

ASTROPHYSICS SEMINAR

Thursday, 20 March 2014 at 11:00

Determining the gas and dust
structure of the gapped
protoplanetary disk HD 135344B
(SAO 206462)

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Abstract. Transition disks are protoplanetary disks with an inner dust gap. The origin of these cavities is currently under debate. One exciting possibility is that they might be related to planet formation. HD 135344B is a F4V star with a transition disk that has been observed at multiple wavelengths with a diversity of techniques (imaging, interferometry, spectroscopy) tracing its dust and gas contents. The disk of HD 135344B has the remarkable property of displaying emission of warm CO gas at 4.7 micron inside the 45 AU dust gap imaged in the sub-mm. HD 135344B is also an object in which Herschel has detected [O] emission at 63 micron. In this talk, I will discuss how the simultaneous radiative transfer modeling of multi-wavelength/multi-instrument gas and dust observations made possible to constrain the structure of the transition disk around HD 135344B, and the connection that this structure might have with planet formation.

Additional Information

The seminars are given in the ISDC "Pavillon" building
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