

Infrared Polarization of AGB Stars

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Many AGB stars including radio luminous OH/IR stars show significant infrared polarization. Only a small portion of the infrared polarization can be attributed to interstellar polarization, and the intrinsic polarization has the significant effect. Conventional models for the dust shells around AGB stars have had a simple spherical geometry which does not produce any polarization. The observed polarization can be explained by aspherical geometry like a disk shape. AGB stars in binary system may easily have a dust disk. In this work, we have made a the aspherical dust envelope models around AGB stars with disk geometry which calculate the outgoing model energy distributions. We explore the possibility of the relationship between the polarization and dust envelope geometry.