

CONDOR-E Small Spacecraft with a synthetic aperture radar

ADVANTAGES

- All weather, round the clock survey of the Earth surface
- Resolution of radar > 1m
- Possible stereo and interferometrical survey in successive orbits
- Mass of spacecraft up to 1150 kg
- possible re-aiming of SAR observing line in roll
- Application of serial common space platform

DESIGNATION

Condor-E small spacecraft (SSC) with SAR is designed for collection, storage and transmission of detailed Earth remote sensing data in the microwave electromagnetic spectral band to ground data receiving and processing posts. SAR ensures round the clock and all weather survey of the Earth surface.

SPECIFICATIONS OF CONDOR-E SSC WITH SAR

Parameters of SSC operation orbit:	
• altitude	~ 500 km
• inclination	up to 98°
SSC mass	up to 1,150 kg
SAR mass	up to 350 kg
Data transmission rate	up to 350 Mbit/sec
DTS frequency band	X-band
SSC active life	5 years

COMPOSITION

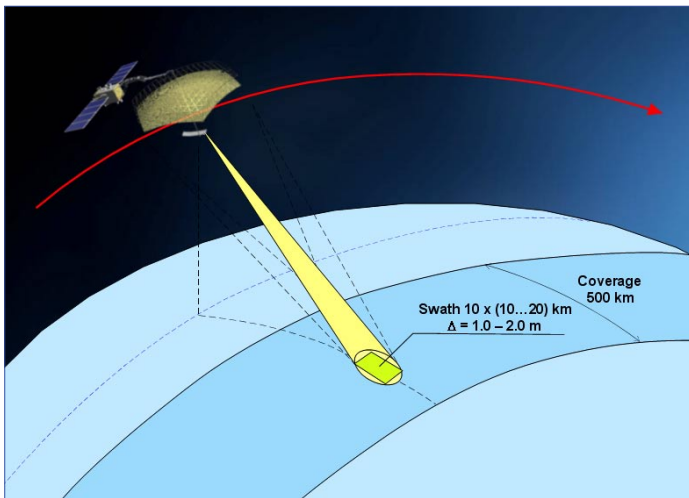
Composition of SSC «Condor-E» with SAR:

- common space platform:
 - onboard control complex,
 - data collection system,
 - data transmission system,
 - propulsion plant,
 - air conditioning system,
 - power generation system,
 - synthetic aperture radar (SAR).

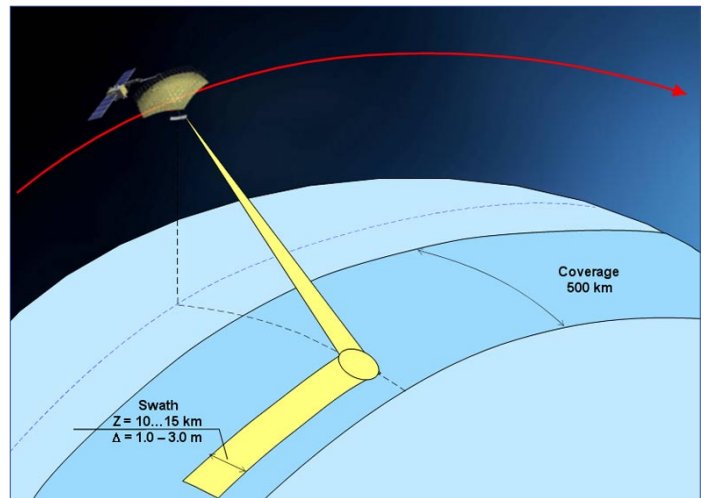
SAR SPECIFICATIONS

Frequency band	S
Coverage	2 x 500 km
Swath	> 10 km
Resolution:	
• spotlight mode	1-2 m
• stripmap mode	1-3 m
• ScanSAR mode	5-30 m
Range of angles of sighting in roll	± 20°...55°

