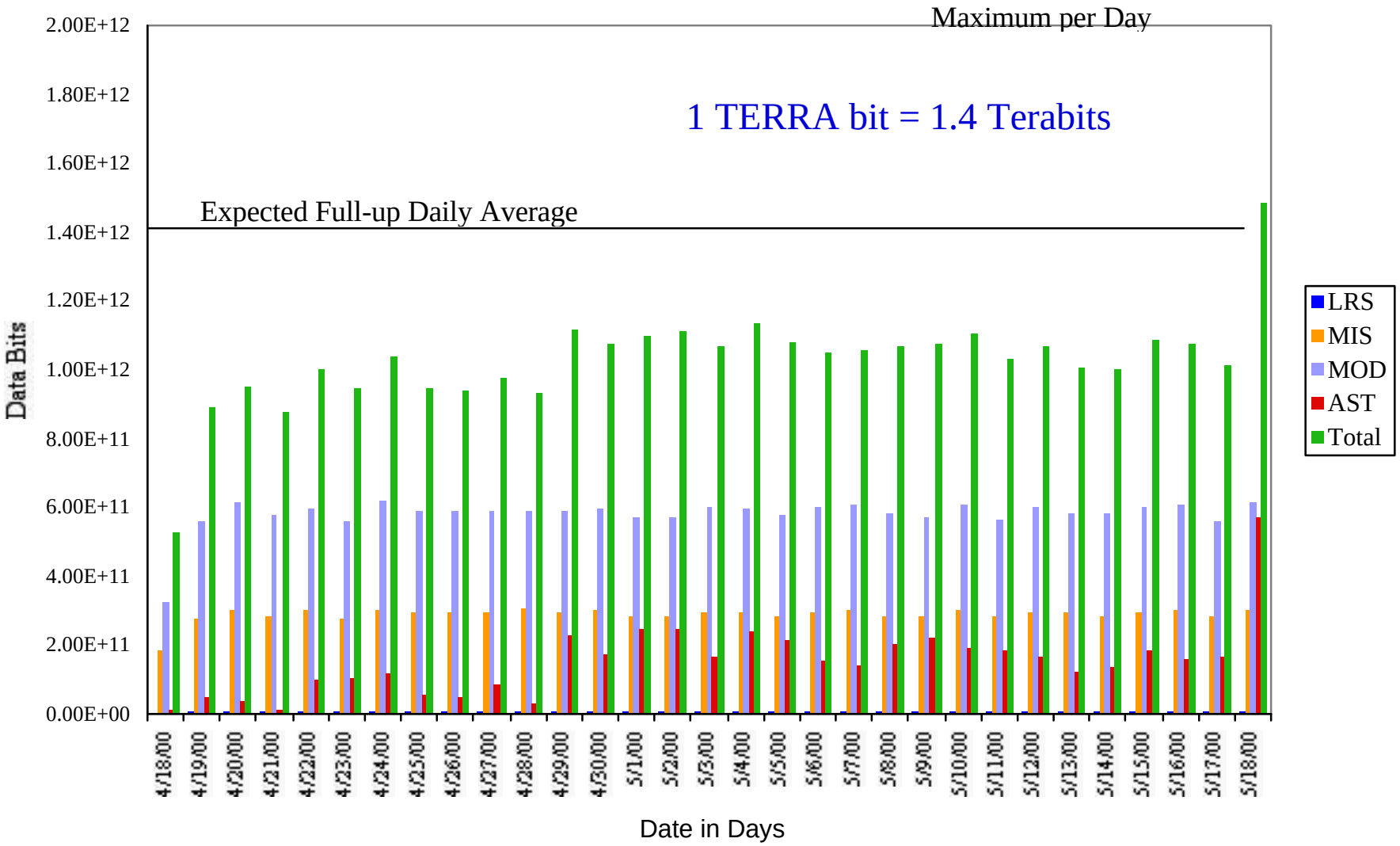
ESMO - MODIS Science Team Presentation

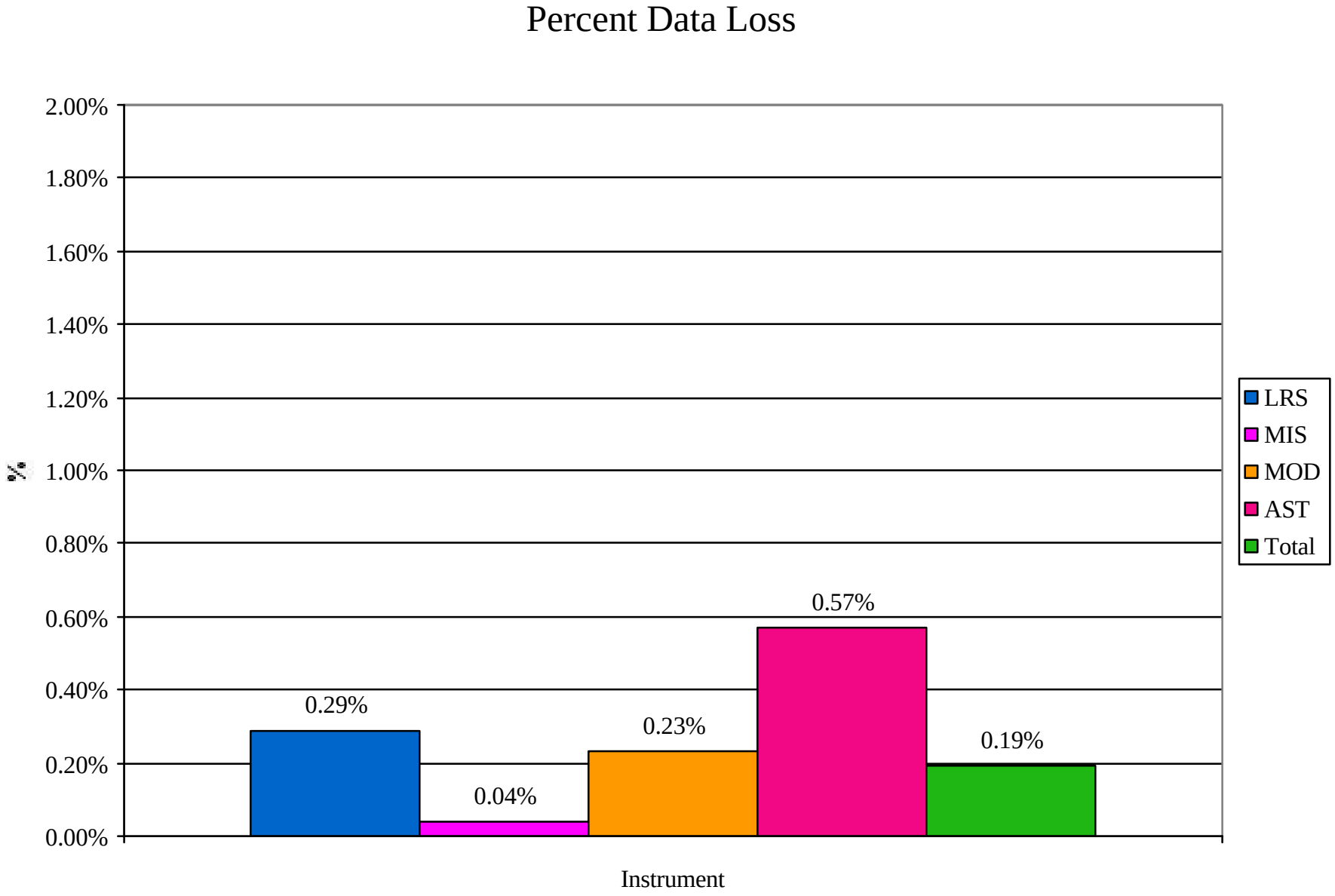
Robert Kozon : TERRA Mission Director

TERRA S/C Status

- All S/C subsystems performing nominally.
- Bit-Flip Problem
  - MODIS has developed level 1 processing workarounds for the bit flips. Essentially when errors are detected, packets are discarded. These processing workarounds have allowed product generation flow to continue.
  - Based on the MODIS processing workarounds to mitigate the bit flip effects, similar workarounds can be implemented in the other level 1 processing flow, basically discarding any error packets.
  - In late April, the trash buffer of the SSR has indicated the accumulation of enough "bad" VCID CADUs to constitute one EDU (about 395 CADUs out of about 10.3 billion CADUs transmitted) since the reconfiguration of the SSR in late January. This indication is consistent with the BER calculated over a day of 1.3 x 10 (-8) with the assumption of 2 bit flips per occurrence. This trash buffer indication will be used to track the bit flip problem to determine if the problem is degrading.

