Objectives for the goal of operating a highly reliable 3rd generation SR source

E. Moog, 4/19/2002

Improve beam stability

• Complete commissioning of CPU	?soon?
• EMW – install/comission arb. function generator	May/June 2002
• Retrofit the poles on the CPU and re-commission	~May 2003
• Improve passive end correction on IDs	extended
• Design & begin adding e-m correctors to IDs	in ~1 year

Enhance reliability of source

• remove and repair U27	need replacement first. 2 yrs?
• build spares for 'other' period IDs	?
• research to better understand radiation susceptibility of magnets and prevent excessive exposure	ongoing
• build irradiation facility off booster	?
• improve ID control software	1 yr

Objectives for the goal of enhancing the capabilities available to users

New types of IDs better tailored to user's specific needs

- ~30 mm period undulator for canted ID beamlines — ~2 yrs
- different period undulator for Sector 3 — ~2 yrs
- superconducting und. – tests of magnetic part only — late 2004
  build superconducting undulator — 2006
- helical undulator for B. Lai — ~3 yrs
- other specialized IDs?

Canted undulator

- First beamlines with 1 mrad separation — 1 yr.

Objectives for the goal of optimizing the scientific and technological contribution from research at APS

Work towards the development of future light sources

- Undulator line for LCLS — complete construction in 2008?

Objectives for the goal of fostering a productive environment

Assist CATs by contributing specialized expertise to support them

- Magnetic Devices, Exptl Facilities Eng'ring, and ME groups are designing & building magnets for use in user experiments