

# Sentinel Asia EOR Response of the Space Technology Institute

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**Space Technology Institute**

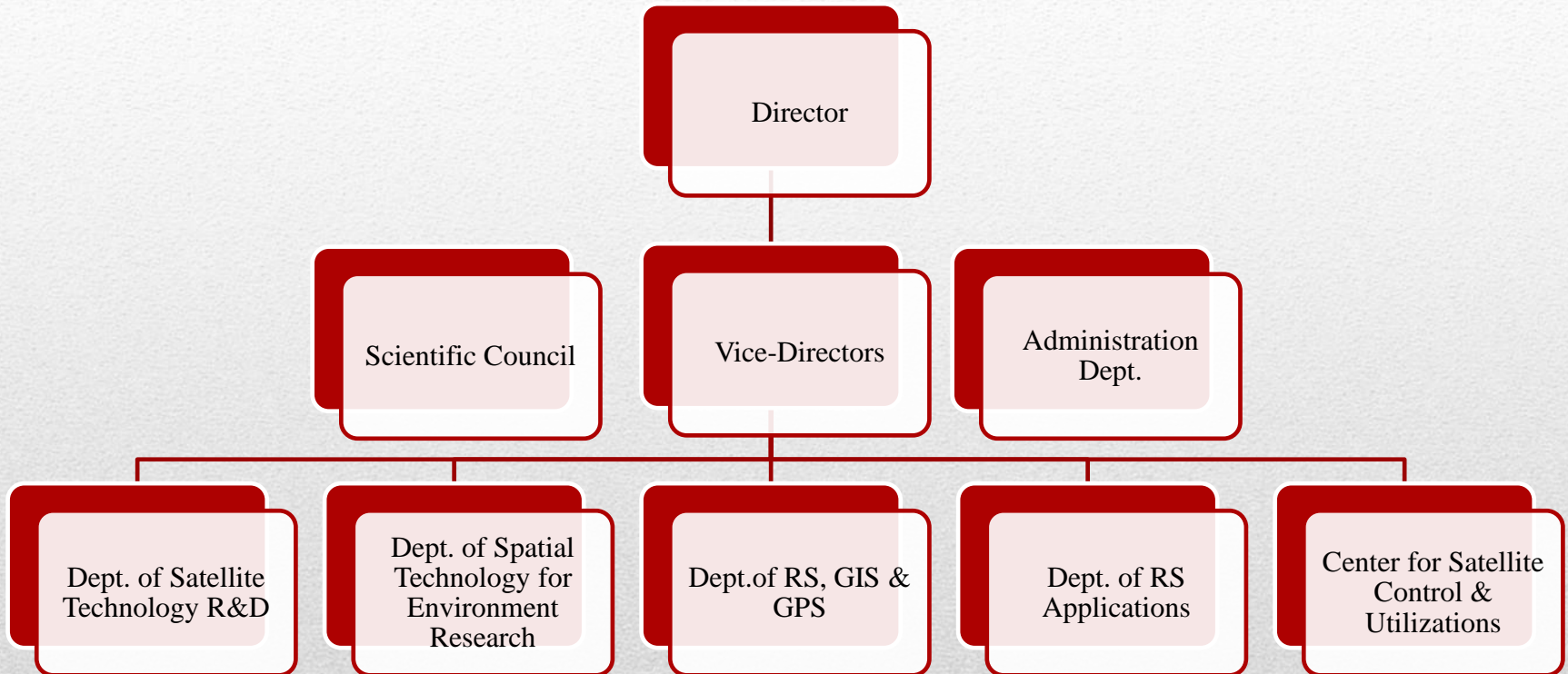
JPTM2018, Taipei Jan. 23-24, 2018

# Space Technology Institute



Space Technology Institute was established on Nov. 20, 2006 by decision number 1549/QĐ-TTg of the Prime Minister to act as the central governmental research institute on space technology.

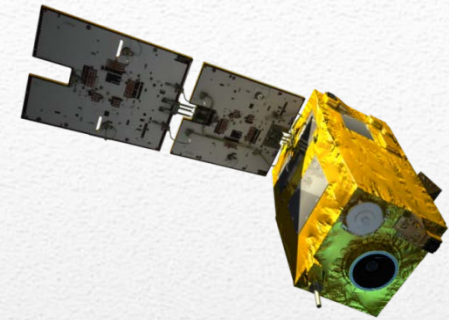
# STI Organization



Until 12/2017, STI has 60 staffs, in which 6 PhD; 6 Doctoral fellows; 25 MSc; 28 engineers & Bachelor.

