



ES213 Jan 3:0

Isotope geochemistry

Instructor

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Teaching Assistant

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Department: Centre for Earth Science

Course Time: Tue., Thurs., 11:30 AM - 1:00 PM

Lecture venue: CEaS lecture hall

Detailed Course Page:

Announcements

Brief description of the course

ES213 is an advanced course designed for students interested to pursue a degree in Earth Science. It deals with the fundamentals of mass spectrometry, different isotope systematics (radiogenic and stable) and their applications to wide-ranging Earth science problems

Prerequisites

The student must have credited ES204

Syllabus

Nuclear systematics; decay mode of radionuclides; radioactive decay; Rb-Sr, Sm-Nd, Lu-Hf, Re-Os and U-Th-Pb systematics, U series disequilibrium, stable isotope fractionation, early Solar System processes, crust-mantle processes, aquatic processes, selected mass spectrometry techniques.

Course outcomes

Students will develop a better understanding of the different isotopic-proxies used for addressing wide-ranging Earth science problems. They will also get a better understanding of how these isotope ratio measurements are performed.

Grading policy

2 exams covering 70% of the grade

term paper covering 20% of the grade

10% on assignments

Assignments

Resources

Assorted book chapter and research papers