Pre-OmegaTranS Observations 2006

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Datareduction in AstroWISE

The data:

- 40h observation time
- 12 nights in April, July, August and September
- R-band (#844), 25-30s exposure time
- 1066 science images in 2 fields @ WFI / La Silla
- 200 GByte raw data (150 science / 50 calibrations)

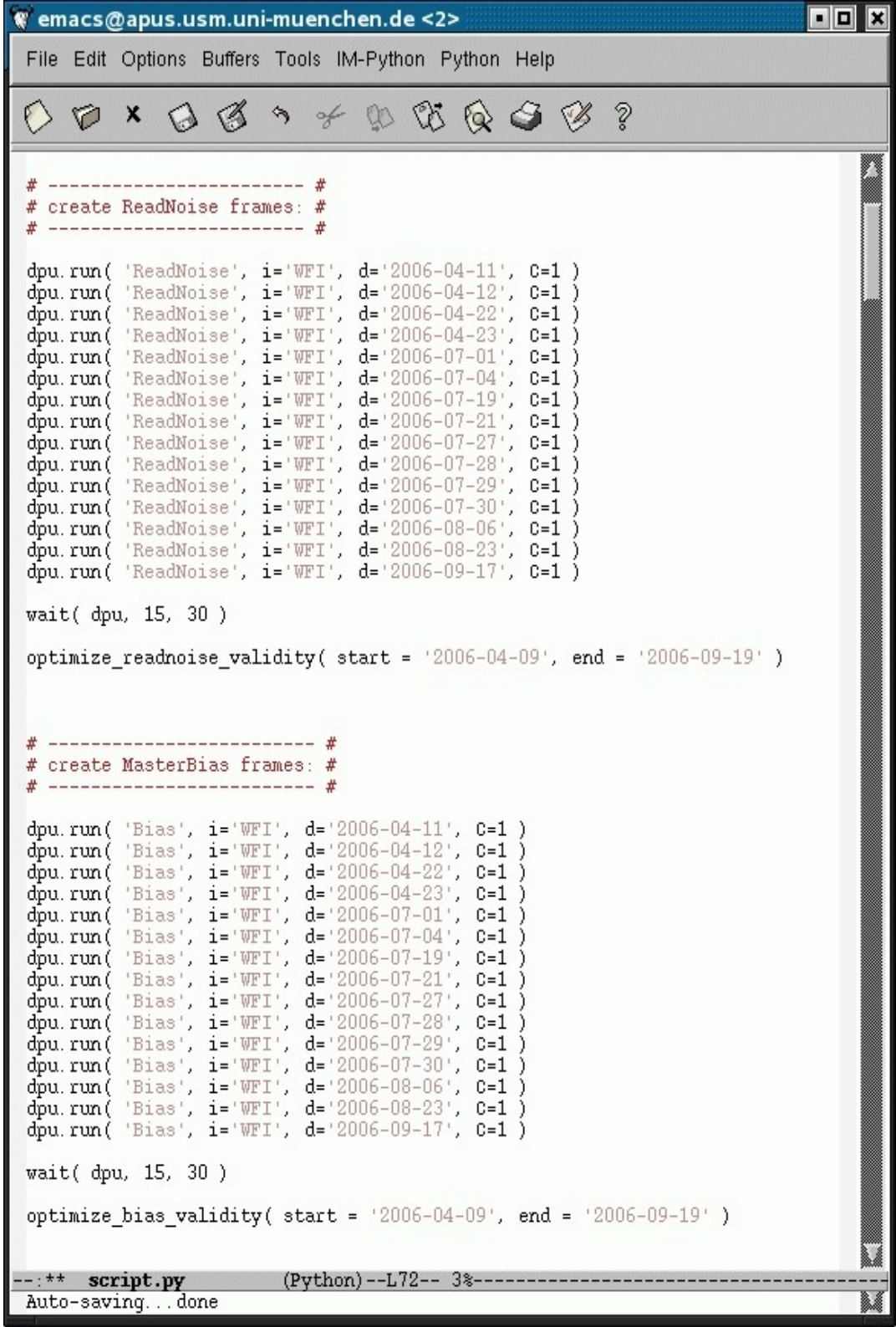
Data reduction in a scripted way:

gain:

- fast & easy
- reproducible

requirements:

- wait for dpu-processes to be finished
- no human interaction

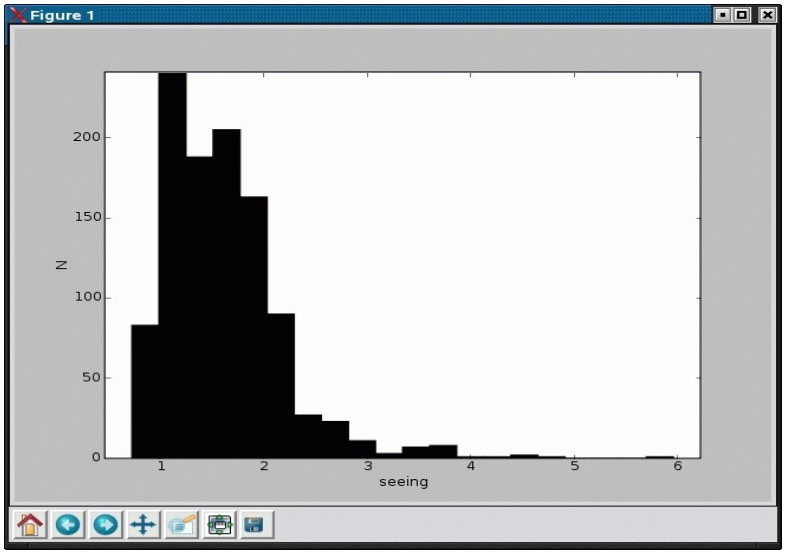


Optimizing validities

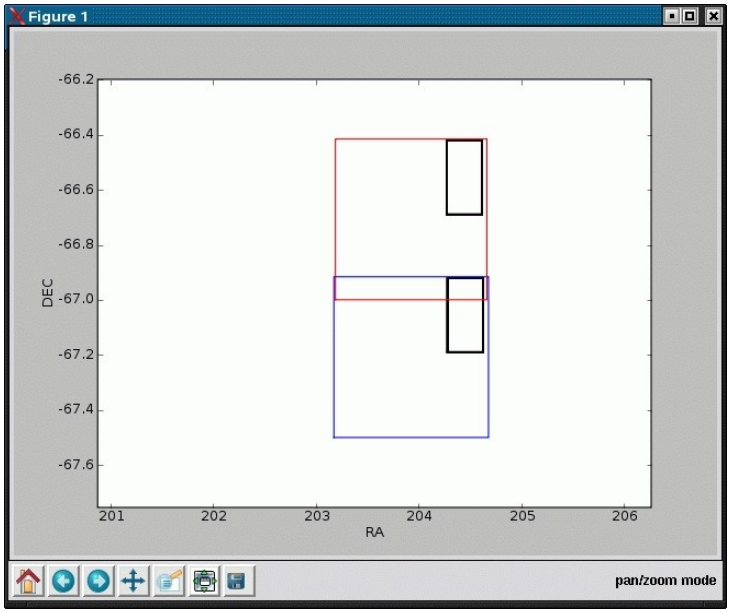
dpu.run('DomeFlat', i='WFI', d='2006-07-29', f='#844', oc=6, C=1)
dpu.run('DomeFlat', i='WFI', d='2006-07-30', f='#844', oc=6, C=1)

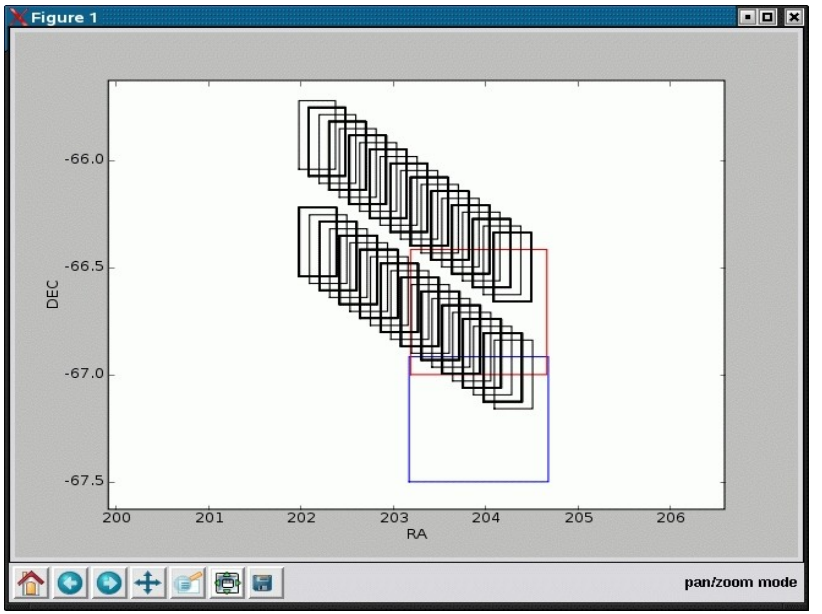
optimize_dome_validity(start='2006-07-26', end='2006-08-03')

