

Project Calliope **Science & Social Media**

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We present the 'Project Calliope' picosatellite to explore how to use social media to initiate, fund, and engage in scientific research. 'Project Calliope' is a sonified ionospheric detector being launched in 2010 on the "TubeSat" platform. It has no federal or academic contribution, and relies on 'citizen scientists' and such 'citizen journalist' channels as ScientificBlogging.com for its technical and infrastructure support. The fundamental question of whether good science can come from small packages has a mixed answer. We put forth the 'Science2.0' concept of science as play, provide a method for engaging individuals as contributors, discuss the pros and cons of operating a research project with full transparency, and present preliminary K12 outreach results.

Project Calliope is a science/music satellite



Input

Earth's Ionosphere
orbital environment

Output

MIDI music signals

Specs:

InterOrbital.com \$8K 'TubeSat'
in a 3-16 week polar orbit

'ICube-X' Sensors from
InfusionSystems.com

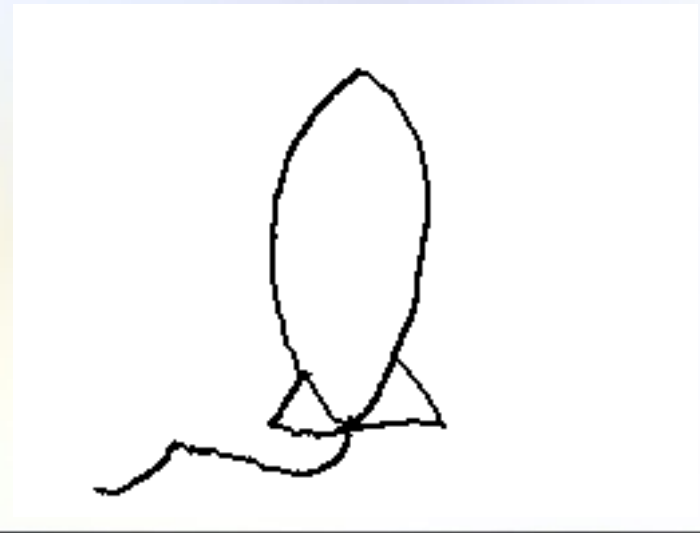
2 ionospheric magnetic sensors
1 particle counter
4 light sensors to track spin
1 temperature sensor

Downlink via shared HAM,
estimate 90-180 minutes/day.

Redistribution via web and P2P

Why?

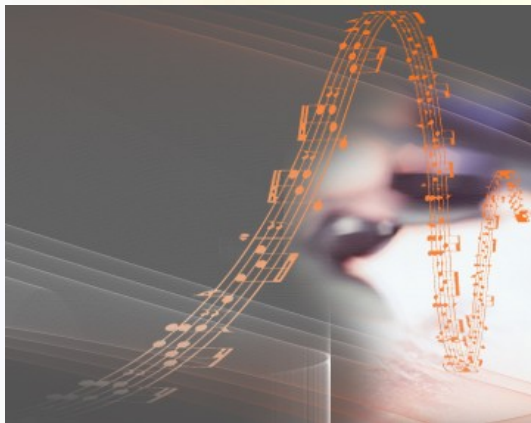
- Dawn of private space age
- 'Small science' by individuals
- Science & Music collaborating
- Open notebook science
- Sharing and remixing
- It's what I do.



Fueled by Social Media

Original plan: assemble a crack engineering & ops team, then promote it myself.

Reality: I can build it solo, using COTS!
But promotion requires many hands.



Communities Engaged

Public: via ScientificBlogging.com



Tech: Infusion Systems' tech team
InterOrbital Systems CEO



Music: P2PNet, Audio4Cast, Echolot



Edu: Project ASTRO, regional K12, J. Wallin



Academia: <crickets>

The Future is 2010/2011

There is a love and need for space, not just among techies but among musicians, artists, students, anyone who looks up.

@skyday #aas215

Project Calliope: “Music from Space”

Alex Antunes

<http://ProjectCalliope.com>

http://scientificblogging.com/satellite_diaries

twitter: @skyday