QuickTime™ and a
Photo - JPEG decompressor
are needed to see this picture.

Quality control of ILRS data and products

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ILRS Fall 2007 Workshop
25 -28 September 2007 Grasse, France

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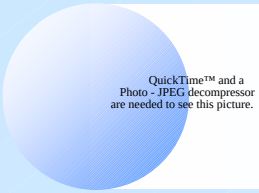
are needed to see this picture.

Motivation

- Validation of ILRS data and products
  - Important and essential task
  - SLR group is the most appropriate for this task
  - ILRS analysis can provide information for this task



Status (2007)

- ILRS provides QC reports from a number of analyses at various centers, disseminated via SLReport email list
- The ILRS AWG generates reports from its weekly analysis that can be used to evaluate and validate its products and at the same time, give useful feedback on station performance and changes
  - Currently *LAGEOS 1 & 2, ETALON 1 & 2* only
  - In near future, Starlette and Ajisai to be added
  - More satellites can be considered in the future

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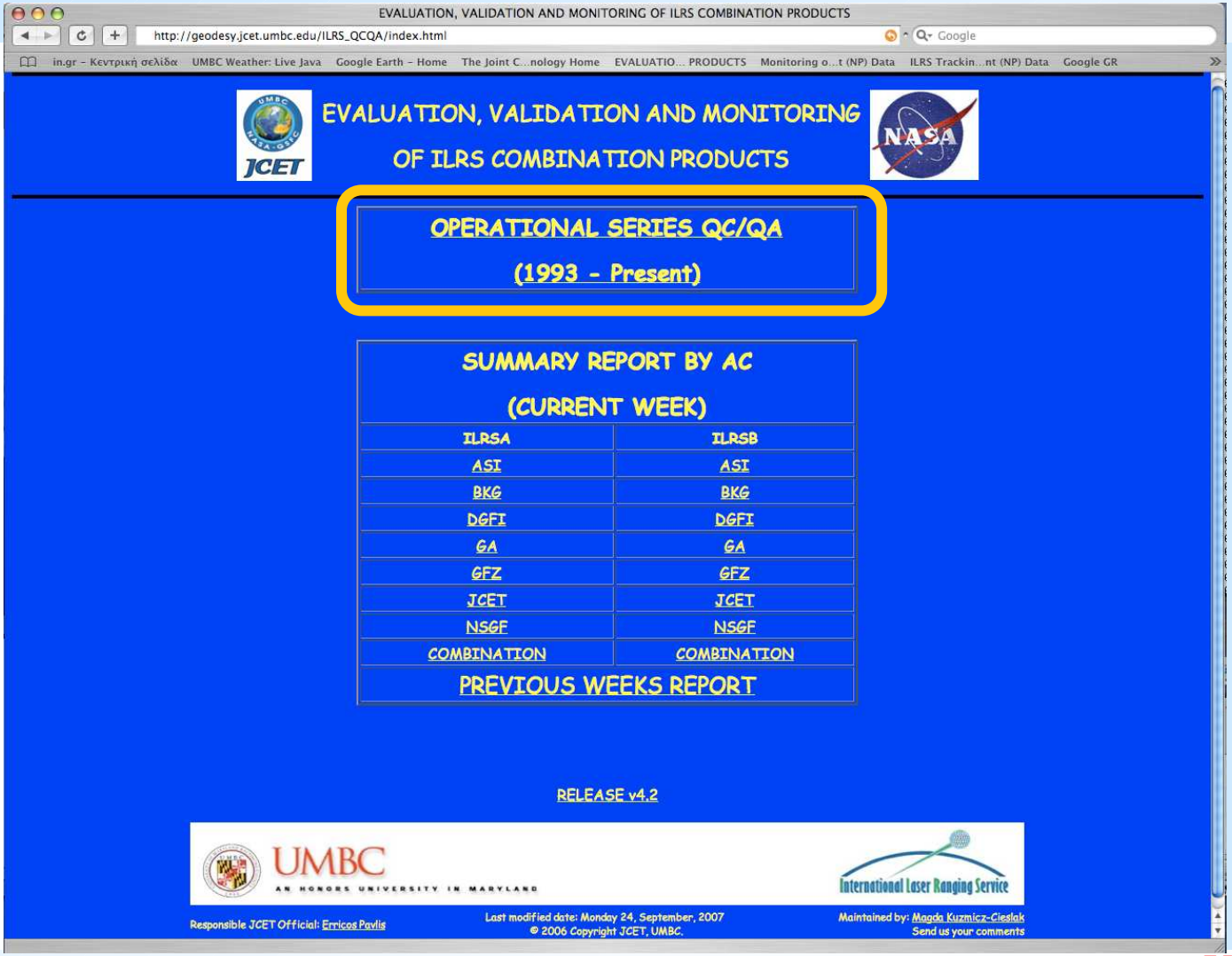
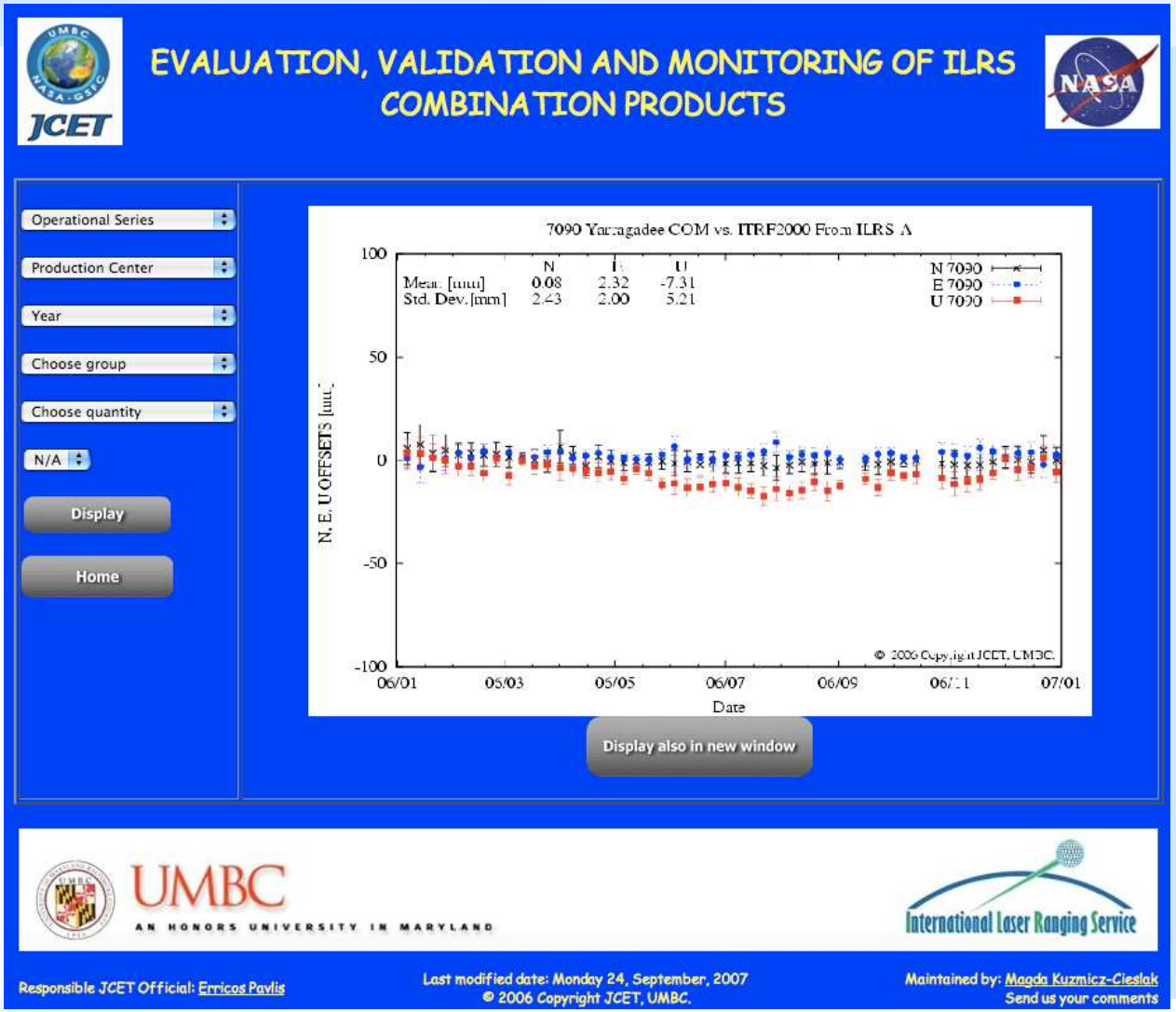
Access via WWW



