

Galaxy formation at the epoch of multi-object spectrographs on ELTs

Myriam Rodrigues
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'FIRST LIGHT' – SPECTROSCOPY OF THE MOST DISTANT GALAXIES

- Probing the epoch of reionisation
- Looking for the low-luminosity sources responsible for the reionisation
- Probing the physical properties of the 'first-light' galaxies

EVOLUTION OF LARGE-SCALE STRUCTURES

- Tomography of the IGM
- The large-scale distribution of galaxies at early epochs $z > 2$
- Studies of galaxy clusters

AGN/GALAXY CO-EVOLUTION & AGN FEEDBACK

- Probe massive outflows at the peak epoch of AGN and galaxy assembly
- How outflow properties correlate with other AGN/galaxy properties

MASS ASSEMBLY OF GALAXIES THROUGH COSMIC TIMES

- Spatially-resolved spectroscopy of high- z emission line galaxies
- The puzzling role of high- z dwarf galaxies in galaxy evolution
- Emission-line galaxies as a benchmark for the epoch of reionisation

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ELT-MOS White Paper: Science Overview & Requirements
Evans et al., ArXiv:1501.04726v1

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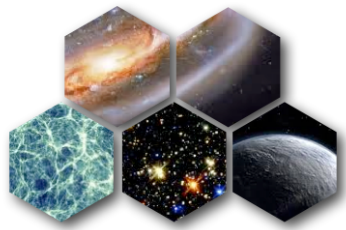


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see poster

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MOSAIC

Multi-Object Spectrograph for Astrophysics, IGM studies and Cosmology

Beginning of Phase A : 2016
Final design review : 2019/20

High Definition Mode (HDM)

IFU field of view	2.0 x 2.0 arcsec
Multiplex	10 IFUs
Spatial pixel size	75 mas
Ensquared Energy	> 25% EE
Spectral Resolution power	5000
λ coverage	0.8 - 1.8 μm

InterGalactic Medium (IGM)

IFU field of view	2.0 x 2.0 arcsec
Multiplex	10 IFUs
Spatial pixel size	0.3 arcsec
Spectral Resolution power	5000
λ coverage	0.4 - 1.0 μm

High Multiplex Mode (HMM)

On Sky aperture	0.9 arcsec
Multiplex	200
Spectral Resolution power	5000 & 15000
λ coverage	0.4 - 1.8 μm

Consortium

AIP, Amsterdam University, ATC, Durham University, Geneva University, GEPI, IAA, INAF, IRAP, LAGRANGE, LAM, LESIA, NOVA, ONERA, Oxford University, Porto University, RALspace, Sao Paulo University, Stockholm University, UCMadrid, Vienna University