

Status Report of the Antarctic Meteorological Research Center

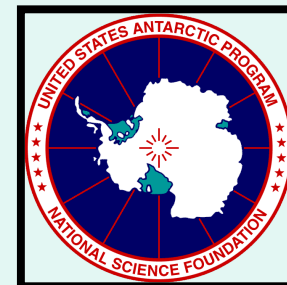


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**Antarctic Meteorological Research Center
Space Science and Engineering Center
University of Wisconsin-Madison**



**AMOMFW 2007 Rome, Italy
June 26-28, 2007**



Outline

- Re-Tooling the AMRC
 - New computing
 - “New” ingest systems
 - AMRC Archive
- Data Topics
 - CLIMAT Message Project
 - Special Data Topics
- Research
- Broader Impact
 - Outreach
 - Data requests
 - Statistics
 - Data Holdings
- Future/Miscellaneous
 - IPY Support, Antarctic-IDD

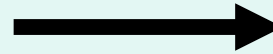


Re-Tooling the AMRC

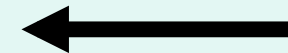
New Computing...

- Dell 1950
 - Rack-mounted
 - Linux OS (RH Enterprise 4)
- 140 Gb SATA RAID/1
 - System Internal Disks
- 6.5 Tb SATA RAID/5
 - Archive
- Primary
 - McMurdo
 - UW-Madison
 - Backup systems TBA
- Problems with heat in MacWX Server Room!

McMurdo MacWX
Server Room



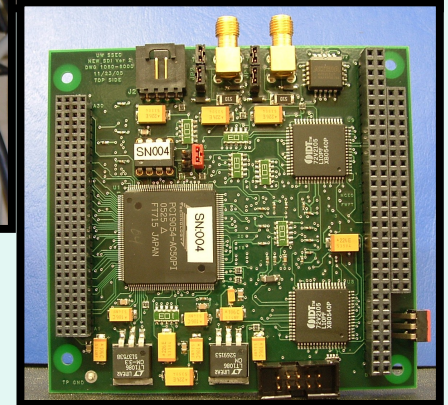
UW-Madison SSEC
Server Room



Re-Tooling the AMRC

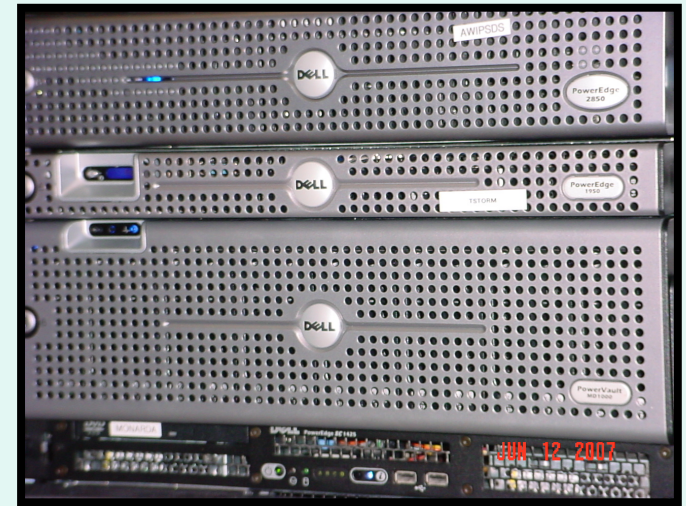
“New” Ingest Equipment...

