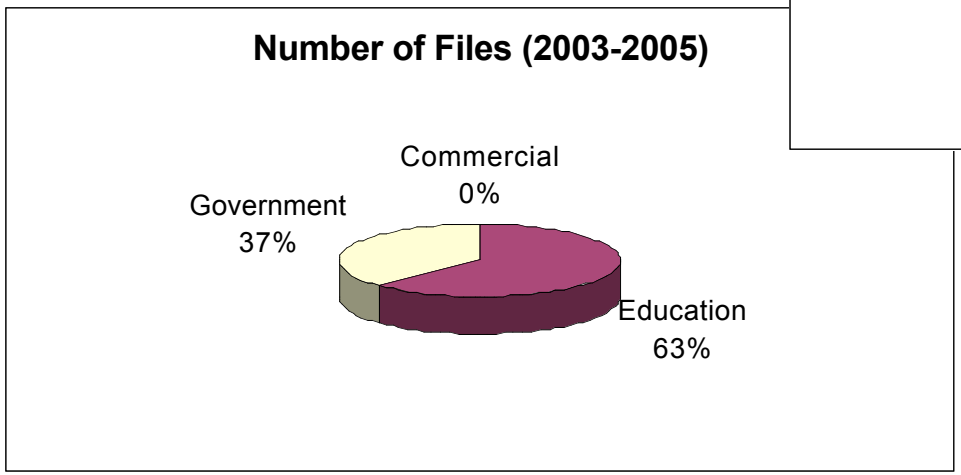
5/9/05


Ordered data by Commercial sector
Number of Granules
60
50
40
30
20
10
0
200301
200303
200305
200307
200309
200311
200401
200403
200405
200407
200409
200411
200501
200503
BDS
CRS
ES4
ES8
ES9
SSF

