

S B R A M !

```

      /NNNNNNNNNN/
    ohhhhdNNNNNNNNNNdhhho
  .++dNNNNNNNNNNd++.
  ./mmmmNNNNNNmmmmNNNN+..
NNy      NNNNNNNNy      NNNNNNN
--.      --oNNNN--.      --oNNNN
ooooo-   /NNNNooooo-   /NNNN
-::dddd: /NNNNdddd:   /NNNN:-
yNNmdhh: ..+NNNNmdhh: ..+NNNNNy
yNNNy..  mmmNNNNNy..  mmmNNNNNy
yNNNNmhhhhhNNNNNNNNNNmhhhhhNNNNNNNNNy
yNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNy
yNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNy
yNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNy
yNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNy
yNNNNd++dNNNNNNy++++yNNNNNNd++dNNNNy
yNNhho ohhNNNN/   /NNNNhho ohhNNy
yNN      NNNNN/   /NNNN      NNy

```

E R R O R

Doh! GALFIT crashed because at least one of the model parameters is bad. The most common causes are: effective radius too small/big, component is too far outside of fitting region (also check fitting region), model mag too faint, axis ratio too small, Sersic index too small/big, Nuker powerlaw too small/big. If frustrated or problem should persist, email for help or report problem to:

Disentangling the counter-rotating discs of IC 719



E. Johnston, F. Selman, G. Couto, P.
Longa-Peña, P. Novais, C. Ricci

Counter-rotating discs in galaxies



For a review:
Corsini et al. 2014

IC719



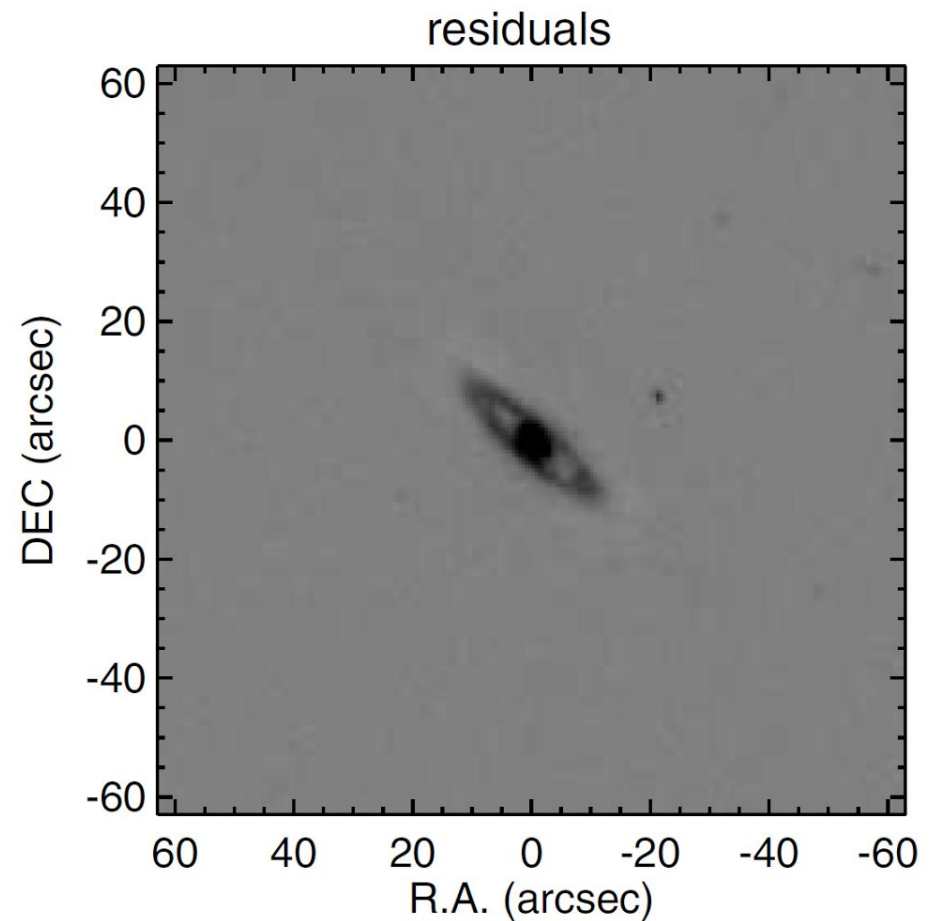
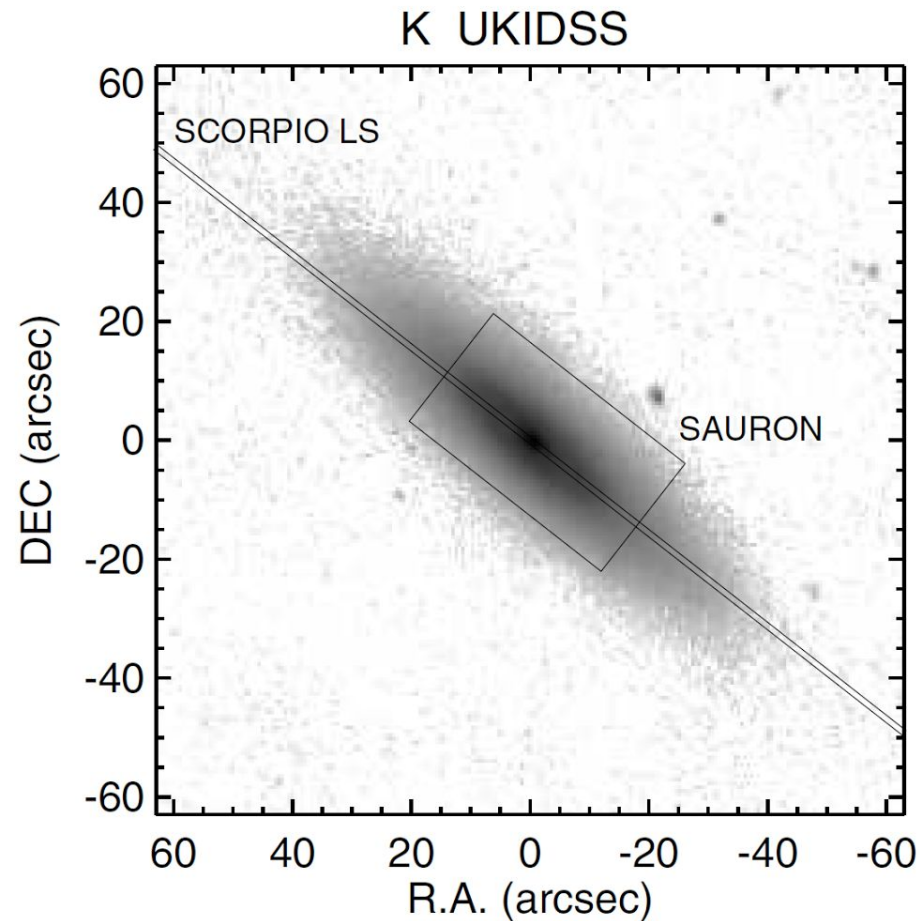
SDSS image