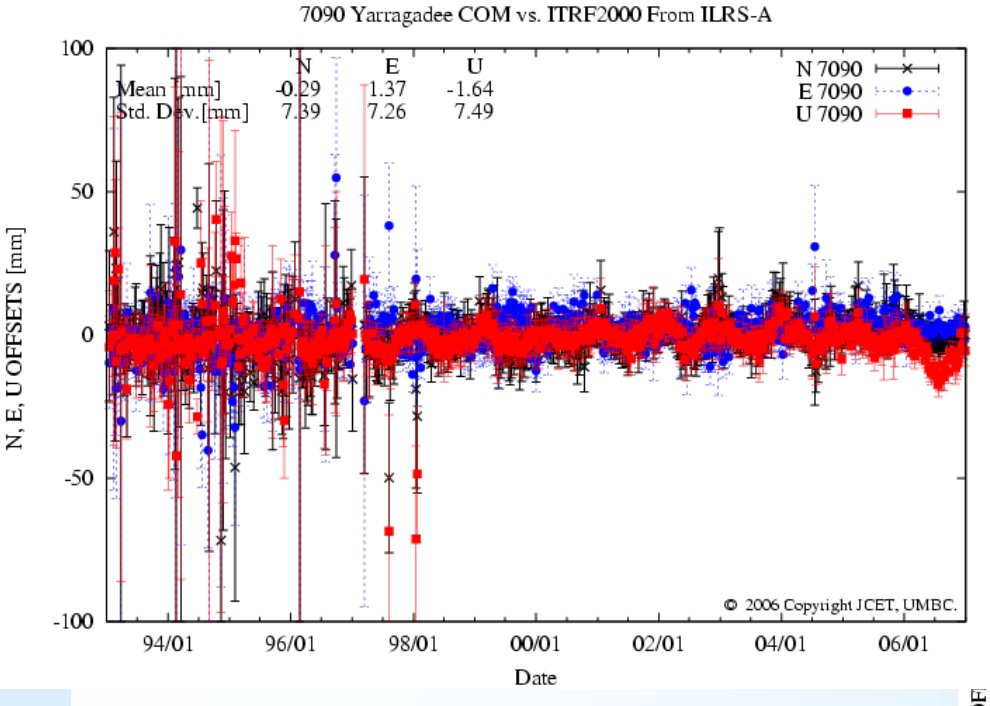
QuickTime™ and a
Photo - JPEG decompressor
are needed to see this picture.

