

# Level III to Diagram: L0 File Ingest

Req ID	Requirement	Comments	Diagrams
<b>3.1 LAT ISOC Configuration and Architecture Requirements</b>			
GEN0090	The LAT ISOC shall automatically receive from the MOC recorded science and housekeeping data.		L0 File Ingest
<b>3.3.1.1 Housekeeping Data Ingest</b>			
TLM0020	The LAT ISOC shall ingest all Level 0 data received from the MOC.		L0 File Ingest
TLM0030	Process Level 0 data received from the MOC that duplicates or overlaps portions of previously received Level 0 data.		L0 File Ingest
TLM0110	The LAT ISOC shall receive stored LAT diagnostic data as part of the Level 0 data.		L0 File Ingest
TLM0120	The LAT ISOC shall receive recorded Level 0 observatory HK and science data post pass.		L0 File Ingest
TLM0170	The LAT ISOC shall send requests for retransmission of observatory data to the MOC.		L0 File Ingest

## 3.3.1.2 Housekeeping Data Processing

Req ID	Requirement	Comments	Diagrams
TLM0210	The LAT ISOC shall process observatory telemetry that is compliant with the Consultative Committee for Space Data Systems (CCSDS) Packet Telemetry Recommendations as defined in the Series 100 Blue Books.		L0 File Ingest
TLM0220	The LAT ISOC shall accept and accommodate variable CCSDS length packets for science, housekeeping, and alert data.		L0 File Ingest, L0 Data Processing
TLM0350	The LAT ISOC shall distinguish between test HK data and operational HK data.	Assume the indication is in the Manifest or the Foo.msg.fits file.	L0 File Ingest
<b>3.3.1.4 Housekeeping Data Quality &amp; Stats</b>			
TLM0500	The LAT ISOC shall automatically perform data integrity checks, and record the results.	This includes at least a check of the anno12 header for each packet.	L0 File Ingest, Telemetry Monitoring, LAT Configuration
TLM0590	The LAT ISOC shall automatically assess the quality of each file received from the MOC.		L0 File Ingest
TLM0610	The LAT ISOC shall record data quality problems requiring operator intervention.		L0 File Ingest, Telemetry Monitoring, LAT Configuration
<b>3.3.2.1 Science Data Processing</b>			
DCP0050	The LAT ISOC shall distinguish between test science data and operational science data.	Assume the indication is in the Manifest or the Foo.msg.fits file.	L0 File Ingest
<b>3.3.2.2 Science Data Transmission</b>			

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DCP0170	The LAT ISOC shall provide the capability to generate Level 0 product delivery summary status data daily by APID.		L0 File Ingest
DCP0180	The product delivery summary status shall include the count of packets received from the MOC by APID.		L0 File Ingest
DCP0190	The product delivery summary status shall include the total number of bytes received from the MOC by APID.		L0 File Ingest
<b>3.3.3 Data Archiving Requirements</b>			
ARCH0030	The LAT ISOC shall retain LAT HK data on-line for 30 days.		L0 File Ingest, Trending
<b>3.4.9 Anomaly Tracking and Notification Requirements</b>			
ATNS0015	The LAT ISOC shall receive, process, and respond to LAT instrument alert messages.		L0 File Ingest, L0 Data Processing, Logging
ATNS0100	The LAT ISOC shall automatically receive notification of anomalous LAT events from the MOC.	Also supports GEN0050	L0 File Ingest, L0 Data Processing, Logging
ATNS0230	The LAT ISOC shall identify a situation where an expected file has not been received within a user-defined time period as an anomalous event.	This includes telemetry data as well as other files.	L0 File Ingest