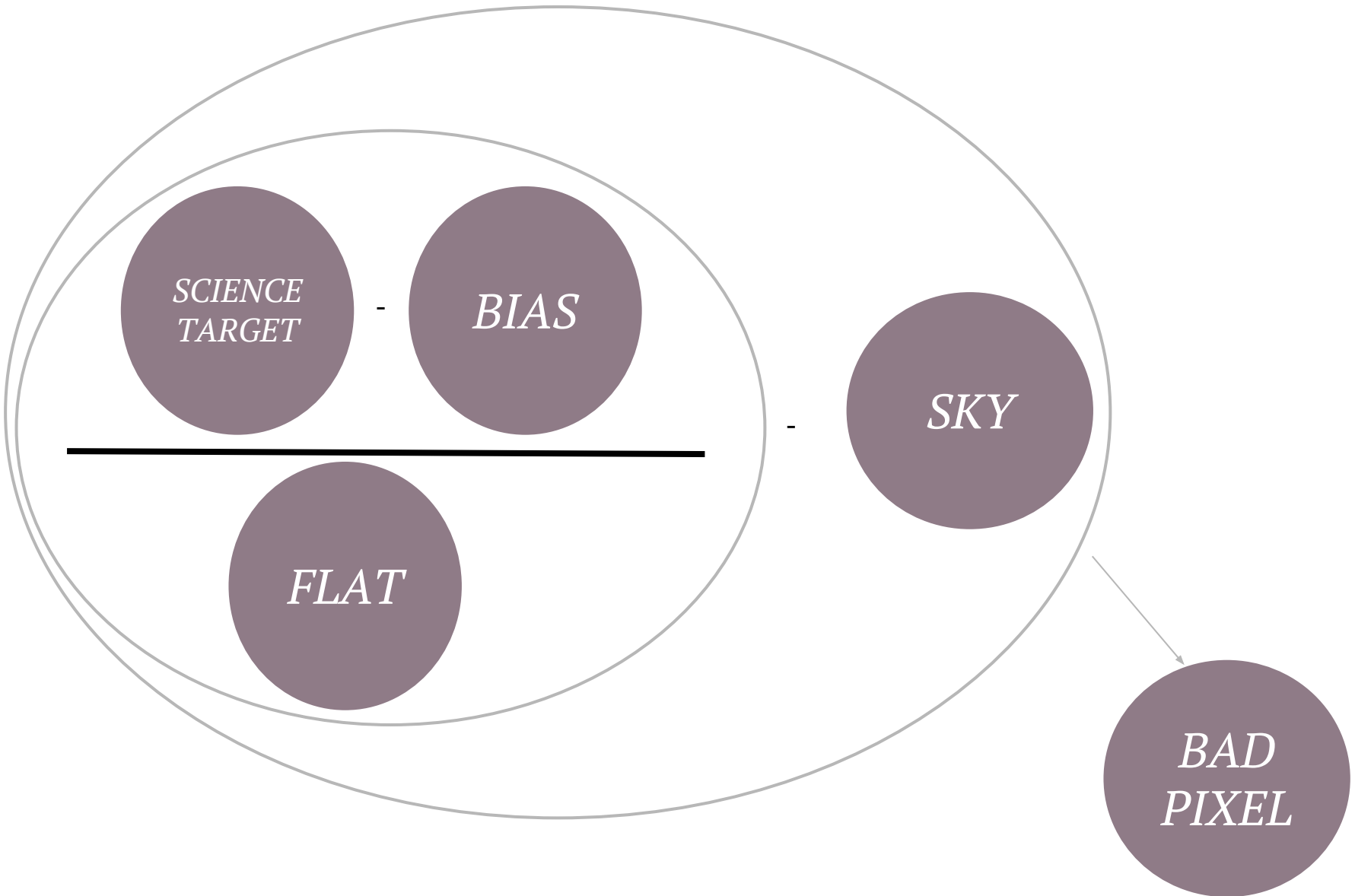
DFOSC image

Photometry & spectroscopy

IC719



Optical Data Reduction

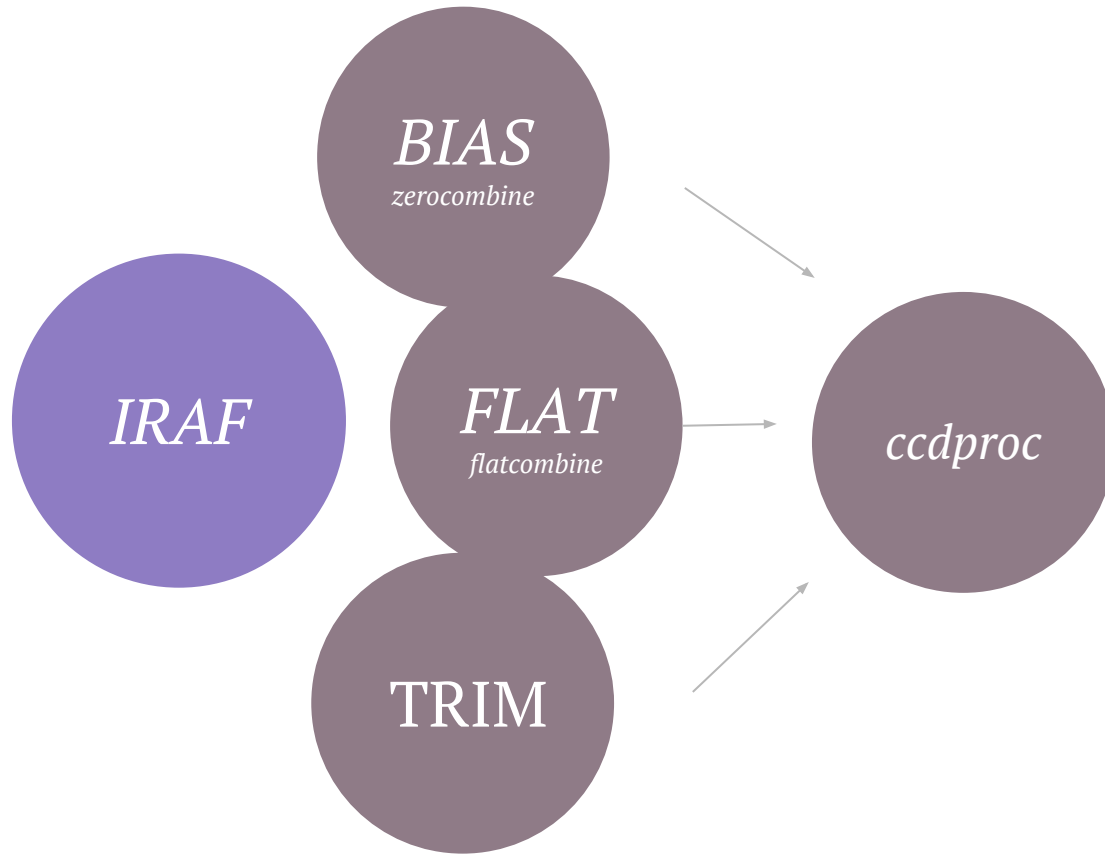


Photometry

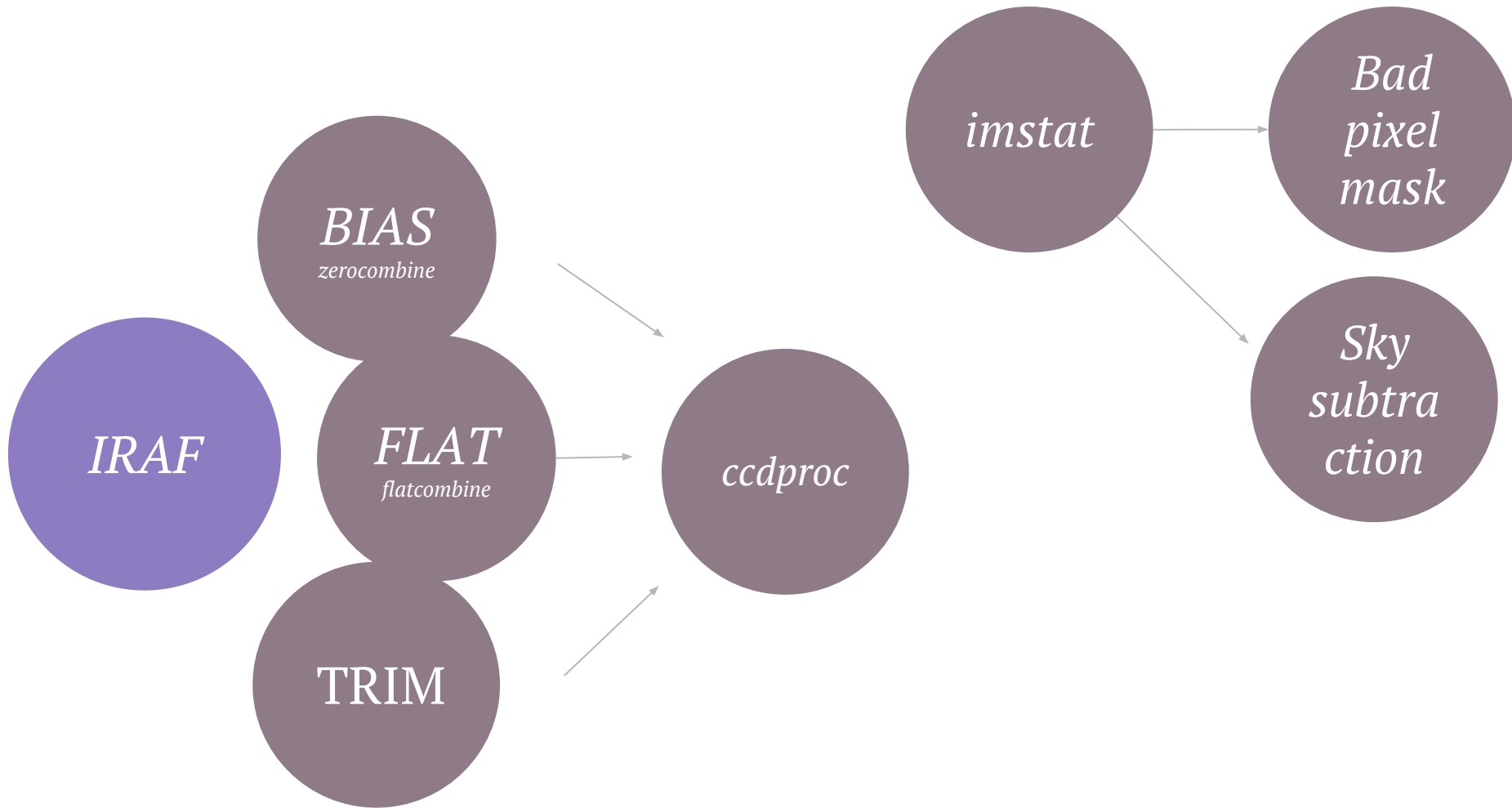


IRAF

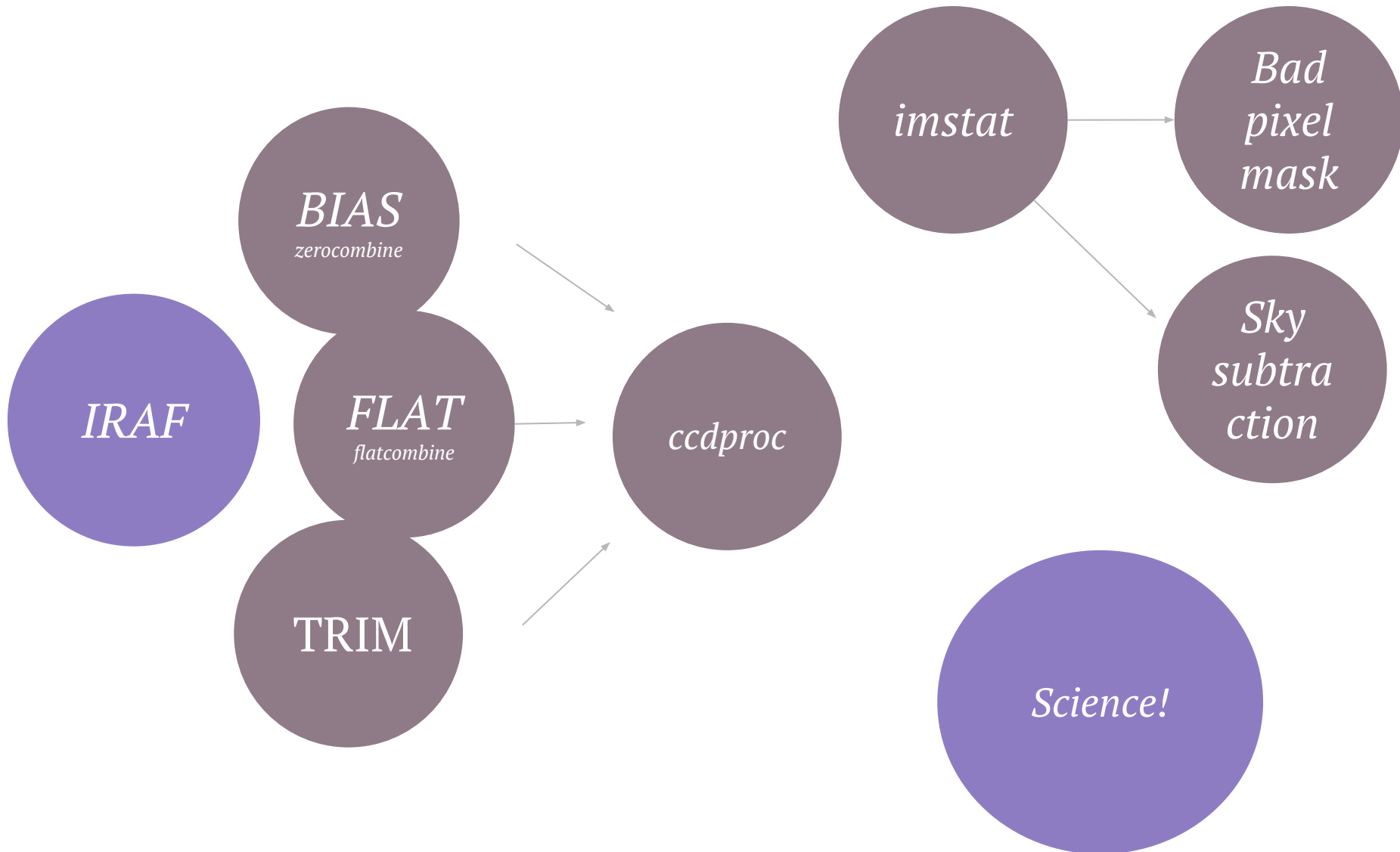
Photometry



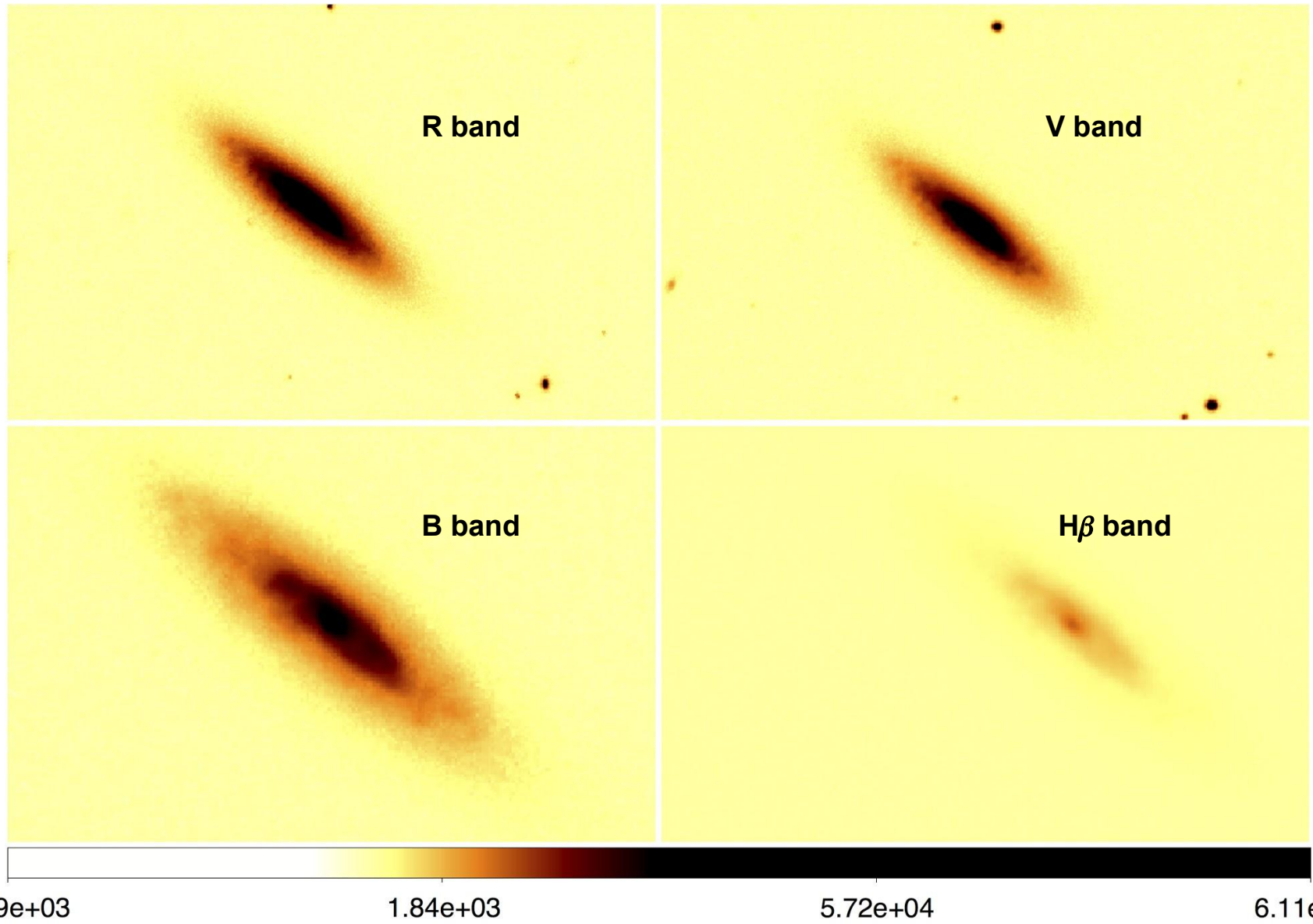
Photometry



Photometry



Photometry



Spectroscopy



*ESOREX
EFOSC
pipeline*

Spectroscopy

*ESOREX
EFOSC
pipeline*

READ THE 'FANTASTIC' MANUAL

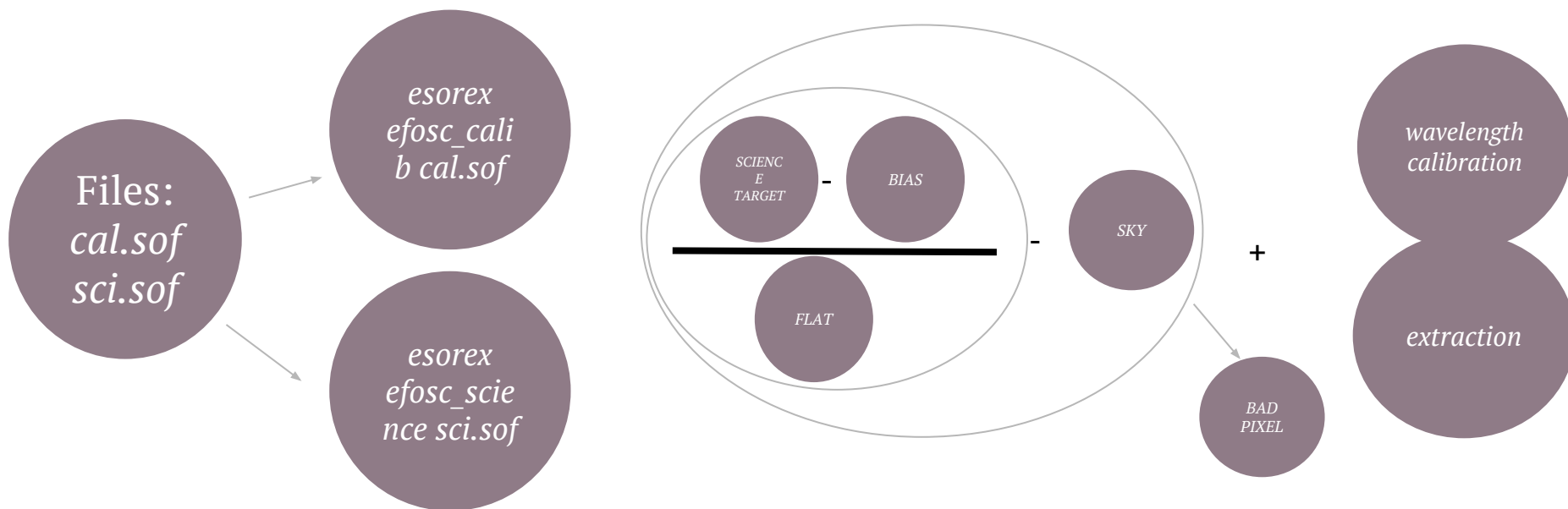
Science!