Seeing:

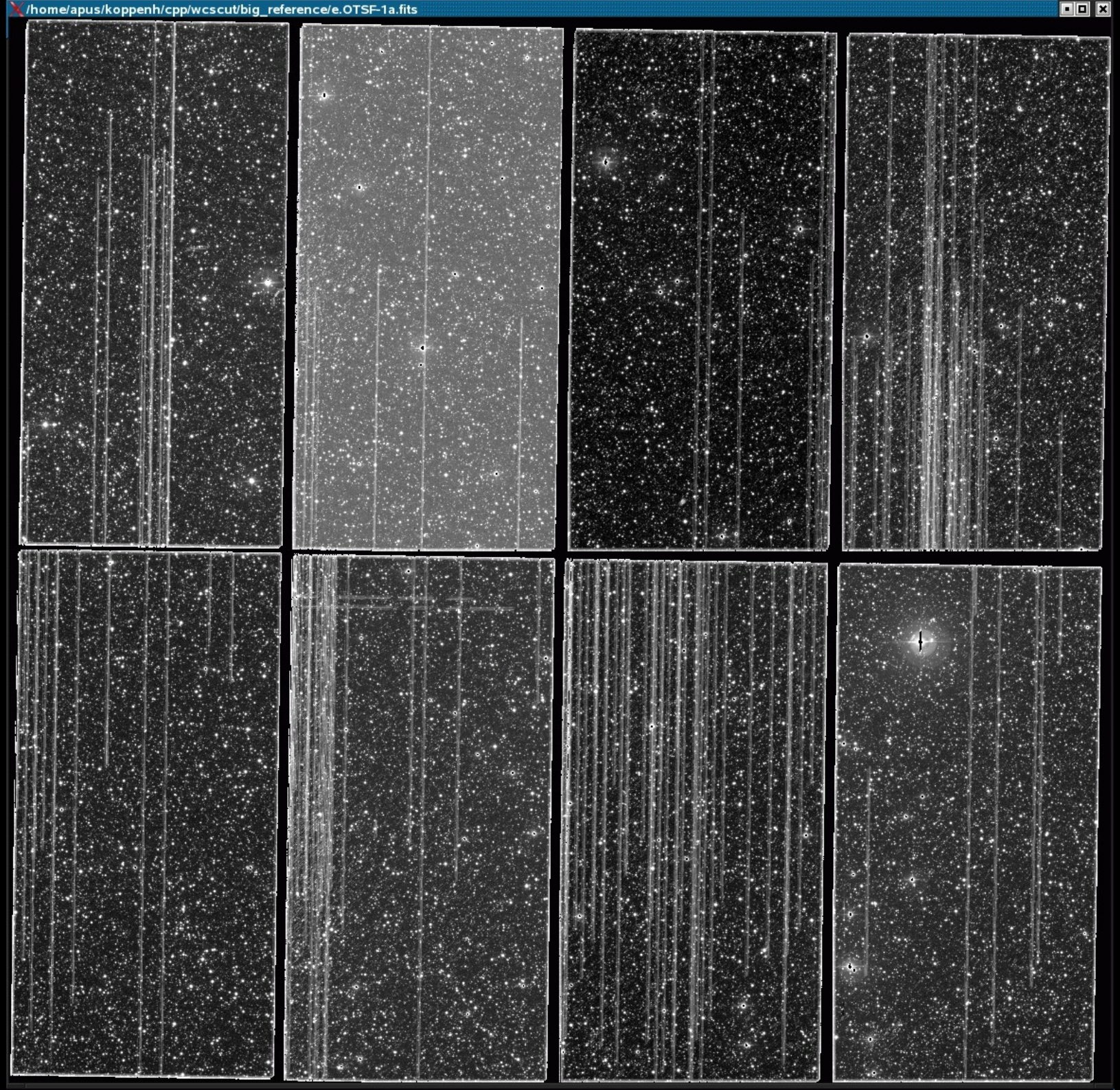


Pointing:

