

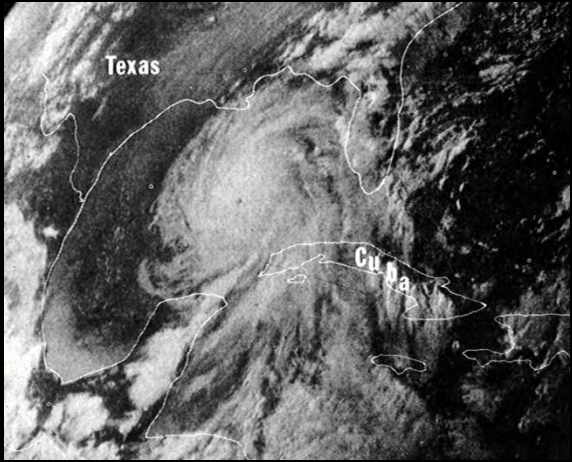
**NASA Applied Sciences
DEVELOP National Program**

Jamie Favors
Deputy National Lead

Ocean Springs, MS



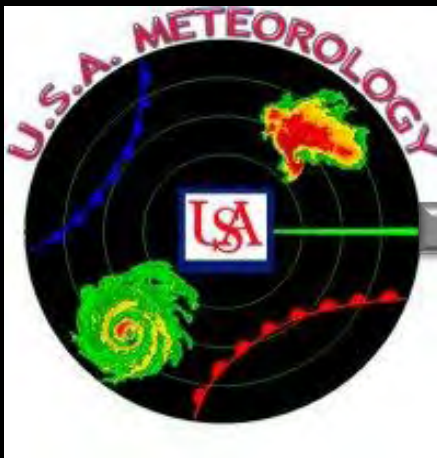
Hurricanes



Rockets









DEVELOP National Program



Applied Science
Community Concerns
Policy
Decision Making
EOS
Capacity Building



Paid Internship

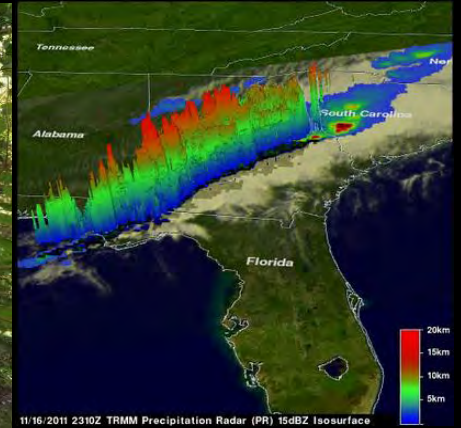




Community Concern



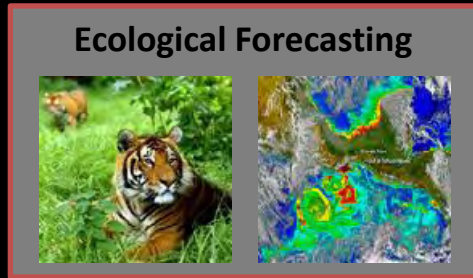
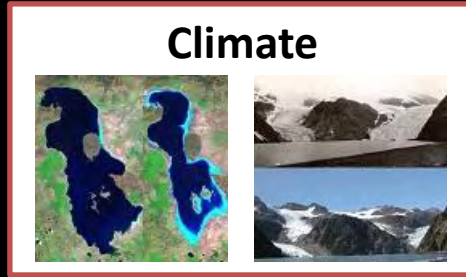
Policy & Decision
Making



