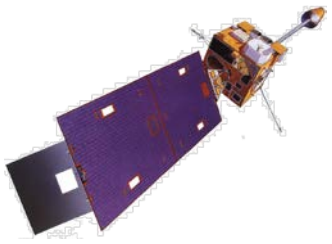
ENGINEERING BULLETIN

Bulletin Number: 11-002 **Date: August 26, 2011**

Engineering Change: GOES Battery Flag Standardization



Systems: All CO-OPS measurement systems that implement GOES transmissions in pseudo-binary.

Region: All Regions

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Background/History:

The service of Geostationary Orbital Environmental Satellites (GOES) for water level stations has proven to be vital to the CO-OPS mission and its strategic goals. With a growing number of instrumentation and the majority of remote telemetry units now broadcasting information every six minutes, the usage and conservation of GOES flags require in being re-appraised. Better handling of this limited resource will lead to enhanced diagnostics and greater reliability for data dissemination.

Action:

In order to better utilize CO-OPS observation practices, the Measurement Systems Configuration Subcommittee (MSCS) has updated the following business rules for decoding and processing battery voltages from GOES transmissions:

- The GOES structure for all CO-OPS measurement systems will have GOES flag "**<**" assigned only to the battery voltage of a data collection platform (DCP).
- The "**<**" flag will also be designated as a placeholder for parsing multiple DCP datasets in GOES messages. The same treatment is used with DPAS code "**L**" (also specified for DCP battery voltage) in separating DCPs from the CO-OPS PORTS® tabular report. As shown by the following deconstructed example (with X's for platform ID and channel number), the first marker will be pronounced as the last value for DCP #1, the second marker for DCP #2, etc:

Satellite Header	DCP #1 Sensor Data Set	DCP #1 Battery Voltage	DCP #2 Sensor Data Set	DCP #2 Battery Voltage	Tsunami 1-Min (U1)

XXXXXXXX11154154216G34+0NNXXXEXE00096"P86581631CP}~Z@@d0VrO|1AmvA`@DGDB>Am[3AR@xAY4DB 5C~6bE | <BC | 2@[jAJ@"@[}3AT@|AZ | <BK | dTOf\@h@k@_@W@N@K

- While the GOES flag "**=**" has been employed in the past to indicate battery voltages on redundant gauges and pressure readings for deployed nitrogen tanks, it will eventually be temporarily decommissioned until allocated for a new CO-OPS product.
- Revised format files will need to be created and a SOP will be issued, where it is estimated that it will take CO-OPS personnel 2 field seasons to execute network-wide change. After modifications have ultimately been confirmed, "**=**" will no longer specify DCP battery voltage.

ENGINEERING BULLETIN

CO-OPS GOES Flags Designation

Description	GOES Flag	DPAS Code
Time Tag	0	
Aquatrak Water Level	1	A
Redundant Water Level	>	
Backup Water Level	2	B
Redundant Backup Level	"	
Wind Data (SPD, DIR, GST)	3	C
Air Temperature	4	D
Water Temperature	5	E
Barometric Pressure	6	F
Future 2-Byte Flag	+	
Shaft Angle Encoder	!	V
Redundant Shaft Angle Encoder	.	
Conductivity	7	G
MWWL	8	Y
Redundant MWWL	#	
Relative Humidity	9	R
Rainfall	:	J
Solar Radiation	;	
Analog 1 – DCP Battery Voltage	<	L
To Be Determined	=	
Paroscientific Digiquartz #1	%	N
Paroscientific Digiquartz #2	&	T
Miros SM-094/2/85N	(	Q
Universal Laser Sensor	(	Q
Redundant Air Gap	)	
Tsunami Water Level		U
Visibility	-o	o

If there are any questions or concerns regarding this Engineering Bulletin, please contact the Measurement Systems Configuration Subcomittee at MSCS@noaa.gov.

References:

- ROS 4.3.1.1 (A1) Tide Station User's Manual, May 2006 – Appendix A GOES Transmission Formatting
- Tides and Currents Publications: H1. NGWLMS GOES Message Formatting for Hourly Transmissions