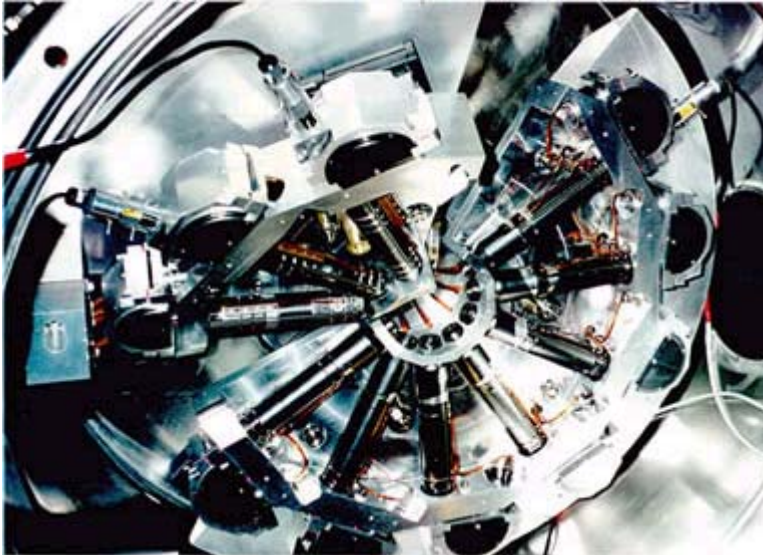


## **GAPH - Gas Phase Photoemission beamline**



The Gas Phase Photoemission beamline is a joint venture between the Istituto Nazionale di Fisica della Materia (INFN), the Consiglio Nazionale delle Ricerche (CNR) and Elettra, and it is operated as a Gruppo di Ricerca (GdR) at the synchrotron radiation facility ELETTRA, Trieste. It is the only beamline at ELETTRA which is specifically devoted to research on **gaseous systems**. The beamline has been operational since the end of 1997 and was officially opened to users in

the second semester of 1998. The line is fed by an undulator (U12.5 at exit U6.2), which delivers light in the range from 14 eV to above 1000 eV using the fifth harmonic radiation. The monochromator is a **Variable Angle Spherical Grating Monochromator (VASGM)**, with fixed positions of the slits. The optical design includes five interchangeable gratings, a toroidal prefocusing and two refocusing mirrors (spherical and plane-elliptical).

There are more experimental stations available, equipped for angle-resolved photoemission, coincidence detection, dispersed and total fluorescence spectroscopy, and with facilities for introduction of gases or evaporation of solids.

The broad energy range (14-1000 eV), the high resolving power and flux together with the purpose built end-stations, make this facility ideal for investigating the spectroscopy and dynamics of basic processes like inner-shell and multiple excitations and ionisation, as well as for characterising key processes relevant to several areas of science and technology (for example atmospheric chemistry, material science and biomedical sciences).

### **Contacts:**

*GAPH – Gas Phase Photoemission beamline - Dr. Lorenzo Avaldi*  
*e-mail* lorenzo.avaldi@milib.cnr.it  
*tel* +39 040 375 8275  
*fax* +39 040 375 8400