

NAME

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SESSION

Session 4: Novel concepts to improve the SLR network

TYPE

Presentation

TITLE

GNSS Prediction from Navigation Message

ABSTRACT

GNSS navigation message provides ECEF time-position quadruples to user, which can be used for making CPF predictions. In this presentation, we generated CPF predictions for GNSS satellites by analysis of navigation message. The generated prediction data is then compared to CDDIS predictions. Also we validated the prediction to actual laser ranging data of GNSS satellite. Analysis of the prediction bias is given.

While GNSS receiver is a component of most SLR stations, it is possible to make autonomous GNSS prediction update without network connection, such to enable rapid prediction on the first few passes of a new GNSS satellite.