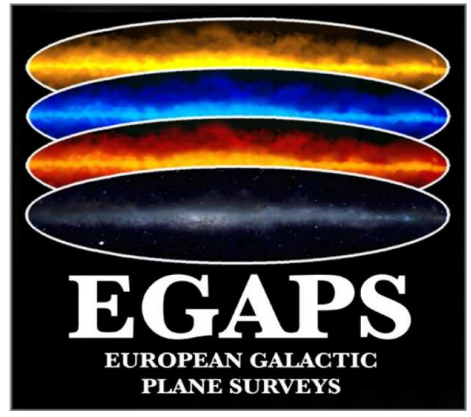


SCIP:

Stellar Circumstellar and Interstellar Physics

EGAPS:

European GAlactic Plane Surveys

Maria Monguió
(University of Hertfordshire, UK)

Barcelona, May 29, 2018

WEAVE characteristics

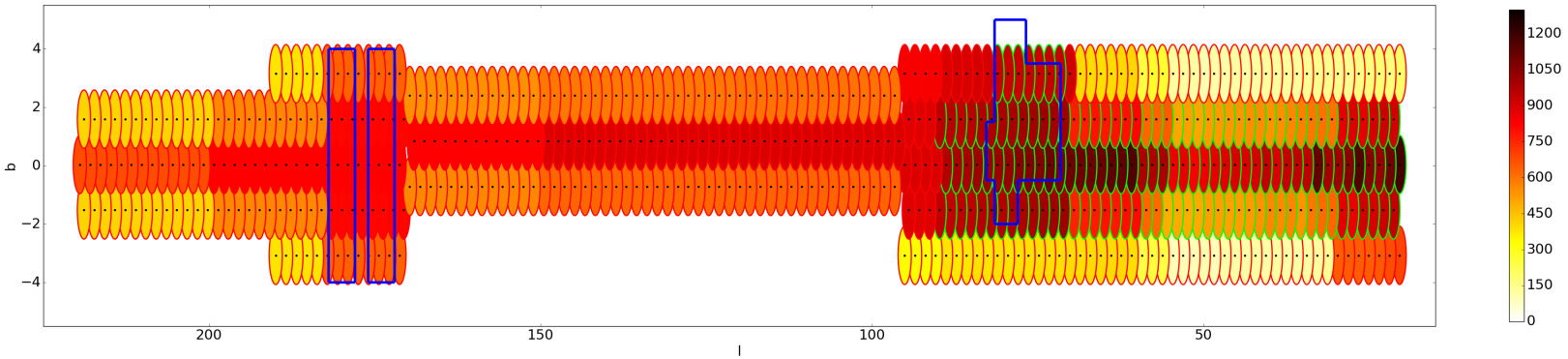
Telescope, diameter	WHT, 4.2m
Field of view	2° ⌀
Number of fibers	960 (plate A)/940 (plate B)
Fiber size	1.3″
Number of small IFUs, size	20 x 11″x12″ (1.3″ spaxels)
LIFU size	1.3′x1.5′ (2.6″ spaxels)
Low-resolution mode resolution	5750 (3000–7500)
Low-resolution mode wavelength coverage (Å)	3660–9590
High-resolution mode resolution	21000 (13000–25000)
High-resolution mode wavelength coverage (Å)	4040–4650, 4730–5450 5950–6850

Survey strands

There are eight WEAVE surveys:

- Galaxy Clusters (PI: Jose Alfonso Lopez Aguerri)
- WEAVE-Apertif (PI: Jesus Falcon Barroso)
- StePS (PI: Bianca Poggianti)
- WEAVE-LOFAR (PI: Dan Smith)
- WEAVE-QSOs (PI: Mat Pieri)
- White dwarfs (PI: Boris Gaensicke)
- Stellar, Circumstellar, and Interstellar Physics (PI: Janet Drew)
- Galactic Archaeology (PI: Vanessa Hill)
  - LR disc (T.Antoja, B.Famaey)
  - LR halo (G.Battaglia)
  - HR halo (V.Hill)
  - Open Clusters (A.Vallenari, A.Bragaglia)

The Stellar Circumstellar and Interstellar Survey



- The low resolution program:
  - O and early-B stars
  - late-B A stars
  - Red supergiants
  - interstellar medium
  - Diffuse ISM, PNe, SNR
  - White dwarfs and interacting binaries
  - Cepheids
  - Young stars, creation of the stellar field

