

## **1. Ion desorption measurement**

- It contributed to the transition pressure rise.
- The ions produced from beam scraping may help electron multipacting.

## **2. NEG coating evaluation**

- Ion desorption reduction, and SEY, electron desorption reduction.
- Activation condition and other issues.

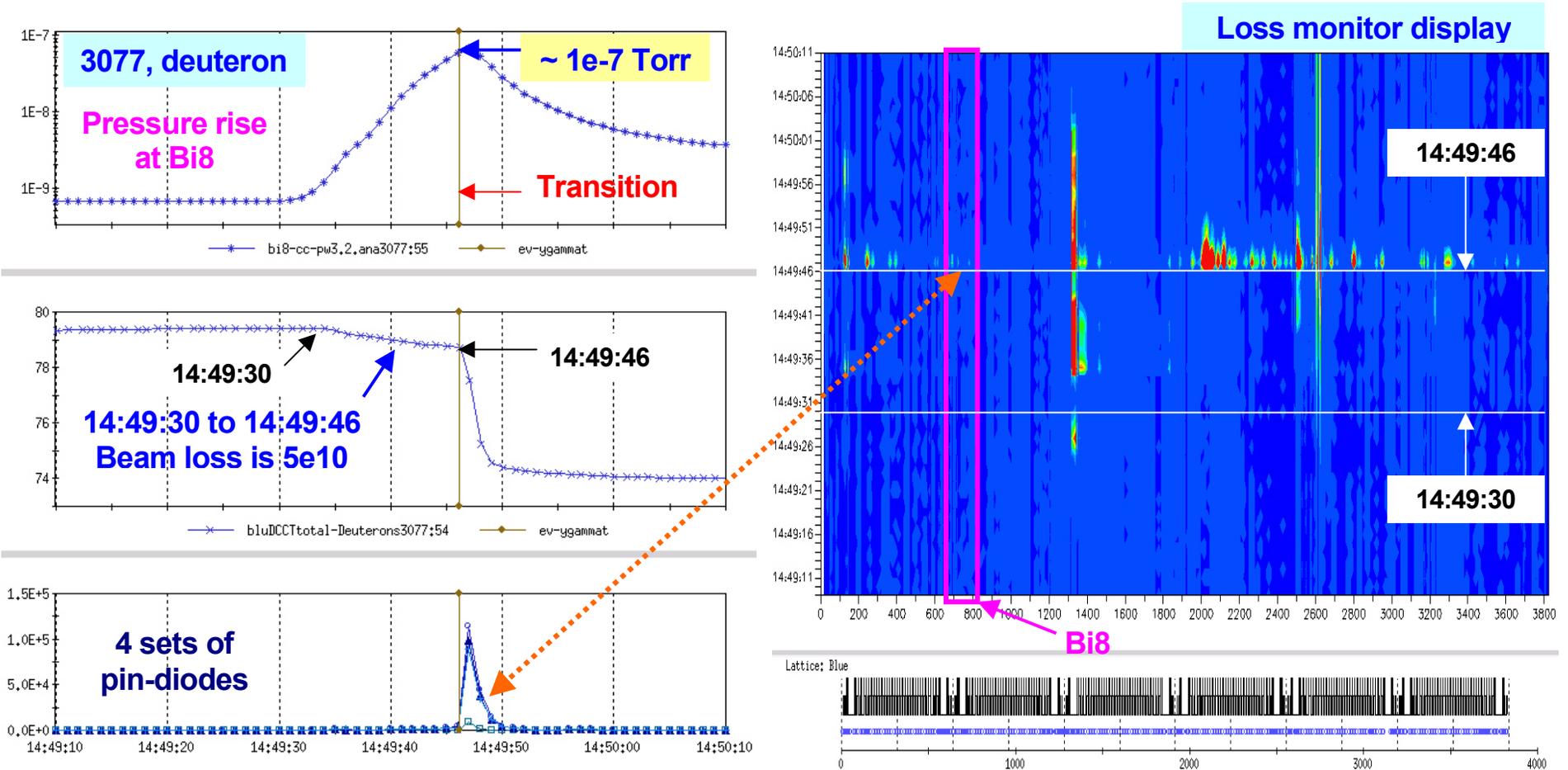
## **3. Electron multipacting - especially at interaction regions**

- Electron cloud at injection.
- Electron multipacting at beam rebucketing in Run 4.
- Effects of beam momentum spread, bunch intensity, bunch length.

## **4. eRHIC issues**

- With 360 bunches in RHIC, electron multipacting is expected
  - **At cold regions, that means possible heat load problem.**
  - **At ramping and at top energy.**
  - **Beam instability and emittance growth.**
  - **Dipole and quadrupole problems.**
- 180 bunch scenario.

# Example of beam scraping - very high ion desorption? Ion production?



- From 14:49:30 to 14:49:46, pressure rise of  $\sim 1e-7$  Torr at Bi8.
- Total beam loss was  $5e10$  deuteron ions at the same time.
- From loss monitor, most of the loss is at other locations, hardly any can be identified at Bi8.
- Pin- diodes signal is consistent.
- Transition pressure rise was not due to the electron multipacting.