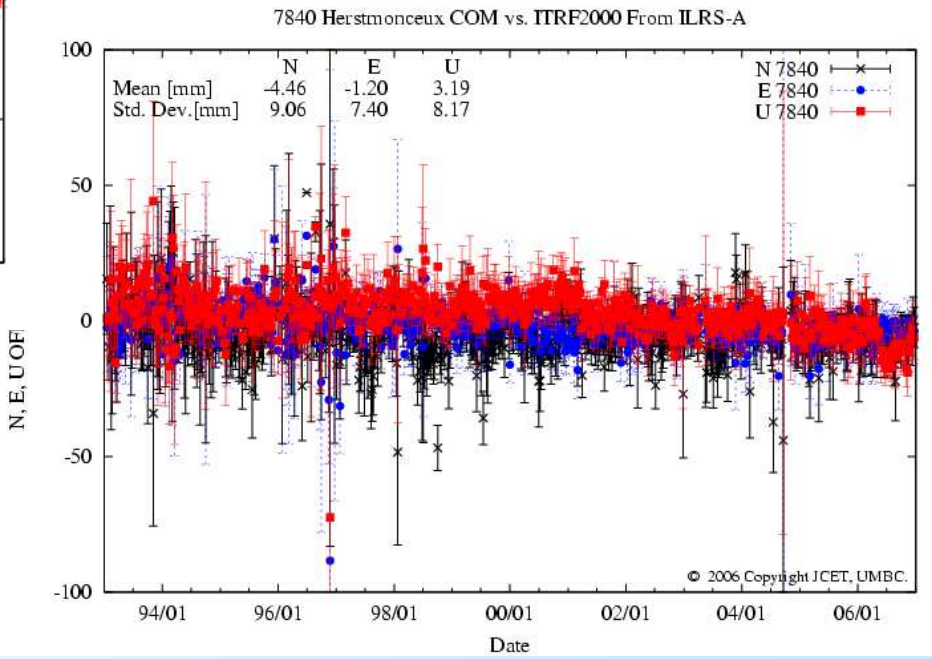
ΔN-ΔE-ΔU Example (7090)



QuickTime™ and a
Photo - JPEG decompressor
are needed to see this picture.

