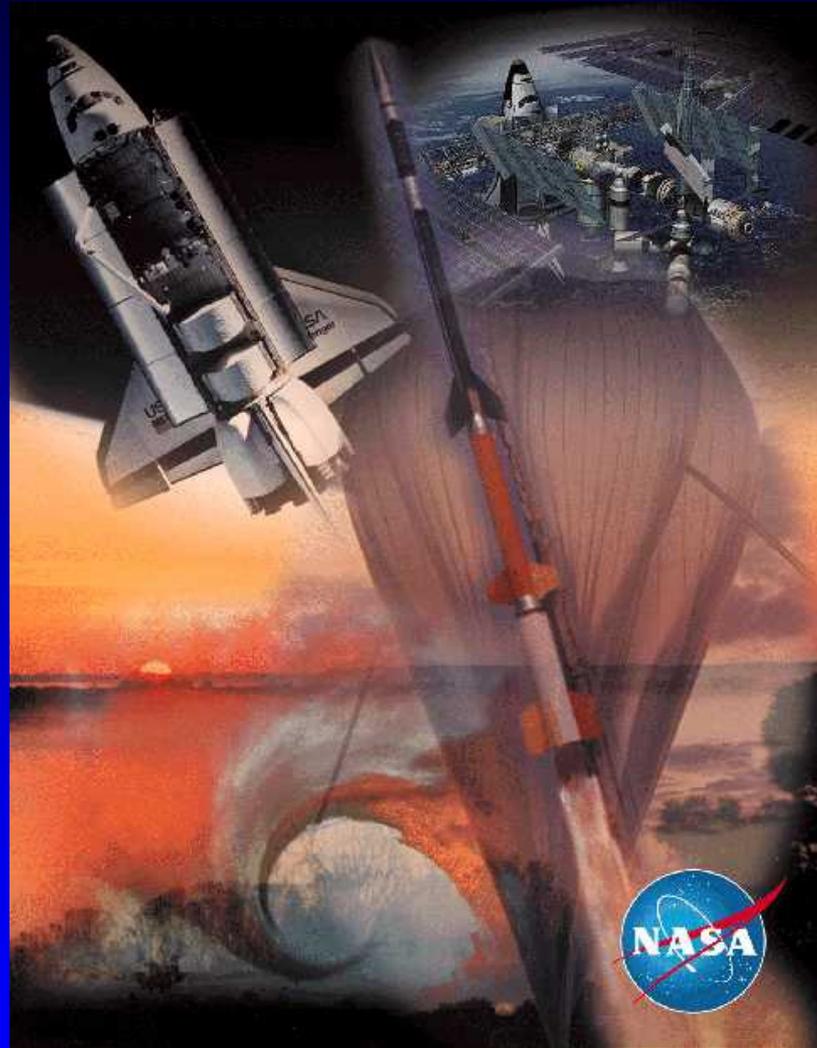


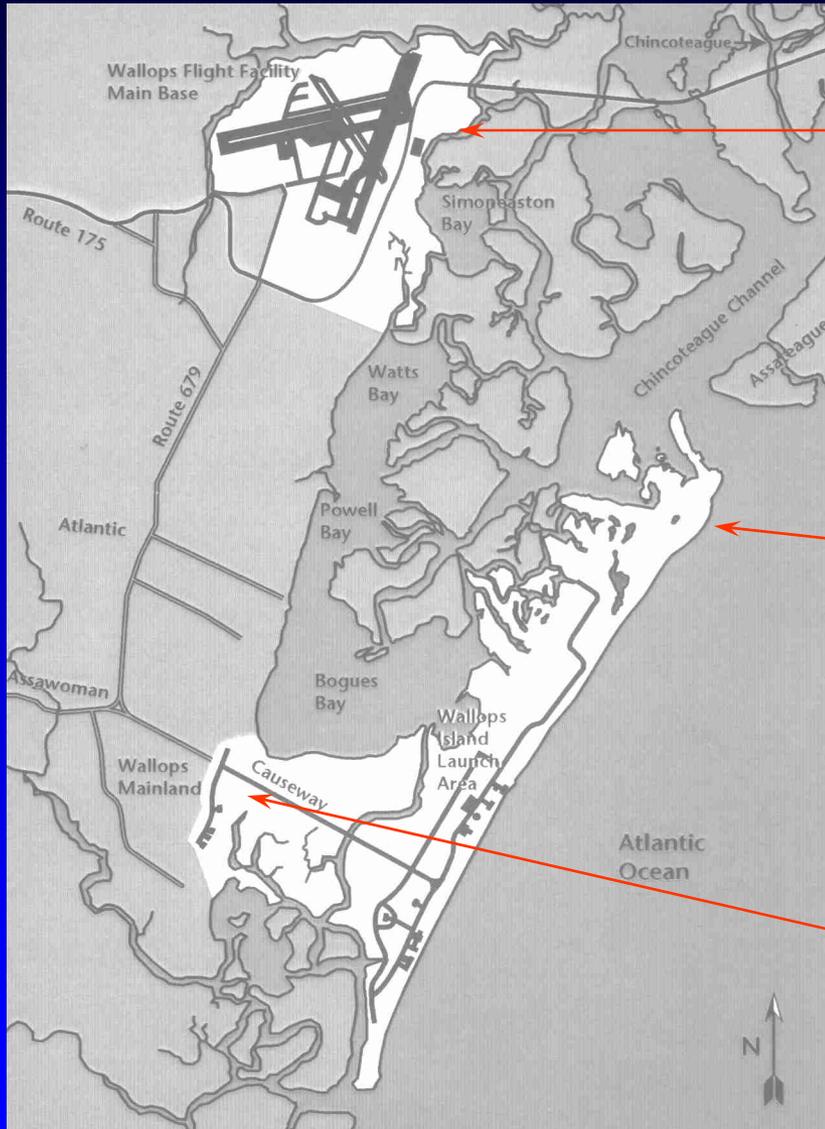
Wallops Flight Facility



“Carrying Science to New Heights”

<http://www.wff.nasa.gov>

Wallops Flight Facility



Three Land Areas **6000 Acres**

• **Wallops Main Base** **1900 Acres**

- Administrative & Technical Offices
- Tracking & Data Acquisition
- Range Control Center
- Ordnance Storage/Processing
- R&D, Processing Facilities
- Research Airport
- Navy Administration/Housing

• **Wallops Island** **3000 Acres**

- Launch Sites
- Blockhouses
- Radar
- Processing Facilities
- Dynamic Spin Balance
- Navy Operational Facilities

• **Wallops Mainland** **100 Acres**

- Tracking & Data Acquisition

• **Marshland** **1000 Acres**



WFF Main Base

Wallops Island



Wallops History

- ***Established by NACA in 1945***
- ***Test Site under Langley Research Center until 1958***
- ***Independent field center from 1958-1981***
- ***Consolidated as part of NASA/Goddard in 1981***
- ***Mission expanded from operations to also include project management and R&D***
- ***Over 15,000 launches conducted***



Early aerodynamic model testing



Little Joe, Mercury ejection system testing



"Miss Sam", primate flight program



Scout Expendable Launch Vehicles

Other Wallops Organizations



Navy/Surface Combat Systems Center



***Naval Air Warfare Center
(Patuxent River)***



