

ICESat-2 PROJECT SCIENCE OFFICE REPORT

Monday, February 18, 2019 thru Sunday, February 24 2019

RGTs spanned: 788-894
Cycle 2

Items of Note:

All ATLAS housekeeping data is nominal; laser 2 is firing at energy level 4 and in science mode. SIPS and the SCF successfully handled the most robust data development and delivery schedule since launch, and continue to do so nominally (all level 1 and 2 products as before, and now are routinely generating several level 3 products for distribution on the SCF for science team members – ATL06 and ATL07/10 currently being developed in operations, and ATL08 is in the works pending successful results in the development “playground”).

****ELEMENT DETAILS BELOW****

CAMS/POD/PPD:

CAMS: Regular CAMS operations continue with constraint and conjunction monitoring for mission week 24, and mission planning for mission week 25.

POD: Regular POD operations continue. Final POD is completed through GPS week 2038, and intermediate POD is completed through GPS week 2040. All results look nominal.

PPD: In response to an identified sinusoidal data variation during the TOO at WSMR in elevation, PPD found a 0.04 timing bias in the pointing solution. It is related to the extraction of 10 Hz rates from the 50 Hz gyro angles. Although this timing bias is always present the impact is only apparent when the TOO maneuver occurs- as the roll motion magnifies the error. PPD is working with POD to determine the best plan forward and will proceed with some test and evaluation on potential fixes.

ISF:

All ATLAS housekeeping data is nominal
Laser 2 is firing at energy level 4 and in science mode
SADA in Airplane Mode
Spacecraft orientation : -X

Mission Planning:

MW24 ATS is loaded to the spacecraft and currently operating.

MW25 is being planned

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Activities during the past week:

ATS activities:

All ATLAS and pointing activities were routine and completed as planned  
MW23 ATS includes a VBG sweep over Greenland (note 1 below)

Real-time activities

Feb 20: Changed the ILRS go/nogo flag appropriately around the DMU (03:13-04:22) (note 2)  
Executed standing CAR 91 to clear SBC errors.

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Upcoming activities:

MW24 scheduled activities in the ATS: MW23 and MW24 Activities are attached

Other Near-term activities:

RIONet Mail server moving to IONet - Testing with ITOS-2
PDB E.0.1 - To be delivered next week. ISF will perform regression testing on dev servers and FLATLAS

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Notes/Issues:

1. ISF has been working with ATLAS SE to plan science mode VBG sweeps in a way that minimizes variation in the return signal due to variations in the background and surface. This will be the first sweep over the interior of Greenland at night.
2. Attaching an updated version of the MS23 activities that include times of the DMU.

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LTO Schedule:

All items remain on schedule except

PDB E.0.1 install in operations to be coordinated with the MOC.

SIPS:

- The SIPS is operating nominally:
 - o Ingested and distributed Level 0 data to the ISF.
 - o Generated Release 202 L1A and L1B products and distributed ATL02s to the ISF, POD, and SCF.
 - o Distributed selected ATL01s to the ISF and SCF by special request.
- Reprocessed Release 202 ATL01 and ATL02s from Oct. 14 2018.
 - o Distributed all the ATL02s to the SCF.
 - o Distributed the ATL02s from Dec 11 onwards to the POD (with VC5 star tracker parameters).
- Reprocessing Release 205 (finals) from DOY 287-328 (2018).

- o ATL03, ATL04, ATL09, and ATL06 reprocessing is complete and products have been staged for NSIDC and SCF pickup.
- o Reprocessing of ATL07 and ATL10 is still ongoing. The completed ATL07 and ATL10s will be distributed to the SCF.
- Processing Release 206 (rapids) ATL03, ATL04, ATL09, and ATL06 from DOY 39 (2019)
 - o Distributing ATL03, ATL04, and ATL09 to NSIDC and the SCF.
 - o Distributing ATL06 to the SCF.

ASAS:

Support the testing and install of ASAS v5.0 into SIPS operation

ASAS developers continue working high priority items.

ASAS CCB approved several ocean items for next ASAS release and support weekly ATBD tag-ups.

Ran extensive test on ASAS code delivered for intermediate code freeze

SCF:

The SCF is operating nominally. An issue where disk space was not available has been resolved, and all data from SIPS have been ingested and distributed for releases 202, 205, and 206. A file listing the current SCF data holdings is attached.

Some issues were discovered with the products and reported to the relevant group(s). These included incorrect values in the orbit_info groups for some release 205 and 206 data products, and incorrect delta_times in the calibration group of ATL04 for release 205. All release 202 ATL02 and release 205 and 206 ATL03, ATL04, ATL06, and ATL09 data will be replaced shortly with products created with a version of ASAS/SDMS that fixes the incorrect values in the orbit_info group.

