

Order 230170

General Information

DQR Information

D210223.2 [mos/aeri/M1]

DQR Submitter

Jonathan Gero

Subject

Side Hatch Failure

Description

The side hatch actuator failed during this time period. The sky hatch, however, was still functioning normally some of the time. The scan sequence was reconfigured on some days for only zenith sky observations.

Suggestions

All limb views during this period are invalid and should not be used. Zenith sky views are good to use, when the hatch is open.

Affected Time Spans

Start Date/Time	End Date/Time	Data Quality Metric
2019-10-15 13:51:00	2019-10-29 10:00:00	Suspect

Measurements

mosaerich1M1.b1(3)

all_mean_rad
mean_rad
standard_dev_all_mean_rad

mosaerich2M1.b1(3)

all_mean_rad
mean_rad
standard_dev_all_mean_rad

mosaeriengineerM1.b1(26)

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
maxSampleStdDev
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
skyViewImaginaryRadiance2282_2287
skyViewImaginaryRadiance2295_2300
skyViewImaginaryRadiance2510_2515
skyViewImaginaryRadiance675_680
skyViewImaginaryRadiance700_705
skyViewImaginaryRadiance985_990
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
twoMinuteNoiseEstimateFactor

[More...](#)

mosaeriM1.00(1)

Raw data stream - documentation not supported

mosaerisummaryM1.b1(31)

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LWskyNENacceptable
LWskyNEN
maxSampleStdDev
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
SkyBrightnessTempSpectralAveragesCh1
SkyBrightnessTempSpectralAveragesCh2

SkyNENCh1
SkyNENCh2
SkyRadianceSpectralAveragesCh1
SkyRadianceSpectralAveragesCh2
SkyUniformityCh1
SkyUniformityCh2
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SWskyNENacceptable
SWskyNEN

[More...](#)

Other Links (DQRs, DQPRs)

[DQPR 8029](#)

DQPR 8029

DQR Attachments

No attachments found!

General Information

DQR Information

D210223.3 [mos/aeri/M1]

DQR Submitter

Jonathan Gero

Subject

Sky Hatch Failure

Description

The sky hatch actuator arm was broken during this time. Zenith sky view data should not be used during this time period.

Suggestions

Do not use zenith sky view data during this time period.

Affected Time Spans

Start Date/Time	End Date/Time	Data Quality Metric
2019-11-21 10:00:00	2019-11-26 11:00:00	Incorrect

Measurements

mosaerich1M1.b1(3)

all_mean_rad
mean_rad
standard_dev_all_mean_rad

mosaerich2M1.b1(3)

all_mean_rad
mean_rad
standard_dev_all_mean_rad

mosaeriengineerM1.b1(28)

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LWskyNEN
maxSampleStdDev
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
skyViewImaginaryRadiance2282_2287
skyViewImaginaryRadiance2295_2300
skyViewImaginaryRadiance2510_2515
skyViewImaginaryRadiance675_680
skyViewImaginaryRadiance700_705
skyViewImaginaryRadiance985_990
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300

surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SWskyNEN
twoMinuteNoiseEstimateFactor

[More...](#)

mosaeriM1.00(1)

Raw data stream - documentation not supported

mosaerisummaryM1.b1(21)

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LWskyNEN
maxSampleStdDev
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SWskyNEN

[More...](#)

Other Links (DQRs, DQPRs)

[DQPR 8029](#)

DQPR 8029

DQR Attachments

No attachments found!

General Information

DQR Information

DQR Submitter

Jonathan Gero

Subject

Snow Incursion in the M-AERI Front-End Blackbodies caused Invalid Data

Description

Persistent blizzards caused the M-AERI rain sensor to operate incorrectly, and prevented the front-end hatches from closing during blowing snow events. Unwanted snow accumulation inside the front-end hex caused issues with scene mirror rotation, and led to snow deposition inside the ambient blackbody.

Suggestions

Scene mirror pointing knowledge (sceneMirrorAngle) is not reliable during this time period. Due to snow deposition in the optical path and inside the ambient blackbody, the calibrated radiance data may have serious data quality issues. Recommend not using data from this time period.

