ATLAS meeting schedule

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11.00 Coffee
11.30 ATLAS Status - Tom Shanks
11.50 ATLAS Photometry issues - Nigel Metcalfe
12.10 Galaxy Photometry Issues - Behzad Ansarinejad/Ruari Mackenzie
12.30 lunch
13.00 CASU update
13.20 WFAU update
13.40-15.00 Discussion
15.00-15.30 Action plan
```
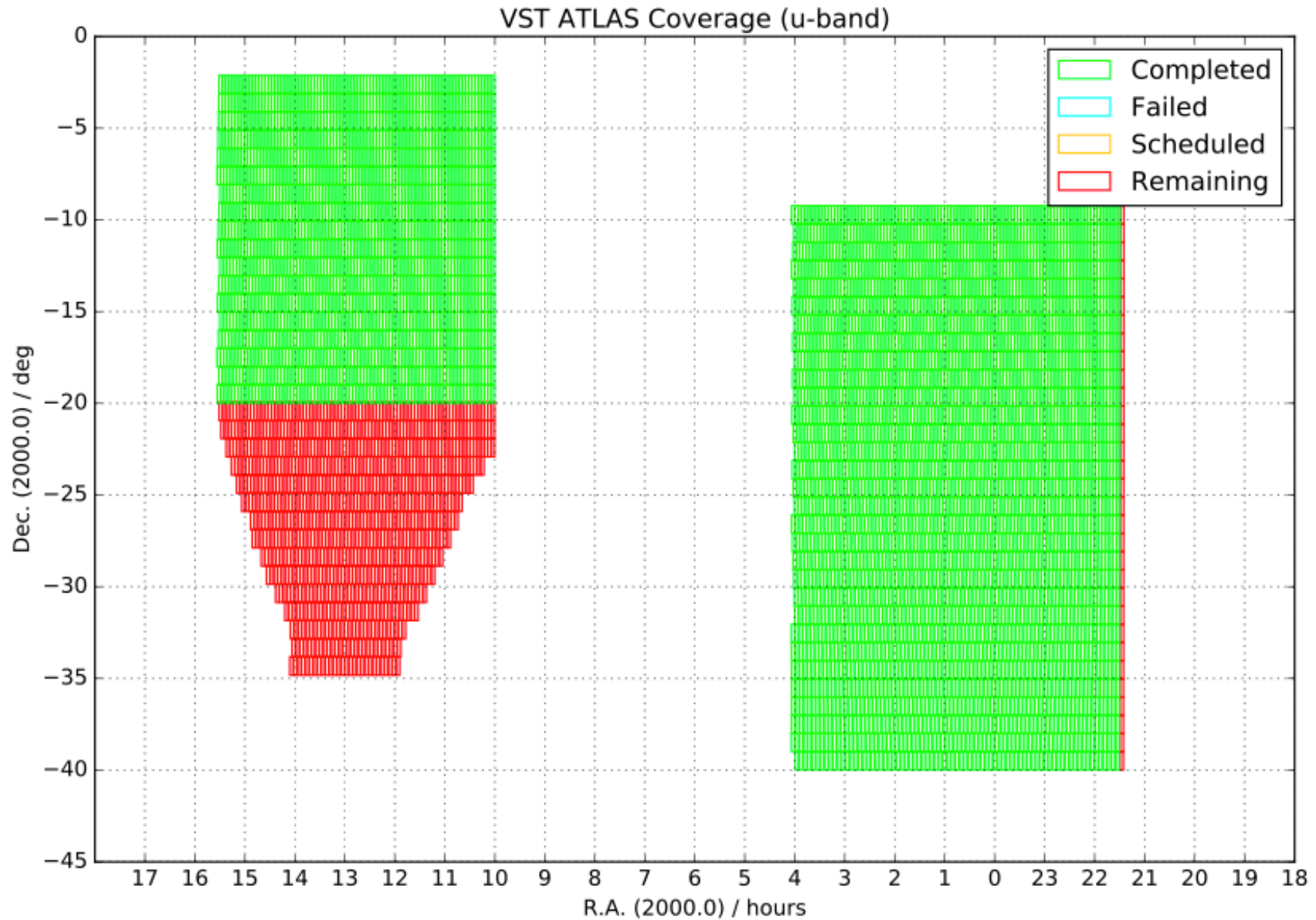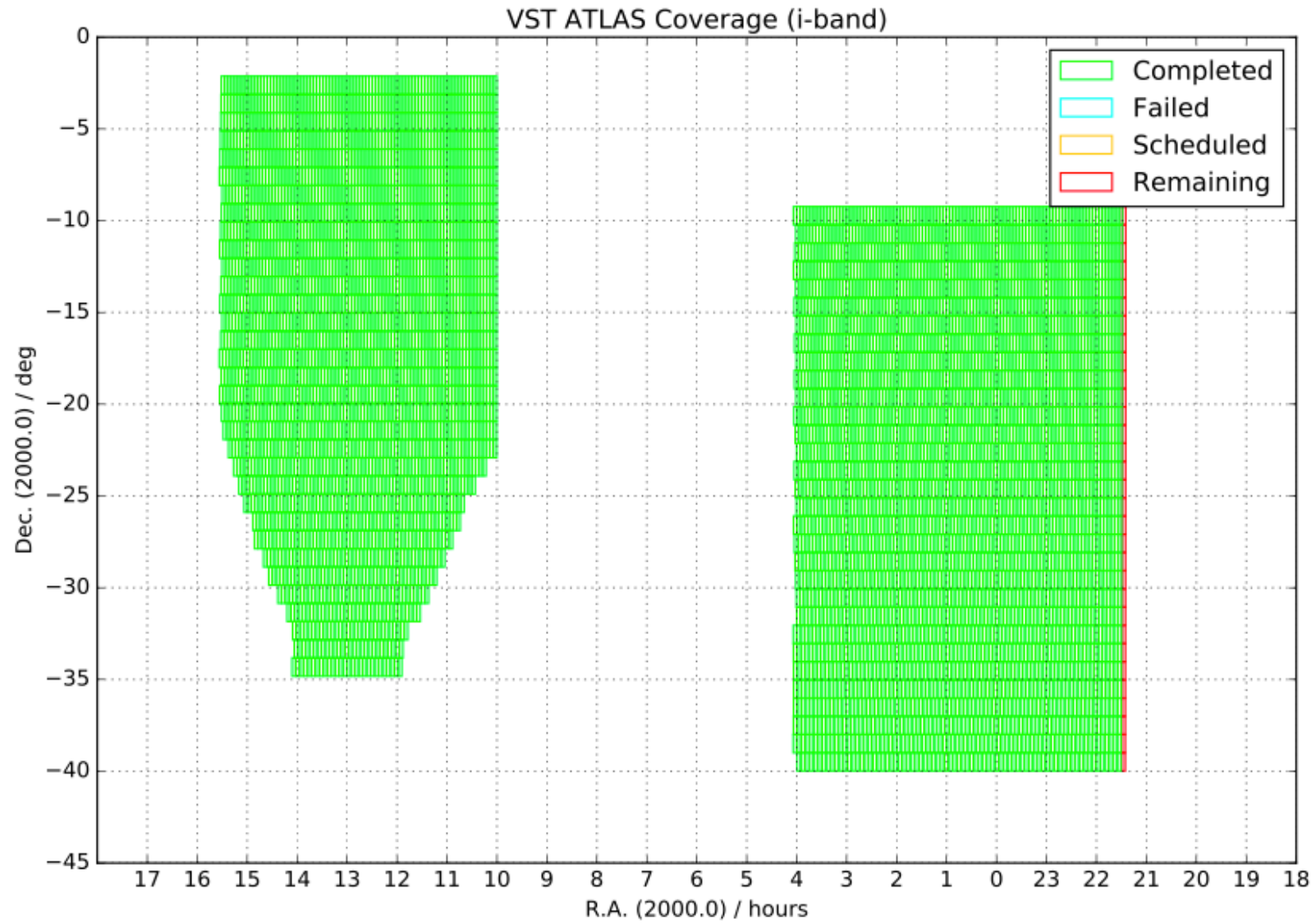
VST ATLAS Status
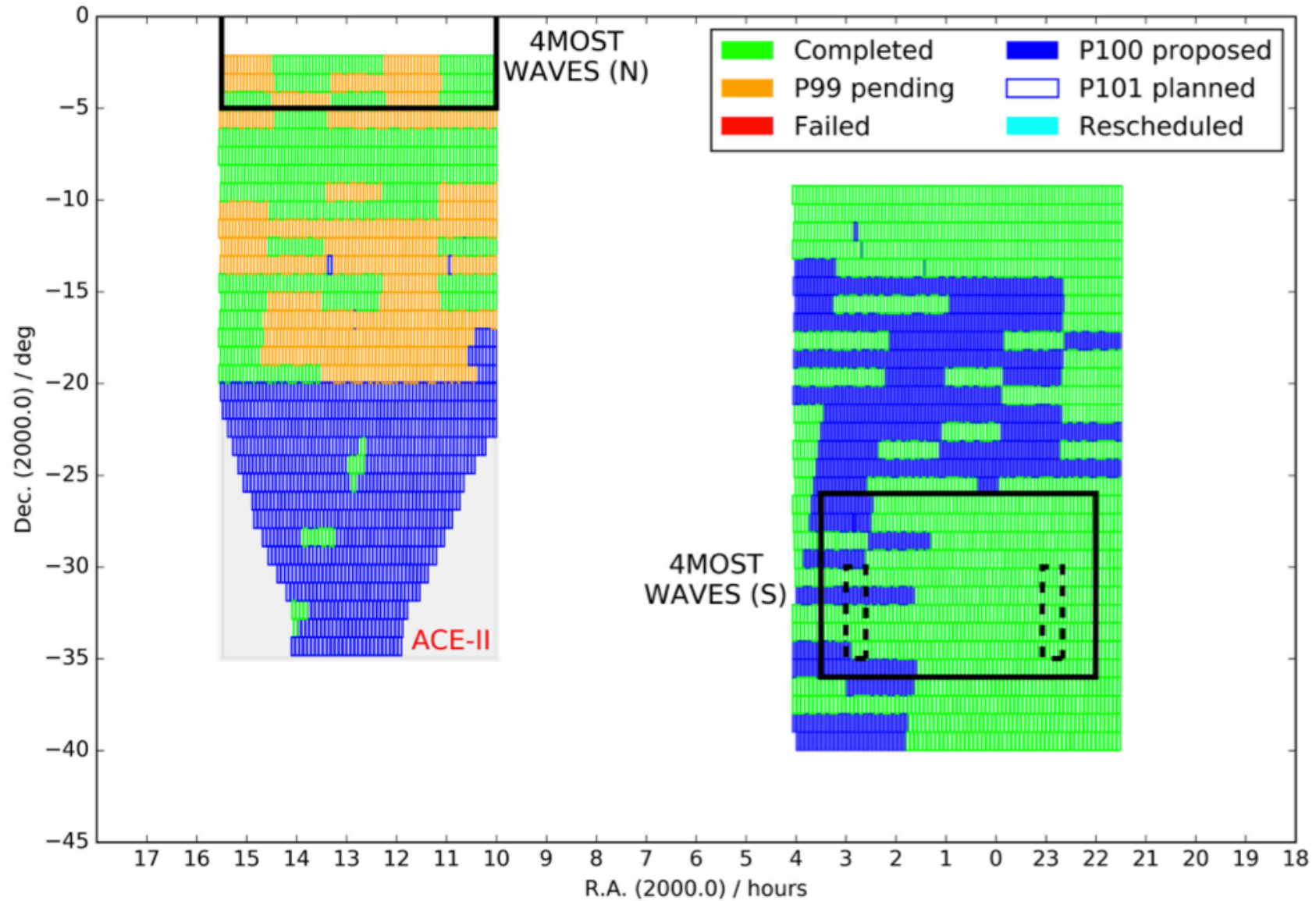
Tom Shanks, NM, JRF et al

Survey completed- u,g,r

i,z completed
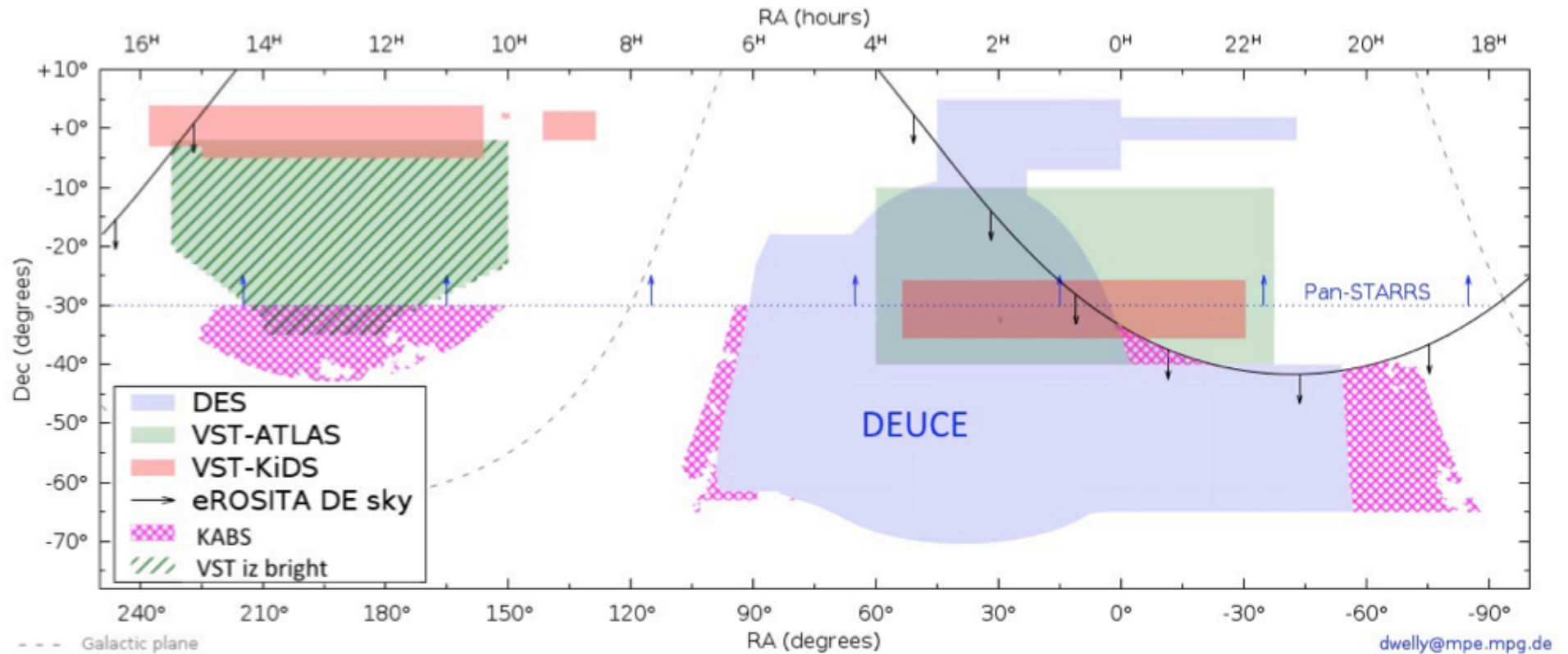

VST ATLAS Coverage (i-band)

ATLAS extensions ongoing

- ATLAS Chilean extension (ACE-I or UVAS) - doubles u exposure over $4700 deg^2$

