Monocam CAblank5 fringing

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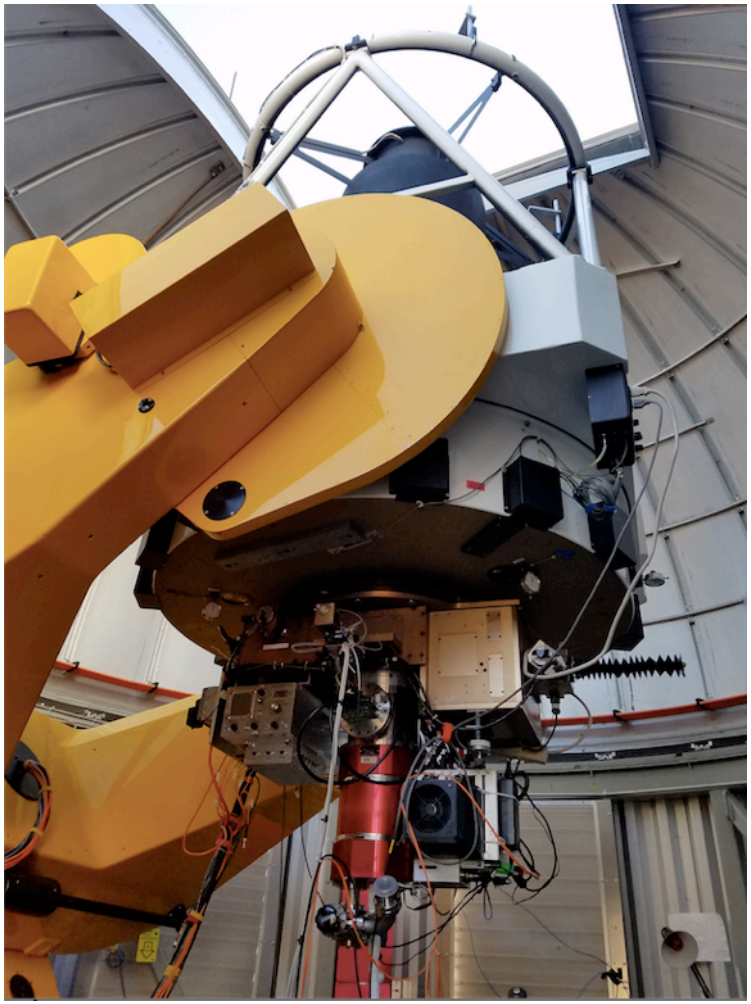
November 15, 2016

Monocam at 1.3m



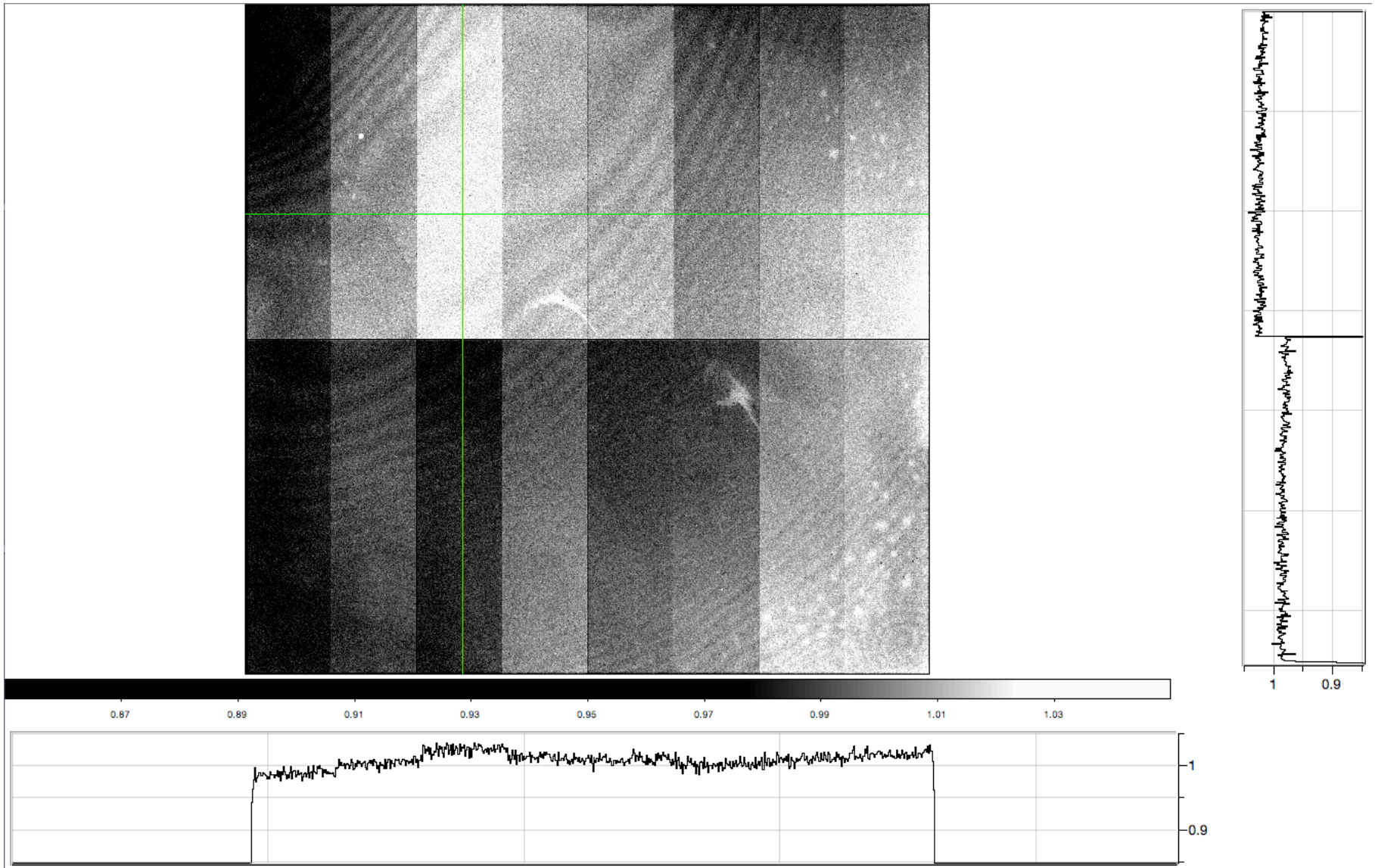
1.3m Telescope

- scale 40.0 arcsec/mm
- f/4.0
- FOV 0.44 x 0.44 sq.deg.
- Blank field CABlank5
  - RA 16 24 33
  - DEC +55 43 59

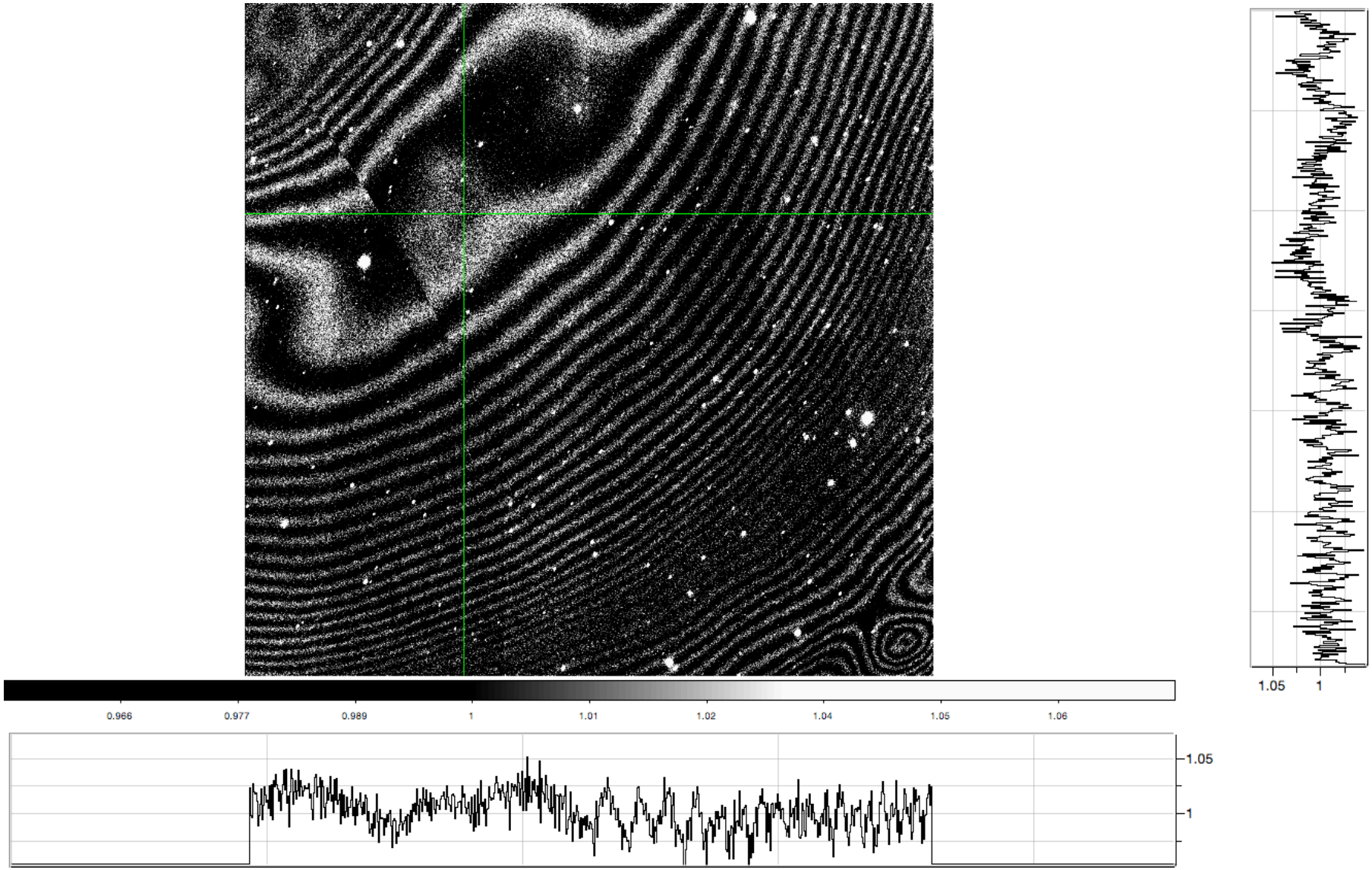
Image Specifications

- postISRCCD images
  - all images are (to some extent) bias corrected, dark corrected and flat fielded
  - possible that there were issues with flat fielding
- monocam 1.3m telescope Y4 filter
- images shown represent the average of ten images taken over the span of ten minutes
  - Each individual image has 60 sec exposure time
- all images that were analyzed have been divided by their average pixel value

