



National Transportation Safety Board

SpaceShipTwo, N339SS
Koehn Dry Lake, California
October 31, 2014

Investigator-in-Charge
presentation



Accident Summary

- October 31, 2014, 1007 local time
- Scaled Composites SpaceShipTwo
- Broke up 13 seconds into fourth powered test flight
- Impacted terrain over area 5 miles long near Koehn Dry Lake, California



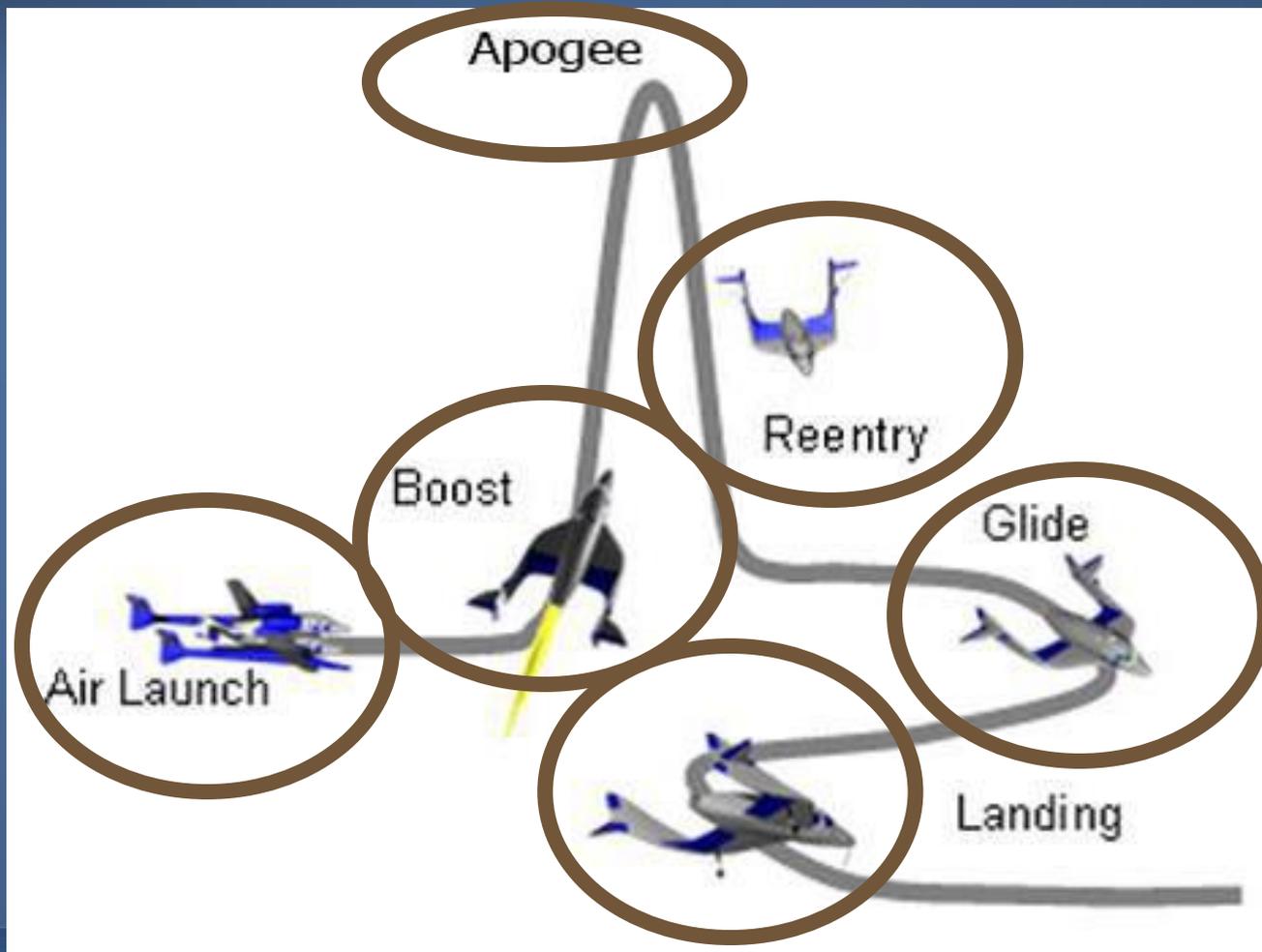
Accident Summary

- Pilot seriously injured; copilot fatally injured
- SpaceShipTwo destroyed
- No injuries on ground
- Vehicle operating under an experimental permit issued by FAA/AST

