Storming Media Pentagon Reports: Fast. Definitive. Complete.

Home About Us Contact Us View Cart My Account FAQ

username LOGIN New Account » Forgot Password? CHAFF GO Advanced Search »

Detection and Countermeasures » Active & Passive Radar Detection & Equipment

Response of an Airborne-Short-Pulse Radar to Chaff,

Authors: James E. Seltzer; HARRY DIAMOND LABS WASHINGTON D C

Abstract: Radar backscatter from a **chaff** cloud is examined for the case in which the radar approaches the cloud from above and moves into and through the cloud. The **chaff** cloud is modelled as a collection of randomly oriented dipoles having a mean volume density that is a function of altitude but invariant in a horizontal plane. The statistics of the **chaff** echo power when the number of dipoles in the resolution volume is large are reviewed. The impulse response, which approximates the short-pulse radar response, and the radar return signal for a specific range resolution cell as a function of the position of the radar relative to the cloud are derived for several **chaff** cloud configurations and antenna patterns. Power spectral density functions for range-gated **chaff**-return signals and correlation functions for the signals following square-law detection are also derived. (Author)

Adobe PDF - $21.95

Printed Format - $24.95

ADD TO CART

Please check the box for the format you wish to order.

Shipping Terms

About Electronic Delivery

Email This Abstract

Limitations: APPROVED FOR PUBLIC RELEASE

Pages: 54

Report Date: APR 1972

Report Number: 0677447

Keywords relating to this report:

- *RADAR CONFUSION REFLECTORS
- AIRBORNE
- BACKSCATTERING
- MATHEMATICAL MODELS
- POWER SPECTRA
- PROBABILITY DENSITY FUNCTIONS
- RADAR CROSS SECTIONS
- RESPONSE

« Back to search

© 2001-9899 Storming Media LLC. All rights reserved.