



*Ministero degli Affari Esteri
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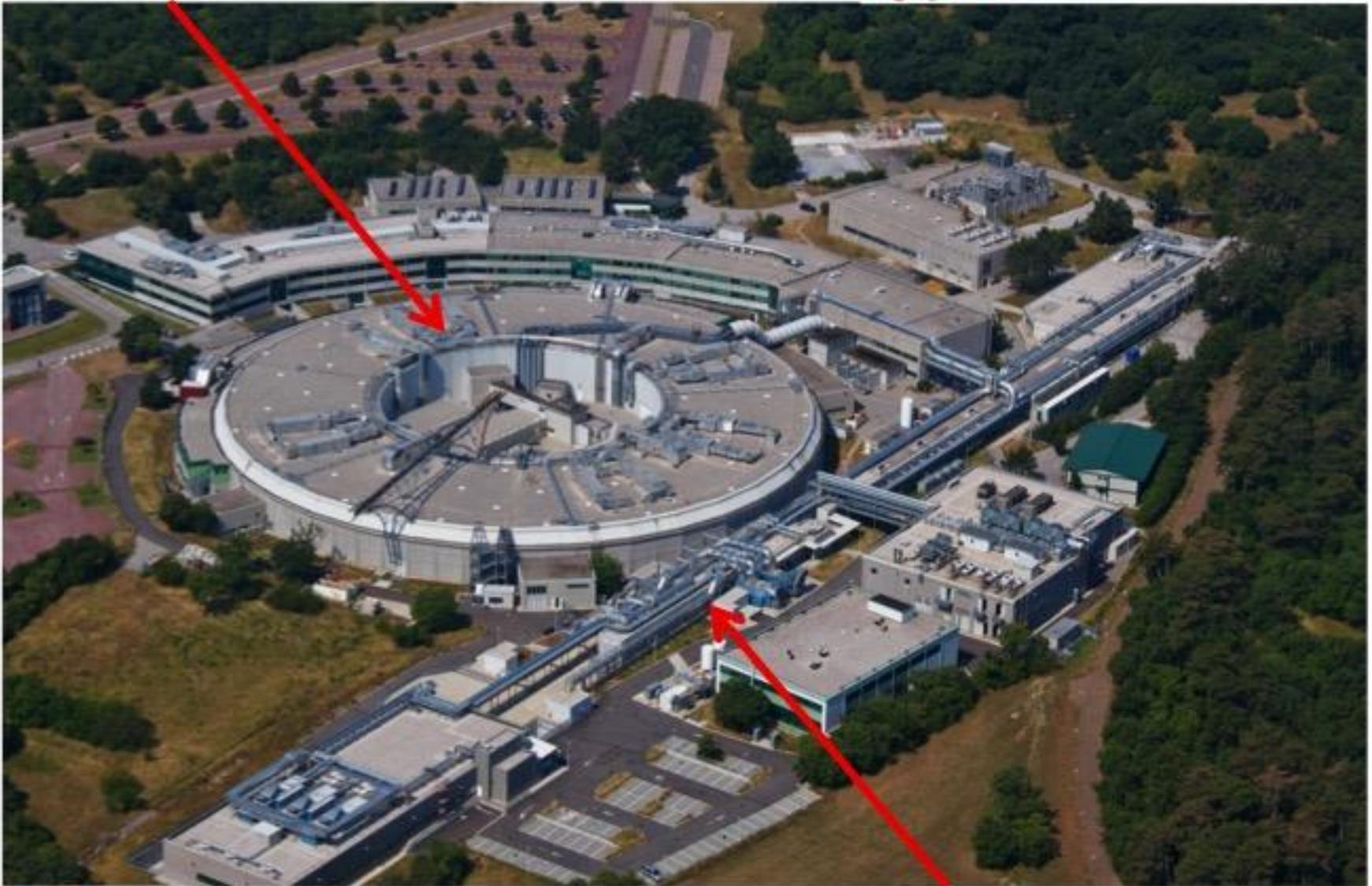


*Innovative materials and technologies at
Elettra-Sincrotrone Trieste*

Elettra Synchrotron Radiation Facility



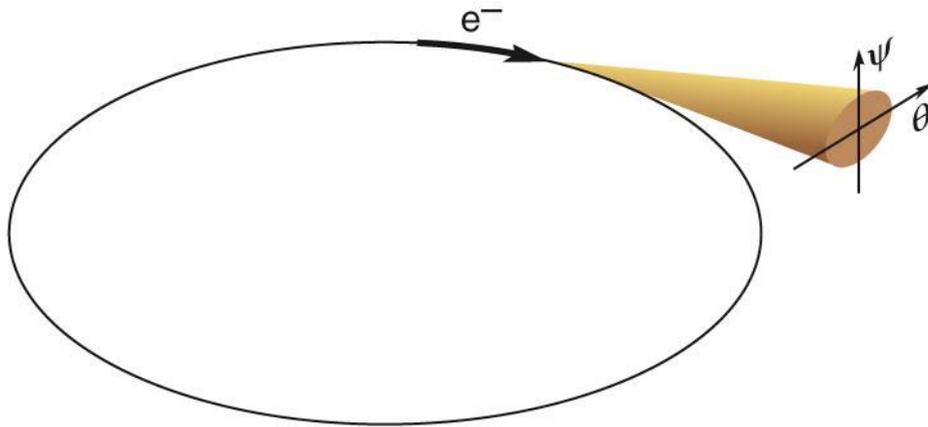
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FERMI seeded Free Electron Laser Facility