  } main components

  } minority components

- High Resolution programs:
  - Cygnus
  - Anticenter

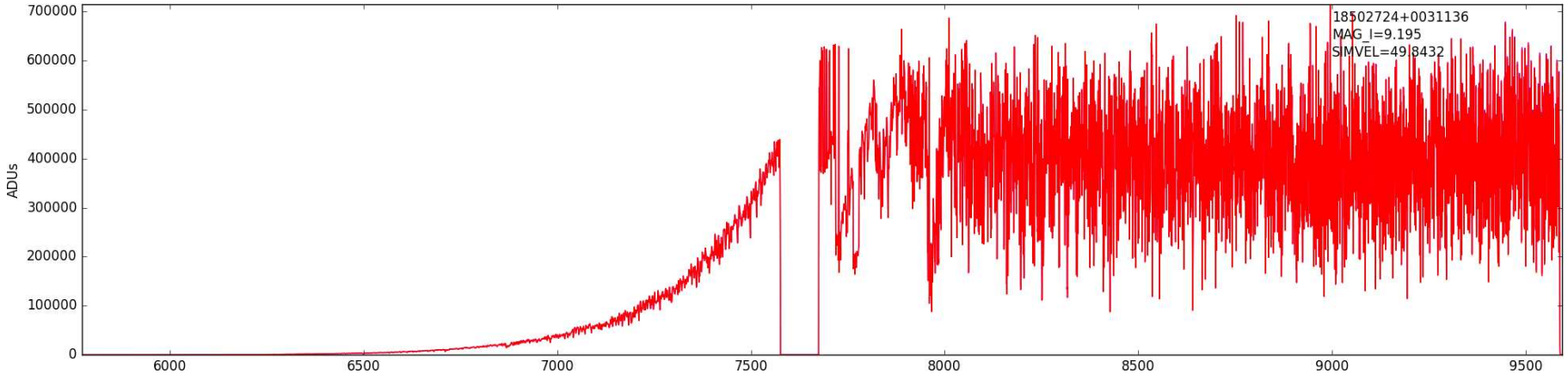
studying the Milky Way now

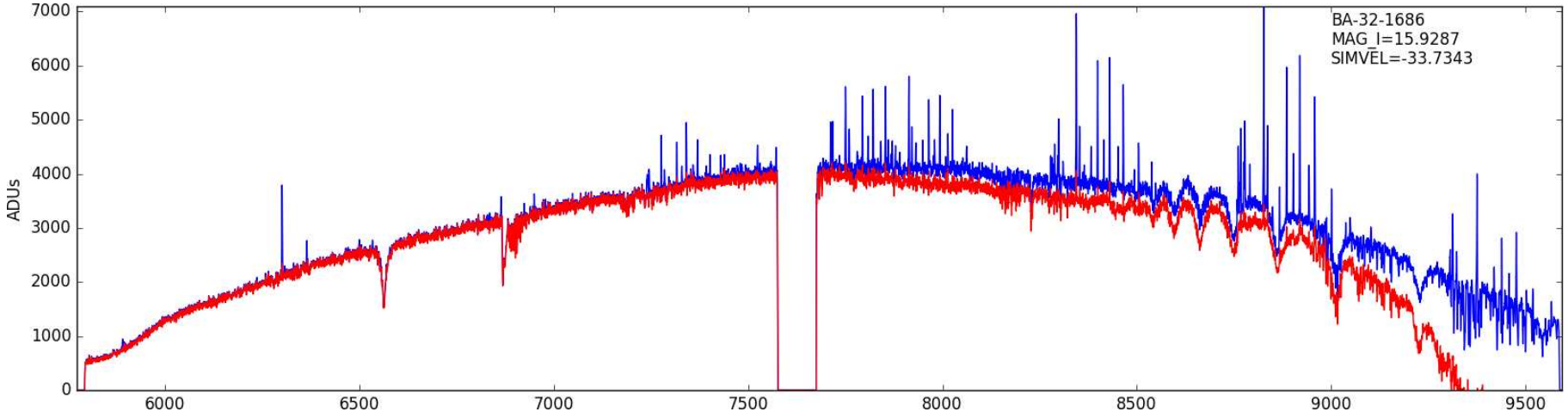
OpR2.5

- Check data flow between groups
  (SWG, OCS, CPS, APS, WAS)
- Get teams used to WEAVE formats and pipelines
  (fits tables, fits <–> xml, wasp submission, reading output, ...)
- Check scientific results

