

Date: April 2, 2004

Subj: APS drawings **25030101-00006** **PAR Injection Chamber**
 25030101-100100 **PAR Extraction Chamber**
 25030101-100200 **Common spare chamber**

Spare status: Spare INJ/EXTR region chamber complete
Stored in Bldg 382 (see Fig. 2)
ASD certification pending (request made)



Fig. 1: Storage location of spare chamber in 382
(open cabinets on mezzanine)



Fig. 2: Photo of Spare Chamber
(Dwg **25030101-100200**)

Further details:

- **Injection Chamber INJ (APS drawing **25030101-00006**)**
 - Installed in PAR on the injection side of the septum as shown in Fig. 3.



Fig. 3: Injection chamber installed in PAR.

- **Extraction Chamber EXTR (APS drawing [25030101-100100](#))**
 - Installed in PAR on the extraction side of the septum as shown in Fig. 4..



Fig. 4: Extraction chamber installed in PAR.

- **Common spare for both Injection Chamber and Extraction Chamber (APS drawing [25030101-100200](#))**
- **Notes:**
 - Injection chamber and Extraction chamber are mirror images in regard to location to beam path.
 - EXTR chamber has an ion gage; INJ chamber does not.
 - Both INJ and EXTR chambers have 6" Conflat connections for ion pumps.
 - Since both chambers have ion pump connection on the bottom of the chamber, and the chambers are mirror images geometrically, the spare chamber has a 6" Conflat connection located on top and bottom.
 - If the ion gage is to be used when the spare is installed to replace the original Extraction chamber (EXTR) then a zero-length reducer must be employed.