European Synchrotron Radiation Facility

The European Synchrotron Radiation Facility (ESRF)

The ESRF is a multinational research institute, situated in Grenoble, France and financed by 19 countries mostly European. It operates a powerful synchrotron X-ray source with some 40 beamlines (instruments) covering a wide range of scientific research in fields such as biology and medicine, chemistry, earth and environmental sciences, materials and surface science, and physics. The ESRF employs about 600 staff and is organized as a French *société civile*.

Three electron accelerators are operated at the ESRF: a 200 MeV linear accelerator, a 6 GeV booster synchrotron and a 6 GeV, 844 meter circumference storage ring.

The ESRF is one of the world's largest synchrotron science centres. Every year, more than 6000 scientists from around the world travel to Grenoble to use its extremely brilliant X-rays for leading-edge research.

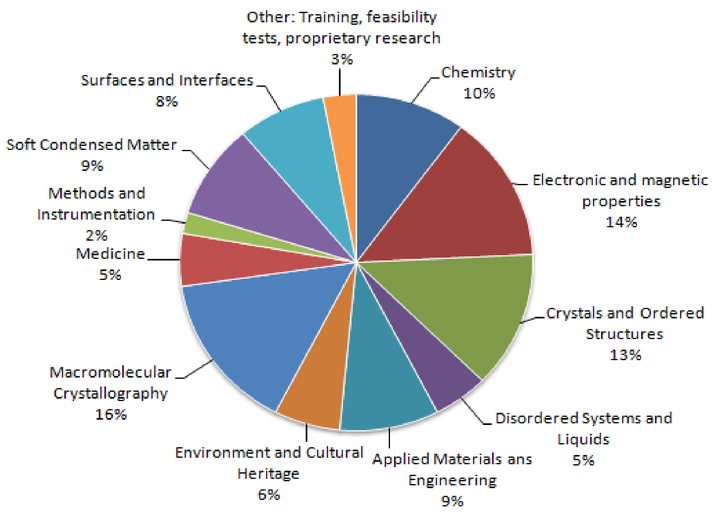
Facts and figures

2012 manpower *(posts filled on 31/12/2012)*

	Scientists, Engineers, Senior Administrators	Technicians and Administrative Staff	PhD Students	Total
Staff on regular positions				
Accelerator and Source	27	38	3	68
Beamlines, instruments and experiments	220	85.8	23.5	329.3
General technical services	30.6	50		80.6
Directorate, administration and central services	39.6	49.8		89.4
Sub-total	*317.2*	*223.6*	*26.5*	*567.3*
Other positions				
Short term contracts	12.7	11		23.7
Apprentices		23		23
European Union grants	1		1	2
Temporary workers		3		3
Total	**330.9**	**260.6**	**27.5**	**619**

2012 Budget

	kEuro
PERSONNEL	
ESRF staff	48 739
External temporary staff	60
Other personnel costs	1 904
RECURRENT	
Consumables	6 050
Services	8 625
Other recurrent costs	2 065
CAPITAL	
Buildings, infrastructure	15 151
Laboratories and workshops	2 303
Accelerator and Source	4 964
Beamlines, Experiments	14 996
Computing infrastructure	1 326
Other capital costs	50
Total	**106 233**



Shifts scheduled for experiments, by scientific area
(May to July 2012)

History

1975 Project of a synchrotron capable of producing very brilliant hard X-rays.

1988 Signature between the governments of the member countries.

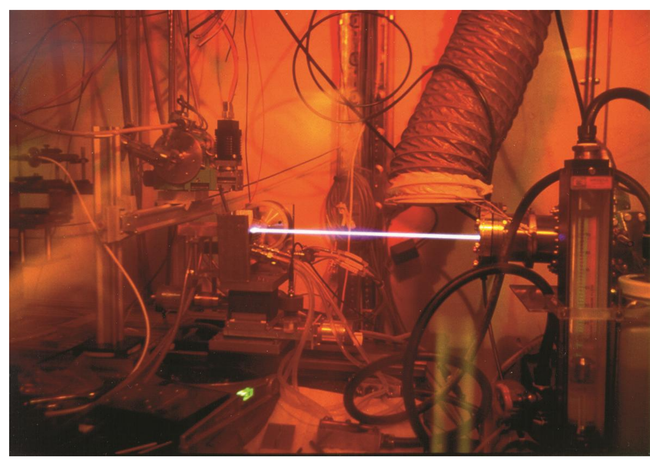
1992 First electron beam in the storage ring. Commissioning phase.

