SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Interactive Presentations (IP)

Author: Dr. Guangming LIU
National Key Laboratory of Integrated Information System Technology, Institute of Software, Chinese Academy of Sciences, China, 18612838979@163.com

Prof. FanJiang Xu
China, fanjiang@iscas.ac.cn

APPLICATION OF MULTIPATH HEMISPHERICAL MODEL IN MULTIPATH ERROR REDUCTION METHOD OF BEIDOU MONITORING RECEIVER

Abstract

Multipath effect is the main factor that affects the quality of GNSS observation data. Beidou monitoring receivers may acquire clutter GNSS signals reflected by surfaces of buildings, water bodies and other obstacles, which introduce systematic deviations to pseudo-range due to extended signal path and thus affect the measurement accuracy of monitoring receivers. Giving the characteristics of the monitoring receiver, the multipath hemispherical map is used to model the three types of navigation satellites(GEO, IGSO and MEO satellites) of Beidou navigation system and the model precision is analyzed. The experimental results show that the multipath effect performance of Beidou monitoring receivers could be significantly improved by the MHM, and proved to be a reliable model with remarkable forecast accuracy.