## Beam loss monitors in the collimation

- To phases of collimator operation:

1. single collimator adjustment (losses occur only at one collimator)
2. multi collimator loss observations (losses occur at more than one collimator)

TO

1. Use of ionisation chambers
2. I onisation chamber dimensions: diameter $=90 \mathrm{~mm}$, length $=600 \mathrm{~mm}$
3. Distance to the beam max about 350 mm .
4. Distance to collimator (back surface) about 300 mm
5. Use of secondary emission monitors (SEM)
6. SEM dimensions: diameter $=90 \mathrm{~mm}$ length $=225 \mathrm{~mm}$
7. Distance to the beam max about 100 mm
8. Distance to collimator (back surface) about 300 mm