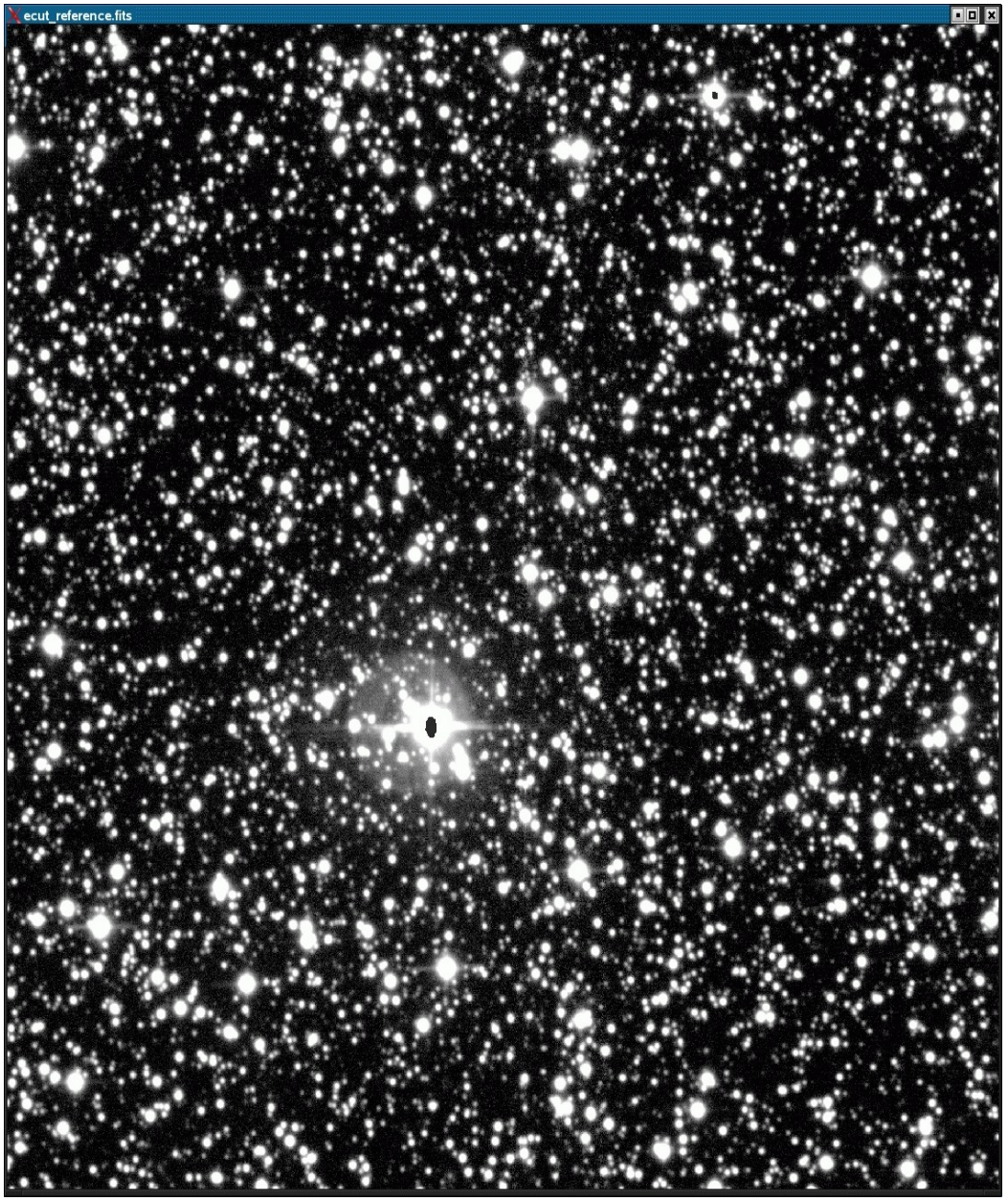


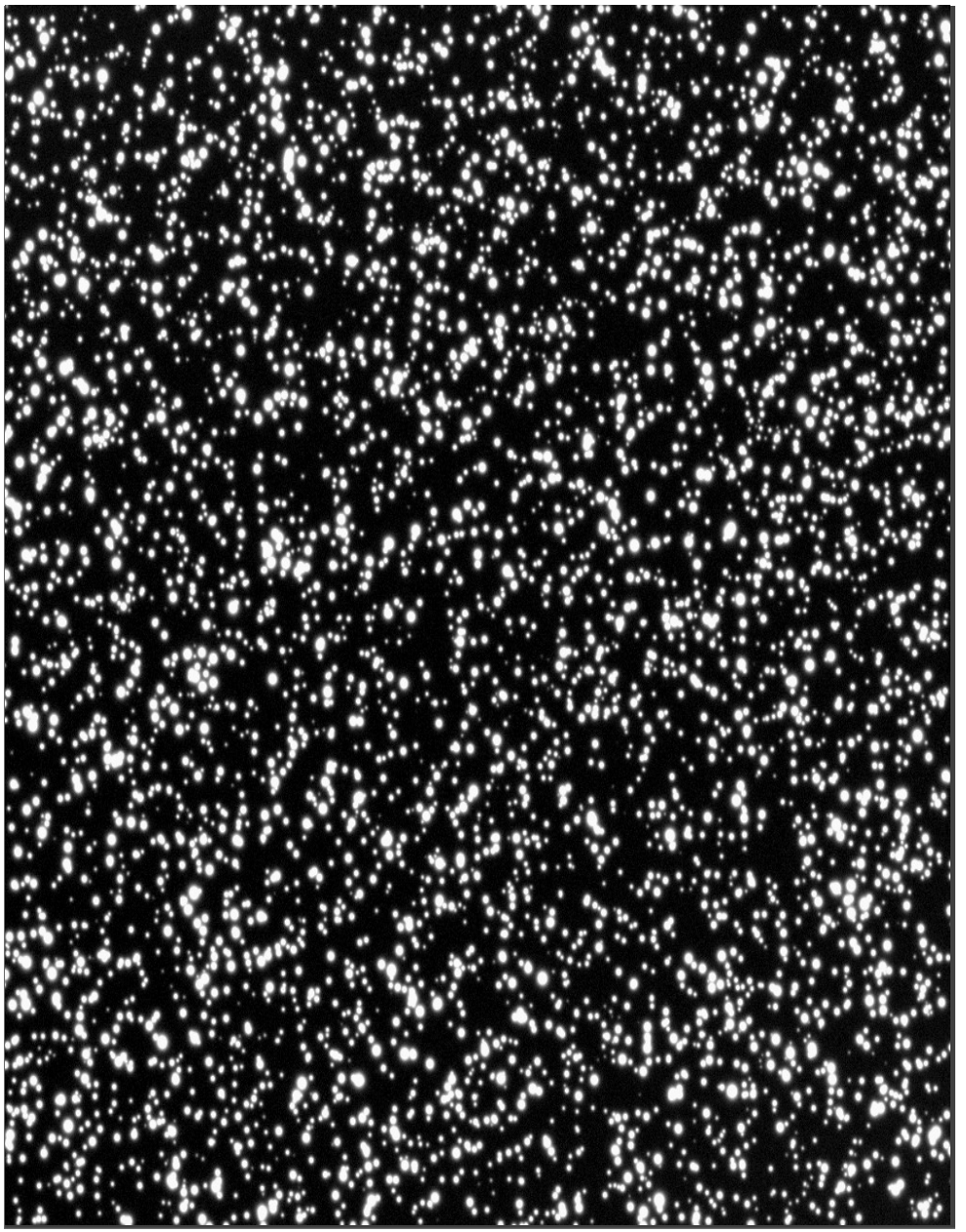



/home/apus/koppenh/cpp/