

## Conveying International Space Station Science

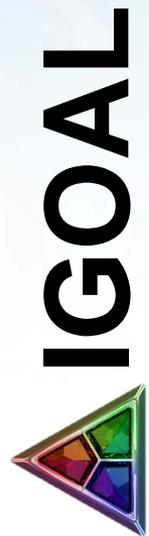
Data Science Day, April 2017 abstract

Over 1,000 experiments have been completed, and others are being conducted and planned on the International Space Station (ISS). In order to make the information on these experiments accessible, the IGOAL develops mobile applications to easily access this content and video products to convey high level concepts. This presentation will feature the Space Station Research Explorer as well as several publicly available video examples.



# Conveying International Space Station Science

- **Over 1100 ISS Science Experiments**
  - Six main categories of experiments
  - Each category has 5-21 subcategories
  - Information within experiments includes:
    - Synopsis
    - Earth/Space Applications
    - Investigators
    - Expeditions
    - Sponsoring Agency
    - Sponsoring Organization
    - Technical summary
    - Objectives
    - Links
    - Images
    - Publications
    - And several more
- 9 major facilities for conducting experiments





# Conveying International Space Station Science

- **Public Accessibility**

- Web page access only
- Access experiments alphabetically
- Can filter by category, date, expedition, partners or name
- Text based, no visual feedback
- No search capability

- **Problems that needed to be solved**

- How can we convey the volume of experiments?
- How can we see the progression of experiment volume throughout the operating years of the ISS?
- How can we communicate this to the general public?
- How can we communicate this to scientists and researchers on the same platform?

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# Conveying International Space Station Science

- **Goals**

- For experiments
  - Graphically depict experiments, categories and subcategories
  - Visually show changes by expedition and sponsor
  - Provide search capability within experiments by keywords
- For facilities
  - Show the facility as well as provide the text description
  - Provide a common interface into experiment data
- Incorporate other media found on ISS Science web pages
  - Consolidates information into one place
  - Links
  - Benefits
  - Media
- Make all of this easily expandable
- Make updating data only < 1 week turnaround

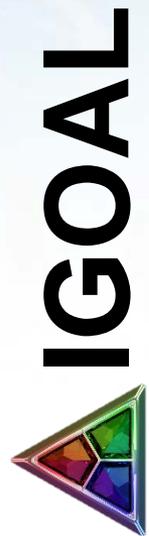
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- **Solution – Space Station Research Explorer**
  - Available on iTunes or Google Play
  - Over 58,000 downloads
  - 4.35 rating on Android
  - Users from over 100 countries
  - On ISS crew iPads





# Conveying International Space Station Science

- **Changing world of media**

- Social media channels need to be supported
- Long documentaries no longer work
- Must appeal to a wide audience
- Goal is to give enough information to convey concept and encourage viewer to look for more information
- Less “talking heads” more action

- **Solution**

- Quick (< 2 minutes) videos
- Movement
- Graphically depict concepts
- Short captions

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# Conveying International Space Station Science

- **Animation Examples**
  - Fruit Flies
  - BEAM
  - DNA

