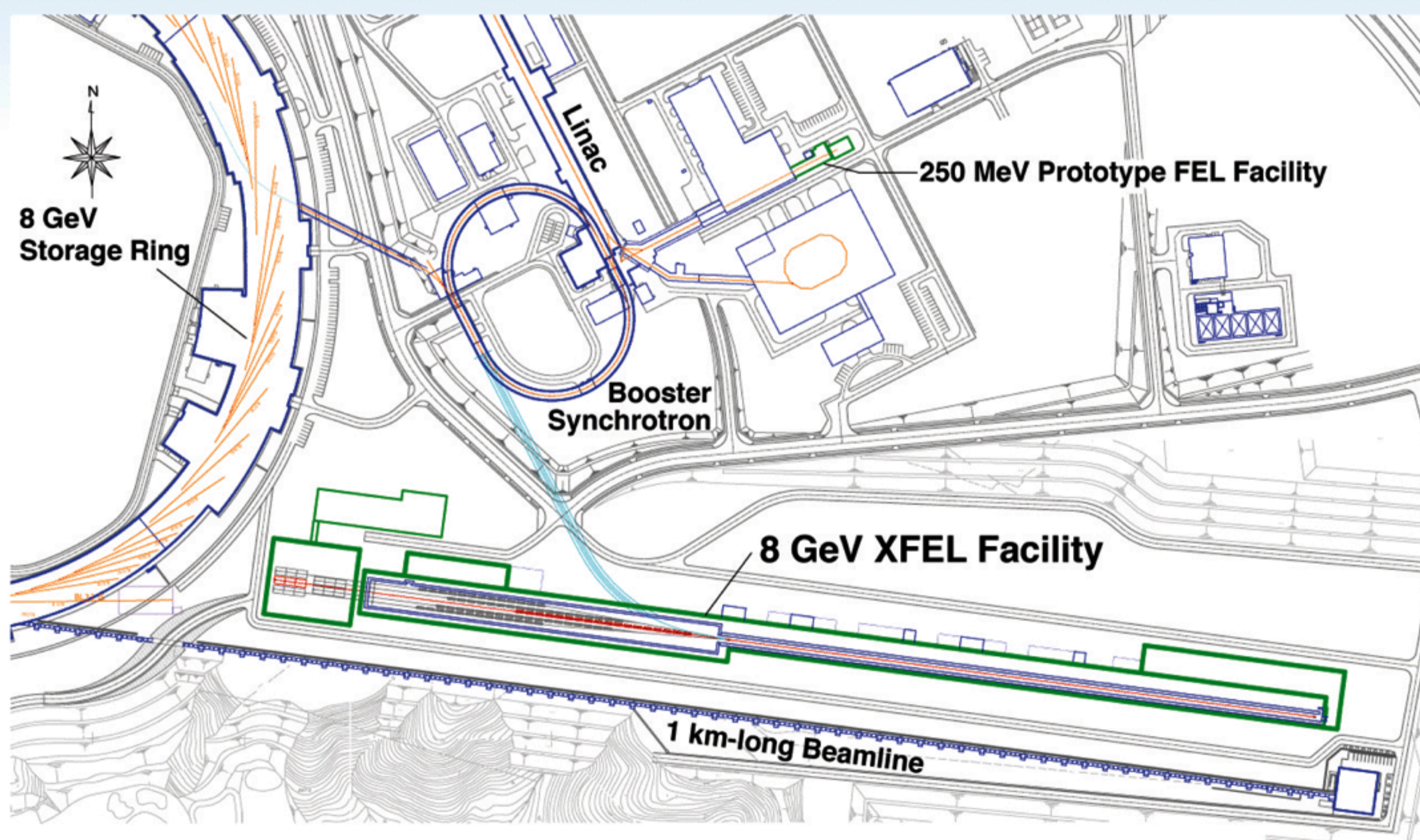


X-Ray Free Electron Laser

Japan launched an X-ray Free Electron Laser Facility construction project in the 2006 fiscal year (FY), as one of the “Key Technologies of National Importance” in its 3rd Science & Technology Basic Plan. A committee for promoting photon science held in FY 2004 at the MEXT (Ministry of Education, Culture, Sports, Science and Technology) published a report pointing out the importance of “short-wavelength coherent radiation.” This could be partly due to the astonishing results obtained with coherent x-rays at the 1 km beamline of SPring-8.

RIKEN had been making an R&D program on “elements development for X-ray Free Electron Laser (XFEL)” when the report was published. They proposed 8 GeV linac-based self-amplified spontaneous emission (SASE) XFEL to generate < 0.1 nm wavelength coherent radiation. The construction of 250 MeV linac-based prototype FEL to generate 50-60 nm extreme ultraviolet laser was approved in FY 2005, which led to the first laser in June 2006. Unique technologies adopted to the Japanese XFEL, such as a DC electron gun, a velocity bunching system, C-band accelerators and in-vacuum undulators, worked perfectly. The experiences accumulated in the prototype construction facilitated the detailed design of 8 GeV XFEL which will be the one and only XFEL co-located with a 3rd generation X-ray SR source.

Official XFEL project website (in Japanese) : <http://www.harima.riken.jp/xfel/> (The English official site is in preparation.)
Also visit <http://www-xfel.spring8.or.jp/> for accelerator development.



Design layout of the 8 GeV XFEL at SPring-8. A new linac is to be constructed parallel to the existing 1 km beamline. The facility is designed to accommodate 5 FEL beamlines in total. The experimental hall for the XFEL is designed to accept some of the SPring-8 beamlines to be able to make XFEL pump SPring-8 probe experiments.

IXS2007

The 6th International Conference on Inelastic X-ray Scattering (IXS2007) will be held at Awaji Yumebutai, Awaji City, Hyogo, Japan, from May 7 to 11, 2007.

<http://ixs2007.spring8.or.jp/>

WIRMS2007

International Workshop on Infrared Microscopy and Spectroscopy with Accelerator Based Sources (WIRMS2007) will be held at Awaji Yumebutai, Awaji City, Hyogo, Japan, from September 25 to 29, 2007.

<http://www.uvsor.ims.ac.jp/WIRMS2007/index.htm>