**ID 280**

**Tipo de Comunicación**: Oral

**Sesión Científica:** La via lactea y sus componentes

**Titulo:** A setup for Gaia-DR1: The star formation history of our thin disc environment

**Nombre (Autor que presenta):** Francesca

**Apellidos (Autor que presenta):** Figueras

**Apellidos y nombre de los autores:** Núria Miret, Roger Mor, Mercè Romero-Gómez

**Resumen:**

The first Gaia Data Release (Gaia-DR1, September 2016) primes the pump and paves the way for a new golden age of the galactic astronomy. We expect Gaia-DR1 will provide us new parallaxes and proper motions for about two million well-behaved Tycho-2 stars. This TGAS (Tycho-Gaia Astrometric Solution) catalogue is being obtained using the first year of Gaia data and Tycho positions as priors. Using both, the astrometric accuracy expected in TGAS and the Besançon Galaxy Model, we quantify and characterize this new 5D (statistically robust) snap-shot of the solar neighborhood. We plan to discuss how long standing issues such as the detection of young local associations, the Gould Belt or the galactic warp kinematics will be seen by TGAS. Furthermore, we will use test particle simulations in realistic galactic potentials to evaluate the present capabilities to trace back on time the star formation history of our thin disc environment.