wcscut/big_reference/OTSF-1a.fits


/home/apus/koppenh/cpp/wcscut/big_reference/e.OTSF-1a.fits

no global astrometry => **bad difference images!**





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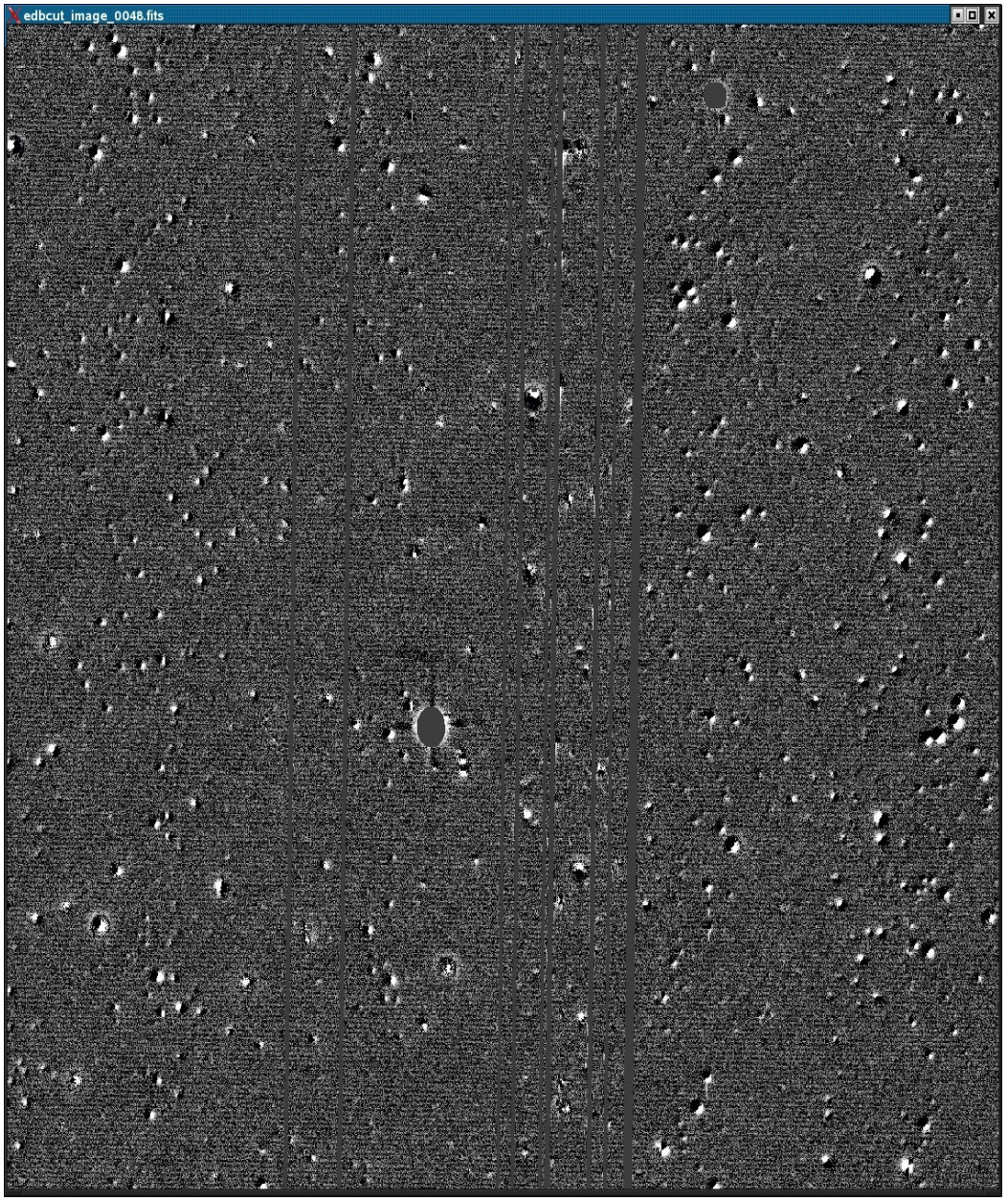
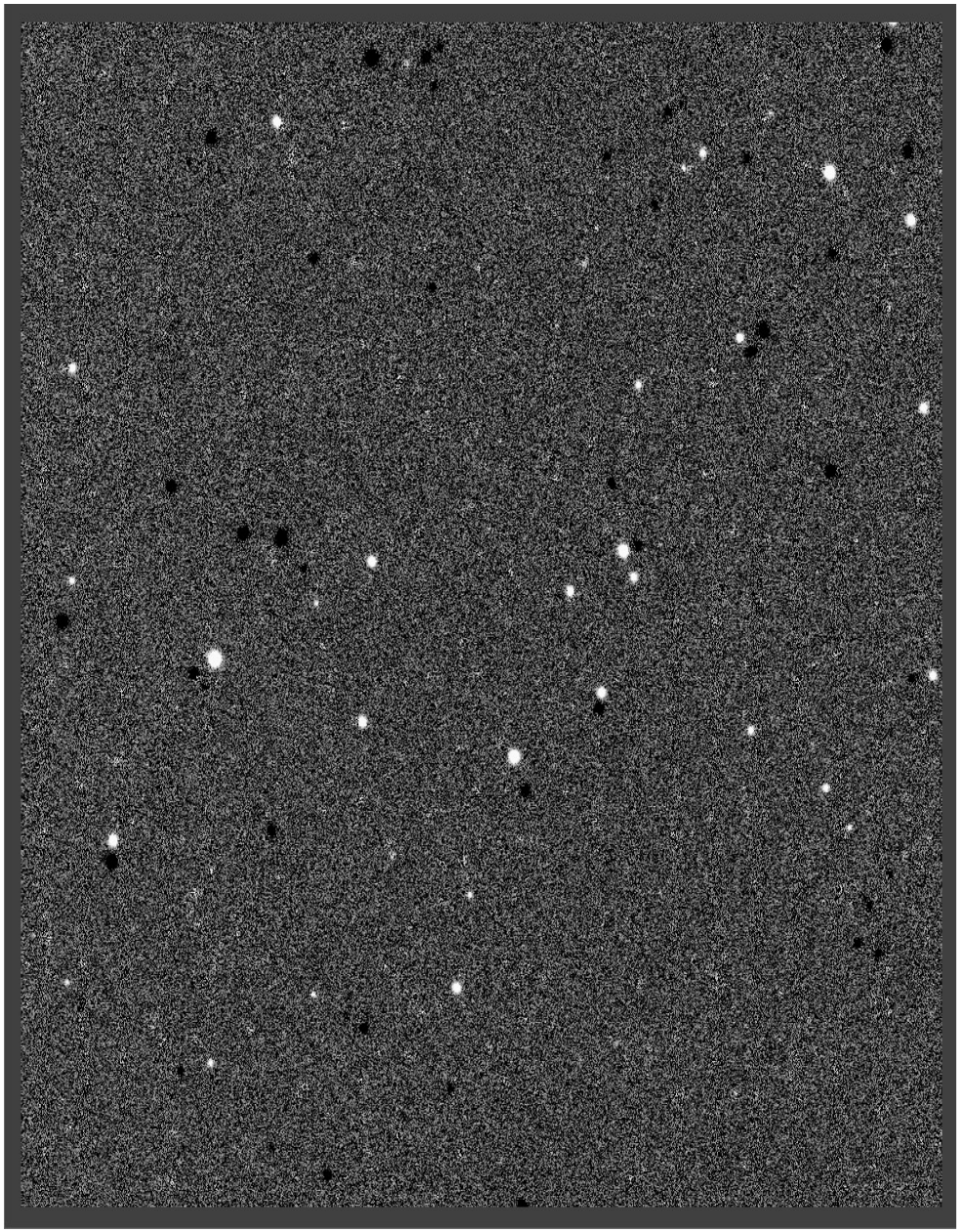
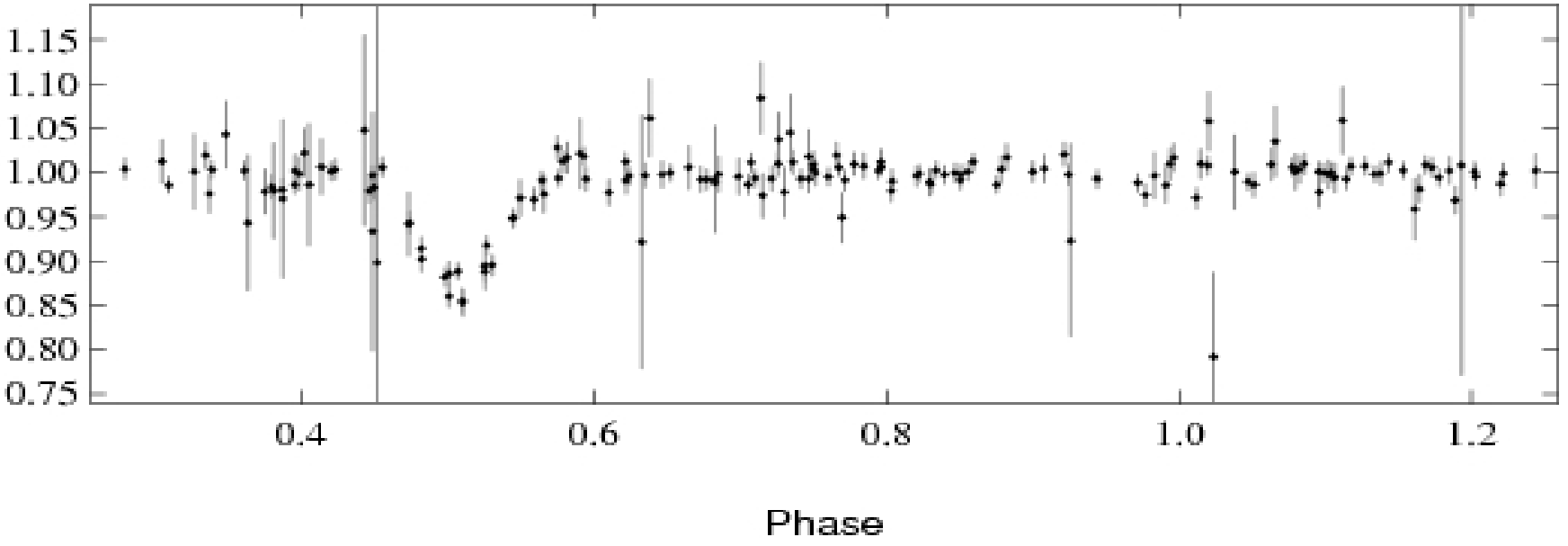


