

Level III to Diagram: L1&2 Product Generation

Req ID	Requirement	Comments	Diagrams
3.3.1.1 Housekeeping Data Ingest			
TLM0150	The LAT ISOC shall be able to process Level 0 data of at least 30 hours of recorded science and 36 hours of recorded housekeeping data within 24 hours.	This ensures the ISOC can handle the largest size data dump from the observatory. The data is assumed to be continuously collected at orbit averaged rates.	L0 Data Processing, L1&2 Product Generation
3.3.1.2 Housekeeping Data Processing			
TLM0190	The LAT ISOC shall process all Level 0 data received from the MOC.	Processing includes providing data extraction, state conversions and Engineering Unit (EU) conversions.	L0 Data Processing, L1&2 Product Generation
TLM0320	The LAT ISOC shall process retransmitted data within 24 hours of its arrival.	This is data resulting from a retransmission request sent by the LAT ISOC	L0 Data Processing, L1&2 Product Generation
TLM0330	The LAT ISOC shall process LAT instrument on-board diagnostic data.	This requirement applies to both RT and recorded data.	L0 Data Processing, Telemetry Monitoring
3.3.1.4 Housekeeping Data Quality & Stats			
TLM0520	The LAT ISOC shall record the quality and completeness of the telemetry received.		L0 File Ingest, Telemetry Monitoring, LAT Configuration
3.3.2.1 Science Data Processing			
DCP0070	The LAT ISOC shall generate Level 1 event files for each contact within 24 hours of receipt of data.	To be done autonomously.	L1&2 Product Generation

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DCP0090	The LAT ISOC shall process meta-data for each Level 1 file that describes the characteristics of the file.	Summary data to include: file size, time of creation, number of events etc..	L1&2 Product Generation
DCP0100	The LAT ISOC shall monitor Level 1 data for flaring gamma-ray sources.		L1&2 Product Generation
DCP0101	Use LAT science data to validate and refine the scientific alert information.		L1&2 Product Generation
DCP0102	The ISOC shall distribute alerts for sources that meet criteria specified by the GLAST Science Working Group (SWG).	These will be sources with short rise times or bright peak fluxes.	L1&2 Product Transmission
DCP0103	The ISOC shall post on its public website fluxes for a predetermined (by SWG) set of sources during the sky survey year.		L1&2 Product Transmission
DCP0104	The LAT ISOC shall monitor Level 1 data for Gamma-Ray Bursts not detected by GBM or LAT onboard algorithms.		L1&2 Product Transmission
DCP0105	For LAT GRBs detected by the onboard algorithm or in ground processing, the LAT ISOC will produce estimates of the coordinates, fluences, and light curves of Gamma-Ray Bursts and distribute these data within TBD hours of receipt of Level 0 data.		L1&2 Product Generation, L1&2 Product Transmission
DCP0106	The ISOC shall transmit new or refined information about GRBs to the Gamma-Ray Burst Coordinates Network (GCN).		L1&2 Product Transmission

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DCP0110	The LAT ISOC shall perform Level 2 processing within 24 hours of receipt of Level 0 data.		L1&2 Product Transmission
3.3.2.2 Science Data Transmission			
DCP0130	The LAT ISOC shall provide Level 1 data to the GSSC within 24 hours of receipt of Level 0 data.	Applies only if no problems are encountered that require operator intervention. Otherwise the data will be posted on a best effort basis.	L1&2 Product Generation, L1&2 Product Transmission
DCP0135	The LAT ISOC shall provide Level 2 data to the GSSC within 72 hours of receipt of Level 0 data.		L1&2 Product Generation, L1&2 Product Transmission
DCP0150	The LAT ISOC shall provide the capability to generate and deliver a product availability notice to the GSSC upon completion of Level 1 data set production.		L1&2 Product Generation, L1&2 Product Transmission
DCP0155	The LAT ISOC shall provide the capability to generate and deliver a product availability notice to the GSSC upon completion of Level 2 data set production.		L1&2 Product Generation, L1&2 Product Transmission
DCP0160	The product availability notice shall include the list of product files available for retrieval		L1&2 Product Generation, L1&2 Product Transmission
3.3.3 Data Archiving Requirements			
ARCH0150	The LAT ISOC shall archive Level 1 data for the life of the mission.		L1&2 Product Generation
ARCH0160	The LAT ISOC shall archive Level 2 data for the life of the mission		L1&2 Product Generation

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ARCH0170	The LAT ISOC shall archive catalogs or other delivered science products for the life of the mission.		L1&2 Product Generation