

# Dust Structure and Star-formation in Nearby Edge-on Galaxies



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## Abstract

Part of the edge-on perspective of a spiral galaxy is the thin dark band due to interstellar dust absorption. The cumulative effect of interstellar matter clouds in the disk dim the stellar light enough to result in the dark band mid-plane. The presence and characteristics of this morphological feature are telling of the underlying physics of the disk itself. The canonical view is that in massive disks, the vertical balance between gravitational pull and turbulence in the ISM results in a thin dust lane while in less massive galaxies the dust clouds are distributed throughout the height of the stellar disk.

With the launch of the Herschel Space Observatory, it is now possible to resolve the height of the dust disk in nearby spirals. Several massive edge-on spirals are targeted by legacy programs, specifically by the HEROES project and I present my complementary survey of low-mass edge-on spirals, NHEMESES. The first result was on NGC 4244 with 13 more galaxies now observed. Similar to recent results on massive galaxies, star-formation heating a fraction of the clumped dust structures is needed to explain the spectral energy distribution of NGC 4244.