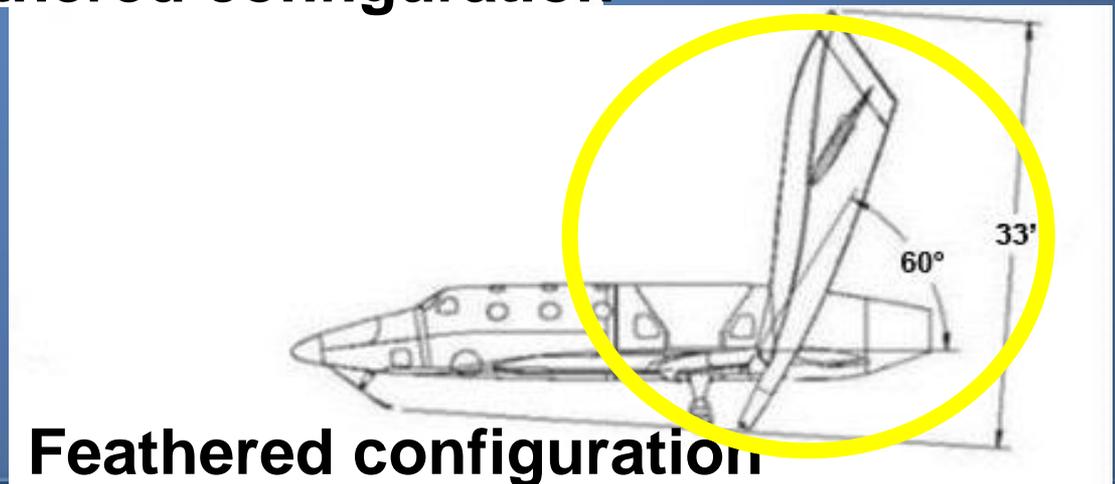
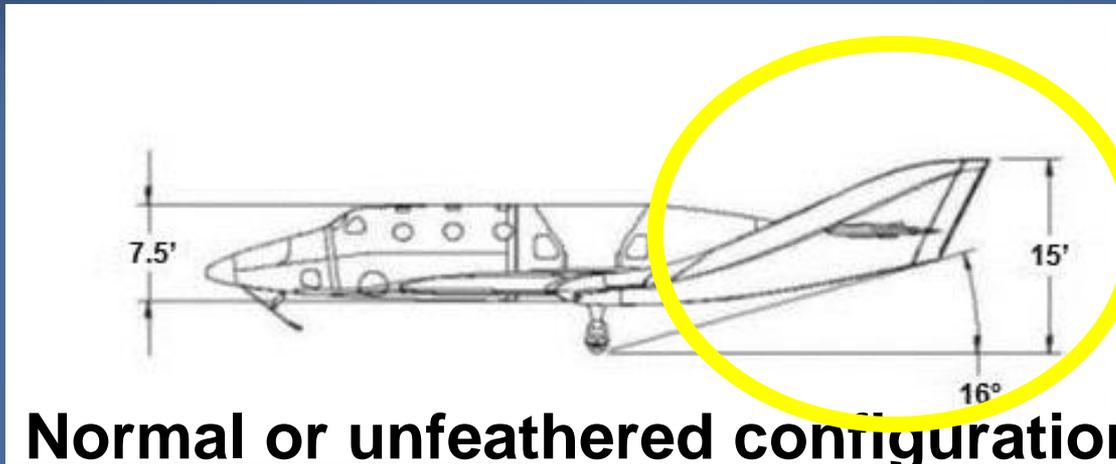
FAA/AST Role in Commercial Space Transportation

