

Using the Astro-Wise system on MDM data

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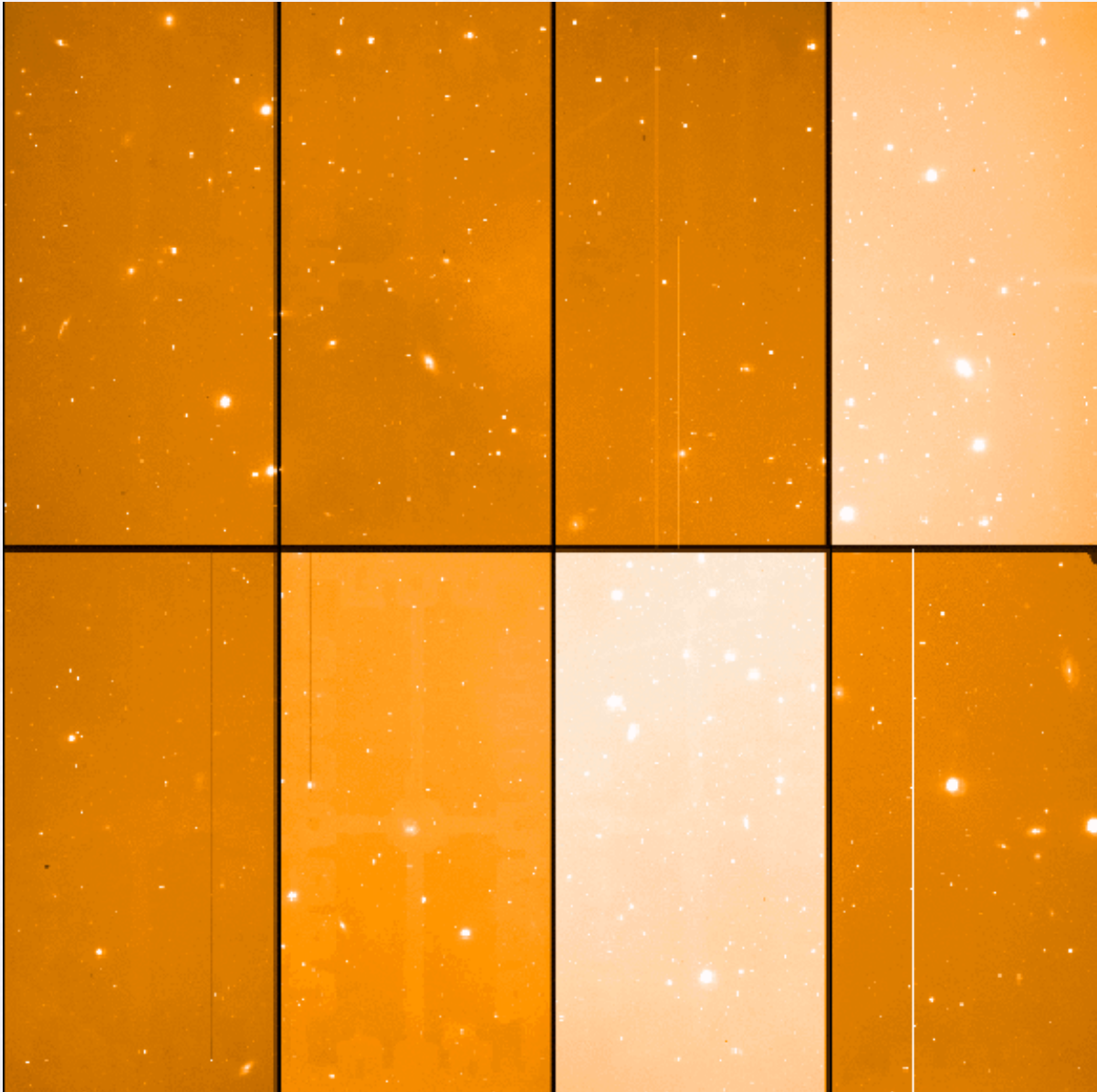
Kapteyn Astronomy Institute Groningen

8K-camera on the Hiltner 2.4-m Telescope (twin WFI)

MDM Observatory Arizona U.S.A.



