



HyspIRI Airborne Science Campaign

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HyspIRI Science Workshop

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Potential Airborne Campaign



- April 2008: Discussions at CC&E Joint Science Meeting
- Goals: Science & Mission Preparation
 - Demonstrate new science available from HypsIRI-like sensors
 - Build HypsIRI research community
 - Provide mission precursor opportunities (e.g., product definition, algorithm refinement, & associated validation)
 - Develop momentum for program
- Initial Considerations
 - Transects running from upland areas of active volcanology through lowlands & coastal zone out to continental shelf: a *“Rift to Reef”* campaign
 - Fits well with calls for an interdisciplinary atmosphere, land, ocean program building upon the connectivity of a shared hydrology (“Landscape to Coast”)
 - Incorporation of thermal sensor & related objectives add extra dimensions to this initial concept
 - Consider combined questions, as well as VQs & TQs
 - Suggestion of 2 campaigns over two to three year period
 - Low latitude – volcano(es) to reef through tropical terrestrial habitats (e.g.: Costa Rica)
 - High latitude – volcano(es) to areas of high coastal productivity from upwelling or other processes (e.g.: Alaska)
 - Common platform carrying AVIRIS imaging spectrometer & MASTER (MODIS/ASTER) airborne simulator
 - Platform requirements suggest either ER-2 or WB-57 aircraft
 - High-flying aircraft offering approximately 20 to 50m ground spatial resolutions from sensors



Airborne Opportunities



- Flight hour costs = ~\$3600/hour
- NASA Earth Science R&A Program has funding for flights to/from Alaska or Costa Rica & for ~25 hours of data acquisition
- Wary of capturing data without research team in place to define & participate in mission & use imagery acquired
- Challenge: funding for the research component
- Have been considering using ROSES 09, but still need to secure funds
- TE Program in ROSES 08 called for scoping studies but none proposed
 - Other TE opportunities?
- Possible Arctic campaign amongst R&A programs with ship time
- IDS opportunity?
- Other opportunities for temporal investigations
- NASA seeks community participation to scope flight campaign(s), includes:
 - Compelling integrated research topics
 - Selection of sites for flights