- Dell E-390 tower w/SATA hard disk
- Solaris x86 OS (ver. 10)
- “Turn-key”
- PCI slots for SDI ingest card
- Internal LTO-3 tape archive
 - Internal SCSI for LTO-3 support
- Extra Internal SATA disk
- ADDE and LDM services
- AWS decoding
- NOAA and DMSP satellites
- 4 systems
 - Two for McMurdo (Active and spare)
 - Two for Palmer (Active and spare)



AMRC Archive

- Moving from Near-line to On-line:
 - New FTP sites to offer the near-line archive
- Archive Copy Project:
 - CD/DVD copied to tape 1992-2005
 - Reviewing bad tapes, etc.
 - Second copy being reviewed as well
 - Will move to LTO “backup” of on-line RAID archive.
- Copy at McMurdo Station
 - Need a backup in a second location
 - Second copy of tape archives planned to go to Wisconsin State Records
- Re-mastering of the composite archive:
 - Starting this summer
 - Standard displays (GIF, JPG, animation, etc.)
 - Will all be on-line
 - Animations will be created (Input welcome! Time span, etc)
 - Future - DVD of the collection



CLIMAT Message Project



- Change of plan: Emphasis on real-time
- South Pole
 - Real-time (South Pole Met Office) & Historic (AMRC)
- AWS
 - “Real-time” from Ferrell, Marble Point, Dome C II, Byrd, Siple Dome, Gill, Possession Island

- **CLIMAT TEMP**

- McMurdo
- South Pole

- **Thanks:**

- NOAA
- NSF
- RPSC
- BAS/WMO

CSAA01 KWBC 171327	2007137 1432
CLIMAT 04007 89376	
111 19813 31332060 412791386 8000000 9303030	
333 23030 8070100	
444 0123421 1144019 2117621 3147420 5120321 =	
CSAA01 KWBC 171326	2007137 1432
CLIMAT 04007 89828	
111 16431 31623036 415741661 8000000 9303030	
333 23030 8010000	
444 0156770 1168918 2148621 3173618 5111024 =	
CSAA01 KWBC 171342	2007137 1432
CLIMAT 04007 89345	
111 18851 411701269 8000800 9303030	
333 23030	
444 2106917 3141004 5106902 =	

Special Data Topics...

- Palmer Station using AWS decoded from SDI/Wisconsin program!!
 - Improved weather on station and for grantees
 - Aid in logistics on/near station
 - Thanks to Christina and Lana at RPSC!
- Black Island Data Recovery
 - 2000-2003 from Wonderware ISQL Hard disks
 - Still to be done by RPSC
- South Pole Radisonde Problem:
 - Wind direction is incorrect since 14 Feb 2005
 - Fix in progress
- WMO resolution #17 compliance...in progress
 - Research Ship
 - Aircraft

Outreach

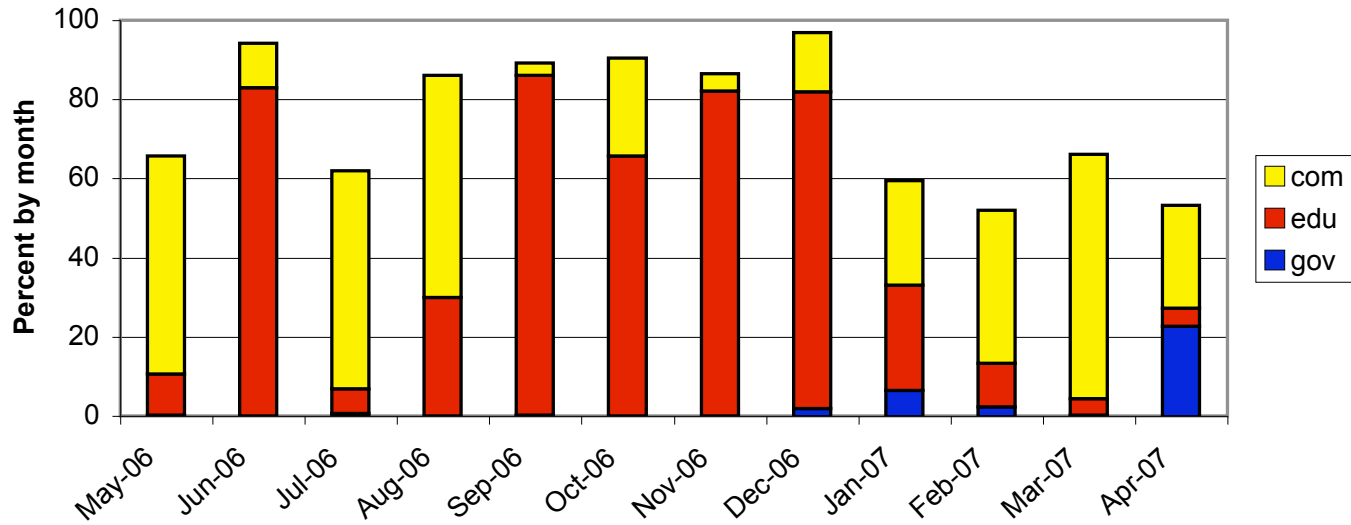
- Continuing existing grass-roots effort
- Aiming to include more general public venues
- Sites:
 - Mt Horeb Public Library
 - Wednesday Night at the Lab
 - Mt Horeb and West Madison Cub Scouts
 - Lodi Middle School
 - Waunakee Intermediate School Family Science Night
 - Deerfield Elementary School
 - Franklin-Randall Elementary School Family Science Night
 - St. Ann's Elementary School