The SDMS scheduling software on the SCF went down on Friday night, preventing the ingest of new data from completing over the weekend, as originally expected. The scheduler was brought back up Monday morning, and ingest of data has resumed.

- * Data Management -- fixed some issues with product QA trending plots.
- * Subsetter -- submitted request to update code in operations, which will fix indexing issue on subsetted ATL03; continued testing Python 3.5 version of the code.
- * Visualizer -- incorporating final new features before a new release is made, almost finished with the land ice custom plot.

ATL02:

The team has decided to change the way downlink band boundaries are computed for output in the ATL02 product, so that the reported offset and width more accurately reflect the observed

time-of-flight statistics. A mathematical description of the behavior of the TOF distribution at the edges of the band is in work.

ATL03:

The ATL03 team and members of the science team continue to evaluate r205 ATL03 granules, as well as r206 rapid granules that began showing up in our SCF directories at the end of the week. Work continues on parameter refinement and language improvements to the ATBD.

ISF ACTIVITIES MISSION WEEK 024:

* Not in science mode

^ Could affect science data quality

^ 2019/052:06:22:47.0000 AMCS Cal for 2 minutes over open ocean

2019/052:07:54:23.0000 OCEANscan (22 minutes)

* 2019/052:13:00:49.0000 TEP data collection for 3 minutes

* 2019/052:14:35:07.0000 TEP data collection for 3 minutes

* 2019/052:16:09:24.0000 TEP data collection for 3 minutes

* 2019/052:17:43:42.0000 TEP data collection for 3 minutes

* 2019/052:19:17:59.0000 TEP data collection for 3 minutes

2019/052:19:41:39.0000 OCEANscan (22 minutes)

* 2019/052:20:52:16.0000 TEP data collection for 3 minutes

* 2019/052:22:26:34.0000 TEP data collection for 3 minutes

^ 2019/052:23:41:17.0000 AMCS Cal for 2 minutes over open ocean

* 2019/053:00:00:51.0000 TEP data collection for 3 minutes

^ 2019/053:01:00:00.0000 Stellar centroid window dump for 90 minutes (no stellar centroids)

^ 2019/053:05:57:08.0000 AMCS Cal for 2 minutes over open ocean

2019/053:07:28:44.0000 OCEANscan (22 minutes)

^ 2019/053:09:05:43.0000 AMCS Cal for 2 minutes over open ocean

* 2019/053:12:35:10.0000 TEP data collection for 3 minutes

* 2019/053:14:09:28.0000 TEP data collection for 3 minutes

* 2019/053:15:43:45.0000 TEP data collection for 3 minutes

* 2019/053:17:18:03.0000 TEP data collection for 3 minutes

* 2019/053:18:52:20.0000 TEP data collection for 3 minutes

2019/053:19:16:00.0000 OCEANscan (22 minutes)

* 2019/053:20:26:38.0000 TEP data collection for 3 minutes

* 2019/053:22:00:55.0000 TEP data collection for 3 minutes

^ 2019/053:23:19:23.0000 AMCS Cal for 2 minutes over open ocean

* 2019/053:23:35:12.0000 TEP data collection for 3 minutes

^ 2019/054:00:40:13.0000 Mini VBG sweep (VBG_TEMP_DEG_C=61.91) over Greenland for 3 minutes

^ 2019/054:00:49:56.0000 AMCS Cal for 2 minutes over open ocean

^ 2019/054:05:31:30.0000 AMCS Cal for 2 minutes over open ocean

2019/054:07:03:05.0000 OCEANscan (22 minutes)