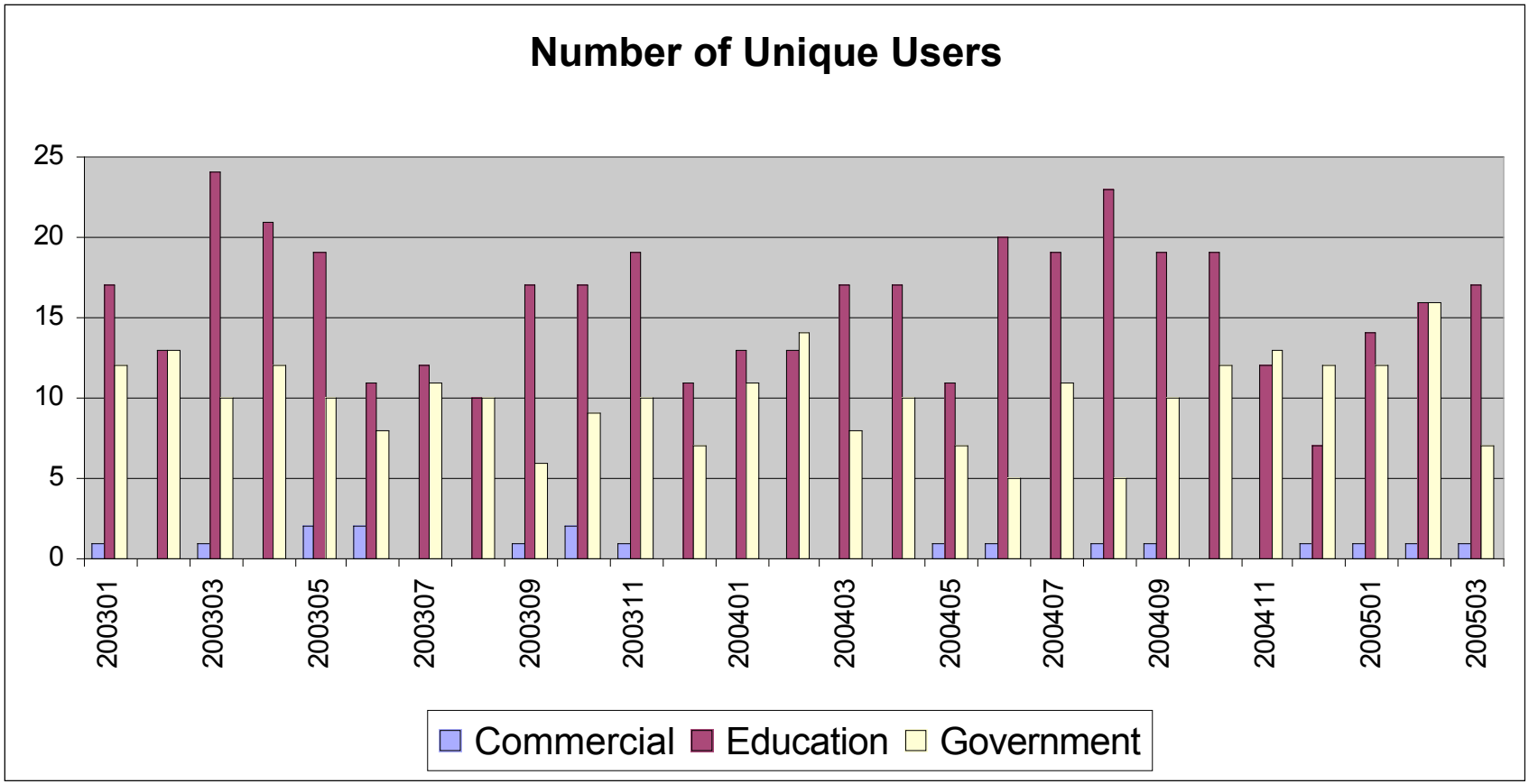
5/9/05


Number of Orders (2003-2005)
Commercial
3%
Government
49%
Education
48%


Size of Orders (2003-2005)
Commercial
0%
Government
42%
Education
58%

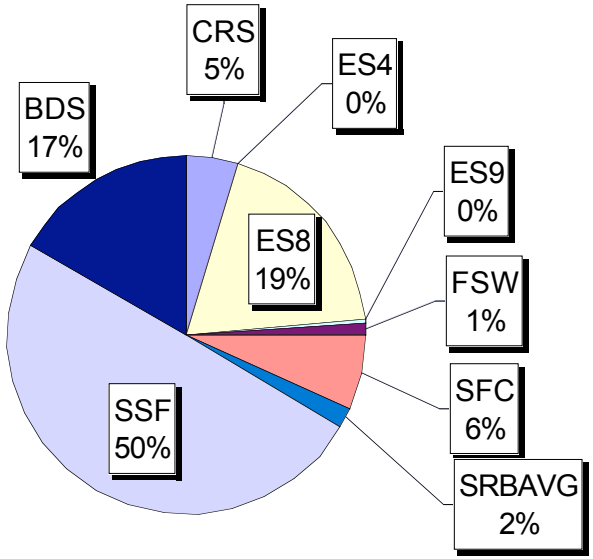

Number of Files (2003-2005)
Commercial
0%
Government
37%
Education
63%

5/9/05


Number of Unique Users
25
20
15
10
5
0
200301
200303
200305
200307
200309
200311
200401
200403
200405
200407
200409
200411
200501
200503
Commercial
Education
Government

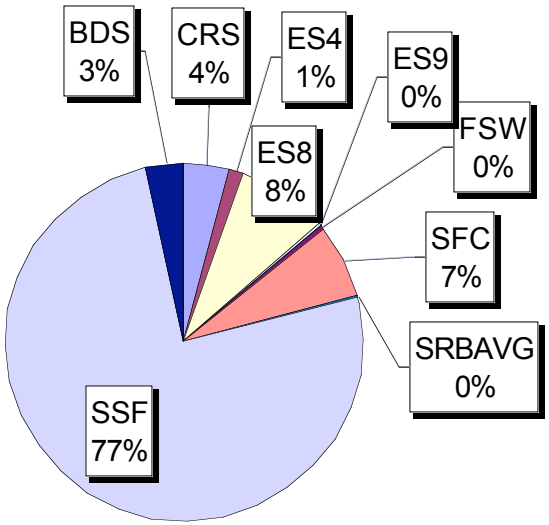
5/9/05

Volume by Data Product



Total Volume = 44,093 GB

of Granules by Data Product



Total Granules = 467,558

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Address http://eosweb.larc.nasa.gov/ Go Link

