

PALSAR product levels

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5th K&C Science Advisory Panel meeting
JAXA EORC, Tokyo/Japan
November 18-21, 2003



PALSAR product levels to be made available from JAXA

Path Image (Level 1.5):

- Continuous 70-km swath (input: start- & end-latitude) for the same PRF regions
- Spatial resolution: 50 m (from full-res data \Rightarrow ~64 looks)
- 16 bits, amplitude
- 1 or 2 channels (HH resp. HH+HV)
- Local incidence angle info (8 bits image available on request)
- Geometry: **TBD (K&C#5)**
 - Slant range (HH: 35m*52m; HH+HV:70m*52m) OR
 - Ortho-corrected (with-out radiometric slope-corrections) OR
 - Ortho-corrected (with radiometric slope-corrections)

ScanSAR Path Image (HH only):

- Continuous 350-km swath (input: start- & end-latitude) for the same PRF regions
- Spatial resolution: **TBD (K&C#5)**
- 16 bits, amplitude
- Geometry:
 - Slant range

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PALSAR Mosaics:

- Semi-continental mosaics assembled from PALSAR path images, acquired within a specific time window (e.g. cycles 5-6)
- 1 or 2 channels (HH resp. HH+HV)
- Spatial resolution: 50 m (from full-res data \Rightarrow ~64 looks)
- 16 bits, amplitude
- Ortho-rectified using SRTM DEM (<N60° only - what about Siberia?)
- Geometric corrections and output projection: TBD (K&C#5)
- Radiometric corrections: TBD (K&C#5)

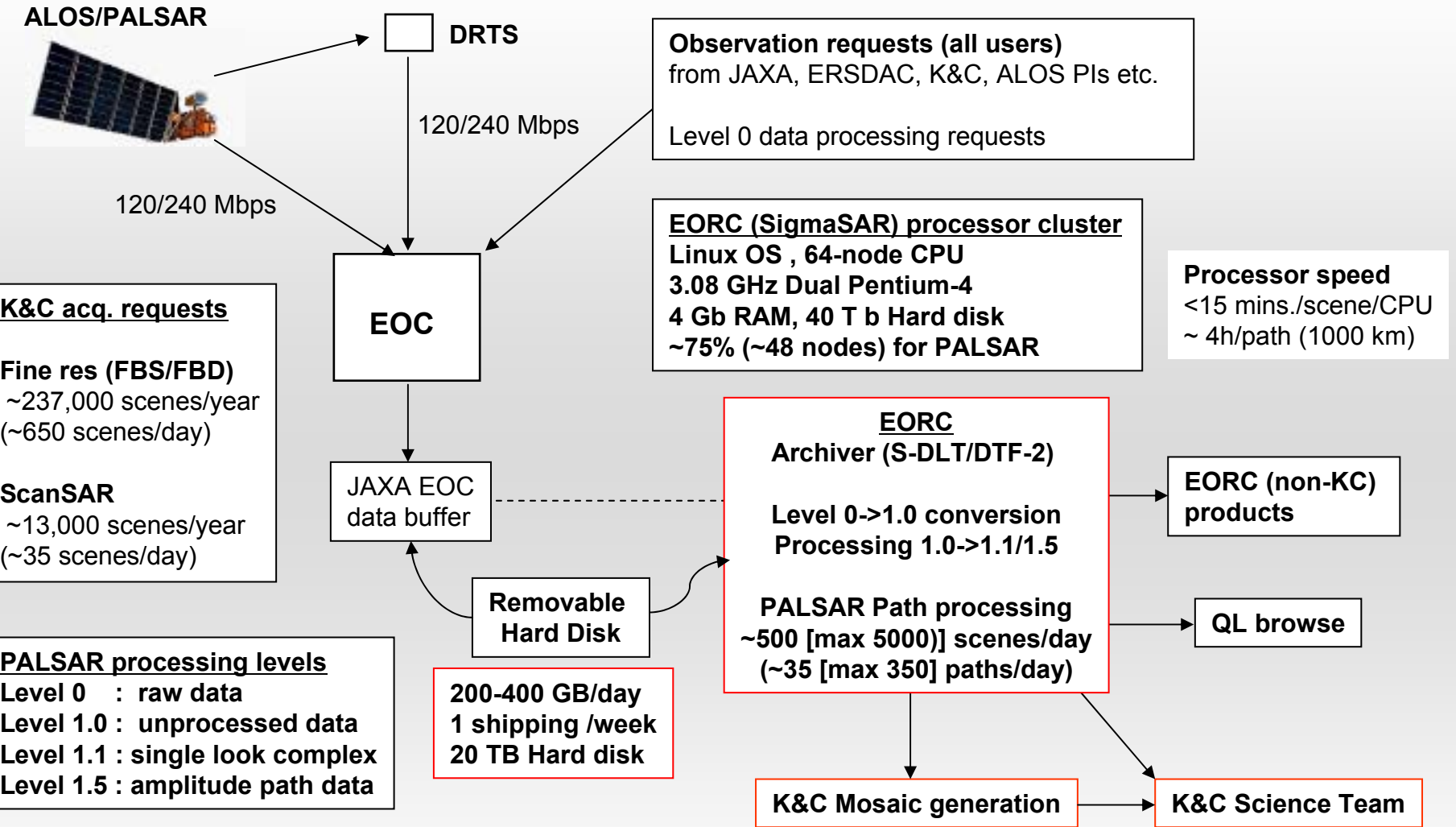
Coherence Mosaics (R/D product):