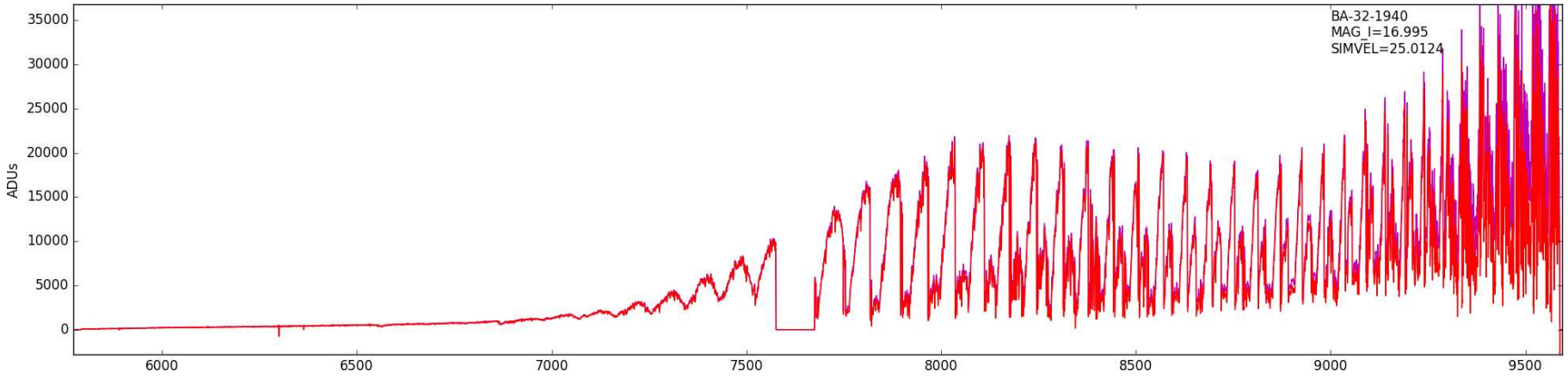
For SCIP: 4 LR and 2HR

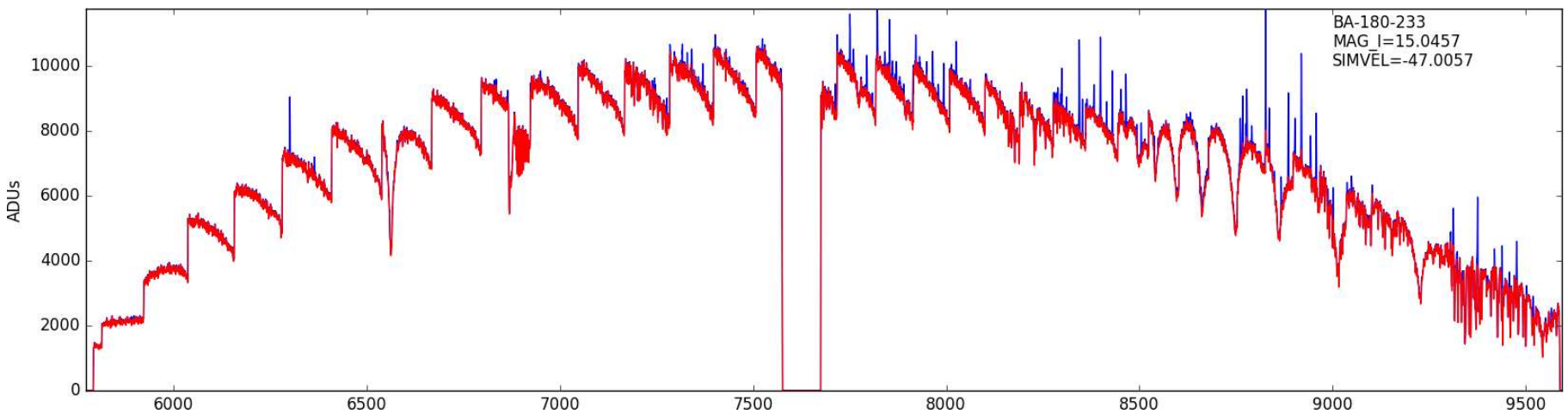
OpR2.5: First look – First problems



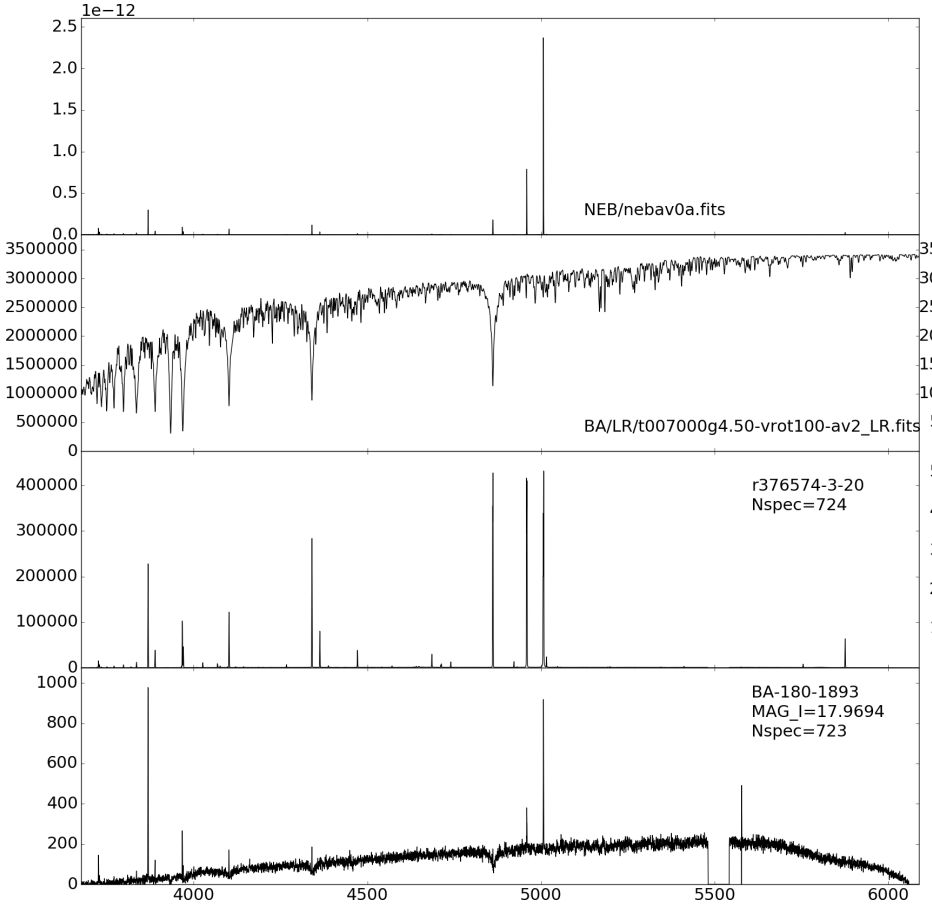


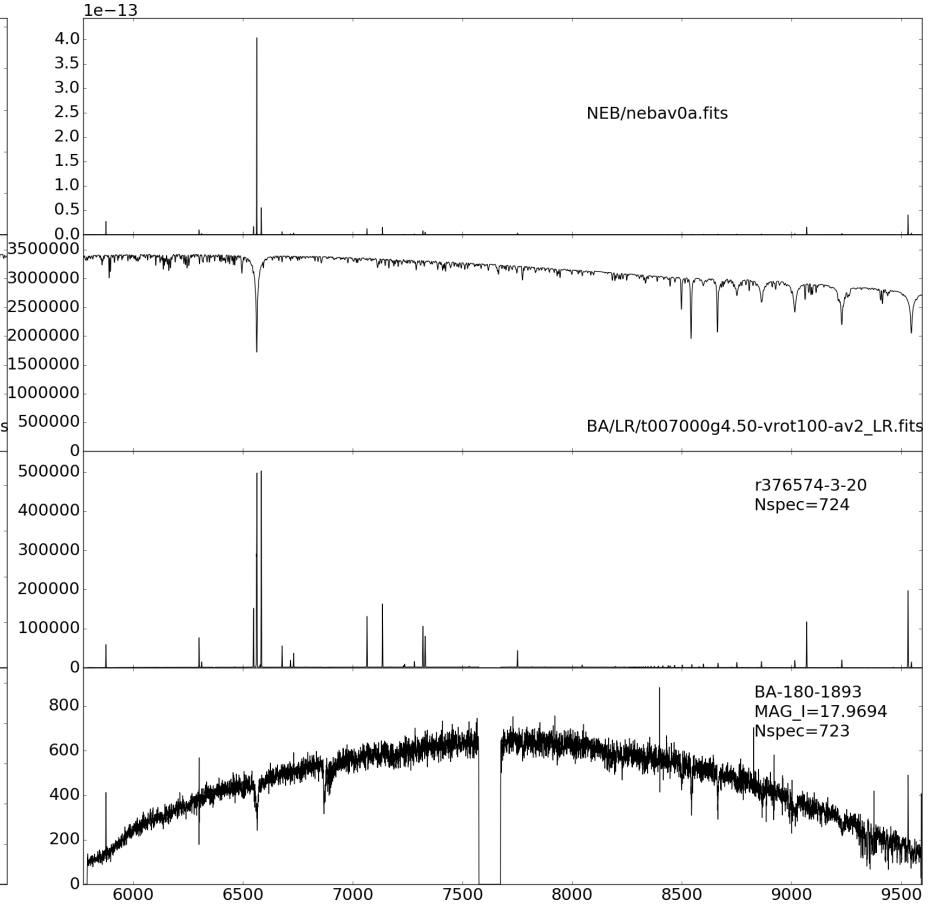
OpR2.5: First look – First problems