ATMOSPHERIC SCIENCES DATA CENTER

Processing, archiving, and distributing Earth science data at NASA Langley Research Center in the following disciplines:

Radiation Budget • **Clouds** • **Aerosols** • **Tropospheric Chemistry**

Data & Documentation

- Access Data by
  - Description
  - Discipline
  - Project
- Data Pool
- Order Tools
- Software Tools
- Acknowledgments

Navigation and Help

- Contact/Feedback
- User Survey
- FAQs
- Site Index
- About ASDC

Data Center Highlights:

- MISR Workshop: May 22, 2005
- MOPITT: Level 3 data released
- TES: Level 1B data released
- Register for news lists

- **MISR: Featured Imagery**

Ice or Clouds?

Imagery

- Imagery of ASDC Products

Featured EOS Projects

Place cursor over links for details. (JavaScript enabled browsers)

- CERES
- MISR
- MOPITT
- SAGE III
- TES

Other Resources

- Other Data Centers
- Educational Resources

Address http://eosweb.larc.nasa.gov/HPDOCS/projects/clouds.html Go Lin

ATMOSPHERIC SCIENCES DATA CENTER

Clouds

Access Data by: Description | Project | Data Pool | Order Interfaces

Discipline: Aerosols | Clouds | Radiation Budget | Tropospheric Chemistry | Field Campaigns

Place cursor over links for product descriptions and ordering. (JavaScript enabled browsers)

- CALIPSO
- CERES
- CLAMS
- FIRE
- ISCCP
- LASE
- LITE
- MISR
- NIMBUS-7
- SRB
- SSE
- SUCCESS

ASDC Home Page | Access Data | Projects Supported | Questions/Feedback

Responsible NASA Official: Bruce R. Barkstrom, Ph.D.
Site Administration/Help: NASA Langley ASDC User Services (larc@eos.nasa.gov)
[Privacy, Security, Notices]
Last Updated: Wed Dec 22 15:24:56 EST 2004

Address http://eosweb.larc.nasa.gov/HPDOCS/projects/rad_budg.html Go

ATMOSPHERIC SCIENCES DATA CENTER

Radiation Budget

Access Data by: Description | Project | Data Pool | Order Interfaces

Discipline: Aerosols | Clouds | Radiation Budget | Tropospheric Chemistry | Field Campaigns

Place cursor over links for product descriptions and ordering. (JavaScript enabled browsers)

- ACRIM II
- ACRIM III
- AirMISR
- ARESE
- ATOST
- CAMEX-4
- CERES
- CLAMS
- ERBE
- FIRE
- ISCCP
- MAS
- MISR
- NIMBUS-7
- SCAR-A
- SCAR-B
- SRB
- SSE
- THORpex

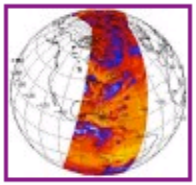
ASDC Home Page | Access Data | Projects Supported | Questions/Feedback

Responsible NASA Official: Bruce R. Barkstrom, Ph.D.
Site Administration/Help: NASA Langley ASDC User Services (larc@eos.nasa.gov)

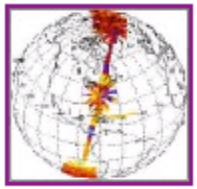
The following images show the areal coverage and characteristics of particular CERES scan modes performed by the CERES instruments. The Cross-Track mode, a Fixed Azimuth Plane Scan (FAPS), are cross-track swaths which overlap to generate complete global coverage in 24 hours. CLAMS-Scan is the instrument initially in Rotating Azimuth Plane Scan (RAPS) and switching to a Programmable Azimuth Plane Scan (PAPS) to collect measurements over the Chesapeake Lighthouse and Aircraft Measurements for Satellites (CLAMS) site. The Special-Scan image is an example of a PAPS mode used to collect measurements for an Angular Directional Model study.