Data Requests and Statistics

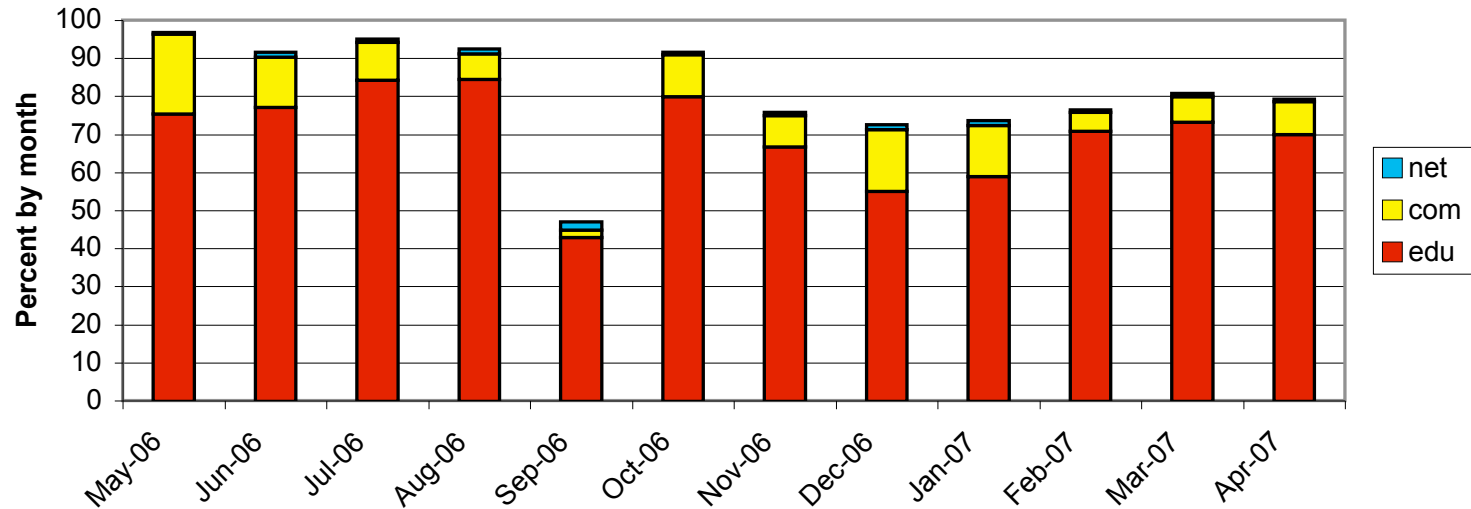
- N.C. Sheeba, U. Malaysia
- Serg Zarin, AARI
- Santiago Grasso, U. Maryland/GESTC
- Penny Clendon, U. Canterbury
- Meraz Moustafa
- Gareth Marshall, BAS
- Mark Seefeldt, CU
- Inga Smith, U. Otago
- Hsiao-ming Hsu, NCAR
- Valerie Loeb, Moss Marine Lab, Cal. State
- Lynn Mooney, unaffiliated
- Larry Saranthus, Devon Gas
- Dan Steinhoff, BPRC
- Doug MacAyeal, U.C.
- Gabrielle Kelley, U. Adelaide
- Clare Oatley, U. Reading
- Annalisa Schilla, CU
- Andrew Parker, UW-Madison
- Gonzalo Hernandez, UW
- Adam Kankiewicz, CSU