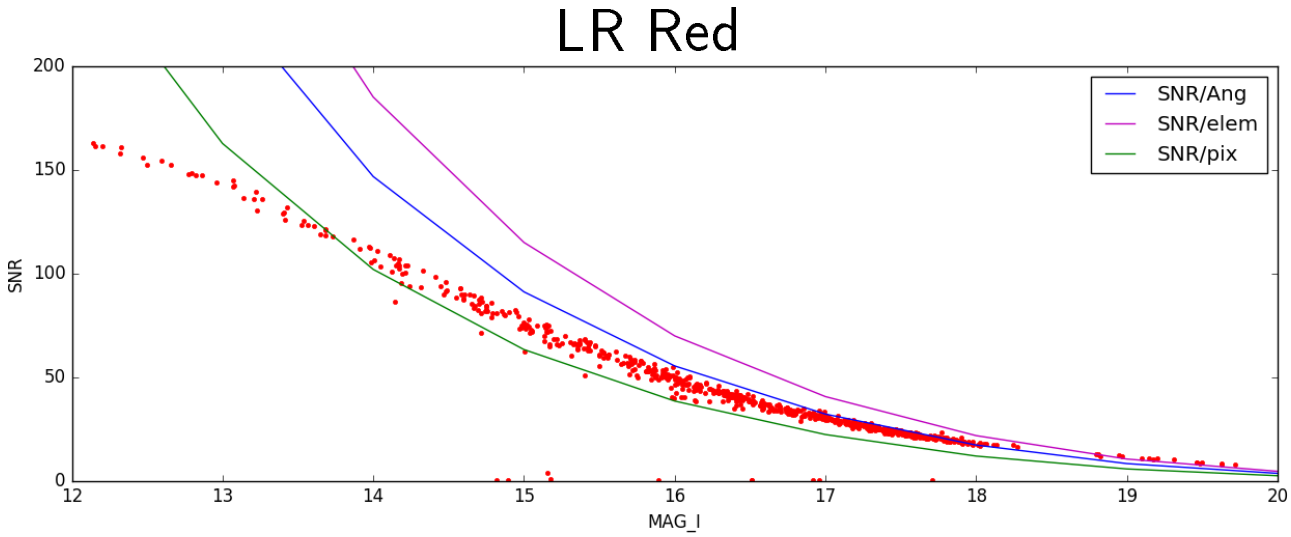


OpR2.5: Crosstalk





OpR2.5: SNR


LR Red
SNR/Ang
SNR/elem
SNR/pix
SNR
MAG_I
0
50
100
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200
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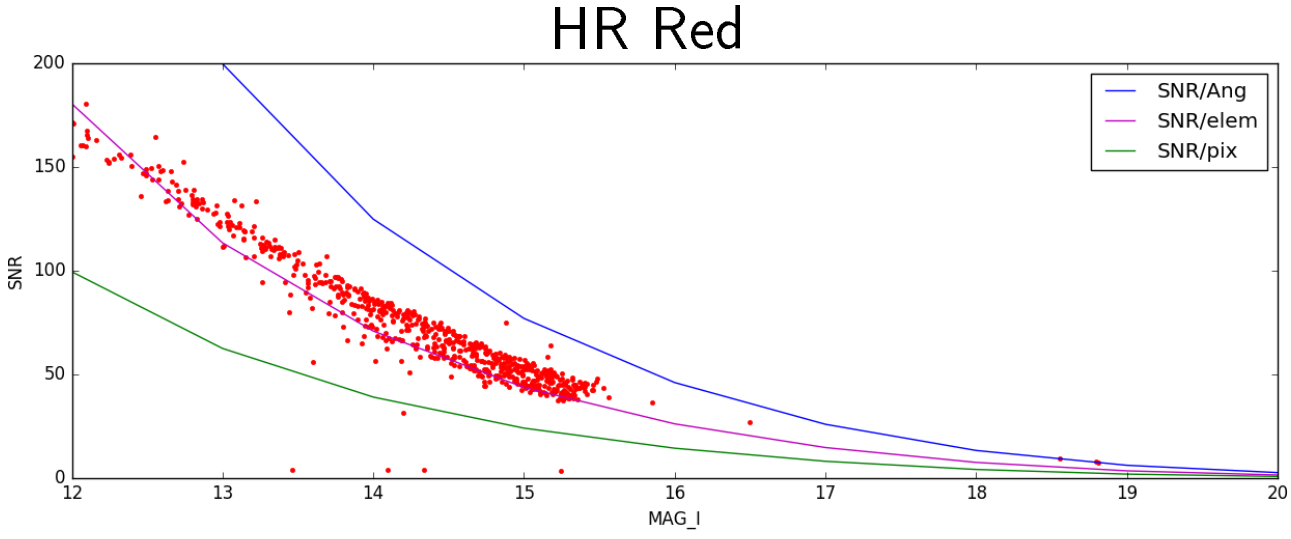
