

J-PAS: low-resolution ($R \sim 50$) spectroscopy over 8000 deg²

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& the J-PAS team

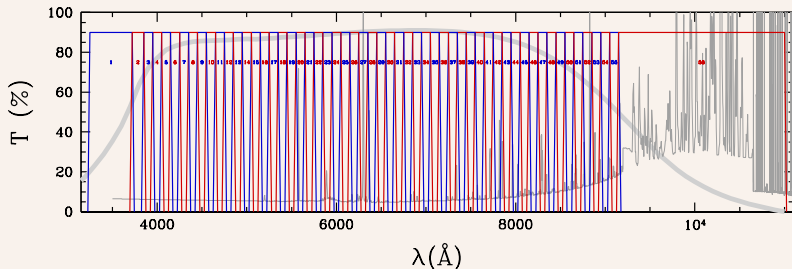


Centro de Estudio de Física del Cosmos de Aragón

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J-PAS: A next generation photometric survey

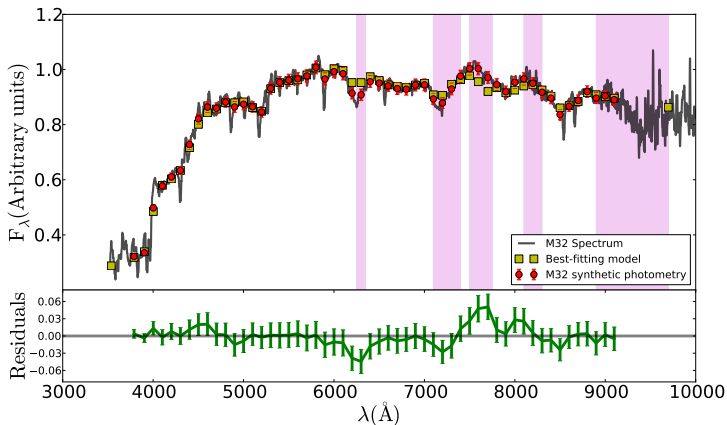
J-PAS : **J**avalambre - **P**hysics of the accelerated universe
Astrophysical **S**urvey (Benítez et al. 2014 [ArXiv:1403.5237])



J-PAS will map $\sim 8000 \text{ deg}^2$ of the northern sky with **54 narrow-band filters** ($\sim 14 \text{ nm}$) + 2 medium-bands at the blue and red ends.

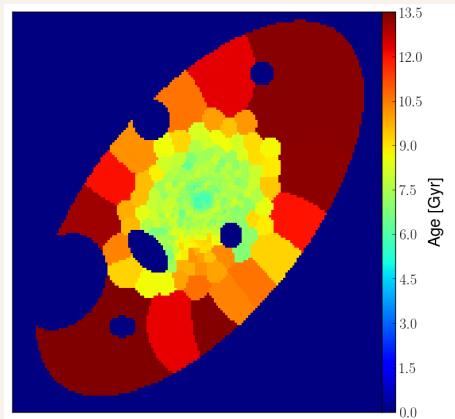
J-PAS (j-pas.org) will be carry out in the OAJ, a new astronomical facility located in Teruel, Spain.

J-PAS: low-resolution ($R \sim 50$) spectroscopy



J-PAS will provide low-resolution ($R \sim 50$) photo-spectra. Very accurate photometric redshifts with $\Delta z/(1+z) \sim 0.3\%$, cosmology, galaxy evolution, and **IFU (i.e., spatially resolved) science**.

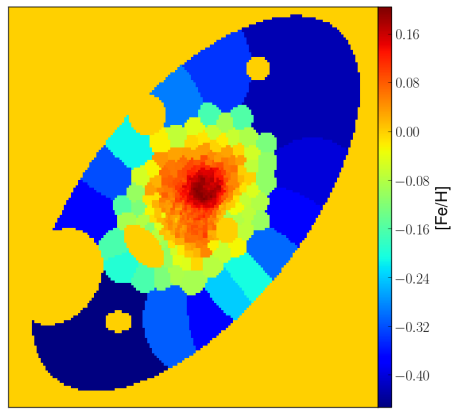
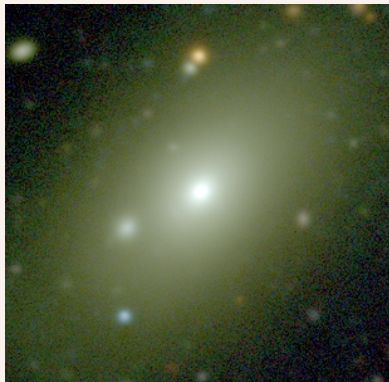
J-PAS: 2D stellar populations



BCG galaxy at $z = 0.075$ observed with medium-band photometry (ALHAMBRA survey, Moles+08; *only 20 filters in the optical*).

