ICESat-2 PROJECT SCIENCE OFFICE REPORT
Monday, December 17, 2018 thru Sunday, December 23, 2018

RGTs spanned: 1217-1329
Cycle 1

Items of Note:

All ATLAS housekeeping data is nominal; laser 2 is firing at energy level 4 and is in science mode. Release 203 of ATL03s were made available on Thursday 12/20 and the PSO is evaluating their quality.

Enjoy the rest of the holiday week!

ELEMENT DETAILS BELOW

CAMS/POD/PPD:

CAMS: CAMS continues to monitor and screen for mission week 015. There are no conjunctions or constraints to report.

CAMS has begun preliminary planning for mission week 016. During initial screening CAMS identified several constraint violations. CAMS is re-running their constraint analysis now looking into a possible concern of a radiator violation as the S/C approaches solar beta near 0 on December 27 and December 28 prior to the yaw flip. ICESat-2 Project leads will be notified if there still exist a probable event after the screening analysis is performed.

Daily operations continue nominally.

POD: POD has completed final POD processing through DoY 335 (GPS week 2029) and intermediate POD processing through DoY 349 (GPS week 2031). Results continue to look nominal, with GPS residual RMS values just below 1 cm and independent SLR residual RMS just above 2 cm.

POD has processed all round-the-world scans through DoY 328 in order to compute time-varying roll/pitch bias corrections (relative to our iterated 10-day solution from the first calibration period) for each orbit angle bin. These time-varying corrections have been used to correct ANC05 files from DoY 287-328, which will be delivered to SIPS as a new cal03 delivery this week.

Intermediate ANC products through GPS week 2031 (DoY 349) have also been delivered to SIPS.

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 is in +X direction

Mission Planning:
MW15 ATS is loaded to the spacecraft and currently operating.

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Activities during the past week:
ATS activities:
All ATLAS and pointing activities were routine and completed as planned
DMU007 executed successfully on Thursday, 12/20 (18-354-13:20:42.000 to 18-354-14:14:33.000)
Real-time activities
Dec 17: 2018/351/13:50:45 Executed standing CAR91 to clear SBC errors
Dec 19: 2018/352 - CAR91 to clear SBS errors

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Upcoming activities:
MW15 scheduled activities in the ATS: MW15 Activities are attached (includes initial rev #)
MW16 planning
Other Near-term activities:
ISF server patching - trouble-shooting an issue for Redhat patching across RIONet.
DMU008 - December 27
Yaw flip to -X - December 28
Retrograde DMU Demo - January

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Notes/Issues:
1. It appears some re-dumps did not contain expected VC6 data - Provided MOC with missing data times for Dec 8-9
2. PDB E.0.0 was received from the MOC * The rec files were received from the MOC and tested successfully on the ISF development server

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 ATL01s via special request to the SCF.
- Received revised ANC03/04/05 files from the POD on 12/20 for DOY 287-328 for Rel 203 ATL03/04/09 data production.
    - Produced and distributed Rel 203 ATL03/04/09 files for DOY 287-328 to the PSO and NSIDC.
- Received “intermediate” ANC03/04/05 files from the POD on 12/21 for DOY 336-349.
    - Currently producing and distributing Rel 201 ATL03/04/09 files for DOY 336-349 to the PSO and NSIDC.

ASAS:
Reprocessed five days of on-orbit data with the latest ASAS code: 10-14-2018 thru 10-17-2018 and 10-19-2018 made available to development with an automated, web-based test report generator for ASAS test products. The test report provides a summary of the products created, including statistics on file sizes, processing time and QA/Error status. Detailed reports are also generated that include extracted browse images and detail-level error and QA information.
L1A –ATL01
Continued verification and implementation of S/C star tracker VC5 packet additions.
L1B- ATL02
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Updated return sensitivity calibration product provided and being processed to updated ASAS calibration files.
Implementing ATBD QA checks.
Updated ATBD draft was provided to review should include the changes ATBD algorithms for receiver sensitivity. An ATBD update is forthcoming.

L2A-ALT ATL03

Testing code for the changes to reduced background counts to properly limit the effects of signal width
Investigating TEP in surface
Investigating issue with the top of telemetry window being too low

L2A – ATM ATL04

Implementing replacement background method1 algorithm

L3A-ATM ATL09

ST is evaluating removal of the ground surface as the lowest cloud and ground surface from Density method
Evaluating the new calibration constant method 2 for implementation.