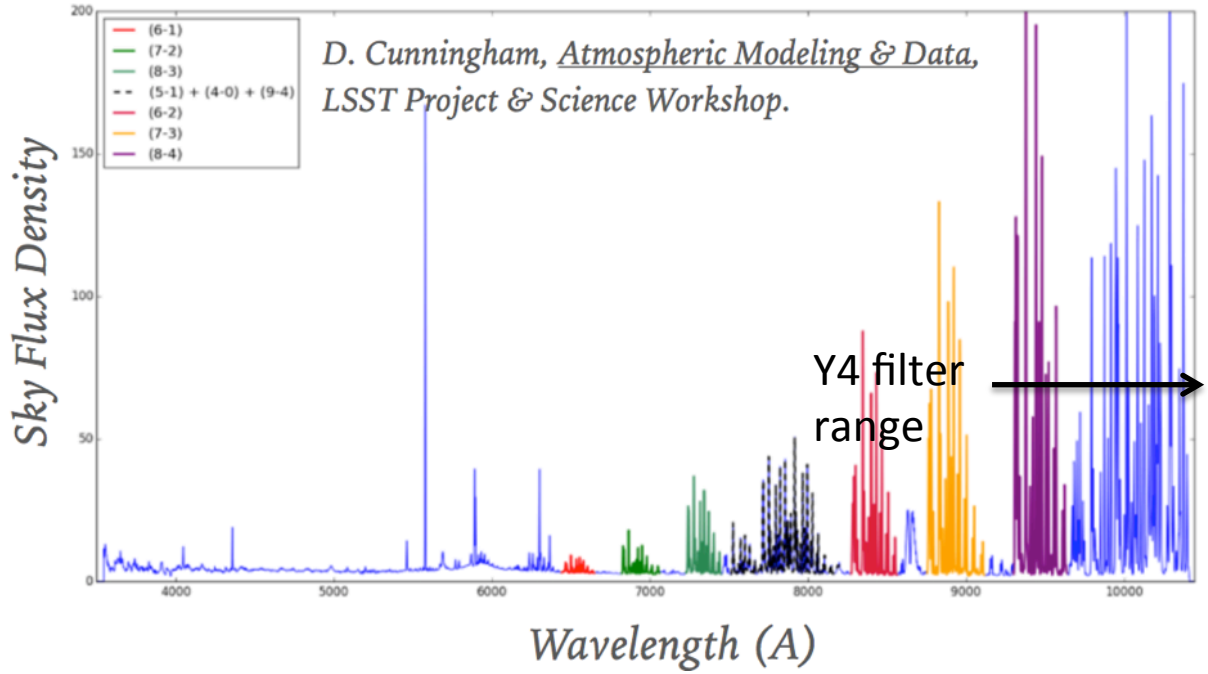
Master flat used



example postISRCCD image

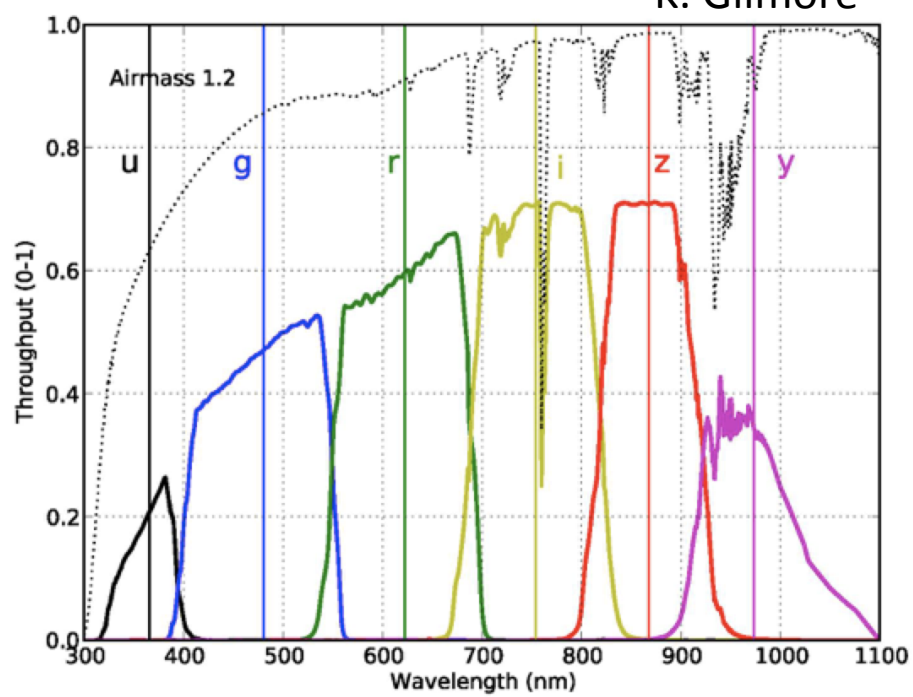


Plot taken from slide 7 of
David Kirkby's 2016/09/22
SAWG presentation
<u>Fringe Modeling</u>