Spectroscopy

*ESOREX
EFOSC
pipeline*

READ THE 'FANTASTIC' MANUAL

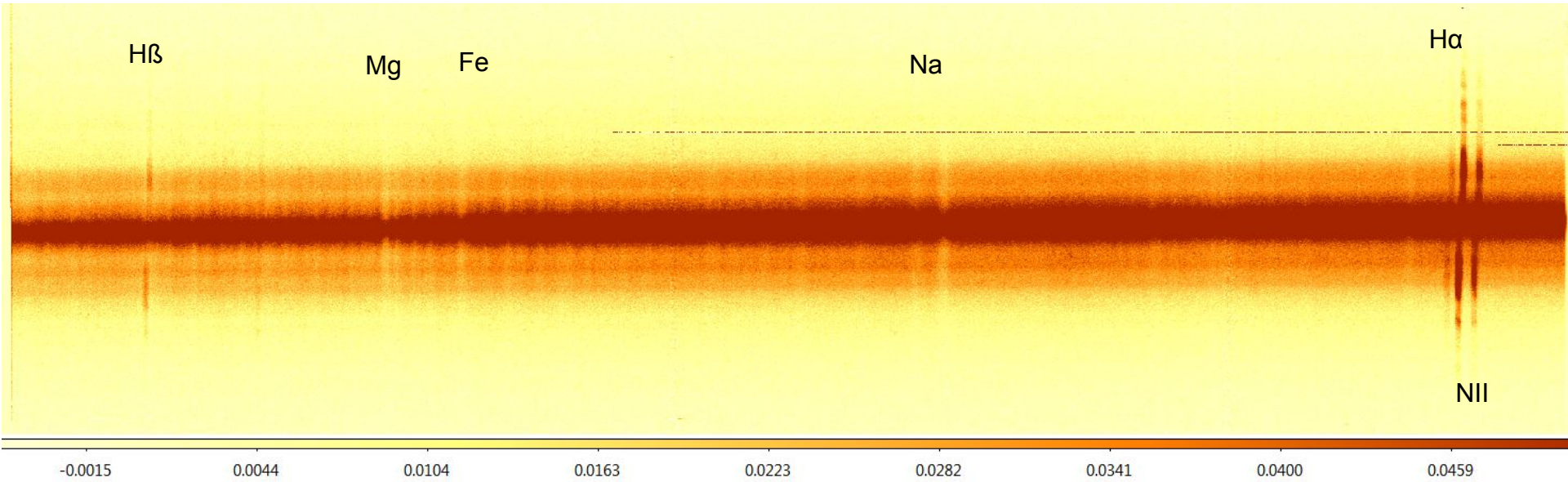
Science!



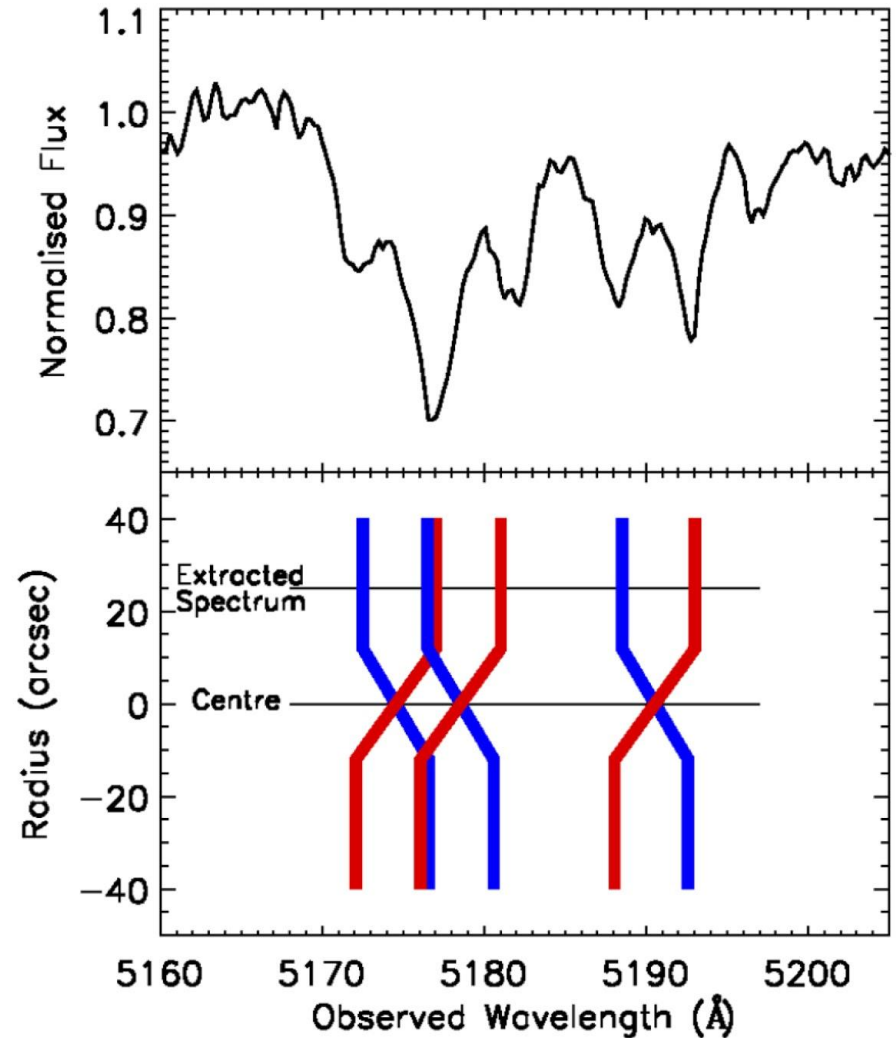
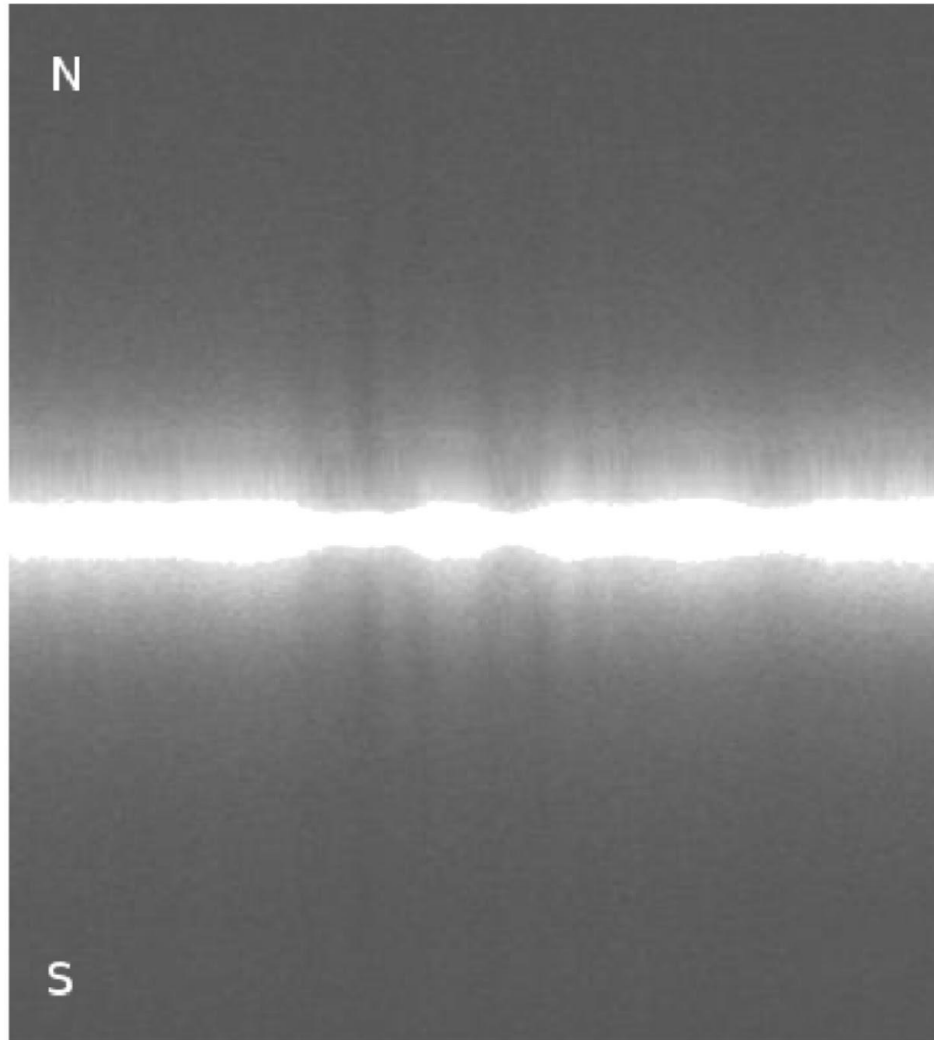
Spectroscopy

4700 Å

6700 Å

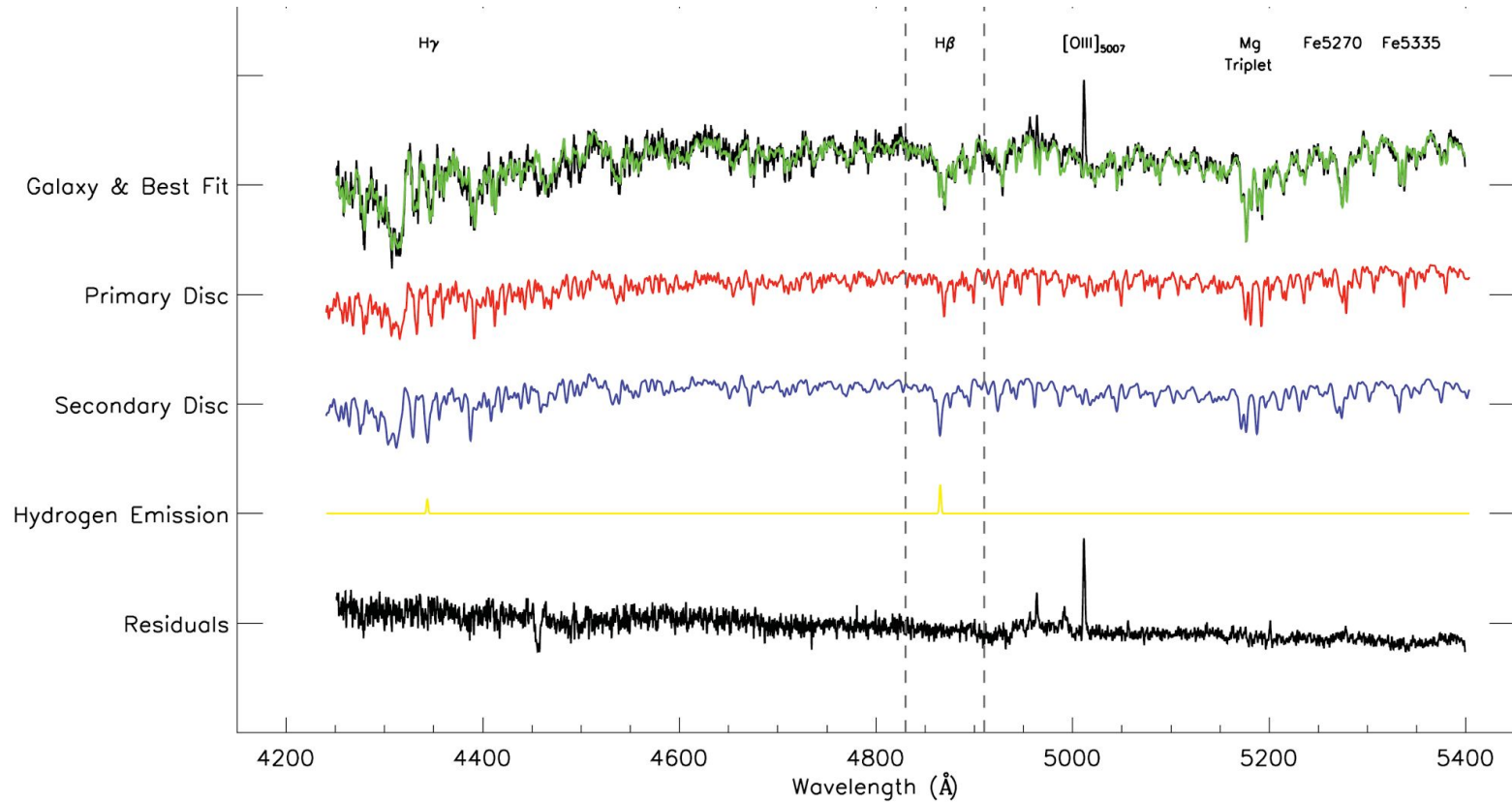


Photometry & spectroscopy



Rubin, Graham & Kenny (1992)