- Protects public health and safety and safety of property
- Protects US national security and foreign policy interests
- Encourages, facilitates, and promotes commercial space industry
- Issues launch and reentry licenses and experimental permits

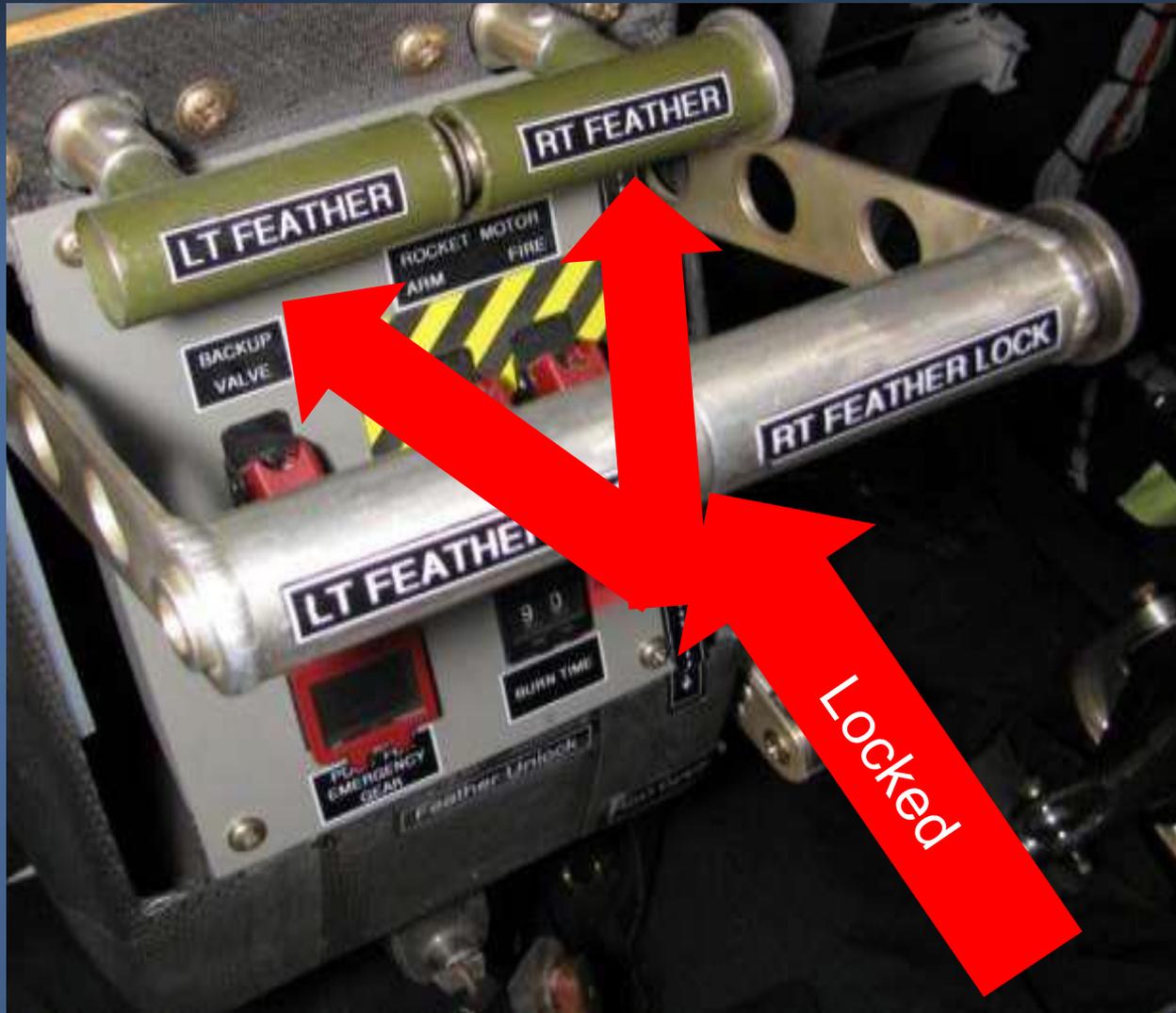
