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Variable stars in Gaia Data Release 3 (Invited)

Tuesday, 20 September 2022 11:40 (30 minutes)

Pulsating variable stars have been used for a long time both as fundamental distance indicators and as stellar population tracers. But, thanks to the availability of additional observables such as periods and amplitudes, they also represent an independent check for the stellar evolution theory. Also, non-intrinsic variables, like binaries, rotational etc. provide important constraints to evolutionary models.

In this context, the contribution of the recent Gaia mission data release 3 (DR3) represents an impressive step forward whose outcomes will be valuable for many years to come.

In this talk, I review the main properties of the variable stars in DR3 which are most relevant for the stellar evolutionary studies, focusing in particular on the pulsating stars such as RR Lyrae, Cepheids and main-sequence oscillators.

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Session Classification: Overview on Gaia data/products and their use