

ATLAS Diamond Beam Monitor (DBM)

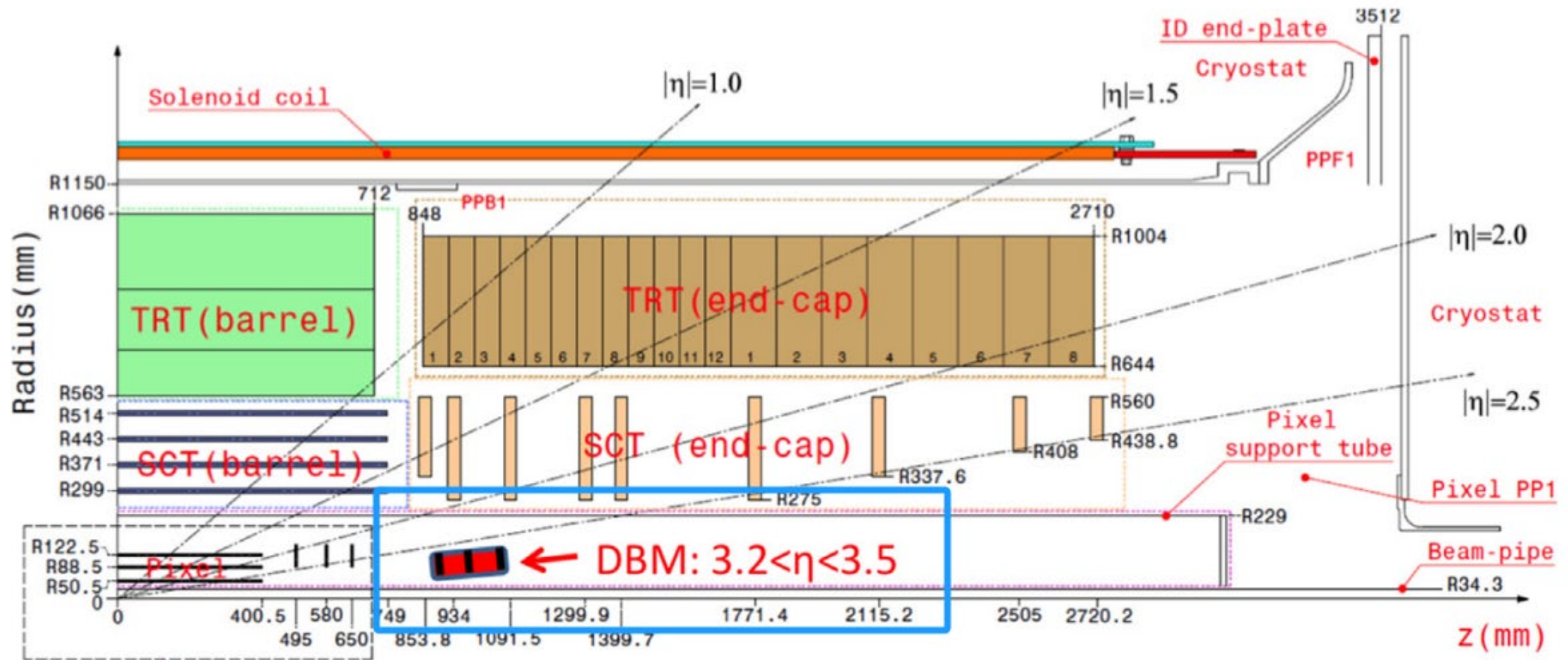
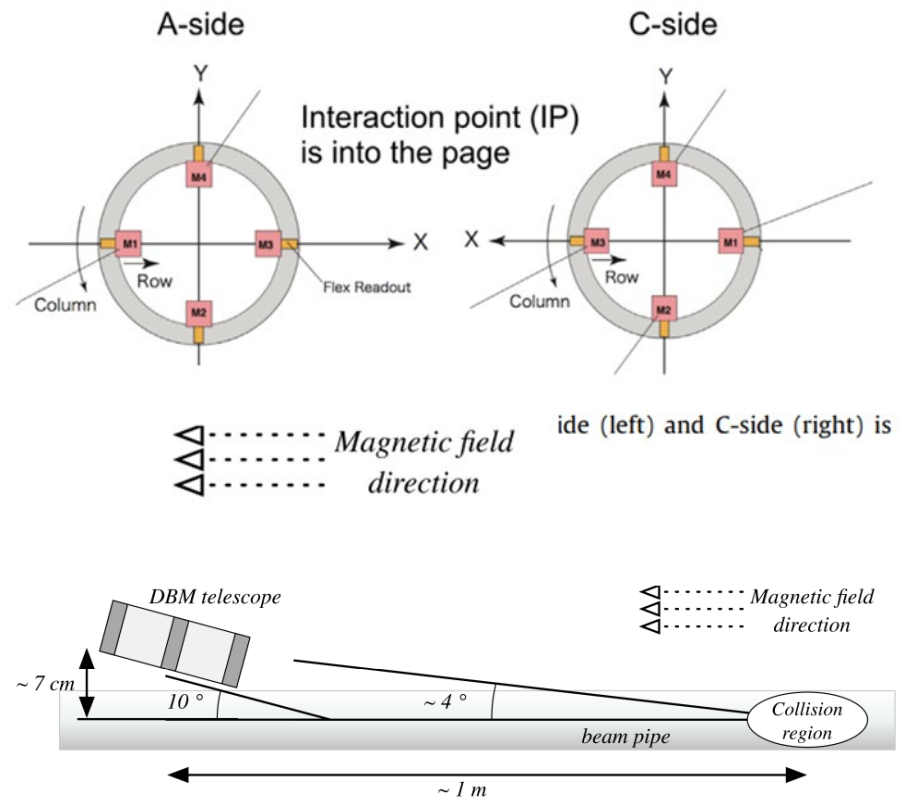
