

**Subject: Booster Bypass Bpms**

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John,

I have a few comments regarding providing a separate bpm PVs for each Linac beam pulse:

1. The SCDUs appear to be set to "Force Free Run". This means they will digitize every beam pulse. No timing modification is needed if this is still acceptable.
2. It's possible to set up a database to count Linac triggers and process only the desired pulse. I've prototyped the logic in my office.
3. From Ned's experience, it is most unlikely the ioc, iocbbpm1 can process 8 bpms at 6Hz to split out the separate beam pulses. We would have to either setup a new ioc or use a different processor or both. The suggestion is to process the 8 bypass bpms at 2 Hz, but provide a PV to select which Linac pulse (0,1,2) to process. There would be but one PV, not three for each BPM PV.
4. Because the SCDUs will still digitize every pulse, the memory scanner PVs will report averages for all pulses as they do now. At 2 Hz, software averaging of SCDU PVs should be ok if averaging is desired.