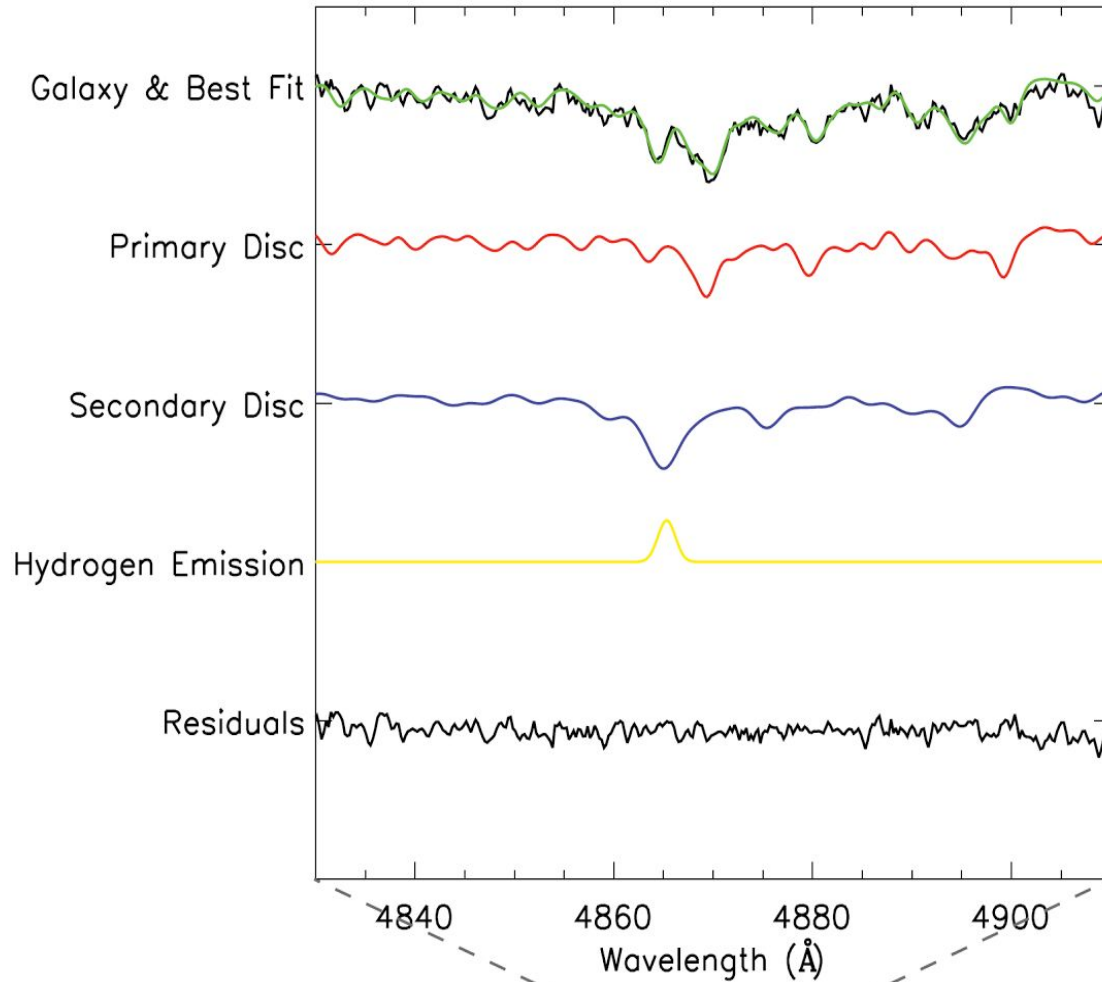
Spectral decomposition



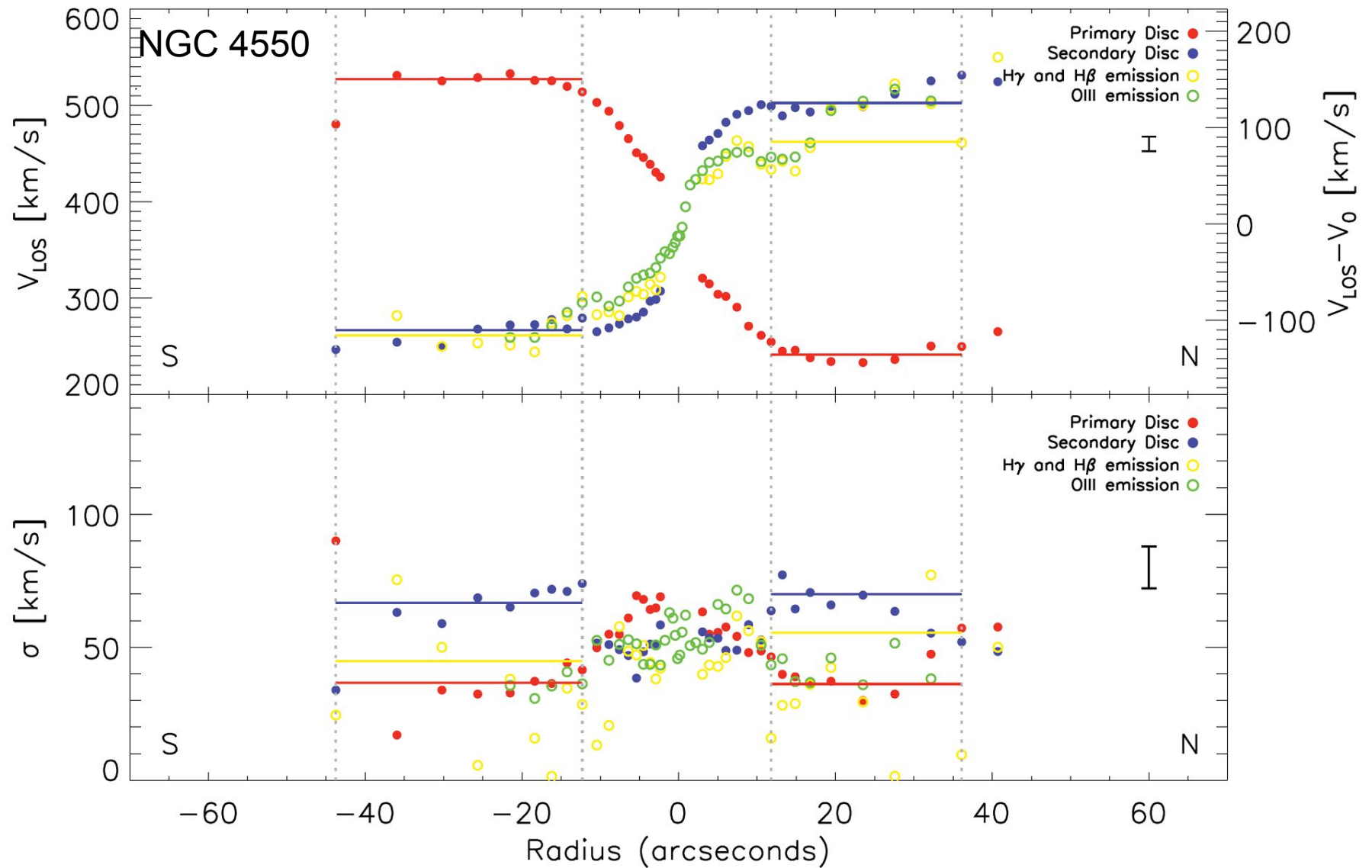
NGC 4550

Johnston et al. 2013

Spectral decomposition

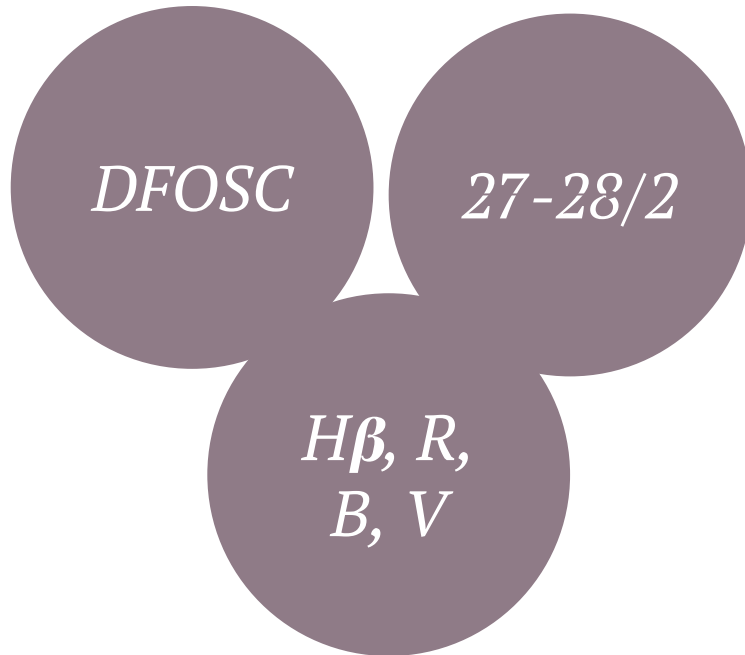


Kinematics



Observation Strategy

Photometry



Spectroscopy



MUSE Data

*ESOREX
MUSE
pipeline*

READ THE 'FANTASTIC' MANUAL

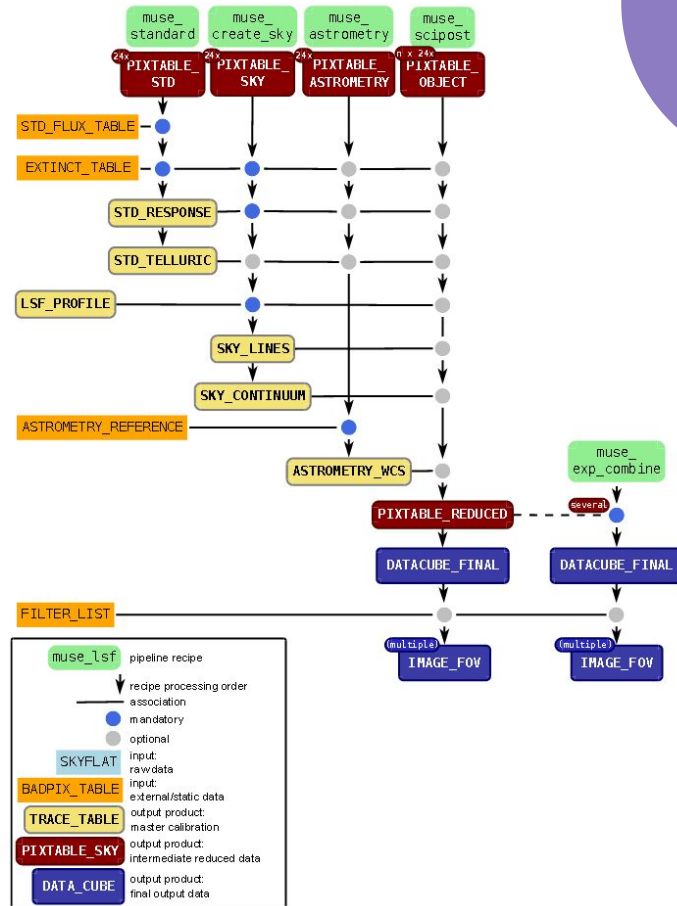
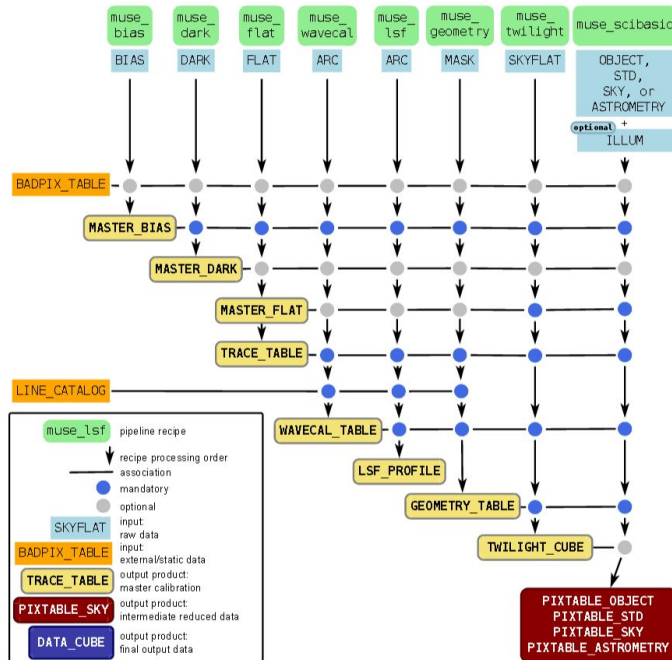
Science!

