



## **DBF MONOPULSE TECHNIQUE AND SYSTEM FOR MULTI-TARGET TRACKING**

**LISHENG YANG, SHIZHONG YANG, JIANMEI LEI, TAO WANG, HAILIN CAO**  
*Chongqing University*  
*Chongqing, China*

**ABSTRACT**—In this paper, a DBF (Digital Beamforming) monopulse technique & system with ability of multitarget tracking is presented based on antenna array and digital signal processing. The scheme of the DBF monopulse tracking system is given. The sum & difference beams and corresponding angle error signal of the monopulse system are formed by data processing in baseband. Algorithms for the forming of these 5 monopulse beams are proposed. Multitarget tracking is achieved by module multiplying. Finally, an example of this DBF monopulse tracking is shown.

**Key Words:** monopulse, digital beamforming, antenna array, multitarget tracking