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### The EUSO@TurLab project

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The TurLab facility is a laboratory, equipped with a rotating tank, located at the Physics Department of the University of Torino. It consists of a 5 m diameter tank, which is used for fluid-dynamics studies. The system has been built mainly to study problems where system rotation plays a key role in the fluid behaviour such as in atmospheric and oceanic flows at different scales.

The tank can be filled with different fluids of variable density, which enables studies in layered conditions such as sea waves. The tank can be also used to simulate the terrestrial surface with the optical characteristics of different environments such as snow, grass, ocean, land, fogs and clouds. The tank is located in an extremely dark place so that the light intensity can be controlled artificially.

Currently the TurLab facility is also used to perform experiments related to the observation of UHECRs from space using the fluorescence technique, as in the case of the JEM-EUSO mission, where the diffuse night brightness and artificial light sources can vary significantly in time and space inside the field of view of the telescope.

The ongoing activity at the TurLab facility in the framework of the JEM-EUSO mission (EUSO@TurLab) will be presented.

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