MUSE Data

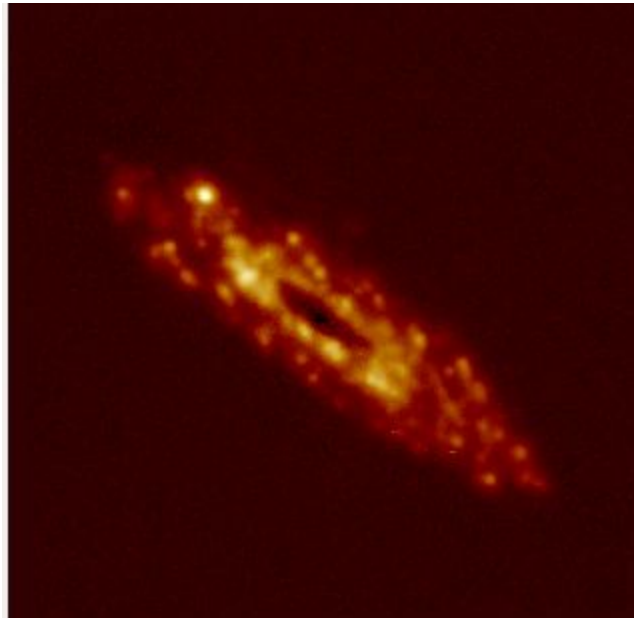
ESO/REX
MUSE
pipeline

READ THE 'FANTASTIC' MANUAL

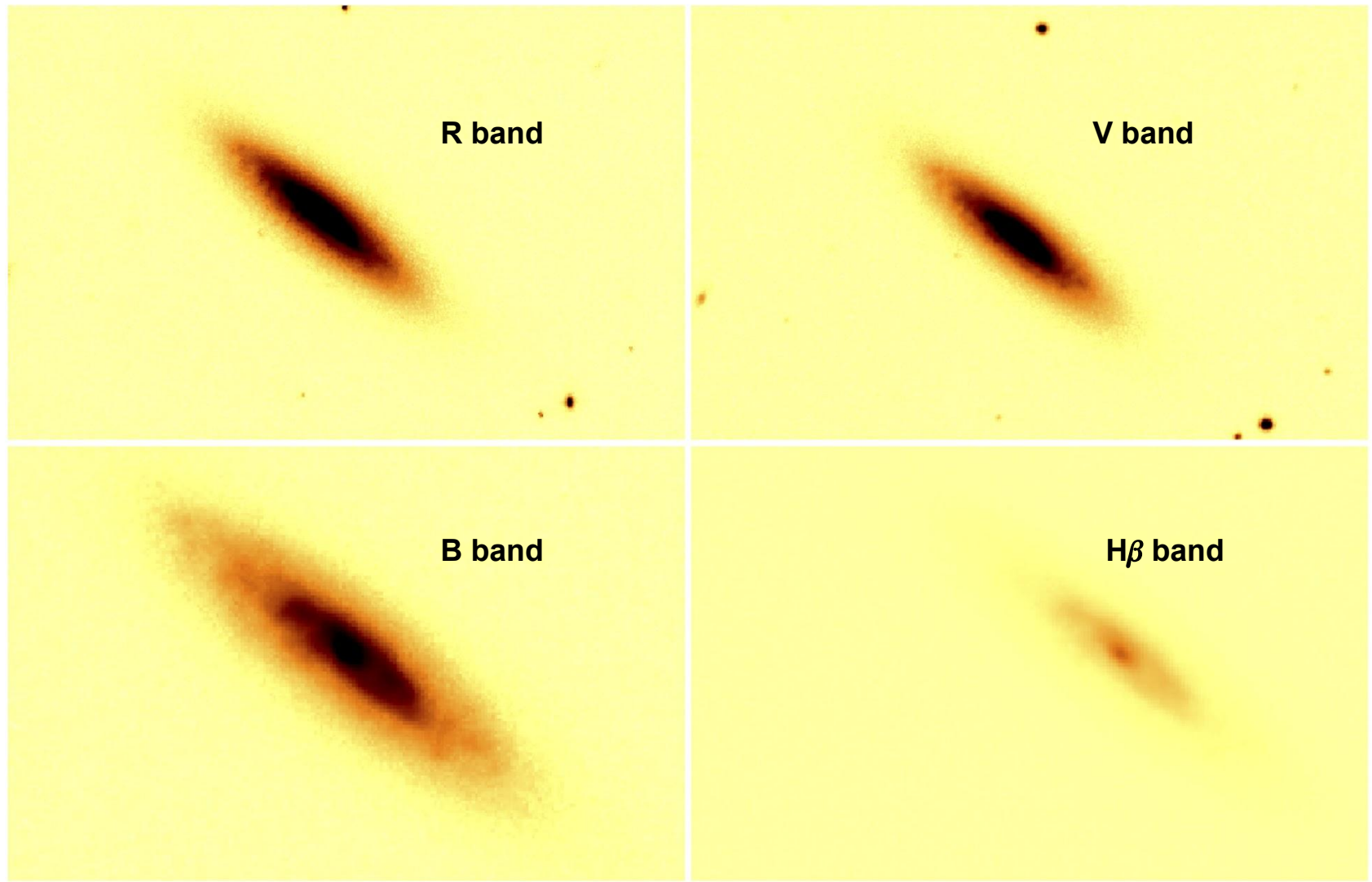
Science!



MUSE Data



Photometry



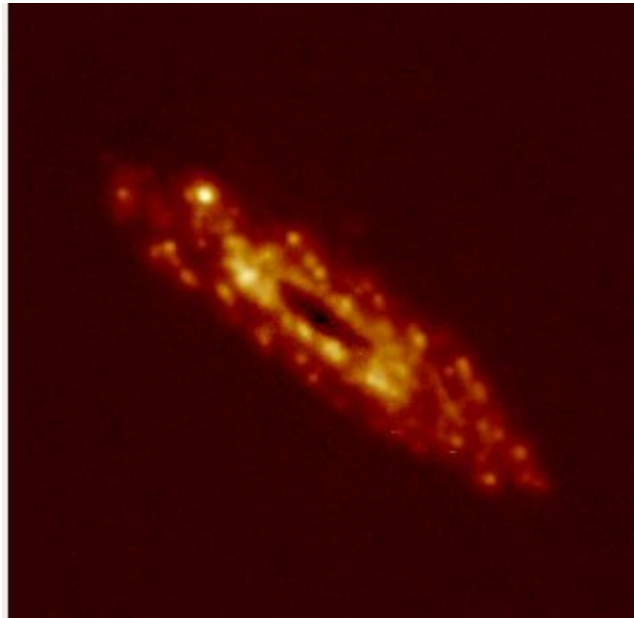
.69e+03

1.84e+03

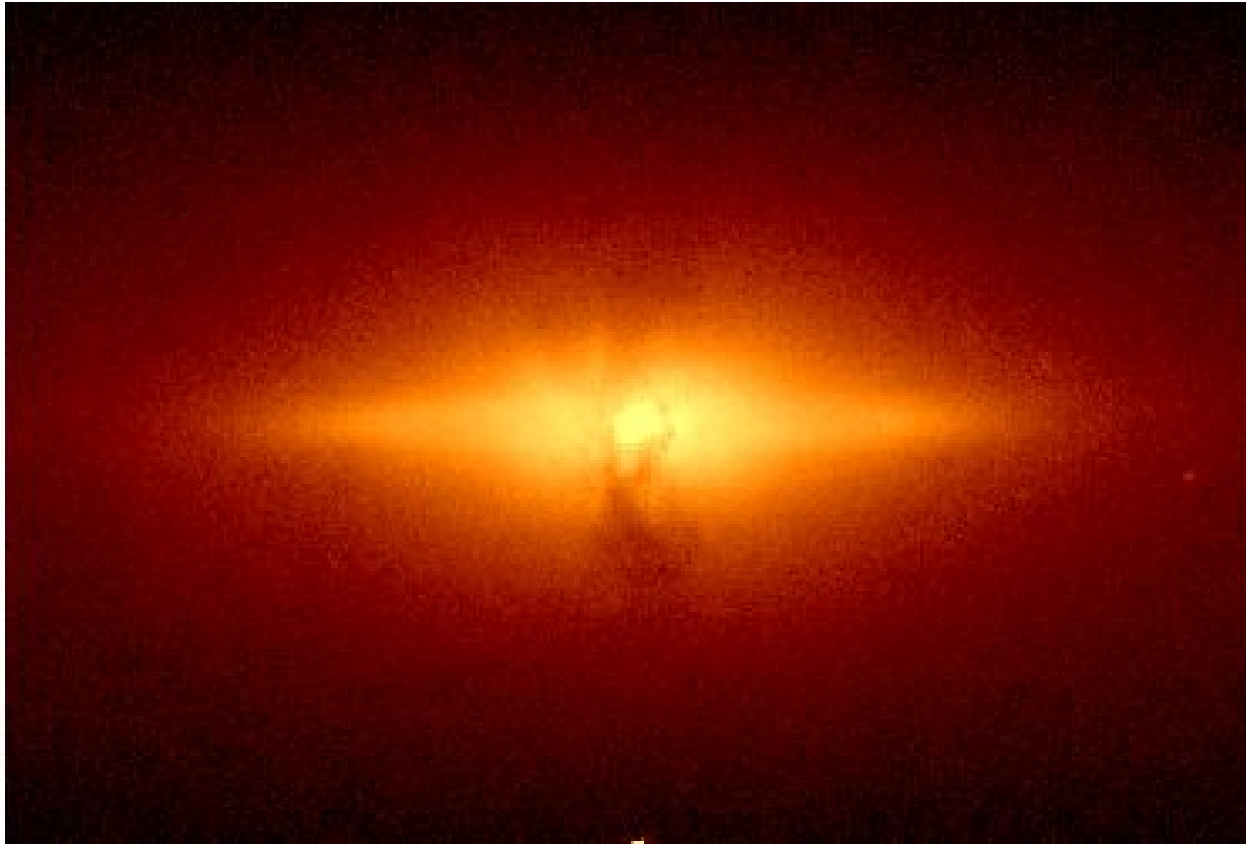
5.72e+04

6.11e+04 24

MUSE Data - H α

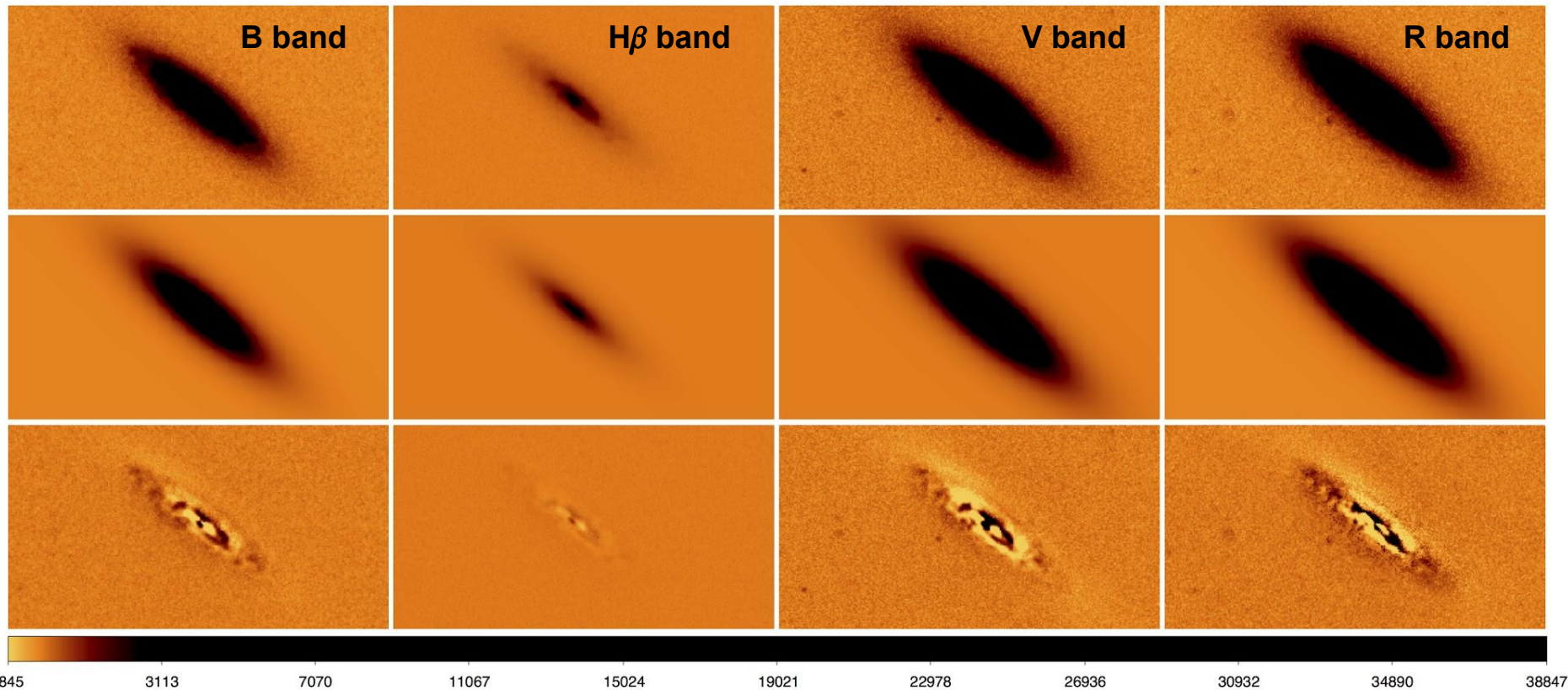


GALFITM



Two-dimensional parametric modelling of galaxy surface brightness profiles.