Percent of bytes transferred on ice.ssec.wisc.edu FTP site

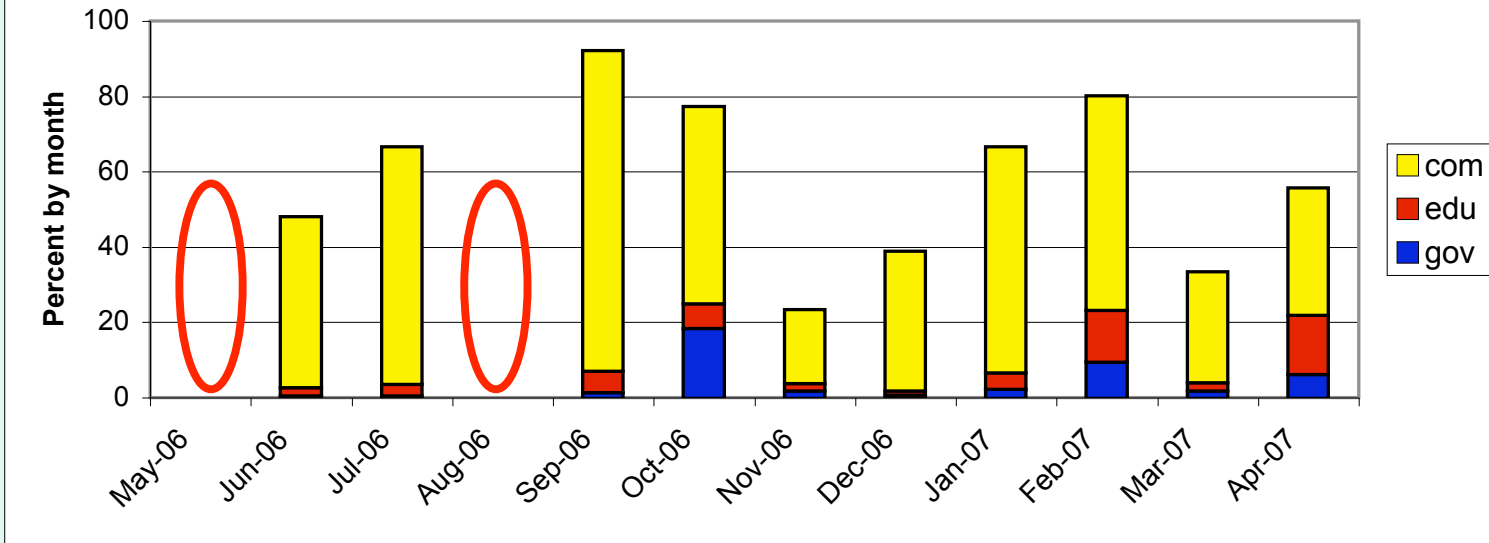


FTP and Web Statistics: ice.ssec.wisc.edu

