

---

## Mission analysis and image quality analysis on spaceborne Synthetic Aperture Radar

Seunghyun Min, Huyn Woo Lee, Munkyu Kim,  
Yunhwang Jung, and Jongho Seon

Satrec Initiative

A analysis method on requirement and performance on spaceborne Synthetic Aperture Radar has been derived. Requirements such as resolution, signal-to-noise ratio and ambiguity derive major design parameters of SAR sensor through trade-off. Feasibility of SAR sensor on small satellite will be investigated. Result of image chain analysis will show an effect of spacecraft attitude on an image quality from SAR sensor. The analysis method can applied to LEO SAR satellite.