HR Red
SNR/Ang
SNR/elem
SNR/pix
SNR
MAG_I
0
50
100
150
200
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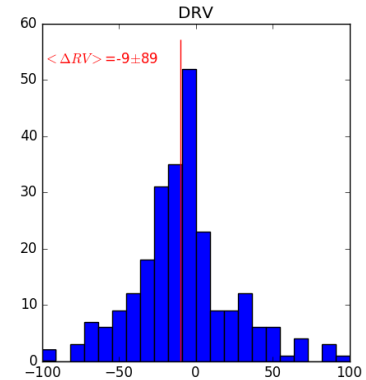
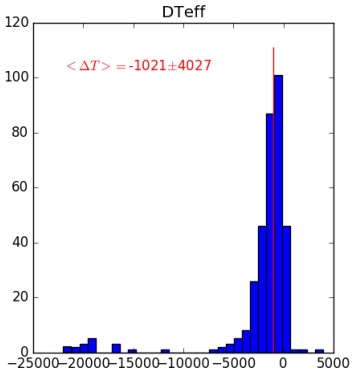
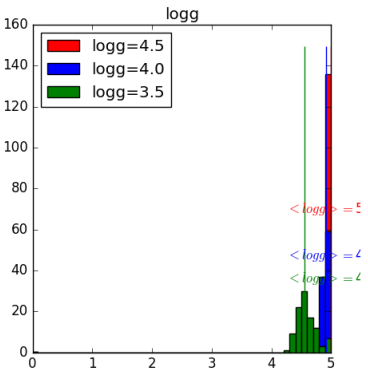
OpR2.5: Physical parameters ofr A stars