- ATLAS Chilean ugr extension (ACE-II) – completes ugr in $\sim 600 deg^2$ in NGC at Dec<-20

- DES u Chilean Extension (DEUCE) – u-band in non-ATLAS DES area via VST OmegaCam ($1400 deg^2$)+CTIO DECam ($1400 deg^2$ proposed)

- Kilo-ATLAS Bridging Survey (KABS) ugri to deeper depths
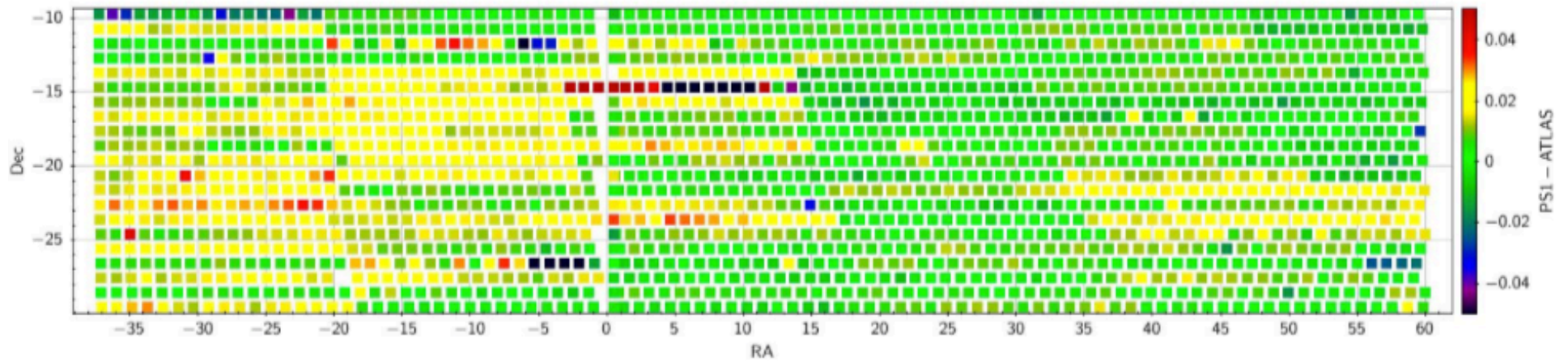
ACE-I,-II Status 31/3/17
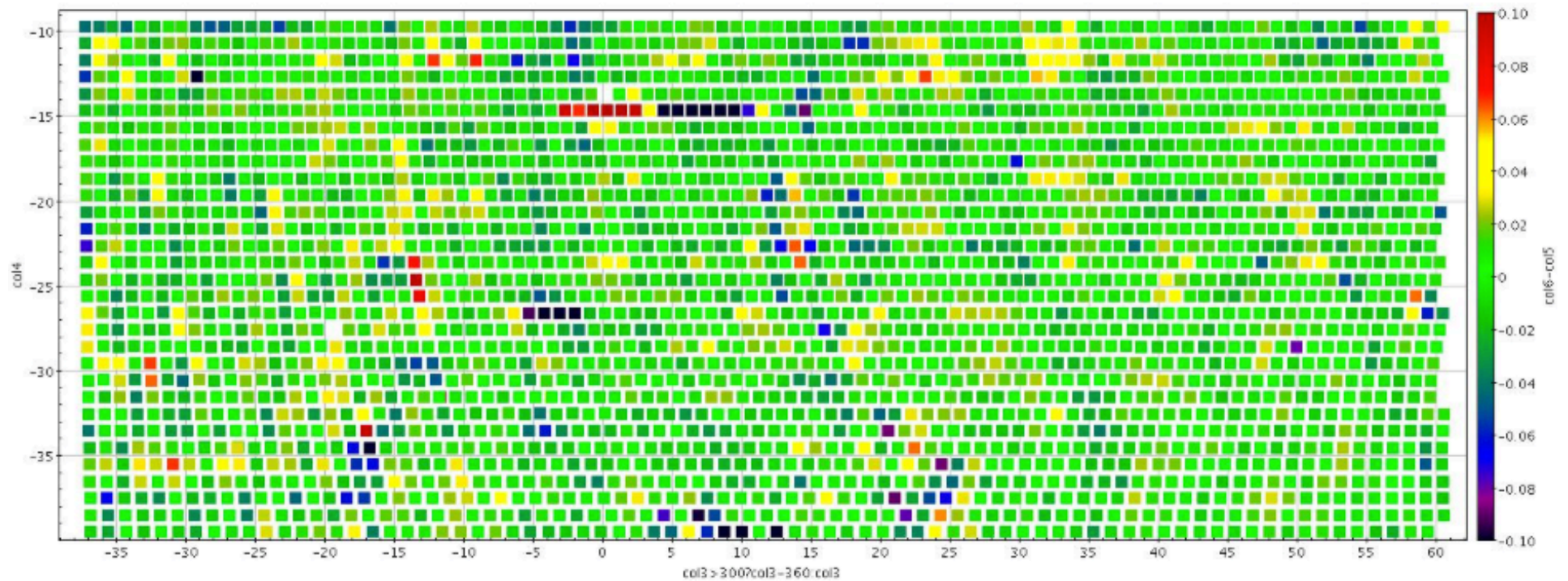