GALFITM - Decomposing IC 719



B	: sersic	:	(1031.91,	702.49)	3.76	40.27	1.16	0.28	50.60
H β	: sersic	:	(1020.83,	704.72)	5.74	40.19	1.21	0.28	50.60
V	: sersic	:	(1043.14,	701.23)	2.21	40.11	1.26	0.28	50.60
R	: sersic	:	(1046.46,	700.44)	1.93	39.95	1.35	0.28	50.60

x

y

mag
(w/ systematic
offset)

R_e

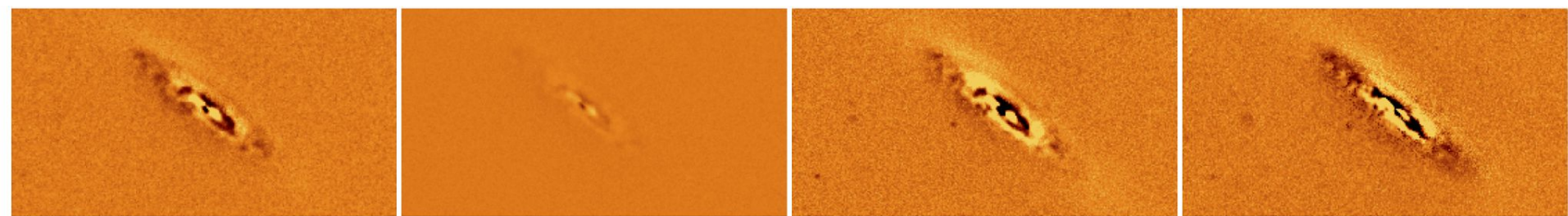
Sersic
ind.

Axis ratios

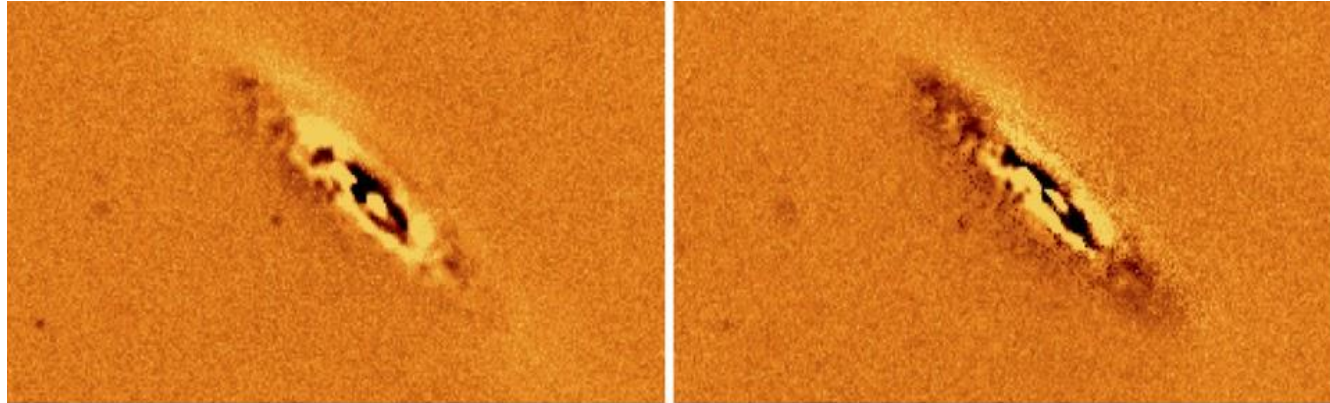
PA

Results

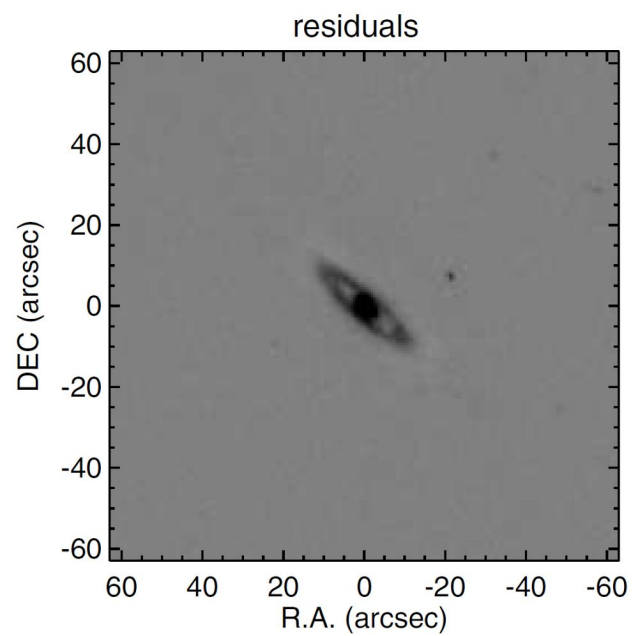
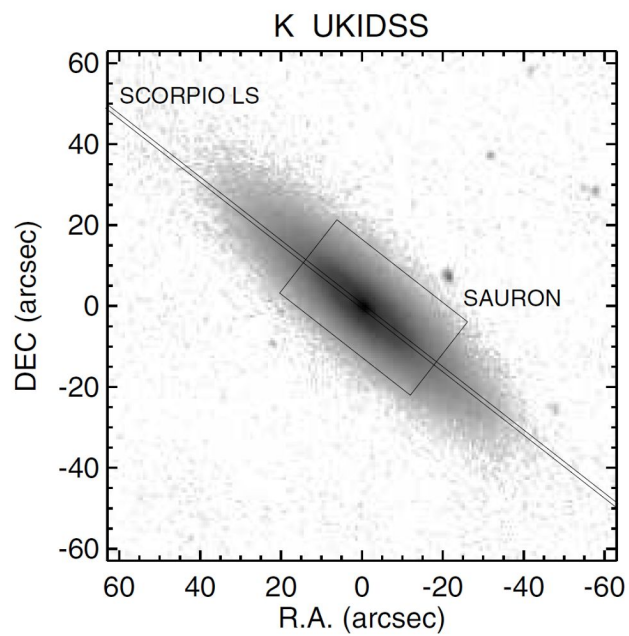
Residual structure => Evidences of recent stellar formation?
Gas accretion and/or merger event?

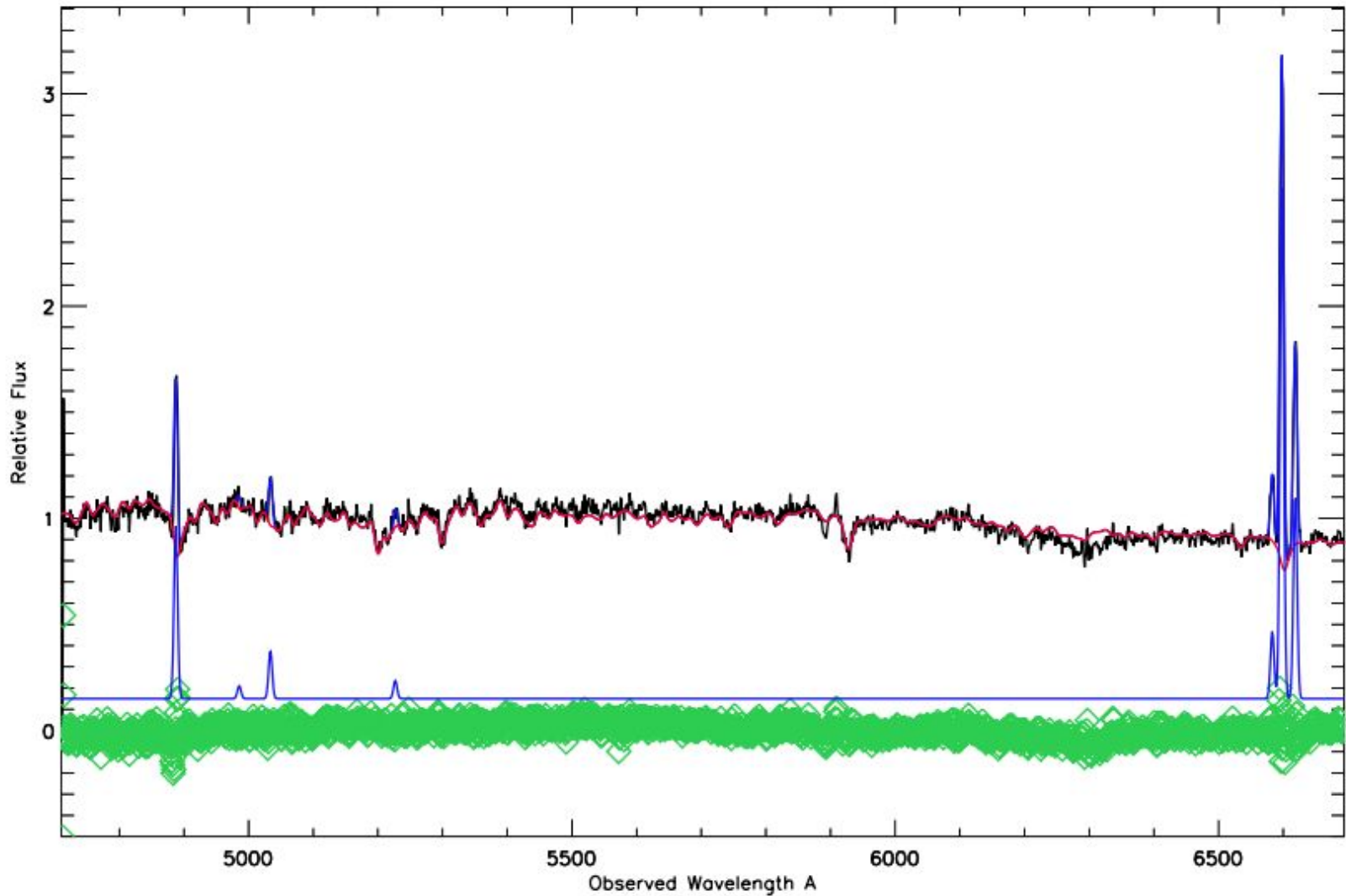


Results



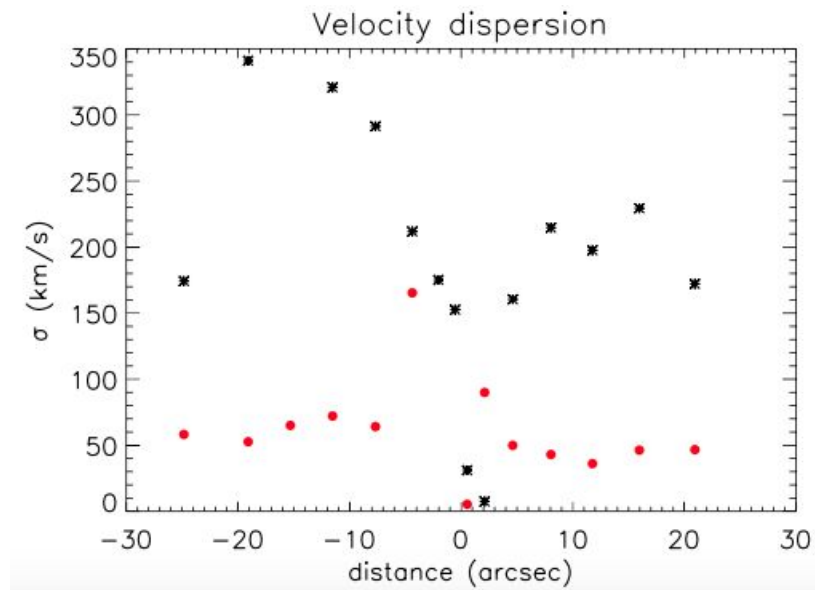
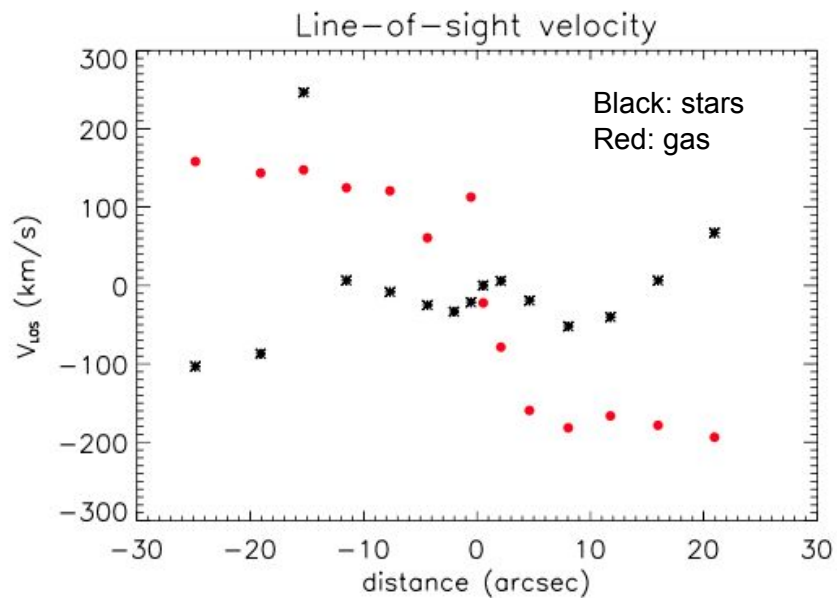
GALFITM