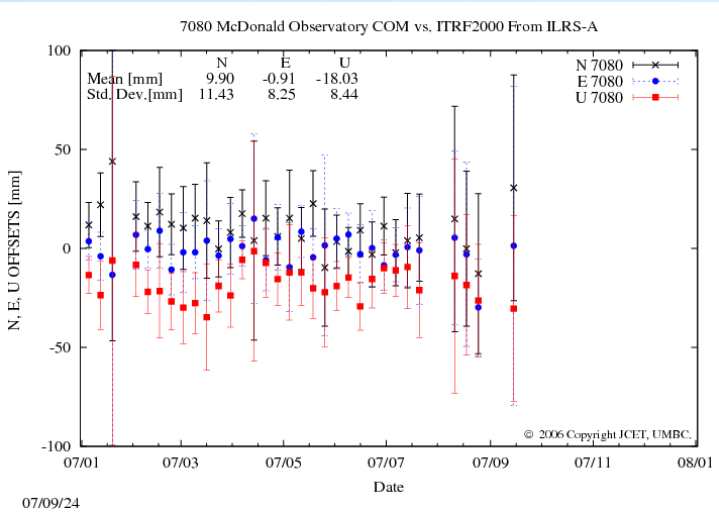
Long-term behavior example

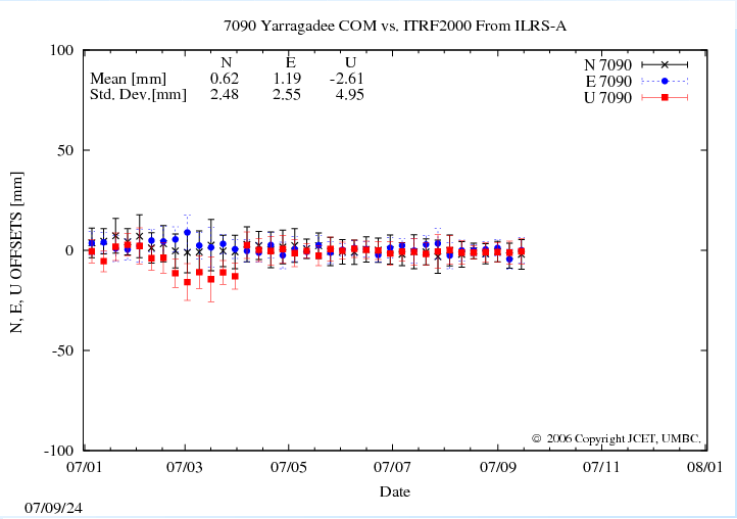


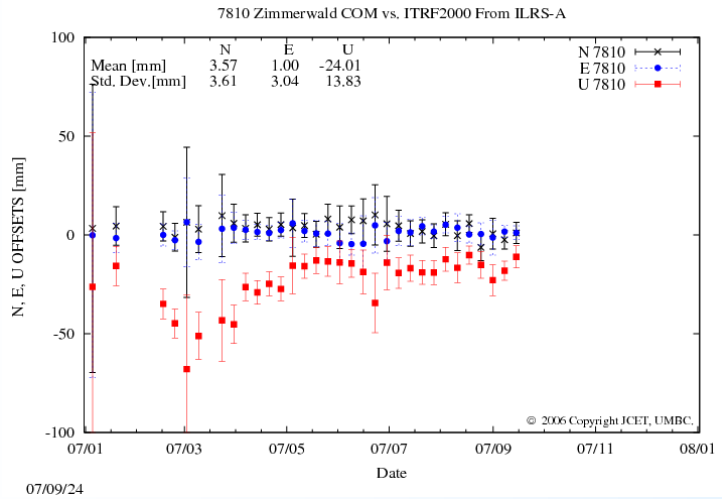


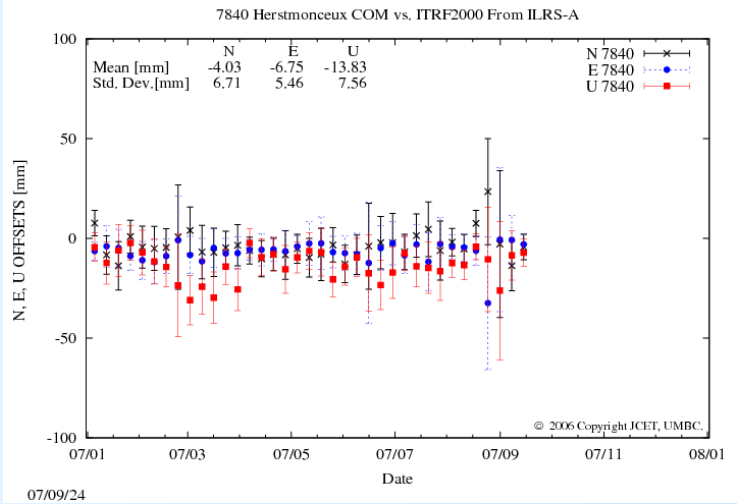
QuickTime™ and a
Photo - JPEG decompressor
are needed to see this picture.

