NASA Applied Sciences
DEVELOP National Program

Jamie Favors
Deputy National Lead
Hurricanes

Rockets
DEVELOP National Program
Applied Science
Community Concerns
Policy
Decision Making
EOS
Capacity Building

NASA + Paid Internship = ✔
Community Concern

Policy & Decision Making

Earth Observing System

Applied Science
Student Run, Student Led
Project Lifecycle

**Applied Sciences Program**
- Project Topics: Science
  - National Science Objectives
  - Program Managers
  - Science Advisors
  - Decadal Survey

**Project Execution**
- Student led
- Partner with stakeholder
- Identify & collaborate with science advisors

**Presentation**
- State & Local Public Policy and Science Forums (AGU, AMS, SGPB, CSG, etc.)

**Capacity Built:**
- Future Workforce
- Partner Organizations
- State & Local Governments
- General Public

**10 Weeks**

**Project Topics: State & Local**
- Community Demand
- SGPB
- CSG
- NACo, etc.
Texas Wildfires of 2011

- Nearly 4 million acres burned
- $78 million in agricultural loss
- Reported $121 million extra cost to the state of Texas
- Over 28,000 separate fires and 7,000 structures lost

Smoke plumes over Bastrop, TX

Provides best data, but...

Costly
Timely
Potentially Dangerous
Fall of 2011, a DEVELOP team at Langley Research Center partnered with the Texas Forest Service

- Map burn severity
HIVE
Highly portable Immersive Virtual Environment

- The HIVE is a 3 walled structure for projecting a 3D environment using LC stereographic shutter glasses
- The HIVE can be setup in under 30 minutes
- It is useful for visualizing data in an easier to understand way than traditional 2D displays
Project Requirements

- Highlight the *capabilities of NASA* satellite and airborne remote sensing technology
- Address *community concerns* relating to environmental issues
- Align with at least one of the nine NASA Applied Sciences Program’s *Application Areas of National Priority*
- Partner with local, state, regional, and/or federal organizations who can *benefit using NASA EOS* to enhance decision making
- Meet partner needs by providing *decision support tools*
- Research is conducted by *student teams with varied backgrounds*
- *Science advisors and mentors* from NASA and partner organizations provide guidance
Applicant Requirements

- High school through graduate level (age 16+)
- Interdisciplinary backgrounds (majority from STEM fields)
- US Citizens & Foreign Nationals*
- Minimum 3.0 GPA
- Currently enrolled in school
- Students come from diverse background, no experience is required but a strong interest in GIS, remote sensing, and science is important

* Foreign nationals accepted at regional & academic locations

Three 10-week terms per year:
Spring, Summer, and Fall
Students must reapply each term
Locations

**NASA Center Locations**
- Ames Research Center
- Goddard Space Flight Center
- Jet Propulsion Laboratory
- Langley Research Center
- Marshall Space Flight Center
- Stennis Space Center

**Regional Locations**
- Great Lakes & St. Lawrence Cities Initiative
- Mobile County Health Department
- Wise County Circuit Court Clerk’s Office
- Fort Collins Science Center

**Leveraged Academic Locations**
- St. Louis University
- Monterrey Tech, Mexico
Student Opportunities and Benefits

- Improved **research skills**
- Invaluable **presentation and communication skills**
- An improved understanding of the **importance of team work**
- Enhanced understanding of **scientific research and the publishing process**
- A learning experience in a **professional environment**
- Experience working on a **multidisciplinary team**
- **Travel**
- Valuable **management and leadership skills**
- **Networking opportunity** with NASA scientist and personnel and partner agencies
- Relevant hands on **experience with NASA science data products, remote sensing, and GIS**
- Skills in utilizing and integrating satellite data and models into **real world applications**
- **Personal development** through exercises and personality testing
Contact & Application Info

- Applications
- Projects
- Videos
- Information
- News and features
- Live events

Website: http://develop.larc.nasa.gov
Facebook: www.facebook.com/developnationalprogram
Twitter: http://twitter.com/#!/nasa_develop
Foursquare: https://foursquare.com/nasa_develop
YouTube Channel: www.youtube.com/user/NASADEVELOP
Google+: http://ow.ly/augy8
LinkedIn: www.linkedin.com/groups?id=4343498&trk=group-name
DEVELOP National Program

develop.larc.nasa.gov

james.e.favors@nasa.gov

Thank You!