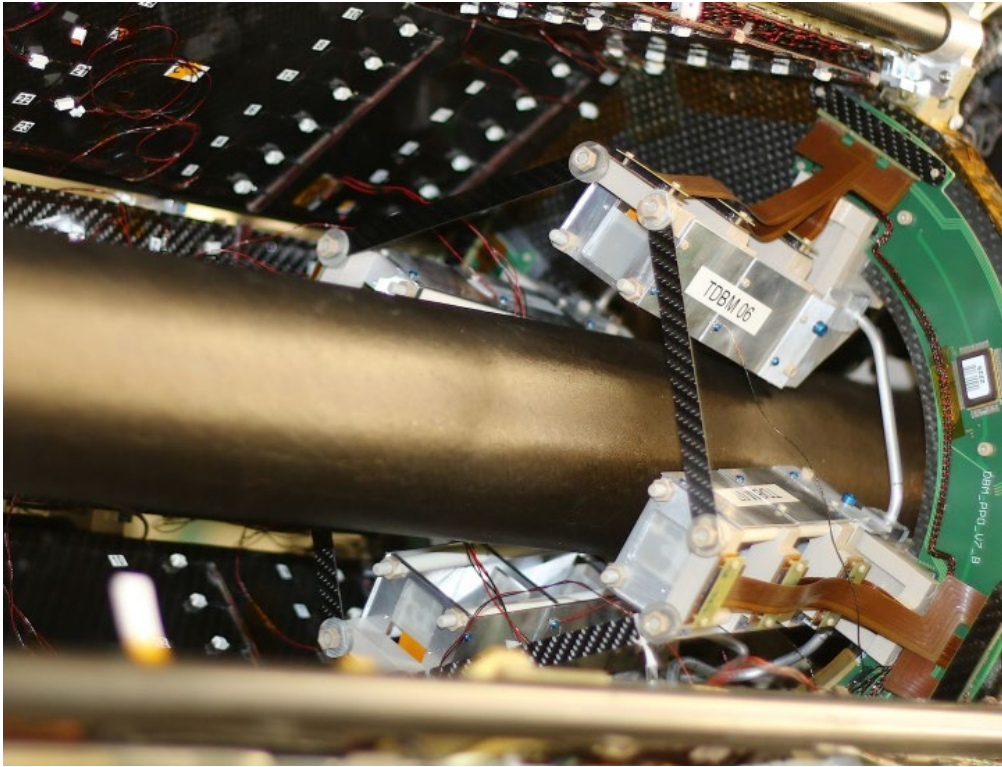
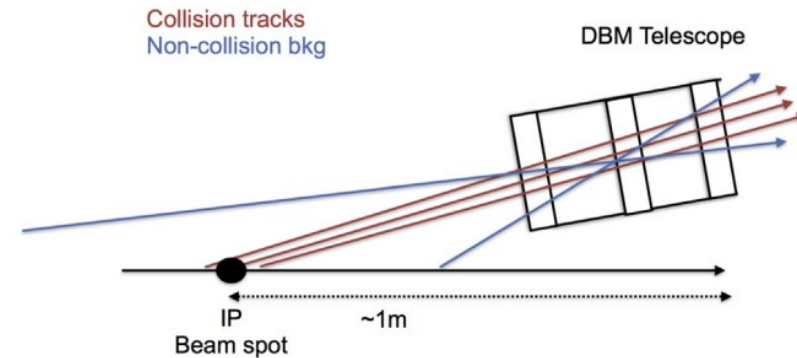


