

CONTROL ID: 2567148

TITLE: Properties of resonant trans-Neptunian objects based on Herschel Space Observatory data

ABSTRACT BODY:

Abstract (2,250 Maximum Characters): The goal of our work is to characterise the physical characteristics of resonant, detached and scattered disk objects in the trans-Neptunian region, observed in the framework of the "TNOs are Cool!" Herschel Open Time Key Program. Based on thermal emission measurements with the Herschel/PACS and Spitzer/MIPS instruments we were able to determine size, albedo, and surface thermal properties for 23 objects using radiometric modelling techniques. This is the first analysis in which the physical properties of objects in the outer resonances are determined for a larger sample. In addition to the results for individual objects, we have compared these characteristic with the bulk properties of other populations of the trans-Neptunian region. The newly analysed objects show e.g. a large variety of beaming factors, indicating diverse surfaces, and in general they follow the albedo-colour clustering identified earlier for Kuiper belt objects and Centaurs, further strengthening the evidence for a compositional discontinuity in the young solar system.

CURRENT * CATEGORY: Centaurs and Kuiper Belt Objects

CURRENT : None

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