^ 2019/054:08:40:04.0000 AMCS Cal for 2 minutes over open ocean
* 2019/054:12:09:31.0000 TEP data collection for 3 minutes
* 2019/054:13:43:49.0000 TEP data collection for 3 minutes
* 2019/054:15:18:06.0000 TEP data collection for 3 minutes
* 2019/054:16:52:24.0000 TEP data collection for 3 minutes
* 2019/054:18:26:41.0000 TEP data collection for 3 minutes
2019/054:18:50:21.0000 OCEANscan (22 minutes)
* 2019/054:20:00:59.0000 TEP data collection for 3 minutes
* 2019/054:21:35:16.0000 TEP data collection for 3 minutes
* 2019/054:23:09:33.0000 TEP data collection for 3 minutes
^ 2019/055:00:14:34.0000 Mini-VBG sweep (VBG_TEMP_DEG_C=63.91) over Greenland for 3 minutes
^ 2019/055:00:24:16.0000 AMCS Cal for 2 minutes over open ocean
^ 2019/055:05:14:51.0000 AMCS Cal for 2 minutes over open ocean
2019/055:06:37:26.0000 OCEANscan (22 minutes)
^ 2019/055:08:14:25.0000 AMCS Cal for 2 minutes over open ocean
2019/055:09:38:14.0000 RTWscan (90 minutes)
* 2019/055:13:18:10.0000 TEP data collection for 3 minutes
* 2019/055:14:52:27.0000 TEP data collection for 3 minutes
* 2019/055:16:26:45.0000 TEP data collection for 3 minutes
* 2019/055:18:01:02.0000 TEP data collection for 3 minutes
* 2019/055:19:35:19.0000 TEP data collection for 3 minutes
2019/055:19:58:59.0000 OCEANscan (22 minutes)
* 2019/055:21:09:37.0000 TEP data collection for 3 minutes
* 2019/055:22:43:54.0000 TEP data collection for 3 minutes
^ 2019/055:23:58:37.0000 AMCS Cal for 2 minutes over open ocean
* 2019/056:00:18:11.0000 TEP data collection for 3 minutes
^ 2019/056:06:14:29.0000 AMCS Cal for 2 minutes over open ocean
2019/056:07:46:04.0000 OCEANscan (22 minutes)
* 2019/056:12:52:30.0000 TEP data collection for 3 minutes
* 2019/056:14:26:48.0000 TEP data collection for 3 minutes
* 2019/056:16:01:05.0000 TEP data collection for 3 minutes
* 2019/056:17:35:23.0000 TEP data collection for 3 minutes
* 2019/056:19:09:40.0000 TEP data collection for 3 minutes
2019/056:19:33:20.0000 OCEANscan (22 minutes)
* 2019/056:20:43:58.0000 TEP data collection for 3 minutes
* 2019/056:22:18:15.0000 TEP data collection for 3 minutes
^ 2019/056:23:32:58.0000 AMCS Cal for 2 minutes over open ocean
* 2019/056:23:52:32.0000 TEP data collection for 3 minutes
^ 2019/057:01:07:15.0000 AMCS Cal for 2 minutes over open ocean
^ 2019/057:05:48:49.0000 AMCS Cal for 2 minutes over open ocean
2019/057:07:20:25.0000 OCEANscan (22 minutes)
^ 2019/057:08:57:24.0000 AMCS Cal for 2 minutes over open ocean
* 2019/057:12:26:51.0000 TEP data collection for 3 minutes

- * 2019/057:14:01:09.0000 TEP data collection for 3 minutes
- * 2019/057:15:35:26.0000 TEP data collection for 3 minutes
- * 2019/057:17:09:43.0000 TEP data collection for 3 minutes
- * 2019/057:18:44:01.0000 TEP data collection for 3 minutes
- 2019/057:19:07:40.0000 OCEANscan (22 minutes)
- * 2019/057:20:18:18.0000 TEP data collection for 3 minutes
- ^ 2019/057:21:42:09.0000 SADA transition to SAILBOAT for 9 minutes
- ^ 2019/057:23:00:00.0000 Stellar centroid image dump for 90 minutes (no stellar centroids)
- ^ 2019/058:00:41:36.0000 AMCS Cal for 2 minutes over open ocean
- ^ 2019/058:05:23:10.0000 AMCS Cal for 2 minutes over open ocean
- 2019/058:06:54:46.0000 OCEANscan (22 minutes)
- ^ 2019/058:08:31:45.0000 AMCS Cal for 2 minutes over open ocean
- 2019/058:09:55:34.0000 RTWscan (90 minutes)
- * 2019/058:12:01:12.0000 TEP data collection for 3 minutes
- * 2019/058:13:35:29.0000 TEP data collection for 3 minutes
- * 2019/058:15:09:47.0000 TEP data collection for 3 minutes
- ^ 2019/058:15:19:19.0000 Laser image dump for 6 minutes over Antarctica during day
- * 2019/058:16:44:04.0000 TEP data collection for 3 minutes
- * 2019/058:18:18:22.0000 TEP data collection for 3 minutes
- 2019/058:18:42:01.0000 OCEANscan (22 minutes)
- * 2019/058:19:52:39.0000 TEP data collection for 3 minutes
- * 2019/058:21:26:56.0000 TEP data collection for 3 minutes
- * 2019/058:23:01:13.0000 TEP data collection for 3 minutes