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Rubin
Observatory

Using the TEAM-UP Report in the University of Wisconsin-Madison Physics Department and Vera C. Rubin Observatory

Keith Bechtol
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WEBINAR

TEAM-UP Report:

The TIME is Now — Charting a Course to 2030

Why were you compelled to work on the issue of improving your department or group for African American undergraduate physics/astronomy students?

Confronting anti-Black racism as a social justice issue

Inspiration from Brian Nord, Chanda Prescod-Weinstein, Dara Norman, Brittany Kamai, and others

<https://www.shutdownstem.com> , www.particlesforjustice.org

Growing sense of individual accountability on many levels (becoming a parent, educator, mentor, PI on research grants, ...); effective action on equity and inclusion is a skill that can be learned and improved

Of course I deserved to be an astrophysicist, and my achievements prove it; but that's not the point. I was worthy the first day I walked into the classroom.

The 'Benefits' of Black Physics Students — Jedidah Isler



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Example:

Research Scholarships

Proposal to use discretionary department funds to establish research scholarships specifically for undergrad students from marginalized groups in physics (academic year and/or summer)

Intent that paid research internships will help to partially address financial challenges, enhance physics identity, and create opportunities for mentoring and career support

Widely advertised; minimal application procedure; attached to the *student* rather than advisor (effectively a research voucher)

Faculty mentors participate in department reading and discussion group



Example: Teaching Introduction to Modern Physics

- Dedicated a full class period to discussion of diversity, equity, and inclusion topics and used the TEAM-UP report as one of the main suggested readings (specifically the “Change Management” chapter)
- Final Exam -> Final Project ; Nobel Prize -> 20th century physics experiment or technological application of choice
- Computational skills using JupyterHub



Additional Department Initiatives

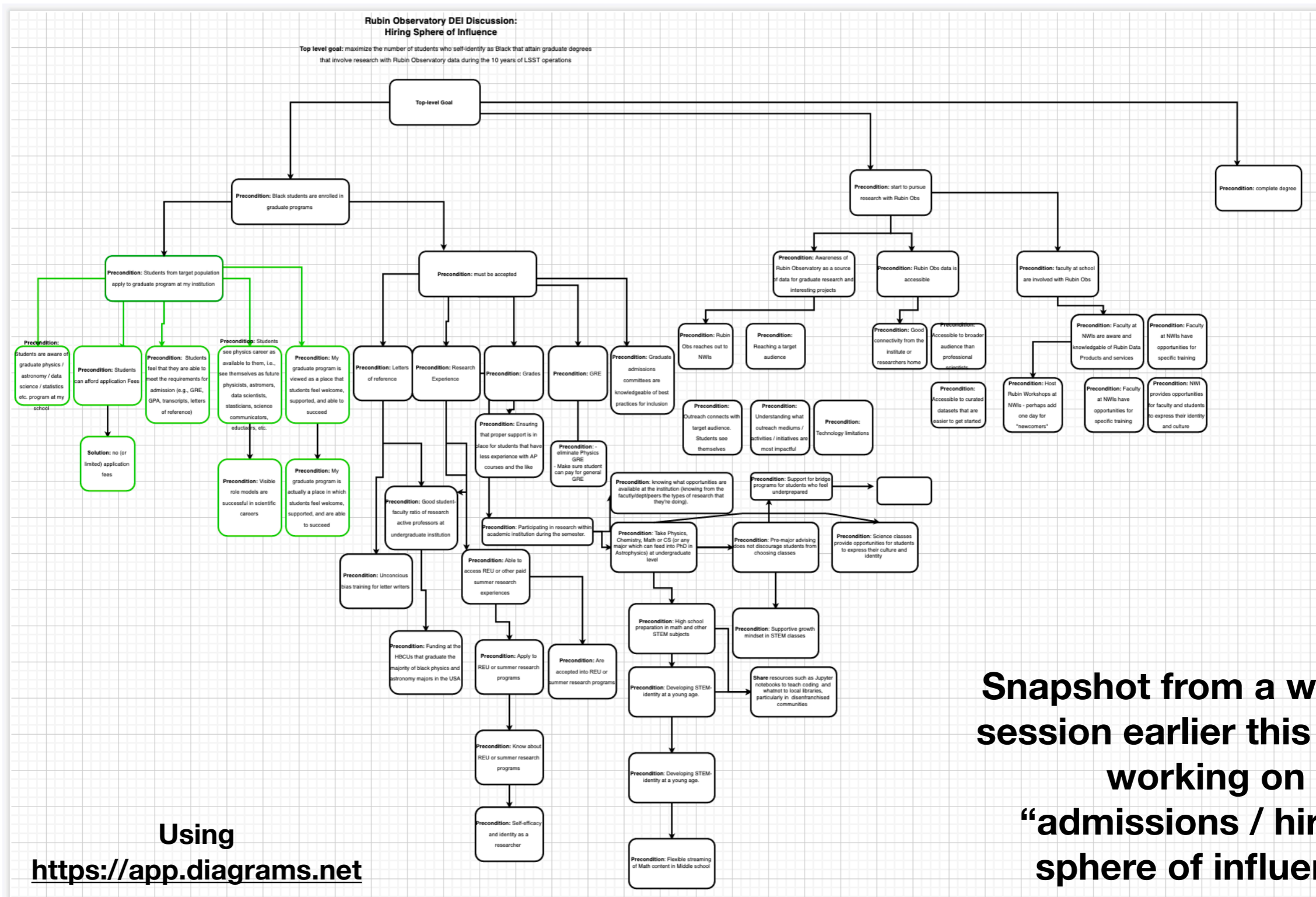
- Diversity and Climate Committee has prepared 10-year plan (Co-chairs: Kevin Black and Justin Vandenbroucke)
- Physics Learning Center - physics learning community for small-group work, peer mentoring groups, review sessions, study materials; emphasis on active learning and community building (Susan Nossal)
- Multimedia reading group dedicated to amplifying the experiences of underrepresented groups in science and academia (particularly people of color and gender minorities), in order to become better advocates for our peers
- Department is seeking combination of external and University funding to establish graduate fellowships aimed at recruitment and retention (Pupa Gilbert)
- Wisconsin IceCube Particle Astrophysics Center using Theory of Change process; also convenes the Multi-messenger Diversity Network (Ellen Bechtol)

Vera C. Rubin Observatory

Developing a Theory of Change

- Rubin Observatory is a major facility for ground-based astronomy in the 2020s. LSST data will be accessible to professional scientists and student researchers at all US educational and research institutions. ([details](#))
- Dedicated plenary session at annual Project and Community Workshop 2020 to recognize the importance of second-order changes, propose long-term goal, and introduce theory of change process (Federica Bianco, Andrés Plazas)
- Ongoing monthly meetings organized by eight “Spheres of Influence” to develop theory of change for Rubin Observatory

Developing a Theory of Change



Snapshot from a working session earlier this month working on “admissions / hiring” sphere of influence

Using <https://app.diagrams.net>

Developing a Theory of Change

- Proposed long-term goal: *Maximize the number of students who self-identify as Black that attain graduate degrees that involve research with Rubin Observatory data during the 10 years of LSST operations*
 - Should we shift focus to undergraduates?
- Spheres of Influence: Admissions / Hiring, Broader Impacts, Classroom Education, Meetings, Science Prioritization, Outreach / Communication, Workplace Interactions, Students