LA NASA EPSCoR Planning Meeting, 8/1/22 – 8/2/22

University of Louisiana at Lafayette

Meeting Notes taken by Meaghin Woolie

Sli.do link: https://app.sli.do/event/mD8jWEHkbV83MQybqefxSk/live/questions

This link is still open and can serve as a further discussion space.

Attendee List: https://lanasaepscor.lsu.edu/wp-content/uploads/2022/09/LA-NASA-EPSCoR-Planning-Meeting-Participant-List-9.6.22-3.pdf

Action Items & Questions For Follow-Up Post-Meeting

1. Have an online follow-up meetings to the LA NASA EPSCoR meeting. LaSPACE will try harder to get reps from other MSIs and community colleges.
2. LA NASA EPSCoR will roll out the 2 new programs as a pilot, not competitive, next summer.
    a. Identify host campuses
3. Develop a Louisiana-based meeting to help create new collaborations & teams following Greg's idea inspired by a national model.
    a. Colleen wants Matt's UNO climate people to come to the meeting.
    b. Zappi notes that the SU and UL and LSU Carbon Uptake folks should attend.
4. Has LaSPACE considered doing something on the recruitment/educational side to do weekly seminars leading up to students applying to the new program?
    a. Something to provide baby steps with no commitment to pick anyone attending the seminars, but to help them learn and get a better picture of what this would look like for the summer before they make decisions.
    b. It would be good for institutions across the state to give a brief view of what they do.
    c. Have this localized show-and-tell to show off campus and opportunities for students, in addition to advertising widely.
5. Look into if host universities could "match" funds for the SURF students via room & board.
6. Constance mentioned MUREP 1 being released 8/22/22; perhaps a link could be shared
7. Jessica and Colleen talked about a potential clearinghouse for resources
8. Greg Guzik had a discussion with Matt Penny, LSU Physics & Astronomy Faculty and Ramesh Kolluru, VP of Research at ULL about a need for a Space Environmental Simulator to support space-related experiment designs across the state.

Funding Opportunities & Resources Mentioned:

1. NSF FAST Program
a. NASA representative states they are not sure if this opportunity will be available next year.
2. Engagement Opportunities in NASA STEM (EONS) Grant Forecasting: https://www.nasa.gov/stem/murep/eons/eons-grant-forecasting.html
3. NASA HBCU/PBI Data Science Equity, Access and Priority for Research and Education (MUREP DEAP) - (New for FY2022)
a. Open to HBCUs and PBIs only
b. Released: August 22, 2022
c. NSPIRES link: https://nspires.nasaprs.com/external/solicitations/summary!init.do?solId={B27EC226-B9E4-DEDA-599E-79B35D8DB94A}&path=open

4. LBRN summer environmental research https://lbrn.lsu.edu
5. LAMBDA Core User Facilities (CUF) https://www.lsu.edu/eng/mie/cuf/index.php
6. LA Board of Regents (BoR) opportunities for young faculty
a. RCS Program
7. Louisiana Optical Network Infrastructure (LONI Network) is owned by the LA BoR and operated with the assistance of the LONI Management Council and LONI Network Operation Center staff at LSU https://loni.org/
8. Louisiana Transportation Research Center (LTRC) Transportation Innovation for Research Exploration (TIRE) Program
a. Can view the 4 most recently-awarded projects (CTRL+ F the word tire): https://www.ltrc.lsu.edu/pdf/2022/LTRC_AWP_2022-2023.pdf
b. FY 2022-23 Request for Proposals (TIRE program contact listed): https://www.ltrc.lsu.edu/pdf/2021/rfp_TIRE_2022.pdf
9. U.S. Department of Transportation University Transportation Centers (UTC) https://www.transportation.gov/content/university-transportation-centers
10. Nanohub.org https://nanohub.org/
11. LAMBDA Seed Grants https://laepscor.piestar-rfx.com/opportunities
12. Young Investigators Forum
a. Zappi notes this would be an on-going zoom-based seminar series (Requested more info)
13. HBCU-UP https://hbcu-up.org/
14. NASA MSI Center program
15. NASA University Leadership Initiative (ULI) Program https://nari.arc.nasa.gov/uli
16. SBIR Roadshow https://www.sbir.gov/sbir-road-tour
17. LSUHSC Space Biology Interest Group (2nd Monday of every month at noon via zoom). Email Lynn and she can send the link.
a. Zappi notes he is going up in early fall to present his work. He suggests the alternative energy and climate change test facilities at the campuses. (Requested more info)
18. LSUHSC diversity programs contacts who should know if there is a program for Grambling or an undergraduate program:
a. Dr. Valarie White, Director, Office for Sponsored Programs (Valarie.White@lsuhs.edu)
b. Toni Thibeaux, Assistant VC for Diversity Affairs (Toni.Thibeaux@lsuhs.edu)
19. Lynn Harrison mentioned via email that the Cardiovascular Center has an R25 for cardiovascular research.
a. One of the overarching goals of the NIH Research Education Program (R25) is to encourage individuals from diverse backgrounds, including those from groups underrepresented in the biomedical and behavioral sciences, to pursue further studies or careers in research.
20. Mary provided links via email to the LS-PAC PSLAMP program
a. https://www.lsu.edu/osi/ls-pac/index.php
b. https://www.lspacmodels.org
c. https://www.lsu.edu/osi/programs/ls-lamp-program/
21. LaTech website where they post when they're having seminars: https://community/latech/edu/new-frontiers/
22. LaTech VISTA program is having art exhibit. The art students work with researchers: https://www.latechvista.com