Earth
Observing
System

Applied Science

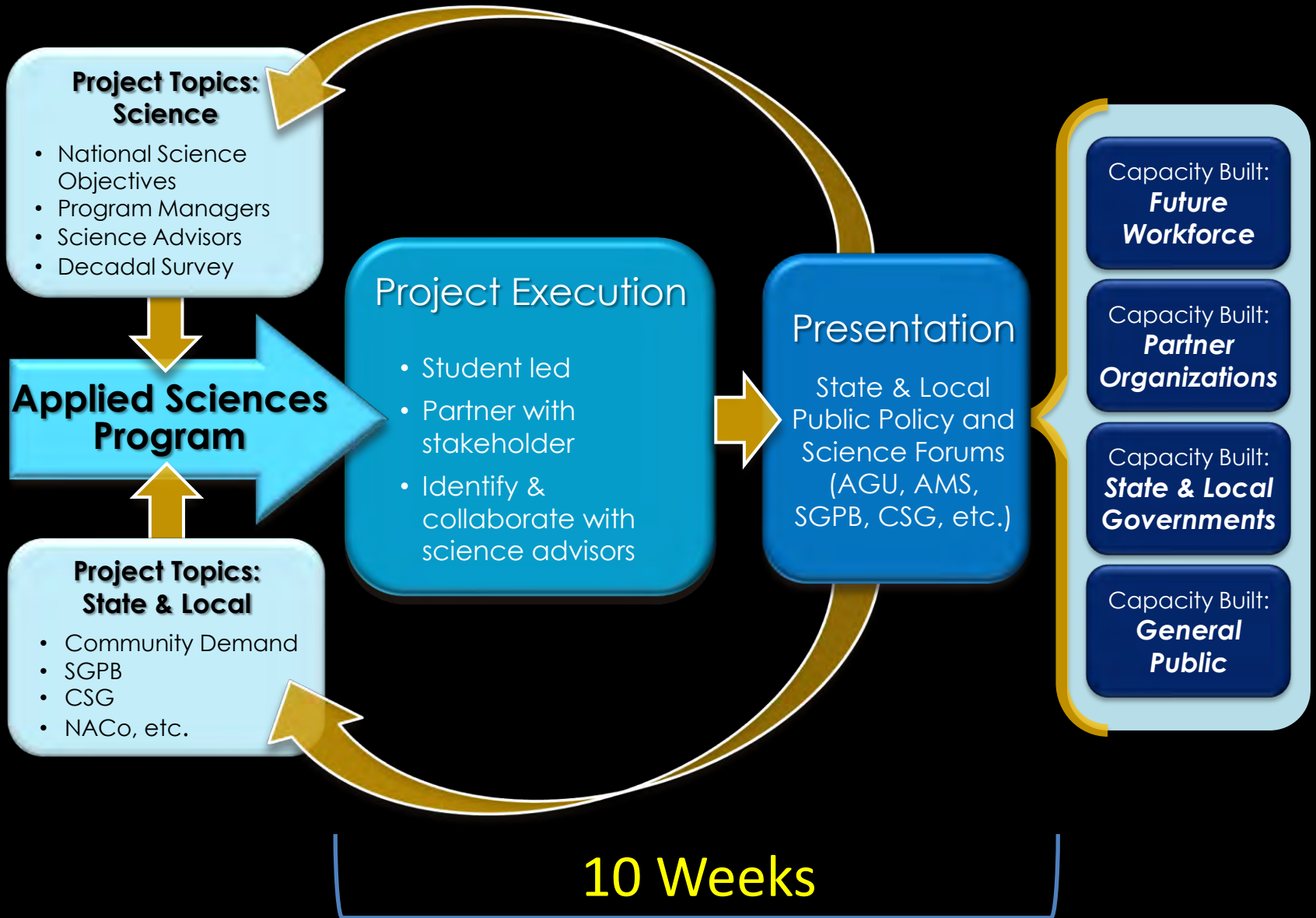
Applied Science



Student Run, Student Led



Project Lifecycle



Texas Wildfires of 2011



Smoke plumes over Bastrop, TX



Provides best data, but...