L3B –ATM ATL16/17

Continue developing unit test for L3B PGE.

L3A- land ice ATL06

Working on issues detected from the latest on orbit test data.
Worked with SDT lead to draft improvements in algorithm for places clouds are reported as land ice height.

L3A Sea Ice ATL07/10

Investigating bugs that cause crash with in flight data.
Implementing product updates.
Implementing disable for multi-beam freeboard
Delivered updated PGE that fixed reported bugs to sea ice referee for testing

L3A- Land ATL08

Received good compares of UT dragann and ASAS processing.
Developing tools to visualize and assess the 100m segment product parameters

L3A Ocean ATL12

No work. Developer working Land Ice
Issues with ASAS sea state bias computation are next implementations.

L3A Inland Water ATL13

Preparing issues for CCB review by working with ST lead provided data.
Provided test results on background removal from long segment histogram and background QA flag
Implement unit test base on SDT lead data for contingency processing

SCF:

The SCF has release 202 from 10/14 - 11/25 for ANC39, ATL03, ATL04, and ATL09. We have release 201 for these products from 11/25-12/01 and release 201 for ATL02 through 12/20. We started to get release 203 of ATL03, ATL04, ANC39, and ATL09 on Dec 20th. We are currently still ingesting it. Once ingested we should have release 203 for the aforementioned products from 10/14-11/26. We will continue to ingest release 201 of ATL02 with rapid orbits. The SDMS staff installed a new scheduling system on SCF this week. It died in the middle of ingesting release 203 products. We believe we are back to a stable version of the scheduling system and are currently operating. It may take a couple of days to finish ingesting and running subscriptions for the new data. We believe we were able to restart all jobs, but if after Christmas you think you are missing data please contact the SCF at ICESat-2-SCFops@mail.nasa.gov.

ATL03:
We're evaluating r203 ATL03 data products that have been generated by SIPS.

ISF ACTIVITIES MISSION WEEK 015

* Not in science mode
^ Could affect science data quality

^ 2018/354:11:16:09.0000 OCEANscan (22 minutes)
^ 2018/354:13:23:16.0000 Mini-VBG sweep (set temp = 61.83) for 3 minutes
^ 2018/354 13:20:42.0000 DMU007 for 54 minutes
* 2018/354:16:22:35.0000 TEP data collection for 3 minutes
* 2018/354:17:56:52.0000 TEP data collection for 3 minutes
* 2018/354:19:31:10.0000 TEP data collection for 3 minutes
* 2018/354:21:05:27.0000 TEP data collection for 3 minutes
* 2018/354:22:39:45.0000 TEP data collection for 3 minutes
^ 2018/354:23:03:24.0000 OCEANscan (22 minutes)
* 2018/355:00:14:02.0000 TEP data collection for 3 minutes
* 2018/355:01:48:19.0000 TEP data collection for 3 minutes
^ 2018/355:03:03:03.0000 AMCS Cal for 2 minutes over Atlantic
* 2018/355:03:22:37.0000 TEP data collection for 3 minutes
^ 2018/355:09:18:54.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/355:10:50:30.0000 OCEANscan (22 minutes)
^ 2018/355:12:57:37.0000 Mini-VBG sweep (set temp = 63.83) for 3 minutes
^ 2018/355:13:10:00.0000 Stellar centroid window dump for 90 minutes (no stellar centroids)
* 2018/355:15:56:56.0000 TEP data collection for 3 minutes
* 2018/355:17:31:13.0000 TEP data collection for 3 minutes
* 2018/355:19:05:31.0000 TEP data collection for 3 minutes
* 2018/355:20:39:48.0000 TEP data collection for 3 minutes
* 2018/355:22:14:06.0000 TEP data collection for 3 minutes
^ 2018/355:22:37:45.0000 OCEANscan (22 minutes)
* 2018/355:23:48:23.0000 TEP data collection for 3 minutes
* 2018/356:01:22:41.0000 TEP data collection for 3 minutes
^ 2018/356:02:37:24.0000 AMCS Cal for 2 minutes over Atlantic
* 2018/356:02:56:58.0000 TEP data collection for 3 minutes
^ 2018/356:04:11:41.0000 AMCS Cal for 2 minutes over Atlantic
^ 2018/356:08:53:15.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/356:10:24:51.0000 OCEANscan (22 minutes)
^ 2018/356:12:01:50.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/356:13:25:39.0000 RTWscan (90 minutes)
* 2018/356:15:31:17.0000 TEP data collection for 3 minutes
* 2018/356:17:05:34.0000 TEP data collection for 3 minutes
* 2018/356:18:39:52.0000 TEP data collection for 3 minutes

