

# Beam Line

## Addressing Readiness Review Report Recommendations

J. Dunne 8/23/2007

Taken from section 3.3  
of report:

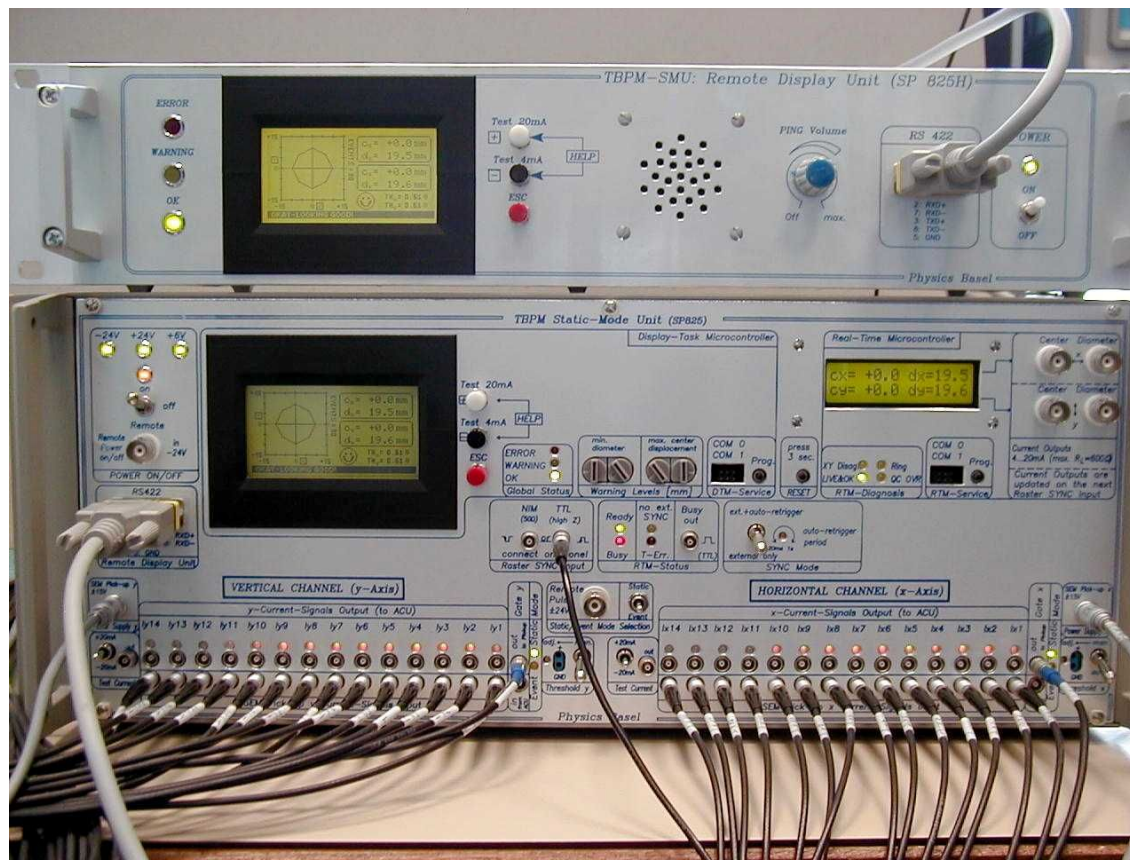
- There should be a low current (nA) diagnostic package of some kind to verify beam position from the target to the dump.
- The read backs from the Secondary Emission Monitor (SEM) should be made available to the MCC through EPICS
- Additional FSD protection for the total beam current, the chicane magnets, rasters, and beamline components between the target and the dump.
- TOSP for hall access including the Hodoscope platform and 5T magnet area.
  - The new SEM should be checked in the noisy environment of the hall as soon as possible so that additional cable shielding can be provided if required.
  - The value for the highest running energy depends on the progress with the accelerator and is still unclear. The collaboration should provide a set of energy points in a range of 5.6-6.0 GeV, optimal for maximizing the beam polarizations in all three halls.

- There should be a low current (nA) diagnostic package of some kind to verify beam position from the target to the dump.

- Longitudinal running – beam dump has ion chambers.
- Transverse running – put ion chambers after He bag.
  - Possibly add cu ring matching downstream window on He bag with ion chambers around
  - Need to determine space between He bag and temporary dump

•The read backs from the Secondary Emission Monitor (SEM) should be made available to the MCC through EPICS

- Not clear why SEM through EPICS, could send them real-time display



- Additional FSD protection for the total beam current, the chicane magnets, rasters, and beamline components between the target and the dump.