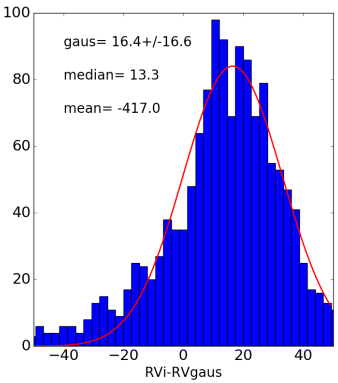
APS (Allende-Prieto)

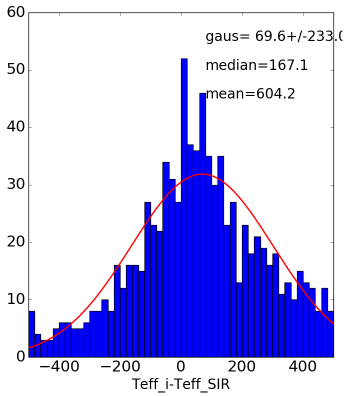


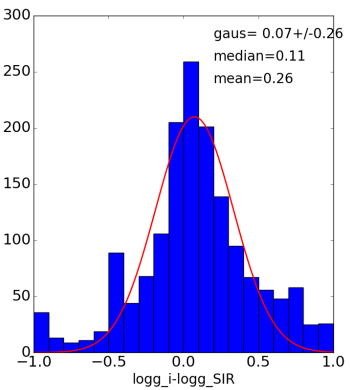




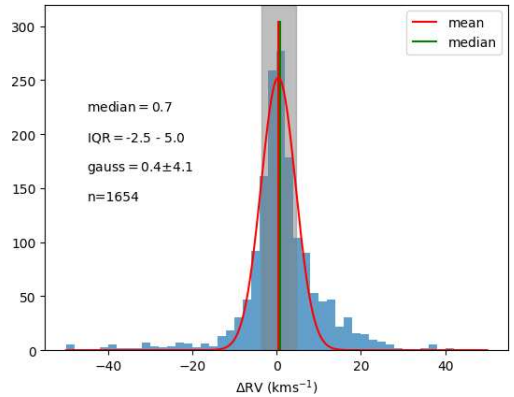
PCA (Gebran+2016)

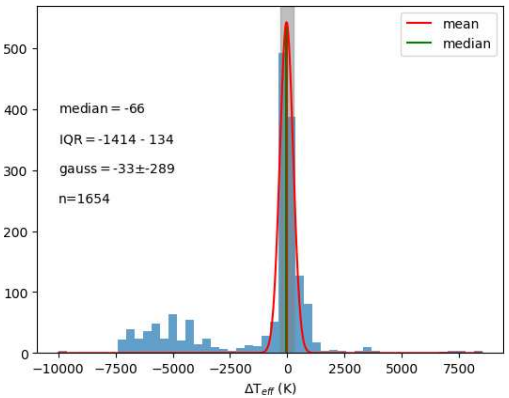


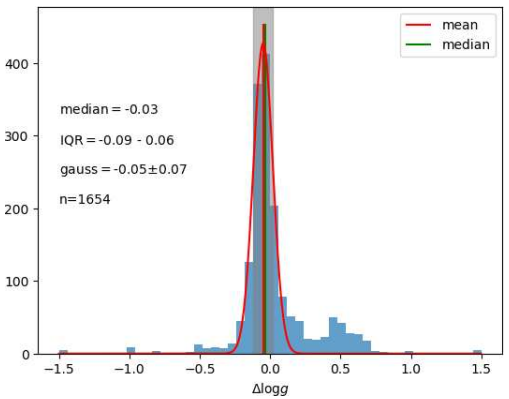




MCMC (Harris+2018)







OpR3 is running...

