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DORIS infrastructure: status and plans after 30 years of service

Jerome Saunier¹, Guilhem Moreaux², and Frank G. Lemoine³

¹IGN France, Geodesy and Metrology, St-Mandé, France (jerome.saunier@ign.fr)

²CLS, Orbitography and Localization, Ramonville Saint-Agne, France

³NASA, Goddard Space Flight Center, Greenbelt MD, USA

The Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) system is based on a homogeneous global geodetic network. The DORIS ground network is managed and monitored by a single entity (CNES/IGN), which makes it possible to closely steer its deployment and evolution. Moreover, thanks to infrastructure and hardware improvements, the DORIS network has continuously improved over time in order to meet the performance requirements of satellite altimetry for which it is mainly dedicated.

Today, the numerous strengths of the DORIS network built up over 30 years give it an important role in contributing to the Global Geodetic Observing System (GGOS). Our extensive experience in geodetic network maintenance and long-standing commitment to international cooperation to co-locate DORIS with other space geodetic techniques and tide gauges led us to define installation requirements at co-located sites and monuments installation specifications.

After presenting an overview of the DORIS system specificities, we review the strengths and assets of the DORIS network and the continuing improvements in the DORIS technique. Then, we present examples of concrete results achieved through improved ground station configurations. Finally, we give an update on the status and plans for the DORIS network in the coming years to overcome the current limitations of DORIS to meet the GGOS goals for the Terrestrial Reference Frame.