DETAILED SPOT SURVEY



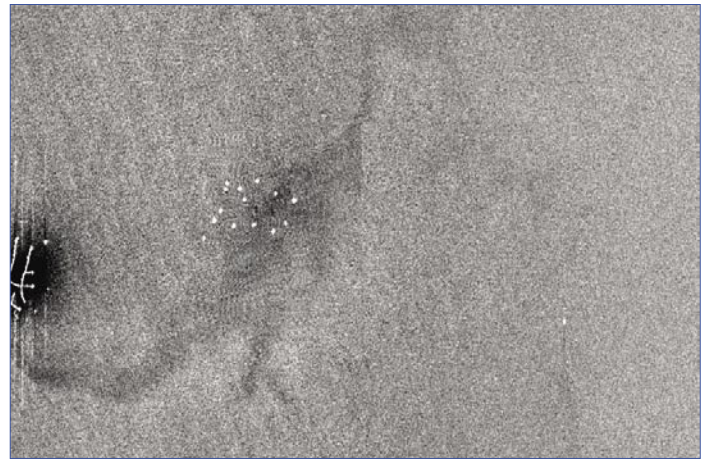
DETAILED CONTINUOUS SURVEY



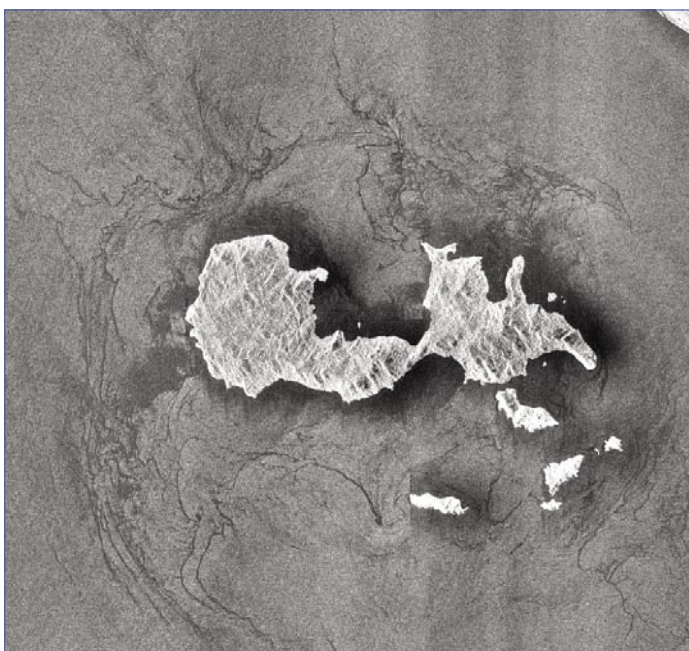
SAMPLES OF RADAR IMAGES OBTAINES FROM SS ALMAZ



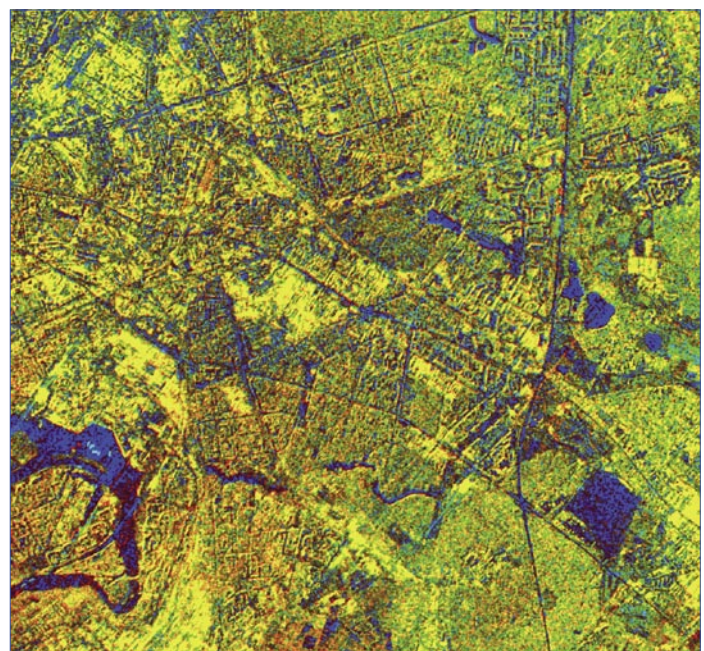
Radar image of Fuji (Japan) volcano



Radar image of the Caspian sea near Baku (Azerbaijan)



Radar image of the Sibolga island area (India)



Synthesis of Moscow images taken in different time