CIS, A Low Energy Booster Synchrotron For IUCF[*], D.L. FRIESEL, S.Y. LEE, Indiana University Cyclotron Facility - Construction of a 2.24 T-m, rapid-cycling booster synchrotron has been underway at IUCF for one year. The synchrotron will initially accelerate protons to 220 MeV and is designed to replace the IUCF isochronous cyclotrons as an injector of polarized light ion beams into the 3.6 T-m electron-cooled storage ring. CIS (Cooler Injector Synchrotron), has a circumference of 1/5th the Cooler ring and is designed to produce 2.5×10^{10} protons per pulse at 1 Hz. Bucket-to-bucket transfer from CIS to the Cooler operating on the 5^{th} harmonic will fill the Cooler to about 10^{11} protons in 5 seconds. The higher intensity stored polarized beams and the improved duty cycle in the Cooler ring will significantly enhance the range and quality of the experimental nuclear physics research programs. The major elements of the ring have been designed and are presently being fabricated both in-house and by outside vendors. A description of the booster synchrotron design and completion schedule will be presented.

* Supported by National Science Foundation Grants NSF PHY 93-147-83 & 23-423-10.