ATLAS Extensions + eROSITA-dE

Global Calibration

- Various methods:
- APASS – individual+nightly
- Ubercal – Koposov et al
- Matrix edge overlaps method – as applied by Findlay/Metcalfe+Shanks
- Stellar Locus – SLR – Mackenzie
- Pan-STARRS direct + other

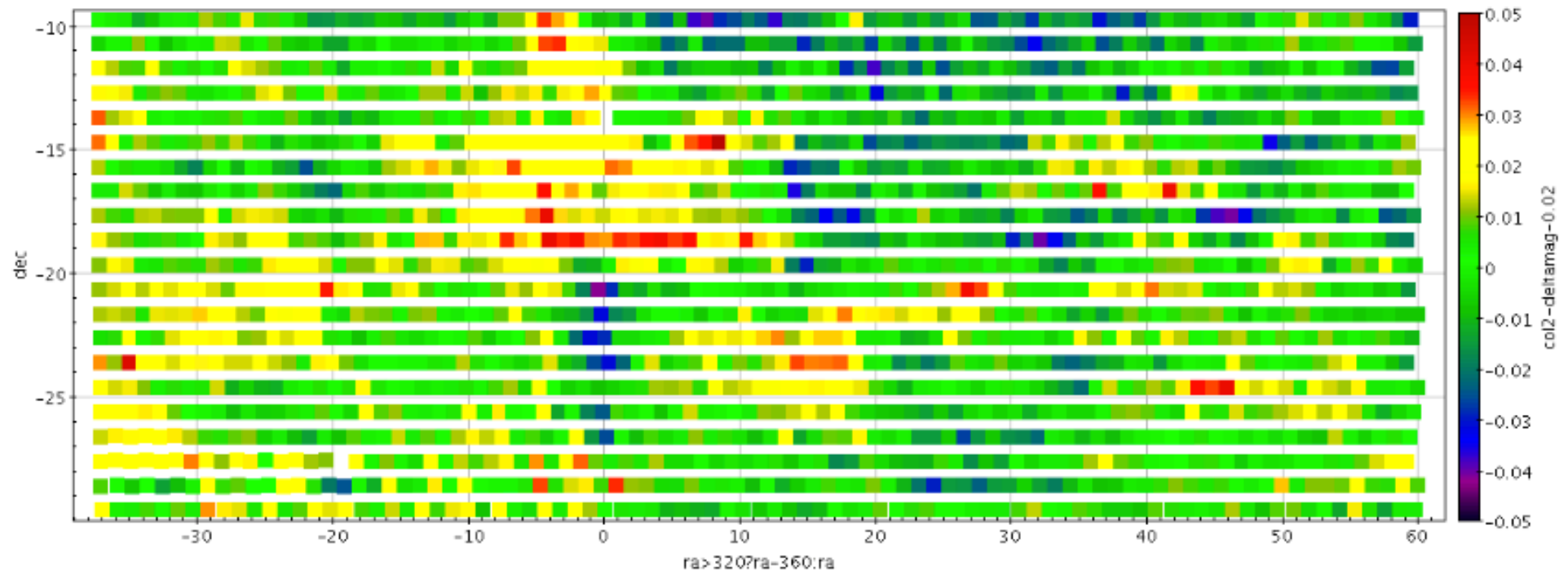# i South PanSTARRS1-ATLAS APASS Nightly

