



# ORS-1 Mission



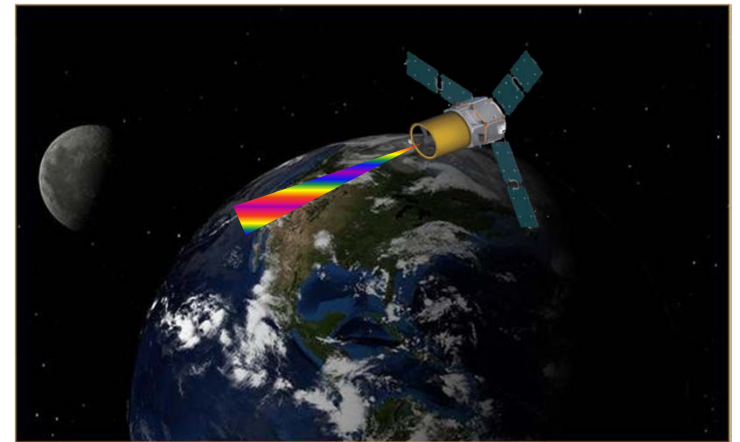
**Assured Space Power Focused on Timely Satisfaction of Joint Force Commanders' Needs**

## Urgent Need

- USCENTCOM request for enhanced battlefield awareness
- ORS Office led assessment produced unique solution
- Proven operational utility
- Provides timely coverage and responsive theater tasking
- Avoided burden of traditional top-down procurements
- Future growth leveraging upgrades in airborne / space assets

## ORS Solution

- Capabilities-based Development
- Payload derived from U-2 aircraft sensor
- Spacecraft bus derived from TacSat-3
- Ground C<sup>2</sup> uses MMSOC
  - Collection scheduling / planning
  - Downlink mission data via space qualified Common Data Link
  - Processing/Exploit/Dissemination – reuse existing systems





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# ORS-1 Program

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## Specifics

- **Requirements Basis:** USCENTCOM Battle-Space Awareness Need
- **Major Customers:** USCENTCOM, USSTRATCOM
- **Contractor:**
  - Space Vehicle: Goodrich, ATK
  - Launch Vehicle: Orbital Sciences Corporation; Mid Atlantic Regional Spaceport
  - C2 system: Lockheed Martin, USAF 50<sup>th</sup> Space Wing
  - Tasking System: NRL/GD
  - Mission Data Processing: US Army
  - Ground Antenna: L3 Communications
- Led by ORS Office; program executed by USAF Space and Missiles Center/ SDD

## Program Status

- Program Start (10/08)
- Preliminary Design Review (3/09)
- Critical Design Review (6/09)
- DoD EA for Space Build Decision (7/09)
- SV bus delivered (4/10)
- Resolved several P/L technical issues
- Final MMSOC MUS installed (3/17/11)
- Space Vehicle TVAC completed (4/6/11)
- Space Vehicle shipped to NASA Wallops (5/20/11)
- Launch: 29 June 2011
- Satellite Control Authority transfer to AFSPC/14AF: 16 September 2011





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# ORS-1 System



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- Primary Sensor based on Goodrich U-2 SYERS-2A imager
- ATK flight-proven responsive space modular base from TacSat-3
- OSC Minotaur I launch vehicle launched from Mid Atlantic Regional Spaceport (NASA Wallops)
- Data downlink via L-3 developed Common Data Link (CDL)
- 468 kg total mass





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# Summary



**Assured Space Power Focused on Timely Satisfaction of Joint Force Commanders' Needs**

- ORS Office formed to support Joint Force Commanders' needs for assured space power
- ORS-1 team is providing combat capability within 32 months from program approval to launch
- ORS-1, TacSat-3, and TacSat-4 are demonstrating military utility of small satellites
- ORS initiatives are laying the path for future rapid reaction space systems



**ORS is Supporting Joint Force Commander Operational Needs!**

