

EROSII@CDS: Ascii-file status

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Outline

- The ascii infrastructure
- Output files
- Quality checks

Infrastructure (erosprod/CDS/README.txt)

```
/pbs/home/e/erosprod/CDS>
/pbs/home/e/erosprod/CDS> ls -l *.py
-rwxr-xr-x 1 erosprod eros 3093 Apr 16 23:00 getallsuivis.py
-rwxr-xr-x 1 erosprod eros 3094 Apr 6 16:37 getsuivilc.py
-rwxr-xr-x 1 erosprod eros 10267 Apr 18 16:31 makeimagelist.py
-rwxr-xr-x 1 erosprod eros 10377 Apr 18 17:43 makeimagelist_lm014.py
-rwxr-xr-x 1 erosprod eros 12159 Apr 12 15:27 makexcat.py
-rwxr-xr-x 1 erosprod eros 11311 Apr 7 11:21 makextime.py
/pbs/home/e/erosprod/CDS>
```

Scripts

```
/sps/eros/users/erosprod/CDS>
/sps/eros/users/erosprod/CDS> du -sh Suivis/Short/
16G    Suivis/Short/
/sps/eros/users/erosprod/CDS> du -sh Suivis/Full/
46G    Suivis/Full/
/sps/eros/users/erosprod/CDS> du -sh XXcat
714M   XXcat
/sps/eros/users/erosprod/CDS> du -sh Xcat
371M   Xcat
/sps/eros/users/erosprod/CDS> du -sh Xtime
202G   Xtime
/sps/eros/users/erosprod/CDS> du -sh Xtinfo/
95M    Xtinfo/
/sps/eros/users/erosprod/CDS>
```

Output

Image list: .xtinfo

One list per field:

```
/pbs/home/e/erosprod/CDS>
/pbs/home/e/erosprod/CDS> head -5 /sps/eros/users/erosprod/CDS/Xtinfo/lm033.xtinfo
  filename      mjd      ehjd      fond      psfx      psfy      psfrr      absorp      airmass      date
lm03300trr6h2099.fits 50316.4383 316.93861 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 1996-08-20
lm03300trr6i0299.fits 50329.3119 329.81222 2915.0 1.873 1.688 -0.055 0.634 1070289024.0 1996-09-02
lm03300trr6i10114.fits 50337.3894 337.88973 2613.68 1.734 1.552 -0.05 0.645 1067920000.0 1996-09-10
lm03300trr6i2682.fits 50353.3355 353.83582 6078.3 1.612 1.399 -0.001 0.757 1068051008.0 1996-09-26
/pbs/home/e/erosprod/CDS> tail -5 /sps/eros/users/erosprod/CDS/Xtinfo/lm033.xtinfo
lm03317tbrdb1661.fits 52687.245 2687.74469 8873.31 1.556 1.568 -0.129 2.551 -1.0 2003-02-16
lm03317tbrdb2133.fits 52692.1245 2692.62419 1077.32 2.095 2.043 -0.062 2.236 -1.0 2003-02-21
lm03317tbrdb2435.fits 52695.1342 2695.63388 655.51 1.705 1.572 -0.083 2.231 1.491 2003-02-24
lm03317tbrdb2450.fits 52695.2072 2695.70688 668.75 1.564 1.572 -0.1 2.102 1.878 2003-02-24
lm03317tbrdb2745.fits 52698.0877 2698.58738 684.29 1.67 1.505 -0.023 1.974 1.376 2003-02-27
/pbs/home/e/erosprod/CDS>
```

