Intro to Electric Circuits

GLAS wiring

ICESat/GLAS

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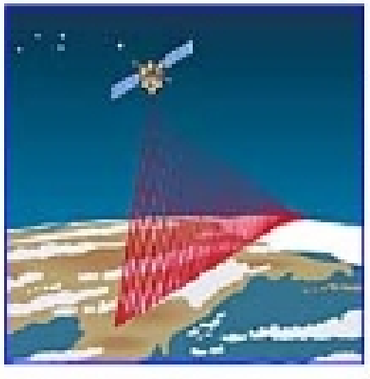


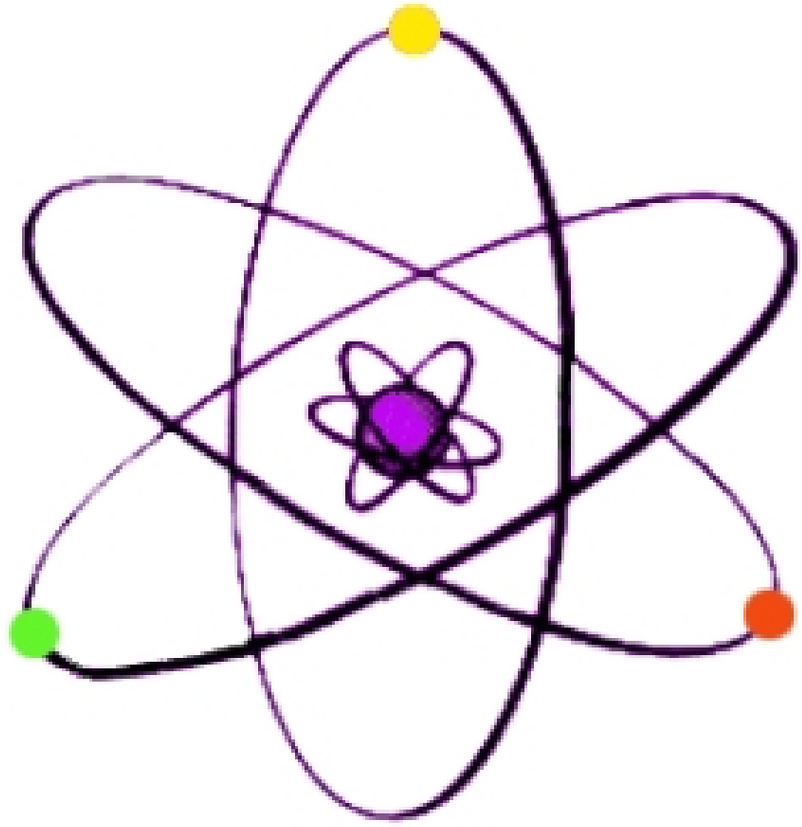
The Geoscience Laser Altimeter System (GLAS) is an integral part of the NASA Earth Science Enterprise (ESE). GLAS is a facility instrument designed to measure ice-sheet topography and associated temporal changes, as well as cloud and atmospheric properties. In addition, operation of GLAS over land and water will provide along-track topography. GLAS is carried on the Ice, Cloud and land Elevation Satellite (ICESat), which launched 13 January 2003 00:45 UTC from Vandenberg Air Force Base in California.

The laser altimeter measures the time required for a laser pulse of 5 nanosecond duration to complete the round trip from the instrument to the Earth's surface and back to the instrument. This time interval can be converted into a distance by multiplying with the speed of light, and the one-way distance can be obtained as half the round trip distance. With the position of the instrument in space determined from a high accuracy Global Positioning System (GPS) receiver and from star camera and gyroscopes carried on the instrument/ spacecraft, the laser direction in space will be determined. From the GPS-determined position, the altimeter measurement and the laser pointing direction, the location on the surface of Earth illuminated by the laser pulse can be determined. The series of such laser spot, or footprint, locations provides a profile of the surface. Analysis of the sequence of laser spots over time enables the determination of temporal change in topography.

Electric Circuits

- **Electricity:** The flow of electrons. (**Mobile** particles, carrying **charge**)

- **Circuit:** A path for electrons to flow in



http://chem-mgriep2.unl.edu/Courses/AnimatedAtoms.html