ANC09:   PRECISION ATTITUDE DETERMINATION FILES

CSR Release 010[§]

Data Set(s):   Laser 1, Feb 20-Mar 29, 2003 (Days 51-88)

Summary: Original real-time PAD solutions, using pre-launch laser biases, and applying no LRS corrections.

CSR Release 002 (L1)

Data Set(s):   Laser 1, Feb 20-Mar 29, 2003 (Days 51-88)

Summary: First re-processing of L1 data set, using updated laser biases obtained from GSFC (Luthcke), based on range-residual analysis of ocean scans. No LRS corrections were applied.

                EKF parameters in PAD processing were tuned.

                LPA pulse orientation was modified to be measured with respect to topocentric north.

                Addition of RELEASE to standard header keywords.

                Addition of USEBEG and USEEND to file-specific header keywords.

                Addition of DEGRADE_INDEX_START/STOP to file-specific keywords.

[§] Technically, this was Release 1. We assumed, incorrectly, that the MMM (release number) in the file-naming convention contained an implied decimal. Thus, we used 010 to represent release 1.0. Subsequent releases use the correct convention, and when reached, a future Release 10 will be (or has been) skipped.

CSR Release 002 (L2A)

Data Set(s): Laser 2A, Sep 25-Nov 18, 2003 (Days 268-322)

Summary: Original real-time PAD solutions, using Release 002 (L1) laser biases, and applying no LRS corrections.

CSR Release 006 (L2A)[§]

Data Set(s): Laser 2A, Sep 25-Nov 18, 2003 (Days 268-322)

Summary: First re-processing of L2A data set, using updated laser biases obtained from GSFC (Luthcke), based on range-residual analysis of ocean and around-the-world scans.

LRS corrections were applied.

Star catalog precession error corrected in PAD processing.

Incorrect adjustment of laser biases to account for velocity aberration removed.

CSR Release 006 (L2B)

Data Set(s): Laser 2B, Feb 17-Mar 21, 2004 (Days 48-81)

Summary: Original real-time PAD solutions, using Release 006 (L2A) laser biases, and applying LRS corrections.

CSR Release 007

Data Set(s): Laser 2C, May 18-Jun 21, 2004 (Days 139-173)

Summary: Original real-time PAD solutions, using Release 006 (L2A) laser biases, and applying no LRS corrections.

[§] Releases 3 and 4 were test cases, and not officially released. Release 5 was aborted when the aberration correction error was uncovered.

CSR Release 008

Data Set(s):   Laser 1, Mar 5-21, 2003 (Days 64-80)

Summary: Second re-processing of L1 data, using newly updated laser biases obtained from GSFC (Luthcke), based on range-residual analysis of ocean scans.

Modeled LRS corrections were applied.

Files generated for Days 64-80 only.

CSR Release 009

Data Set(s):   Laser 2A, Sep 25-Nov 18, 2003 (Days 268-322)

Summary: Second re-processing of L2A data set, using Release 006 (L2A) laser biases, and applying LRS corrections.

A 50-ms correction was applied to gyro time tags during PAD processing, in conjunction with a new gyro time-tag interpolation algorithm.

LPA centroid (X,Y) and pulse orientation, measured with respect to LPA X-axis, were added to each 40-hz record.

CSR Release 011

Data Set(s):   Laser 1, Feb 20-Mar 21, 2003 (Days 51-80)

Summary: Third re-processing of L1 data, using Release 008 laser biases, and applying modeled LRS corrections.

A 50-ms correction was applied to gyro time tags during PAD processing, in conjunction with a new gyro time-tag interpolation algorithm.

LPA centroid (X,Y) and pulse orientation,
measured with respect to LPA X-axis, were
added to each 40-hz record.

CSR Release 012

Data Set(s):   Laser 3A, Oct 3-?, 2004 (Days 277-?)

Summary: Original real-time PAD solutions, using
               preliminary laser biases determined by GSFC
               (Luthcke), based on range-residual analysis
               of early ocean and around-the-world scans.
               LRS corrections were applied.