

ICESat-2 PROJECT SCIENCE OFFICE REPORT
Monday, July 8, 2019 thru Sunday, July 14, 2019

RGTs spanned: 167-258
Cycle 4

Items of Note:

All ATLAS housekeeping data is nominal; laser 2 is firing at energy level 4 and in science mode. The laser returned to fire on July 8 at 18:16 UTC, and all 3 PCEs were returned to science mode on July 9 at 20:56 UTC. MW 45 is actively being planned, with the biggest item being that vegetation off-pointing is slated to start at that time (nominally July 25).

****ELEMENT DETAILS BELOW****

CAMS/POD/PPD:

CAMS: Nominal CAMS operations resumed with constraint and conjunction monitoring for mission weeks 43 and 44, and mission planning for mission week 45.

POD: Nominal operations continue.

PPD: Nominal operations continue. Final ANC05 PPD products have been delivered through DOY 175 (June 24). We've also looked at the resonance characteristics that are a result of the airplane mode. They are comparable to those we observed last time we were in this solar panel configuration.

ISF:

All ATLAS housekeeping data is nominal
Laser 2 is firing at energy level 4 and in science mode
Laser Fire: 2019-189-18:16:08.552 (2019-July-08-18:16:08.552) UTC
All 3 PCEs in science mode: 2019-190-20:56:53.643 (2019-July-09-20:56: 53.643) UTC
WTEM Peak to Edge Ratio: 1.249
Laser 2 Temperature Error: -0.27C
SADA in Airplane Mode
Spacecraft orientation: - X

Mission Planning:

MW44 ATS is loaded to the spacecraft and currently operating
MW45 is being planned - Veg tracks are planned to start during MW45
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**Activities during the past week:**

**Real-time activities:**

Completed ATLAS activation and return to Science mode on Monday and Tuesday of this past week.

ATS activities:

DMU18

LCA 10 putting laser in ARM mode to mitigate HIE with 15592 (COSMOS 1633)

Started routine calibration activities on 2019-192 (2019-July-11)

Other Activities:

Monitored laser temperature, health and performance post-fire.

Near-term activities:

Monitor results of instrument calibrations and re-calibrate as needed.

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Notes/Issues:

1. Preparations for loading Rx Algorithm V8 parameters will re-commence next week.
2. Continuing Hardware refresh planning - testbed servers are being ordered.

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LTO Schedule:

All items remain on schedule

**SIPS:**

- The SIPS is operating nominally:
  - Ingested and distributed Level 0 data to the ISF.
  - Generated L1A and L1B products and distributed ATL02s to the ISF, POD, and SCF.
  - Distributed selected ATL01s to the ISF and SCF by special request.
  - Generated rapids ATL03 using ANC03/04/05 files from the CAMS.
  - Distributed ATL03 (rapids) to the SCF.
- SIPS started producing rapid ATL03s from July 9 when the PCEs went into science mode.

**ASAS:**

ASAS is tracking down a bug that may be the root cause of missing data in granules with an AMCS calibration.

Otherwise, everything is being wrapped up for a code freeze on Monday 7/15.

**SCF:**

The SCF is operating nominally. Data for releases 001 and R001 are being ingested and distributed. Full granule subscriptions are current; subsetting subscriptions are still running. A Python 3 environment has been installed on the test server, which should allow full testing of the data management scripts and subsetter in Python 3 to begin soon. ATL06 trending issues have been partially resolved. A file listing the current SCF data holdings is attached.

\* Data Management -- Possible use of another system with SDMS to help with processing data requests is still under consideration. Some Python 3 environment issues have been resolved. The test document is being reviewed to ensure it is up to date for the latest

features. One of the ATL06 trending fixes resulted in the same error being triggered in a different way, so further investigation is needed to fully resolve this issue.

\* Subsetter -- Some minor edits were made to verbose logging, and unit tests were updated to use data from mission cycle 3. A similar update of data choice for integration testing is in progress.

\* Visualizer -- Continued working on converting the code from Python 2 to Python 3, including updating data instances from PyQt4 to PyQt5. Worked on documenting the creation of apps under Python 2 to ensure there is a stable base of information to work from for when this is done in Python 3.

### **ATL02/Instrument Science:**

The team is currently tracking 6 open issues (1 new this week, 1 resurrected). No significant technical impacts to the products are expected as currently delivered for release 001. Work is ongoing for developing quality assessment mechanisms.

### **ATL03:**

ATBD updates are ongoing as we prepare for release 002 of the data product later this summer, specifically with changes to static uncertainty values as we wait for dynamically calculated uncertainties later in the summer. Analysis also continues of ATL03 data collected at the 88S calibration site.

