

## Growth and porosity evolution of dust aggregates in protoplanetary disks: Effects on the disk opacity

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Porosity evolution of dust aggregates plays a decisive role in their collisional growth in protoplanetary disks. In this presentation, we show how the evolution of aggregate porosities affects the appearance of the disks at millimeter wavelengths on the basis of our recent numerical simulations of aggregates' growth and porosity evolution. We find that our new porous aggregate model predicts a monotonic decrease in the opacity index beta toward the central stars, in marked contrast to previous compact aggregate models predicting the emergence of the peak of beta at several tens of AU. This difference allows us to test the porosity models by millimeter observations of protoplanetary disks.

Keywords: dust, coagulation, porosity, opacity, protoplanetary disk