

IGAPS: the merged IPHAS and UVEX optical surveys of the northern Galactic plane

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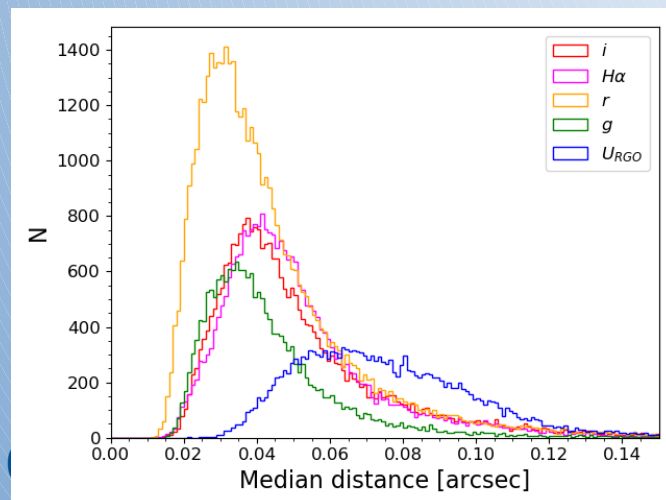
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- The INT Galactic Plane Survey (IGAPS) is the merger of the
- optical photometric surveys, IPHAS and UVEX.
- Point source catalogue: 295 million rows of i , r , $H\alpha$, g and U_{RGO} mags.
- First 1-arcsec resolution digital/optical survey of northern Galactic plane.

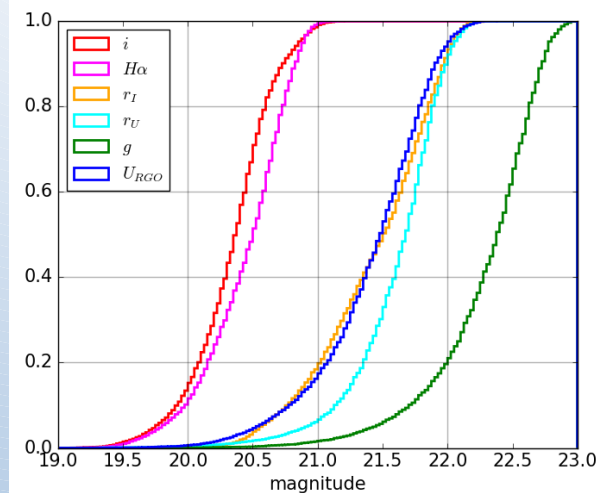
The IGAPS point source catalogue:

- Coverage: $|b| < 5^\circ$ and $30^\circ < l < 215^\circ$
- Astrometry: Now in Gaia-DR2 frame
- Photometry: i , r , narrow-band $H\alpha$, g , and U_{RGO}
 - i , r , g : Uniform calibration in the PanSTARRS system
 - $H\alpha$: Linked to r and re-calibrated via field overlaps
 - Vega and AB magnitudes provided
- Median limiting magnitude $r < 21.5$
- Median PSF: 1 arcsec (in i), 1.5 arcsec (in U_{RGO}).

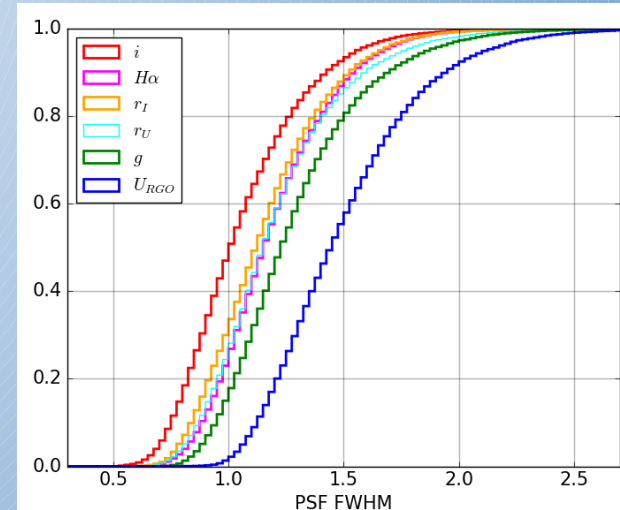
Astrometric accuracy:



Limiting magnitude:

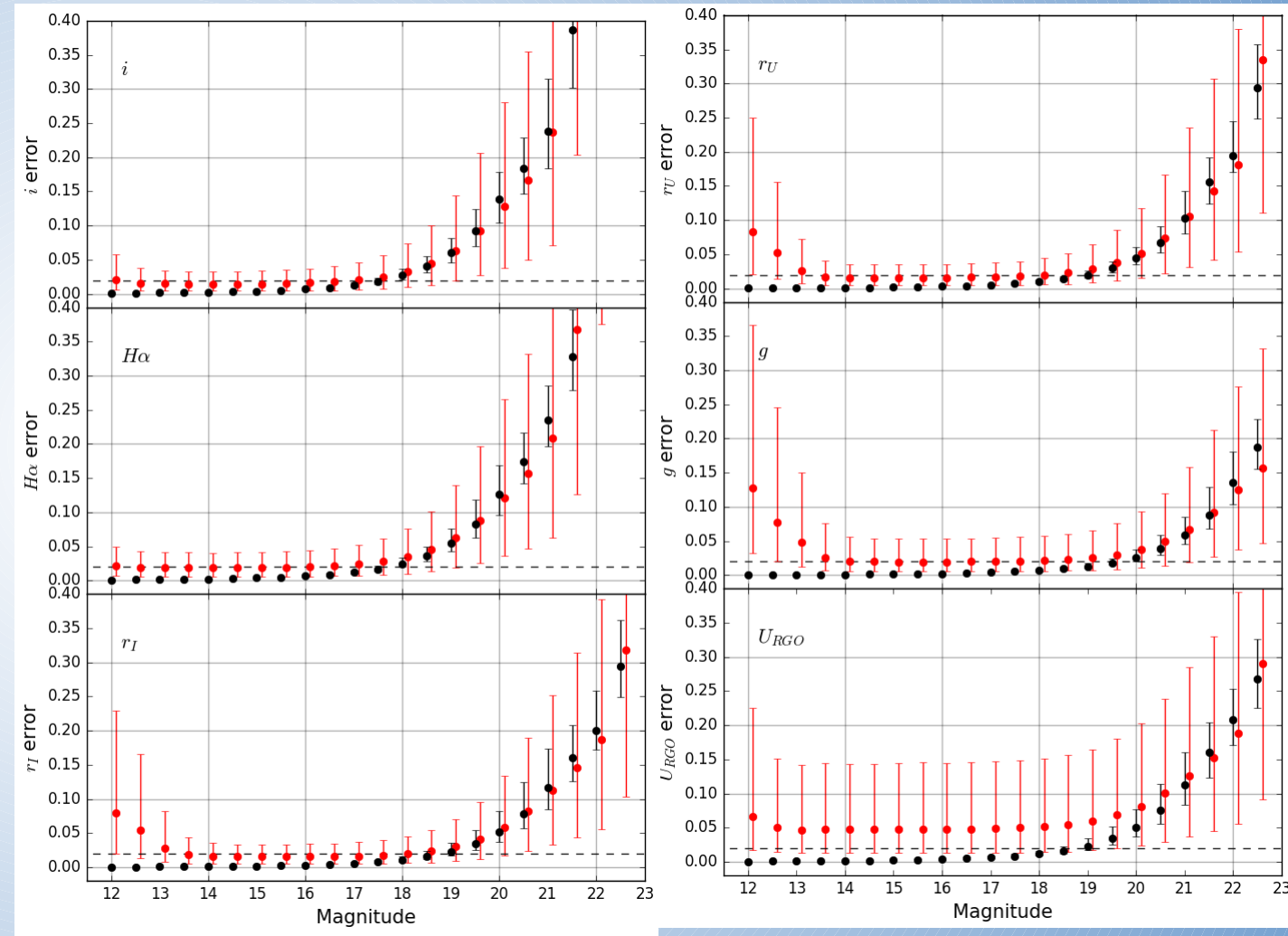


PSF:



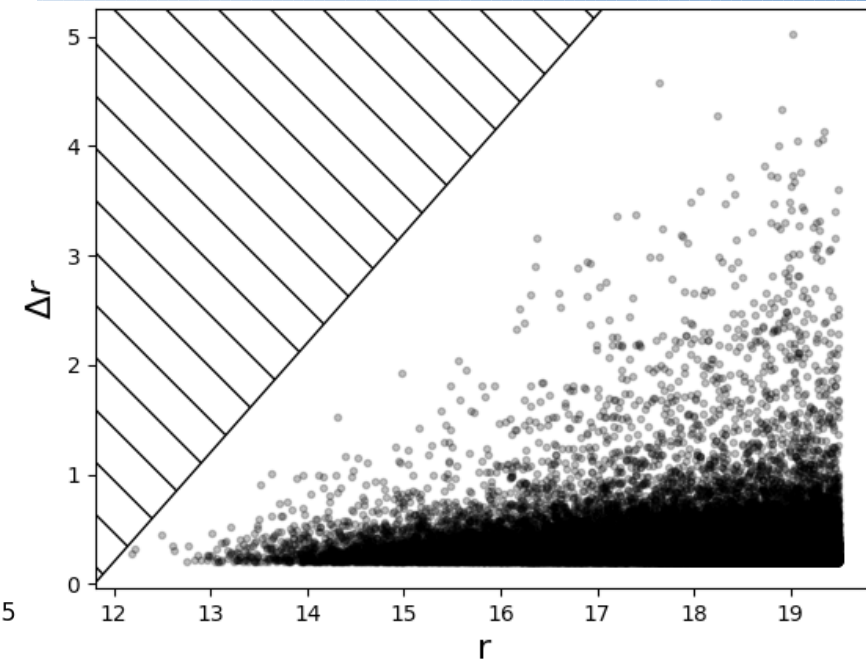
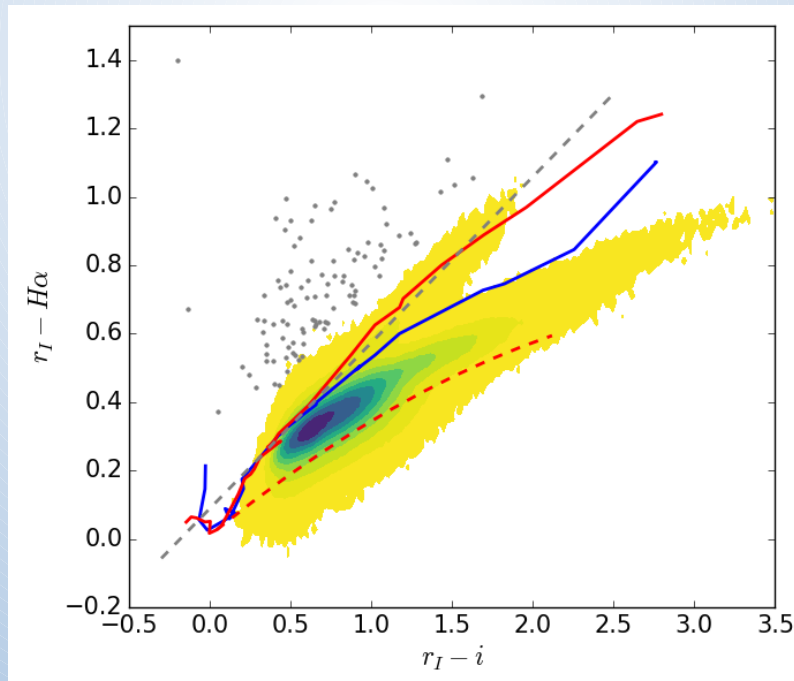
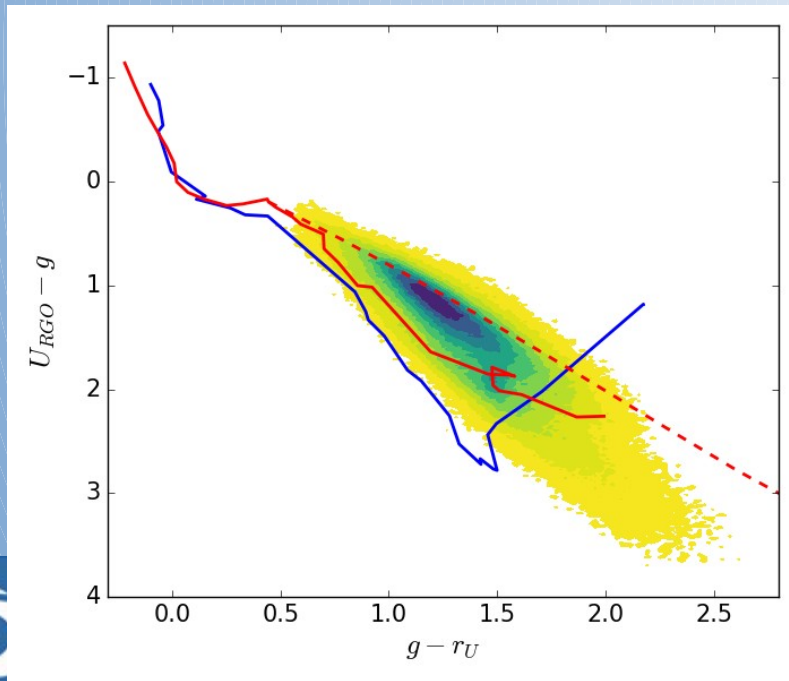
Photometric errors:

- Median photometric errors from Poissonian noise (black)
- Reproducibility error from different measurements is better than 0.02 mag in the range $13 < r < 19$ (red)
- Error bars show 16-84 percentiles
- Effect of saturation at brighter mags



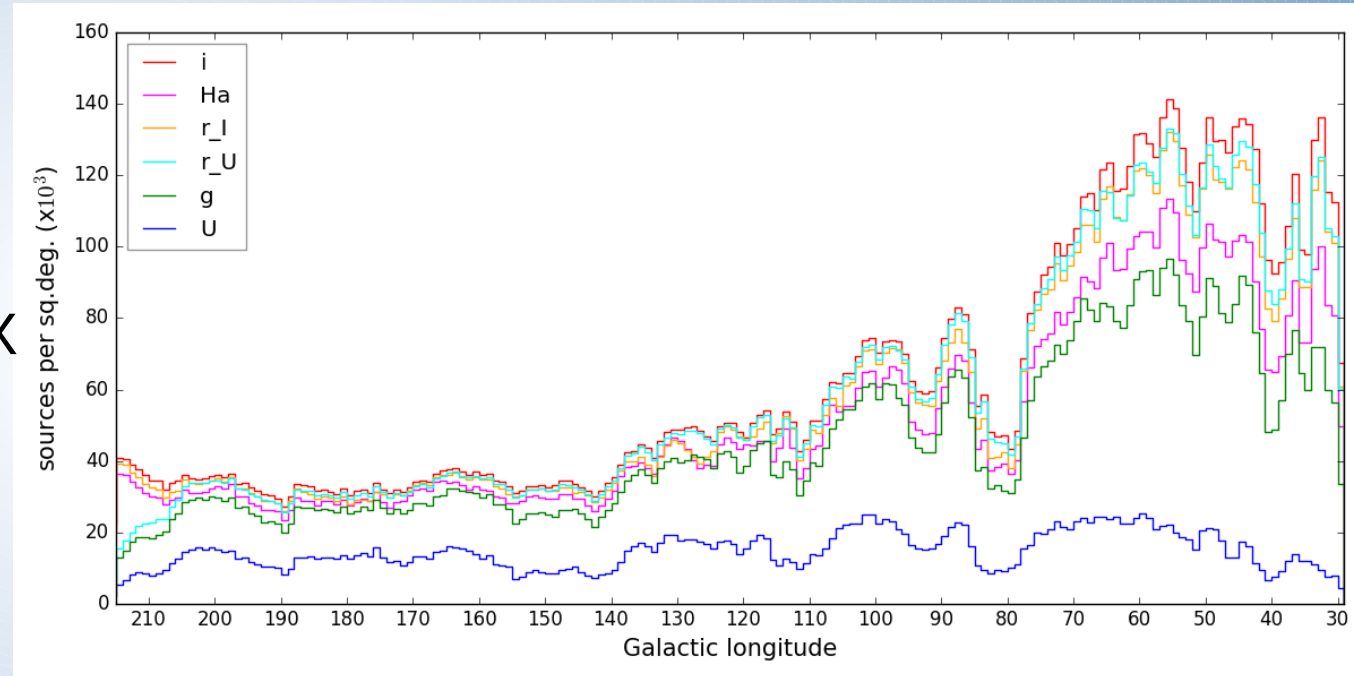
Colour-colour diagrams

- Essential for target selection (e.g. spectroscopic surveys)
- Synthetic tracks for LC V(red) and III(blue) and different A_V available online.
- 8292 emission line candidates selected (grey points, second figure)
- Two r measurements \rightarrow >53000 variable objects flagged ($\Delta r > 0.2$)



Catalogue content:

- 174 columns:
 - Astrometry, photometry, errors, quality flags, MJD, seeing for each band
 - Variable and emission flags.
- 295.4×10^6 sources
 - 254×10^6 with IPHAS information
 - 246×10^6 with UVEX information
 - 215×10^6 with both IPHAS and UVEX



- Catalogue Available through CDS
(<http://cdsarc.u-strasbg.fr/viz-bin/cat/J/A+A/638/A18>).
- Images are also available for download via igapsimages.org
(Greimel et al, in preparation).