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2.2 Preliminary results of Russian laser ranging network performance in the third GNSS tracking campaign

Pasynkov V.V., Sadovnikov M.A., Shargorodskiy V.D., Zhukov A.N.

JC «RPC «PSI», Moscow, Russia

Laser ranging systems play a key role in increasing accuracy of the global navigation systems as regards both verification of navigation error components at the expense of the space segment (ephemerides and time-and-frequency corrections) and monitoring accuracy of transfer and distribution of geocentric reference frames.

The authors have analyzed the preliminary results of the third campaign on tracking the satellites of the global navigation systems GLONASS, Galileo, Compass in regard to the performance of the Russian laser ranging network (RLRN) and ILRS means.

The authors have presented estimates of normal points, sectors and passes distribution characteristics for different stations of the network and GNSS, features of planning and performing measurements of parameters of SC motion in visibility zones of the stations, dependence of amount and accuracy of laser measurements from the local (astronomical) time of ranging and other analytical information.

The authors have stated preliminary generalizations on production rates of new RLRN stations and accuracy of experimental data, suggestions on RLRN development in the interests of making it truly global, GGOS included.