

Visualisation and analysis of astronomical and Earth Observation data on the web browser

Yago Ascasibar & Fabrizio Giordano (UAM)

Space Weather Days for Spain
09/06/2026

1 Scientific motivation

2 AstroBrowser

Multiwavelength extragalactic astronomy

Thermal emission

- Stars
- Hot/warm/cold gas
- Dust

Non-thermal emission

- Supernovae
- Compact objects
- AGN
- Dark matter

Observations

- (Multiwavelength) photometry
- (Integral-field) spectroscopy
- Polarimetry
- Time domain

Multiwavelength extragalactic astronomy

Thermal emission

- Stars
- Hot/warm/cold gas
- Dust

Non-thermal emission

- Supernovae
- Compact objects
- AGN
- Dark matter

Observations

- (Multiwavelength) photometry
- (Integral-field) spectroscopy
- Polarimetry
- Time domain

Multiwavelength extragalactic astronomy

Thermal emission

- Stars
- Hot/warm/cold gas
- Dust

Non-thermal emission

- Supernovae
- Compact objects
- AGN
- Dark matter

Observations

- (Multiwavelength) photometry
- (Integral-field) spectroscopy
- Polarimetry
- Time domain

Multiwavelength extragalactic astronomy

Thermal emission

- Stars
- Hot/warm/cold gas
- Dust

Non-thermal emission

- Supernovae
- Compact objects
- AGN
- Dark matter

Observations

- (Multiwavelength) photometry
- (Integral-field) spectroscopy
- Polarimetry
- Time domain

Analysis workflow

Traditional

- Expert users
- Small samples
- Optimised pipelines
- Thoroughly supervised

Algorithmic

- Non-specialist users
- Large samples
- Standardised pipelines
- Semi-supervised

Analysis workflow

Traditional

- Expert users
- Small samples
- Optimised pipelines
- Thoroughly supervised

Algorithmic

- Non-specialist users
- Large samples
- Standardised pipelines
- Semi-supervised

Analysis workflow

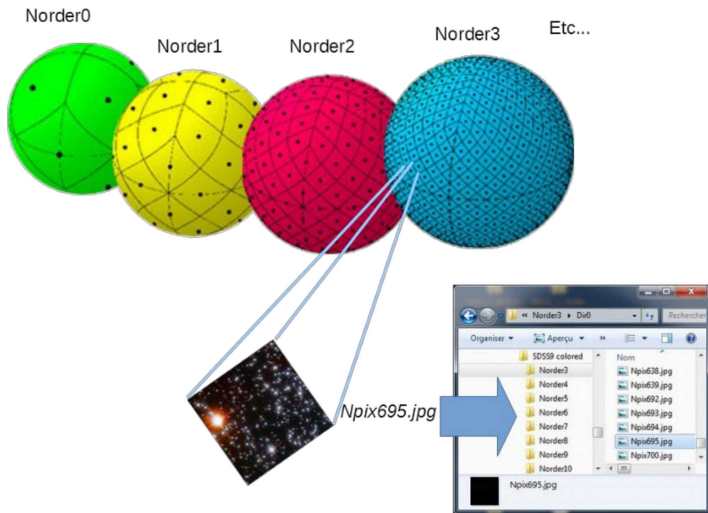
Traditional

- Expert users
- Small samples
- Optimised pipelines
- Thoroughly supervised

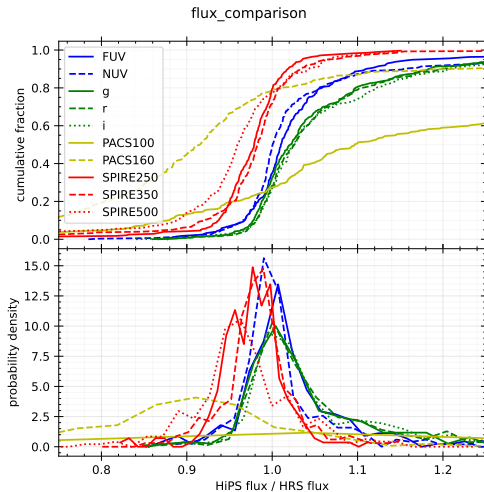
Algorithmic

- Non-specialist users
- Large samples
- Standardised pipelines
- Semi-supervised

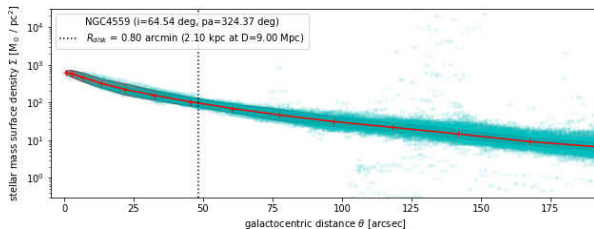
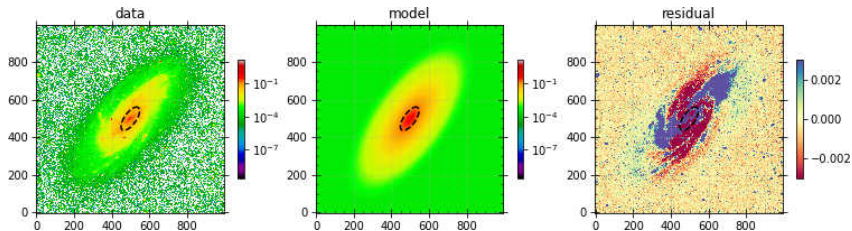
Hierarchical Progressive Survey (HiPS) standard



Aperture photometry



Radial profiles



<https://astrobrowser.ft.uam.es>