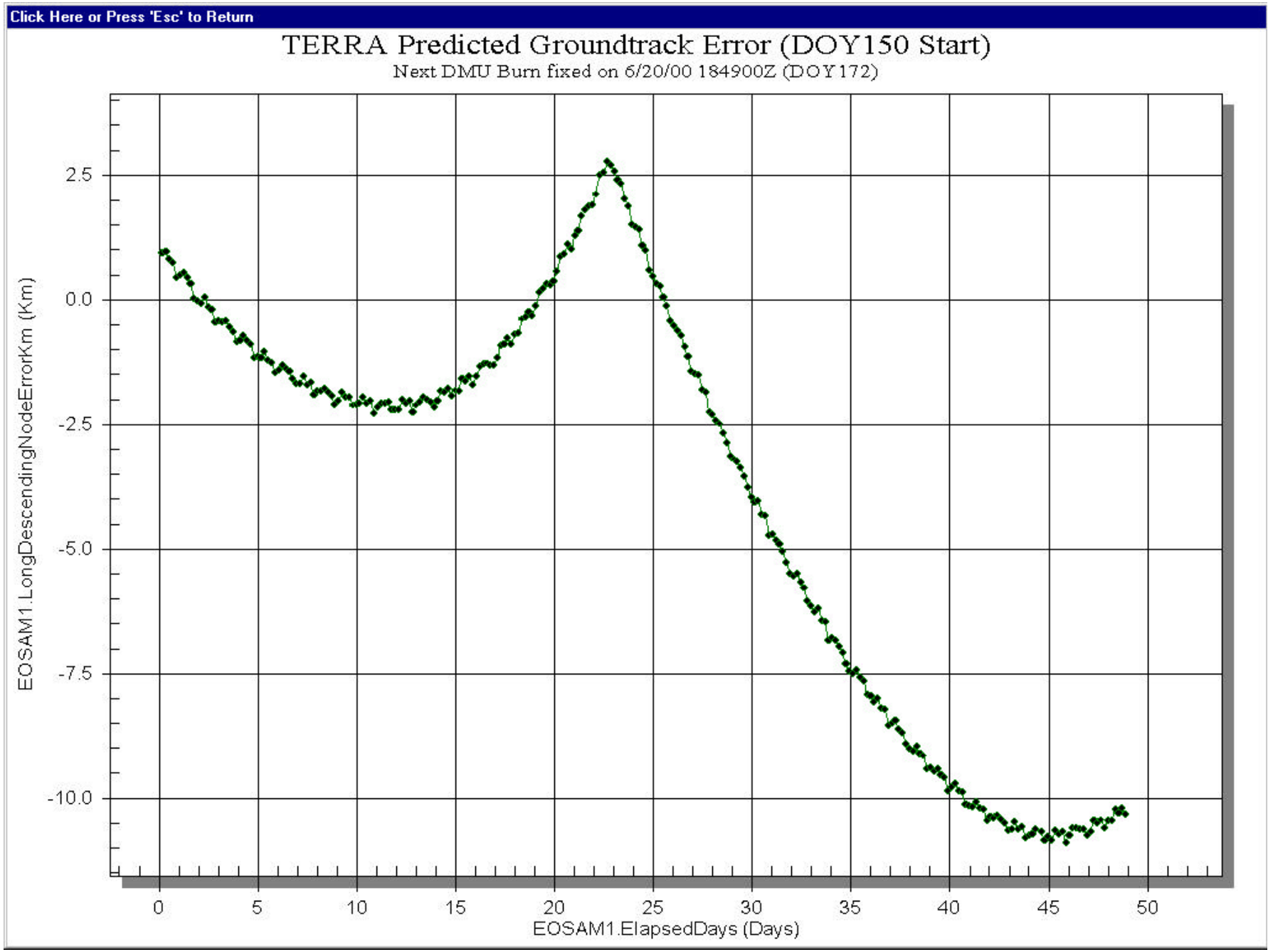
Science Recording

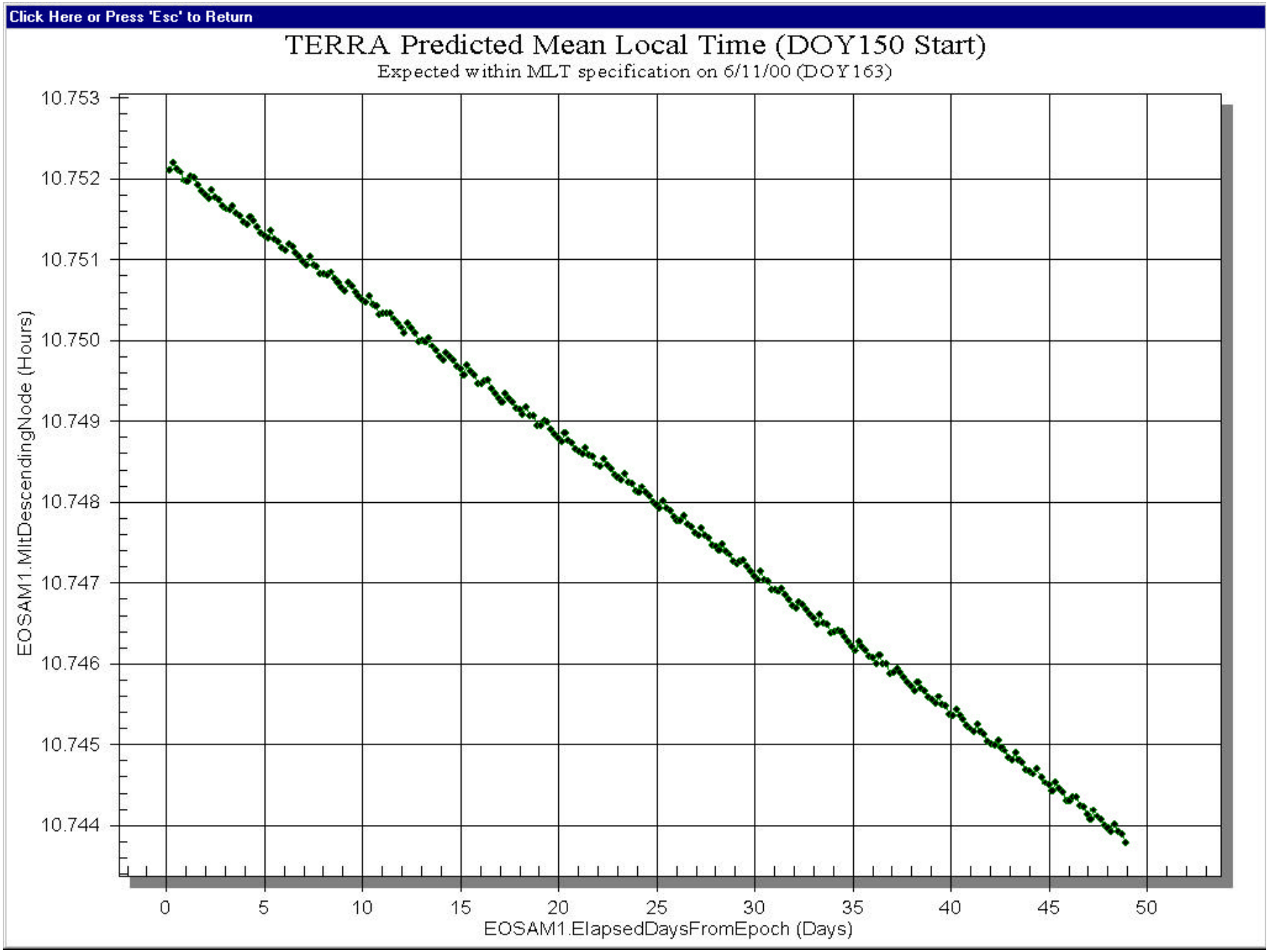



Percent Data Loss
2.00%
1.80%
1.60%
1.40%
1.20%
1.00%
0.80%
0.60%
0.40%
0.20%
0.00%
%
0.29%
0.04%
0.23%
0.57%
0.19%
LRS
MIS
MOD
AST
Total
Instrument

FDS Daily Status as of 06/06/00

- Expected MLT < 10:45 on 6/11/00 (DOY163)
- Next DMU fixed on 6/20/00 (DOY172/18:49:00Z)
- Weekly products (DOY150) include 6/20 DMU and 6/21 MODIS Rolls (3 starting at 2141Z)
- Summer Solstice on 6/21/00 0148Z
- Partial Solar Eclipses on 7/1/00 and 7/31/00