Meeting Notes

Participants quoted/paraphrased in notes: Greg Guzik, LaSPACE/La NASA EPSCoR (Greg); Mark Zappi, ULL (Zappi); Mary Caldorera-Moore, LaTech (Mary); Lynn Harrison, LSUHSC (Lynn); Jessica Patton, Board of Regents (Jessica); Colleen H. Fava, LaSPACE/ La NASA EPSCoR (Colleen); Patrick Mensah, SUBR (Patrick); Sheila Holmes, ULL (Sheila); Shengmin Guo, LSU (Shengmin); Mitch Krell, NASA (Mitch); Constance Meadors, NASA (Constance);Matthew Tarr, UNO (Matt); Jonathan Raush, ULL (Jonathan); Tomekia Simeon, Dillard (Tomekia);David Lafargue, SOWELA (David); Mohammad Salam, SUBR (Salam); Bill Shelton, LSU (Bill); Ramesh Kolluru, ULL (Ramesh)

DAY ONE, August 1, 2022

9:00am Brief welcome / logistics overview
9:15am Networking breakfast
10:00am Introductions / ice breaker

11:00am Program Administration Session (three presentations plus questions/discussion)

1. **Overview of NASA EPSCoR Program & Administration of that program in Louisiana (T.G. Guzik)** (Guzik presentation slides linked here)
2. **LA NASA EPSCoR RID – Deep Dive – New Programs for MSI faculty and students (C.H. Fava)** (Fava presentation slides linked here)

- Greg- NASA EPSCoR funds can't support projects in non-EPSCoR states. BoR funds have to be spent in Louisiana. We are not going to support a subaward project with support for researchers in Texas or Alabama, for example.
- Zappi- NASA connection makes you nationally competitive
- Questions/thoughts from Colleen's presentation
    - Mary- REU students / traditional student model might not work well for this because of time & experience. Might struggle recruiting students b/c they don't know what they're getting into. Has LaSPACE considered doing something on the recruitment/educational side to do weekly seminars leading up to them applying? Something to provide baby steps with no commitment to pick anyone attending the seminars, but to help them learn and get a better picture of what this would look like for the summer before they make decisions.
        - Colleen thinks this is a great idea. The silver lining of the pandemic is everyone getting comfortable with virtual communication. Good idea to step it up. We started award one month ago, but we aren't implementing until next year, so we have a full year.
    - Lynn- Following up on Mary. It would be good for institutions across the state to give a brief view of what they do. I've had kids come from Xavier and BoR. One student had no idea what he was walking into, but he was all in and he was specifically looking for an independent summer program.

- Jessica- Community college (CC) students might've chosen the CC education path for reasons like being close to home or resources. Keep that in mind because they might be scared to take that leap and the baby steps might help them.
- Mary- some jump and it might be scary after and hard financially, so they might check out. As a faculty, we could make these seminars bonus. Is there a way to make them listen via captive audience or some sort of carrot?
- Colleen- It's a small program and the intent is to do our own recruiting. We will publish widely, but the broad model has proven to not work. We're going to be requesting to have face time with student-serving STEM orgs on campuses; someone connecting with a faculty at Grambling; etc. The faculty can write the job ads with someone in mind and that's okay. We want that to be NOT because you already knew someone, but we want to great a space to invite in new researchers.
- Zappi- Part of goal is to connect faculty across state. If I want to get one, I'm already thinking who I'm going to connect with. Do faculty first and then student. Then through zoom, connect. Recruit student who has a stamp of a faculty member and kill 2 birds with 1 stone. To answer question about funding – our NASA project funded 4 REU students and it worked great. But you really need to offer the room & board funding. If not, it's going to be limited to those students who have both institutions within driving distance. I like the faculty plan too. Having one come to the lab in the summer with a dedicated role could expand our infrastructure and interaction. May consider only funding those faculty coming from one (R3/R4) to the next one which would preclude R1s going to next institution.
- Colleen- We are already doing that. No LSU student/faculty can do this program. LSU, ULL, UNO, LaTech, Tulane would be hosts. The HBCUs and all community colleges would send people to the hosts.
- Zappi- I like what you're doing and I think you can focus on the HBCUs and the 2yr programs, or the R3s/R4s by institutions where, again, I'm trying to build a collaboration with some of the other institutions.
    - Zappi suggests setting up an applied program for the two-year institutions.
- Colleen- I think that can be a Step 2. Step 1 is getting HBCUs to participate in the program; we want more from Southern, but we want the others to get involved.
- Mary- It's embarrassing the lack of research collaborations between LaTech/LSUSHC and Grambling.
- Lynn- we've had programs, but it's been years. We have a specific diversity chancellor/vice chancellor. This would also be a good way to get involved by bring this to them. We definitely run programs with Grambling because I remember having students. I don't think Bossier Parish CC has ever gone through LaSPACE. Lots of things going on there and I have contacts. Don't think have had a BPCC student come through the lab.
- Mary- It's a different mindset. Our students are mostly non-traditional or if they are traditional, they don't want to leave. There's specific reasons why they're there.
- Colleen- if you have children and need to figure out childcare, you eliminate a whole group of people by requiring 40hrs from students, so I really want to do part-time

option. A student doing 8-10 weeks in summer with 20hrs a week, that's significant! And if you can't make that significant for a student, we need a new host lab.

