

**ICESat-2 PROJECT SCIENCE OFFICE REPORT**

**Monday, November 16, 2020 thru Sunday, November 22, 2020**

RGTs spanned: 807 - 913

Cycle 9

**SUMMARY:**

All ATLAS housekeeping data is nominal; laser 2 is firing at energy level 4 and in science mode. SIPS successfully ingested release 001 ATL11 files from ADAPT and started distribution to NSIDC, with plans to begin public release the week of 11/23.

**Have a happy and safe Thanksgiving!!**

**\*\*ELEMENT DETAILS BELOW\*\***

**CAMS/POD:**

**CAMS:** Regular CAMS operations: constraint and conjunction monitoring for MW114 and MW115 and mission planning for MW116.

CAMS created an MCR for MW115 to mitigate the 112deg boresight-nadir constraint that was violated during processing of the inclination maneuver defined in the MTL.

CAMS continues working with the project on ARB09.

**POD:** Regular POD operations continue. Intermediate POD was completed for GPS week 2131. Final POD was completed for GPS week 2129.

**ISF:**

All ATLAS housekeeping data is nominal

Laser 2 is firing at energy level 4 and in science mode

WTEM Peak to Edge Ratio: 1.21

Laser 2 Temperature Error: -0.31C

SADA in AIRPLANE Mode

Spacecraft orientation: - X

**Mission Planning:**

MW115 ATS is loaded to the spacecraft and currently operating

MW116 AIP has been delivered, nominal calibrations; CAMS has delivered preliminary products.

CAMS continues to perform daily laser conjunction screening and constraint analysis including screening for ISS visiting vehicles

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**Activities during the past week:**

Real-time activities:

monitoring via telework

ATS activities:

MW\_114 (completed nominally - PSO Activity list attached)

BSM XY Offset updated to 18.8, 10.1 post-DMU063a  
Monthly TEP stare started at 2020/318 18:15 and executes for two orbits  
Solar Array transition to AIRPLANE mode 2020/321 19:30  
Receiver Algorithm V10 Parameter test starts at 2020/322 00:11:44 and executes for two weeks  
MW\_115 (currently active):  
Routine Instrument calibrations, TOOs, Ocean scans and Vegetation Data collection, Segmented RTW scans

Other Activities:

Updated ANC13 and ANC27 delivered to SIPS  
PDB E.0.2 Update  
TBS - install and testing on playback ISF server (itos2)  
**PDB requires re-build. E.0.3 to be delivered early in December.**

Near-term upcoming activities:

Testing of receiver algorithm parameter updates started November 17 and continues until December 1.

Facility:

**Updating ITOS servers to RedHat 7.0 due to EOL of 6.0 at the end of November**  
**Updating VM that runs itos for OpenMCT**

Tech HW refresh:

ISF Tech Refresh Phase 2 hardware moved to B33 Room F325  
Phase 1a setup and testing continues (on-hold for RedHat OS update)

Notes/Issues:

1. ARB09: RMM02 Anomaly - the team continues to analyze events and determine process (automated and manual) updates to mitigate the chance of a recurrence. The team has implemented changes to the manual processes for verification of planning products. The team is providing inputs for independent review board.

LTO Schedule:

Tech refresh updates to be provided to ESMO Scheduler. Update to RedHat 7.0 takes priority.

**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, ATL04, ATL06, ATL07, ATL08, ATL09, and ATL10 using ANC03/04/05 files from the CAMS.
  - Distributed the ATL01 and ATL02 Data products to NSIDC.
  - Distributed the rapid Science Data products to the SCF.
- Continued with Integration Testing of SIPS Build 6.0 (consisting of ASAS V5.4)
- Successfully completed upgrade of all the SIPS clusters (IntTest, AccTest, and Ops) to Ubuntu 20.04.
- Distributed Release 003 ATL08, ATL12 and ATL13 from 17 July 2020 thru 30 September 2020 to NSIDC with PSO holds applied.
- Ingested Release 001 ATL11 files from ADAPT and started distribution to NSIDC.

**ASAS:**

L1A/L1B: Developed custom software to examine Tx/Rx issue. Proven useful with a small sample of ATL01 products. Software is currently processing a significantly larger sample of ATL01s to improve statistical significance of the results.

L2A\_ALT: No work.

L2/L3 Atmosphere: Waiting on new overrides to run another test case in ASAS-PG.

L3A Land Ice: No work.

L3B Land Ice: The transfer path of ATL11 via ADAPT->SIPS->NSIDC is in testing.

Sea Ice/Freeboard: Work is underway on ATL21.

