Dust formation around AGNs

We study dust formation, growth and survival of dust in magnetic-field driven winds flowing out of the accretion disks in AGNs.

Where seeds of dust grains can grow from gas phase reactions

Dust production rate ~ 0.09 $M_{\text{sun}}/\text{yr}$

Dust/gas (mass) ~ $10^{-4} M_{\text{sun}}$

primary dust types: silicates, SiO$_2$

We are working on the optical depths as a function of the viewing angle

Ionized gas
No dust

dusty torus(?)

Ionized gas
No dust

Konigl & Kartje 1994