- Greg- question for Mary & Lynn. Heard you say we "used" to have collaboration with Grambling. We don't have to address this right now, but I have my suspicions as to why that is. I would like to see your statements as to why that is.
- Lynn- We might still have something, but I think it was linked with the NIH to get students interested in moving from a 2yr to a 4yr program.
- Jessica- It was the LBN summer environmental research? (Patrick says it still exists)
- Mary- There are so many benefits for recruitment purposes to host and make collaborations.
- Greg- Why aren't you tapping into that program now?
- Lynn- I haven't been asked recently. Usually they do various calls through various programs.
- Patrick- I think an opportunity as suggested by Mary is to have this localized show-and-tell to show off campus and opportunities for students, in addition to advertising widely.
- Zappi- Have to be careful. If you oversell and only let 6-7 in, the word will get out that it's over competitive and folks won't get in. Would you consider us going to HBCUs out of LA? Get students from Jackson State and Alcorn and bring them in.
- Colleen- We've talked about regional & interjurisdictional programs. EPSCoR management has talked about if we get the raises we need from Congress to grow and have an arm that's interjurisdictional, I would be open to that LATER. We need to address the needs within our state right now with the folks who are currently underserved. And then we can consider opening it up, get more funding, grow the project.
- Zappi- a lot of building relationship with HBCUs, could we recruit an underrepresented minority from a non-HBCU?
- Colleen- Problem is it's illegal. We can't recruit people on demographics, but we can recruit institutions on classification. We can't write an ad for a woman or person of color to apply because that's illegal, but we can do it by classification of institution. We know HBCUs/CCs serve a disproportionate number of underrepresented minorities, so that should be a prime space for recruitment to begin with.
- Zappi- Have you thought about assignments like 2 per HBCU so the challenge is on us to go get them? So you can get the distribution.
- Colleen- I'm open, especially for the pilot summer, to doing a limited and pre-arranged host relationship. We could say "We have 2 faculty seats or 6 student seats. We've identified that Shengmin is getting a faculty member and Zappi is getting a faculty member. You can have 1-2 students. And then Lynn can have 1-2 students." We could pre-identify the match for ULL to go for 2 Grambling students. If we pre-matched, it'd be limited to geography.
- Lynn- I think it's nice to keep it open because otherwise, we're limited to institution. Room & board needs to be included.
- Mary- The stipends need to be comparable to what they'd make in their other job.
- Colleen- But we also don't want them to need to quit their job, so we need the part-time so they don't have to go find a job again after 2 months.

- Zappi- 2 months is too short, so 20 hours a week cuts back the benefit of the graduates who are going to mentor them. The REUs work more with PhD than the actual faculty members.
    - Zappi notes, “For us, it has to be 40 hours per week or the grad student mentors will not be supportive.”
- Colleen- I really want a part-time program because we are pricing out such a large constituency.
    - Zappi notes, “Not all universities have an HBCU source of students that can come over to work on a part-time basis.”
- Lynn- That might depend on discipline. Certain can be done from home via zoom meetings.
- Sheila- Develop certain skills if they’re only going to be part time. Do training before so they’re ready to work. In our bio labs, have some training before they can even come into the lab like bio-safety.
- Shengmin- It’s hard to train students full-time for summer. We support our own UG students spread all year long. Stretch 3 months to 12 months.
- Colleen- That might work with geographic matches.
- Patrick- We have a collaboration with LSU for REU. Shared professional development activities where each week we Engage in professional development (writing skills, communication skills, presentation, etc.). Yes, bringing in a student and training them takes a while to be successful. But spread over 10 weeks, I think you can get some meaningful results. For e.g., some students we engaged this summer participated in the Louis STOKES promotional center for careers and some students came out with awards from this national program. We’ve considered recruitment of students across campuses.
- Shengmin- What about offering credit equivalent to 1 course?
- Colleen- We can’t pay and give course credit.
- Patrick- In terms of preparing them, engaging them…..this summer I have faculty & student paired who have gone on to Harvard. One student was engaged in research at Southern all year in research and this summer he’s gone with the faculty to work.
- Colleen- That goes back to Zappi and relationship between faculty & student. Faculty member could already be enmeshed in the research, understanding requirements and doing some of the training already. By the time they come to Mark’s lab, they already have XYZ skills and they’re just digging into a question.
- Lynn- Has a student in her lab who lives in Shreveport in summer, but goes to Xavier. Can they be involved?
- Colleen- I’ve thought about that and I think that’s something we implement later. If we don’t pay for housing, we’re saying “if you’re so lucky as to live in the area of this institution then you can apply” so now Xavier student could be taking spot of Grambling student. That could be privileging people who already have more access.
- Mary- From university perspective, this is going to be a recruitment negative for our graduate programs. LaTech isn’t the only one struggling with that since the pandemic. I can’t speak for my administration, but this could be the university’s opportunity to provide a match because that’s just matching funds. They have dorms and facilities already.

- Colleen- I'm curious about that and if we could have a university to put that up. We had a program that was specifically designed for community college students and HBCU students for our ballooning program. It was supposed to be academic year-long only. We had a concentrated amount of work that needed to get done and we still had funding, so we partnered with LSU REU program, and it was successful but really expensive to give them that significant level of stipend funding. If this program works well, we might could get bigger funding as NASA develops more opportunities for inclusion or an existing NSF program.