L3A Land/Veg: Investigation of issues related to a strong/weak beam crossing is awaiting release 004 ATL03s (which contain roll/pitch/yaw).

Inland Water: Work is underway on ATL22.

Ocean: Work is underway on ATL19.

**SCF:**

The SCF is operating nominally. Data for releases 003 and R003 are being ingested and distributed. A file listing the current SCF data holdings is attached.

+ Data Management -- The data management pipeline is operating nominally. There was an outage for a few hours on Thursday morning due to the SCF database shutting down for an update, but processing caught up by late Thursday.

+ Subsetter -- Operations continue normally with no failed jobs.

+ Visualizer -- Nothing to report

**ATL02/Instrument Science:**

NTR.

**ATL03:**

Continuing investigation of TxRx alignment slip cases.

**ISF ACTIVITIES MISSION WEEK 114**

\* Not in science mode

^ Could affect science data quality

\* 2020/317:00:10:57.0000 TEP data collection Grid 59 Duration 3 minutes  
2020/317:00:58:09.0000 OCEANscan Duration 22 minutes  
\* 2020/317:02:08:44.0000 TEP data collection Grid 380 Duration 3 minutes  
2020/317:03:58:57.0000 Segmented RTWscan Part 1 Duration 37 minutes  
2020/317:04:48:05.0000 Segmented RTWscan Part 2 Duration 35 minutes  
2020/317:05:28:36.0000 Segmented RTWscan Part 3 Duration 14 minutes  
\* 2020/317:06:28:06.0000 TEP data collection Grid 50 Duration 3 minutes  
\* 2020/317:06:45:16.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/317:08:25:39.0000 TEP data collection Grid 371 Duration 3 minutes  
\* 2020/317:09:44:32.0000 TEP data collection Grid 153 Duration 3 minutes  
\* 2020/317:11:11:10.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/317:11:31:51.0000 TEP data collection Grid 330 Duration 3 minutes  
2020/317:12:45:24.0000 OCEANscan Duration 22 minutes  
\* 2020/317:14:19:44.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
^ 2020/317:14:43:00.0000 DMU63a for RGT excursion Duration 74 minutes  
^ 2020/317:16:05:00.0000 Post-DMU063a update BSM XY Offset X 18.8 Y 10.1 based on performance trends. Duration 1 minutes  
\* 2020/317:17:33:22.0000 TEP data collection Grid 141 Duration 3 minutes  
\* 2020/317:17:41:12.0000 TEP data collection Grid 249 Duration 3 minutes  
\* 2020/317:17:51:37.0000 TEP data collection Grid 392 Duration 3 minutes  
\* 2020/317:18:59:47.0000 TEP data collection Grid 31 Duration 3 minutes  
\* 2020/317:19:10:16.0000 TEP data collection Grid 175 Duration 3 minutes  
\* 2020/317:19:25:55.0000 TEP data collection Grid 390 Duration 3 minutes  
\* 2020/317:20:34:05.0000 TEP data collection Grid 29 Duration 3 minutes  
\* 2020/317:20:47:10.0000 TEP data collection Grid 208 Duration 3 minutes  
\* 2020/317:21:19:57.0000 TEP data collection Grid 406 Duration 3 minutes  
\* 2020/317:22:21:28.0000 TEP data collection Grid 206 Duration 3 minutes  
\* 2020/317:22:34:30.0000 TEP data collection Grid 385 Duration 3 minutes  
\* 2020/317:23:45:18.0000 TEP data collection Grid 60 Duration 3 minutes  
\* 2020/318:01:43:00.0000 TEP data collection Grid 381 Duration 3 minutes  
2020/318:02:06:47.0000 OCEANscan Duration 22 minutes  
\* 2020/318:02:59:06.0000 TEP data collection Grid 127 Duration 3 minutes  
\* 2020/318:03:06:56.0000 TEP data collection Grid 235 Duration 3 minutes  
\* 2020/318:04:48:44.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/318:05:59:49.0000 TEP data collection Grid 15 Duration 3 minutes  
\* 2020/318:06:19:37.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/318:07:49:48.0000 TEP data collection Grid 228 Duration 3 minutes  
2020/318:07:55:00.0000 Stellar window dump Duration 90 minutes  
\* 2020/318:09:37:09.0000 TEP data collection Grid 405 Duration 3 minutes  
\* 2020/318:10:45:31.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/318:12:19:48.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
2020/318:13:54:02.0000 OCEANscan Duration 22 minutes  
\* 2020/318:15:38:39.0000 TEP data collection Grid 216 Duration 3 minutes  
\* 2020/318:17:05:06.0000 TEP data collection Grid 106 Duration 3 minutes  
\* 2020/318:18:14:00.0000 TEP Stare 2 orbits of TEP calibration Duration 192 minutes

