Alerts

Alerts are messages generated during mining that often serve as a notice or warning that a certain threshold or event occurred. Each alert contains a severity, a time, and a specific message.

MOMA Alerts

General Error Check

- **Alert ID**: 1
- **Severity**: Notice
- **Description**: Grep message log for "Error"

MAIF APV Comm

- **Alert ID**: 2
- **Severity**: Warning
- **Description**: Grep message log for "ldi: error"

Spacewire Comm Error

- **Alert ID**: 3
- **Severity**: Warning/Notice
- **Description**: Spacewire Parity (HK 522) > 0 or Spacewire Disconnect (HK 523) > 0 after 30sec

MOMA Safe Event

- **Alert ID**: 4
- **Severity**: Notice
- **Description**: HK 507 MAX, MOMA_STATUS_SAFE > 0 at any time during a TID

WRP Too Fast

- **Alert ID**: 5
- **Severity**: Notice
- **Description**: PWM Speed - HK 832 MAX > 103000

WRP Failed To Start

- **Alert ID**: 6

- **Severity**: Warning
- **Description**: PWM Speed - HK 832, MAX > 1000 and < 99000 RPM

WRP Pressure Spike

- **Alert ID**: 7
- **Severity**: Warning
- **Description**: HK 830, MOT_SUP_IMON, MAX > 1.1A

Dark Counts

- **Alert ID**: 8
- **Severity**: Warning
- **Description**: HK 252 SCAN_TELEM_DAC_ID = 20000 AND HK 253 SCAN_TELEM_DAC_VAL > 5

Laser Burst Energy Variation

- **Alert ID**: 9
- **Severity**: Info
- **Description**: Std. Dev. of burst pulse energy is > 5.0

Laser Pulses Mismatch

- **Alert ID**: 10
- **Severity**: Notice
- **Description**: Main Pulses != # of Pulses in Burst

Unknown SEB sequences

- **Alert ID**: 11
- **Severity**: Notice
- **Description**: Scan type is LDI or EI, and SEB packet sequence count == 0

Filament VMON Pegged

- **Alert ID**: 12
- **Severity**: Warning
- **Description**: Anytime Filament VMON HK is > 4.9

Expected Pulse Count Mismatch

- **Alert ID**: 13
- **Severity**: Warning
- **Description**: HKID 1050 (PLS_SUBPKT_CNT) != (pkt.length() - 4 / 16)

Gap in Scans

- **Alert ID**: 14
- **Severity**: Warning
- **Description**: Bin Delta between Science packets is > 100

Old Packet Format

- **Alert ID**: 15
- **Severity**: Info
- **Description**: Scan Packet Version Number != 2 (c_scan.science_data_pkt_version())

Missing Scan Status Packets

- **Alert ID**: 16
- **Severity**: Warning
- **Description**: Number of Scan Status Packets != Number of Scans in Summed Packet | Disable for Dark Counts

Dropped Packets

- **Alert ID**: 17
- **Severity**: Warning
- **Description**: Dropped packets are detected by gaps in the packets' sequence numbers.

Both EMs On

- **Alert ID**: 18
- **Severity**: Warning
- **Description**: Both Electron Multipliers are on at the same time

Sub-system Communication Errors

- **Alert ID**: 19
- **Severity**: Warning
- **Description**: Communication errors between any of the sub-systems (MAIF, SEB, GC, LASER) as reported by the CDH/FSW.

WRP Instantaneous High Current

- **Alert ID**: 20
- **Severity**: Warning
- **Description**: The instantaneous WRP Current exceeded a threshold. A Problem Report should be opened if it happened on the Flight Model.

Mass Flow	WRP Back Pressure	Instant WRP Current

MP_PRESS < 0.5	4 Torr	0.55 A
MP_PRESS < 0.5	6 Torr	0.65 A
MP_PRESS < 0.5	8 Torr	0.75 A
MP_PRESS > 0.5	4 Torr	0.70 A
MP_PRESS > 0.5	6 Torr	0.80 A
MP_PRESS > 0.5	8 Torr	0.90 A

WRP 1-Min Average High Current

- **Alert ID**: 21
- **Severity**: Warning
- **Description**: The 1-Min Avg WRP Current exceeded a threshold. A Problem Report should be submitted if it happened on the Flight Model.

Mass Flow	WRP Back Pressure	1-Min Avg WRP Current
MP_PRESS < 0.5	4 Torr	0.45 A
MP_PRESS < 0.5	6 Torr	0.55 A
MP_PRESS < 0.5	8 Torr	0.65 A
MP_PRESS > 0.5	4 Torr	0.60 A
MP_PRESS > 0.5	6 Torr	0.70 A
MP_PRESS > 0.5	8 Torr	0.80 A

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