Modelling IR Light Scattering of Interstellar Dust

<u>Mika Saajasto</u> Department of Geophysics and Astronomy, University of Helsinki, P.O.Box 64, FI-00014 University of Helsinki, Finland email: mika.saajasto@helsinki.fi

Although most of the mass of our galaxy is concentrated in stars the interstellar space is not devoid of matter. Interstellar matter is roughly ten percents of the total mass of our galaxy, most of which is concentraded in the galactic plane and spiral arms. Most of this matter is composed of gases like hydrogen and helium, only one percent of the matter is in dust, formed of solids like silicates and carbon based compounds.

Interstellar dust might be only a small part of our galaxy but its precense in interstellar medium has strong effectson star formation and even on the long scale evolution of the galaxy. Thus understanding the physical and chemical composition of dust plays a major role in modern astrophysics. Despite extensive research, the exact properties of interstellar dust and the evolution of dust in interstellar medium are not fully understood.

In our ongoing study we have used infrared light scattering simulations on several different dust models in an attempt to discern the properties of dust grains. In this poster we present a brief overview of our simulations and some of the results we have obtained.