- Over selected regions only (SE-Asia & Siberia?)
- Co-registered with amplitude mosaics (above)

PALSAR Level 1.0/1.1 for InSAR:

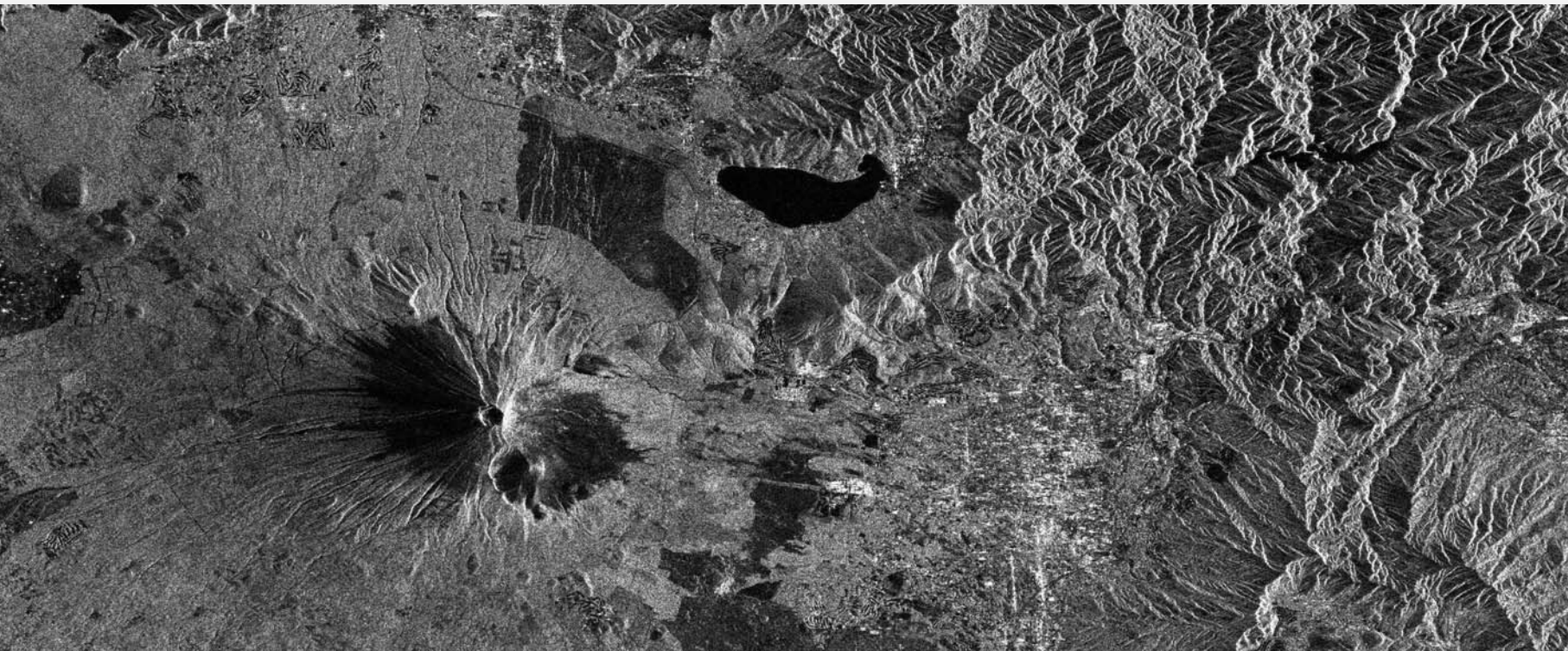
- Level 1.0 (unprocessed) OR Level 1.1 (SLC) TBD (K&C#5)
- Selected distribution only (Moreira, Siqueira, Holecz)
- Scene-based standard products