\* 2020/318:21:52:35.0000 TEP data collection Grid 171 Duration 3 minutes  
\* 2020/318:23:35:19.0000 TEP data collection Grid 276 Duration 3 minutes  
\* 2020/318:23:42:27.0000 TEP data collection Grid 384 Duration 3 minutes  
2020/319:01:41:08.0000 OCEANscan Duration 22 minutes  
\* 2020/319:02:38:41.0000 TEP data collection Grid 199 Duration 3 minutes  
\* 2020/319:04:18:11.0000 TEP data collection Grid 269 Duration 3 minutes  
\* 2020/319:05:53:58.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/319:10:20:14.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/319:11:54:09.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
2020/319:13:28:24.0000 OCEANscan Duration 22 minutes  
\* 2020/319:15:02:44.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/319:16:34:12.0000 TEP data collection Grid 35 Duration 3 minutes  
\* 2020/319:18:11:07.0000 TEP data collection Grid 68 Duration 3 minutes  
\* 2020/319:18:24:11.0000 TEP data collection Grid 248 Duration 3 minutes  
\* 2020/319:19:48:02.0000 TEP data collection Grid 102 Duration 3 minutes  
2020/319:21:00:00.0000 Laser window dump Duration 2 minutes  
\* 2020/319:21:32:46.0000 TEP data collection Grid 243 Duration 3 minutes  
\* 2020/319:22:59:14.0000 TEP data collection Grid 133 Duration 3 minutes  
\* 2020/320:00:46:33.0000 TEP data collection Grid 310 Duration 3 minutes  
2020/320:01:15:29.0000 OCEANscan Duration 22 minutes  
\* 2020/320:05:28:19.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/320:07:03:00.0000 TEP data collection Grid 301 Duration 3 minutes  
\* 2020/320:09:54:53.0000 TEP data collection Grid 44 Duration 3 minutes  
\* 2020/320:10:07:32.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/320:11:28:30.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/320:11:44:48.0000 TEP data collection Grid 257 Duration 3 minutes  
2020/320:13:02:45.0000 OCEANscan Duration 22 minutes  
\* 2020/320:14:37:05.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/320:14:59:13.0000 TEP data collection Grid 361 Duration 3 minutes  
\* 2020/320:19:27:37.0000 TEP data collection Grid 174 Duration 3 minutes  
\* 2020/320:20:54:03.0000 TEP data collection Grid 64 Duration 3 minutes  
\* 2020/320:21:09:43.0000 TEP data collection Grid 279 Duration 3 minutes  
\* 2020/320:21:17:33.0000 TEP data collection Grid 387 Duration 3 minutes  
2020/321:00:49:50.0000 OCEANscan Duration 22 minutes  
\* 2020/321:05:02:40.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/321:06:36:58.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/321:11:02:51.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
2020/321:12:37:06.0000 OCEANscan Duration 22 minutes  
\* 2020/321:14:11:26.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/321:19:07:19.0000 SAM007a SADA Mode to AIRPLANE Duration 23 minute  
\* 2020/322:00:10:00.0000 Setup for Receiver Algorithm V10 Parameter Test to improve bathymetry data collection over ocean Duration 2 minutes  
2020/322:00:24:11.0000 OCEANscan Duration 22 minutes  
2020/322:03:24:59.0000 Segmented RTWscan Part 1 Duration 37 minutes  
2020/322:04:14:25.0000 Segmented RTWscan Part 2 Duration 35 minutes  
2020/322:04:54:55.0000 Segmented RTWscan Part 3 Duration 14 minutes

\* 2020/322:06:11:19.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/322:10:37:12.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/322:12:11:29.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
2020/322:13:45:44.0000 OCEANscan Duration 22 minutes  
2020/322:19:22:13.0000 TOO TOOid 1767 RGT 834 offpoint 0.48deg Duration 2 minutes  
2020/323:01:32:49.0000 OCEANscan Duration 22 minutes  
2020/323:04:50:49.0000 TOO TOOid 1766 RGT 840 offpoint 4.51deg Duration 2 minutes  
\* 2020/323:05:45:39.0000 AMCS Cal over open Atlantic ocean Duration 2 minutes  
\* 2020/323:10:11:33.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
\* 2020/323:11:45:50.0000 AMCS Cal over open Pacific ocean Duration 2 minutes  
2020/323:13:20:04.0000 OCEANscan Duration 22 minutes  
\* 2020/323:14:54:25.0000 AMCS Cal over open Pacific ocean Duration 2 minutess