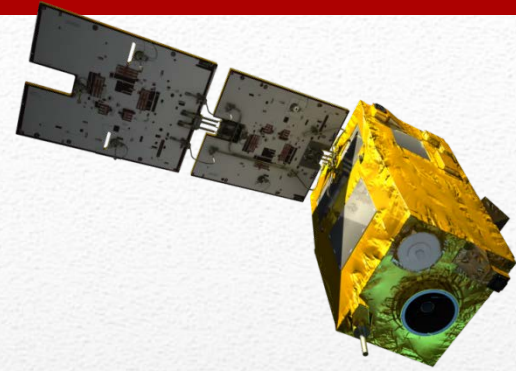
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- STI is currently responsible for mission planning and control of the Vietnam Natural Resource Environment Disaster Monitoring Satellite (VNREDSat – 1).
- 18/11/2015: STI was accepted as a SA-DPN/DAN

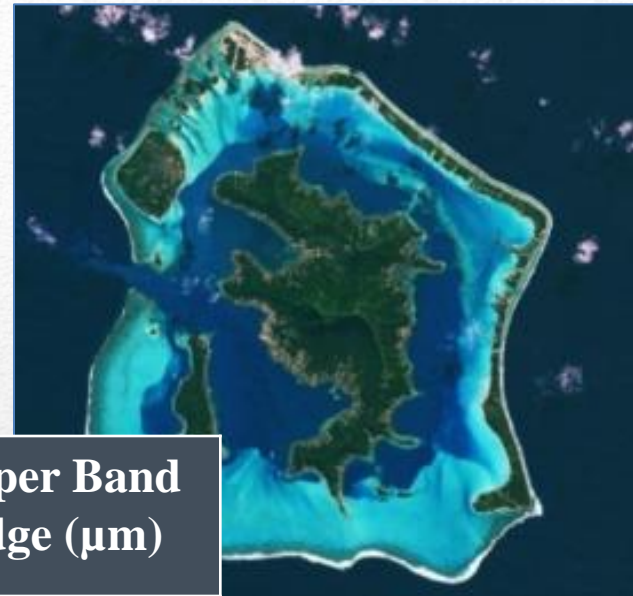
# VNREDSat-1



- Mission: Earth observation in PAN and 4 spectral bands
- Spatial resolution: **2.5m** (PAN) and **10m** (MS)
- Orbit: **SSO, 680 km** altitude
- Descending local time : **10:30 AM**
- Revisit time: **3 days**
- Platform dimension: **600 mm x 570 mm x 500 mm**
- Total mass: **~130kg**
- Life-time: **5 years (guaranteed)**
- Launch: May 7, 2013



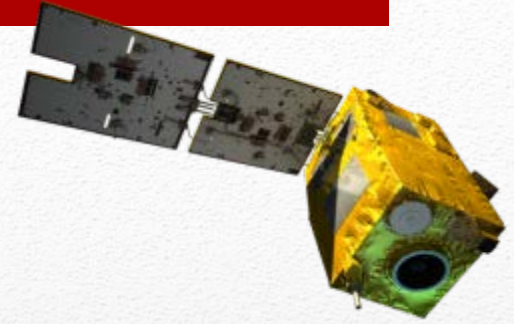
# Spectral bands



Band	Name	Lower Band Edge ( $\mu\text{m}$ )	Upper Band Edge ( $\mu\text{m}$ )
Panchromatic	PAN	$0.45\pm 0.02$	$0.75\pm 0.02$
Blue	B1	$0.45\pm 0.02$	$0.52\pm 0.02$
Green	B2	$0.53\pm 0.02$	$0.59\pm 0.02$
Red	B3	$0.625\pm 0.02$	$0.695\pm 0.02$
Near Infrared	B4	$0.76\pm 0.02$	$0.89\pm 0.02$