Mission Profile



Feather System



Feather Lock Handle



WhiteKnightTwo and SpaceShipTwo





Ground-based camera



WhiteKnightTwo camera



SpaceShipTwo camera

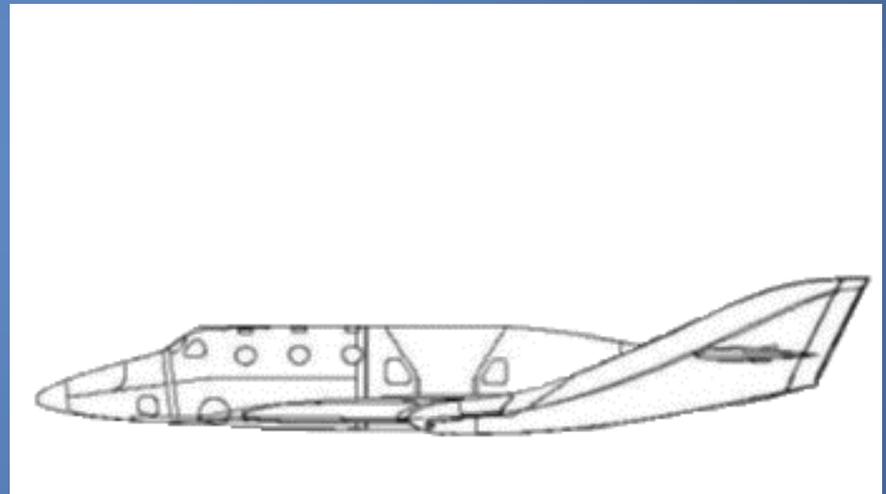
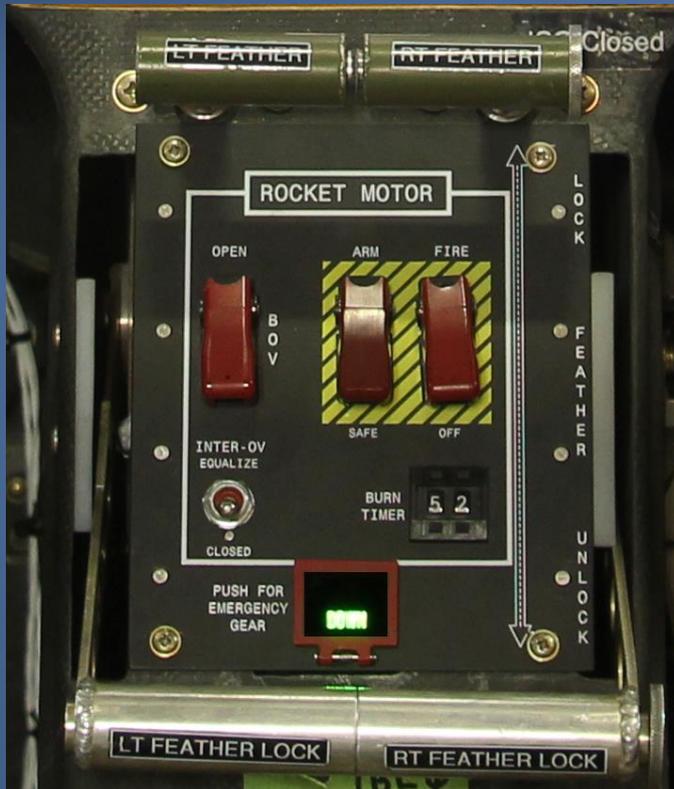
Video is located on the
NTSB YouTube Channel:

<http://www.youtube.com/user/NTSBgov>

Uncommanded Feather Movement

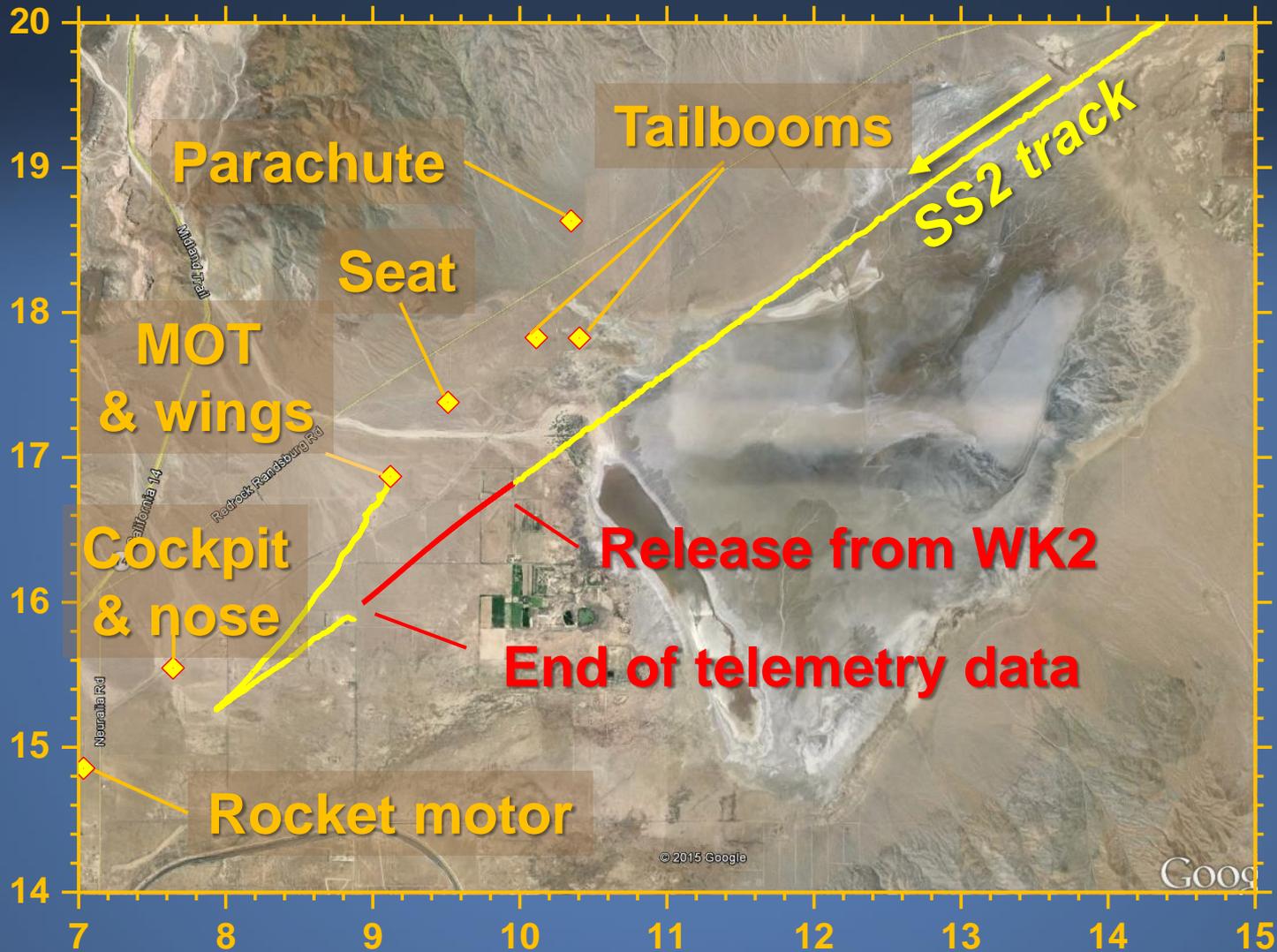


Feather System



Unlocked

Distance north of MHV, nm



Distance east of MHV, nm



NTSB

Parties to Investigation

- Scaled Composites
- Virgin Galactic
- Federal Aviation Administration
- Butler Parachute Systems

Safety Issues

- Human factors guidance for commercial space operators
- Preapplication consultation process
- Experimental permit evaluation process
- FAA/AST evaluation of Scaled's hazard analysis and waiver from regulatory requirements
- Inspector familiarity with commercial space operators
- Emergency response planning
- Database for commercial space operators on mishap lessons learned



National Transportation Safety Board