

ACD & LAT Environmental Monitoring

Michael Amato, Peters, Shiblee 1/17/03

IMPORTANT NOTE: For non-flyaway instrumentation needed for ACD testing, see ACD I&T Test Plan.

	Routed to Spacecraft (ELEX OFF)		Routed to Test Plug	Routed to PDU monitor card		Routed to TEM	Routed to AEM, DAQ ELEX FULL ON		Justifications
	Off, Pre-Deploy, Survival			LAT Hardware Safemode			Observing, T&DF ON, Detectors On,		
	Pri	Sec		A	B		A	B	
Temperatures									
Top/Sides of LAT (ACD Tiles)	5*	5*							To monitor the outermost part of LAT. One sensor for each side.
ACD FREE							12	12	To monitor ACD Electronics
ACD Composite Shell (Inside)	5*	5*							To monitor Tile and Shell gradients and to monitor Tracker to ACD radiation.
ACD Composite Shell (Outside)				2	2				
ACD BEA at Grid I/F	0	0		2	2				For flight verification of temperature across the Grid/ACD interface. (the main driver of our ACD temperatures). Desired at only two of the interface points.
ACD PMT Rail	4	4		4	4				To monitor ACD BEA temperatures on the structure that holds PMTs and HVBSs. During Survival modes (Inst OFF) monitor one sensor on each side.
Other Analogs									
ACD FREE V (LAT resp)							24	24	
ACD FREE I (LAT resp)							2	2	
ACD HV (I) (LAT resp)							24	24	
Digitals (overcurrent)									
Flyaway Accelerometers									
ACD BEA									
ACD Shell			3						

NOTES and ASSUMPTIONS:

* Some of these signals were not routed to the spacecraft until requested by LAT (Martin Nordby)

Note: All instrumentation that is 'flyaway' must go through a test plug.

Note: All signals not routed through the 24 AEM cables must be routed to the PDU or SIU (TBD).