MOMA Alerts

A MOMA Alert is defined as a notification of certain parameters of interest in a single MOMA Test. This page details the logic we use to extract the data for each alert. Note that this is the master reference, which means the engineers and scientists should ensure that the logic detailed here is correct. All alert data is in an Alert Panel within a typical TID record __TOC__

General Error Check

Severity : Notice

- Message Log is parsed for the phrase 'Error' while excluding messages that contained 'Holding at stop for operator' or 'error =' <- Means a value was being set.

MAIF APV Comm Check

Severity : Warning

- Message Log is parsed for the phrase 'ldi: error'.

Spacewire Comm Error

Severity : Warning

- Spacewire Disconnect (HK 522) > 0 or Spacewire Parity (HK 523) > 0 after 30 sec.

Severity : Notice

- Spacewire Disconnect (HK 522) > 0 or Spacewire Parity (HK 523) > 0 only before 30 sec.

MOMA Safe Event

Severity : Notice

- MOMA_STATUS_SAFE (HK 507) is 1 at any time during the TID.

WRP Too Fast

Severity : Notice

- PWM Speed (HK 832) > 103000RPM at any time during the TID.

WRP Failed to Start

Severity : Warning

- PWM Speed (HK 832) surpassed 1000RPM but never reached over 99000RPM at any time during the TID.

WRP Pressure Spike

Severity : Warning

- MOT_SUP_IMON (HK 830) > 1.1A at any time during the TID.

Dark Counts

Severity : Warning

- SCAN_TELEM_DAC_ID (HK 252) == 20000 and SCAN_TELEM_DAC_VAL (HK 253) > 5 at any time during the TID.

Laser Burst Energy Variation

Severity : Info

- Standard Deviation of the Energy from all Pulses in a Single Burst > 5.0

Laser Pulses Mismatch

Severity : Notice

- Number of Main Pulses Commanded (HK 1002) != # of Pulses in the Burst

Unknown SEB Sequences

Severity : Notice

- Scan Type is LDI or EI && SEB Packet Sequence Count == 0
- Scan Mode determined using c_scan.scan_mode_as_string()
- Sequence Length determined using len(c_scan.seb_sequence_pkt_indexes())

Filament VMON Pegged

Severity : Warning

- FIL_VMON (HK 19) > 4.9 at any time during the TID.

Pulse Count | Packet Size Mismatch

Severity : Warning

- HKID 1050 (PLS_SUBPKT_CNT) != (pkt.length() - 4 / 16)

Summed Scan | TIC Mismatch

Severity : Warning

- In a sum scan, the number of summed scans != the number of TICs

Gap in Scans

Severity : Warning

- Bin Delta between Science packets is > 100

cFactor | TIC Mismatch

Severity : Warning

- Number of cFactors != # of TICs

Scan Status | TIC Mismatch

Severity : Warning

- Number of Scan Status Packets != # of TICs

Dropped Packets

Severity : Warning

- Packet Sequence Numbers

Both EMs On

Severity : Warning

- Both Electron Multipliers are on at the same time

Limit Violations

Severity : Warning

- Come Back Later

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