Short-term behavior example









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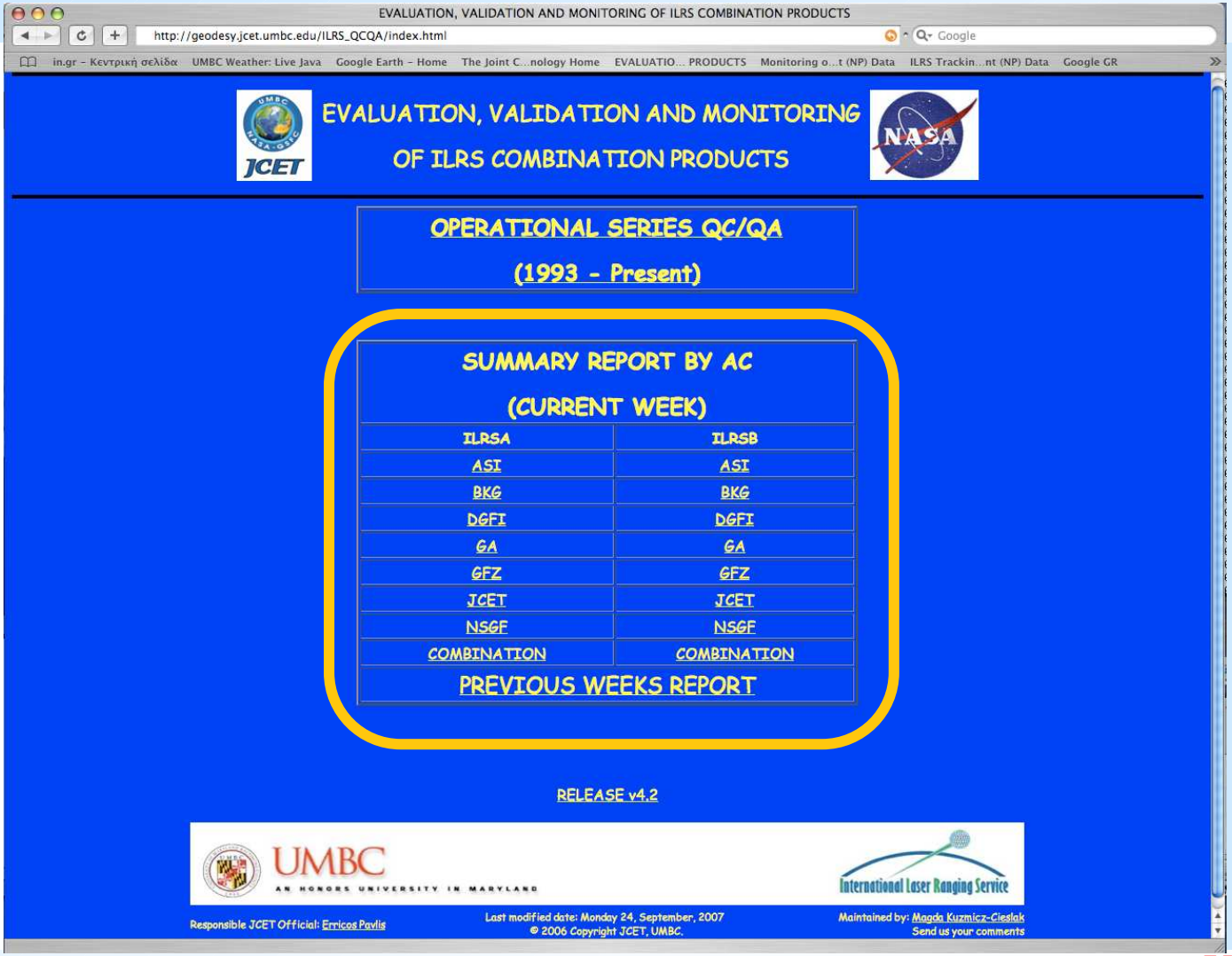
Weekly Report of AC & CC



QuickTime™ and a
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Long-term behavior example

ASI REPORT

FOR WEEK 070915

FROM ILRSA

QuickTime™ and a
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are needed to see this picture.

