

Seminarium Astrofizyczne

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Influence of the gravitational darkening effect on neutron stars spectra

A distorted star, either due to centrifugal forces caused by rotation or by tidal forces from a secondary star in a close binary system, radiates away radiative energy in a non-symmetric way and exhibits variations of the radiation power over its surface. Consequently, the effective temperature on the stellar surface is not uniform. This effect was recognized by Swedish astronomer, Hugo von Zeipel in 1924. From that time, the gravitational darkening effect was studied for different aspects and for different types of objects. In my talk I will present our model atmospheres of hot neutron stars. Our model includes many important effects, and now the gravitational darkening effect was added. Our study shows that this effect strongly modify outgoing spectra and it should be included in realistic model atmospheres.

Serdecznie zapraszam,
Agnieszka Majczyna