Affected Time Spans

Start Date/Time	End Date/Time	Data Quality Metric
2020-03-06 09:00:00	2020-04-15 13:30:00	Suspect

Measurements

mosaerich1M1.b1(4)

all_mean_rad
mean_rad
sceneMirrorAngle
standard_dev_all_mean_rad

mosaerich2M1.b1(4)

all_mean_rad
mean_rad
sceneMirrorAngle
standard_dev_all_mean_rad

mosaeriengineerM1.b1(43)

ABBviewStdDevRadiance2282_2287
ABBviewStdDevRadiance2295_2300

ABBviewStdDevRadiance2510_2515
ABBviewStdDevRadiance675_680
ABBviewStdDevRadiance700_705
ABBviewStdDevRadiance985_990
elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LW_HBB_NEN
LWresponsivity
LWskyNENacceptable
LWskyNENlimit
LWskyNEN
maxSampleStdDev
sceneMirrorAngle
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
skyViewImaginaryRadiance2282_2287
skyViewImaginaryRadiance2295_2300
skyViewImaginaryRadiance2510_2515
skyViewImaginaryRadiance675_680
skyViewImaginaryRadiance700_705
skyViewImaginaryRadiance985_990
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SW_HBB_NEN
SWresponsivity
SWskyNENacceptable
SWskyNENlimit
SWskyNEN
twoMinuteNoiseEstimateFactor

[More...](#)

mosaeriM1.00(1)

Raw data stream - documentation not supported

mosaerisummaryM1.b1(42)

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
HBB2minNENestimateNo1Ch1
HBB2minNENestimateNo1Ch2
HBB2minNENestimateNo2Ch1
HBB2minNENestimateNo2Ch2
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LW_HBB_NEN
LWresponsivity
LWskyNENacceptable
LWskyNEN
maxSampleStdDev
ResponsivitySpectralAveragesCh1
ResponsivitySpectralAveragesCh2
sceneMirrorAngle
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
SkyBrightnessTempSpectralAveragesCh1
SkyBrightnessTempSpectralAveragesCh2
SkyNENCh1
SkyNENCh2
SkyRadianceSpectralAveragesCh1
SkyRadianceSpectralAveragesCh2
SkyUniformityCh1
SkyUniformityCh2
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SW_HBB_NEN
SWresponsivity
SWskyNENacceptable
SWskyNEN

[More...](#)

Other Links (DQRs, DQPRs)

[DQPR 8462](#)

DQPR 8462

DQR Attachments

No attachments found!

General Information

DQR Information

D200113.2 [mos/aeri/M1]

DQR Submitter

Jonathan Gero

Subject

AERI Operating System Issues

Description

During the period from the start of the campaign to Nov 18, networking issues prevented the AERI operating system from functioning reliably. Uptime for the instrument data collect is poor. Limited data was collected during this period.

Suggestions

The data collected during this period is good, though very limited.
Affected Time Spans

Start Date/Time	End Date/Time	Data Quality Metric
2019-10-11 00:00:00	2019-11-18 08:55:00	Note

Measurements

mosaerich1M1.b1(38)

AERIunitNumber
all_mean_rad
alt
Altitude
atmosphericPressure
atmosphericRelativeHumidity
base_time
BBsupportStructureTemp
calibratedSceneID
calibrationAmbientTemp

calibrationCBBtemp
calibrationHBBtemp
channelNumber
dateYYMMDD
hatchOpen
instrumentUnitNumber
JulianDay
Latitude
lat
lon
Longitude
maxPitch
maxRoll
mean_rad
missingDataFlag
outsideAirTemp
qc_time
sceneMirPosEncoderMaxDrift
sceneMirrorAngle
sceneViewDuration
standard_dev_all_mean_rad
systemReleaseNumber
timeHHMMSS
time_offset
time
Time_UTC_hours
wnum2
wnum

[More...](#)

mosaerich2M1.b1(38)

AERIunitNumber
all_mean_rad
alt
Altitude
atmosphericPressure
atmosphericRelativeHumidity
base_time
BBsupportStructureTemp
calibratedSceneID
calibrationAmbientTemp
calibrationCBBtemp
calibrationHBBtemp
channelNumber
dateYYMMDD
hatchOpen
instrumentUnitNumber

JulianDay
Latitude
lat
lon
Longitude
maxPitch
maxRoll
mean_rad
missingDataFlag
outsideAirTemp
qc_time
sceneMirPosEncoderMaxDrift
sceneMirrorAngle
sceneViewDuration
standard_dev_all_mean_rad
systemReleaseNumber
timeHHMMSS
time_offset
time
Time_UTC_hours
wnum2
wnum

[More...](#)

mosaeriengineerM1.b1(142)

ABBapexTemp
ABBapexTempWeight
ABBbottomTemp
ABBbottomTempWeight
ABBmaxTempDiff
ABBtempOffset
ABBtopTemp
ABBtopTempWeight
ABBviewStdDevRadiance2282_2287
ABBviewStdDevRadiance2295_2300
ABBviewStdDevRadiance2510_2515
ABBviewStdDevRadiance675_680
ABBviewStdDevRadiance700_705
ABBviewStdDevRadiance985_990
AERIunitNumber
airNearBBsTemp
airNearInterferometerTemp
alt
Altitude
atmosphericPressure
atmosphericRelativeHumidity
base_time

