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## DustKING: revealing the dust attenuation in NGC628

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The shape of the dust attenuation law is not expected to be uniform between galaxies, nor within a galaxy. The DustKING project sets to study these variations in nearby galaxies of the KINGFISH sample. To this aim, we used the CIGALE SED fitting code to fit models with varying dust extinction properties to a set of multi-wavelength data. Particularly important for our goal are UV images taken with the SWIFT space telescope, whose filters uniquely cover the curious bump feature in the attenuation curve at 2175 Å. This enables us to characterise the strength of this bump and the UV slope of the attenuation curve.

In this talk, I present the results for the spiral galaxy NGC628 which clearly illustrate the potential of the SWIFT data in obtaining the characteristics of the attenuation curve on spatially resolved scales. From UV colours and from SED modelling, we found that the attenuation law of this galaxy is characterised by a relatively small bump and a shallower UV slope compared to the Milky Way. Also, we noticed variations of the dust attenuation properties on different scales within the galaxy. I will walk you through some intriguing trends between dust attenuation law shapes and other galaxy properties, and discuss the impact of our results.

### Consider for a poster?

Yes

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