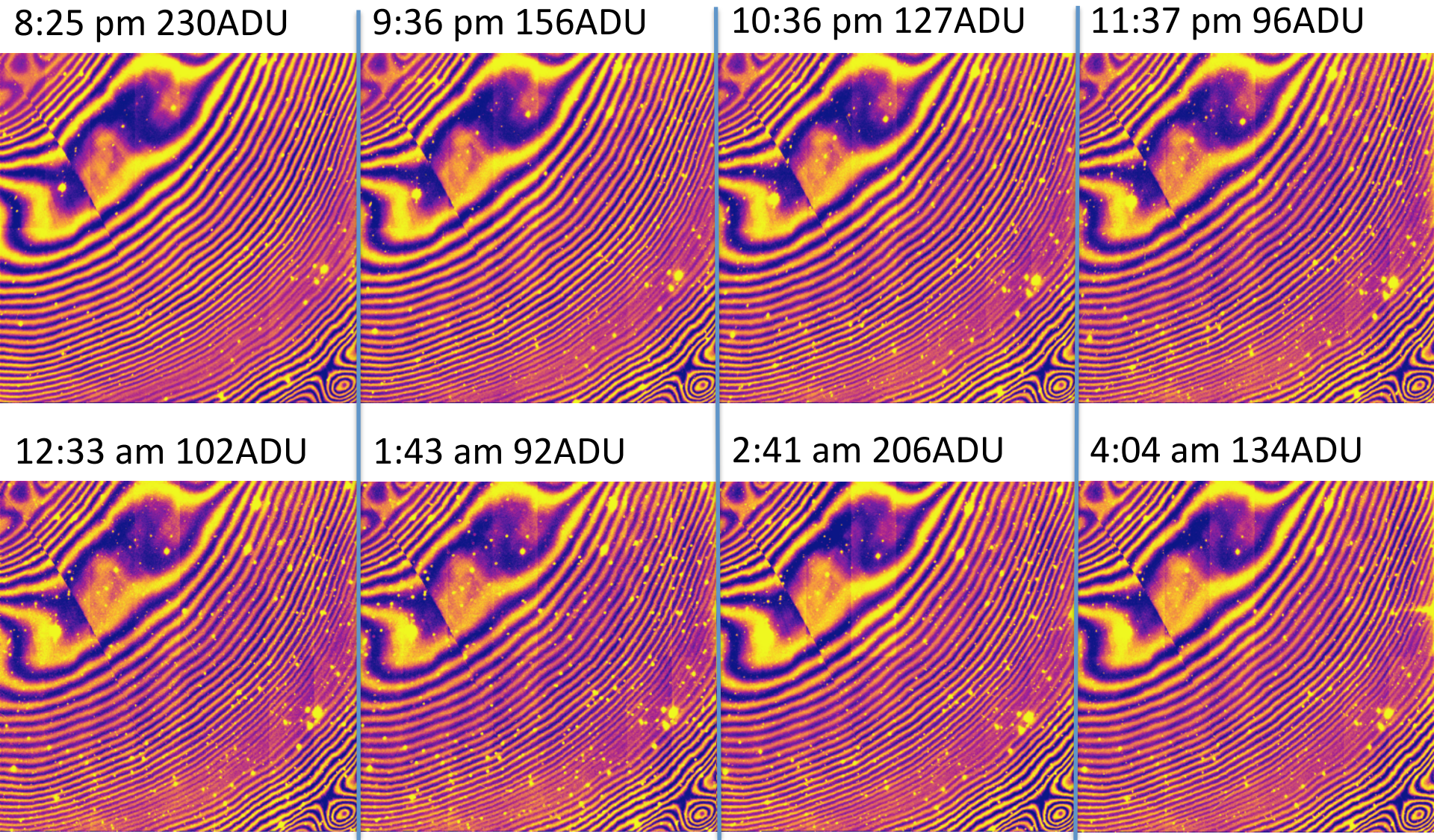


Y filter shown in pink

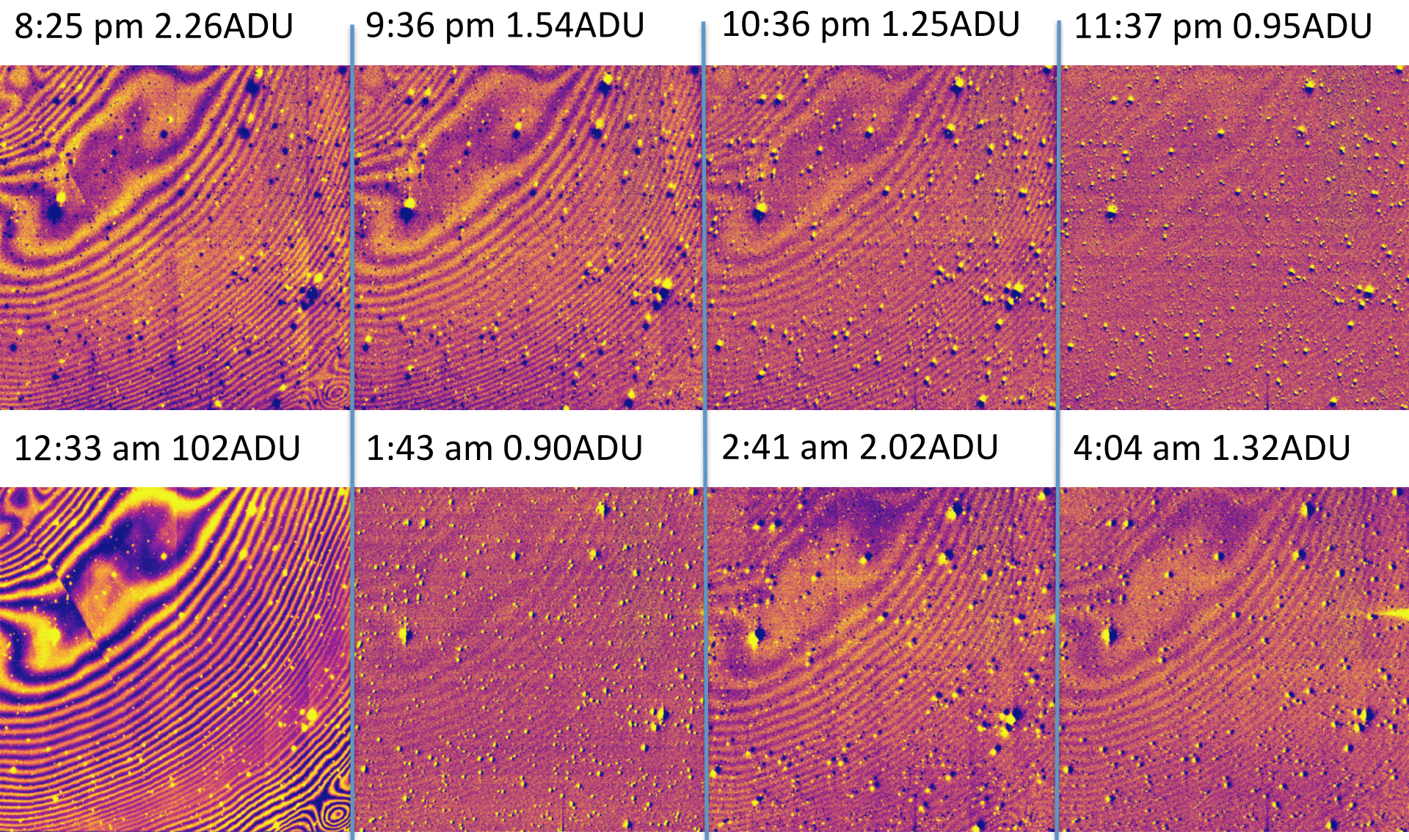
K. Gilmore



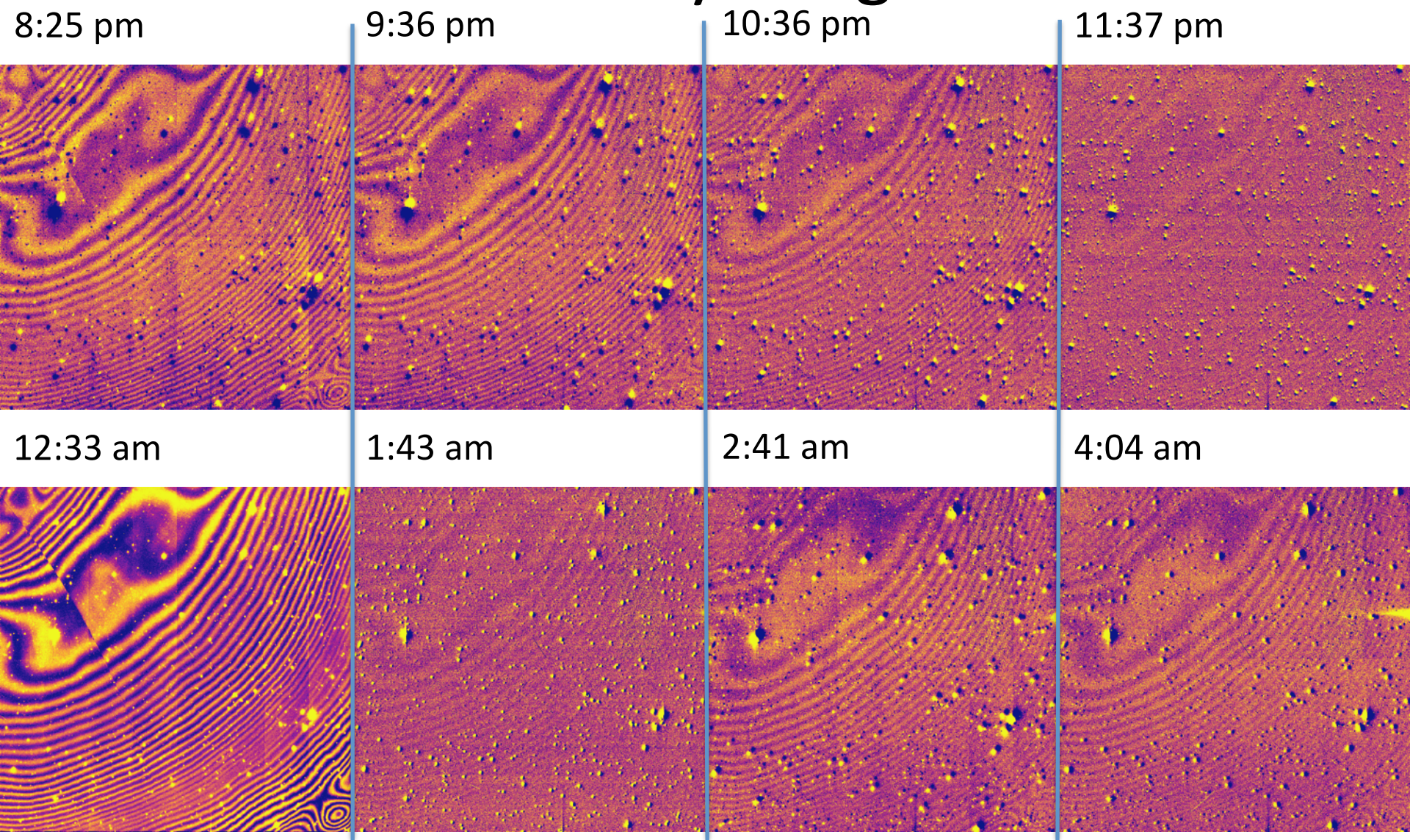
All averaged raw images with median signal