BBcavityFactor
BBcontroller1temp
BBcontroller2temp
BBsupportStructureTemp
calibratedSceneID
calibrationAmbientTemp
calibrationCBBtemp
calibrationHBBtemp
coadditionsCount
computerTemp
coolerCompressorTemp
coolerCurrent
coolerExpanderTemp
coolerPowerSupplyTemp
dataAvailable
dateYYMMDD
detectorTemp
elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
expandedInterferogramSize
FFOVhalfAngle
fixed12KohmResistor
fixed250ohmResistor
fixed97KohmResistor
frontEndFanAirHeatedTemp
frontEndFanAirTempDiff
frontEndFanAirUnheatedTemp
hatchOpen
HBBapexTemp
HBBapexTempWeight
HBBbottomTemp
HBBbottomTempWeight
HBBmaxTempDiff
HBBstable
HBBtempDriftLimit
HBBtempDrift
HBBtempOffset
HBBtopTemp
HBBtopTempWeight
HBBviewStdDevRadiance2282_2287
HBBviewStdDevRadiance2295_2300
HBBviewStdDevRadiance2510_2515
HBBviewStdDevRadiance675_680
HBBviewStdDevRadiance700_705
HBBviewStdDevRadiance985_990
instrumentUnitNumber

interferometerEnclosureRelativeHumidity
interferometerSecondPortTemp
interferometerWindowTemp
JulianDay
Latitude
lat
lon
Longitude
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LW_HBB_NEN
LWresponsivity
LWskyNENacceptable
LWskyNENlimit
LWskyNEN
maxPitch
maxRoll
maxSampleStdDev
mirrorMotorTemp
missingDataFlag
motorDriverTemp
numberOfTerms
opticsCompartmentRelativeHumidity
originalInterferogramSize
originalLaserWavenumberCh1
originalLaserWavenumberCh2
outputLaserWavenumber
outsideAirTemp
qc_time
rackAmbientTemp
rainSensorIntensity
sceneMirPosCount
sceneMirPosEncoderDrift
sceneMirPosEncoderMaxDrift
sceneMirPosEncoder
sceneMirrorAngle
sceneMirrorMotorStep
sceneMirrorPosition
sceneMirrorTemp
sceneViewDuration
SCEtemp
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
skyViewImaginaryRadiance2282_2287
skyViewImaginaryRadiance2295_2300
skyViewImaginaryRadiance2510_2515
skyViewImaginaryRadiance675_680
skyViewImaginaryRadiance700_705

skyViewImaginaryRadiance985_990
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
spareTemp
sunSensorIntensity
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SW_HBB_NEN
SWresponsivity
SWskyNENacceptable
SWskyNENlimit
SWskyNEN
systemReleaseNumber
timeHHMMSS
time_offset
time
Time.UTC_hours
twoMinuteNoiseEstimateFactor

[More...](#)

mosaeriM1.00(1)

Raw data stream - documentation not supported

mosaerisummaryM1.b1(95)

ABBmaxTempDiff
AERIunitNumber
alt
Altitude
atmosphericPressure
atmosphericRelativeHumidity
base_time
calibratedSceneID
calibrationAmbientTemp
calibrationCBBtemp
calibrationHBBtemp
dataAvailable
dateYYMMDD
elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705

elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
frontEndFanAirTempDiff
hatchOpen
HBB2minNENestimateNo1Ch1
HBB2minNENestimateNo1Ch2
HBB2minNENestimateNo2Ch1
HBB2minNENestimateNo2Ch2
HBBmaxTempDiff
HBBstable
HBBtempDrift
instrumentUnitNumber
JulianDay
Latitude
lat
lon
Longitude
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LW_HBB_NEN
LWresponsivity
LWskyNENacceptable
LWskyNEN
maxPitch
maxRoll
maxSampleStdDev
missingDataFlag
outsideAirTemp
qc_time
rainSensorIntensity
ResponsivitySpectralAveragesCh1
ResponsivitySpectralAveragesCh2
sceneMirPosEncoderDrift
sceneMirPosEncoderMaxDrift
sceneMirrorAngle
sceneViewDuration
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
SkyBrightnessTempSpectralAveragesCh1
SkyBrightnessTempSpectralAveragesCh2
SkyNENCh1
SkyNENCh2
SkyRadianceSpectralAveragesCh1
SkyRadianceSpectralAveragesCh2
SkyUniformityCh1
SkyUniformityCh2
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300

skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
sunSensorIntensity
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SW_HBB_NEN
SWresponsivity
SWskyNENacceptable
SWskyNEN
systemReleaseNumber
timeHHMMSS
time_offset
time
Time_UTC_hours
wnumsum10
wnumsum11
wnumsum12
wnumsum13
wnumsum14
wnumsum1
wnumsum2
wnumsum3
wnumsum4
wnumsum5
wnumsum6
wnumsum7
wnumsum8
wnumsum9

[More...](#)

Other Links (DQRs, DQPRs)

[DQPR 8029](#)

DQPR 8029

DQR Attachments

No attachments found!