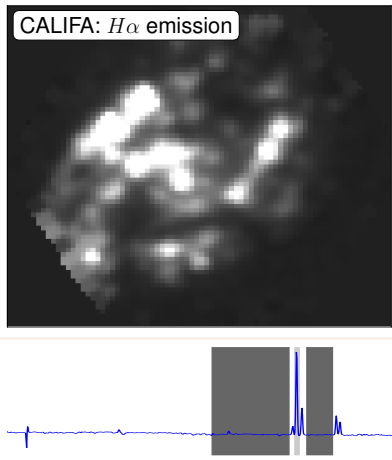
Both **age** and **metallicity** gradients are observed.

J-PAS: 2D stellar populations



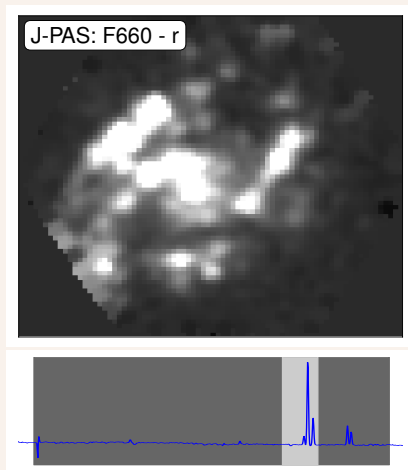
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J-PAS: 2D star formation rate



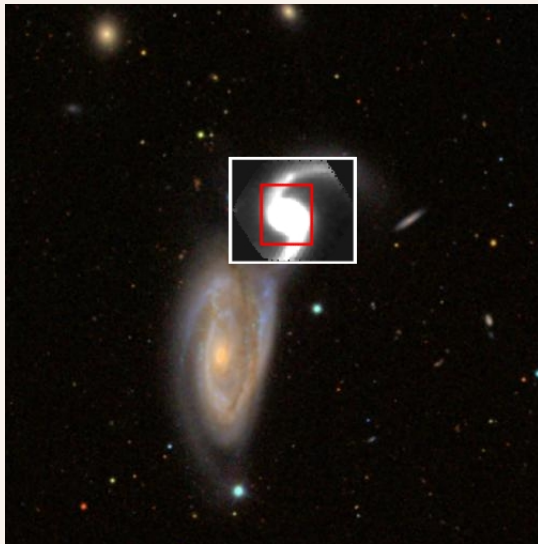
The star forming regions traced by emission lines, such as $H\alpha$ or $[OII]$, will be detected with J-PAS, and the star formation rate estimated.

J-PAS: 2D star formation rate



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J-PAS: Field-of-view and environment

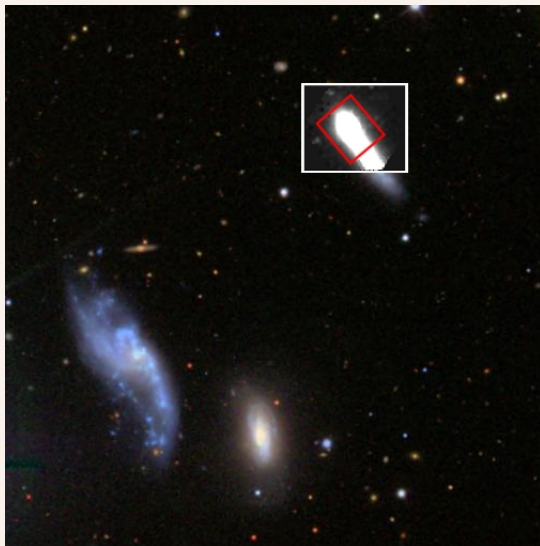


CALIFA
Sánchez+12



SAURON
instrument
Bacon+01

J-PAS: Field-of-view and environment



CALIFA
Sánchez+12



SAURON
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Summary

J-PAS as a low-resolution spectrograph

- J-PAS will provide low-resolution ($R \sim 50$) photo-spectra of a hundred million galaxies to $r \lesssim 23.5$ by 2022.
- J-PAS will complement high-resolution IFSs and permit the study of 2D stellar populations, star forming regions, and the environment of local Universe galaxies.
- J-PAS is a perfect reference for flux calibration of IFSs spectra.

J-PLUS and S-PLUS will survey the northern and the southern sky with 5 SDSS + 7 narrow-band filters (including $H\alpha$ and [OII]) in the next four years.

Thank you for your attention.
Let'schnitzel!!

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