Percent of bytes transferred on ice.ssec.wisc.edu Web site

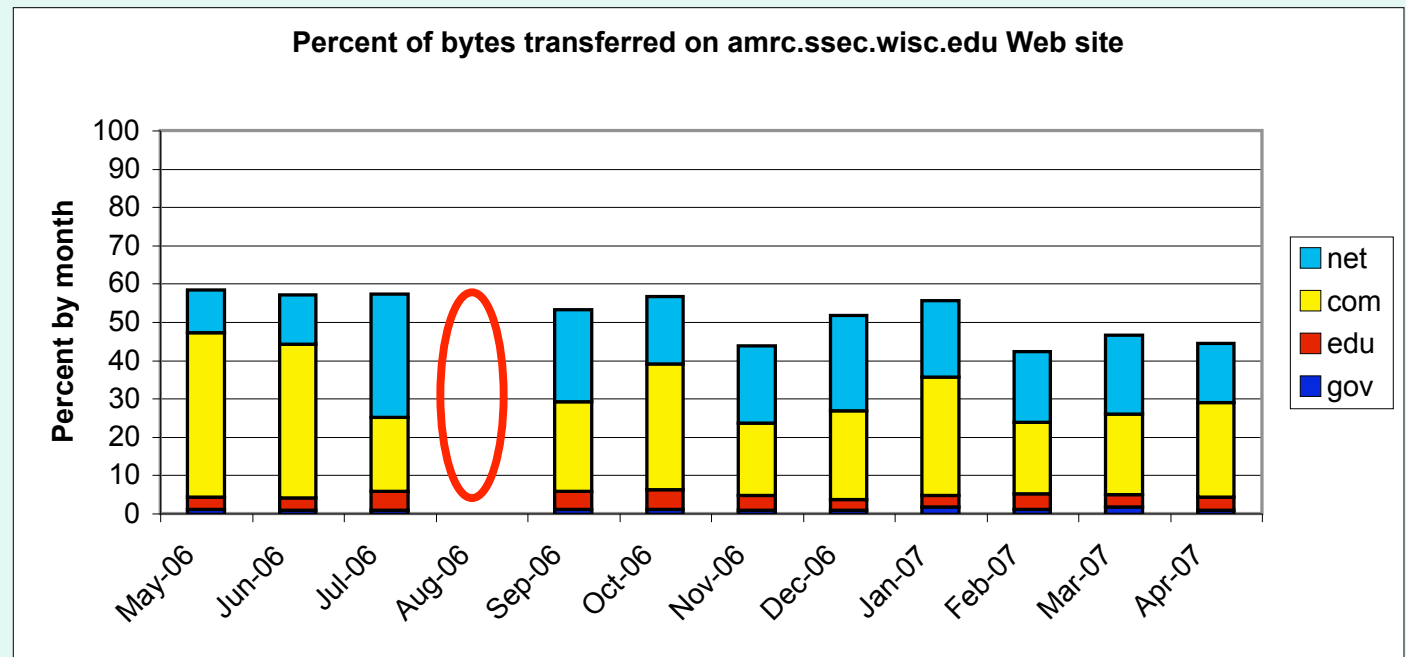


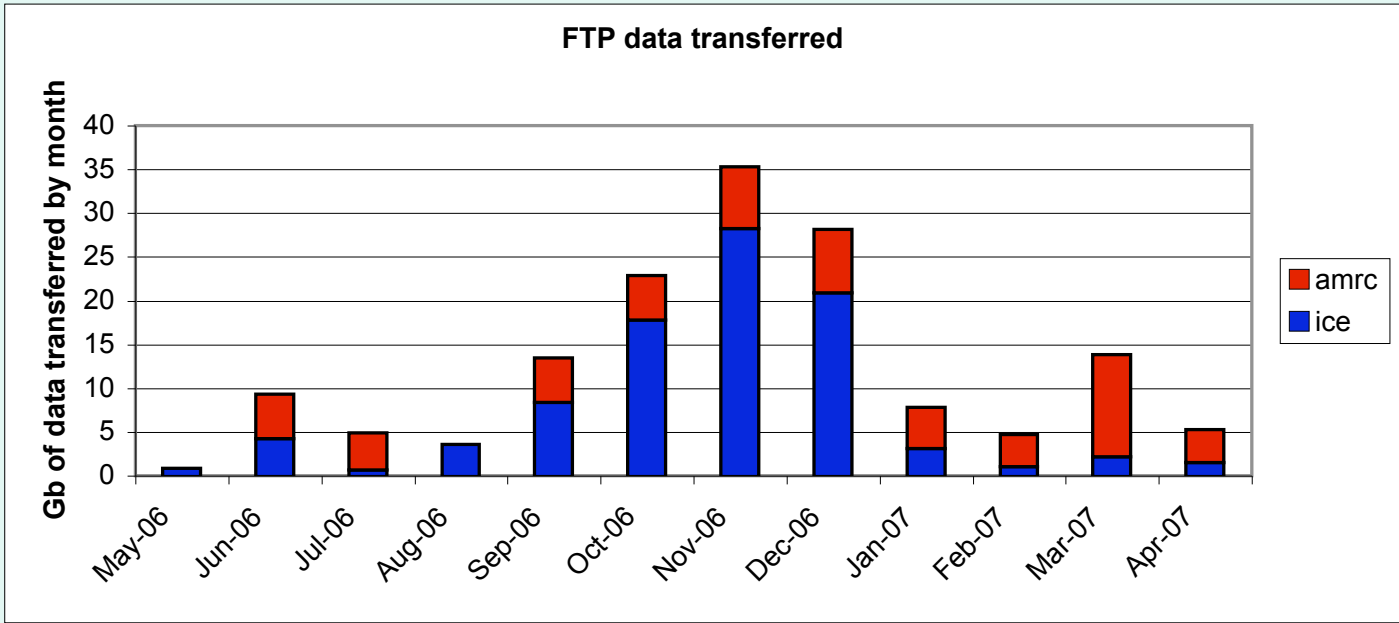
