

Quality check of ocean loading models through precise orbit determination of LAGEOS satellites

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Several ocean loading models are tested with precise observation data of satellite laser ranging to LAGEOS satellites. High-precision orbit determination analysis using our software concerto v4 reveals that recent models based on the TOPEX/POSEIDON altimeter data generally excel the formerly used Schwiderski model. Among the altimeter-based models, the NAO.99b model shows the best performance. By increasing the standard 11 waves to 54 waves in the NAO.99b model (Matsumoto 2003), the performance gets slightly better.