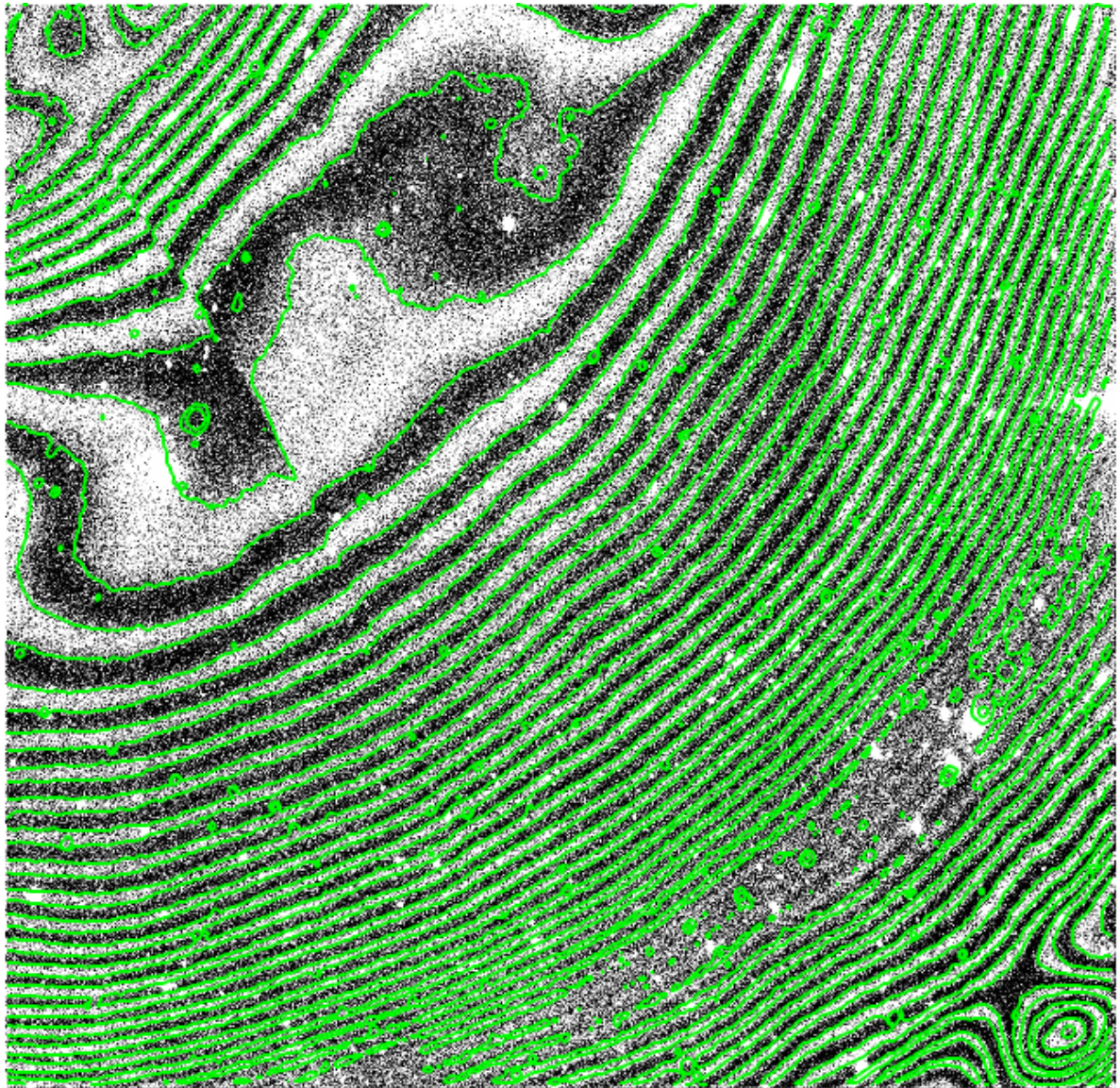
Images normalized to 12:33am



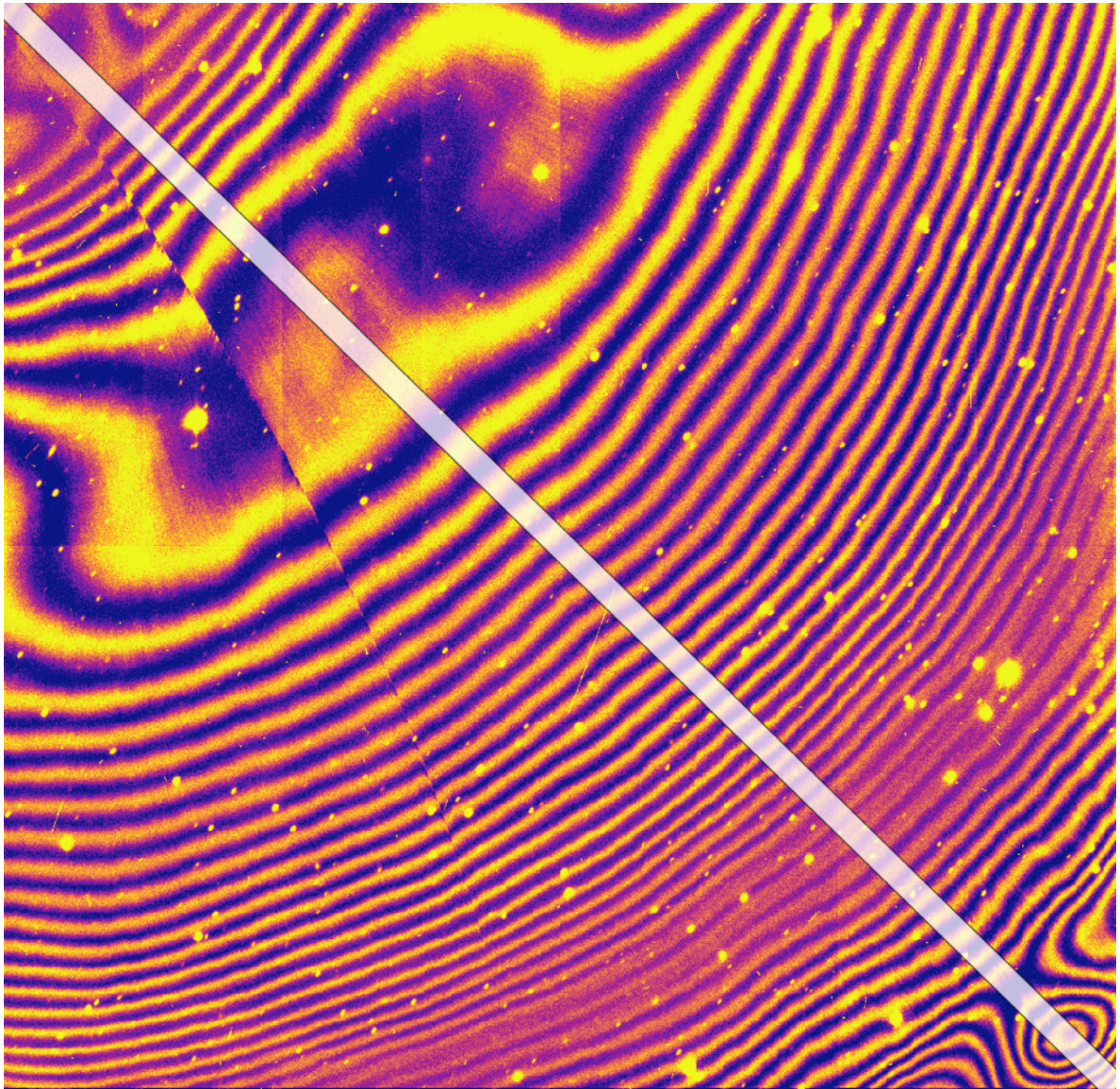
Images normalized to 12:33am with division by image median



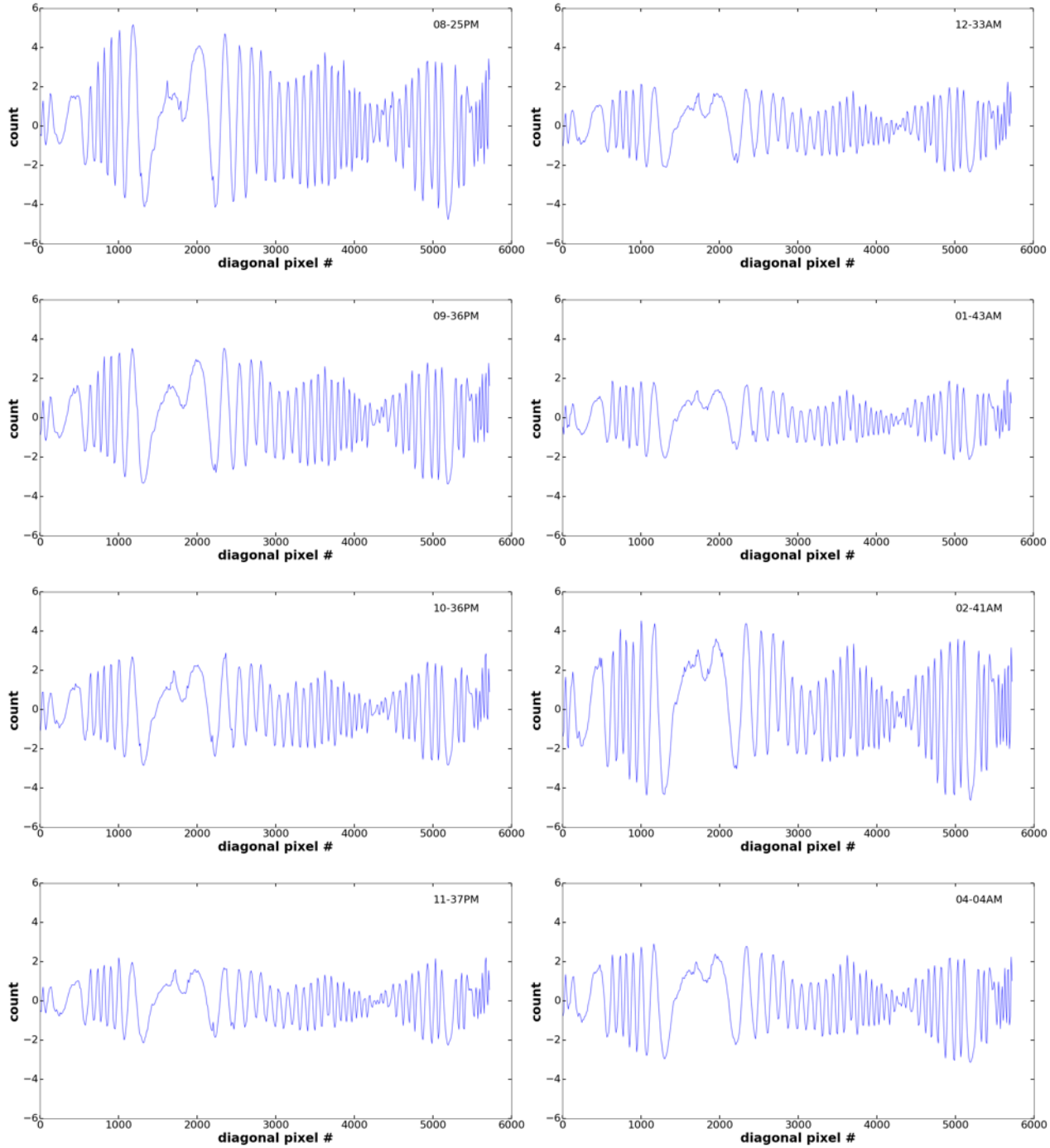
8:25pm contours (green) placed over 4:04am average raw image



