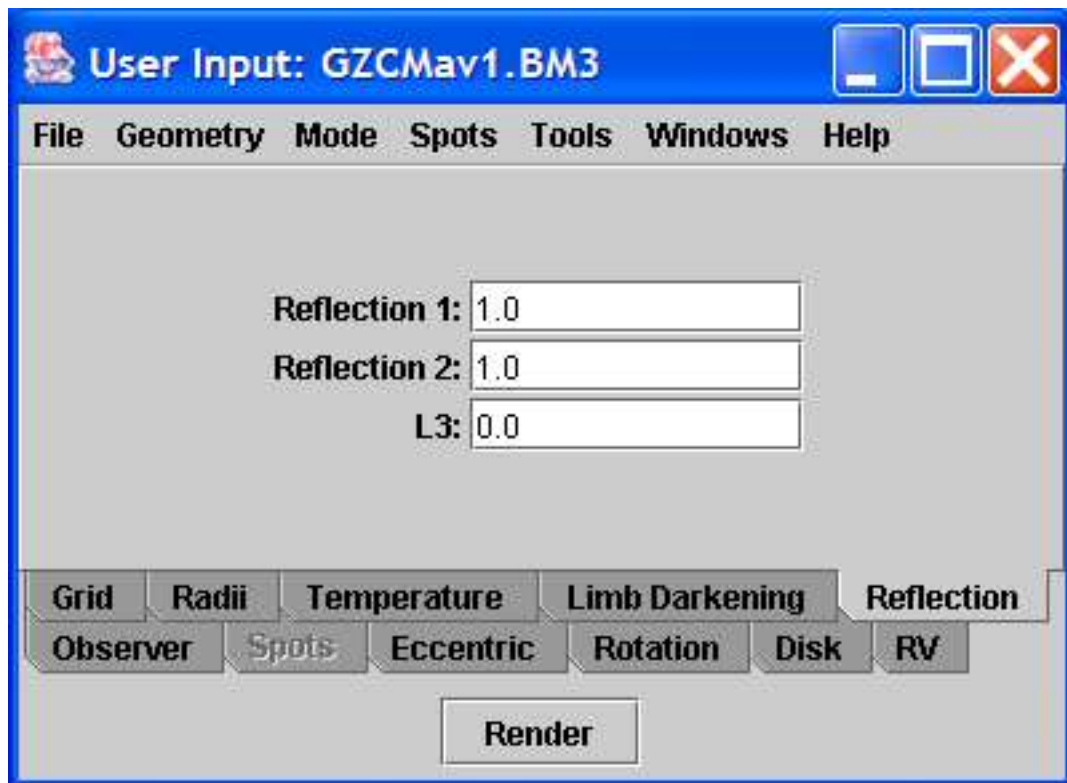# Reflection Effect

Reflection and **Third Light** inputs

When the radiation from one star strikes the surface of the other, its energy will heat up the receiving surface and, if the star is mostly radiative, re-radiate the energy like a mirror. The bolometric albedo (sometimes called the reflection coefficient) is the percentage of incident radiation that is re-radiated by the companion star. For radiative stars the coefficient is assumed to be 1.00. Rucinski (1969) showed that for convective stars the albedo will be approximately 0.50 because surface convection will carry away some of the energy to re-radiate it from regions other than where it was incident. Thus for stars whose temperatures are less than 7200 °K this coefficient should be set to 0.50.

Third Light

This wavelength dependent parameter takes into account any contamination in the data due to sources other than the binary stars themselves. This can be a third star that is part of the binary or even a field star that could not be excluded from the diaphragm when observing at the telescope because of its coincidental proximity to the binary. Third light is in the same units as the input or output flux and is *not* a luminosity fraction like L_1 and L_2.