Detection and Length and Orientation Measurement of Extended Targets

Ulrich Nickel¹, Eric Chaumette², Pascal Larzabal³

¹ Fraunhofer FKIE, 53343 Wachtberg, Germany
ulrich.nickel@fkie.fraunhofer.de

² ONERA- The French Aerospace Lab, 91120 Palaiseau, France
eric.chaumette@onera.fr

³ SATIE, ENS Cachan, CNRS, Univers Sud, 94230 Cachan, France
pascal.larzabal@satie.ens-cachan.fr

Abstract: A method for rapid detection of extended targets and for measuring the length and the orientation in 2D angle space is presented. The detector and the measurements are based on the distribution of the generalized monopulse ratio. The statistical performance of the estimators is given. This method facilitates the initialization of group tracking algorithms and handling partially connected convoy targets. The performance measures may be used as a priori knowledge in tracking.