Costly

Timely

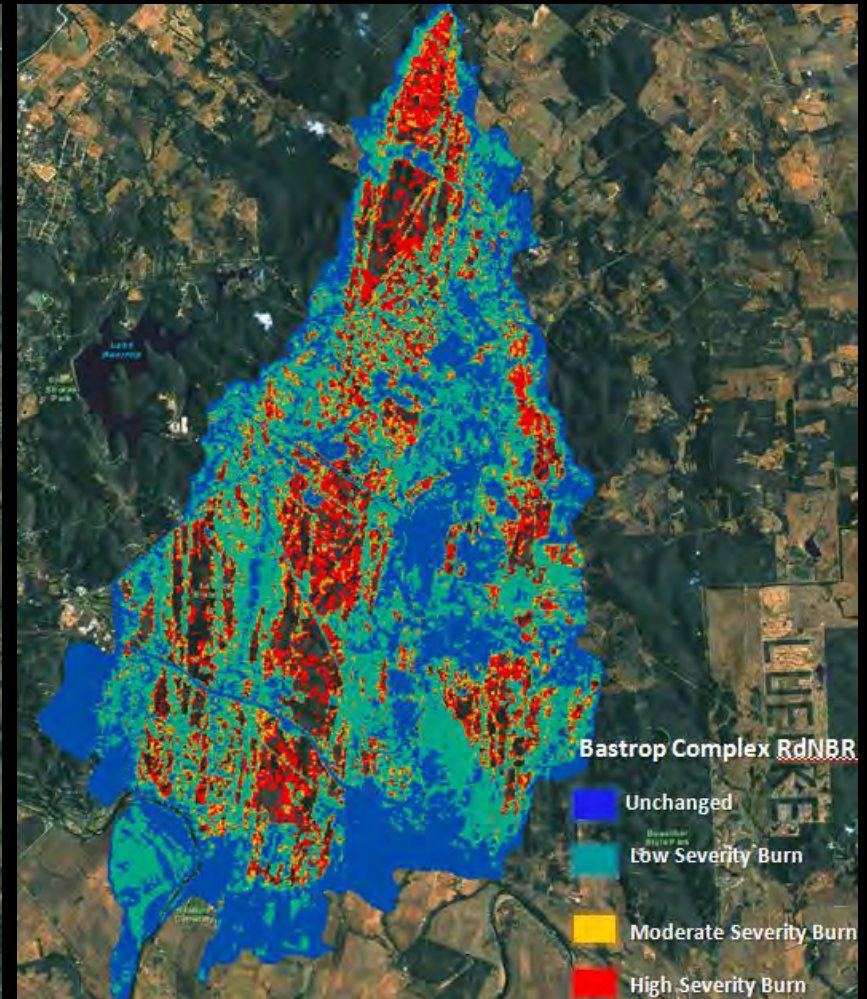
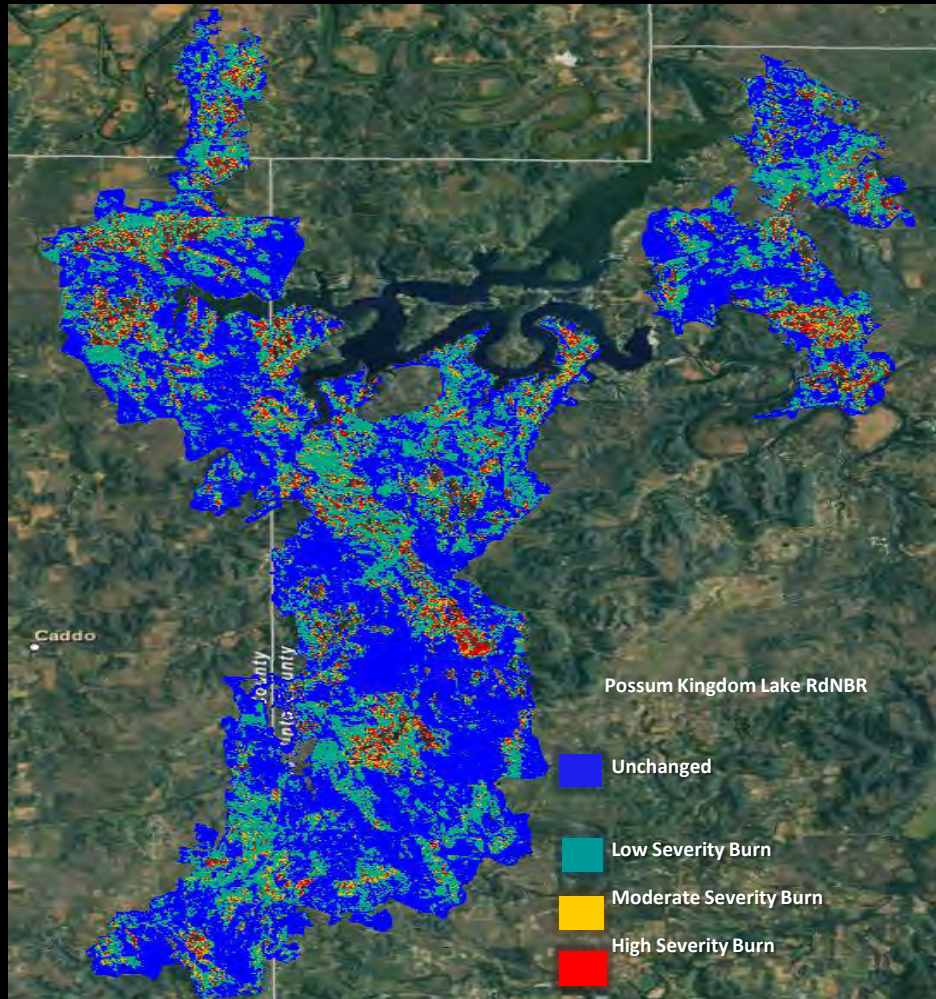
Potentially Dangerous