^ 2018/356:19:00:00.0000 Stellar centroid image dump for 90 minutes (no stellar centroids)
* 2018/356:20:14:09.0000 TEP data collection for 3 minutes
* 2018/356:21:48:27.0000 TEP data collection for 3 minutes
^ 2018/356:22:12:06.0000 OCEANscan (22 minutes)
* 2018/356:23:22:44.0000 TEP data collection for 3 minutes
* 2018/357:00:57:02.0000 TEP data collection for 3 minutes
* 2018/357:02:31:19.0000 TEP data collection for 3 minutes
^ 2018/357:03:46:02.0000 AMCS Cal for 2 minutes over Atlantic
^ 2018/357:08:27:36.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/357:09:59:12.0000 OCEANscan (22 minutes)
^ 2018/357:11:36:11.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/357:12:06:18.0000 Laser image dump over Antarctica for 6 minutes (no laser centroids)
* 2018/357:15:06:08.0000 TEP data collection for 3 minutes
* 2018/357:16:39:55.0000 TEP data collection for 3 minutes
* 2018/357:18:14:13.0000 TEP data collection for 3 minutes
* 2018/357:19:48:30.0000 TEP data collection for 3 minutes
* 2018/357:21:22:48.0000 TEP data collection for 3 minutes
^ 2018/357:21:46:27.0000 OCEANscan (22 minutes)
* 2018/357:22:57:05.0000 TEP data collection for 3 minutes
* 2018/358:00:31:23.0000 TEP data collection for 3 minutes
* 2018/358:02:05:40.0000 TEP data collection for 3 minutes
^ 2018/358:03:20:23.0000 AMCS Cal for 2 minutes over Atlantic
^ 2018/358:08:11:39.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/358:09:33:33.0000 OCEANscan (22 minutes)
^ 2018/358:11:10:32.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/358:12:34:21.0000 RTWscan (90 minutes)
* 2018/358:16:14:16.0000 TEP data collection for 3 minutes
* 2018/358:17:48:34.0000 TEP data collection for 3 minutes
* 2018/358:19:22:51.0000 TEP data collection for 3 minutes
* 2018/358:20:57:09.0000 TEP data collection for 3 minutes
* 2018/358:22:31:26.0000 TEP data collection for 3 minutes
^ 2018/358:22:55:05.0000 OCEANscan (22 minutes)
* 2018/359:00:05:43.0000 TEP data collection for 3 minutes
* 2018/359:01:40:01.0000 TEP data collection for 3 minutes
^ 2018/359:02:54:44.0000 AMCS Cal for 2 minutes over Atlantic
* 2018/359:03:14:18.0000 TEP data collection for 3 minutes
^ 2018/359:09:10:35.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/359:10:42:11.0000 OCEANscan (22 minutes)
* 2018/359:15:48:37.0000 TEP data collection for 3 minutes
* 2018/359:17:22:54.0000 TEP data collection for 3 minutes
* 2018/359:18:57:12.0000 TEP data collection for 3 minutes
* 2018/359:20:31:29.0000 TEP data collection for 3 minutes
* 2018/359:22:05:47.0000 TEP data collection for 3 minutes
^ 2018/359:22:29:26.0000 OCEANscan (22 minutes)

* 2018/359:23:40:04.0000 TEP data collection for 3 minutes
* 2018/360:01:14:21.0000 TEP data collection for 3 minutes
^ 2018/360:02:29:05.0000 AMCS Cal for 2 minutes over Atlantic
* 2018/360:02:48:39.0000 TEP data collection for 3 minutes
^ 2018/360:04:03:22.0000 AMCS Cal for 2 minutes over Atlantic
^ 2018/360:08:44:56.0000 AMCS Cal for 2 minutes over Southern Pacific
^ 2018/360:10:16:32.0000 OCEANscan (22 minutes)
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* 2018/360:16:57:15.0000 TEP data collection for 3 minutes
* 2018/360:18:31:33.0000 TEP data collection for 3 minutes
* 2018/360:20:05:50.0000 TEP data collection for 3 minutes
* 2018/360:21:40:07.0000 TEP data collection for 3 minutes
^ 2018/360:22:03:47.0000 OCEANscan (22 minutes)
* 2018/360:23:14:25.0000 TEP data collection for 3 minutes