January 16, 2017

To the External Review Committee:

On behalf of the College of Arts and Sciences, please let me express my sincere appreciation for your service as external reviewers for the Georgia State University Department of Physics and Astronomy. We understand the demand on your time and very much appreciate your willingness to help. Your expertise and insights into the state of the department and its future directions will be critical to our effort in formulating a strategy to move forward.

We have enclosed the department’s self-study report, which provides a comprehensive summary of the state of the department consistent with the strategic directions specified in Georgia State’s current strategic plan (http://strategic.gsu.edu/gsu-strategic-goals/) and in the recently adopted strategic plan of the College of Arts and Sciences (http://cas.gsu.edu/about/college-strategic-plan). We appreciate the evident hard work of the self-study committee (Misty Bentz, Megan Connors, Sumith Doluweera, Xiaochun He, Stuart Jefferies, Sébastien Lépine, Unil Perera, Brian Thoms, and committee chair Douglas Gies) and the department chair, Michael Crenshaw. We believe the report clearly demonstrates how Physics and Astronomy has made important contributions to the university’s strategic planning goals, and it helps shape a pathway for future sustainability and accomplishment.

We congratulate the department on its progress during the review period. Physics and Astronomy has steadily increased the number of Physics B.S. graduates over the past five years, including a higher percentage of females and under-represented minorities than the national average. The department has used assessment results as the basis for program revisions during the review period, and has redeveloped teaching laboratories to accentuate active learning approaches and student success. The Physics and Astronomy doctoral programs have continued to grow as well, and survey data indicate a high placement rate for graduates.

The Physics and Astronomy faculty has grown notably in recent years, due in part to strategic university research cluster hiring initiatives. Additional personnel have joined with the department’s existing faculty to achieve significant increases in external research funding during the review period. Most of the gains have come from the faculty involvement in the University Center for Nano-Optics, the Center for High Angular Resolution Astronomy, and the Stellar Astrophysics and Astroinformatics cluster. These accomplishments have created many new opportunities for Physics and Astronomy.

The Dean’s Office agrees with the general goals outlined in the Physics and Astronomy self-study. We must, of course, identify the most effective way to achieve these objectives. In the
context of Georgia State University’s revenue-neutral budgetary climate, we essentially have three options for developing the strengths of our programs: 1) redirection of resources within existing departmental budgets to maximize programmatic impact, 2) entrepreneurial pursuit of opportunities for external funding, and 3) lateral redirection of resources from other units within the college where we are convinced that the value added in a particular unit or focus area is an effective way of achieving the goals of the college and university strategic plans. In keeping with these parameters, we ask that the external review team members consider the following:

- How can the college and university best facilitate further progress by the research centers and focus areas related to the department?
- What opportunities for interdisciplinary, collaborative research can the Department of Physics and Astronomy pursue to enhance prospects for large team grants, shape faculty hiring goals, and enrich its academic programs?
- Are there further opportunities for building partnerships with research centers, federal agencies, non-profits, and businesses that can develop into funded research projects, internship/practicum opportunities, or other mutually beneficial relationships?
- As a research university, our Ph.D. programs are critical to our research success. What are the current strengths and weaknesses of the Physics and Astronomy doctoral programs (recruitment, funding, mentoring, time to degree, and job placement), and how can we support continued strength of the programs?
- Are there professional programs or certificate programs that the department could develop to attract new students seeking professional training and employment? In addition to developing new programs, how can the department adapt its existing curriculum to emphasize the acquisition of career competencies in support of college and university career-readiness goals?
- What else can Physics and Astronomy do to advance college and university goals relating to understanding the complex challenges of cities and globalizing the university?
- Are there any other recommendations or suggestions for increasing undergraduate and graduate enrollments, improving academic program, and/or enhancing faculty research productivity?

We look forward to your analysis and insights on the state of the department and its future directions.

Sincerely,

Sara Rosen, Dean
College of Arts and Sciences