General Information

DQR Information

D200103.3 [mos/aeri/M1]

DQR Submitter

Jonathan Gero

Subject

The M-AERI scene mirror was replaced as part of routine preventative maintenance. Following the replacement, there was an issue with the scene mirror motor rotation.

Description

The scene mirror motor had to be disconnected during the scene mirror replacement. After the mirror was replaced and the motor was reconnected, there was an issue getting the motor working normally again. The motor connectors were cleaned and re-seated, and the issue was resolved.

Suggestions

Since the scene mirror was not rotating during this period, all radiance values are incorrect and can not be recovered. Do not use radiance data from this period.

Affected Time Spans

Start Date/Time	End Date/Time	Data Quality Metric
2020-01-01 11:20:00	2020-01-02 06:30:00	Incorrect

Measurements

mosaerich1M1.b1(4)

all_mean_rad
mean_rad
sceneMirrorAngle
standard_dev_all_mean_rad

mosaerich2M1.b1(4)

all_mean_rad
mean_rad
sceneMirrorAngle
standard_dev_all_mean_rad

mosaeriengineerM1.b1(50)

ABBviewStdDevRadiance2282_2287
ABBviewStdDevRadiance2295_2300
ABBviewStdDevRadiance2510_2515
ABBviewStdDevRadiance675_680
ABBviewStdDevRadiance700_705
ABBviewStdDevRadiance985_990

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
HBBviewStdDevRadiance2282_2287
HBBviewStdDevRadiance2295_2300
HBBviewStdDevRadiance2510_2515
HBBviewStdDevRadiance675_680
HBBviewStdDevRadiance700_705
HBBviewStdDevRadiance985_990
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LW_HBB_NEN
LWresponsivity
LWskyNENacceptable
LWskyNENlimit
LWskyNEN
maxSampleStdDev
sceneMirrorAngle
sceneMirrorPosition
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
skyViewImaginaryRadiance2282_2287
skyViewImaginaryRadiance2295_2300
skyViewImaginaryRadiance2510_2515
skyViewImaginaryRadiance675_680
skyViewImaginaryRadiance700_705
skyViewImaginaryRadiance985_990
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SW_HBB_NEN
SWresponsivity
SWskyNENacceptable
SWskyNENlimit
SWskyNEN
twoMinuteNoiseEstimateFactor

[More...](#)

mosaeriM1.00(1)

Raw data stream - documentation not supported

mosaerisummaryM1.b1(42)

elevatedLayerAirTemp2282_2287
elevatedLayerAirTemp700_705
elevatedLayerRadiance2282_2287
elevatedLayerRadiance700_705
HBB2minNENestimateNo1Ch1
HBB2minNENestimateNo1Ch2
HBB2minNENestimateNo2Ch1
HBB2minNENestimateNo2Ch2
longwaveWindowAirTemp985_990
longwaveWindowRadiance985_990
LW_HBB_NEN
LWresponsivity
LWskyNENacceptable
LWskyNEN
maxSampleStdDev
ResponsivitySpectralAveragesCh1
ResponsivitySpectralAveragesCh2
sceneMirrorAngle
shortwaveWindowAirTemp2510_2515
shortwaveWindowRadiance2510_2515
SkyBrightnessTempSpectralAveragesCh1
SkyBrightnessTempSpectralAveragesCh2
SkyNENCh1
SkyNENCh2
SkyRadianceSpectralAveragesCh1
SkyRadianceSpectralAveragesCh2
SkyUniformityCh1
SkyUniformityCh2
skyViewStdDevRadiance2282_2287
skyViewStdDevRadiance2295_2300
skyViewStdDevRadiance2510_2515
skyViewStdDevRadiance675_680
skyViewStdDevRadiance700_705
skyViewStdDevRadiance985_990
surfaceLayerAirTemp2295_2300
surfaceLayerAirTemp675_680
surfaceLayerRadiance2295_2300
surfaceLayerRadiance675_680
SW_HBB_NEN
SWresponsivity
SWskyNENacceptable
SWskyNEN

[More...](#)

Other Links (DQRs, DQPRs)

DQR Attachments

No attachments found!

undefined