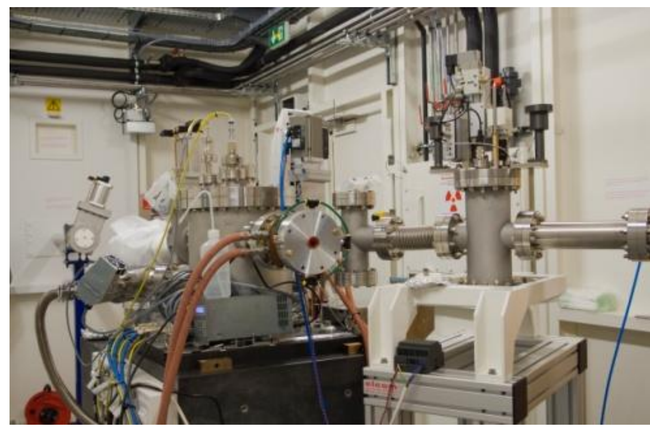
1994 Opening to users. 15 beamlines are available.

1998 End of construction. 40 beamlines are operational.

2009 Start of the upgrade programme.

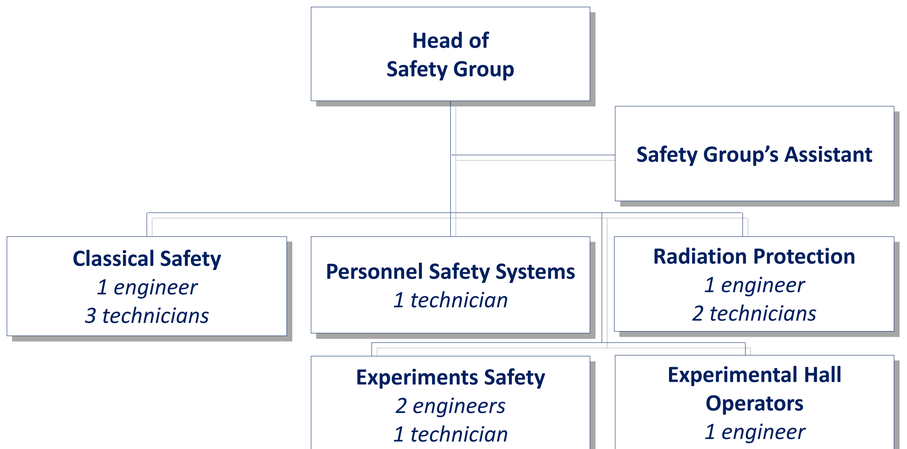
2011 Inauguration of the first Upgrade Beamline.





HSE Organisation

The ESRF Safety Group is directly attached to the ESRF's Director General. A formal delegation of power and legal responsibilities is signed between the Director General and the Head of the Safety Group. The Safety Group deals with all matters of safety, radiation protection and environmental issues. The Safety Group's manpower includes 6 engineers, 14 technicians and 1 administrative assistant. The Experimental Hall Operators, who provide 24/7 assistance to the Users belong to the Safety Group.



Safety hazards

Although ionising radiation represents the most important, specific safety hazard at the ESRF, due to the operation of the electron accelerators and the X-ray beamlines, a very wide range of other safety hazards exist at the ESRF: non-ionising radiation (lasers, magnetic fields, ...), electrical hazards, chemical hazards, working at height, ...

Many contractors work on site, either permanently (e.g. maintenance contracts) or for specific projects. The safety follow-up of the interventions from these contractor is an important part of the Safety Group's mission.

The large number of user experiments (> 1500 experiments per year, > 6000 user visits per year, > 40 experiments carried out simultaneously) creates a number of specific constraints in terms of safety follow up.

ESRF Upgrade Programme

The first phase of the Upgrade (2009 – 2015) will deliver: eight Upgrade Beamline projects with unique capabilities, comprising 11 different beamlines with 15 independent end stations; refurbishment of the remaining beamlines; improvements to the X-ray source to maintain world-leading beam availability, stability and brilliance; new state-of-the-art instrumentation; new buildings for long beamlines, support laboratories and offices.

The second phase of the ESRF Upgrade will cover new developments from 2015 to 2018 and beyond.