All LMC fields done

lm014, ccd2 fails

Airmass problem in 1996

EROSII Star Catalog files: .cat→.xcat

One catalog per ccd quarter:

```
/pbs/home/e/erosprod/CDS>
/pbs/home/e/erosprod/CDS> head -5 /sps/eros/users/erosprod/CDS/Xcat/Lm0020m.xcat
# erosid Ra Dec MagR ErrMR XR YR MagB ErrMB XB YB VarFlag fluxr fluxb nlc medianr sigpullr medianb sigpullb
lm0020m29 82.307940 -69.066350 19.826 0.402 1294.59 1648.89 19.966 0.322 1238.08 1688.88 0 1187.11 1173.8 375 19.825 0.801 19.965 0.773
lm0020m32 82.287230 -69.067040 20.186 0.771 1357.83 1643.24 20.656 0.821 1301.29 1683.30 0 349.69 841.63 385 20.133 0.827 20.614 1.53
lm0020m33 82.416890 -69.066680 19.649 0.362 961.89 1644.40 19.842 0.262 905.58 1684.07 0 811.42 1495.46 382 19.647 0.819 19.84 0.562
lm0020m37 82.580950 -69.067370 20.220 0.932 460.98 1634.80 20.313 0.672 404.99 1673.98 0 192.4 332.9 420 20.14 0.599 20.289 0.616
/pbs/home/e/erosprod/CDS> tail -5 /sps/eros/users/erosprod/CDS/Xcat/Lm0020m.xcat
!lm0020m32877 82.66786 -69.09472 19.73 -1. 197.58 1397.53 19.68 -1. 142.12 1436.64 0 968.42 1863.06 0 -1. -1. -1. -1.
!lm0020m32881 82.548744 -69.09559 19.2 -1. 560.91 1393.35 19.73 -1. 505.24 1432.82 0 1568.39 1776.37 0 -1. -1. -1. -1.
!lm0020m32882 82.66947 -69.09533 18.72 -1. 192.72 1392.23 19.23 -1. 137.27 1431.34 0 2448.45 2818.45 0 -1. -1. -1. -1.
!lm0020m32888 82.26939 -69.0961 20.12 -1. 1412.83 1393.96 99.0 -1. 1356.65 1434.27 0 670.65 -1.0 0 -1. -1. -1. -1.
!lm0020m32891 82.494316 -69.096664 18.71 -1. 726.93 1385.4 19.59 -1. 671.17 1425.04 0 2457.88 2028.21 0 -1. -1. -1. -1.
/pbs/home/e/erosprod/CDS>
```

lm001, lm002, lm055 done
flux, nlc, median, sigpull added
faint objects with no lightcurve added at end

EROSII Lightcurve files: .time→.xtime

One file per star:

```
/pbs/home/e/erosprod/CDS>
/pbs/home/e/erosprod/CDS> head /sps/eros/users/erosprod/CDS/Xtime/lm0020m10008.xtime
# star:  erosid      MagR      ErrMR      XR      YR      MagB      ErrMB      XB      YB
#          lm0020m10008      17.324      0.042      1049.83      1216.79      18.010      0.055      994.14      1256.87
#
#
#   date      MagR      ErMagR      MagB      ErMagB      fluxr      efluxr      fluxb      efluxb      chi2r      chi2b      image
315.89299      17.323      0.055      18.003      0.073      9027.8      464.95      8701.0      595.65      1.647      4.246      6h1975
325.82966      17.284      0.054      99.999      9.999      9451.79      478.24      -1.0      -1.0      1.598      -1.0      6h2995
327.82295      17.330      0.037      17.970      0.054      9317.3      311.69      9655.4      450.13      1.845      1.96      6h3195
334.87162      17.337      0.034      17.993      0.045      9229.93      289.5      9289.05      370.04      2.109      2.845      6i07117
351.82713      17.325      0.037      17.992      0.051      9292.58      313.62      9281.07      418.0      1.736      1.474      6i24101
361.85427      17.276      0.063      17.987      0.096      9260.37      558.38      8325.66      793.59      1.733      2.257      6j04130
/pbs/home/e/erosprod/CDS> tail -5 /sps/eros/users/erosprod/CDS/Xtime/lm0020m10008.xtime
2680.70410      99.999      9.999      18.020      0.065      -1.0      -1.0      8614.06      519.7      -1.0      1.411      db0910
2683.58571      99.999      9.999      18.010      0.062      -1.0      -1.0      8850.05      503.2      -1.0      1.209      db1225
2686.57221      99.999      9.999      18.059      0.093      -1.0      -1.0      8316.39      718.26      -1.0      1.191      db1516
2697.63455      99.999      9.999      17.922      0.052      -1.0      -1.0      9382.98      456.8      -1.0      1.678      db2632
2697.74525      99.999      9.999      17.959      0.076      -1.0      -1.0      8967.24      641.48      -1.0      0.953      db2666
/pbs/home/e/erosprod/CDS>
```

