

A NOVEL APPROACH TOWARDS RAIN TEST ON AN AIRBORNE AESA

Annapurna Sogunuru, P. Vikram, Suma Varughese
Scientist
Centre for Airborne Systems (CABS)
Defence Research and Development Organisation (DRDO)
Min of Defence, Belur
Bangalore-560 037, India
Email : annapurna@cabs.drdo.in

Abstract

Centre for Airborne Systems (CABS) has designed, developed and successfully qualified Active Array Antenna Unit (AAAU) - a state-of-art technology system for airborne applications and mounted on Indigenous Airborne Early Warning and Control (AEW & C) aircraft. AAAU houses Active Electronically Steered Antenna (AESA) of Primary and Secondary Radar and front end electronics of the radar. These electronics positioned inside AAAU use ram air cooling. To comply with the all-weather conditions, an important test is the Rain test in which the radar effectiveness is verified. This paper presents a novel, cost effective and tailor made methodology adopted to suit the requirements for qualification of the AAAU. On successful completion of the test, AAAU is certified by Centre for Military Airworthiness and Certification (CEMILAC) authorities for flying under rainy conditions and has been accepted by the Indian Air Force.

Keywords: All Weather, Airborne, Rain Worthy