

## **Supernovae in the Lab: Astrophysics experiments with high-energy lasers**

Press conference: **Wednesday 18 April 2007, 10:00 – 11:00**

**Laboratory Astrophysics is a new and growing research field. Today, several high energy laser facilities are available: GEKKO XII in Japan, LaserMégaJoule in France and National Ignition Facility in USA). They can produce laser plasmas with the same physical characteristics as those existing in various astronomical objects of the Universe, like stars, supernovae, planetary surfaces, etc.**

These experiments are used to check and validate analytical theories and numerical simulations that model the evolution of these objects. This brand new approach is a valuable addition to astrophysical observations. This topic is about 15 years old and began in USA at Livermore. Europe started to work on this topic in 1999. Various astrophysical phenomena have been studied through this approach, namely, radiative shocks in interstellar medium, high mach number flows around stars, hydro instabilities, jets arising when a new star is born, etc.

**Michel Koenig: The LULI Laboratory Team - Laboratory Astrophysics Experiments At LULI Laboratory [michel.koenig@polytechnique.fr](mailto:michel.koenig@polytechnique.fr)**

**Session: NP6.06 Astrophysical Turbulence and Shocks, Plasmas and High Mach Number Flows | [>>programme](#)**

Tuesday, 17 April, 14:15 - 15:00, Friday, 20 April, 15:30 - 18:30, Lecture Room 22

**poster session: [>>programme](#)**

**Falize, E.; Bouquet, S.; Michaut, C. Radiative Cooling and Kelvin-Helmholtz Instability in Astrophysics**

Thursday, 19 April 2007 15:30 - 17:00