3. NASA OSTEM HQ Introductions (M. Krell & C. Meadors)

- Mitch Krell and Constance Meadors introduced themselves and spoke of their background and current work before segueing into the Q&A session.

12:30pm Open Q&A Session with Program Administration

- Greg- Mitch, what are your thoughts on moving forward in things like multi-jurisdictional efforts in EPSCoR?
- Mitch- You can always do multi-jurisdiction; nothing in NOFO to say it can't be this. But I have to have extra funds or we have to take away awards. Once I can break money away, that is my intent.
- Greg- Has there been further development on interagency?
- Mitch- We've also been looking at doing interagency stuff with NIH and maybe DOD. We're always looking for opportunities like that.
- Constance- NSF FAST program with NSF and it was geared to have faculty members apply & do research w/ NASA in summer. It was Funded by NSF and NASA EPSCoR was going to give a certain portion. Worked with Ali and NSF team recruiting/identifying faculty to apply. We had faculty ready, and what you're talking about reaching out, and the deadline hindered it.
- Colleen- Part of the problem with some programs, if they don't get subscribed early, they get killed. But they are not built for these audiences because you need more lead and development time. Constance & I have talked about spending more time prepping faculty in advance for these opportunities and offering support like proposal development, understanding contractual requirements, understanding govt codes you need to be following. We hope if it comes around again, we'll have more lead time to develop a package.
- Constance- MUREP-1 is coming out and is asking for institutions to collaborate. I'm looking to set up advisory councils. Working at HBCUs and MSIs to get faculty interested (we want 3-5 people) in working with us and then they work with SG EPSCOR directors along with their local institutions. Purpose of the advisory is to address concerns about partnerships from SG/EPSCoR and the concerns the institutions themselves (like Grambling) might have. It works to establish relationships so the advisory council could be tapped into or Constance and then they can reach out to Dr. Mensah, for example, to establish these relationships. We had a lot of interest in FAST. We discovered the timeline was right up on finals and end of the academic year. She pointed out that this was going to be a problem and it was. She wants us to know they try to take into consideration university schedules.

- Colleen- agency-wide, that's an issue because they forget our academic calendars are different and we have different constraints.
- Zappi- I would encourage you to keep in mind, to get really good collaboration we need a funded program to work with. We need to have a common bond of some type of formal program to make that relationship last. We can meet someone at a meeting and want to collaborate, but if you aren't writing up a proposal together then it's not going to last. What you're doing with the formality of this program is critical to building relationships. To the NASA people, keep fighting for those funds because unless you give the state the funds, this collaboration won't happen. The formality is important.
- Colleen- Last summer, NASA put out an RFI to improve DEIA and recruitment. I put together a committee, had meetings, shared document, and submitted a 20+ page document. People from SUBR, Dillard, OSP, and made lots of recommendations. Major recommendation was you can't jump straight into research funding. Need infrastructure funding so faculty could have lab space, someone in OSP to review/process grant and invoices, lessen teaching load. And nobody ever responded to that.
- Mitch- That's not unusual. Don't feel bad. You aren't being slighted.
- Colleen- I feel bad for the initiative because it's important work.
- Mitch- I've been hearing word that some stuff was happening. You brought up a point about the funds for buying infrastructure and I agree. One of the biggest things we've seen with MSIs, when we give funding to MSI: they don't do it, can't do it, or I was going to do it but I'm not now. And it's because they're not given the time to actually do it. Funding them for X-amount of release time, but their org won't release them. Nothing we can do except what Constance was doing is that the boards would get through to the upper level management to make them understand that in order to succeed at research, they need the opportunity or time to do it.
- Greg- The driver has nothing to do w/ boards, but many MSIs are state-funded. So what's driving this is the lack of funding from the state because it's decreasing. So you have mandates from state to teach N number of courses for a limited number of faculty. So your faculty go teach 6-7-8 courses and they can't do these things.
- Mitch- I agree. There are states like Mississippi getting extra money for funding MSIs because of a case (Ayers: https://mississippiencyclopedia.org/entries/ayers-v-fordice/) and the state had to take extra money and put into the MSIs. It (faculty not being able to take advantage of these other opportunities) shouldn't be happening, but you're right.
- Colleen- The issue in our state is that everyone got cut, but institutions like LSU are able to generate funding from federal agencies & donors, but other smaller institutions don't have that bandwidth.
- Mitch- If we are funding release time, they should be able to take that money and put somebody else in the classroom.
- Greg- That's the statement is that they don't allow release time.
- Colleen- That's why this is summer because we know they can't do it during the full semester.
- Zappi- Have to also help them round out 9-month salary to get those 3 summer months covered. The challenges of EPSCoR states stuck in middle of nowhere, so getting replacement faculty to cover those courses is challenging.
- Greg- For the many decades I've dealt with these kinds of things is the lack of knowledge of NASA leadership. They're going into those leadership positions have no clue how universities

work and especially no clue about how an MSI works. So they think let's have a program for a million MSI students to have five minutes of engagement in summer and NASA thinks they have "engaged" them. So you also have to educate the leadership at NASA as to what the real problems actually are.