Examples of Satellite-Instrument Scan Modes

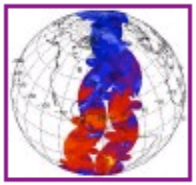
Cross-Track (FAPS)



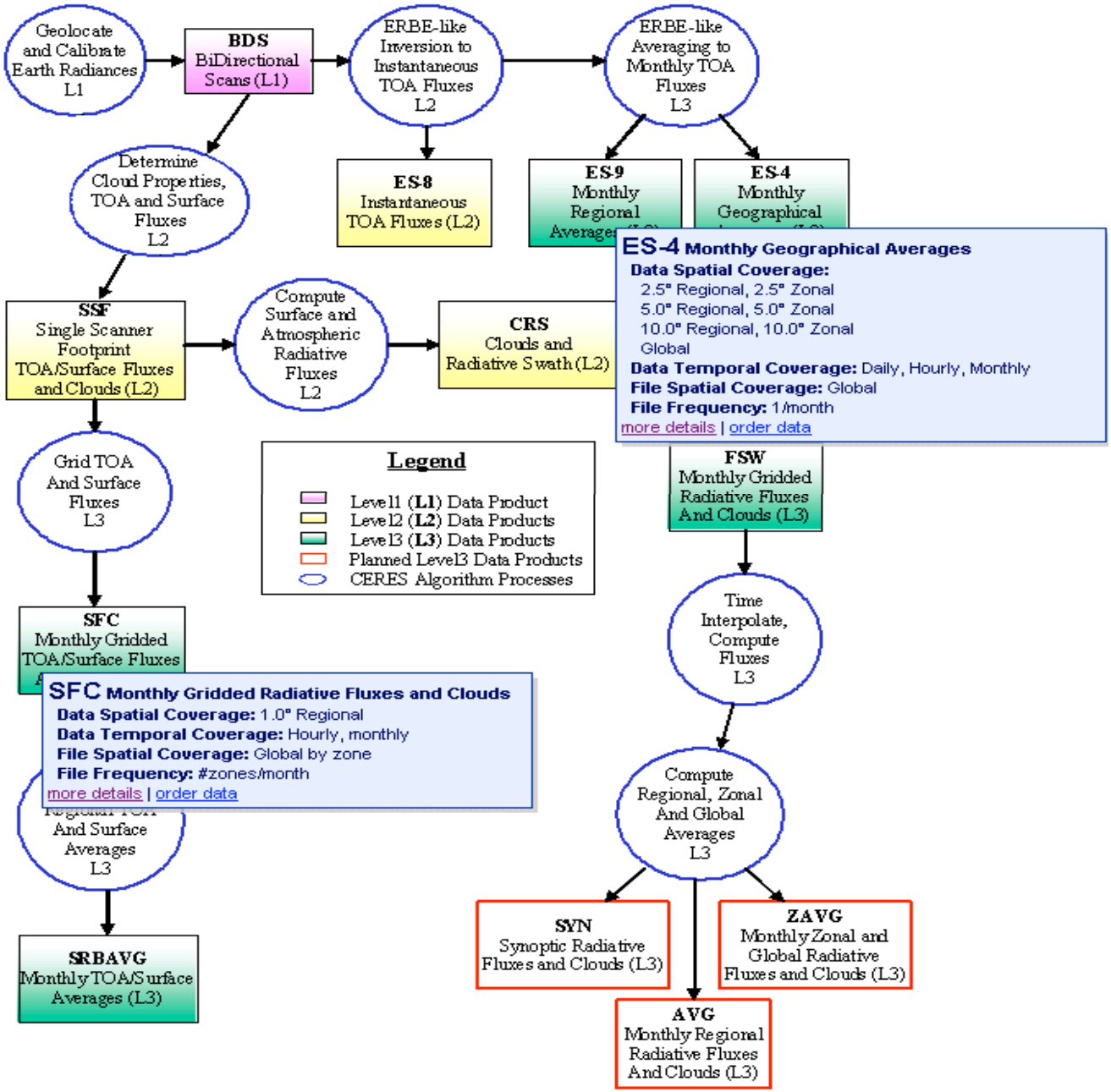
CLAMS-Scan (RAPS & PAPS)



Special-Scan (PAPS)



