

用投影滤波滤除伪码体制引信中的AM-FM干扰

刘己斌^{①②}, 刘顺利^②, 赵惠昌^①

^①南京理工大学光电学院 南京 210094; ^②郑州防空兵学院 郑州 450052

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摘要

在介绍正交投影滤波基本原理的基础上, 具体分析在伪码体制引信中采用投影滤波滤除AM-FM干扰信号的方法, 并对各种情况进行仿真分析, 最后详细推导投影滤波后相关器的输出SNR。结果表明, 用投影滤波方法既能有效地滤除伪码体制引信中的FM干扰, 也能很好地滤除AM-FM干扰, 从而有效提高相关器的输出SNR, 而且不会导致接收端所期望的伪码的失真, 但干扰参数的估计误差对滤除AM-FM干扰的影响较大。

关键词 [伪码](#) [投影滤波](#) [AM](#) [FM](#) [SNR](#) [引信](#)

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AM-FM Interference Excision Using Projection Filtering in Pseudonoise Code Fuzes

Liu Ji-bin^{①②}, Liu Shun-li^②, Zhao Hui-chang^①

^①School of Electronic Engineering and Optoelectronic Technology NUST Nanjing 210094 China; ^②PLA Zhengzhou Air Denfense Forces Academy Zhengzhou 450052 China

Abstract

Based on principle of orthogonal projection filtering, it is introduced firstly, the method of AM-FM interference excision using projection filtering in pseudo-random code fuzes is analyzed in detail. Moreover, the method in some cases is simulated. And, the correlator output SNR using projection filtering is deduced in detail. The results show that the method could filter not only FM interference effectively, but also AM-FM interference in pseudo-random code fuzes. Furthermore, the method could improve the output SNR, and could not cause distortion to the desired PN code at the receiver. However, estimation error of interference parameters has significantly effect on the performance of AM-FM interference excision using projection filtering.

Key words [Pseudonoise code](#) [Projection filtering](#) [Amplitude Modulation \(AM\)](#) [Frequency Modulation \(FM\)](#) [Signal to Noise Ratio \(SNR\)](#) [Fuze](#)

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通讯作者

作者个人主页 刘己斌^{①②}; 刘顺利^②; 赵惠昌^①

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