### **McIDAS-XCD Status**

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## **NOAAPORT DVB Upgrade**

- DVB-S = Digital Video Broadcast by Satellite
- NWS changed to this system in March 2005
- Software supplied by SSEC in conjunction with Unidata
- Version 1.1.3 of the DVB reader software is available at: <u>http://www.ssec.wisc.edu/mcidas/software/xcd/dvb/reader\_upgrade.html</u>
- Root password privileges required at 'sudo' step (others require you to be user 'ldm' on NOAAPORT ingestor computer)

# McIDAS-XCD 2006 Updates

- Various modifications made to the GRIB filer that writes to the MySQL database to aid debugging the new GRIB server
- Updated the maximum number of grids that can be contained in a McIDAS grid file
- Determined that XCD already contained enough levels to successfully decode GPS radiosonde levels to be added using the Radiosonde Replacement System
  - > TTBB will have 135 Levels, TTDD 40 Levels

#### McIDAS-XCD 2006 Updates (continued)

- Added designations for stitched-together ECMWF global grids – 14912 and 5678
- Fixed bugs in Synoptic Decoder which resulted in incorrect Antarctic ceiling and visibility values being placed into the real-time synoptic MD files
- Working on implementing METAR FEW designation into the METAR decoder

## To Z or not to Z

- Designation for GRIB parameters in XCD allows for duplicate designations
  - > in gbtbpds001.2v3 file, 'Z' has the following designations:
    - ICAO Standard Atmosphere Ref Height
    - Geopotential Height
    - Geometrical Height
    - Geopotential Height Anomaly
    - 5 wave geopotential height
  - > other duplicated parameters include P, U, V, W

# The Issue of Multiple Parameters

- Occurs when using McIDAS GRID commands; specifically, the PAR= keyword
  - for example, if PAR=Z in the GRDLIST command, McIDAS will select the first grid with Z specified in the gbtbpds001.2v3 file - which is actually "ICAO Standard Atmosphere Ref Height" !!!
  - most users would expect Z to be "Geopotential Height", so there is a potential for users to be looking at something they did not request

## **The Solution?**

After consulting by email to the mcidas.users list, it was determined that

- we will use the traditional definitions of the duplicated parameters, e.g., Z will be identified as geopotential height
- > the remaining parameters will be changed to something more appropriate, perhaps something along the lines of the NCEP table at

http://www.nco.ncep.noaa.gov/pmb/docs/on388/table2.html

Note that if we use the NCEP table's parameter names, HGT will be geopotential height and Z will disappear - resulting in possible confusion and angst ©

# Missing GRIB Table Parameters

- GRIB table gbtbpds001.2v3 also is missing certain parameters; these are represented by 'x' in the table
- We will replace these with something appropriate, most likely based on the NCEP table; this solves the problem of GRDLIST returning 'x' values that the user has no idea what the grid is for (first found for Wind Gust grid)

## xcdadmin Script

- Streamlines certain repetitive XCD tasks
- Included in the McIDAS-XCD 2005 upgrade
- *"xcdadmin statdisp"* shows the XCD status display window:

ł	McIDAS-XCD Status (breeze)												
	Mon May 16 19:08:39 2005												
	##	Sre	Inges	stor T	ime	Byte	Index		Index file	Origin	Wmo	Product	
	 1 2	NTXT INGET		TEXT 1 BIN 1	90839 90839	547804240 8524080	533200		SA05136.IDX HRS.SPL	СМАО	SACN	82	
							Gridf	Gri	đ				
	##	Decod	ler	Time	Begptr	Lasptr	MD	Row	Col	Text		Index	
	1	1 SANTEC		190814	533072	533972	6	59	 2426			 9805136	
	$\hat{2}$	2 RABDEC		190812	74016	74016	26	14	225			UJ05136	
	З	3 SYNDEC		190820	184140	8 1841408	56	7	5758			SM05136	
	4	4 SHPDEC		190820	184140	8 1841408	36	20	157			SM05136	
	7	7 PIRDEC		190812	28352	28352	66	20	68			UA05136	
	8	8 TERDEC		190812	138208	138208						FT05136	
	9	9 TIRDEC		190812	96	96				TIROS 15		TB05136	
	10	Ø GRIB		190837	8370	8370	68266	135		182 12 M	APS		
	11	11 MDRDEC		190812	43328	43328	69006	19				SD05136	
	13	13 NEXRFILE		190816						NISGRB 16	19		
	14	14 NAMMOS		190812	63136	63136	76	22	111	111		F005136	
	15 GFSMOS		190812	63136	63136	86	43	1088	91818		F005136		
	16	16 NGMMOS		190812	63136	63136	46	20	246			F005136	

#### xcdadmin Script (continued)

- "xcdadmin log –r" rotates the current log file out and creates a new one – useful for isolating current XCD behavior
- *"xcdadmin status"* is similar to "*statdisp"*, but is more text based
- > And finally, the most important options:
  - start and stop (if you're really frustrated with XCD, stop has a now option <sup>(1)</sup>)

Feel free to suggest any additions to this script to consider for inclusion in a future release