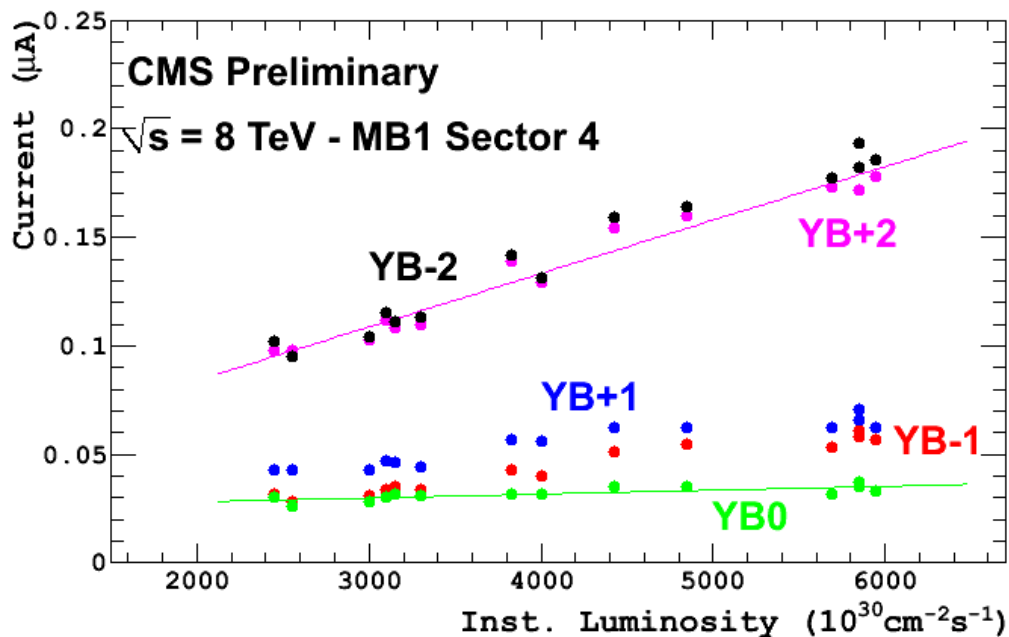
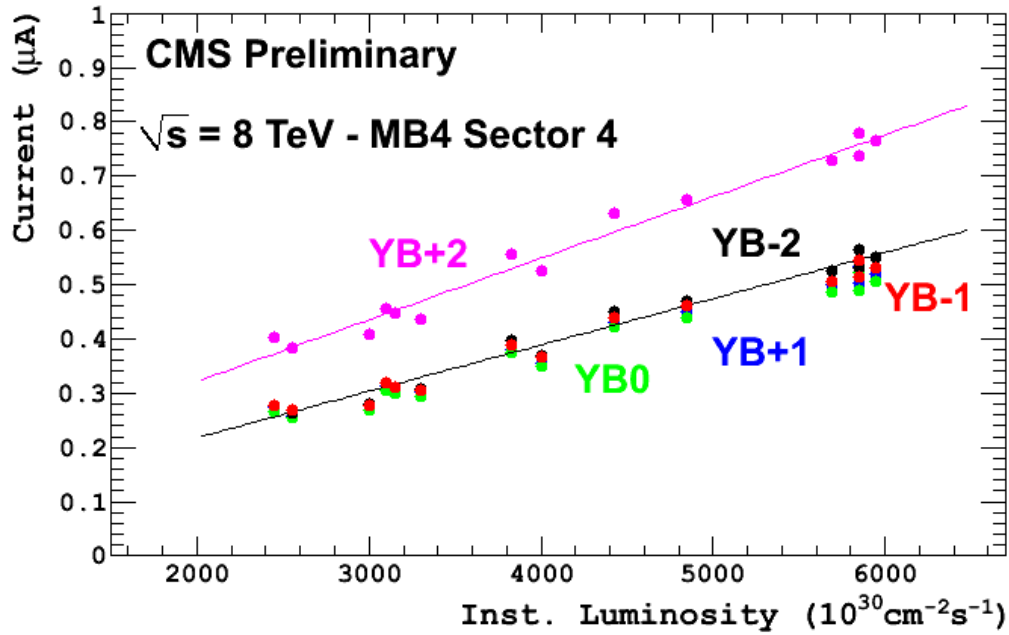


Measurement of current drawn by DT chambers as a function of LHC instantaneous luminosity

- The currents drawn by DT chambers were measured during LHC operation, Fills 2683 to 2728. The currents were read from the DT HV modules CAEN A877.
- The shown values were obtained by averaging the currents of all wires and layers of a given chamber for 10 minutes. The current measured for the same chamber in no-beam conditions was subtracted from the result.
- The results are plotted as a function of LHC instantaneous luminosity, as read from the LHC Operation Page.
- The highest values of currents were found in the top sectors (Sect.4) of the outermost station (MB4), where the background is maximum. This is due to the presence of collision induced "neutron gas", setting up between the detector and the cavern's ceiling.
- For each wheel, MB1 currents were verified to be Phi symmetric. They are higher in the external wheels (YB-2, YB+2) due to higher track multiplicity.



Current drawn by the chambers MB1/Sect4 of all wheels as a function of LHC instantaneous luminosity



Current drawn by the chamber MB4/Sect4 of all wheels as a function of LHC instantaneous luminosity

-- FrancescaCavallo - 18 Mar 2014

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