Level III to Diagram: Trending

Req ID	Requirement	Comments	Diagrams

3.3.1.2 Housekeeping Data Processing

Req ID	Requirement	Comments	Diagrams
TLM0200	The LAT ISOC shall automatically process recorded observatory HK data when received from the MOC.		L0 Data Processing, Trending
TLM0310	The LAT ISOC shall process recorded housekeeping data at a minimum of 10 times the real-time rate.	This provides the ability to replay previously recorded data through the real-time system.	L0 Data Processing, Trending

3.3.3 Data Archiving Requirements

Req ID	Requirement	Comments	Diagrams
ARCH0030	The LAT ISOC shall retain LAT HK data on-line for 30 days.		L0 File Ingest, Trending

3.4.11 Calibration & Performance Requirements

Req ID	Requirement	Comments	Diagrams
C&P0030	The LAT ISOC shall have the capability to trend calibration data.	Applies to both stored and real-time command execution.	Trending

3.4.8 Trending Requirements

Req ID	Requirement	Comments	Diagrams
TRND0010	The LAT ISOC shall provide data analysis capabilities for trending the observatory data and relevant data from other sources.	Driven by a number of L2s: 4.2.3, 4.2.4, 4.3.1, 4.3.2, 4.3.4	Trending
TRND0020	The LAT ISOC shall provide the capability to specify a data set based on a user-defined set of mnemonics.	A data set is a user-defined set of telemetry mnemonic values defined by mnemonic name and time.	Trending

Req ID	Requirement	Comments	Diagrams
TRND0030	The LAT ISOC shall provide the capability to specify a data set based on a user-defined time span.		Trending
TRND0053	The LAT ISOC shall provide the capability to populate the data sets with data from archived raw packet files.		Trending
TRND0060	The LAT ISOC shall be capable of ingesting and storing data sets through an automated procedure.		Trending
TRND0070	The LAT ISOC shall be capable of ingesting data sets through user requests.		Trending
TRND0072	The LAT ISOC shall be capable of ingesting calibration data sets from both ground and flight calibration files.		Trending
TRND0084	The LAT ISOC shall retain trending data for life of mission.	Statistical trending data to include min, max, mean, and standard deviation.	Trending
TRND0090	The LAT ISOC shall provide the capability to generate plots of the ingested data.		Trending
TRND0100	The LAT ISOC plots shall depict mnemonic values versus time.		Trending
TRND0110	The LAT ISOC shall provide the capability to generate tabular reports of the ingested data.		Trending
TRND0120	The LAT ISOC shall be capable of generating a plot of from 1 to at least 4 mnemonics simultaneously.		Trending

Req ID	Requirement	Comments	Diagrams
TRND0130	The LAT ISOC shall be capable of generating a tabular report of from 1 to at least 4 mnemonics simultaneously.		Trending
TRND0150	The LAT ISOC shall provide the capability to display plots.		Trending
TRND0160	The LAT ISOC shall provide the capability to display tabular reports.		Trending
TRND0170	The LAT ISOC shall provide the capability to print plots.		Trending
TRND0180	The LAT ISOC shall provide the capability to print tabular reports.		Trending
TRND0190	The LAT ISOC shall provide the capability to save plots to file.		Trending
TRND0200	The LAT ISOC shall provide the capability to save tabular reports to file.		Trending
TRND0210	The LAT ISOC shall provide the capability to export tabular reports in Excel-compatible file format.	Provides ability for external analysis applications to access observatory data (e.g., Excel tool).	Trending
TRND0220	The LAT ISOC shall maintain trends of key parameters for the life of the mission.		Trending
TRND0230	The LAT ISOC shall provide the capability to calculate the maximum value of a user-defined parameter over a user-defined time-span.		Trending

Req ID	Requirement	Comments	Diagrams
TRND0240	The LAT ISOC shall provide the capability to calculate the minimum value of a user-defined parameter over a user-defined time-span.	Delete - duplicate	Trending
TRND0250	The LAT ISOC shall provide the capability to calculate the mean value of a user-defined parameter over a user-defined time-span.		Trending
TRND0260	The LAT ISOC shall provide the capability to calculate the standard deviation value of a user-defined parameter over a user-defined time-span.		Trending
TRND0270	The LAT ISOC shall provide the capability to include statistical values (i.e. maximums, minimums, means, and standard deviations) within plots.		Trending
TRND0280	The LAT ISOC shall provide the capability to include statistical values (i.e. maximums, minimums, means, and standard deviations) within tabular reports.		Trending
TRND0290	The LAT ISOC shall provide a WWW interface to allow authorized remote users to create and view plots.	Also supports WEB section	Trending
TRND0300	The LAT ISOC shall provide a WWW interface to allow authorized remote users to create and view tabularal reports.	Also supports WEB section	Trending