- Constance- Another point is that all MSIs aren't the same. Sometimes when looking, you have larger MSIs and then HBCUs and smaller tribal colleges. What may work for an R2 or R1, but classified as an MSI. My school had to worry about how to replace me for my current position. Some MSI R1 universities may not have the same challenges. How do you addressed based on the type of MSI and how it may be different for each institution.
- Greg- I suspect MSIs in EPSCoR states are that much worse off than some of the others. So if you're trying to improve MSI participation in NASA research, you really should be going back to EPSCoR states and focus on those states/institutions. Because the Howards aren't in EPSCoR state, they're R1 and don't have the same kind of problem. Has OSTEM leadership been able to acknowledge that?
- Mitch & Constance- Not able to give a clear answer.

1:00pm Networking lunch

2:30pm Non-ULL NASA-Aligned Researcher Panel

1. **LSUHSC-S Lynn Harrison** (Requested Slides - link to slides to be posted when available)
2. **LSU Shengmin Guo** (Requested Slides - link to slides to be posted when available)

- Lynn brought up how nice it was to train high school students
- Shengmin had a nice slide of the CUF users after he listed out all the equipment available at LSU which other researchers could use. Maybe something like this can be made available so like he said, other folks are made aware of what is available for use
    - Happy with track 1 support and recently got track 2 support. But for many colleagues, hard to sustain funding. Even receiving small grant from LaSPACE, won't be able to hire a grad student and hire new students. Researchers need a large enough group of researchers and grad students to keep generating funding to support. Pool resources.
    - Shengmin-communication across disciplines is hard.

3:30pm Networking Break

4:00pm ULL Researcher Talking Tour (Zappi) (Requested Slides - link to slides to be posted when available)

DAY TWO, August 2, 2022

9:00am Networking breakfast

10:00am Day 1 Recap / Day 2 Overview & Open Mic Lessons Learned / Ideas

- Lynn- how are we structuring summer pilot? Stipend or what?
    - Colleen- haven't sorted that out yet. Need to discuss with Jessica. Part of it will be the ease with which can pay PLUS the needs of the host PIs (more supplies to have someone else working in the lab, for example). For follow-on stuff, we could have a follow-on

travel opportunity. Maybe a $500 stipend later in the year to present your work. Probably good to test the more complicated funding in the pilot.
    - Lynn- and we could have them come to the council meeting, putting that travel money toward presenting
- Zappi- I love the idea of getting together and the conversations we have had. Some renewing old friendships or making new friendships. As we talked yesterday, is maybe the idea of a young researcher foreign? So many people early in their career (avg age of getting your first grant is low 40s) is shockingly disappointing. In Louisiana we have several programs that are oriented toward young faculty like y'all and the BoR (RCS) and DOT tire grant. Your programs are open to young faculty and do very well with them. Maybe you alone or you in partnership with BoR has forums where the young faculty come and senior faculty give overviews how wrote proposals, how structured them, talk bout their program. Y'all have BoR and the LTRC with the TIRE program that won't fund you beyond assistant professor rank, so you have to be non-tenured. It's open to a lot of areas. If you can have that as a way to facilitate young careers taking off, that would be a huge gift to the young faculty.
    - Colleen- It would be good to partner with groups around the state, but it would not be something we led, rather we something we participated in. I haven't been in a NASA meeting that didn't mention inter-agency cooperation and you hear other agencies are interested in this as well.
    - Zappi- If you want to take the burden off yourself, ask each institution to host it and have different agencies come in. A day where young faculty can come in and meet those who've been through the trenches or are just receiving their first award. They'll get to see facilities and whatnot.
    - Colleen- could pitch to state EPSCoR committee and get buy-in from the higher level groups. If we did a real forum, could have concurrent sessions where BoR does present. We don't have the bandwidth to do it ourselves.
    - Mary- as a young faculty, it's beneficial to hear them talk, but there's no forum. You may not think of questions to ask, but someone else might. So maybe make it an official event instead of a casual pop-in thing.
    - Lynn- have senior faculty looking at young business proposals too because you need to know the tricks. Good to get the advice.
    - Colleen- I see forum that Mark is pitching as separate from what I was talking about earlier.
    - Zappi- young = untenured for the 4yr programs. Might be intimidating to have tenured faculty in the room when you haven't generated more than ~$300k. McNeese is making a big push to build their research capacity.
    - Colleen- maybe let institutions define themselves what it means to be young career.
    - Constance- I think what was missing from FAST was the PUIs, primarily undergraduate institutions. So in a state like LA, majority of schools are PUIs.
- Zappi- Talking to David Lafargue (SOWELA), he made a comment about a lot of what we talked about yesterday, we tend to gravitate more toward research & 4yr programs. The skillsets they're learning in a 2yr program. How do you fit a student who's learning construction management/process operations into a test-tube lab when they've been in a different setting? There are opportunities at our institutions for 2yr kids. What if we took the program and ask the

workforce side to fund 4-5 positions for community college students to come to 4yrs for facility construction/management instead of test tubes. Increase money through workforce commission because they have programs that would find David's students to come work on a construction project (solar energy, advanced materials).

