



ID de Contribution: 44

Type: **Oral presentation**

## **Statistical estimation of the stellar binarity rate using Gaia, in the scope of a microlensing search.**

*mercredi 10 février 2021 17:00 (15 minutes)*

Gravitational microlensing imposes constraints on the massive compact object abundance within the Galactic halo. To estimate the effectiveness of microlensing search analysis, it is necessary to know the number of stars surveyed. However an identified source in the catalogue can be composed of several stars that could not be separated by the instrument (blending). These stars may be accidentally close along the line of sight or they may be physically bounded, as in the case of binaries.

I analyzed the *Gaia* EDR3 data in a purely statistical way using stars between 50 and 500pc to estimate the stellar binarity rate and evaluate its impact on a microlensing search.

### **Field**

Solar & Stellar Physics

### **Day constraints**

**Auteur principal:** BLAINEAU, Tristan (LAL)

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**Classification de Session:** Talk

**Classification de thématique:** Astrophysics