≈ 1day per field (32 quarters)

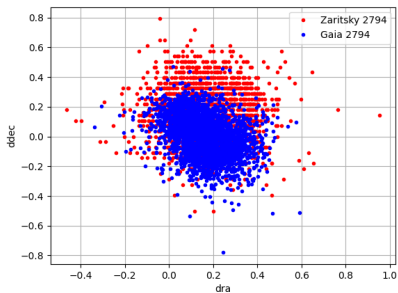
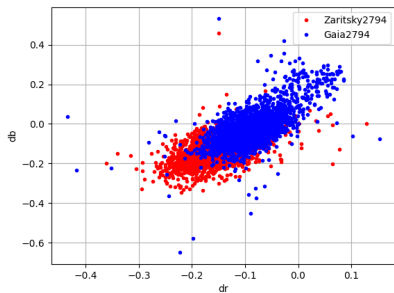
lm001, lm002, lm055 done

flux, eflux, chi2, image name added

Red camera failure at end

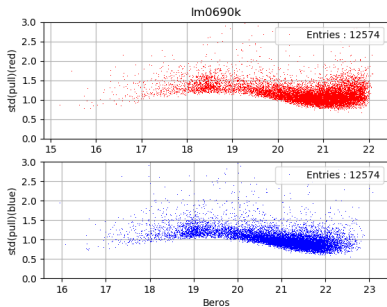
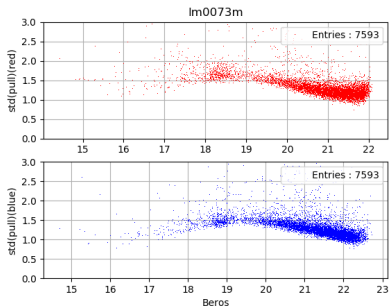
Mag, (ra,dec) Comparison with Zaritsky/Gaia

Median offsets quarter by quarter:



Uncertainties: Median Pull vs mag

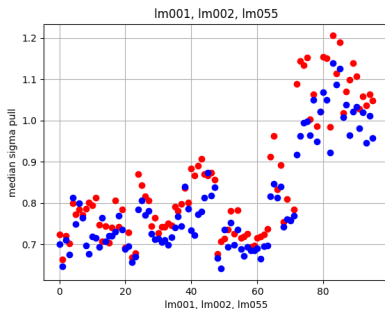
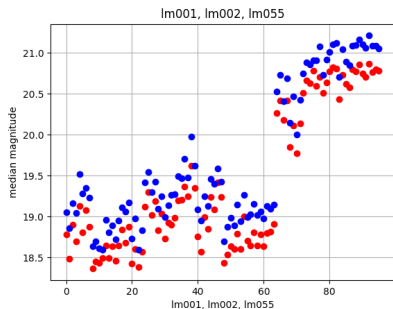
$$\text{Pull} = (\text{mag} - \text{median}) / \text{error}$$



To be done for each field

Median Magnitude and Pull, Im001, Im002, Im055

$$\text{Pull} = (\text{mag} - \text{median}) / \text{error}$$

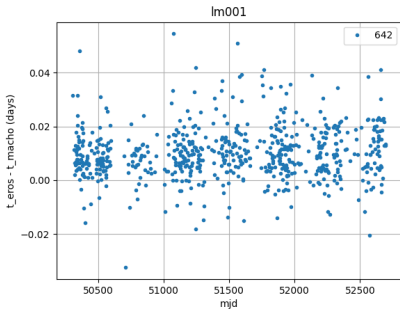
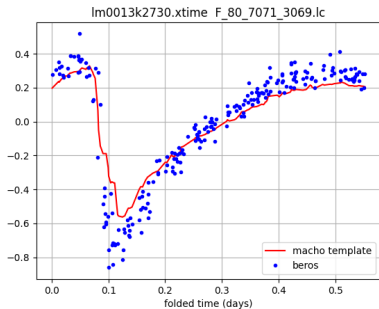


To be done for each field

$t_{eros} - t_{macho}$ with Macho periodics

Compare eros lightcurves with Macho template.
Fit ($t_{eros} - t_{macho}$) using all bright periodics in a field

Im001:



Precision: ≈ 0.01 day for each image
To be done for each field?