

The NASA logo, featuring the word "NASA" in a bold, sans-serif font, with a stylized white swoosh and several small white stars to its right. The logo is positioned in the upper left corner of the slide.

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2013

**National Council of NASA Space Grant Directors'
Spring Meeting**

Arlington, VA

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TSGC and JSC Alignment

**(Topic Generic/Pertinent to all Space Grant
Jurisdictions and all NASA Centers)**

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Collaboration between Texas Space Grant Consortium (TGSC) and NASA Johnson Space Center (JSC)

- ❖ NASA and the SGCs are, by design, intended to work closely together and have synergistic Vision, Mission, and Goals
- ❖ The TSGC affiliates and JSC have been working together, but not always in a concise, coordinated, nor strategic manner
- ❖ Today we have a couple of simple ideas to present about how TSGC and JSC have started to work together in a more concise, coordinated, and strategic manner, and how JSC and non-TSG Jurisdiction members have started to collaborate:

Idea I: TSGC and JSC Technical Alignment

Idea II: Concept of Clusters



Collaboration between TGSC and JSC Topic I: TSGC and JSC Technical Alignment

❖ Topic I: TSGC and JSC Technical Alignment

- Background: In Fall 2011, as part of a new assignment within JSC, I started talking to a few SG Directors. I found out that they were being “dinged” by NASA for not doing “NASA stuff” with SG funding. The common problem I found was that SGs didn’t have enough information about what NASA does and what they needed done by the SGs.



Collaboration between TGSC and JSC

Topic I: TSGC and JSC Technical Alignment

❖ Topic I: TSGC and JSC Technical Alignment

➤ The solution – TGSC and JSC Technical Alignment

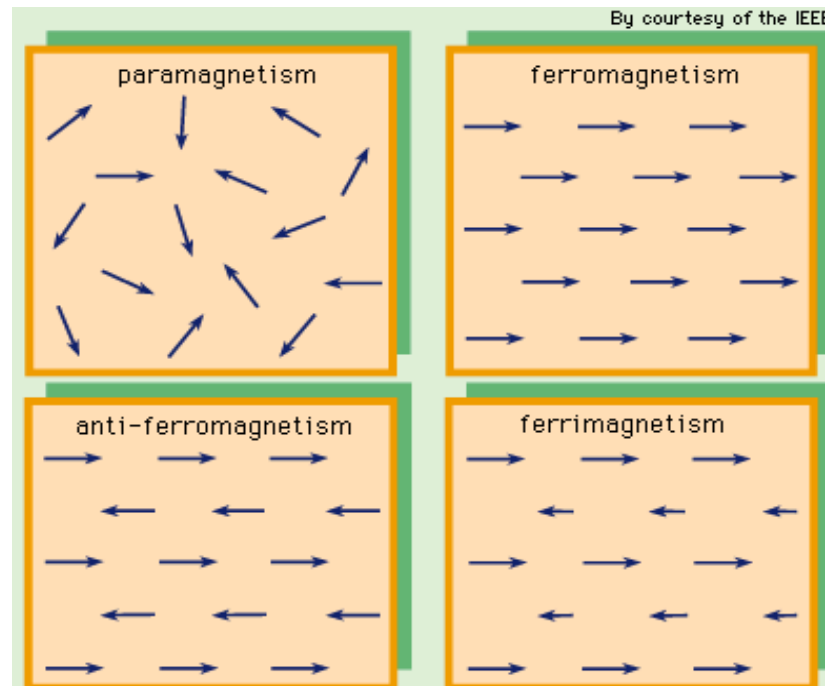
- ✓ Simply put, match the technical areas of JSC/NASA Centers' with the TSGC/All SG Jurisdictions' capabilities
- ✓ Defining and **methodically and strategically (vs. ad hoc)** mapping of JSC's (NASA's) technical problems and needs and capabilities against the technical capabilities, ideas, solutions and creativity of the TSGC's (All SGs) members in order for the TSGC (SGs) and the JSC (NASA) to work efficiently and collaboratively together in multiple areas:
 - Solving Human Space Flight Technology Challenges and Gaps. (JSC-centric)
 - Addressing the Human Space Flight road maps. (JSC-centric)
 - For other NASA centers, it is ANY Space Flight Technology Challenges and Gaps and addressing any Space Flight road maps.