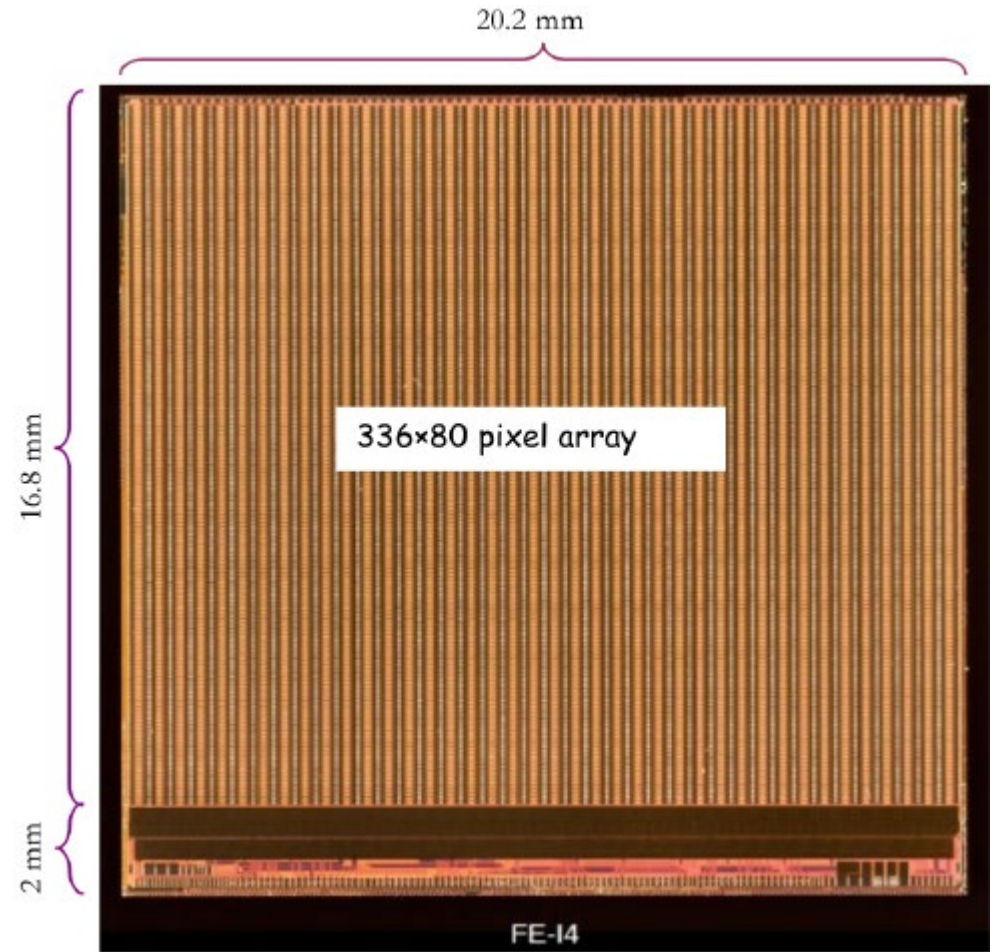
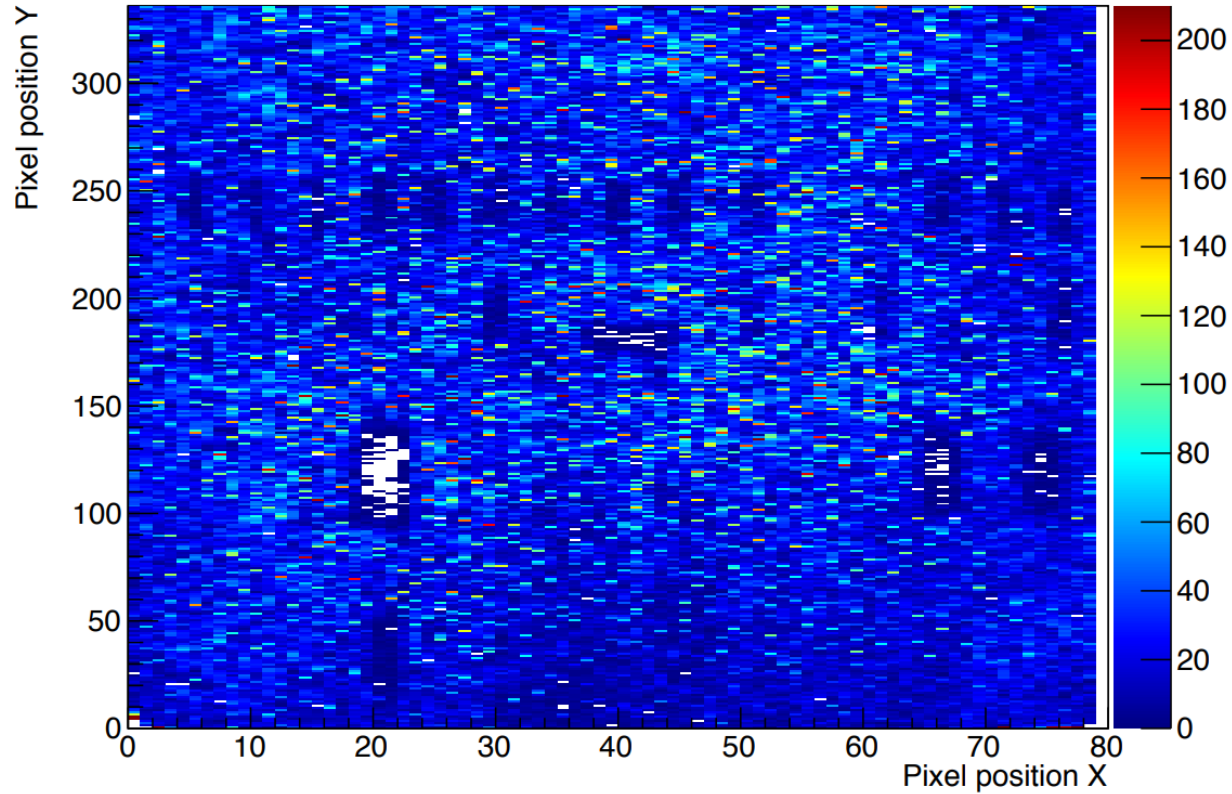
Fig. 1. The DBM at $\eta \sim 3.2$ in the ATLAS detector.



