

# S7 operation update

Eric Dufresne, TRR group meeting, October 25, 2005

- The new mask after the P4 did not work as well as we would have hoped. There were still some radiation leaks detected, but we are now allowed to close down the gap to 11mm in monochromatic mode, when the 7ID-B flight path is in administrative control.
- The routine radiation survey revealed several new leaks, one on the roof of 7ID-A, one near the door of 7ID-A. These were repaired yesterday by Technit. A new 7ID-A labyrinth was installed as one of the repairs.
- The 7ID-B hutch had some leaks near the floor and wall seams but did not require repairs. The 7ID-C and D hutches were fine. DW will add some shielding to the 7ID-C to 7ID-D gate.
- One of the monochromator picomotor got stuck so ED and BA re-opened the monochromator to fix it. We were down less than 24 hours and the repair was completed successfully.
- One of the cryogenic lines borrowed from S1 has a leaky vacuum jacket. We must pump on it continuously with a turbo pump. Emergency power supplies the turbo pump inside of 7ID-A.
- DW used the 200mm long KB in 7ID-C and with a 1.5 m working distance reached a focal spot of 12 (V) x 30 (H)  $\mu\text{m}$ .

# 7ID-E Update (from EL)

- The new laser interlocks have been installed and the new laser SOP was approved. The lasers are either Class I or Class IV -- no more "intermediate yellow" ambiguous hazard states. The laser synchronization can be preserved even in GREEN/SAFE mode
- The laser is operating at spec in the new hutch, and synchronized to the storage ring. The first laser-only experiment was already conducted by AMO group!
- The new laser labyrinth was installed and passed radiation survey last Friday.
- The laser beam transport is under test, including relay imaging in a vacuum transport.
- The laser will support > 5 weeks of user beam time this run from new enclosure.
- Huber operating well with its new encoders, ACS drivers and VME crate located in-hutch. We need a new gear reducer for the Phi motor. We desperately need to get a new pair of motorized slits so that the Huber detector arm is not shared between the Kappa and the Huber!
- We have added microfocusing to a time-resolved diffraction experiment for the first time. The 200mm long KBs can be switched between 3 different locations: Kappa, Huber, and AMO.
- The AMO table as well as the 7ID-C laser transport design are complete and awaiting funding.
- Phil Coppens' lab new hybrid singlet chopper to be tested in December.
- Major effort for January shutdown: cabling, including patch pannels.