

**Compact Synchrotron Radiation Source 'AURORA-2' with 2.7 T Normal Conducting Bending Magnets,**  
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Sumitomo Heavy Ind. - A 2.7 T normal conducting bending magnet with a pole gap of 42 mm and a magnetic induction of 160000 AT was successfully developed so we can design a compact synchrotron radiation source which has the performance comparable to superconducting one, but is less expensive than it. Two types of this synchrotron radiation source have been designed, which are named 'AURORA-2S' for the industrial application such as X-ray lithography and 'AURORA-2D' for scientific researches. These sources are racetrack type electron storage rings in which the electron-beam is injected at 150 MeV, accelerated up to 700 MeV and stored. The critical wavelength of synchrotron radiation from the bending magnet is 1.4 nm. 'AURORA-2S' is designed to be as compact as possible, having a circumference of 11 m with a footprint of 6.8 m x 4.0 m. It has a self radiation protection shield. 'AURORA-2D' has two relatively long straight sections so that two insertion devices can be settled. Its circumference is 22 m with a footprint of 12 m x 3.8 m. The beam current should be 500 mA for 'AURORA-2S' and 300 mA for 'AURORA-2D'. The machine is now under construction.