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Earth Observation Satellite Program of Vietnam and applications for disaster management



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OUTLINES

1. VNREDSat-1 (VAST*) - Optical
2. VNREDSat-1B (VAST) – Hyperspectral
3. JV-Lotus1 & JV-Lotus2 – Radar
4. Applications of Space Technology for DRR

*(VAST – Vietnam Academy of Science & Technology)

The major natural disasters in Vietnam

1. Typhoon
2. Flood, Flash flood
3. Inundation
4. Drought
5. Salt water intrusion
6. Cyclone
7. Land erosion
8. Forest fire

(Source: Disaster Management Center, Vietnam)

The major natural disasters in Vietnam



Disaster Management Center (DMC) of Vietnam
www.dmc.gov.vn



9AM, 16/11, a big
flash flood rush to
VN middle provinces
made 29 people died

Vietnam organizes the Committee for looking for and rescue
 people who are suffered by Typhoons (fishery boats) incl. MARD,
 border army, led by 01 Vice-PM



On 8/11/2013, the ship with 600 containers Heung A
 Dragon (Korea) is swallowed at VN sea

Typhoon Haiyan makes cyclone and flash flood in Vietnam (11/2013)



VNREDSat-1 Project

(VietNam small satellite for natural Resource, Environment & Disaster management)

Project Owner: Vietnam Academy of Science and Technology (VAST)

Implementation period: 2010 – 2014

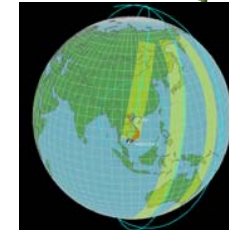
Finance source: French ODA (55,8 millions Euro)

Prime contractor: EADS Astrium

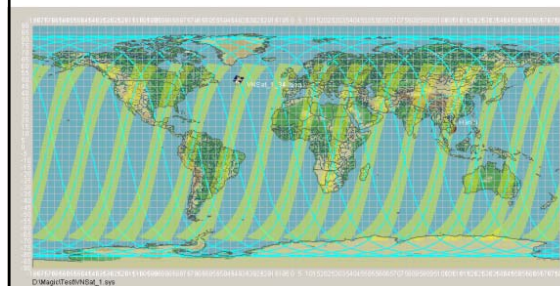
Launched successfully: 7/5/2013 at Kourou, France

Characteristics:

- Revisit time: **3 days**
- Orbit characteristics: **SSO, 680 km** altitude
- Local time of ascending node : **10:30 PM**
- Spatial resolution: **2.5m** (PAN) and **10m** (MS)
- (~SPOT5, but narrower scene: 17.5x17.5 km²)
- Total mass: **~130kg**
- Life-time: **5 years (guaranteed)**
- **15** STI/VAST members trained in Astrium EADS, Toulouse from 8/2011 – 11/2012
- In 8/2013, the contractor (EADS Astrium) has completely transfer VNREDSat-1 to Vietnam (STI/VAST) for full control & utilization

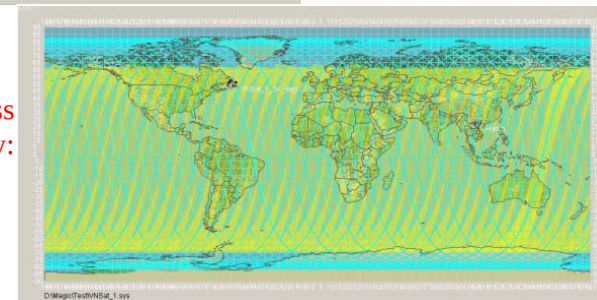


VNREDSat-1 SSO descending orbit and
access corridor



VNREDSat-1 access
corridors over 1 day

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



Platform engineering & procurement& AIT



PF reference tests



AIT



TV test set-up

and success fully
launched by VEGA, 07/5/2013



At 9:06AM (VN time) on 07 May 2013, VNREDSat-1 was
launched at Kourou station (French) by Vega launcher

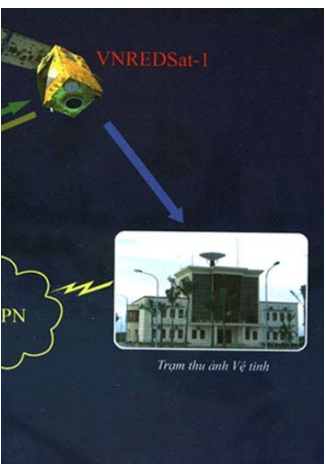


预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_6142



Components (ground)



First images from VNREDSat-1