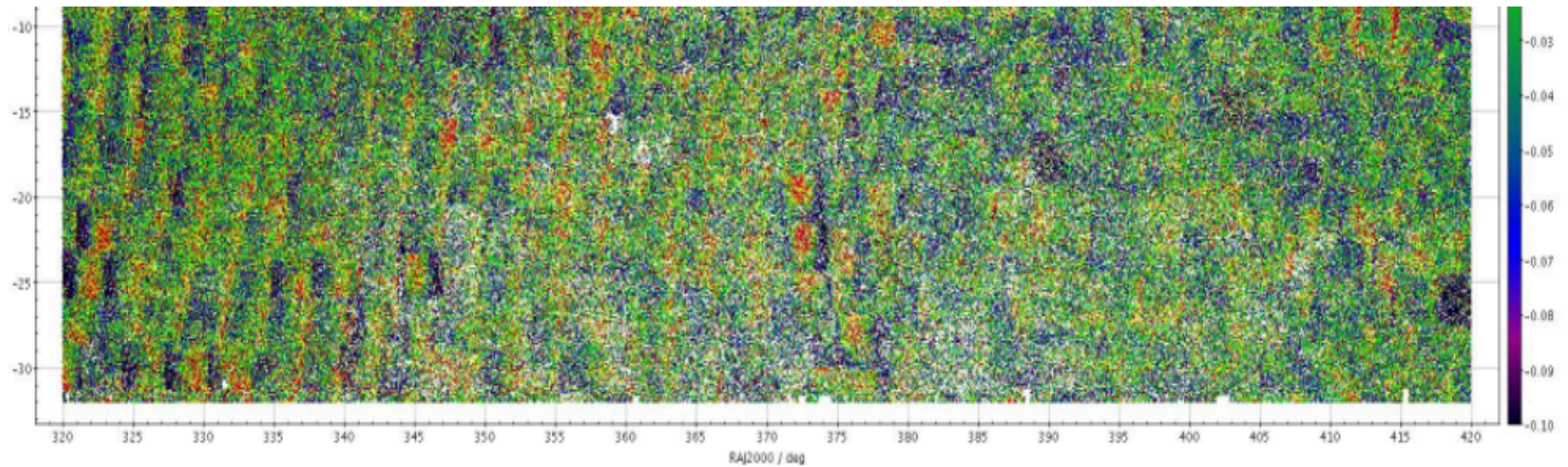# i South APASS nightly-individual->anchors

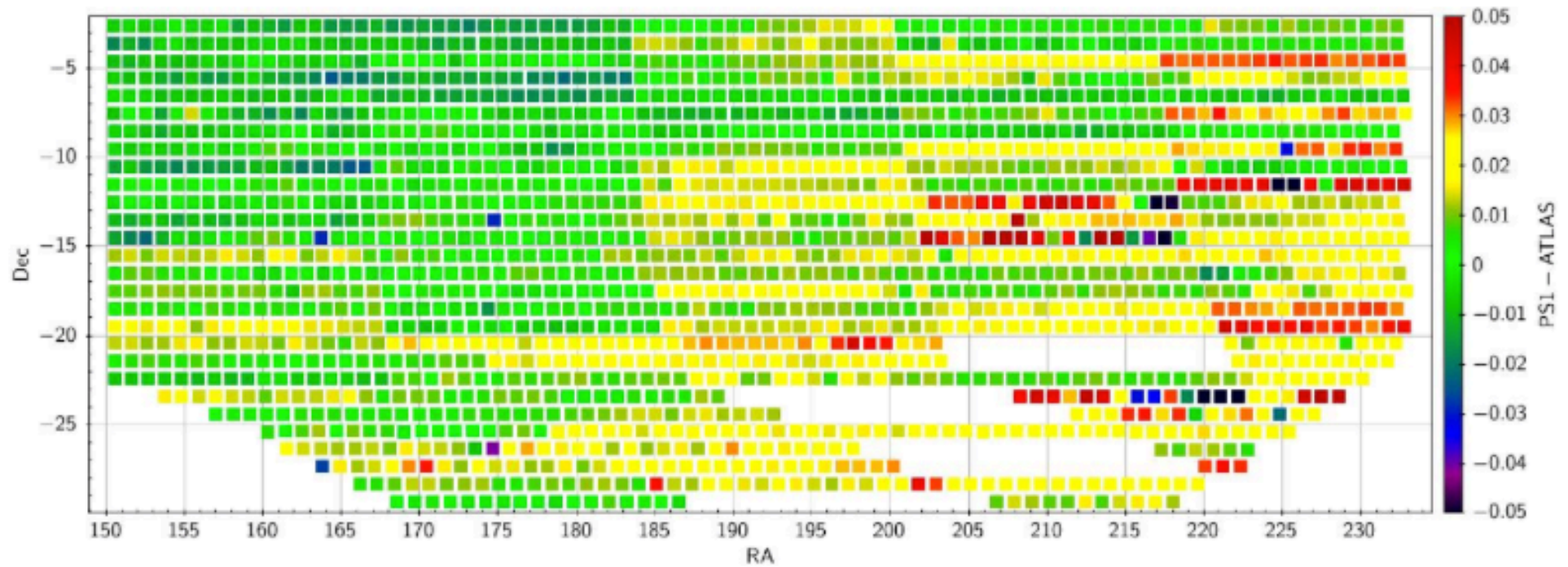# i South PS1-matrix (59% anchors)
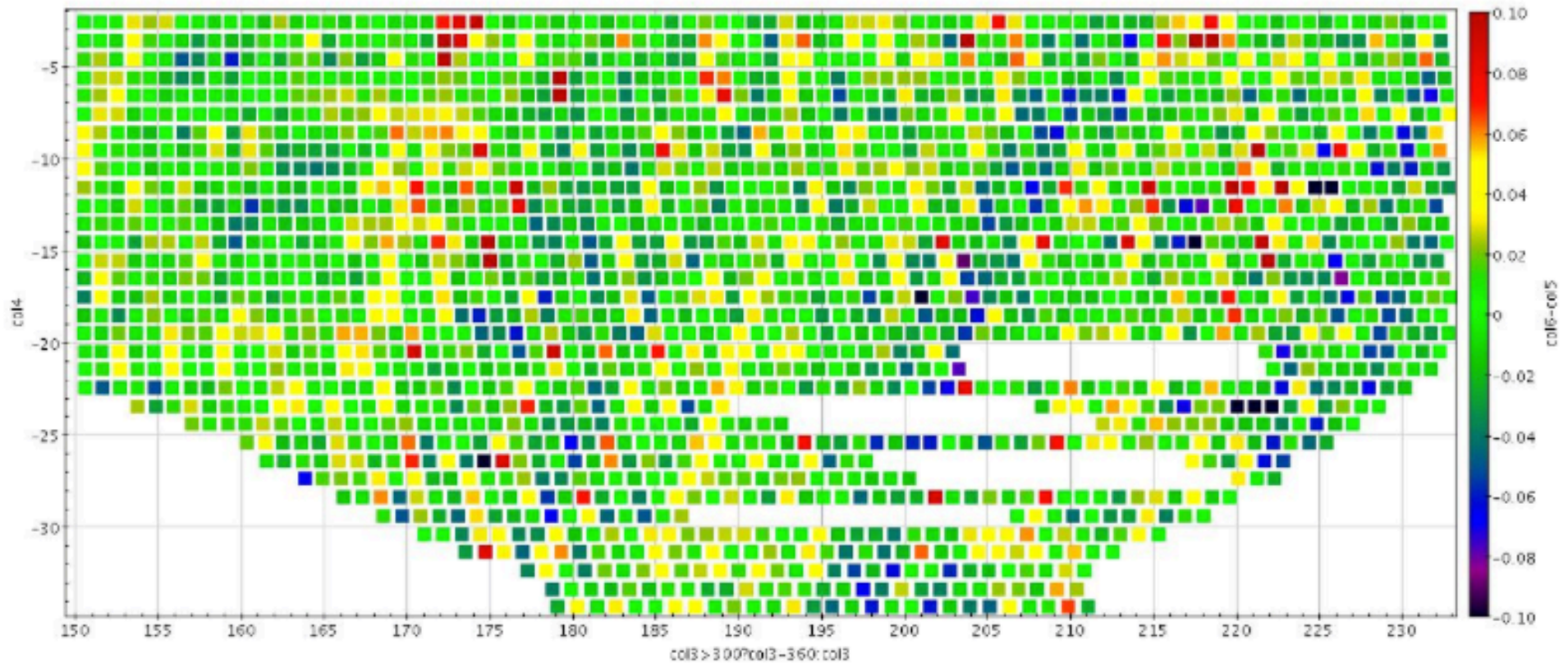
i South PS1-Koposov ubercal

i South PS1-APASS (stars)

i North PanSTARRS1-Nightly

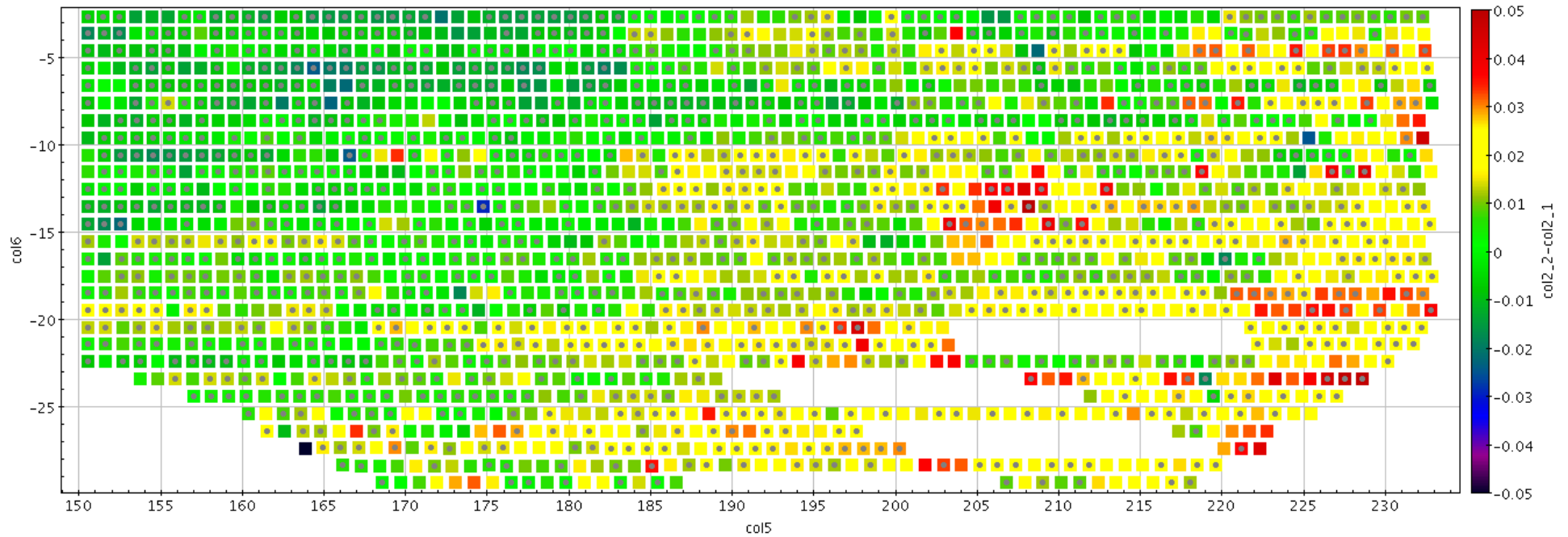i-band: $(i_{PS1} - i_{VST} = 0.0_{PS1})$
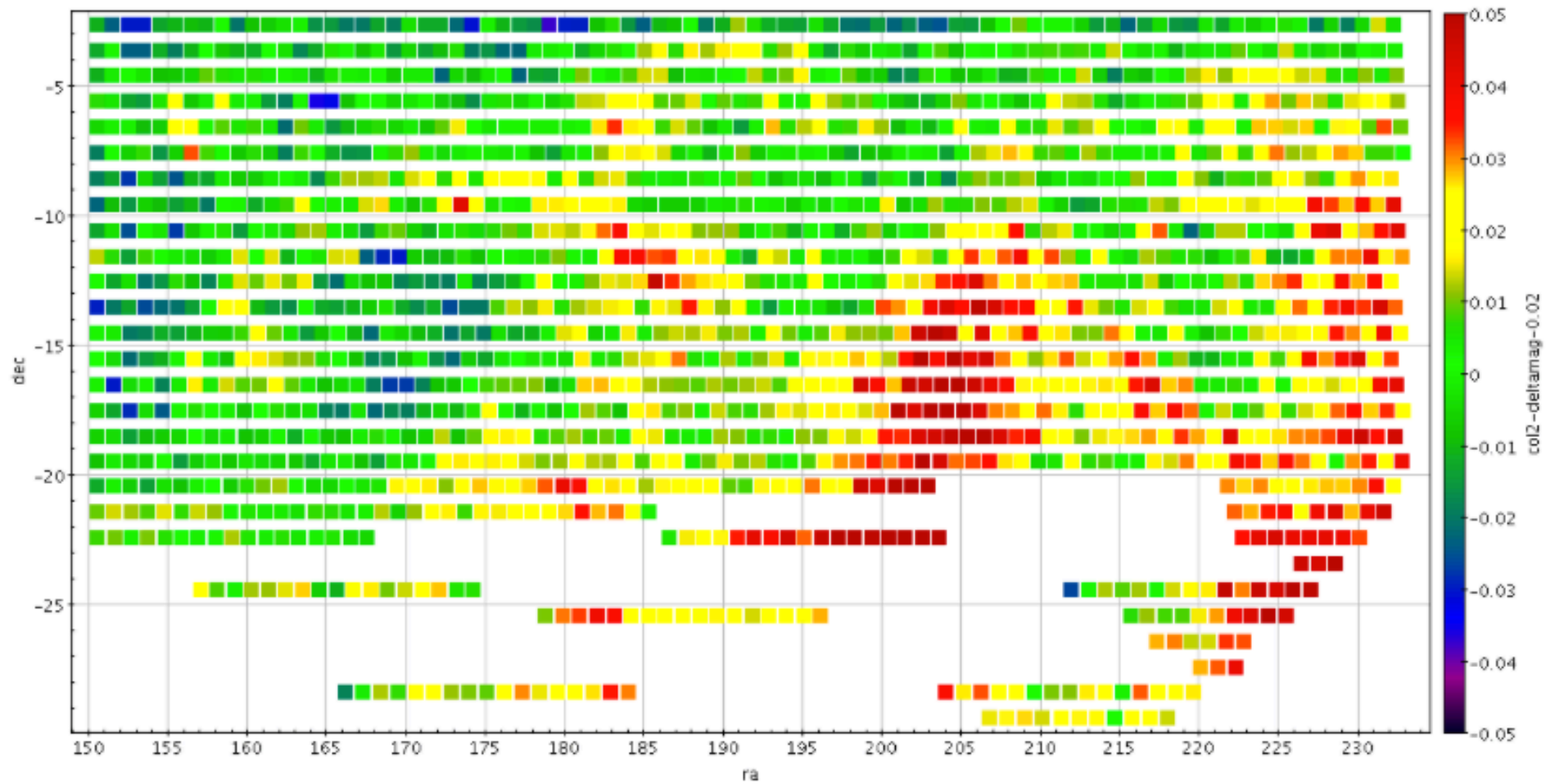
