Research Laboratories and Programs

The department’s faculty, staff, and students are engaged in a wide variety of research projects in the laboratories of individual faculty members and in the departmental laboratories described below. Many also participate in the activities of interdisciplinary laboratories such as the Center for the Global Change Science and the Joint Program on the Science and Policy of Global Change, described in the section on Research and Study (http://catalog.mit.edu/mit/research).

Earth Resources Laboratory

The Earth Resources Laboratory (ERL) (http://erl.mit.edu) is MIT’s primary home for research and education focused on sub-surface energy resources. Through integration across disciplines, departments, and school boundaries, and with support from federal agencies and a consortium of energy companies, ERL addresses questions concerning hydrocarbon exploration and production, geothermal energy, CO₂ sequestration, and near-surface environments.

ERL’s faculty, research staff, and students work with a variety of methodologies (including geophysical imaging, rock physics and chemistry, multiphase flow, geomechanics, microseismics, and remote sensing) to obtain a holistic understanding of sub-surface reservoirs—their structure, the geological materials of which they are made, the fluids that flow through them, and changes that occur in response to production.

Building on a rich tradition, ERL aims to produce tomorrow’s industry leaders through rigorous disciplinary education and broad exposure to the earth sciences, mathematics, and engineering.

Professor Laurent Demanet is the current director of ERL. For further information, please visit ERL website (http://erl.mit.edu).

George R. Wallace, Jr., Astrophysical Observatory

The George R. Wallace, Jr., Astrophysical Observatory (http://web.mit.edu/wallace) is a versatile facility for research and teaching optical astronomy. The observatory located in Westford, MA, has several optical telescopes ranging from 24-in to 8-in diameters and modern instrumentation. The telescopes are used in formal instruction; faculty, staff, and student research projects; and as testbeds for instrumentation to be used with larger telescopes.

Further information on the Wallace Observatory may be obtained by contacting Dr. Michael Person (miperson@mit.edu), 54-418, 617-452-2304.