- monitor the instantaneous (bunch-by-bunch) luminosity and bunch-by-bunch position of the beam spot in the ATLAS experiment.
- with three or more sensors stacked one behind the other, it is also possible to define the particle's trajectory.



All Hit Occupancy



- instrumented with pixellated FE-I4 front-end chips, 26,880 pixels

A fast luminosity monitor based on diamond detectors for the SuperKEKB collider

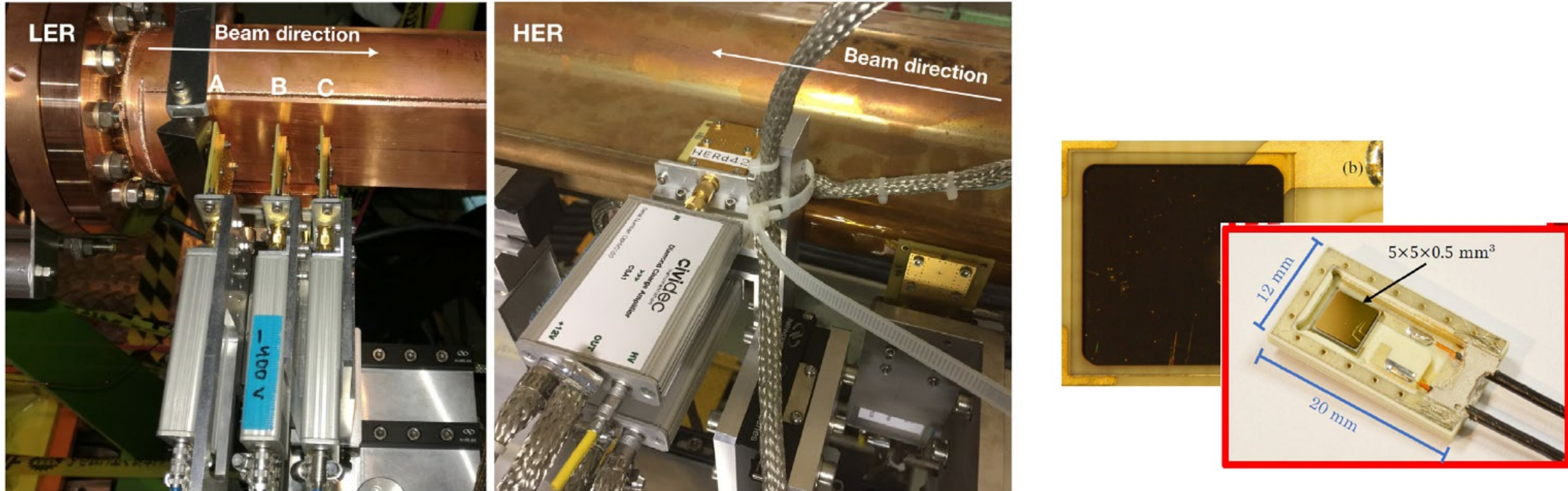


Fig. 1. Experimental layout in both rings (lhs: LER, rhs: HER).

- 10 and 30 m downstream of the IP in the Low Energy Ring (LER) and High Energy Ring (HER). Belle II
- a remotely controlled motor to adjust the distance from the vacuum pipe in the horizontal plane over a range of 25 mm.

Diamond-based beam-loss monitor system of Belle II