### **ISF ACTIVITIES MISSION WEEK 044:**

\* Not in science mode

^ Could affect science data quality

2019/192 01:02:36.0000 DMU0017 for 75 minutes

\* 2019/192:03:47:05.0000 TEP data collection for 3 minutes

\* 2019/192:05:21:22.0000 TEP data collection for 3 minutes

^ 2019/192:05:40:59.0000 AMCS Cal for 2 minutes over open ocean

\* 2019/192:08:18:39.0000 Laser Conjunction Avoidance #10 15592 (COSMOS 1633) 11-Jul-2019 08:18:54 with Laser to ARM mode for one minute

^ 2019/192:11:43:47.0000 AMCS Cal for 2 minutes over open ocean

2019/192:13:15:24.0000 OCEANscan (22 minutes)

^ 2019/192:15:00:00.0000 Laser Window dump for 5 minutes

\* 2019/192:17:55:40.0000 TEP data collection for 3 minutes

\* 2019/192:19:29:58.0000 TEP data collection for 3 minutes

\* 2019/192:21:04:15.0000 TEP data collection for 3 minutes

\* 2019/192:22:38:32.0000 TEP data collection for 3 minutes

\* 2019/193:00:12:50.0000 TEP data collection for 3 minutes

2019/193:01:02:28.0000 OCEANscan (22 minutes)

\* 2019/193:01:47:07.0000 TEP data collection for 3 minutes

^ 2019/193:03:09:34.0000 VBG sweep in Science mode for 3 minutes  
\* 2019/193:03:21:24.0000 TEP data collection for 3 minutes  
\* 2019/193:04:55:41.0000 TEP data collection for 3 minutes  
^ 2019/193:05:15:18.0000 AMCS Cal for 2 minutes over open ocean  
^ 2019/193:11:18:06.0000 AMCS Cal for 2 minutes over open ocean  
^ 2019/193:12:35:18.0000 VBG sweep in Science mode for 3 minutes  
2019/193:12:49:43.0000 OCEANscan (22 minutes)  
^ 2019/193:14:26:41.0000 AMCS Cal for 2 minutes over open ocean  
2019/193:16:30:00.0000 RTWscan (90 minutes)  
\* 2019/193:19:04:17.0000 TEP data collection for 3 minutes  
\* 2019/193:20:38:34.0000 TEP data collection for 3 minutes  
\* 2019/193:22:12:51.0000 TEP data collection for 3 minutes  
\* 2019/193:23:47:09.0000 TEP data collection for 3 minutes  
2019/194:00:36:47.0000 OCEANscan (22 minutes)  
\* 2019/194:01:21:26.0000 TEP data collection for 3 minutes  
\* 2019/194:02:55:43.0000 TEP data collection for 3 minutes  
\* 2019/194:04:30:00.0000 TEP data collection for 3 minutes  
^ 2019/194:04:49:37.0000 AMCS Cal for 2 minutes over open ocean  
^ 2019/194:05:03:45.0000 Laser Dark image dump for 7 minutes  
\* 2019/194:06:03:48.0000 TEP data collection for 3 minutes  
^ 2019/194:06:23:54.0000 AMCS Cal for 2 minutes over open ocean  
2019/194:09:35:10.0000 TOO (TOOid=1069) for 3 minutes  
^ 2019/194:10:52:25.0000 AMCS Cal for 2 minutes over open ocean  
2019/194:12:24:02.0000 OCEANscan (22 minutes)  
^ 2019/194:14:01:00.0000 AMCS Cal for 2 minutes over open ocean  
^ 2019/194:17:48:15.0000 Laser Raw image dump for 7 minutes  
\* 2019/194:18:38:35.0000 TEP data collection for 3 minutes  
2019/194:19:41:50.0000 TOO (TOOid=1056) for 3 minutes  
\* 2019/194:20:12:53.0000 TEP data collection for 3 minutes  
\* 2019/194:21:47:10.0000 TEP data collection for 3 minutes  
\* 2019/194:23:21:27.0000 TEP data collection for 3 minutes  
2019/195:00:11:06.0000 OCEANscan (22 minutes)  
\* 2019/195:00:55:45.0000 TEP data collection for 3 minutes  
\* 2019/195:02:30:02.0000 TEP data collection for 3 minutes  
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\* 2019/195:19:47:11.0000 TEP data collection for 3 minutes  
\* 2019/195:21:21:29.0000 TEP data collection for 3 minutes  
^ 2019/195:22:01:00.0000 Stellar centroid window dump for 90 minutes (no stellar centroids)

\* 2019/196:00:30:03.0000 TEP data collection for 3 minutes  
2019/196:01:19:42.0000 OCEANscan (22 minutes)  
\* 2019/196:02:04:21.0000 TEP data collection for 3 minutes  
2019/196:02:46:13.0000 RTWscan (90 minutes)  
\* 2019/196:05:12:55.0000 TEP data collection for 3 minutes  
^ 2019/196:05:32:32.0000 AMCS Cal for 2 minutes over open ocean  
^ 2019/196:06:00:00.0000 Stellar centroid image dump for 90 minutes (no stellar centroids)  
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