Documentation	Ordering Data	Tools and Images	Relevant Links
• Data Products Catalog • Collection Guides • Workshop Presentations (January 2003)	• Subsetting Tips • Langley Web Ordering Tool • EOS Data Gateway (EDG) Locations • CERES Sampler CD-ROM (5 Volumes) • Processing and Data Flow Diagram (with temporal and spatial resolution information) 	• Instrument Operations • view_hdf Tool • Information on HDF • Outgoing Longwave Radiation Animation: 9 Mbytes | 15 Mbytes • Validation Graphics: ES-8 and ES-4 Validation Graphics • Browse Images • Visible Earth Images	• Join CERES News List • CERES Home Page • CERES Brochure (PDF) • CERES Aqua Home Page • CERES Terra Home Page • CERES TRMM Home Page • CERES ARM Validation Experiment • CERES/ARM/GEWEX Experiment • CERES/ARM Radiation Experiment • CERES Surface Properties • CLAMS Home Page • Earth Observatory Feature


Geolocate and Calibrate Earth Radiances L1
BDS BiDirectional Scans (L1)
ERBE-like Inversion to Instantaneous TOA Fluxes L2
ERBE-like Averaging to Monthly TOA Fluxes L3
Determine Cloud Properties, TOA and Surface Fluxes L2
ES-8 Instantaneous TOA Fluxes (L2)
ES-9 Monthly Regional Averages
ES-4 Monthly Geographical
ES-4 Monthly Geographical Averages
Data Spatial Coverage:
2.5° Regional, 2.5° Zonal
5.0° Regional, 5.0° Zonal
10.0° Regional, 10.0° Zonal
Global
Data Temporal Coverage: Daily, Hourly, Monthly
File Spatial Coverage: Global
File Frequency: 1/month
more details | order data
SSF Single Scanner Footprint TOA/Surface Fluxes and Clouds (L2)
Compute Surface and Atmospheric Radiative Fluxes L2
CRS Clouds and Radiative Swath (L2)
Grid TOA And Surface Fluxes L3
Legend
Level1 (L1) Data Product
Level2 (L2) Data Products
Level3 (L3) Data Products
Planned Level3 Data Products
CERES Algorithm Processes
FSW Monthly Gridded Radiative Fluxes And Clouds (L3)
SFC Monthly Gridded TOA/Surface Fluxes
SFC Monthly Gridded Radiative Fluxes and Clouds
Data Spatial Coverage: 1.0° Regional
Data Temporal Coverage: Hourly, monthly
File Spatial Coverage: Global by zone
File Frequency: #zones/month
more details | order data
Time Interpolate, Compute Fluxes L3
And Surface Averages L3
Compute Regional, Zonal And Global Averages L3
SRBAVG Monthly TOA/Surface Averages (L3)
SYN Synoptic Radiative Fluxes and Clouds (L3)
ZAVG Monthly Zonal and Global Radiative Fluxes and Clouds (L3)
AVG Monthly Regional Radiative Fluxes And Clouds (L3)

Monthly Gridded TOA/Surface Fluxes and Clouds (SFC):
Hourly single satellite flux and cloud parameters averaged over 1.0-degree regions.

Select Parameters: Clear-sky and All-sky TOA Fluxes, Surface (Radiative) Fluxes, OLR, Clear-sky and All-sky Albedo, Cloud Properties, Surface Types
Complete Parameter List

Documents: Description/Abstract | Collection Guide (PDF).

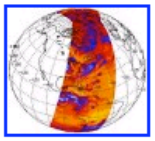
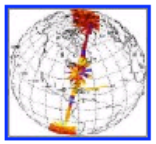
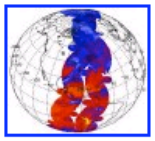
Spacecraft	Data Set Name (Select name to order)	Data Products Catalog	Sample Software	Temporal Coverage (Monthly)
TRMM (covers opened 12/27/1997)	CER_SFC_TRMM-PFM-VIRS_Edition2B. Quality Summary.	DPC_SFC_R3V2	Readme | Read Package (C).	01/1998 - 08/1998, 03/2000
Terra (covers opened 02/25/2000)	CER_SFC_Terra-FM1-MODIS_Edition2C. CER_SFC_Terra-FM2-MODIS_Edition2C. Quality Summary.	DPC_SFC_R4V3	Readme | Read Package (C).	03/2000 - Current Production
	CER_SFC_Terra-FM1-MODIS_Edition2B. CER_SFC_Terra-FM2-MODIS_Edition2B. Quality Summary.			03/2000 - 10/2003
	CER_SFC_Terra-FM1-MODIS_Edition2A. CER_SFC_Terra-FM2-MODIS_Edition2A. Quality Summary.	DPC_SFC_R4V2	Readme | Read Package (C).	03/2000 - 12/2003
Aqua (covers opened 06/18/2002)	CER_SFC_Aqua-FM3-MODIS_Edition1B. CER_SFC_Aqua-FM4-MODIS_Edition1B. Quality Summary.	DPC_SFC_R4V3	Readme | Read Package (C).	07/2002 - Current Production
	CER_SFC_Aqua-FM3-MODIS_Beta2. CER_SFC_Aqua-FM4-MODIS_Beta2. Quality Summary.	DPC_SFC_R4V2	Readme | Read Package (C).	12/2002
	CER_SFC_Aqua-FM4-MODIS_Beta1. Quality Summary.	DPC_SFC_R4V1	Readme | Read Package (C).	09/2002-10/2002, 01/2003

