Contribution ID: **37**   Type: **Talk/Seminar**

Modeling General- relativistic disk in OJ 287

Tuesday 24 September 2019 16:00 (20 minutes)

We have modelled the accretion disk around the primary black hole in the binary black hole system OJ 287 as a self-gravitating, stationary torus of barotropic matter in Keplerian motion. Using a consistently general-relativistic approach, we found solutions that satisfy either geometric requirements on the disk or the requirements on its mass density
found by Lehto, Valtonen, and their co-workers. It seems that the most important observable features of OJ 287 may be consistent with the model based on the Bondi-Hoyle-Lyttleton transit of the secondary black hole through the disk. This talk is based on paper: W. Dyba, P. Mach and E. Malec, MNRAS 486, 3118-3123 (2019).

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Session Classification: Parallel Sessions

Track Classification: Parallel Sessions