

Mechanical Design Considerations for Taiwan Photon Source

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A 3 GeV synchrotron light source, Taiwan Photon Source (TPS), is proposed at the National Synchrotron Radiation Research Center (NSRRC). The TPS is designed to have a circumference of 518.4 m with 24 long straights and featured of its low emittance of 1.7nm-rad. The mechanical issues, such as vibration, survey and alignment, precision mechanics, temperature stability, high heat load absorber etc., are critical to the performance of TPS. The design considerations and some preliminary designs for the major mechanical subsystems or components of the TPS are depicted in this paper.