5/9/05

Updates to the web pages
Using newer web technologies

Examples of Satellite-Instrument Scan Modes

Cross-Track **CLAMS-Scan** **Special-Scan**

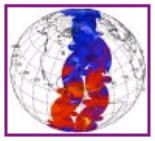




Available Data Products

Documentation	Ordering Data	Tools and Images	Relevant Links
• Data Products Catalog • Collection Guides • Workshop Presentations (January 2003)	• Subsetting Tips • Langley Web Ordering Tool • EOS Data Gateway (EDG) Locations • CERES Sampler CD-ROM (5 Volumes) • Processing and Data Flow Diagram	• Instrument Operations • view_hdf Tool • Information on HDF • Outgoing Longwave Radiation Animation: 9 Mbytes | 15 Mbytes • Validation Graphics: ES-8 and ES-4 Validation Graphics • Browse Images • Visible Earth Images	• Join CERES News List • CERES Home Page • CERES Brochure (PDF) • CERES Aqua Home Page • CERES Terra Home Page • CERES TRMM Home Page • CERES ARM Validation Experiment • CERES/ARM/GEWEX Experiment • CERES/ARM Radiation Experiment • CERES Surface Properties • CLAMS Home Page • Earth Observatory Feature

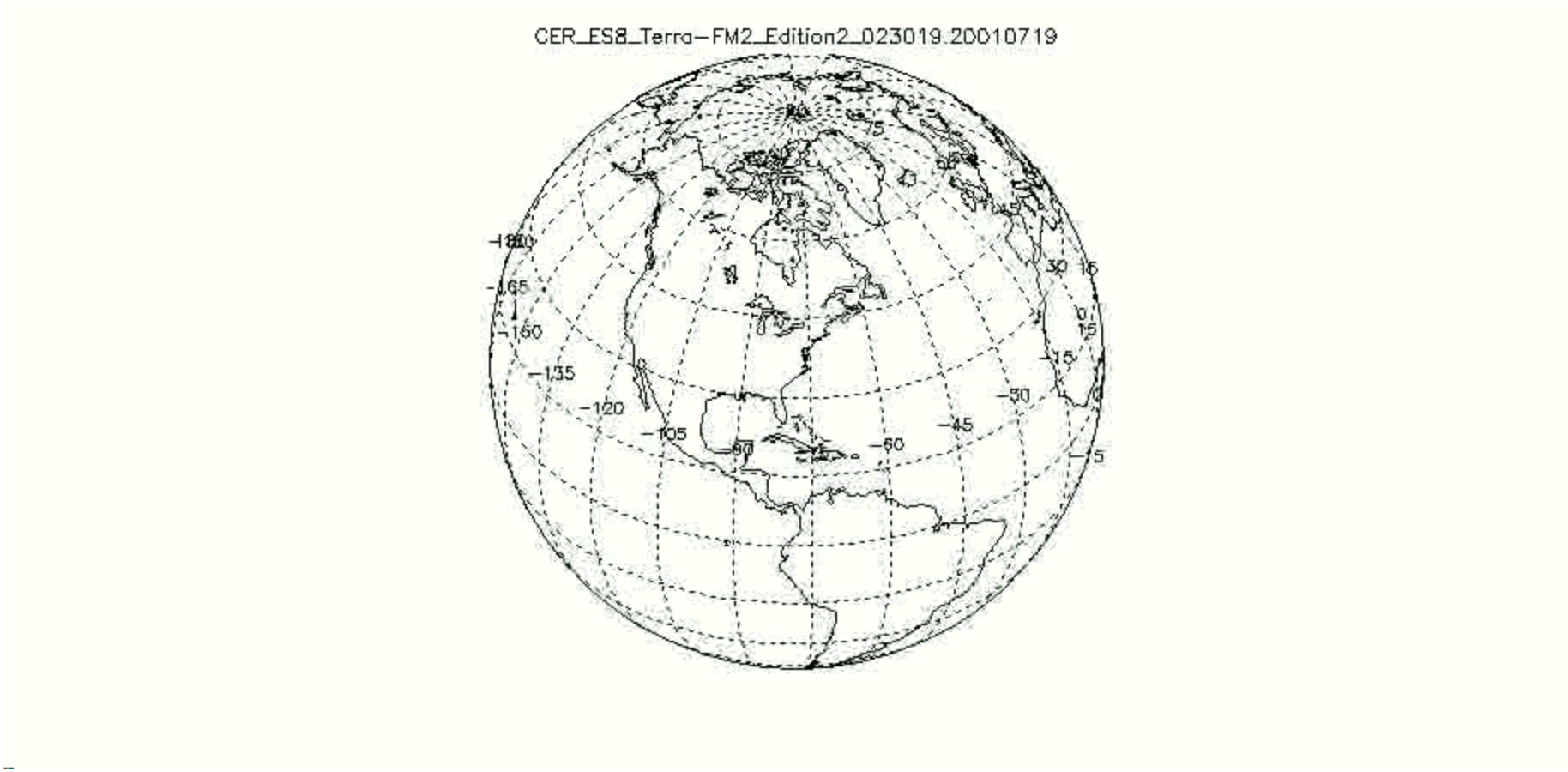
Scan Modes

Special-Scan (PAPS)

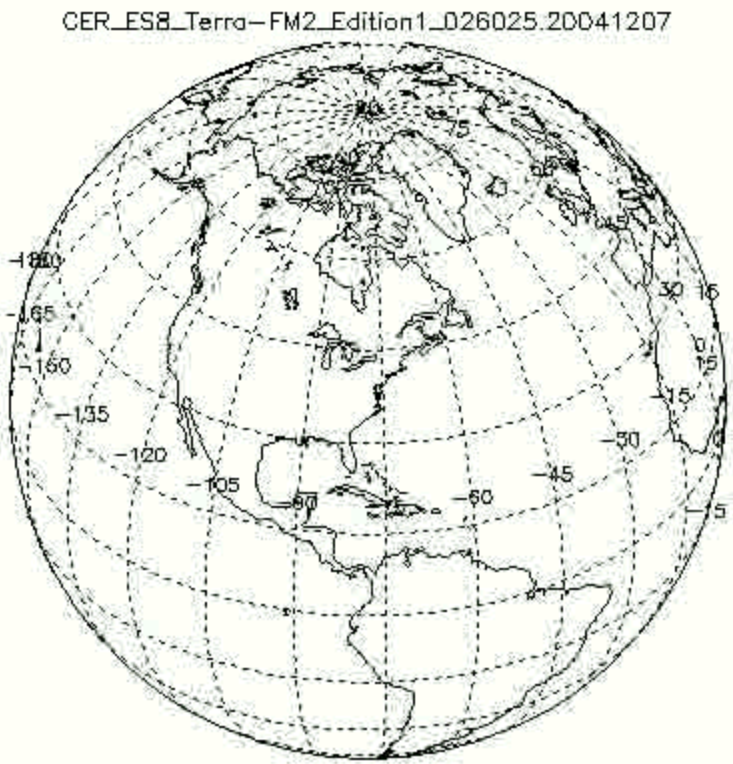


Documentation | Ordering Data | Tools and Images | Relevant Links

- Instrument Operations
- view_hdf Tool
- Information on HDF
- Outgoing Longwave Radiation Animation: 9 Mbytes | 15 Mbytes
- Validation Graphics: ES-8 and ES-4 Validation Graphics
- Browse Images
- Visible Earth Images



5/9/05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