THE GRADUATE SCHOOL
UNIVERSITY of WASHINGTON

June 9, 2023

To: Dianne Harris, Dean, College of Arts & Sciences
Daniel Pollack, Divisional Dean of Natural Sciences, College of Arts & Sciences

From: Joy Williamson-Lott, Dean
Kima Cargill, Associate Dean for Academic Affairs

RE: Review of the Department of Astronomy (2022 - 2023)

This memorandum outlines the Graduate School's final recommendations from the Department of Astronomy academic program review. Detailed comments on the review can be found in the documents that were part of the following formal review proceedings:

- Charge meeting between review committee and administrators (May 1, 2022)
- Self-Study (August 29th, 2022)
- Site visit (October 10-11, 2022)
- Review committee report (November 3, 2022)
- Department of Astronomy response to the report (December 9th, 2022)
- Graduate School Council consideration of review (February 16, 2023)

The review committee consisted of:

- **Virginia Armbrust,** Professor, School of Oceanography, University of Washington (Committee Chair)
- **Abel Rodriguez**, Chair and Professor, Department of Statistics, University of Washington
- **Jennifer Johnson**, Professor, Department of Astronomy, Ohio State University
- **Enrico Ramirez-Ruiz**, Professor, Astronomy and Astrophysics Department, University of California, Santa Cruz

The Department of Astronomy at the University of Washington offers the following degree programs:

- Bachelor of Science
- Master of Science
- Doctor of Philosophy

Daniel Pollack, Divisional Dean of Natural Sciences of the College of Arts and Sciences, and Thomas Quinn, Professor and Chair of the Department of Astronomy, attended a Graduate School Council meeting to discuss outcomes from the review. The Council reviewed all documents from the review prior to the meeting. A summary of the review documents and the Graduate School Council discussion are attached to this memo.

Graduate School Council Recommendations

The Graduate School Council commends the Department of Astronomy on the strength of its programs, faculty, and students. After discussion, the Council recommended the following:

- Full academic program review in 10 years (2032-2033)

- Interim report to the Graduate School in 5 years (2027-2028) addressing the following items as outlined in the review committee report:
    - Creation of written policies, job descriptions, review criteria
    - Strategic planning
    - Leadership
    - Strategic diversity, equity, and inclusion plan
    - Workloads
    - Undergraduate and graduate education

We concur with the Council's recommendations.

cc: Mark Richards, Provost and Executive Vice President
Patricia Moy, Associate Vice Provost for Academic and Student Affairs, Office of the Provost
Thomas Quinn, Professor and Chair, Department of Astronomy
Review Committee Members
GPSS President

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Attachment

Summary prepared by the Graduate School Director of Academic Program Review

Site visit date: October 10-11, 2022

Degrees/Certificates included in the review:

- Bachelor of Science
- Master of Science
- Doctor of Philosophy

Overall Review Committee Recommendation: Continuing status for all degree programs with a subsequent review in 10 years.

Additionally, interim report to the Graduate School in 5 years, addressing the following:

- **Creation of Written Policies, Job Descriptions, Review Criteria:** Including graduate education handbooks and procedures, formalizing undergraduate pairing with faculty for research projects, and administrative organizational charts.
- **Strategic planning:** The strategic plan must incorporate the goals of enhancing transparency, creating synergies amongst the different interdisciplinary components of the department, and increasing communication.
- **Leadership:** Because the current chair is in a 2-year appointment and many obvious senior faculty who could assume the leadership role are already leading big programs that require their full attention, the review committee suggests that the department consider an external hire to become departmental chair and that this recruitment begin within the next two years.
- **Strategic diversity, equity and inclusion plan:** The review committee recommends development of a more focused strategic diversity, equity and inclusion plan to help the Department create an inclusive, equitable and sustainable culture and work environment.
- **Workloads:** Including development of a strategic plan to create department-wide priorities, increasing budgetary transparency, prioritizing financial support for a person to organize/support DEI activities such as outreach, speaker invitations, etc.
- **Undergraduate and graduate education:** Evaluate each program including size of the program, whether to adjust requirements such as the requirement of individual research projects for all undergraduate majors, and providing more transparency to students.

Program Strengths (as described in Review Committee Report)

- The Department of Astronomy is one of the top Astronomy departments in the country
- The department is uniquely positioned to take advantage of the Vera Rubin Observatory and the Legacy Survey of Space and Time (LSST)
- The undergraduate program has tripled the number of majors in the past ten years, and these students are well-positioned to enter graduate programs and data-science oriented career

trajectories.

- The PhD program is remarkably exclusive, accepting about 5 students each year from the 350 applicants. These students become top leaders within Astronomy and other careers of their choosing. The faculty includes an outstanding cohort of early career scientists, including two Sloan Fellows. The research faculty and staff play key roles in creating strong and exciting research within the department and the teaching faculty are essential to enhancing learning within the undergraduate community.

Challenges & Risks (as described in Review Committee Report)

- The department recognizes that reaping the benefits of the Vera Rubin Observatory and attracting new faculty hires requires access to 6-10-meter class telescopes, which in turn requires significant private funding, as federal funding is not available.
- The department struggles to cover faculty service roles, in good measure because the senior faculty are heavily involved in high-profile research activities at the national level.
- The current chair is serving a short two-year service and there is no clear succession plan. Long-term leadership and the lack of administrative know- how is a serious, but eminently addressable, challenge.
- The department has also struggled to attain its long-established goal of increasing the diversity of the faculty…The department faces several climate issues that require prompt attention. Faculty feel overwhelmed, which likely contributes to the lack of willingness to take on service roles in the department. Furthermore, the relationship between faculty and PhD students is strained.
- The undergraduate program has tripled in size to 120 majors…The success of the major adds to the overwhelmed feeling of the faculty who are dedicated to student success and yet are becoming more and more thinly stretched.
- It was also apparent that the current dynamics make the management of the department challenging. The department lacked a stable and engaged department manager for many years. The coping mechanisms developed by the rest of the staff (and faculty) have led to blurred roles, an idiosyncratic organizational chart, and some level of tribalism that have made organizational change and the integration of new staff difficult.

Areas of concurrence (as described in Unit Response)

- The Department of Astronomy largely agreed with and accepted the committee's recommendations, and many were already in the process of being implemented at the time of submitting the unit response.

Areas of Disagreement (as described in Unit Response)

- A point of clarification from Astronomy is that they no longer have a research requirement in the astronomy major as of two years ago; nonetheless, the department is struggling with a huge demand for undergraduate research opportunities relative to available positions.

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Summary of Graduate School Council Discussion on February 16, 2023

The Graduate School Council discussion of this review included the following key topics:

- *Department chair search:* The Department of Astronomy has a search underway for a new department chair and expects to make a selection in summer 2023. The Council noted that an interim report, as recommended by the review committee, could help a new chair focus on some of the important issues identified in the report. The Council also cautioned that an interim report should not be onerous to where it becomes a tax on the new chair.
- *Diversity, equity, and inclusion in faculty hiring:* The Council asked for clarity regarding how concerns raised by the review committee are being addressed in the faculty search underway. The Department of Astronomy engaged with the Associate Vice Provost for Faculty Advancement and made several adjustments to improve inclusivity in its search process.
- *Departmental strategic planning process:* The Council asked whether the Department of Astronomy has made progress in the strategic planning recommendation from the review committee. The Department chair indicated that it had started, but at the time of the Council meeting, a pending faculty search was the main priority and strategic planning would restart after the search concluded.

Graduate School Note: The Department of Astronomy has informed the Graduate School that the chair search referenced above has been completed and a new chair will begin in March 2024.