Slice across 8:25pm and 4:04am image

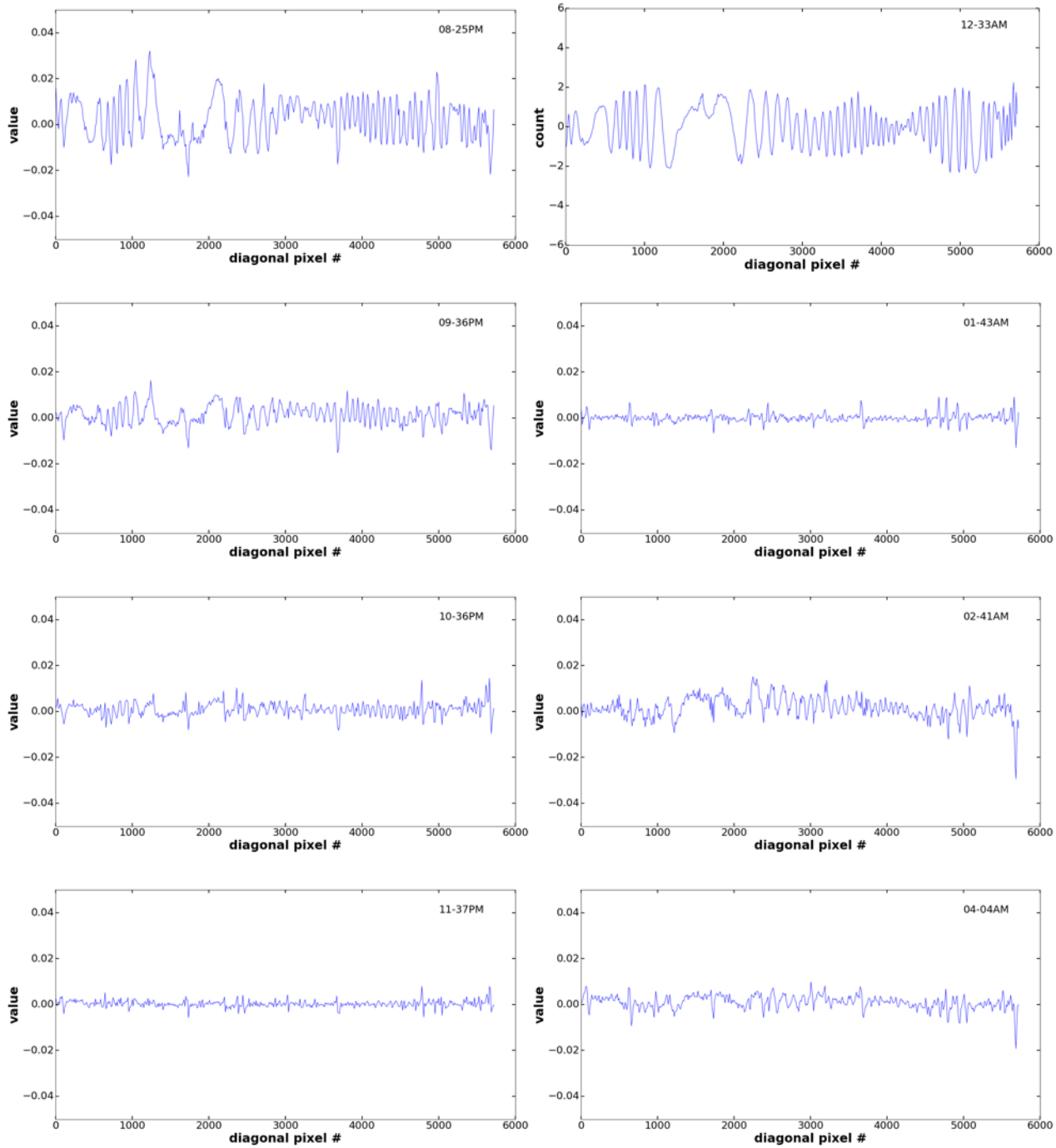


Slice across all raw images



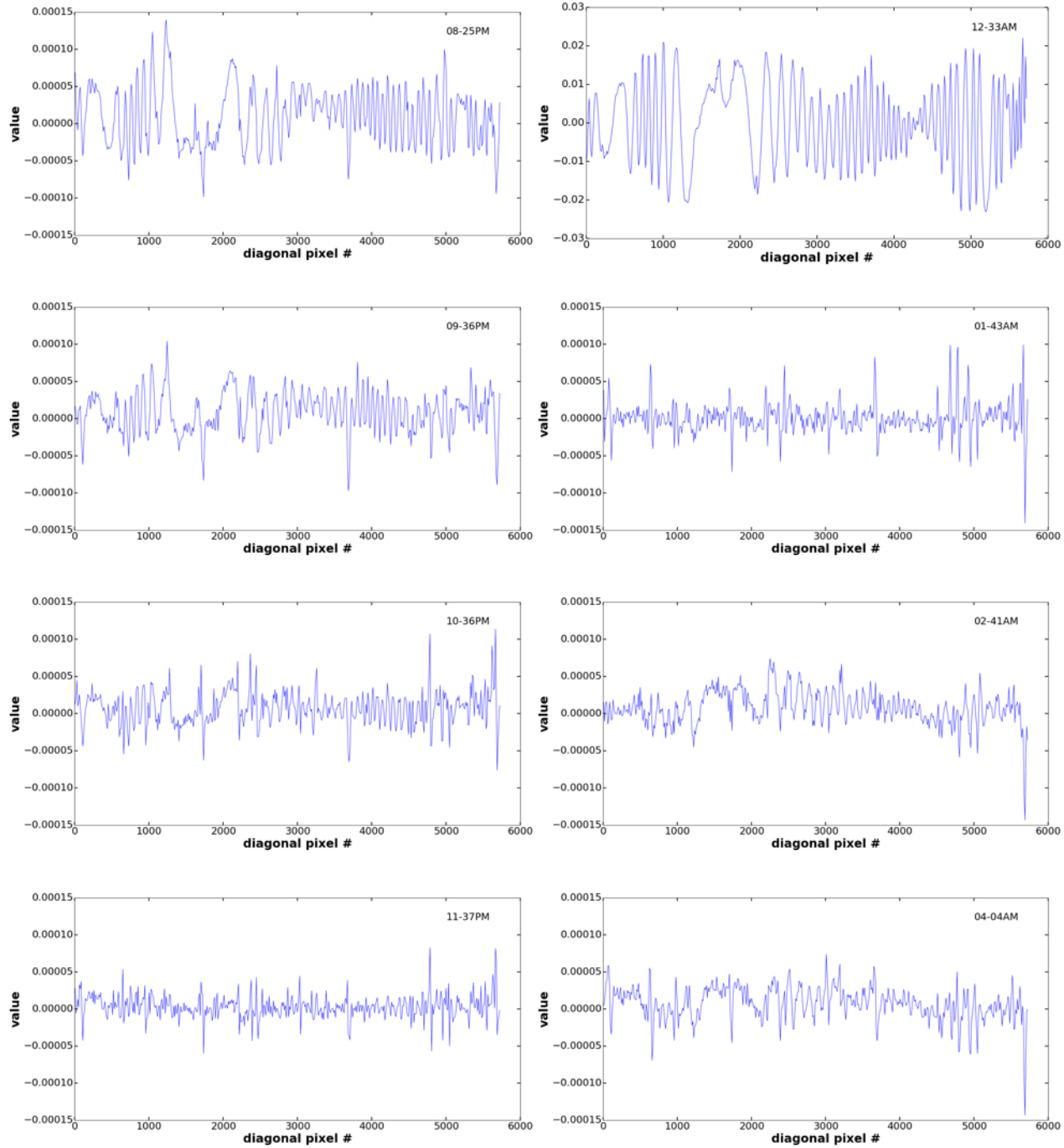
Slice across all images normalized to 12:33am (Median division not included)

Note: 12:33am plot shown not divided by itself but is still included for comparison

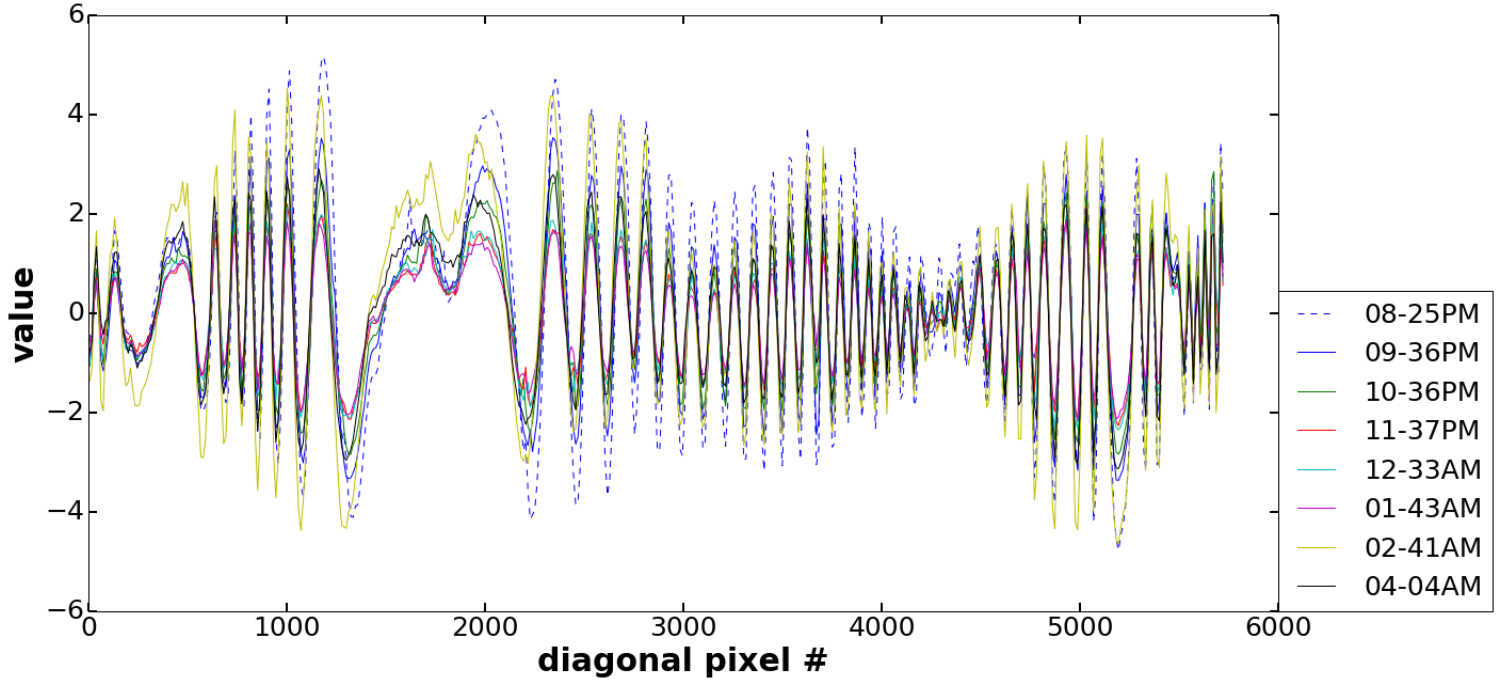


Slice across all images normalized to 12:33am

Note: 12:33am plot shown not divided by itself but is still included for comparison