- 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



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

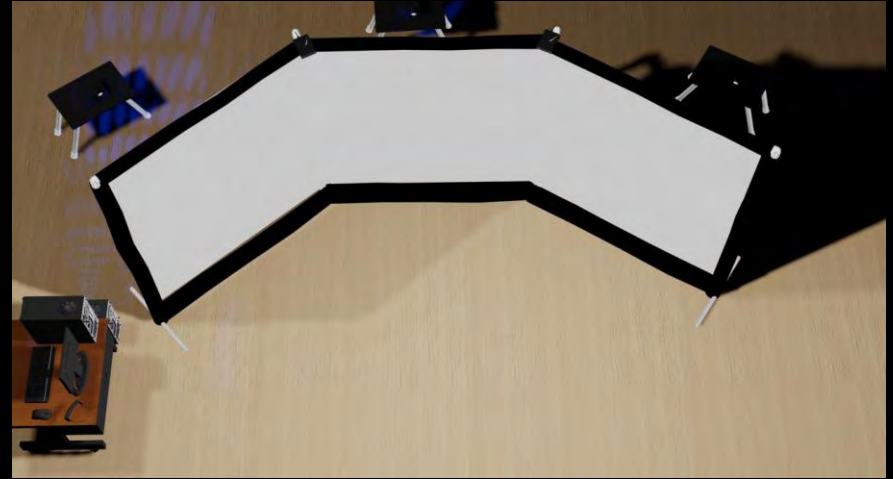
- Map burn severity



HIVE

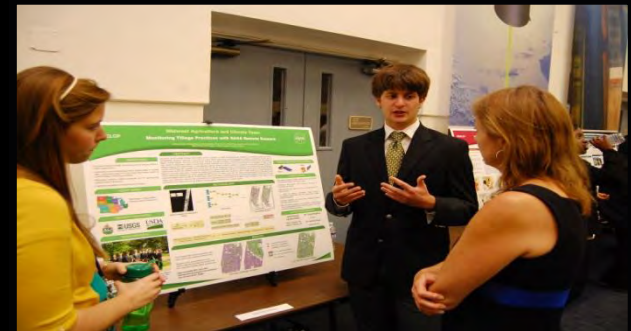
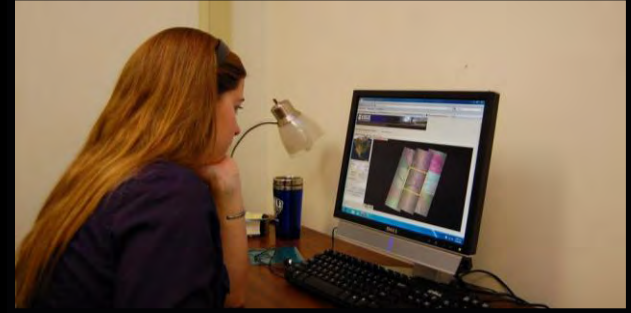
Highly portable Immersive Virtual Environment

- 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

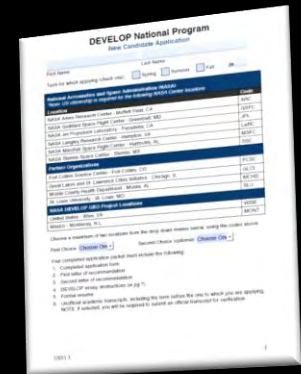
Student Opportunities and Benefits

- 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/auqy8>

LinkedIn: www.linkedin.com/groups?gid=4343498&trk=group-name

DEVELOP National Program

develop.larc.nasa.gov

james.e.favors@nasa.gov



Thank You!