AEROKATS
Advancing Earth Research Observations with Kites &
Atmospheric/Terrestrial Sensors

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4-3-18
1912 Picavet Alternative - The Aeropod
MultiPod

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UMES/Boseman Field - Thermal Imager
Arenal & Turrialba Volcanoes
w/ David Pieri/JPL, Andres Diaz/Univ. Costa Rica
VEREX
Volcanic Retrievals Emissions Experiment
AEROKATS and ROVER Education Network

Typical NASA Mission Model

AREN Model

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**TwinCam**

- Low-Cost Video Cameras: Color and Near-Infrared for Normalized Difference Vegetative Index (NDVI)
- With UMES Natural Sciences & Engineering and Aviation Sciences Departments
TwinCam
Twin Cam Image Processing - Classification Example

Visible (RGB)  Near Infrared (N)

Composite (NRG)  Classified
Profiler
Boundary Layer Studies
Profiler

- Wind mph v Alt Ft - Beach
- Wind mph v Alt Ft - Field
- Temp F v Alt Ft - Beach
- Temp F v Alt Ft - Field

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Eclipse 2017: AREN at PARI
MicroSpectrometer on MSC Barge
w/ Jeff Sumey, et al – California Univ. of Pennsylvania
Schmidt Ocean Institute R/V Falcor
Images Captured by S. Uz, et al/NASA