- FSD added to ion chambers near dump for transverse running
- FSD on chicane power supply current.
- Rasters have FSD's
- FSD on beam current?
- FSD on target magnet field for transverse running (GEn01-*RSS*)

- TOSP for hall access including the Hodoscope platform and 5T magnet area.
- Start with TOSP used during RSS.

- The new SEM should be checked in the noisy environment of the hall as soon as possible so that additional cable shielding can be provided if required.

- Yes, should be done
  - Need to coordinate with Gep to determine when this could be done

•The value for the highest running energy depends on the progress with the accelerator and is still unclear. The collaboration should provide a set of energy points in a range of 5.6-6.0 GeV, optimal for maximizing the beam polarizations in all three halls.

From O. Rondon:

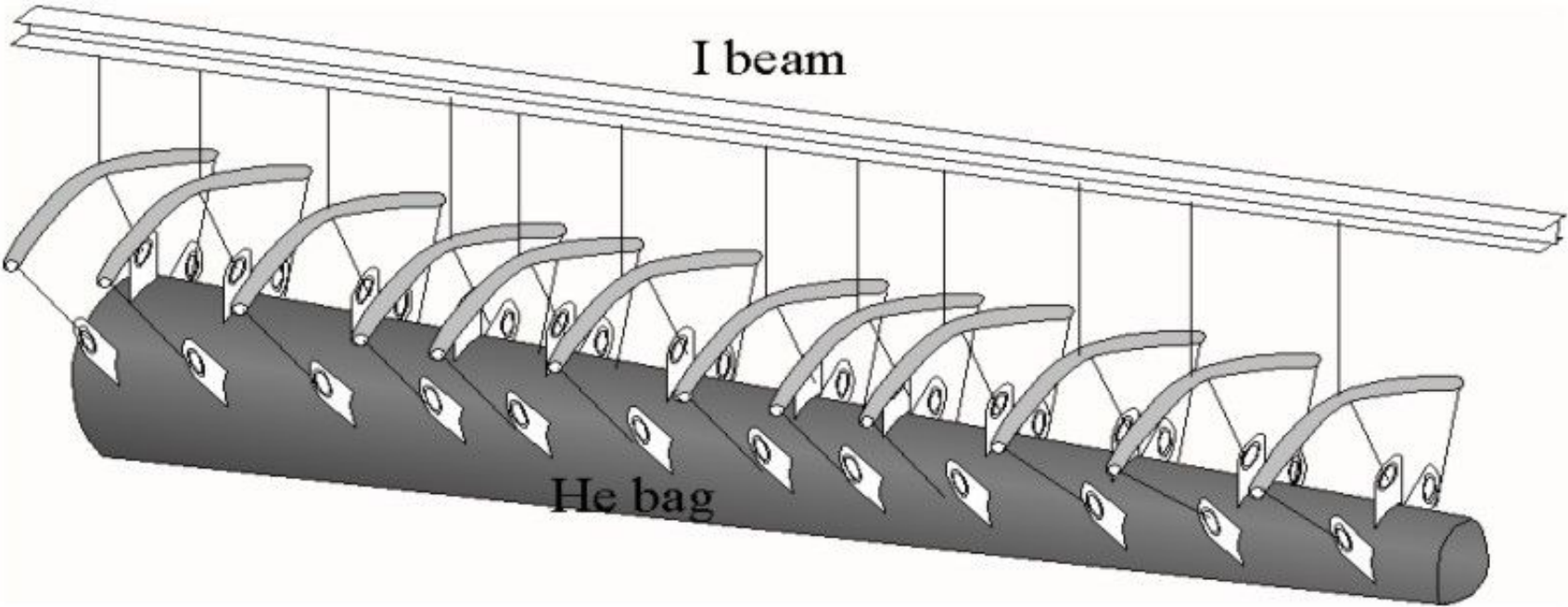
- According to Accelerator Schedule for January-June 2008, the highest linac energy at 5-passes will be  $\geq 5.714$  GeV, so our request is for

highest linac energy at 5-passes = 5.971 GeV (for linac 1170.27) OR  
5.714 GeV (for linac 1130.09)

highest linac energy at 4-passes = 4.746 GeV (for linac 1170.27) OR  
4.569 GeV (for linac 1126.56)

highest linac energy at 2 passes = 2.406 GeV (for linac 1170.27) OR  
2.316 GeV (for linac 1126.56)

# Downstream Beam Line



Proposed He bag support structure