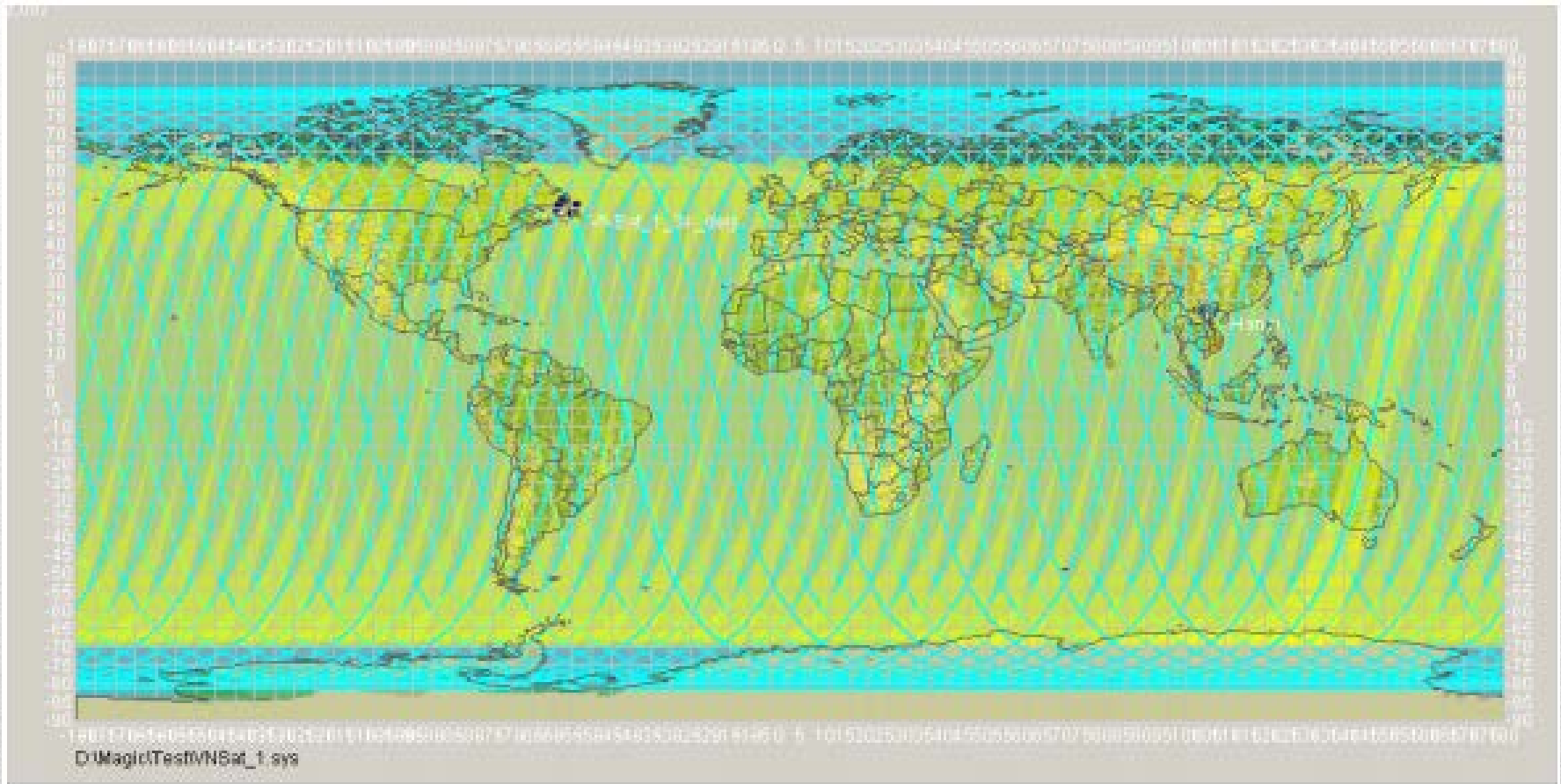


# Imaging capability



- Spatial resolution: **2.5m** (PAN) and **10m** (MS)
- Imaging modes: single shot, scanning, stereo
- Swath: **17.5 km**
- Strip length: **823 km** (PAN + MS)
- Number of acquired images per day: **100 scenes**
- Max. acquisition inclined angle: +/- 35 degrees





VNREDSat-1 access corridors over 3 day: whole world coverage



## VNREDSat-1 responses to SA EOR

Date	Disaster	Location	Number of scenes
11/01/2017	Flood	Thailand	42
21/01/2017	Flood	Philippines	12
13/02/2017	Earthquake	Philippines	12
21/02/2017	Flood	Indonesia	2
22/02/2017	Land slide	Indonesia	1
05/06/2017	Flash flood	Bangladesh	61
26/06/2017	Land slide	China	3
24/08/2017	Flood	Bangladesh	34
11/10/2017	Flood	Vietnam	0
14/10/2017	Flood	Taiwan	31
20/10/2017	Flood	Philippines	8
20/11/2017	Earthquake	Korea	6
27/11/2017	Volcano Eruption	Indonesia	2
19/12/2017	Cyclone Ockhi	India	100
Total			325

Year	Number of scenes
2014	6
2015	15
2016	335
2017	325

# THANK YOU!

