

# Image Interpretability Rating

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# Example Rating (Inadequate for SAR)

<b>National Imagery Interpretability Rating Scale (NIIRS)<sup>[1]</sup></b>	<b>Ground Resolved Distance (GRD)</b>
0	Image cannot be interpreted because of obscuration, degradation, or very poor resolution
1	> 9.0 meters
2	4.5 - 9.0 meters
3	2.5 - 4.5 meters
4	1.2 - 2.5 meters
5	0.75 - 1.2 meters
6	0.40 - 0.75 meters
7	0.20 - 0.40 meters
8	0.10 - 0.20 meters
9	< 0.10 meters

# Why Rating Scale?

- Furnishes a quantitative means for benchmarking signal processing methods, e.g., two methods operating on the same raw data produce different rating scale outcomes
- For SAR imaging, the rating scale needs to encompass more than resolution.

# Factors that Affect SAR Image Interpretability

- Distortions
  - Scaling (ground resolution)
  - Foreshortening
  - Layover
  - Geometrical shadowing
  - Speckle
  - Ambiguity
  - Degradations associated with Polarimetric SAR
  - Degradations associated with Interferometric SAR
  - .....
- Other considerations pertinent to Strip-map, Squint, Spot-light, ScanSAR, ISAR, SweepSAR, StereoSAR, ...
- Should the RWG undertake the challenge to construct a comprehensive rating scale that applies to all types of SAR images?