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RESEARCH ON HIGH-PRECISION TRACK TECHNOLOGY FOR BURST SPREAD SPECTRUM SIGNAL

Abstract

The communication model for burst spread spectrum signal (BSSS) has attracted great attention in space navigation due to its properties of flexibility, fast-switch and robust in communication. Traditional track technology would result in low track precision when applied to track BSSS, which may generate bad influence on demodulation and ranging application. We analyze the communication model for BSSS, and propose an optimal design method of track technology from the aspect of maximizing track precision without loss of convergence of track system. Simulation results show that the proposed signal track technology for BSSS can give a stable high-precision track result which nearly reaches the theoretical limit of track precision.