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(Sub-)millimeter optical constants of silicates and water ice

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We provide new temperature-dependent optical constants of silicate glasses, silicate minerals, and crystalline and amorphous water ice, in the sub-millimeter spectral range, for silicate glasses up to a wavelength of 4 mm. We compare these optical constants to literature data, such as the "astronomical silicate" and commonly used extrapolations of the water-ice opacity. We discuss physical reasons of the strong temperature dependence of the absorptivity seen in the data, and consequences for the contribution of these materials to the sub-millimeter emission of cosmic dust.

Consider for a poster?

Yes

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