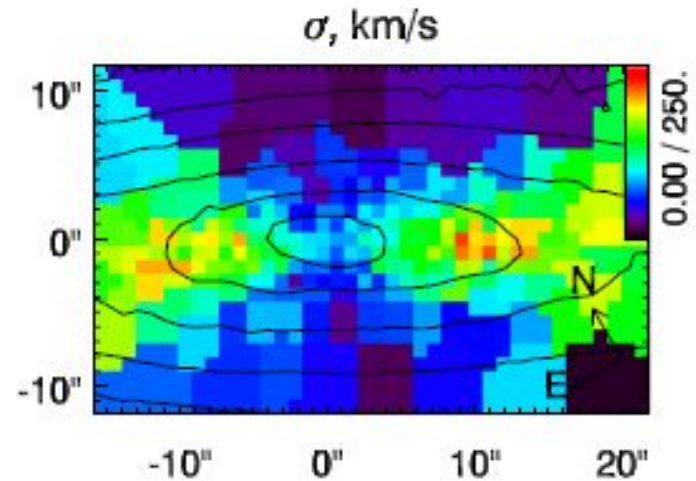
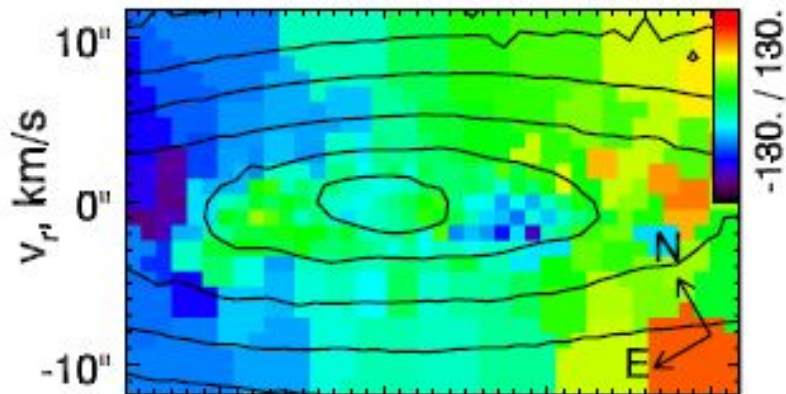
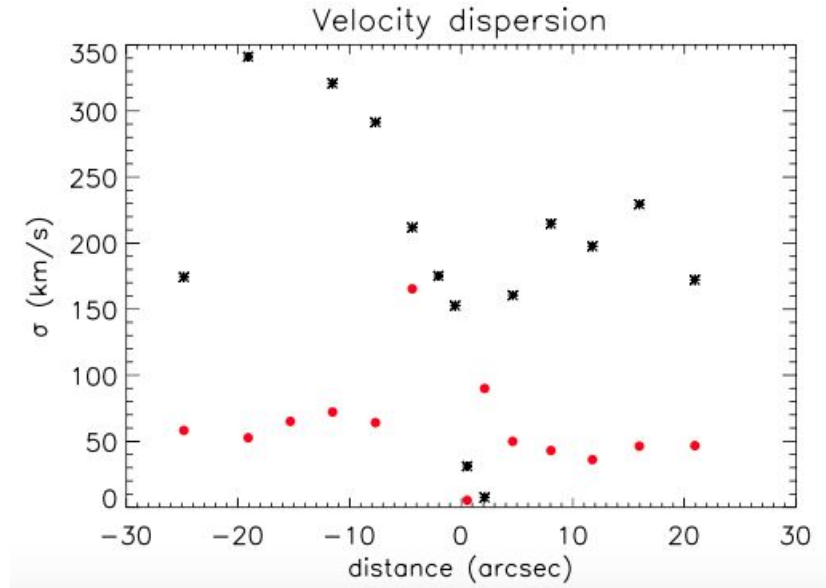
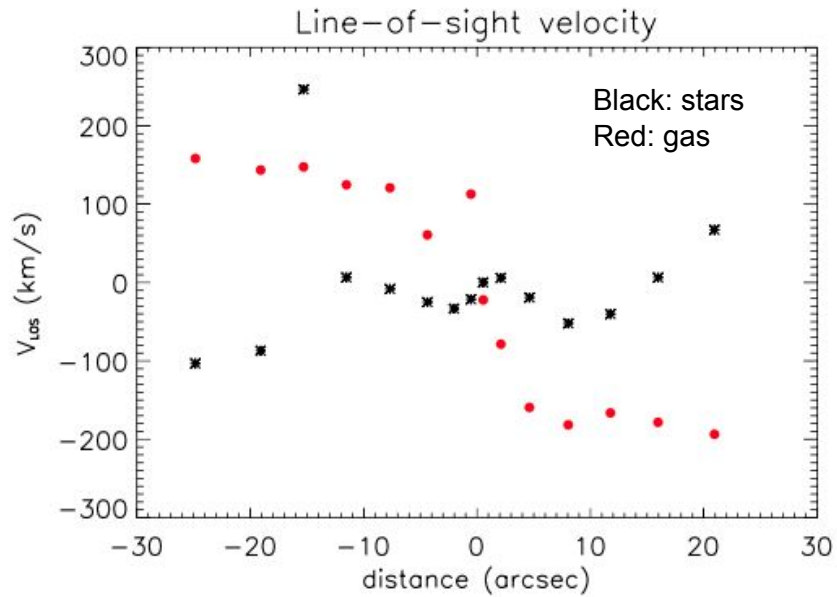


Stellar + gas components

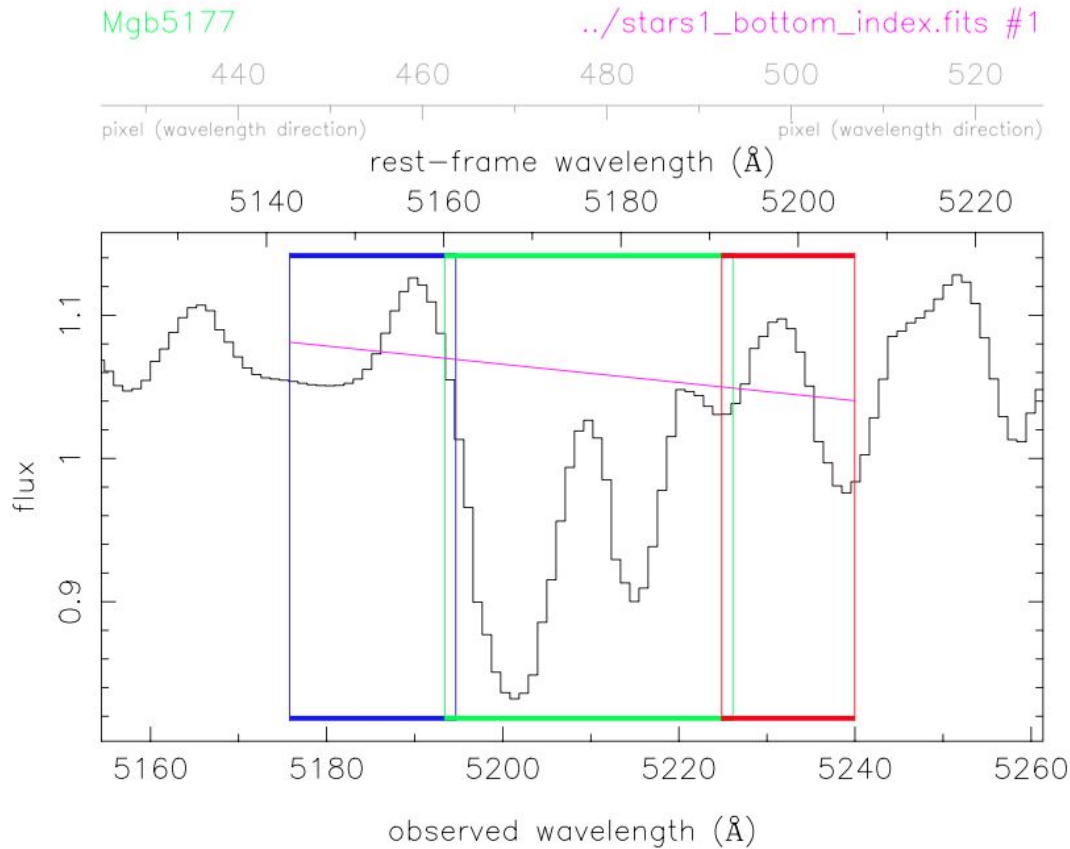
Radial velocities



Radial velocities



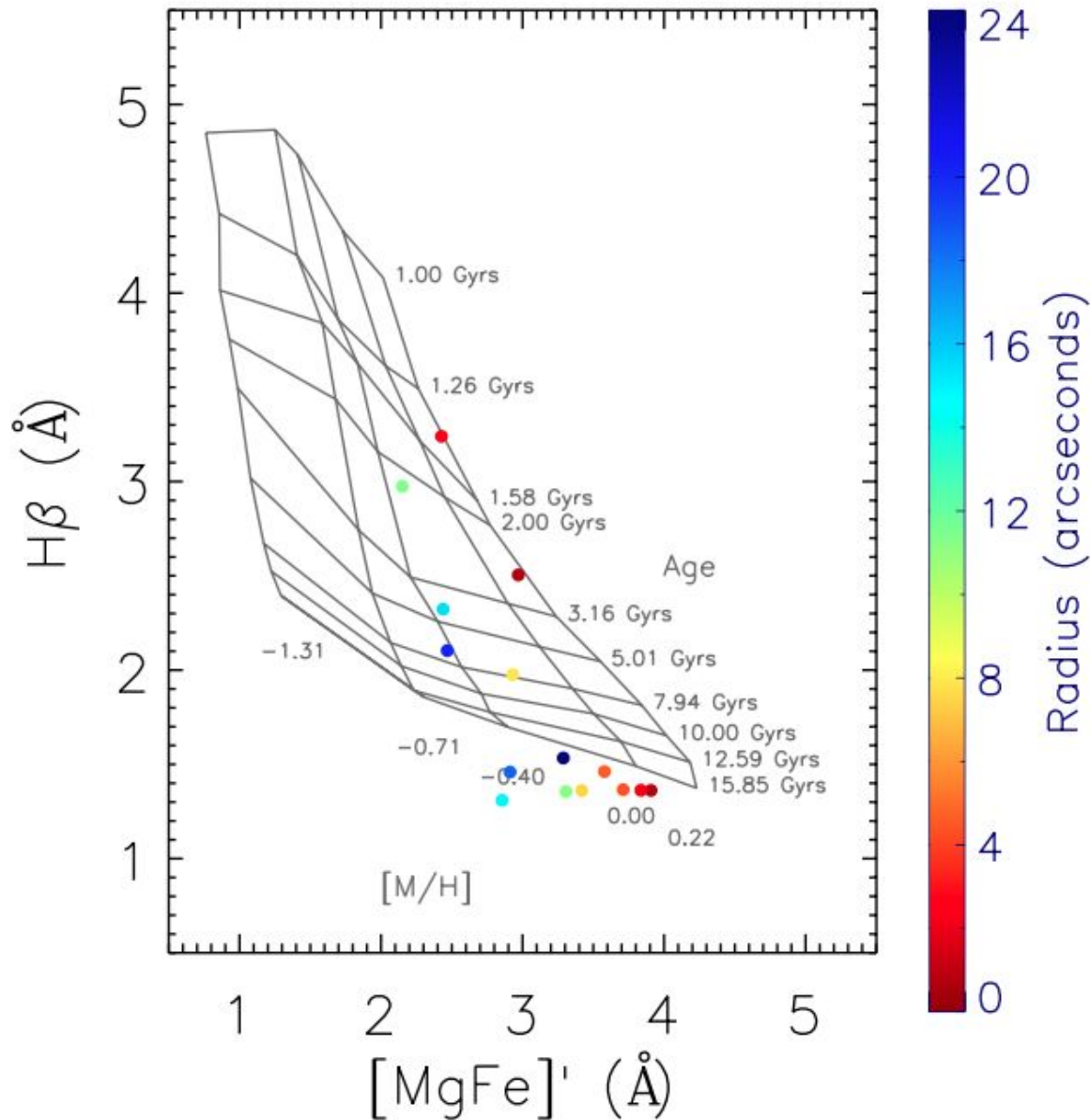
Lick indices



$$I_{SSP} = \Delta \left(1 - \frac{\sum_i F_L^i}{\sum_i F_C^i} \right)$$

Mg absorption

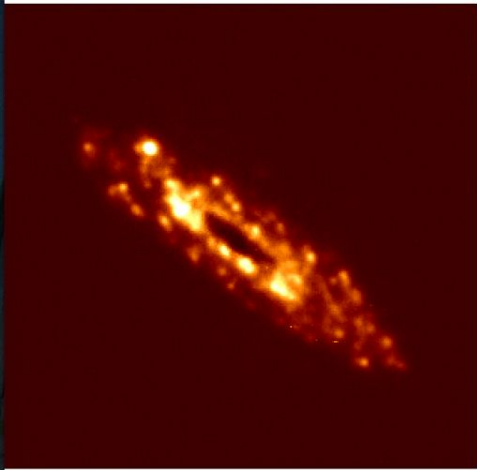
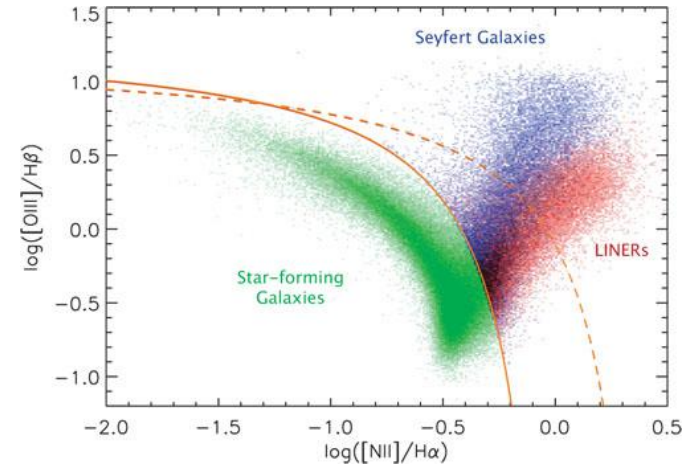
SSP (Simple Stellar Pop) models