Percent of bytes transferred on amrc.ssec.wisc.edu FTP site



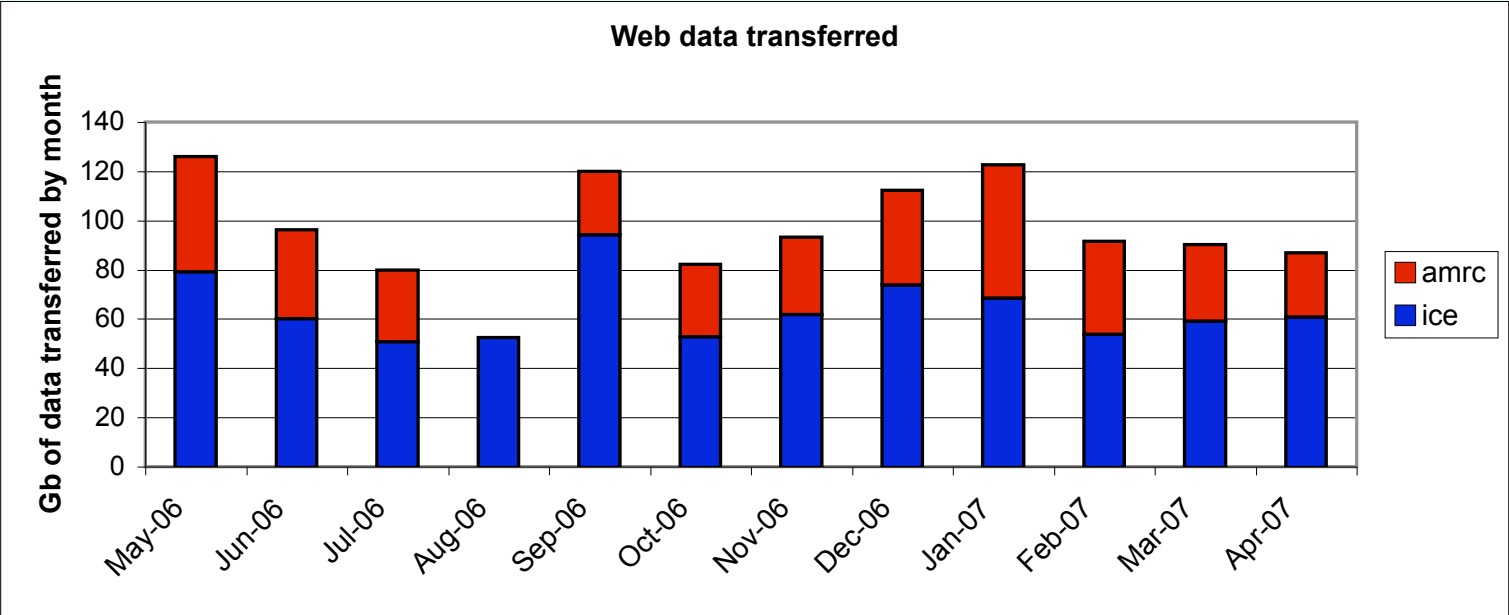
FTP and Web Statistics: amrc.ssec.wisc.edu