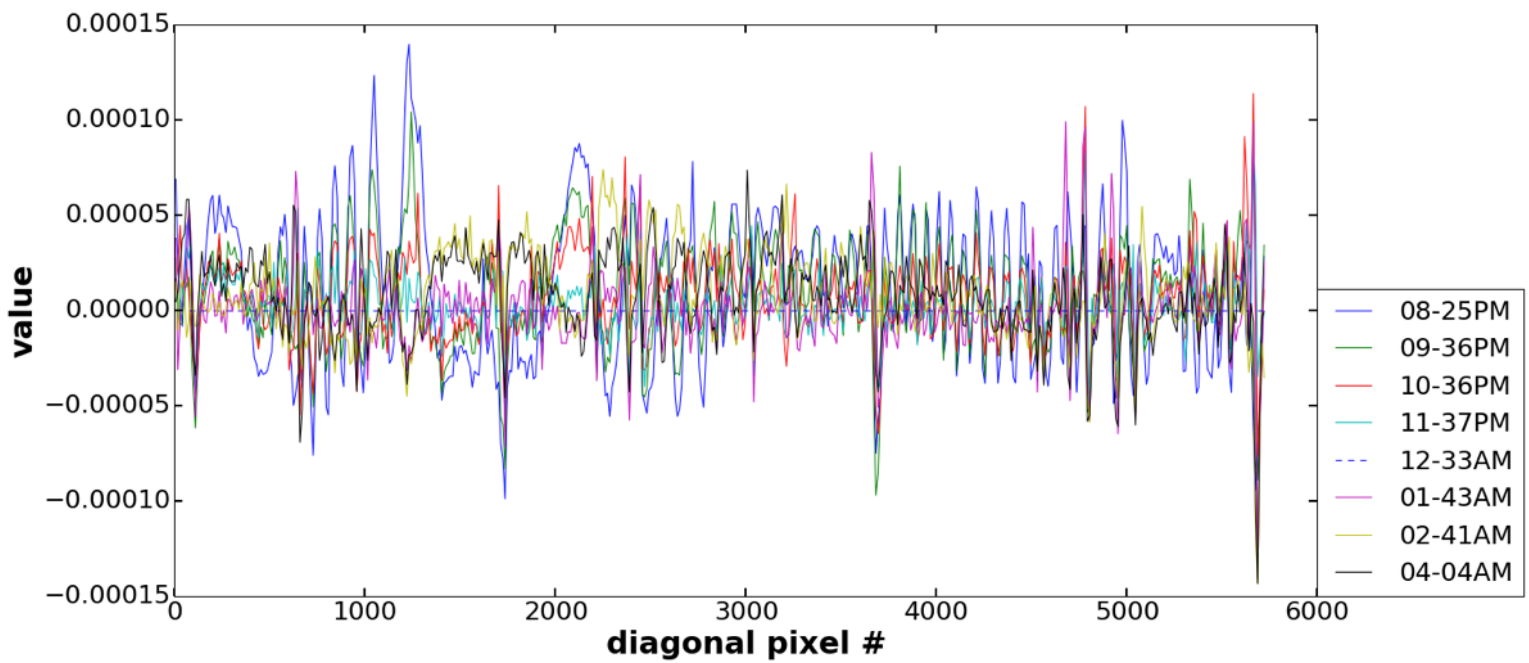


All Raw data

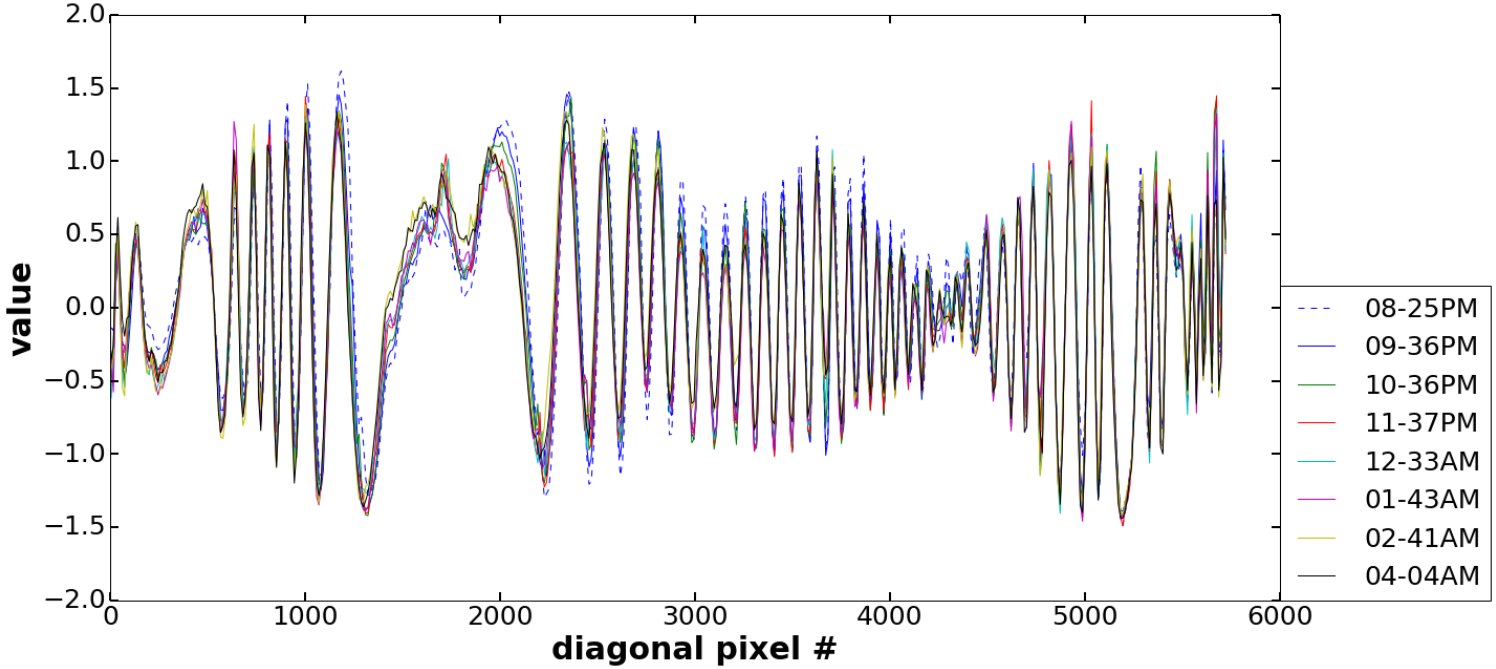


All data Normalized to 12:33am

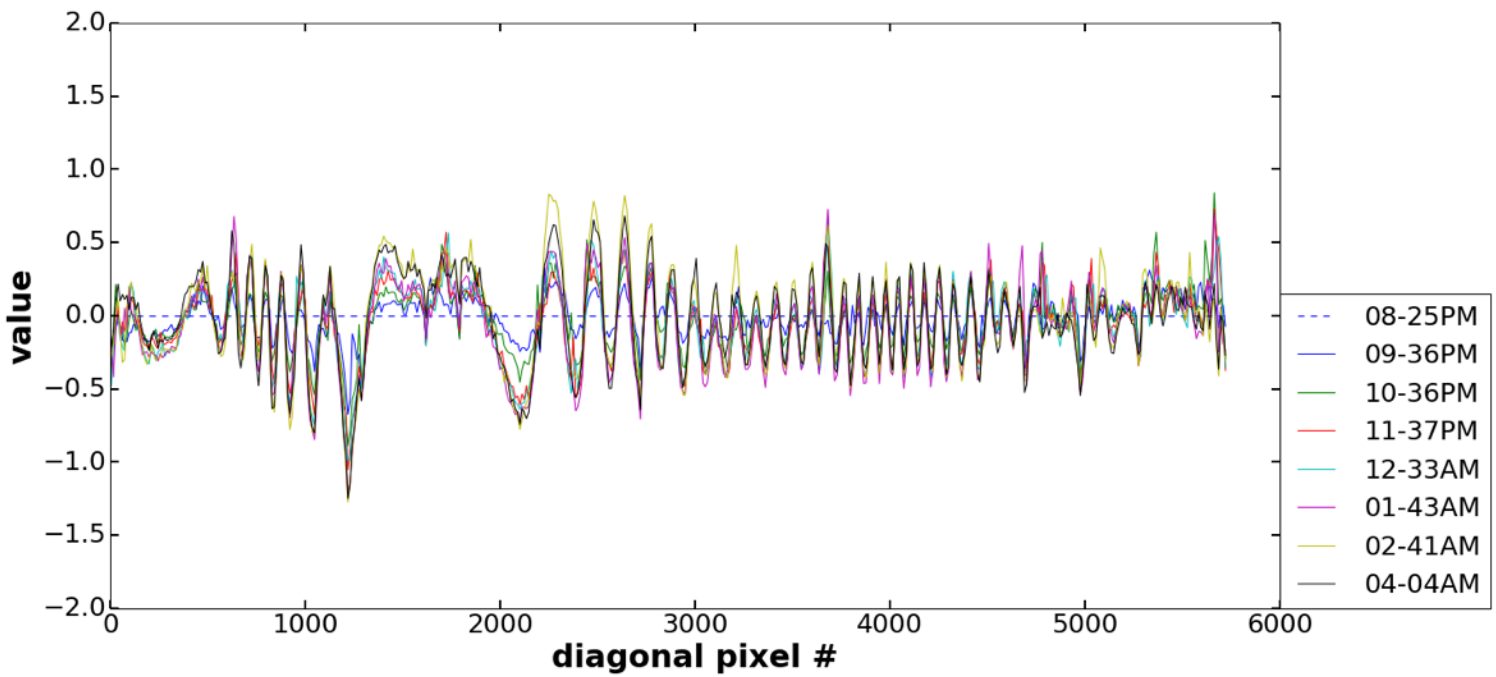
Note:
12:33 points normalized to themselves in plot



