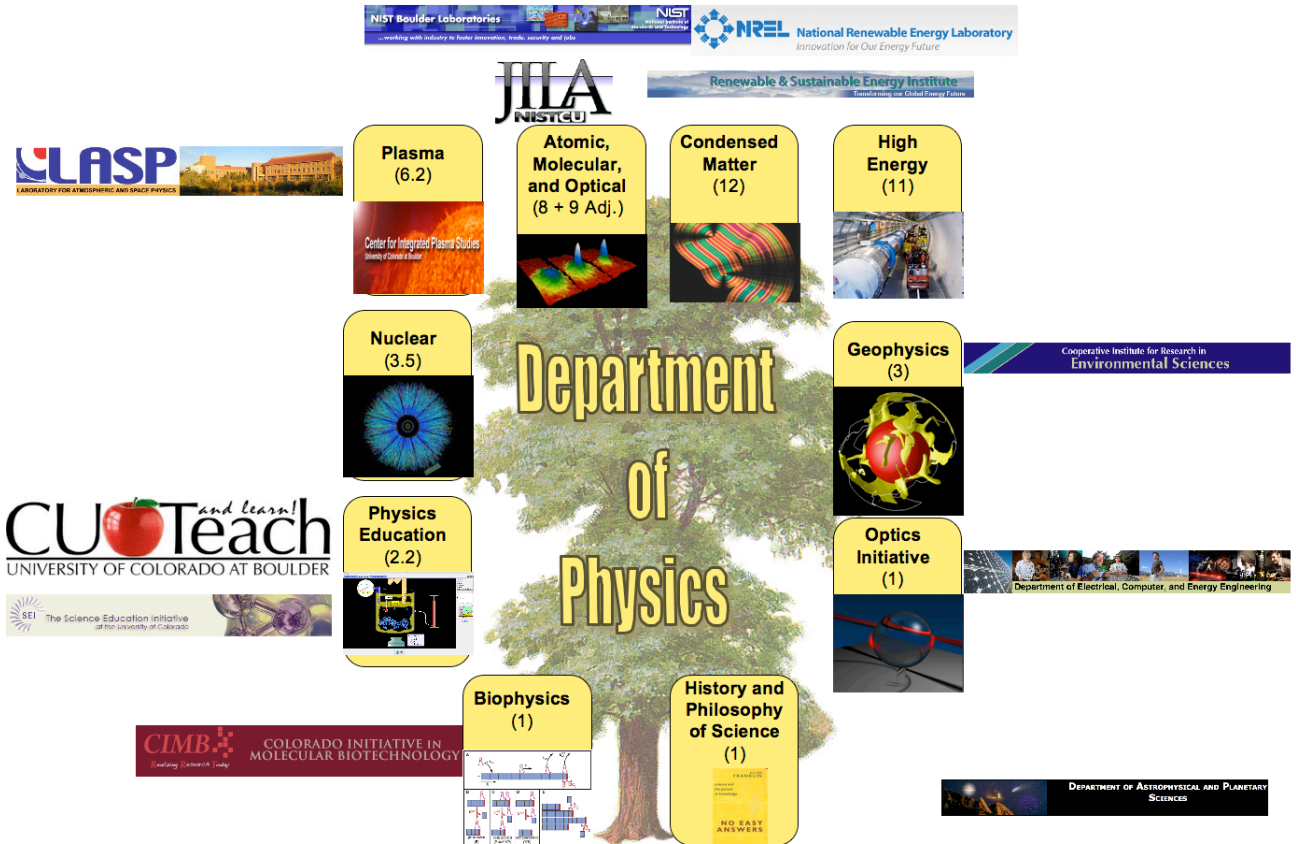


Department of Physics 2008 Program Review Self-Study

Question 9: Mission Use this question as an opportunity to describe your mission and its relation to other units, both on and off campus.



The Department of Physics contributes significantly to the international reputation and recognition of CU Boulder as a world class Research University. Our commitment to excellence spans all areas of inquiry - research, teaching and service, Our research mission is to continue to foster a research environment conducive new high-impact research accomplishments which will continue to attract world-wide recognition. The Department of Physics is committed to educational excellence at all levels. Its educational mission is to best prepare future leaders in physics through our graduate and undergraduate programs, to support the development other scientists and engineers and to serve the broader public in an awareness of physics and forms of inquiry embodied in physics.

Physics is committed to remain highly interactive with many institutions, both on campus and off. We will continue our well-established and close connections with many departments and interdisciplinary research institutes on campus, federal research laboratories in the region, and private sector companies, many of which were created by our faculty and graduates. We are already leaders on campus in interdisciplinary research

with close relations with JILA, CIRES and LASP and the new Renewable and Sustainable Energy Institute (RASEI). (See table of acronyms at end of this section). Ten of our tenure-track faculty are JILA Fellows, and eleven of the NIST senior scientists in JILA are research professors or professors adjoin in physics.

The vast majority of the graduate students working in JILA are in the physics Ph.D. program. Physics graduate students are also highly sought after for research assistantships in LASP, CIRES, APS, chemistry, electrical engineering and at NIST and NREL. Nearly one-quarter of our graduate students work on research projects with faculty and senior scientists outside the department. Physics faculty and students work with scientists at NIST, NREL, NOAA, on many research projects. Physics is a campus leader in joint research projects with scientists at NIST and NREL. Physics faculty played a leadership role this year in the creation of RASEI, just as we did in 1962 with the creation of JILA. Three of our faculty (Dessau, Rogers and Smalyukh) were selected as founding Fellows of RASEI.

Physics' mission includes an unusually intense focus on service, teaching, outreach and educational research which are of the finest caliber. Physics will continue to be a campus and national leader in educational practice and innovation and remains committed to diversity equity and access. We shall continue to address educational research and innovative improvements in science education, and will share these efforts across the campus, the state and nation. Physics faculty are campus leaders in the educational improvements in science, technology, engineering and mathematics education through leadership on a variety of campus educational initiatives, such as the SEI, iSTEM, the LA Program, CU Teach, and discipline-based educational research.

TABLE OF ACRONYMS USED IN THIS REPORT	
Acronym	Full name
AMO	Atomic, Molecular and Optical Physics
APS	Department of Astrophysical and Planetary Sciences
ATLAS	Alliance for Technology, Learning and Society
CCLDAS	Colorado Center for Lunar Dust and Atmospheric Studies
CIMB	Colorado Initiative in Molecular Biotechnology
CIPS	Center for Integrated Plasma Sciences
CIRES	Cooperative Institute for Research in Environmental Sciences
CM	Condensed Matter Group
ECEE	Department of Electrical, Computer, and Energy Engineering
HE	High Energy Group
iSTEM	Integrating Science Technology Engineering & Math Education
JILA	formerly Joint Institute for Laboratory Astrophysics, now just JILA
LA	Learning Assistant Program
LASP	Laboratory for Atmospheric and Space Physics
MRSEC	Materials Research Science and Engineering Center
NCAR	National Center for Atmospheric Research
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NREL	National Renewable Energy Laboratory (DOE)
OCG	Office of Contracts and Grants
PER	Physics Education Research
RASEI	Renewable and Sustainable Energy Institute
SEI	Science Education Initiative
SPA	Sponsored Projects Accounting