Click Here or Press 'Esc' to Return
TERRA Predicted Groundtrack Error (DOY150 Start)
Next DMU Burn fixed on 6/20/00 184900Z (DOY172)
EOSAM1.LongDescendingNodeErrorKm (Km)
2.5
0.0
-2.5
-5.0
-7.5
-10.0
0
5
10
15
20
25
30
35
40
45
50
EOSAM1.ElapsedDays (Days)


Click Here or Press 'Esc' to Return
TERRA Predicted Mean Local Time (DOY150 Start)
Expected within MLT specification on 6/11/00 (DOY163)
10.753
10.752
10.751
10.750
10.749
10.748
10.747
10.746
10.745
10.744
EOSAM1.MltDescendingNode (Hours)
0
5
10
15
20
25
30
35
40
45
50
EOSAM1.ElapsedDaysFromEpoch (Days)

TERRA S/C Plans

- Deep Space Calibration Maneuver (NET 11/00).
- Roll Calibration Maneuver (06/21).
- CERES Yaw Maneuver (06/15).

EOC/IST Operational Status

06/05/2000 8:17

MMS/Analysis

Location	MMS			Analysis	
	OPS1	OPS2	SUPP*	OPS	SUPP
EOC					
EOC	(2.5.6.5)	4.0.6	(D/4.0.6)	4.0.1	(4.0.1)
IST					
ASTER (aos10)	(2.5.6.5)	4.0.6	(D/4.0.6)	4.0	
ASTER (aos11)				4.0	
CERES (EOSOPS1)	(2.5.6.5)	4.0.6	(D/4.0.6)	4.0	
CERES (EOSOPS2)				4.0	
CERES (EOSOPS)		4.0.6	(D/4.0.6)	4.0	
CERES (blackhole)					
MISR (MISR_IST1)	(2.5.6.5)	4.0.6	(D/4.0.6)		
MISR (MISR_IST2)		4.0.6	(D/4.0.6)	4.0	
MODIS (Roy)	(2.5.6.5)	4.0.6	(D/4.0.6)	4.0	
MODIS (Siegfried)		4.0.6	(D/4.0.6)	4.0	
MOPITT UT (Mopitt4)	(2.5.6.5)	4.0.6	(D/4.0.6)	4.0	
MOPITT@NCAR (ist)		4.06		4.0	
ASTER JPL (buzzard)	(2.5.6.5)	4.0.6			
SDVF GSFC					

Online

Location	Online	
	OPS	SUPP
EOC		
EOC	4.06	T/2.5.6.9
IST		
ASTER (aos19)	4.06	
ASTER (aos20)	4.06	
CERES (CER122401)	4.06	
CERES (CER122402)	4.06	
CERES (CER12LA01	4.06	
CERES (CERSNLA01)	4.06	
MISR (MISJPL01)	4.06	
MISR (MISJPL02)	4.06	
MODIS (MOD32G01)	4.06	
MODIS (MOD32G02)	4.06	
MOPITT UT (HMI_IST)	4.06	
MOPITT NCAR (MOPNB01)	4.06	
SDVF GSFC (FSTBGS01)	(2.5.8)	

Note: All EOC and IST system configuration changes must be coordinated with the FOT Ground System Manager (GSM). Mr. Jim King can be reached at jking@eoc.ecs.nasa.gov or 301 614–5572.

Legend:

n.n.n	Operational	D/ n.n.n	FOT/ IOT product development
(n.n.n)	Not available		Not implemented
T/ n.n.n	FOT/ IOT test only	*n.n.n.n*	Software version number

Macros

Ctrl-Shift-**G**	Green
Ctrl-Shift-**R**	Red
Ctrl-Shift-**Y**	Yellow
Ctrl-Shift-**B**	Blue
Ctrl-Shift-**E**	Erase colors