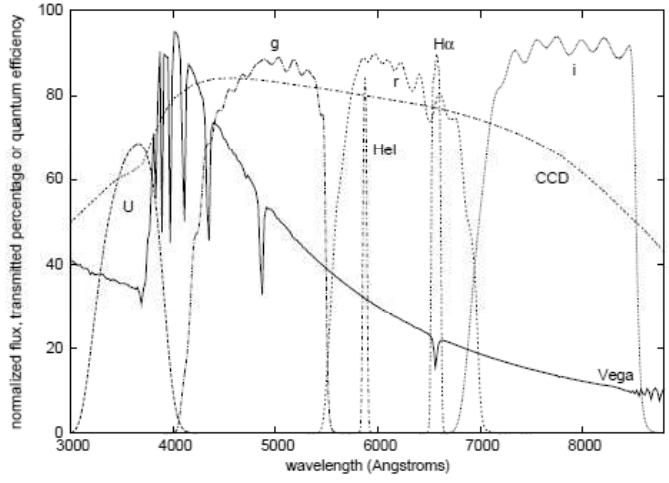
- OpR3a: scheduling of 1 month in three semesters
- OpR3b: 1 week of simulated data in three semesters
- OpR3c: scheduling over a larger period

Data selection: EGAPS

= IPHAS + UVEX + VPHAS+

PI	J.Drew	P.Groot	J.Drew
Filters	r,i,Hα	u,g,r	u,g,r,i,Hα
web	www.iphas.org	astro.ru.nl/uvex/	www.vphas.eu

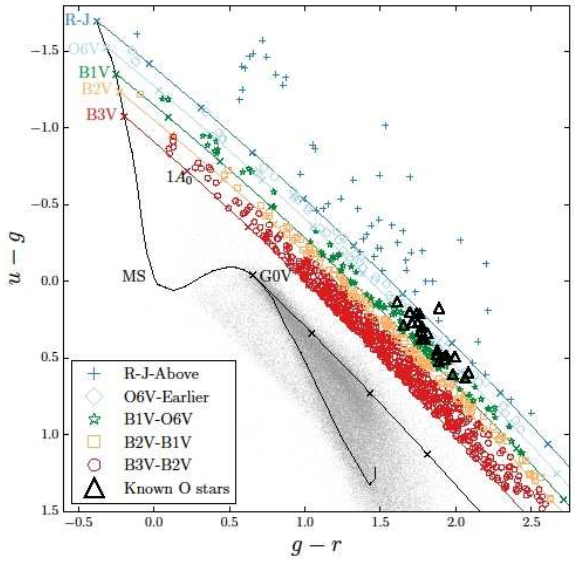
- Galactic Plane at $|b|< 5°$
- Around 1 arcsec angular resolution
- Reaches to **at least** 20th magnitude
- Approximate Saturation limit: $\sim$12-13

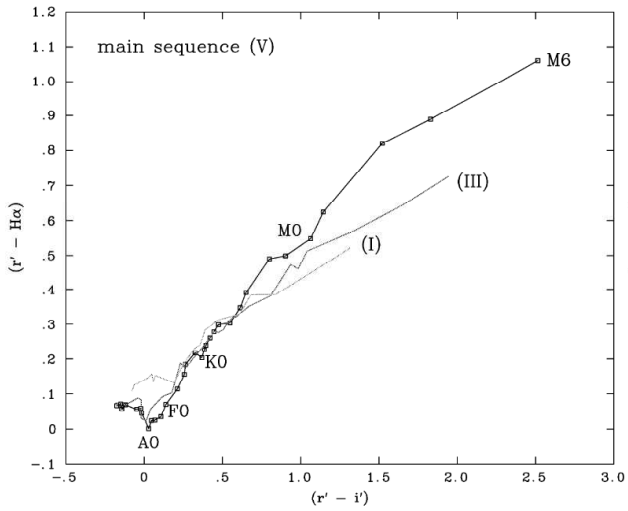


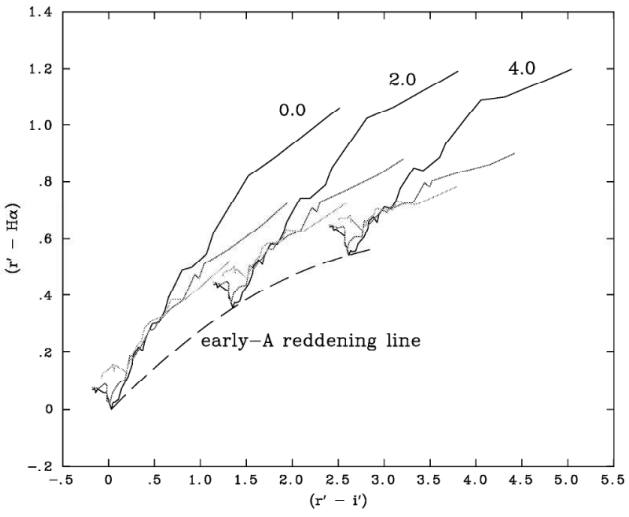
Data selection: EGAPS

OB and BA stars easily selected from:

Mohr-Smith et al 2005

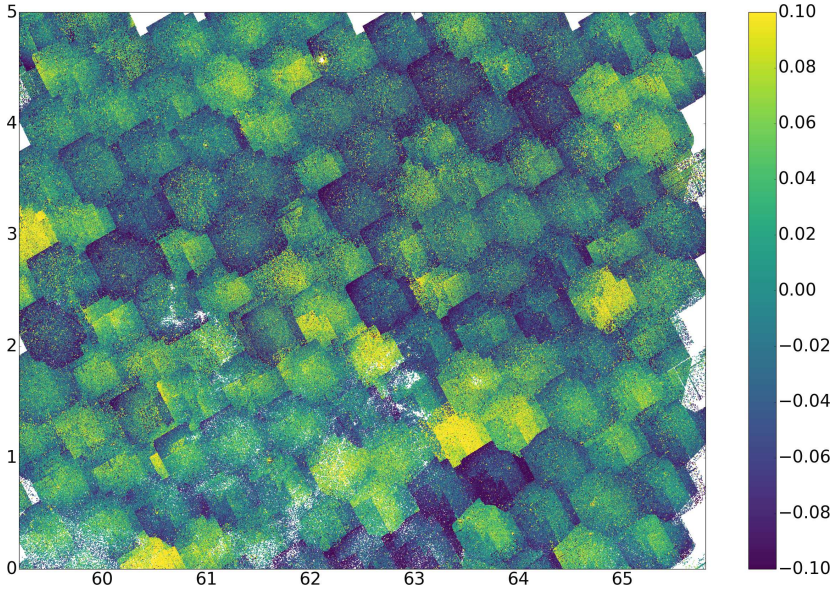


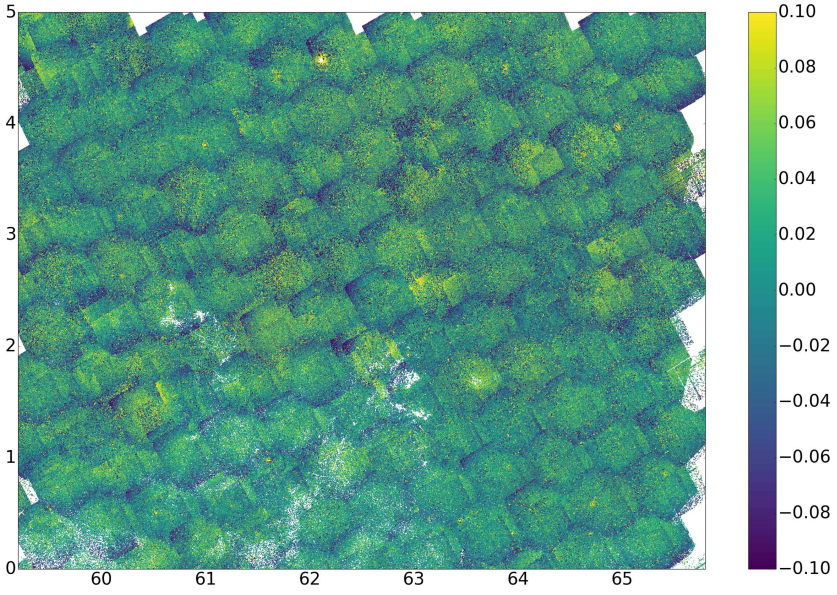


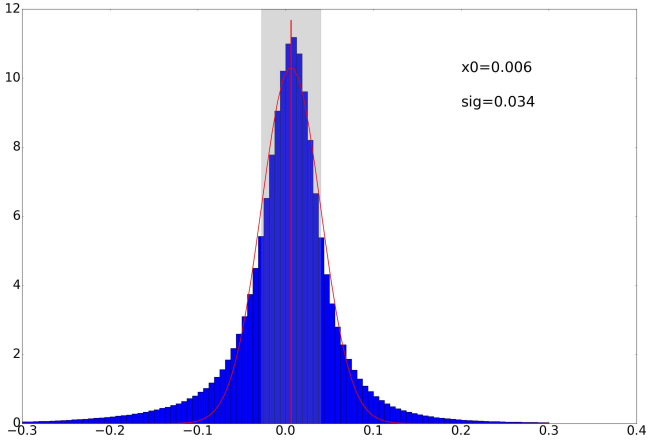


Drew et al 2008

EGAPS: calibration







Wd2: testbed for O-stars ejections

Massive stars in the hinterland of the young cluster, Westerlund 2

J. E. Drew,[1⋆], A. Herrero[2,3], M. Mohr-Smith[1], M. Monguió[1], N. J. Wright[4], T. Kupfer[5,6], R. Napiwotzki[1]

O selection from Mohr-Smith+2017

Gaia-DR2 ppm

Thanks!