



# NASA Applied Science @ SSC

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<http://science.ssc.nasa.gov>

*Duane Armstrong  
Chief, Applied Science & Technology Project Office*

# Career & Education Overview



- NASA Career

- Chief, NASA Applied Science & Technology Project Office, SSC
- Deputy, NASA Applied Science & Technology Project Office, SSC
- Acting Deputy, Office of External Affairs, SSC
- Lead, Science & Technology Division, SSC
- Senior Engineer
  - Goddard Space Flight Center and Langley Research Center
  - 12 flight science instruments – Earth science, space science, heliophysics and missile defense – 4 currently in orbit
  - R&D – nanophotonics, radiation hardened mixed-signal electronics, quantum effect sensors, advanced data acquisition systems, intelligent/adaptive/autonomous systems
- Cooperative education student

- Education

- BSEE, Mississippi State University
- Ph.D. candidate, Virginia Commonwealth University



# Earth System Science



Sun- Earth  
Connection

Climate Variability  
and Change

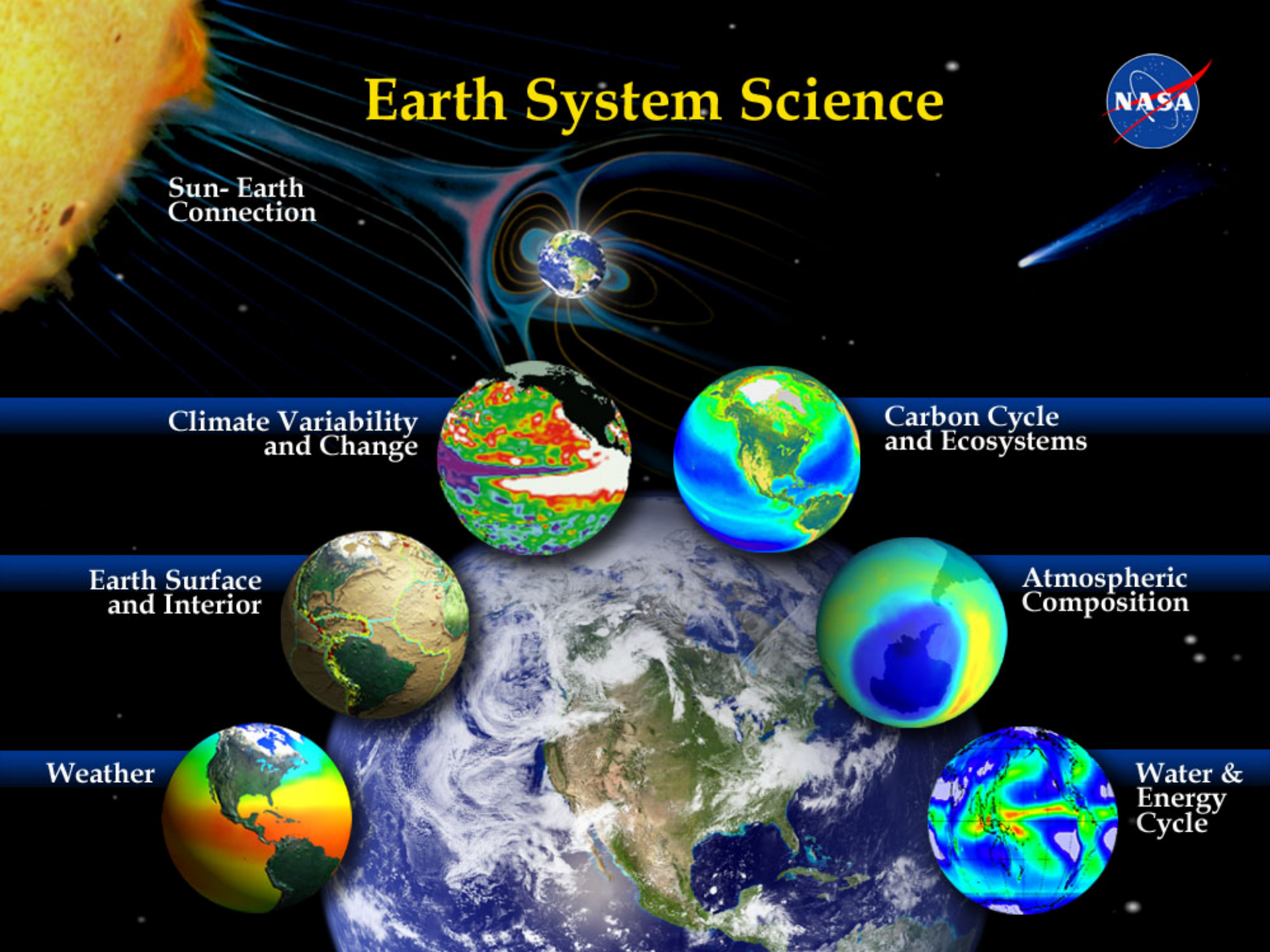
Carbon Cycle  
and Ecosystems

Earth Surface  
and Interior

Atmospheric  
Composition

Weather

Water &  
Energy  
Cycle



# 2012





# SCIENCE@SSC

- Performs Scientific Research That Benefits The Nation And The Region
- Coordinates Multi-Agency Scientific Research Initiatives For NASA HQ
- Represents NASA On National And Regional Scientific And Policy-Making Bodies



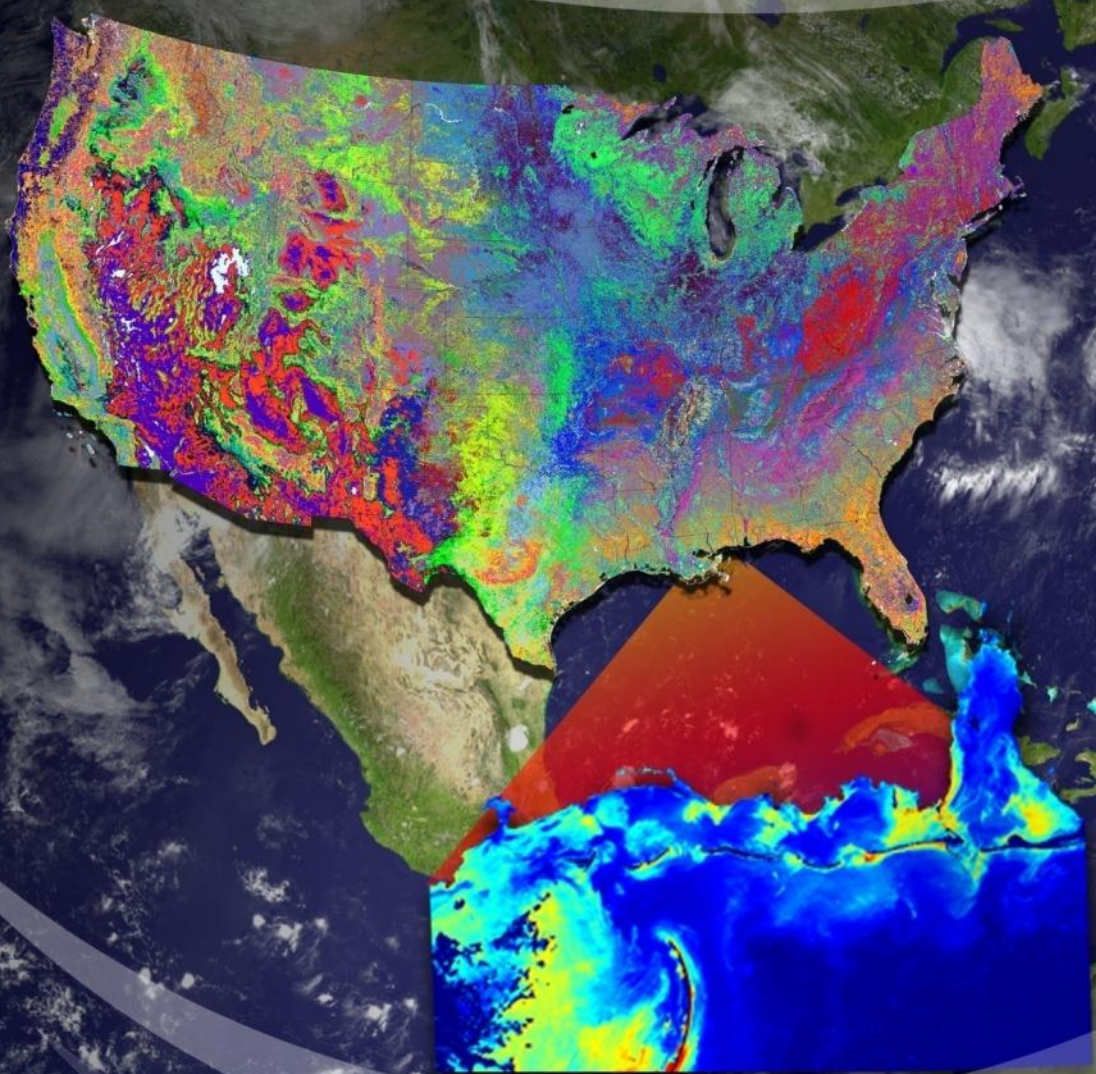
Provides National Exposure for NASA Science