Collaboration between TGSC and JSC Topic I: TSGC and JSC Technical Alignment

❖ Topic I: TSGC and JSC Technical Alignment

➤ What is it again? (hint one is bad, random):





Collaboration between TGSC and JSC

Topic I: TSGC and JSC Technical Alignment

- One quick, simple start to alignment is “JSC simply needs to tell us (TSGC) what it does, what it’s problems and needs are.”
 - Then use mechanisms that take advantage of TSGC working on JSC challenges/problems
 - *More detail in a bit...*
- Also a “starter” way to continually find out more about what JSC does is needed. Some suggestions are:
 - JSC Biennial Research and Technology Development Report
 - http://www.nasa.gov/centers/johnson/external_relations/university/biennial_report.html
 - 2005, 2007, 2009, 2011 are linked, and 2013 is in work now
 - “JSC-ized” technology road maps – *Ronnie Clayton presentation*
 - Derived from NASA HQ Office of Chief Technologist Roadmaps
<http://www.nasa.gov/offices/oct/home/roadmaps/index.html>
 - All SG Jurisdictions should go take a look at these road maps



Collaboration between TGSC and JSC

Topic I: TSGC and JSC Technical Alignment

- If you are interested in working with JSC, just ask! Point of Entry for Academia:
 - ✓ **Jeff Bye** (Supporting Dr. Lulla on Rotational Assignment, so start with Jeff)
 - JSC University Research, Collaboration and Partnership Office
 - 281-483-9814
 - Email: jeffrey.d.bye@nasa.gov
 - ✓ **Kamlesh (Kam) Lulla, Ph.D.**; *Director, University Research, Collaborations and Partnership Office*
 - 281-483-5066
 - Email: kamlesh.p.lulla@nasa.gov

- Odds are that as diverse as JSC is, there is probably something in common with any University
 - ✓ There are 15 Directorates, two major Programs, and White Sands Test Facility
 - ✓ Under these there are 30 Divisions and then 160 Branches or Offices
 - ✓ These organizations all have DIFFERENT PURPOSES, CULTURES, DEMOGRAPHICS, TECHNICAL AREAS, ETC.

- ⇒ **NOW EXTRAPOLATE THIS TO ALL THE NASA CENTERS AND ALL SG JURISDICTIONS!!! [NASA](#) AND THE SGs UNDOUBTEDLY HAVE A LOT OF POTENTIAL FOR COLLABORATION**



Collaboration between TGSC and JSC

Topic I: TSGC and JSC Technical Alignment

- Back to:
 - ‘One quick simple start to alignment is “JSC simply needs to tell us (TSGC) what it does, what it’s problems and needs are.” ‘
 - Then use mechanisms that take advantage of TSGC working on JSC challenges/problems
 - What “mechanisms” can we use to help get aligned with JSC, and once aligned, to collaborate with JSC?
 - ✓ Undergraduate Students
 - ✓ Graduate Students
 - ✓ Faculty/JSC Engineer Rotations
 - ✓ Research Collaborations
 - ✓ Education Outreach Programs
 - ✓ Facility Sharing
- ⇒ **IN REALITY ANYTHING IS AN OPTION**
- ⇒ **AND ANY ‘MECHANISM’ ABOVE CAN START TO BE UTILIZED, EVEN IF YOU ARE NOT YET “FULLY ALIGNED” WITH JSC**



Collaboration between TGSC and JSC

Topic I: TSGC and JSC Technical Alignment

- For example, Expanding on just the Undergraduate Student “mechanism” for Collaboration Options and Opportunities (these have been discussed with Dr. Fowler):
 - ✓ JSC can provide challenges and problems for TSGC’s Senior Capstone Project use, along with JSC mentorship
 - ✓ TSGC can support Internships at JSC. JSC will provide real world challenging problems, as well as direct mentorship.
 - ✓ Co-Develop Programs/Competitions for student engineers that involve Human Space Flight
- => ANYTHING INVOLVING, HELPING UNDERGRADS IS AN OPTION**



Collaboration between TGSC and JSC

Topic I: CLUSTER

❖ Topic II: Concept of a **CLUSTER**

➤ What is it?

✓ **CLUSTER = Collaboration for Leveraging with Universities in Space Technology, Engineering, and Research**

➤ In tomorrow's world, the problems are big/complex, and in today's austere budget environment:

✓ Leverage through collaboration vs. competition is what we should be doing

- » Leverage Every Resource We Have
- » Use Every Resource We Have Wisely
- » Cooperation and Teaming
- » Common Technical and Research Interests
- » Similar/Related Problems and Technical Challenges



Collaboration between TGSC and JSC

Topic I: CLUSTER

- **So what is a CLUSTER again?**
 - NASA and SG Jurisdictions working together
- **Example: Wearable Technology CLUSTER Status** *(next on agenda)*
 - MnSG/JSC Functional Apparel Design Collaboration – **Lucy Dunne**, *University of Minnesota* (sponsored by MN SGC) and **Cory Simon**, *NASA JSC*



Collaboration between TGSC and JSC

OPEN FLOOR FOR DISCUSSION

- ❖ **TSGC AND JSC HAVE INITIATED EFFORTS TO ALIGN**
- ❖ **TSGC AND JSC BELIEVE THIS IS SOMETHING ALL SPACE GRANT JURISDICTIONS AND ALL NASA CENTERS SHOULD DO**
- ❖ **JSC IS INTERESTED IN WORKING WITH ALL SPACE GRANT JURISDICTIONS**