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A FAST ACQUISITION METHOD FOR TD-ALTBOC MODULATION SIGNAL AND
PERFORMANCE ANALYSIS

Abstract

The acquisition of TD-AltBOC modulation signal is more complicated than that of traditional signal for the multi-sharpness of the correlation peak of TD-AltBOC modulation signal and the specific design of the PN codes. This paper proposed a method which could turn the planar acquisition of code phase and Doppler frequency shift into one dimensional, thus lessen the acquisition time. Also this paper discussed the application of PMF-FFT on acquisition of TD-AltBOC modulation signal, solved the problem of spectrum aliasing with sideband-deblurring method, derived the relationship between coherent combining loss, PMF size and Doppler frequency shift, finally analyzed the acquisition performance and causation.