- Colleen- David and I had good conversation about opening our perception of internships to be accommodating. When we focus on community colleges, we tend to focus on students transitioning to 4yr. We don't think about 2yr or certificates as its own space. I need to ask Michoud and Stennis how many employees have 2yr/certificates? There have to be people working on their HVAC systems getting those degrees. We can support that kind of work too.
- Matt- If you look at it other way around at community colleges, they have more assets that 4yr don't offer. Mechanical engineering undergrad (UG) students don't know how to weld and they're going to get jobs supervising people who do weld. Utilizing community college assets to better train UGs. With NASA missions, there are lots of things 4yr student don't know but should know. We're just not set up to teach those.
- Greg- for long time, Space Grant (SG) had difficulty trying to figure out how to deal with community colleges. SG focused on workforce development & research. When hit upon entry-level ballooning, things started clicking. SG offered a program to integrate community colleges with the program in SG. When we did that program, we used LaACES as the model. Both community colleges (Delgado and BRCC) integrated that into special topics course. Went beyond that and had both community colleges interact with Stennis and Michoud to go & visit those places and have them come to classroom. I agree about welding and other activities. For SG to do that, we'd have to put that into the context of aerospace. Not difficult, but it's something we have to do. Current leadership at OSTEM is very narrow-minded- focus on K-12 and engagement instead of students doing something productive. We need to couch it in terms of aerospace and sell it on that.
- Matt- One way to overcome the barrier with K-12 is to do mentoring program. Have UG students talk to middle schoolers, they have to think about how to explain it.
- Greg- I'm not necessarily against that, except in my experience, those 5-min or 1hr engagements…
- Matt- That's not what I meant…
- Greg- The impact on the middle school student is minimal.
- Mary- At least it's something
- Colleen- I think Matt's talking about an ongoing program.
- Patrick- we have a summer mentoring program where we have our UGs engaged as part of their mentoring activities.
- Greg- it's good for the UGs to have the exposure, but we have a lot of problems in the K-12 schools that won't be solved by an UG or professor visiting for an hour.
- Lynn- Shares that her son Joey joined LSU team in 8th grade. He went after school to do the ballooning classes. They were amazing with him.
- Greg- We have had high school groups even engaged in HASP and LaACES. The difference is that that teacher in that classroom was different. If we want to address K-12, we have to get to the teachers.

- Mary- The parents or children are self-selecting out of STEM as young as 2nd-3rd grade. If we're going to fix the system, we have to do something. Teaching and helping them find STEM, so the college students can feel like they can try to make a difference and help create a better pipeline. But you have to take small steps.
- Greg- We used to have a program where teachers would go to Michoud for 6-8 weeks. They'd develop lesson plans and apply it back to their classrooms. That worked out fairly well. We had a number of class & teachers that went onto other things. We couldn't sustain because it required school districts to release time during the academic year. Things like that, I think, are the way to attack that kind of issue. Back to community colleges and technical training, that's something I'd like to pursue. Jonathan doesn't have much to do these days, so we could have him come up with a community college program.
- Zappi- Is working on a multi-million dollar project. The community college skillsets are different from an REU. Their difference is our strength. Speaking for David, probably 20-30% of David's kids would travel, but the others won't (because of families and jobs) and the part-time option would be attractive to them. They could add so much.
- Greg- A few years ago, Joanna at Delgado Community College was partnering with Jonathan at ULL. The plan was for Joanna to send some students to Jonathan to work on advanced machine research and Jon's students would work on electrical at DCC.
- Jonathan- shared that the pandemic basically halted all work/progress on top of her constraints teaching so many courses + personnel constraints.
- Mary- I'm going to toss out there about Space Biology. There is a lot of research of how to grow plants better or develop systems. If y'all can solve the problem of water management for plants, I think there are additional untapped areas where community college students could delve into.
- Colleen- to Patrick about urban forestry program at SUBR. I don't know why we are not working with them! They're figuring out how to do more in smaller spaces w/ less resources. NASA needs that.
- Patrick- I'd just approach them to engage them in DOT and UTC proposal we are working on. I thought wait a minute, they're working with LSU civil engineering and they're not doing things with us?!
- Lynn- In terms of plants, when I was at KSC, they were measuring roots and doing hydroponics and more. If there was someone like that, I could put them in contact with NASA.

10:30am MSI / CC Panel: Challenges, Opportunities, Goals, Capabilities (SUBR Patrick Mensah, SOWELA David Lafargue, Dillard Tomekia Simeon, SUBR Mohammad Abdus Salam)

- Patrick – Slide presentation (Requested Slides - link to slides to be posted when available)
- Tomekia – Shared comments from her interactions so far at this meeting
    - Mary made a comment ab how scientists here (diff schools in LA) could use video modules to help HBCUs and MSIs engage in various scientists. There was feedback that we want to move from online to in-person environment. For the past 3yrs, we have used that model for the R1 institution. With nanohub.org, we

had scientists come in at beginning of semester to introduce their research to our students. Throughout semester, our students had to come up w/ research proposal using modules on nanohub and would be reviewed by nanoscientists. They had to do a presentation and then received feedback & a grade. That turned into a more ongoing relationship with Purdue, so next year they created more modules. We had one student who had an internship with them and went through the homework and modules to point out different things to enhance. We had another student who had a more-intense internship w/ them where he developed tools for space applications. The 1st student helped & gained experience w/ writing & communications. The 2nd student had publications with them. Helped Dillard and Purdue with their broader engagement. They had access to students. And it helped me because I didn't have to search online for materials.

