

TATA INSTITUTE OF FUNDAMENTAL RESEARCH
DEPARTMENT OF ASTRONOMY & ASTROPHYSICS

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Title : Effect of Coriolis force on the shapes of rotating stars
and stars in binary systems

Day, Date & Time : Tuesday, 23 June, 2009 at 16.00 hrs

Venue : Lecture Theatre (AG-66)

Abstract

In this study an attempt has been made to determine the effect of Coriolis force on the shapes of Roche equipotential surface of rotating stars and stars in binary systems. Equation of Roche equipotential surface have been obtained for rotating and binary stars which take into account the effects of Coriolis force besides the centrifugal and gravitational forces. Shapes of Roche equipotential and values of Roche limits are obtained for different values of angular velocity of rotation for rotating stars and for different values of mass ratios for the binary stars. The computed results have been compared with the corresponding results in which the effect of Coriolis force has not been considered and conclusions drawn.