Missing Data





FTP and Web Statistics: Totals



Generated Data and Products	Satellite Imagery and Data	Model Analyses & Forecasts	Observational Data (GTS/NOAAPORT)	Text Data (GTS etc.)	USAP Station Data
Antarctic Composites •IR •WV •VIS <i>experimental</i> •Pseudo-Color	NOAA •HRPT (McMurdo & Palmer-RT) •GAC (Project FROST/by request) •LAC (Iceberg)	NCEP •GFS •WWFM	METAR	METAR (McMurdo area South Pole, SA)	South Pole
		Met Office (UK)	PIREP/AIREP	TAF (McMurdo Area)	Palmer
UW & SPAWAR AWS Data	Terra/Aqua MODIS Products <i>(Real time)</i>	ECMWF (Europe)	Synoptic (US and ABoM - ABoM ends March 2006)	AIREP (New Zealand Region)	McMurdo
GMS/GOES Satellite wind charts <i>(Courtesy of CIMSS)</i> MODIS Winds - J. Key <i>(Real time)</i>	DMSP •OLS •SSM/I (McMurdo & Palmer) <i>(Real time)</i>	AMPS <i>(Real time)</i>	Radiosonde	USAP Ship SIT-REPS	NCDC Data holdings up to 1998
		CRAS <i>(Real time)</i>	Ship & Buoy		Field Camps & MAWS & Mt. Erebus 2004-2006 & more

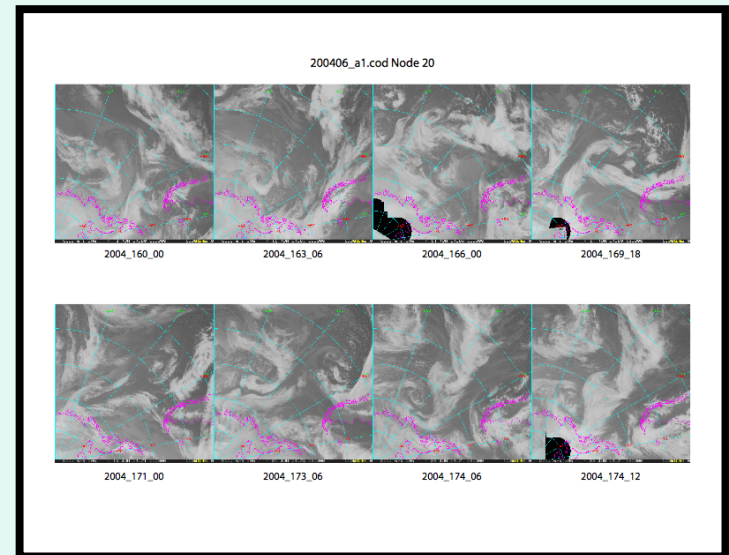
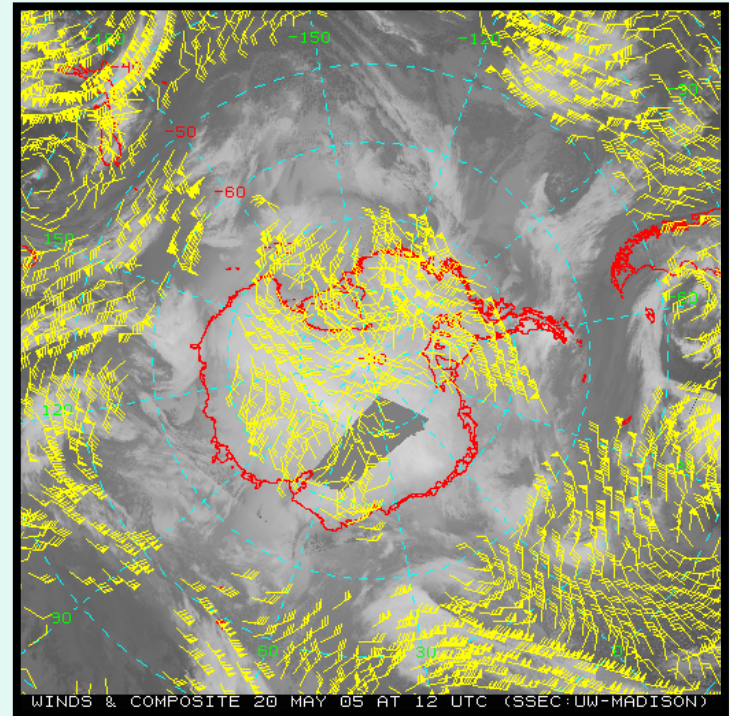
Research Activities