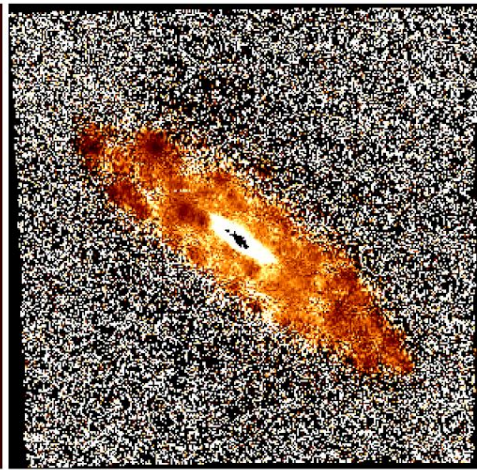
MUSE results



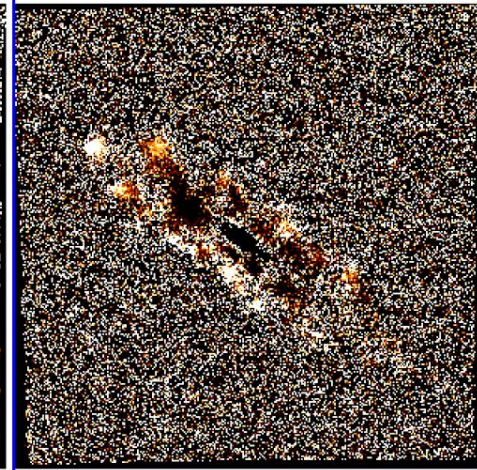
Proprietary
data



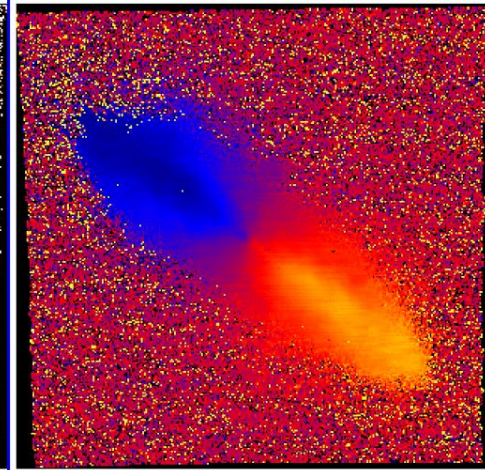
Ha flux



[NII]/Ha



[OIII]/Hb



Ha centroid velocity

Conclusions

Structure within the S0 galaxy

More than one stellar component in radial velocity

Need more resolution to resolve the components properly

Evidence of young age stellar population

pPXF gives consistent results with previous studies

What we could improve

Test the grisms in the day time

Add more grisms to try to improve the resolution

(Another telescope)

Bonus Track

Outside
GCN
IAUCs

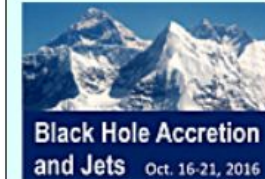
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ATELstream
ATel Community Site
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4 Mar 2016; 01:14 UT

This space for free for your conference.



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Classification of Gaia16agf as a pre-max Ia supernova

ATel #8754; *M. Dennefeld (IAP and UPMC), N. Elias-Rosa (INAF-Padova), E. Johnston and F. Selman (ESO), and the NEON school PhD/PostDoc students G. Couto (UFRGS-Porto Alegre), P. Longa-Pena (Univ. Antofagasta), P. Novais (LAG- Sao Paulo) and C. Ricci (PUC-Santiago)*
on 29 Feb 2016; 14:52 UT
Credential Certification: Michel Dennefeld (dennefel@iap.fr)

Subjects: Optical, Supernovae

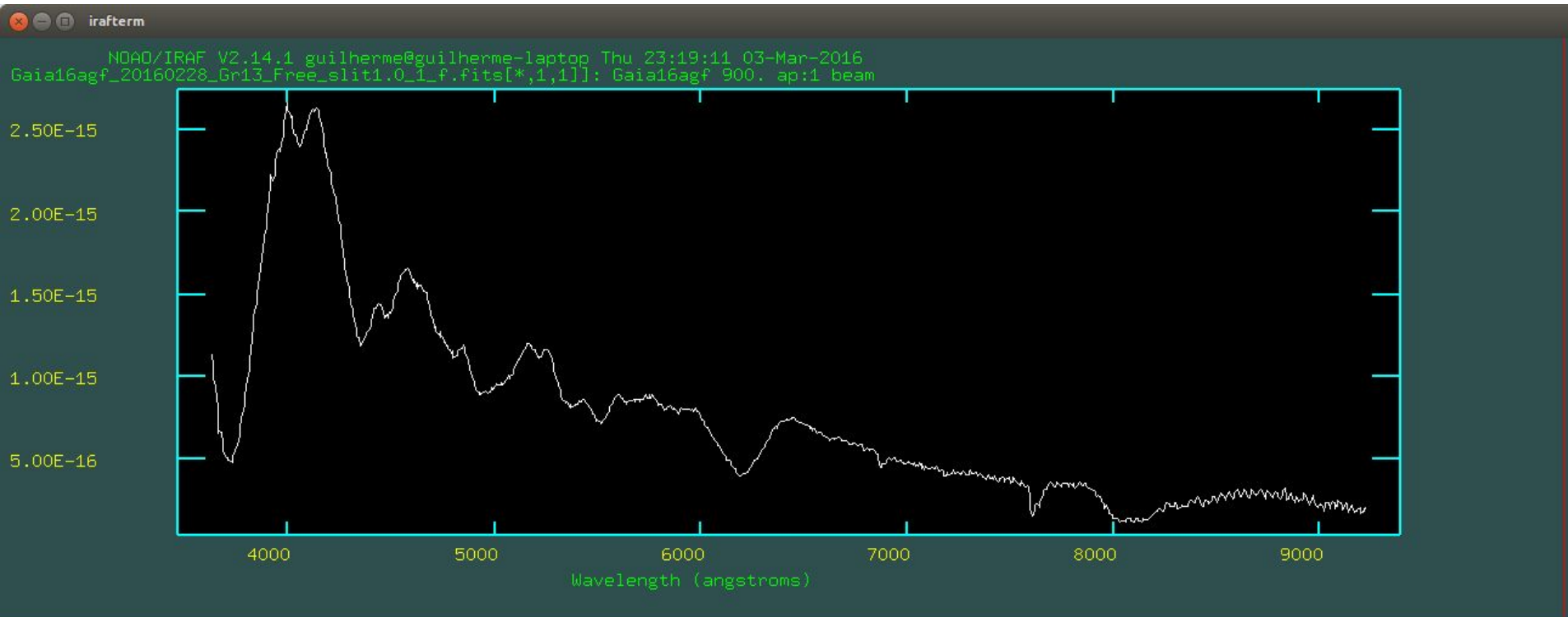


We report the classification of the SN candidate Gaia16agf (supplied by ESA Gaia, DPAC and the Photometric Science Alerts Team (<http://qsaweb.ast.cam.ac.uk/alerts>, detected on 2016 Feb. 27th, 06:41 UT). The observations were performed with the ESO New Technology Telescope at LaSilla on 2016 February 29th 02:38 UT, using EFOSC2 and Grism 13 (3985-9315, 18A resolution). The classification was done using GELATO (Harutyunyan et al., 2008, A&A, 488, 383). Gaia 16agf is a young type Ia Supernova, about 1 week before maximum light, at $z \sim 0.03$. From the SiII 6355 absorption, we derive an expansion velocity of 15600 km/s.

[[Telegram Index](#)]

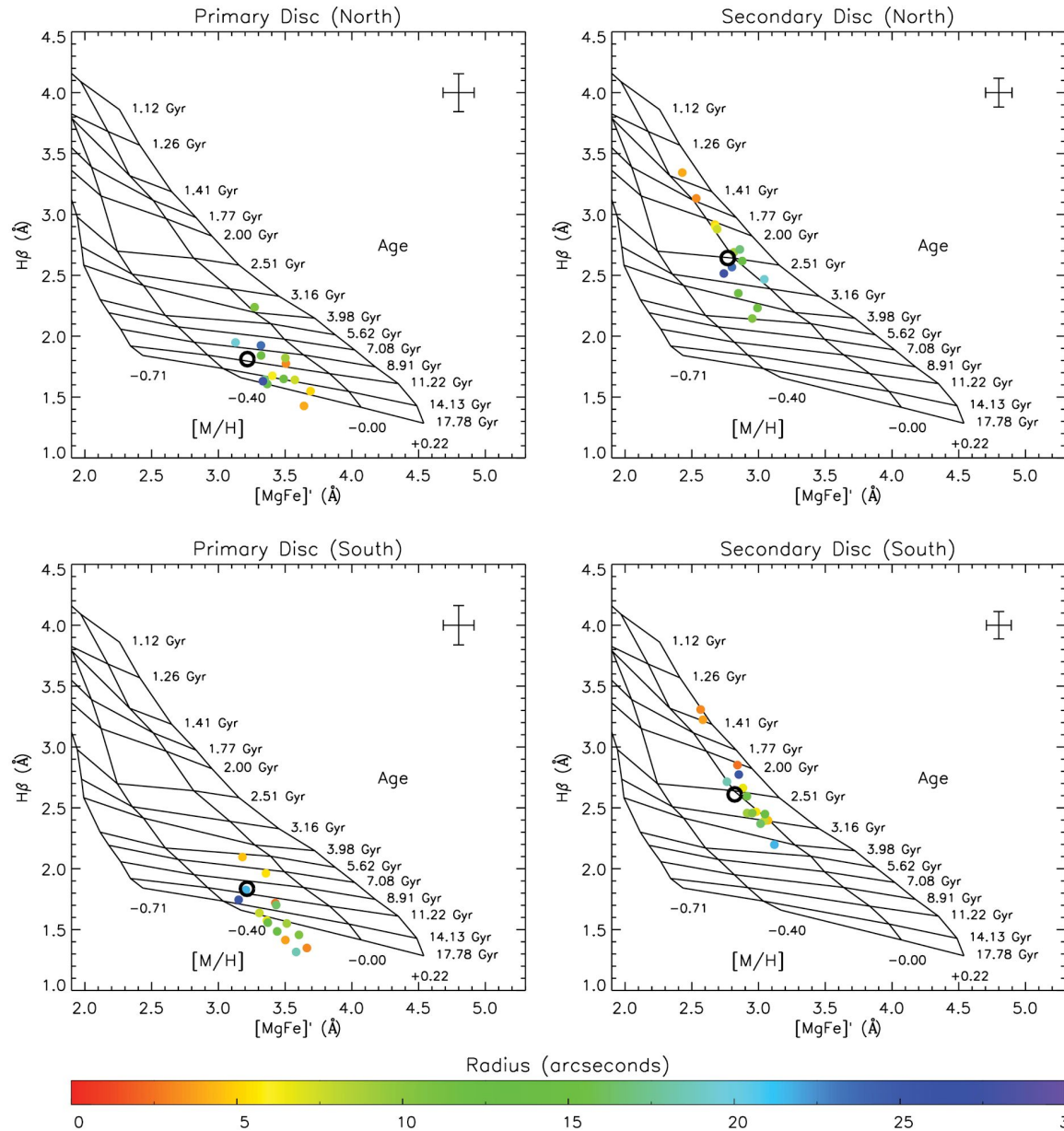
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Derek Fox, Editor dfox@astronomerstelegram.org
Mansi M. Kasliwal, Co-Editor mansi@astronomerstelegram.org

Type Ia Supernova



Expansion velocity ~ 16000 km/s

Lick indices and SSP models



NGC 4550

Johnston et al. 2013