***National Oceanic and
Atmospheric Administration***



Virginia Commercial Space Flight Authority



U. S. Coast Guard



The Wallops Mission

Vision

The Wallops Flight Facility will be a national resource for providing low cost integration, launch, and operation of suborbital and small orbital payloads

Mission

To further scientific, educational, and economic advancement by providing facilities and expertise to enable frequent flight opportunities for a diverse customer base

Key Mission Elements

Suborbital & Orbital Flight Projects

Mission Operations

Scientific Research

Technology Development

Educational Outreach

Commercial Development of Space

NASA/WFF Suborbital Projects



Sounding Rockets

- ***20-35 missions per year***
- ***Space & earth science, microgravity, & technology research***
- ***Worldwide launch locations***
- ***Low-cost, quick response missions***
- ***Altitudes > 1300 km, Spacecraft > 2000 lbs., Flt. Times > 20 mins***
- ***Complete in-house mission capabilities***



Scientific Balloons

- ***20-35 missions per year***
- ***Primarily supports space science research***
- ***Worldwide mission support***
- ***Suspended loads > 6000 lbs.***
- ***Float altitudes of > 100K ft.***
- ***Mission durations up to several weeks***
- ***Ultra Long Duration Balloon development provides 100-day missions***
- ***Future plans include trajectory control and Mars missions***