i N APASS Nightly-Individual -> Anchors

i-band:

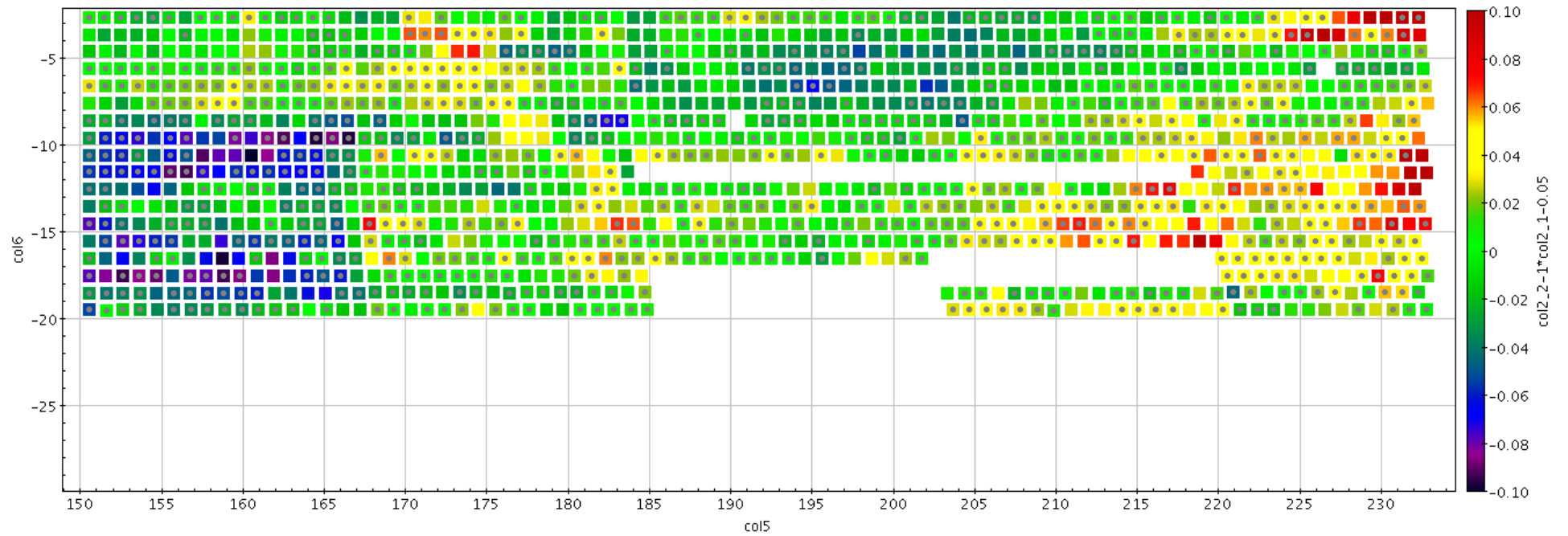# i N PS1-Matrix (59% Nightly anchors)

i N PS1-Koposov Ubercal
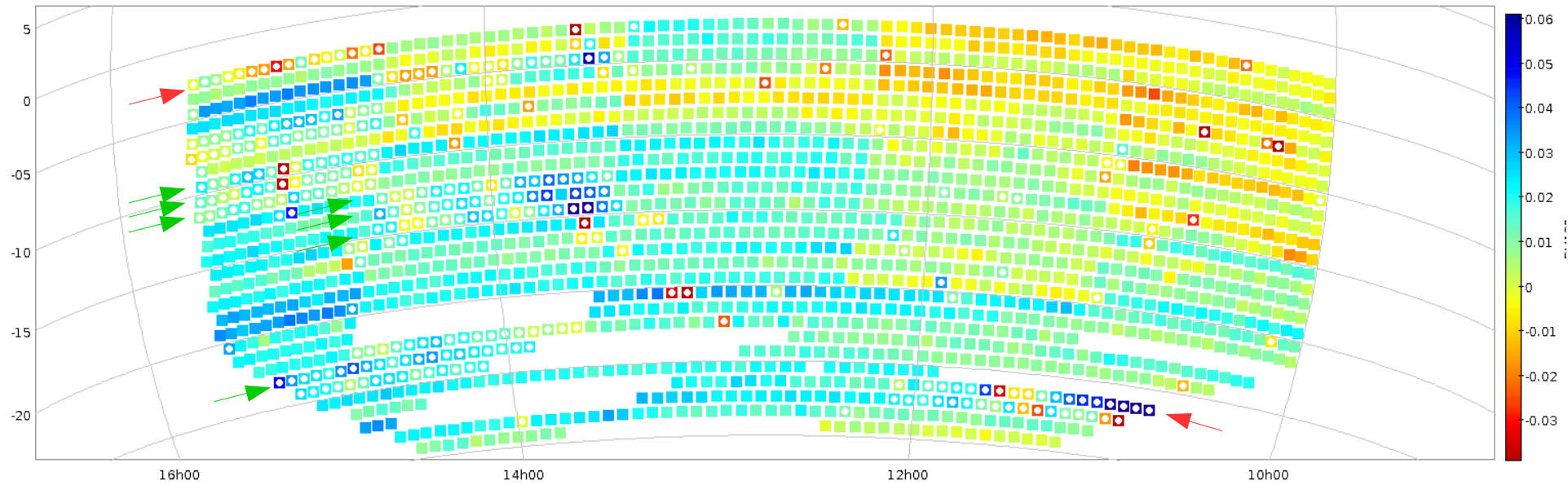
i-band:

u N PS1-ATLAS APASS nightly

u-band: (g-r<0.85: $g_{PS1}-u_{VST} = -2.7(g-r)_{PS1}-0.02$) ((g-r)>=0.85: $g_{PS1}-u_{VST} = -1.3(g-r)_{PS1}-1.5$

u North PS1-matrix (59% anchors)

Findlay's matrix + anchor edge rejection

Conclusions

- ATLAS complete but ACE-I, ACE-II, DEUCE extensions ongoing
- u-band key for quasar surveys + eROSITA+4MOST
- Global calibration needed 1 year from now
- Possibilities – ubercal, PS1, matrix+nightly, SLR
- Default is matrix+nightly but still working on it
- Particularly on anchor selection
- But other calibration + galaxy photometry issues may dominate....

ATLAS Wish List

a) illumn correction improvements in catalogues
b) S-G sepn improvement in catalogues
c) Route to implementing matrix zpts in images and catalogue headers
d) Forced photometry for griz as well as u
e) model mags for galaxies and psf mags for stars

f) Analytic illumn corrections
g) APASS updates to nightly
h)