

Ake Rosenqvist Personal notes
Do Not Quote

ALOS technical details

HSSR (solid state recorder)

Capacity: 96 Gb (80 minutes at 240 Mbps)
Max input: 240 Mbps + 120 Mbps
Downlink: 240 Mbps via DRTS to EOC
120 Mbps direct link to foreign GS

PALSAR, AVNIR-2 and PRISM can be operated independently. Only limitation is the output data which need to be routed to HSSR, DRTS and/or GS.

Data Relay Test Satellite (DRTS)

Only one DRTS to be launched
Location: E90°
Space Station top prio

The orbit

671 revolutions in 46 days (14 27/46 revs/day)
Ground velocity: 6.75 km/s
Equator passes (LST): 10:15-10:45 a.m. (descending)
10:15-10:45 p.m. (ascending)

Each PALSAR observation segment begins and ends with 120 seconds of pre- and post-calibration.

Minimum observation length: 352 (120+112+120) seconds (2377 km)
Maximum (theoretical) segment length: 70 minutes
Two segments acquired in different modes (e.g. ScanSAR + hi-res) can follow each other without time gap, but 4 mins of post&pre CAL still required => 4 mins gap.
Pre- & post CAL time can possibly be trimmed to 10 secs.

PRF switching causes 2~4 secs of black-out, followed by another 2~4 secs of low power. Both may possibly be retrieved in processing, but pass with PRF switch should attempted to be avoided. Observation segment is however not interrupted.

The geographical location of the PRF switch depends on the start-latitude of the segment. Max segment length expressed as a function of start-latitude should be provided.