PALSAR data flow and processing

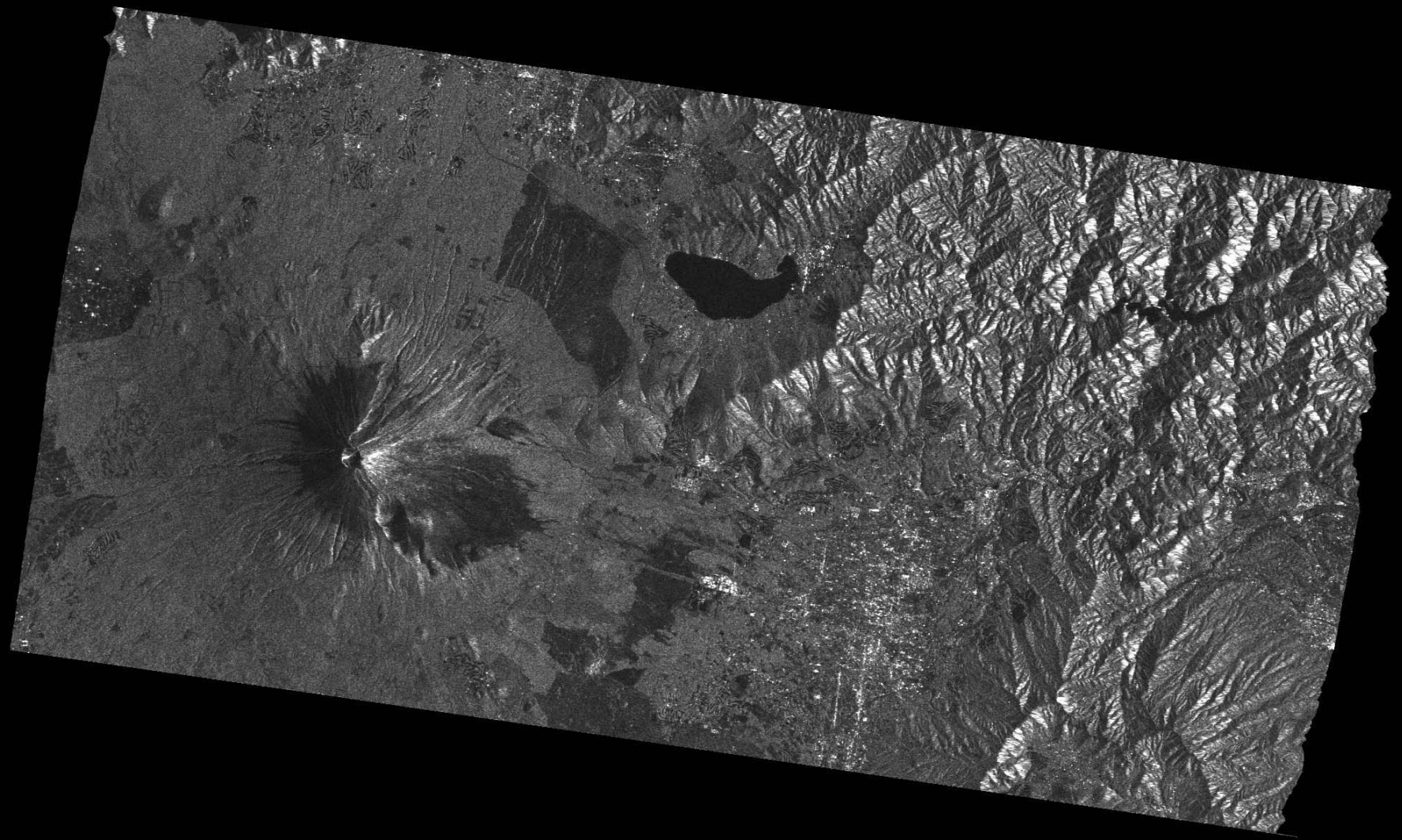


Processing targets:

