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STABLE TRACKING OF NARROW-BEAM INSTRUMENTATION RADAR OF SPACE TRACKING  
SHIP

**Abstract**

Ship rolling affects greatly the stable tracking of the space tracking ship's Instrumentation Radar, especially of the unified X-band system, whose beam is very narrow and target acquisition and stable tracking becomes much more difficult in dynamic environment under the sea. This paper proposes and elaborates various techniques to overcome this challenge and to get quick acquisition, improve isolation of ship rocking, reduce dynamic lag, and enable this shipboard narrow-beam system to track stably with required accuracy.