All Raw data divided by interquartile range



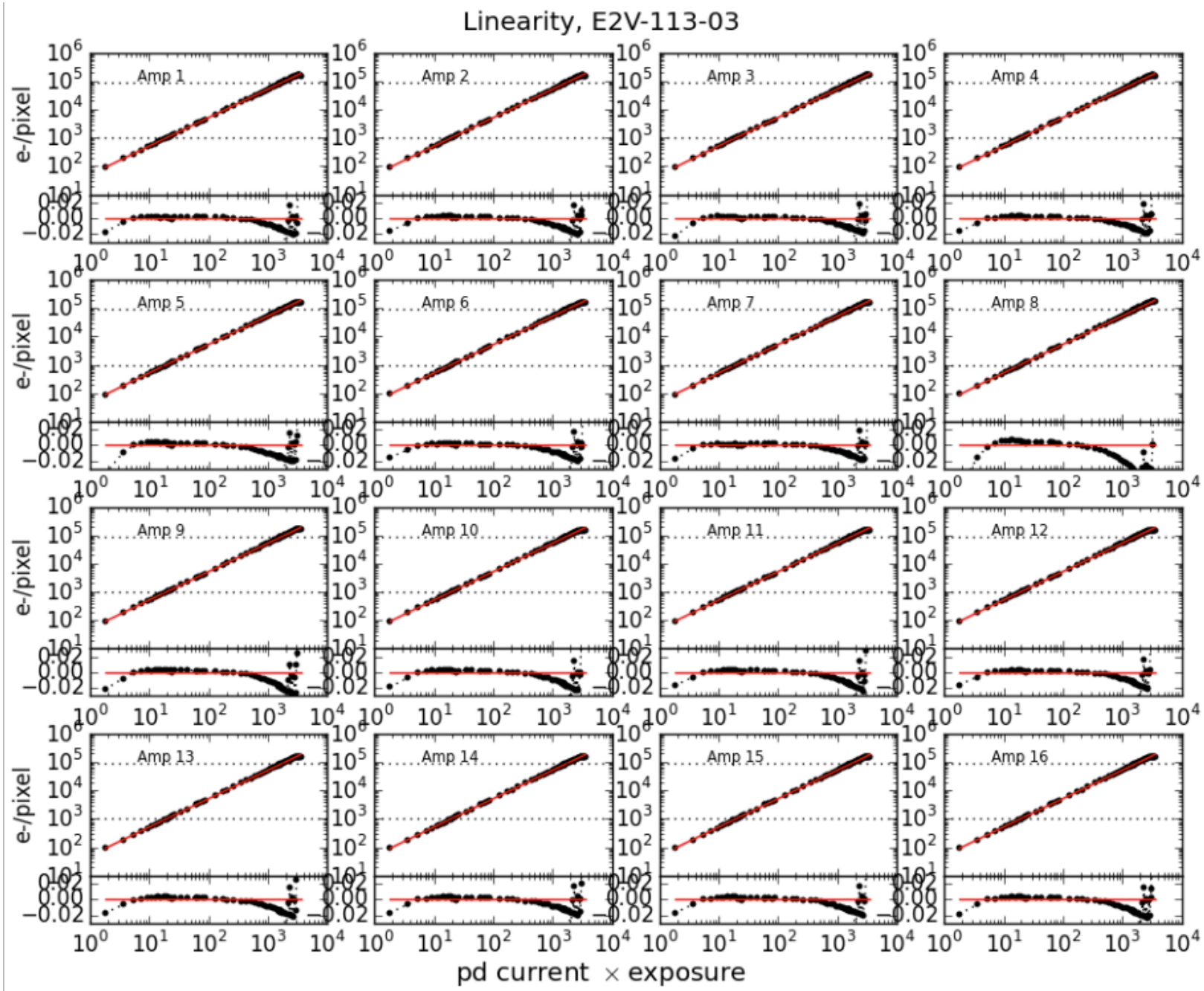
Above data subtracted by 8-25PM line shown above

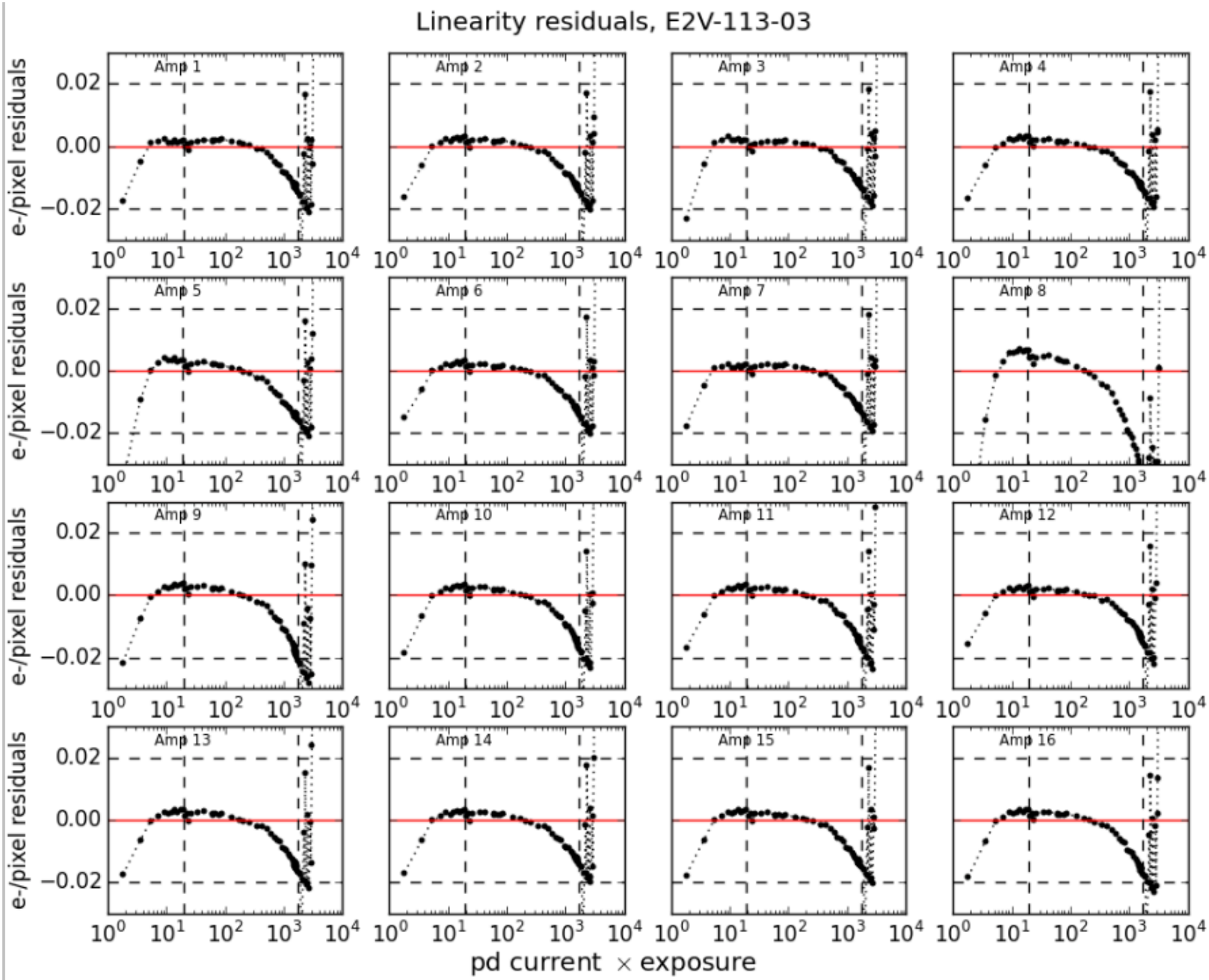


Summary

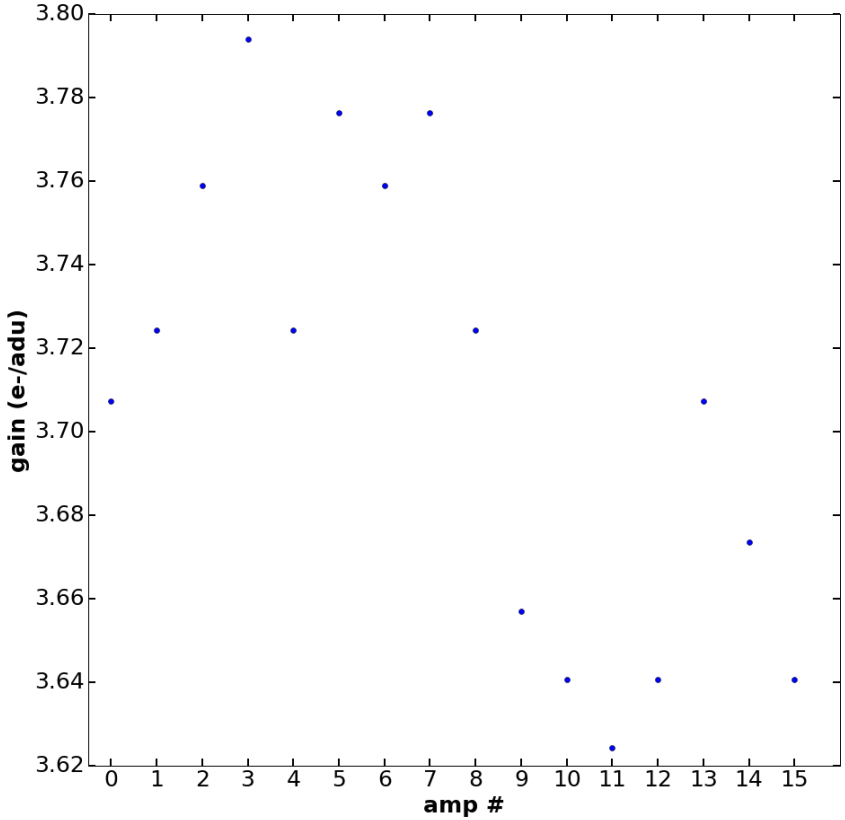
- Looked at postISRCCD images with fringing in Y4 band
- Simple checks to study fringing variations through night
  - Ratios to selected hour image, subtle changes in ratios?
  - Slice plot across raw and images with ratio applied
  - Contour placed over image
- Fringing patterns do not appear to change