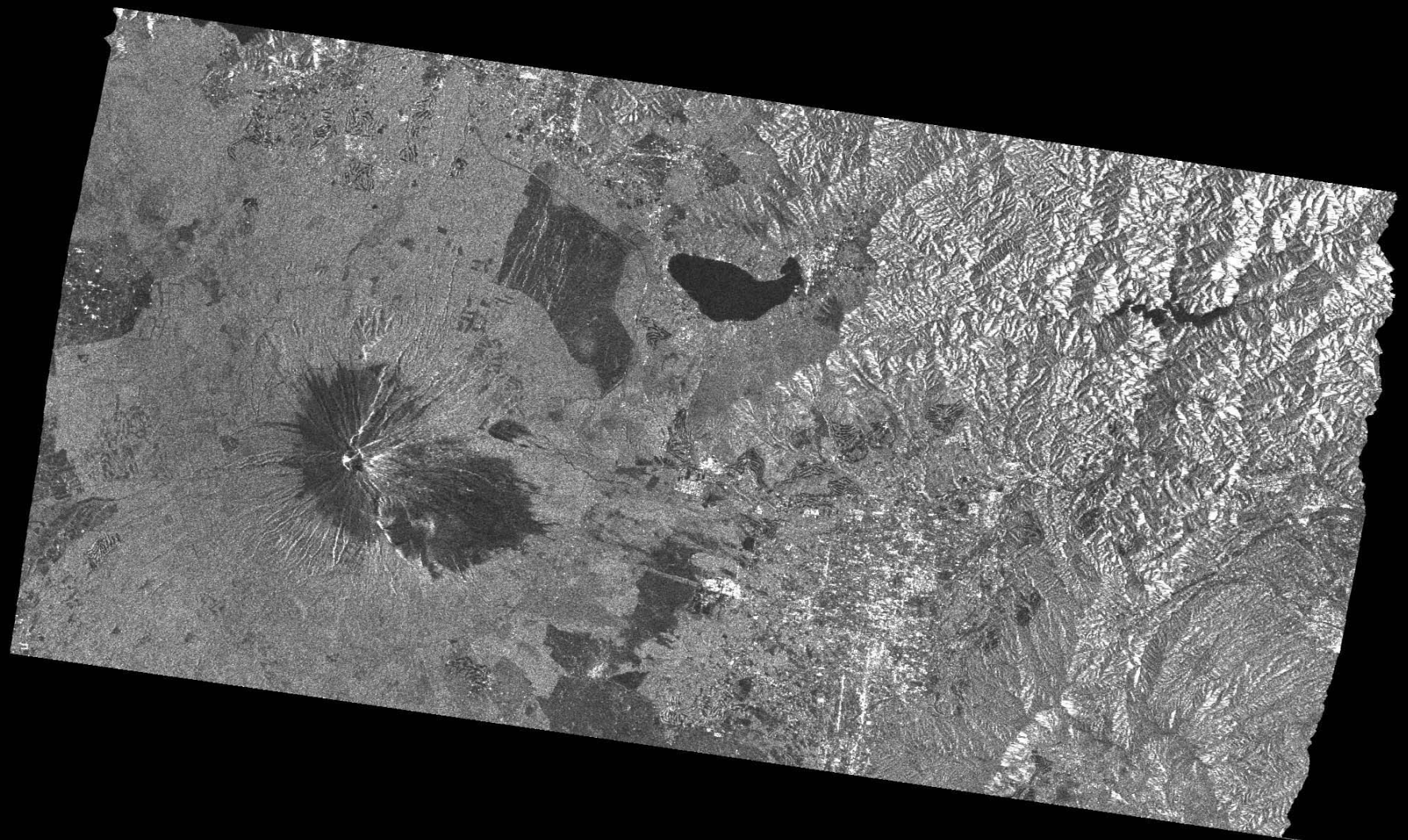
- Processing capacity > daily incoming data flow from EOC
- ~1 cycle observation/processing time lag for Path Level 1.5
- ~3 cycle time lag for mosaics