Enables Students to Participate In NASA Research



Develops Environmental Monitoring Technologies







*Applied Science & Technology Project Office*

*Stennis Space Center*

**Making a difference  
in the Gulf,  
across the country,  
and around the world.**

**Disaster Response**

- Floods & Drought
- Tornadoes & Hurricanes
- Fires
- Oil spills

**Coastal Restoration & Recovery**

- Oyster fisheries
- Coastal marshes
- Barrier islands
- Seagrass beds
- Water Quality

**Forest & Ecosystem Management**

- Continental early warning system
- Pests & invasive species detection
- Habitat identification & conservation
- Damage and recovery monitoring

**Technology Development**

- Cloud computing
- Environmental sensors
- Unmanned aerial vehicles
- Innovative web applications

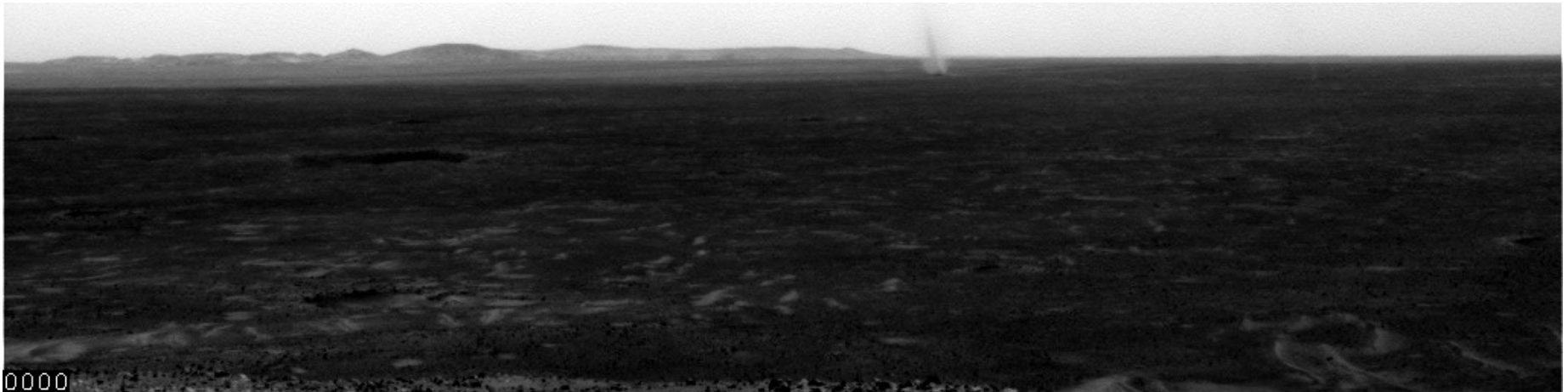
**Education & Outreach**

- DEVELOP
- DRIFTER
- Internships

**Partnerships**

- Local, state and federal agencies
- Industry and non-profits
- Universities

# Dust Devils on the Surface of Mars







**Questions?**