



Contribution ID: 55

Type: Poster

Resolved spectral attenuation curves in dusty ETGs

Monday, 11 June 2018 10:48 (1 minute)

The properties of a particular dust mix are encoded in the extinction curve, which is notoriously hard to measure. In all but a few external galaxies, it is not possible to resolve individual stars and match them to local, unreddened stars of the same spectral type. Most measurements for external galaxies are thus global attenuation curves, which hold a convolution with the line-of-sight geometry, and are usually sampled only in a few bands, relative to the V band.

Using high-quality MUSE integral-field observations, we developed a technique to directly measure the attenuation curve in dust-lane early-type galaxies (ETGs). I will present, for the first time, these spectrally resolved optical attenuation curves, and how their strength and slope changes within the dust lane of two ETGs. Finally, using 3D radiative transfer simulations, I will show how we start break the degeneracy between geometry and dust mix to obtain detailed information about the extinction curve and the distribution of dust in external galaxies.

Consider for a poster?

Yes

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Session Classification: Poster Presentations

Track Classification: What is dust?