- 2nd idea Tomekia had was from different conversations. She learned about the LAMBDA Core User Facilities which she didn't know about before. What they've done w/ chemical instrumentation class is introduce students to AFM/SEM/TEM instruments. With the wide network of institutions w/ instruments. They had journal articles published w/ applications of these instruments. The students will take application from AFM or SEM; although we didn't have AFM or SEM on campus, they got to synthesize nano-particles and sent samples off. Didn't get hands-on experience, but they got some level of experience. Now that she knows about the facilities & program and she separately talked with Jessica about seed-funding, that might help Dillard and HBCUs that may not have their core facilities in the various chemistry and biology labs built up.
- 3rd idea: came from Zappi with Young Investigators Forum idea which would be an on-going zoom-based seminar series. Someone mentioned sometimes researchers & faculty members may be intimidated by applying for these various awards. I appreciate critical feedback, but other faculty members may not understand that you really want someone to be as critical as possible as long as it's helping you. In terms of Young Investigators Forum, each year NSF has these various grant announcements like NSF HBCU-UP, and are targeted infusion and research initiation. So if there was something like a Young Investigators 1.5 years before these proposals are due, scientists from MSIs and HBCUs, one output from a forum like that could be scientists saying what they're interested in and be matched with someone at another school and have a year to work together on a proposal. Benefit is it helps HBCUs and in summer, students from HBCUs could go to other universities.

- David
  - Liked what Colleen said about making this into regular meetings. Great opportunity to come together & network.
  - Regarding summer intern program, when you talk about the challenges (from perspective of community colleges) this is a solution to make connections.
  - He has experience in public & private sector. Different mindset in community colleges and universities. I see positive things coming out of collaborations. Both

sides have different set of lenses they're looking at and unique hardships. There are resources that both sides have to contribute. If we can get more of these challenges / opportunities / perspectives together, we can approach things differently and imagine the solutions that could come out of this. He and Mark talked previously and he had a fast track program: come in with 2yr degree at least (or more) and within 1 semester, they earned another degree (16 weeks). Those people would be prime candidates for something like this because the program happens in the spring and they're available in the summer. Out of the many years they've done the program, only ~1 out of 200 students didn't complete the program. (Requested more info)

- I liked what Matt said about flipping it and have the engineers go get a technical experience. From his experience in operations, he saw there was a disconnect between engineers and the operations area he worked in. When engineers did come in with that background, they were different, got more data and information because they were able to connect better and do better.
- We all have things from different sides and we can pool our resources together and to have solid solutions for these challenges.

- Mohammad Salam – Slide Presentation (Requested Slides - link to slides to be posted when available)
- Q&A
  - Colleen- asked Patrick about the NASA MSI Center program. NASA puts out a CFP every 4 year or so. It's a 4-5M Center award where they expect the MSI to engage in research related to one of the Mission Directorates. It's a center AT an MSI.
  - Salam- asked Constance a question about an opportunity. Constance says MUREP will have one opportunity for PBI/HBCU to focus. She's been helping to develop it and it'll be out on August 22. AI-ML data-science focused. Constance will conduct proposal writing webinars after it's released.
  - Patrick- to Mitch. How can we prepare ourselves to participate in big initiatives?
  - Mitch- as far as collaborations, I would encourage that whether you're applying for research money or not, the more you do together, the more you CAN do. It's a great thing even if you're not looking at applying for money. If you get that set up, when those opportunities come around, it's so much easier for you to apply for them because you already have the infrastructure and experience.
  - Zappi- How could we increase our collaboration in meaningful ways? Talk is cheap, so what could WE be doing to build collaboration? Best bridge or avenue that would be impactful yet use our valuable time on both sides in good ways. You know what works best at Southern and Dillard. Would a visit to give seminars work? Bring faculty here?
    - Patrick mentions a NASA program (ULI?) he thinks run by HQ.
    - They (SUBR) look at presentations and how can we start brainstorming
    - Something about CPRP
    - Zappi says he'd like to tap into expertise at Dillard. It's about how we do it.

        - Tomekia says presentations and students/scientists come from Dillard to ULL and the reverse. Have a clear agenda about type of funding announcements and the scientists at ULL and LSU and the funding they've had in the past. Beneficial for faculty & students because some students like to go away, but lots like to stay home and just don't know about what research is there.
    - Greg
        - It occurs to me that one thing we can look at is a model between NASA EPSCoR jurisdiction researchers and NASA Center researchers. You have centers who are research intensive and jurisdictions perhaps not as research intensive. The way we're working toward that, the Centers identify major research topics they're interested in. you have a major list of those topics then distribute them to jurisdictions. Researchers put together a capabilities statement, have a meeting between jurisdiction & Center researchers where the jurisdiction researchers made a presentation and talked to the NASA Center about capabilities, etc. in a flash talk. That provided the NASA Center Researchers to have a better idea about the capabilities out there.
        - We then and hopefully will organize a session that's more focused with round-table discussion. Each table was a single topic which was hosted by a Center researcher and the jurisdiction researchers would go from table to table.
        - If instead of Center, we put R1 and put MSIs/community colleges as the jurisdiction then perhaps we can try to establish those connections.
    - Mary
        - Can we get a better database of what equipment & resources are available through the state?
        - Jessica says it's crickets for the Board to get input from the universities.
        - Colleen says we can ask for specialized facilities.
        - Greg says also capabilities and also what is it that you need

11:30am ULL Researcher Talking Tour (Raush) (Requested Slides - link to slides to be posted when available)