New Station Bias Report + …

```
# @070809
# @Date span:  070722 - 070729
# @contact epavlis@umbc.edu
# @website http://geodesy.jcet.umbc.edu/
# @version 1.0
#
# each line contains:
#
# STA ID           = site name
# YY/MM/DD HH:MM   = pass starting time
# SAT              = satellite name (L1: LAGEOS1; L2: LAGEOS2; E1: ETALON1; E2:ETALON2; S1: STARLETTE; A1: AJISAI
# GOOD OBS         = number of accepted normal points
# RAW RMS          = residual RMS before editing & bias estimation
# PREC EST         = post-fit scattering rms
# RANGE BIAS       = estimated range bias
# RANGE BIAS SIGMA = estimated range bias sigma
# TIME BIAS        = estimated time bias
# TIME BIAS SIGMA  = estimated time bias sigma
# PASS DUR         = pass duration
# EDIT OBS         = number of bad normal points
# CALIB+ MEAN      = mean Applied System Delay (ILRS FR format cols 97-104)
# CALIB SDEV       = mean System Calibration Method (ILRS FR format cols 126)
# CALIB SHIFT+     = mean Root Mean Square (ILRS FR format cols 111-114)
# STPASS RMS       = mean Pass RMS (ILRS FR format cols 58-64)
# TEMP             = mean surface temperature [K]
# HUM              = mean relative humidity of surface %
# PRES             = mean pressure [hPa]
# WLEN             = wavelength [nm]
# SCH              = System Change Indicator (ILRS FR format cols 127)
# SCI              = System Configuration (ILRS FR format cols 128)
# DRF              = Data Release Flag (ILRS FR format cols 130)
# ELEVATION MAX    = maximum elevation for pass [degress]
# ELEVATION MIN    = minimum elevation for pass [degrees]
#
#1864 Maidanak  12340S002
# STA ID YY/MM/DD HH:MM SAT  GOOD   RAW   PREC    RANGE RANGE   TIME   TIME    PASS    EDIT   CALIB+  CALIB  CALIB++ STPASS   TEMP      HUM     PRES     WLEN   S S D       ELEVATION
#                            OBS    RMS    EST    BIAS  BIAS    BIAS   BIAS    DUR     OBS    MEAN    SDEV   SHIFT   RMS       [K]       %      [hPa]    [nm]   C C R      MAX       MIN
#                                   [mm]  [mm]    [mm]  SIGMA   [us]   SIGMA   [min]          [mm]    [mm]   [mm]    [mm]                                      H I F       [degrees]
#
18645401 7/07/22 16:27 L1      7    29.8  25.7   -16.3  12.2    -4.6     2.8    12       0   21416 E     0     0  P    44     285.1     58.0    732.0    532.0  0 0 0      33.8      30.8
18645401 7/07/22 16:27 L1      7    29.8  25.7   -16.3  12.2    -4.6     2.8    12       0   21416 E     0     0  P    44     285.1     58.0    732.0    532.0  0 0 0      33.8      30.8
18645401 7/07/23 16:53 A1      6    13.9  11.0    -8.5   8.9     1.3     3.6     3       3   21413 E     0     0  P    82     287.1     50.0    732.0    532.0  0 0 0      68.2      53.1
18645401 7/07/23 18:37 L1      4    55.4  35.1   -25.6   8.2    -3.5     2.7    15       2   21412 E     0     0  P    88     287.1     50.0    732.0    532.0  0 0 0      52.4      32.2
18645401 7/07/23 18:37 L1      4    55.4  35.1   -25.6   8.2    -3.5     2.7    15       2   21412 E     0     0  P    88     287.1     50.0    732.0    532.0  0 0 0      52.4      32.2
18645401 7/07/24 15:58 A1      4    11.4  11.4    -0.6  10.6    -5.0     4.1     4       6   21415 E     0     0  P   104     287.1     41.0    734.7    532.0  0 0 0      54.6      45.6
18645401 7/07/24 17:11 L1      6    21.5   7.9   -25.1  10.9     2.6     2.8    10       0   21415 E     0     0  P    49     287.1     41.0    734.7    532.0  0 0 0      38.7      34.0
18645401 7/07/24 17:11 L1      6    21.5   7.9   -25.1  10.9     2.6     2.8    10       0   21415 E     0     0  P    49     287.1     41.0    734.7    532.0  0 0 0      38.7      34.0
```

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Summary

- ILRS AWG maintains new web-based QC/QA tool for ACs/CCs as well as stations
- Updated with WEEKLY products every Thursday (soon more frequently)
  - Yearly graphs for near-term performance of several estimates (NEU, XYZ, etc.)
  - Long-term performance since 1993
- Pass-by-pass bias report for all sites and L 1 & 2, E 1 & 2, and Starlette and Ajisai