8 nights in May
2004 and
additional time
in January 2005



ESO
field08B

field08B003-B8.fits
05:34:48.062 +44:36:17.45 2004.5

schneider/Skycat

Nov 10, 2005 at 16:17:13

Creation of Masterflats:

- **Bias pipeline:** ReadNoise, Debiasing, HotPixelMap
- **Flat-field pipeline:** DomeFlat, ColdPixelMap, TwilightFlat, MasterFlat, Defringing

- **Problems with unbinned BiasFrames:** couldn't be used for debiasing of binned ScienceFrames \Rightarrow used set of binned BiasFrames from second run for ReadNoise and HotPixelMap and overscan regions for debiasing.
- **Problems with DomeFlats:** were of bad quality and couldn't be used \Rightarrow MasterFlats were made only with TwilightFlats.

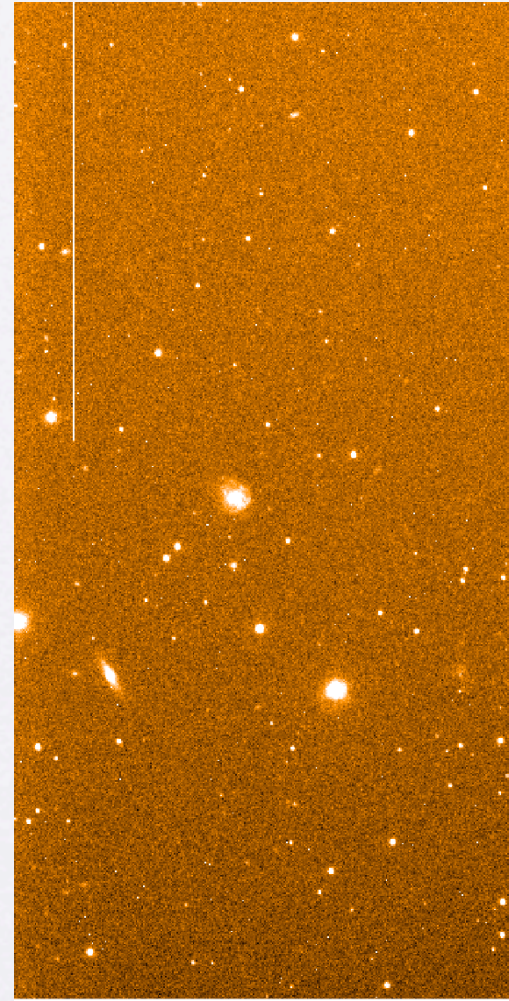
ScienceTask:



ESO MDM_2004-05-12T04:45:56_0_2.fits
field08B 16:06:13.541 +17:58:06.24 2000

schneider/Skycat

Nov 10, 2005 at 16:06:15

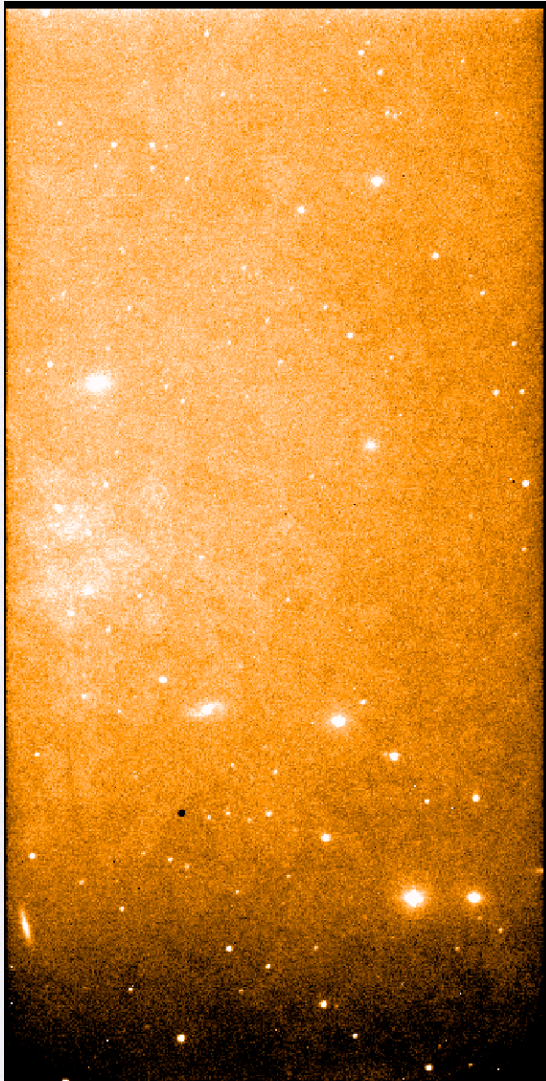


ESO Sci-TSCHNEIDER-MDMR-----B-l-Red---Sci-53685.6058508.fits
field08B 16:06:14.095 +17:58:11.29 2000

schneider/Skycat

Nov 11, 2005 at 16:16:16

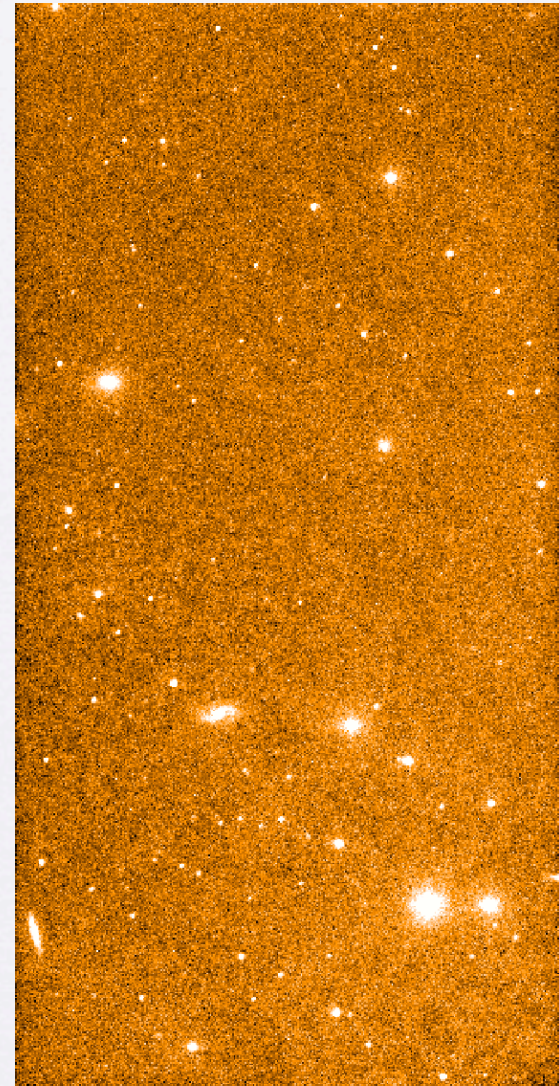
Defringing:



ESO field09z field09z0205.fits.gz
05:34:40.062 +63:08:23.74 2004.5

schneider/Skycat

Nov 11, 2005 at 16:40:17



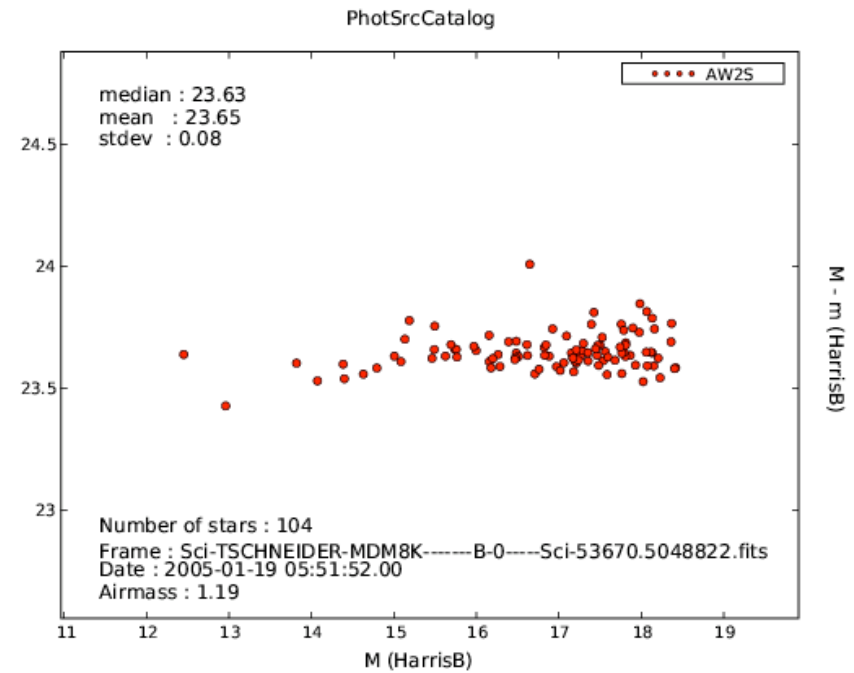
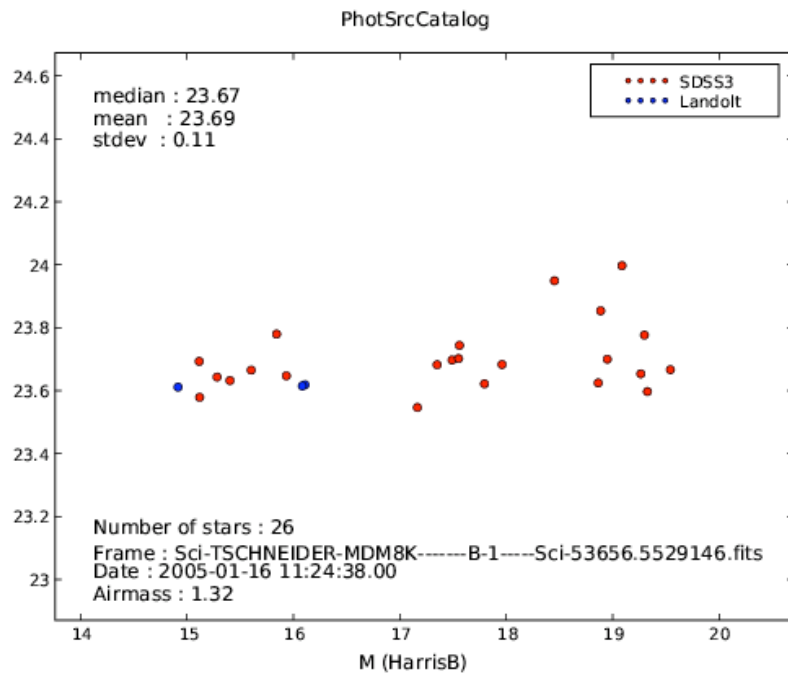
ESO Sci-TSCHNEIDER-MDM&R-----2-5-Red---Sci-53685.6395350.fits
field09z 16:04:37.507 +17:29:05.55 2000

schneider/Skycat

Nov 11, 2005 at 16:37:10

Photometry:

- System contains all Landolt standard star catalogs, supplemented by SDSS (3) data.
- Also available for a few standard star fields: (extra wide) secondary star catalogs specially made for OmegaCam photometry. (SA98)
- May 2004: SA107 & SA110
- January 2005: SA101 & SA98 ➤ Is expected to give the best results so was used to determine the zeropoints of the MDM chips for now.



Inspect method for zeropoint determination:

- x: magnitudes of the individual standard stars as known to the standard star catalog.
- y: the associated zeropoints.

Left in the reduction pipeline:

- Illumination correction
- Co-addition and subtraction of the sky-background.
- Creating and associating source-lists (SExtractor)
- Quality control

 **Science!** 