Backups

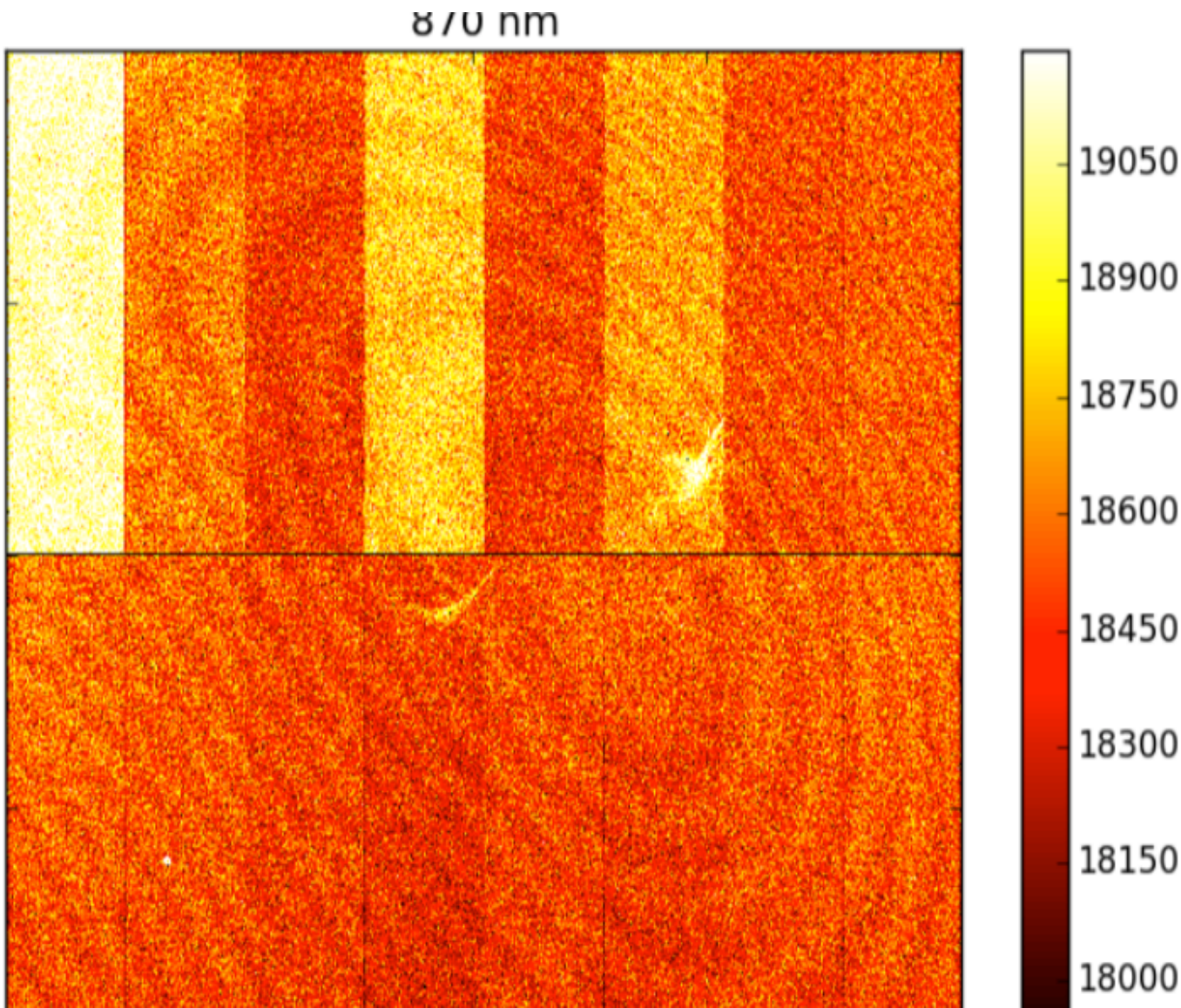
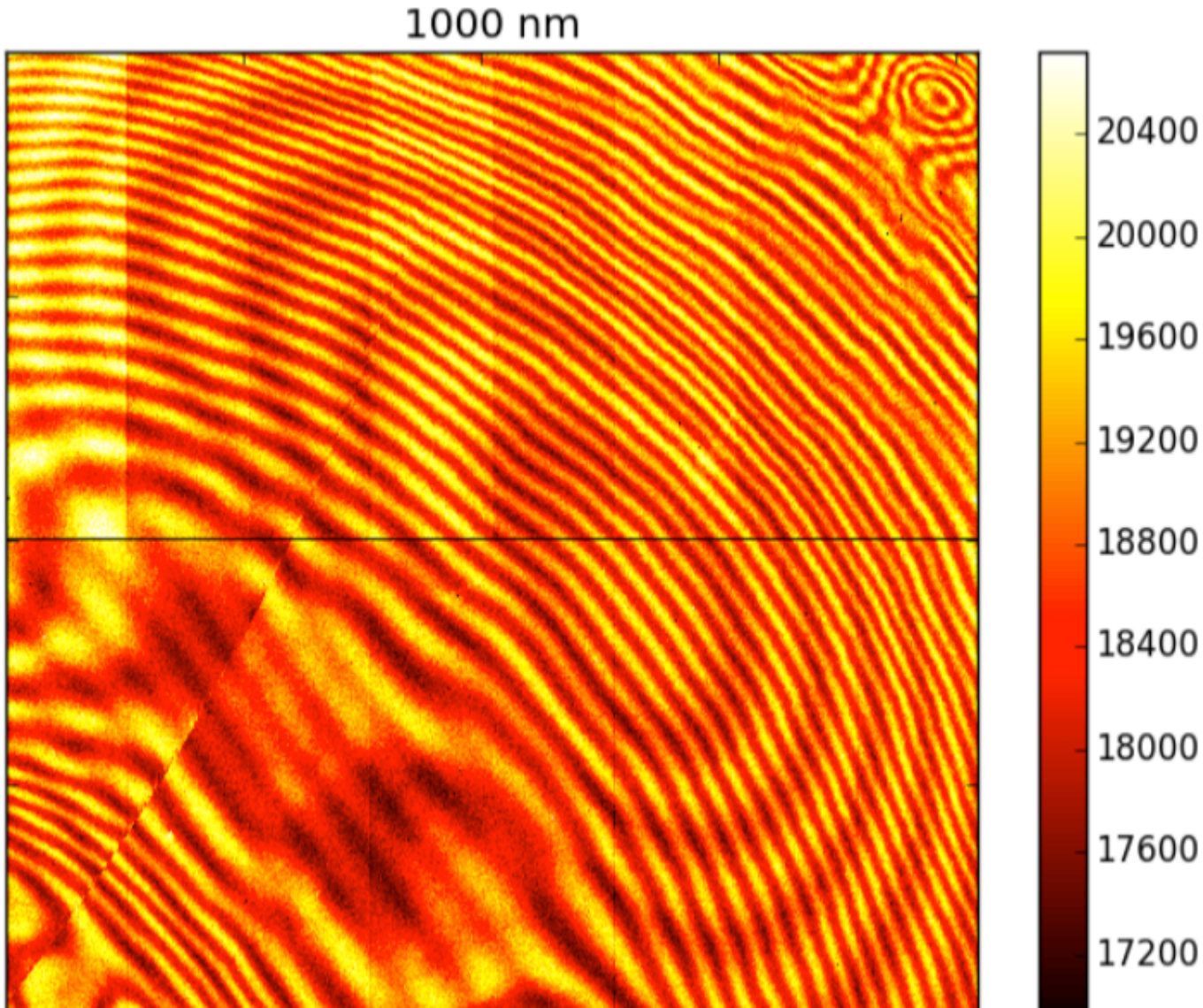

Linearity, E2V-113-03
Amp 1
Amp 2
Amp 3
Amp 4
Amp 5
Amp 6
Amp 7
Amp 8
Amp 9
Amp 10
Amp 11
Amp 12
Amp 13
Amp 14
Amp 15
Amp 16
e-/pixel
pd current × exposure


Linearity residuals, E2V-113-03
Amp 1
Amp 2
Amp 3
Amp 4
Amp 5
Amp 6
Amp 7
Amp 8
Amp 9
Amp 10
Amp 11
Amp 12
Amp 13
Amp 14
Amp 15
Amp 16
e-/pixel residuals
0.02
0.00
−0.02
10^0 10^1 10^2 10^3 10^4
pd current × exposure

Gain from Fe55 calibration



Fringes found in lab-870nm



Fringes found in lab-1000nm