Bright and Powerful X-Rays from Relativistic Electrons

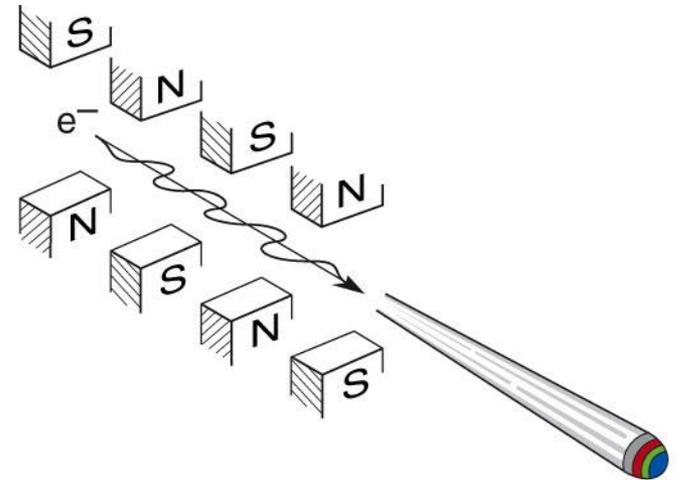


Synchrotron radiation

- 10^{10} brighter than the most powerful (compact) laboratory source
- An x-ray “light bulb” in that it radiates all “colors” (wavelengths, photons energies)



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Undulator radiation

- Lasers exist for the IR, visible, UV, VUV, and EUV
- Undulator radiation is quasi-monochromatic and highly directional, approximating many of the desired properties of an x-ray laser



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Zach²
Zambon Chemicals



Elettra Sincrotrone Trieste



Elettra

28 beamlines
in operation

major upgrades:

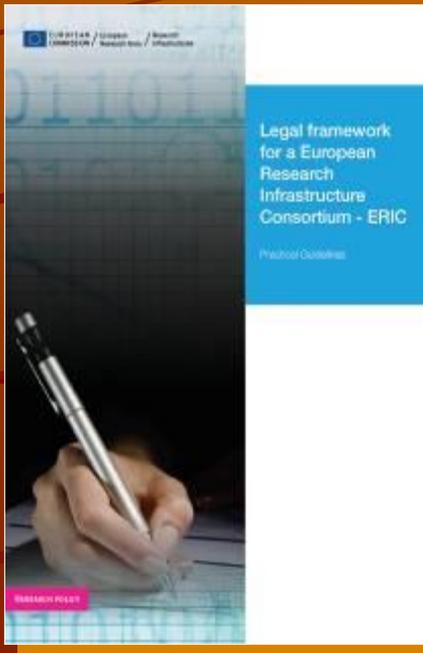
- XRD1**
- SuperESCA**
- Nanospectroscopy**
- XRF**
- XPRESS**
- XRD2**

being negotiated:
XAFS2 with Iran

European Research Infrastructure Consortia



- New legal bodies, recognised at the EU level, for the joint establishment and operation of Research Infrastructures of European interest among several countries
- Current status: awarded ERICs:
 - **SHARE** (17/03/2011, hosted by the Netherlands)
 - **CLARIN** (29/02/2012, hosted by the Netherlands)
 - **EATRIS** (11/11/2013, hosted by the Netherlands)
 - **BBMRI** (22/11/2013, hosted by Austria)
 - **European Social Survey** (22/11/13, hosted by the U.K.)
 - **ECRIN** (29/11/2013, hosted by France)
 - **Euro-Argo** (05/05/2014, hosted by France)
 - **CERIC (28/06/2014, hosted by Italy)**
 - **DARIAH** (15/08/2014, hosted by France)
 - **JIV** (12/12/2014, hosted by the Netherlands)
 - **ESS** (19/08/2015, hosted by Sweden)
 - **ICOS** (26/10/2015, hosted by Finland)
 - **EMSO** (29/09/2016, hosted by Italy)



CENTRAL EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM:

Italy (Elettra), Austria (SAXS and TU Graz Laboratory), Czech Republic (Materials Science and Prague Laboratory), Hungary (Budapest Neutron Center), Poland (SOLARIS), Romania (Magurele Laboratory), Slovenia (NMR center).

- common entry point and integrated services for users
- single proposal evaluation system
- free and open access by quality selection only
- support and logistic services as required
- joint IPR and industrial policy
- joint educational and outreach activities





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Ricerca Proprietaria: Partnership e collaborazioni



AGUGIARO FIGNA



Honeywell



MEMC
TECHNOLOGY IS BUILT ON US





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Inauguration XRD2 and Xpress, October 20, 2016