Complete/In Progress

- Shelley - MS Thesis complete!
- Matt - PhD (see talk at IUGG...)
- Jess - MS Thesis...finishing up
- Linda - South Pole Comparison Project (old vs new surface obs)

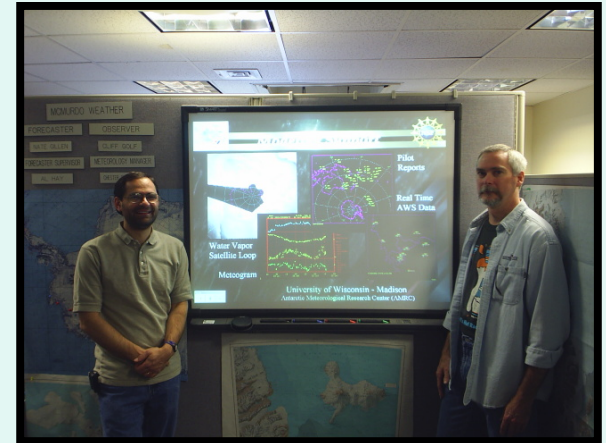
Starting Up/Future

- Atmospheric Motion Vectors
a.k.a. Satellite derived Winds
with Antarctic composite
- SOMs with Dave Reusch
- USAP Review Presentation at
McMurdo Station - thank you!



Future/Miscellaneous

- “Antarctic VISITView”
 - Setting one up this summer...
 - Recall - collaborative
 - Interest in an active Antarctic weather briefing?
- Antarctic-IDD
 - (more in the discussion!)
 - Expand usage:
 - More users
 - More data
- IPY Support
- Hourly Antarctic Composites coming soon!
 - Thanks to NOAA/GOES-10 support!
 - New procedure to produce the composites



E-mail Lists: *Please Join Today!*

- **ANTIDD** – Antarctic-IDD mailing list
- **ANTDISCUSSION** – Antarctic meteorology discussion group
- **ANTAWS** - Information and updates on AWS data
- **ANTOBS** - Information and updates on all other observational datasets
- **ANTOPS** - Notices on AMRC's real-time data availability, distribution and status
- **ANTICEBERG** - Notices on latest Iceberg monitoring images posted to the web site
- **ANTCOMMUNITY** - Infrequent notices to the Antarctic community on events and significant developments

E-mail: amrc@ssec.wisc.edu to join!

Thank you! (including NSF-OPP #0537827)

