

Modelling ϵ Aurigae Without Solid Particles

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Three components can be expected to contribute to the emission of ϵ Aurigae. There is a primary F star. There is an opaque disk which occults it, and there is a gas stream which is observed to produce absorption lines. Evidence that the disk is not responsible for the gas stream lines comes both from the radial velocities, which are too small, and from the IR energy distribution out of eclipse, which shows free-free emission that would produce inadequate optical depth in electron scattering. The color temperature of the IR excess can give misleading indications of low temperature material. Free-free emission at 10^4 °K between 10 and 20μ has a color temperature of 350°K. We discuss our attempts to mold the system.