

Beams-doc-1479  
December 1, 2004

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Earlier today Jim set up data logging on 6 of the BPMS in A3, 3 H bpms and 3 V BPMS. A copy of his email is included at the end of this.

I have included 2 pictures which show a quick look at some of the data on the proton cables:

position.gif  
intensity.gif

In all of these pictures there are 6 traces, one each for HA32, HA34, HA36, VA33, VA35, and VA37. The H BPMs are on the bottom, with the left hand scale and the V BPMs are on the top with the right hand scale.

Position is computed  $26(A-B)/(A+B)$  and intensity as  $A+B$ .

Everything looks good except for one glitch for about 10 seconds near 13:49 PM. Other than the glitch, there are no outliers. This is an improvement over the pre-shutdown data. The figures

position\_detail.gif  
intensity\_detail.gif

show details of the time of the glitch. Some of the scales have also been fiddled a little relative to the first pair of pictures.

With a position of -25 mm, it is hard to believe that this is real beam motion. And it does not look like any of the noise we have seen in the past - the glitched position is stable for about 10 seconds. My guess is that someone wiggled a cable?

Any other guesses?

I also grabbed the IQ data and spot checked it:

- 1) The pattern of 5 stable phases is back.
- 2) The data logged position and intensities agree with the data logged IQ data.
- 3) The glitch is also present in the IQ data.

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This is a copy of Jim's email explaining what is being data logged.

Rob,

I've started datalogging BPM values from A3. The values are being logged in the TEV data logger (DUE40). T:HA34IQ[] and T:VA35IQ[] are being logged at 15Hz. The following devices are being data logged at 1Hz:

T:HA32IQ[]  
T:VA33IQ[]  
T:HA36IQ[]  
T:HA37IQ[]  
T:HPA32[]  
T:VPA33[]  
T:HPA34[]  
T:VPA35[]  
T:HPA36[]  
T:VPA37[]

Jim Steimel