EMOS Ground System Operations 06/06/00

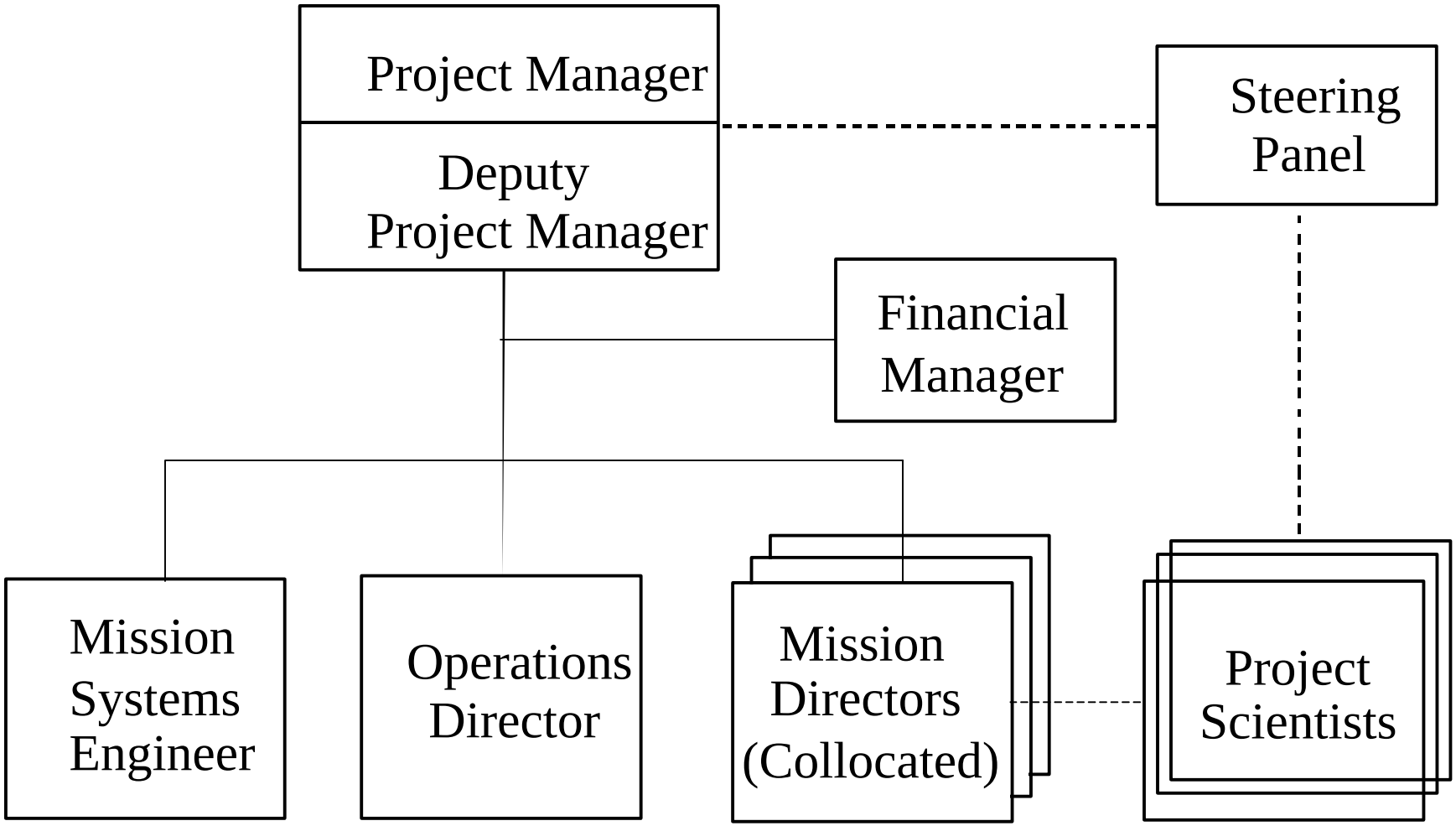
Subsystem	Version	PDB	Status
Online OPS	4.06	27.1 Flight	Operations
Online Sup	2.5.6.9	27.1 Flight	RFU*
MMS OPS1	2.5.6.5	27 Flight	RFU
MMS OPS2	4.0.6	27 Flight	Operations
MMS Sup	4.0.6	27 Flight	RFU
Analysis Ops	4.0.1	27 Flight	Operations
Analysis Sup	4.0.1	27 Flight	RFU

* * Ready For Use

Ground System Status

- EDOS
  - 5 full, and 5 partial day in arrears to teams for supplying data.
  - Tape problem @ GSIF.
- EOC Configuration
  - Reconfiguration to support AQUA S/C underway.

ESMO Organization



MD/FOT Organization