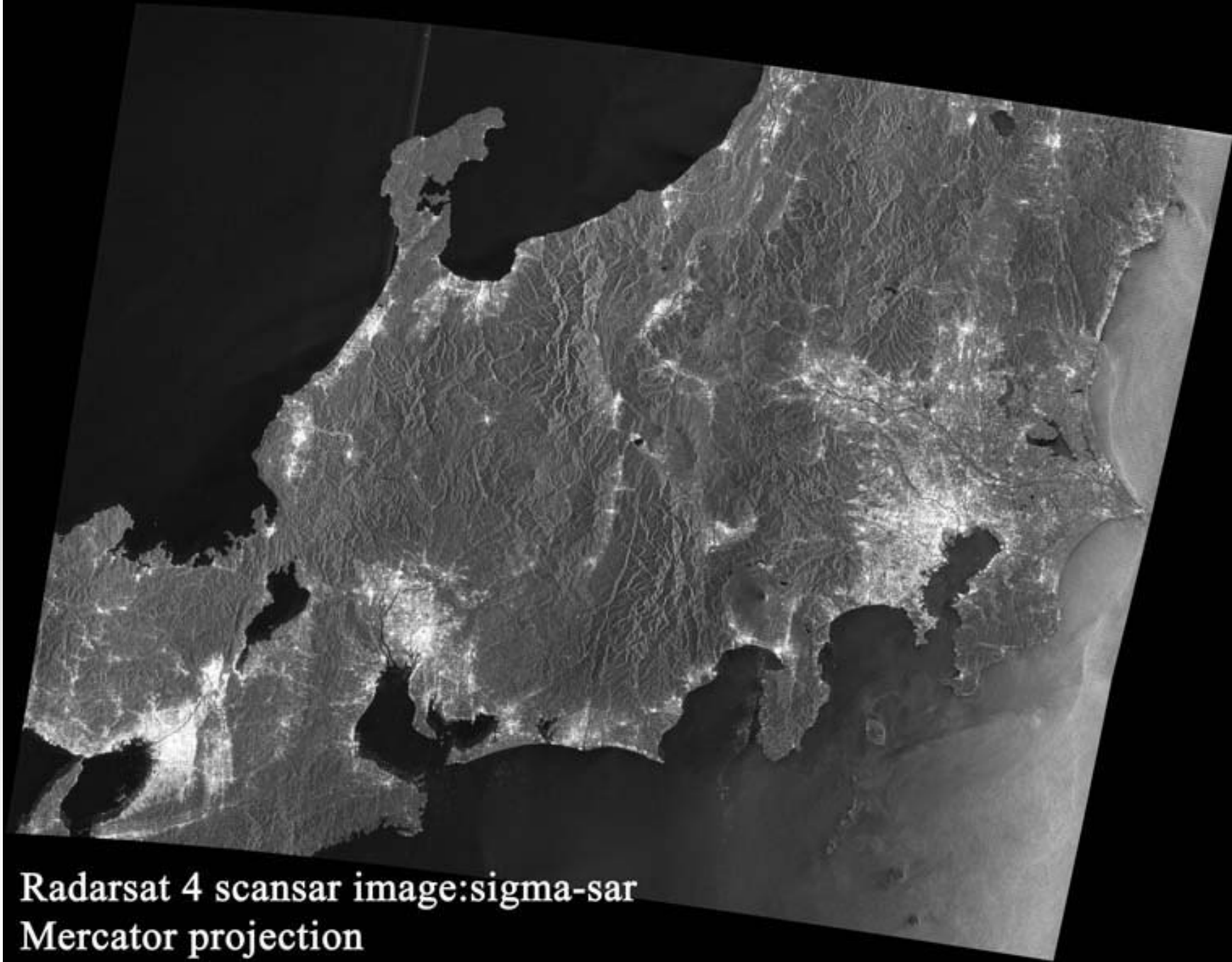
Slant range 16 bit image



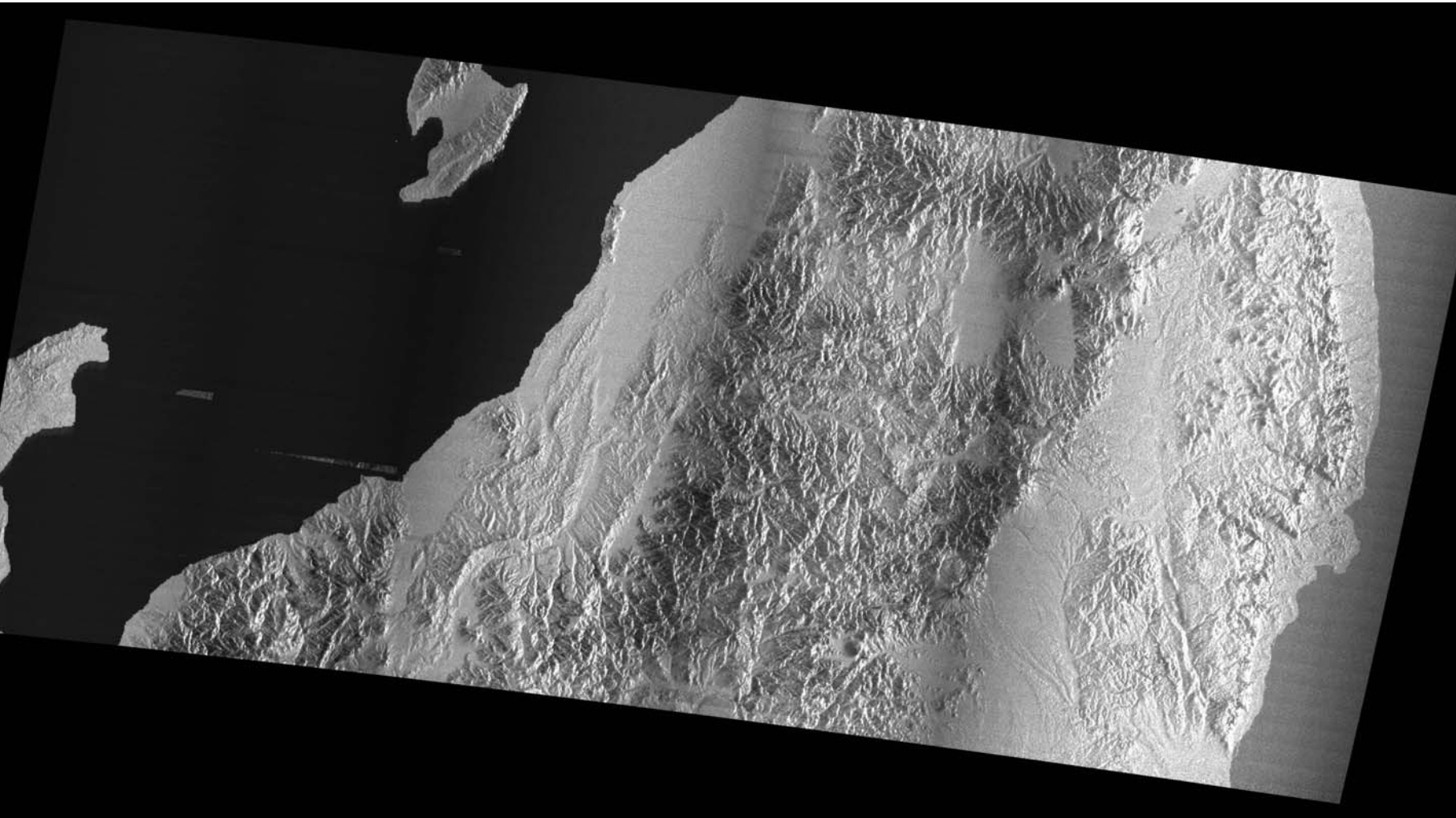
Ortho rectified without slope correction



Ortho rectified with slope correction



Radarsat 4 scansar image:sigma-sar
Mercator projection



350 km

Simulated PALSAR 5 SCAN SCANSAR image (geocoded)

Simulated ScanSAR data contains some errors due to processor memory limitation problem.