Aerospace Platforms & Integration

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Aerospace Vehicle Performance Spectrum

Manned

Limit

Unmanned

1 10 100 1000 10000
Sensing Rates [sq-mi / hour]

Gulfstream V:
6000 nm @ 470 kts
VHF/UHF pods, LiDAR,
Optical, Gravity
Continental ranges

Basler BT67:
1000 nm @ 170 kts
Low-profile VHF/UHF
Robust polar platform

DHC-6 Twin Otter:
800 nm @ 170 kts
HF, VHF, UHF
LiDAR, Optical, etc.
Mountainous Terrain

Satellites:
Multi-vehicle arrays & large
deployable reflectors
Orbit tracking & design

FlightDesign CTLS:
700 nm @ 100 kts
VHF & UHF pods
Semi-autonomous

Fixed Wing & Rotary UAS:
Manual & autonomous
Extreme & remote regions
Testbed & low-cost platforms

High Resolution PNT and Command &
Control with modern sensors, data fusion, and software/hardware integration

Design and Synthesis

Science Needs
Mission Planning

Antenna & Aircraft Placement

Radar and Antenna Systems

Loads and Structures
Aerodynamics