University of Victoria, Academic Program Review, January 2019 Department of Physics and Astronomy

EXECUTIVE SUMMARY

The Department is a strong research-based Physics and Astronomy department, among the top in Canada in astronomy and particle physics. It delivers strong undergraduate and graduate programs in both physics and astronomy. The students who met with the review committee reported that they had a cohesive community, good support from faculty members, and strong lines of communication with the Department. The Department uses a variety of experiential learning techniques and has a very active Co-op program that provides students with practical work experience.

Department researchers are internationally-known in particle physics and astronomy, with rapidly growing strength in medical physics. There are also two smaller research groups in condensed matter physics and ocean physics. The astronomy, particle physics, and medical physics programs, benefit from and rely on the support of adjunct faculty, affiliated with the National Research Council's Herzberg Astronomy & Astrophysics Research Centre, TRIUMF, and the BC Cancer Agency, respectively. The Department's decision to "focus for impact" in future faculty hiring is strategic and in alignment with University directions.

Both the Physics and Astronomy graduate programs and the University's undergraduate Engineering program have seen recent rapid growth.

RECOMMENDATIONS

The review committee sees the five issues identified below as the most pressing issues facing the Department.

- 1. Teaching lab infrastructure renewal is the top need and priority of the Department.
- 2. Teaching needs in the Department require some additional instructor resources and also some rationalization.
- 3. The Medical Physics program requires additional faculty for long-term viability.
- 4. The visibility and long-term viability of the particle physics group needs to be enhanced and its faculty renewal considered.
- 5. The Department and University need to work together to optimize the use of technical support staff in both research and teaching.