Scientific Aircraft

- ***Low-to-medium altitude earth science research support***
- ***In-house aircraft modifications to support unique instrument needs***
- ***Worldwide mission support***

NASA/WFF Orbital Projects



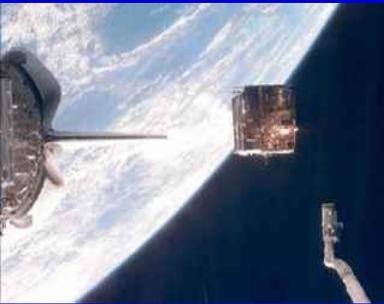
University Class Projects

- ***Space & earth science small spacecraft missions***
- ***Total mission cost < \$15M***
- ***Heavy student & HBCU participation***
- ***Flown on ELVs, Shuttle, and Balloons***



Shuttle Small Payloads Projects

- ***Carriers include Get-Away Special, Hitchhiker, & Space Exp. Module***
- ***Support includes mission management, hardware systems, & safety***
- ***Carriers provide power, data, thermal, and experiment control***
- ***New emphasis on ejectable systems & Space Station applications***



Spartan Projects

- ***Space Shuttle based freeflyer carriers***
- ***Support includes mission management & hardware systems***



Space Station Research Program

- ***Coordination of Station research for NASA space & earth science***
- ***Facilitation of administrative & safety processes***

NASA/WFF Mission Operations



Launch Range

- ***Suborbital & orbital rockets, balloons, & drop model operations***
- ***Science research, technology development, testing, & training***
- ***Support to NASA, DoD & commercial customers***
- ***Complete mobile launch range support***



Research Airport

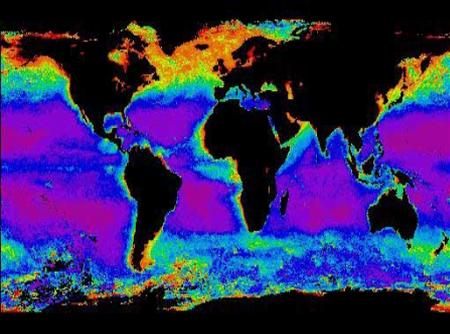
- ***Support for aircraft & airport research***
- ***3 runways, 2 longer than 8000 ft.***
- ***Supports aviation acoustics, safety, airport capacity, & airport/aircraft instrumentation development testing***
- ***Ideally suited for UAV operations***



Orbital Tracking

- ***Management of NASA's Ground Network***
- ***Around the clock tracking/commanding of 20-30 NASA satellites***
- ***Development/operation of remote transportable telemetry systems***
- ***R&D of highly autonomous tracking systems***

Other NASA/WFF Activities



Earth Science Research

- Resident researchers investigate global climate change*
- Instrument development*
- Research laboratories*
- Extensive use of WFF aircraft and Test Range*



Engineering & Technology Development

- Engineering support to WFF flight projects*
- New technology development for WFF carriers & mission operations*



Education & Outreach

- Student sounding rocket & balloon missions*
- VA Space Flight Academy*
- University partnerships*
- Cooperative education/employment programs*
- Educator resources*
- Visitors Center, tours, speakers & other public outreach*

Other WFF Technical & Logistical Services



- ***Engineering***
- ***Fabrication Labs***
- ***Flight Environment Testing***
- ***Materials Testing***
- ***Calibration***
- ***Chemical Analysis***
- ***Weather Forecasting***
- ***Data Analysis***
- ***User Facilities***
- ***Security***
- ***Crash, Fire, and Rescue***
- ***Photo Services***
- ***Printing***
- ***Public Affairs***
- ***Shipping/Receiving***
- ***Food Service***
- ***Technical Library***
- ***Fitness Facility***
- ***Dormitories***
- ***Small Purchases***
- ***Environmental Management***
- ***Hazardous Storage***

The Future



- ***Increased government & commercial Test Range support***
- ***Advanced space transportation testing***
- ***Range technology development***
- ***Mars missions***
- ***Improved carrier system technologies and modifications for Space Station research***
- ***Quick response access to Space Station***
- ***Increased Unpiloted Aerial Vehicle activities***
- ***New partnerships and teaming***