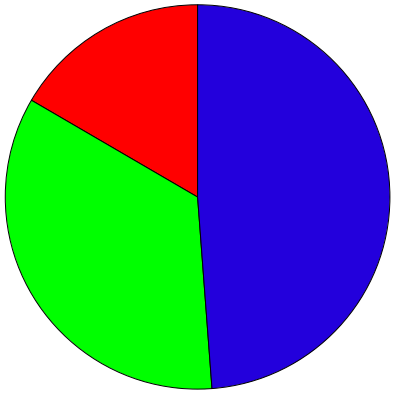


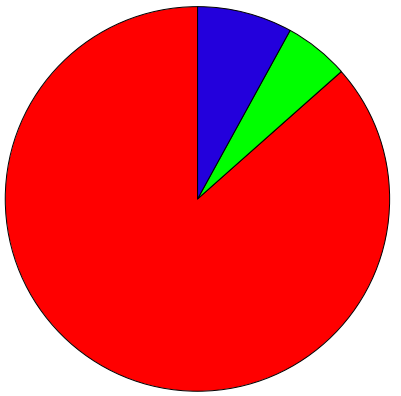
Example lightcurve from the WESPS project



Computation times

	single cpu	16x2 cluster
Ingest	120.6h	120.6h
Bias, Flat, etc.	36.0h	1.1h
Reduce	165.6h	5.2h
Astrometry	12.0h	0.4h
Regrid	35.2h	1.1h
Reference	3.5h	0.1h
MDia	349.2h	10.9h
Total	722.1h	139.4h





Conclusions

- try to avoid service-mode on LaSilla
- always use more than one computer for data ingestion
- global astrometry is essential for difference imaging
- AstroWISE on a good way to be ready to perform datareduction of big datasets (more tomorrow)
- MDia is almost ready to be used by the community (documentation)