

Estimation of the laser retro-reflector array center location for BEIDOU-3M

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Four BEIDOU satellites are included in ILRS priority list. ILRS stations have recorded more than 25000 measurements sessions of them since 2022 year. For each satellite, a location of its laser retro-reflector array center was estimated using precise ephemeris data in SP3 format from different IGS analysis center. The objective of the work was to study ways to improve the accuracy of ephemeris support for BEIDOU-3M SC in our analysis center (IAC) based on joint coordinated use (co-location) of SLR and radio measurements. Work on co-location of different measurement and observation techniques is highly important in terms of results consistency and verification.