

## **SPEED: Short period and episodic Earth rotation determinations**

The primary objectives of project SPEED are to observe high-quality Earth rotation parameter (ERP) series over at least three years with a time resolution of one hour or less derived from various modern geodetic techniques, namely GNSS (GPS+GLONASS), VLBI, and ring laser gyroscopes, and to provide a concise interpretation of these series. The investigations will concentrate on an almost complete modeling of atmospheric and oceanic phenomena, which are the most likely source of short period variations of Earth rotation with periods of few days down to few hours. Because of the unprecedented resolution of the observed ERP time series and the detailed modeling of atmospheric and oceanic excitation based on geophysical data quasi-periodic, a-periodic, and episodic variations of the ERP should be detectable for the first time. Within each technique validation of the results using different software packages for the same data and analysing these data independently by two analysis centers will provide highest robustness and reliability.