1:00pm Networking Lunch

2:15pm Research Offices Panel Discussion (LaTech Mary Caldorera-Moore, UNO Matt Tarr, LSU Bill Shelton, ULL Ramesh Kolloru)

- Bill- LSU overview of 3 major research areas: energy innovation, biotechnology, AI machine learning. Talked about funding paths and money coming into LSU.
- Matt Tarr- UNO research related to NASA around additive manufacturing, AI and machine learning research, naval architecture & marine engineering, aerodynamics. Lots of workforce development initiatives; developing VR "maker's space" for outreach and connected to this they're ramping up Beyond Learners at UNO using VR tools to bring in

middle school & early HS students with UG learning and growing skillsets. Been partnering with Nunez Community College to bring others
    - Note from Matt Tarr: We just started creating the BeyondLearners@UNO program, so there currently is not a website.
- Mary Caldorera-Moore- NASA focused areas: LAMBDA, biotech, researchers coming more focused on Space Biology. From broader sense, 3 main colleges: College Engineering Science, Chemistry & Phys, Applied & Natural Sciences, College of Ed. (only in state with NASA-funded educational center for outreach). Talks about specific projects.
- Matt- brings up disconnect of lots of jobs and also unemployed people. One reason is the jobs require skills that people don't necessarily have. Research going into coastal & climate, but that's not super aligning with NASA?
- Bill- alignment with the 3 areas he mentioned earlier. From his perspective, haven't tapped into NASA so much, like NIH NSF DOE/DOD. 3 main growth opportunities are DOE, DOD, NASA. Doing better with DOE and now talking about bringing on other agencies. NASA will fit into one of the 3 buckets.
- Mary- Latech's commitment to growth: biotech. Trying to get the people up and then the production up. Feeds & lends well to additive manufacturing. Cybersecurity. Micro and nanotech sensors. Filtration. Novel construction materials which feeds into forestry & their new forestry center. We need to do a better job of targeting NASA researchers.
- Bill- Mentions LONI-based machine
- Increasing participation
    - Matt- his office of research puts info out via weekly newsletter. Created 2 positions (grant writers) and they do outreach to faculty & prospective researchers. Make a phone call or write a targeted email. They've been working on that approach to increase engagement. Few ideas: SBIR program does "SBIR roadshow" going around the country. BoR does this and they're going to be on campus doing a BoR workshop. Gets back to the personal interaction which people respond to. Another opportunity- NSF has a research infrastructure improvement program for EPSCOR state researchers allowing them to go to another facility to get experience/expertise that they wouldn't have access to otherwise. They added a NASA track to that. NSF limits 3 submissions per campus…they submit 3 every time and only awarded 2 (which were on 2nd submission). Assign mentors from dept./college who can help someone, but maybe statewide network could help. Last thing is statewide EPSCoR committee in ACARL (the BoR's Advisory Committee for the Advancement of Research in Louisiana) which meets 3-4 times a year. Maybe we can work with that group because they have strategic plans.
        - Note from Matt Tarr: Website link could not be found. He receives notices from Shannon Domingue (Shannon.domingue@laregents.edu) at the Board of Regents who may be able to provide more info.
    - Bill- we have mentoring for junior faculty and some departments do this. He's been a mentor. Show what a successful proposal looks like and helps them. We

do have internal grants for people putting together multidisciplinary teams. Also involved in the program Matt brought up.

- Mary- OSP office has a new hire whose drive & focus will be doing things Matt mentioned (enabling more collaborations, additional support for faculty to reduce hurdles and help them become competitive for grant and proposal writing). Young successful faculty, those are the ones able to step into larger projects from day 1 and have ell-established faculty take them under their wing to train them & bring them onto big proposals as CO-Is. Better prepare them to then lead as PI on their own grant. Haven't been great doing that across all depts. So some go at it alone.
- Matt- we have issues w/ women and other underrepresented groups not having high success rate as grad students or assistant prof positions because of the system of mentoring not sensitive to the position of those people. Having an external mentor that helps power imbalance.

3:00pm Recap / Open Mic / Action Items / Thank you / Adjourn

- Colleen big 3 action items
  - 1. Have an online follow-up meeting to this. Going to try harder to get reps from other MSIs and community colleges.
  - 2. We will roll out the 2 new programs as a pilot, not competitive, next summer.
  - 3. Develop a LA-based meeting to help create new collaborations & teams following Greg's idea from the morning which is used at the national level.
    - Colleen wants Matt's climate people to come to the meeting.
- Lynn- Space Biology Interest Group (2nd Monday of every month at noon via zoom). Email Lynn and she can send the link. Lynn has established a group and when she receives emails (opportunities), she emails specific researchers to let them know where their project would fit.
- Mary- They don't have someone trying to do something like that, but their new OSP director is trying to do something like this. Reiterates her earlier pitch about having a website that highlights all the equipment that we have in the state. At LaTech, they're trying to create a website where they post when they're having seminars (https://community/latech/edu/new-frontiers/). Maybe that is something we could have links for everyone. Is there a way that we can create a better calendar? They have faculty at Grambling that use this as bonus points for their students.
- Matt- collaborations where we take existing programs and allow institutions that are overburdened to use those instead of having everyone do all the work
- Mary- VISTA program is having art exhibit. The art students at the end of the class are working with researchers. (https://www.latechvista.com)
- Ramesh- poster showing image from NASA outside of this room but showcasing it as art. Use earth as art/platform to get people excited