

Paper QA Criteria

Paper QA
Criteria

Volker RW
Schaa

Basics

More checks

Margins

Paper QA Criteria

Volker RW Schaa

GSI Darmstadt, Germany

JACoW Team Meeting, 09 October 07

Basic Instructions

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- Check number of pages: Same as in database?

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- Check number of pages: Same as in database?
- Pages display in <5 seconds? (5sec/#GHz)

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- Check number of pages: Same as in database?
- Pages display in <5 seconds? (5sec/#GHz)
- **All pages display without error?**

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- Pages display in <5 seconds? (5sec/#GHz)
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- **Check the margins once more**

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- **Look carefully at the text and**

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- Check equations and figures for strange or bad fonts.

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- But, is this all you have to check?

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- Are you QAing your own paper?

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- Are you QAing your own paper?
- Is the paper size $\approx 595 \times 792 \pm 1$ pt?

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- Why are margins so important?

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Why are margins so important?

grade for Main Injector (MI) BPM system followed and was completed at the end of year 2006. For both machines the upgrades opened up a whole new realm of possibilities and made the analysis presented here possible.



Figure 1: Horizontal plane phase space plot of HP124 in Recycler Ring, for 40 consecutive turns. The measured beta and alpha function is listed at the lower-right corner in green.

ALGORITHM

The basic concept of this calibration procedure is simple

† Operated by Fermi Research Alliance, LLC under Contract No. DE-

AC02-07CH11359 with the United States Department of Energy.

‡ E-mail: yang@fnal.gov

ple, beta functions from any other sources can be used, as long as they are an accurate description of the machine.

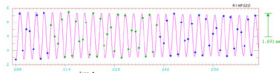


Figure 2: The horizontal plane TBT data at HP222 is plotted for 70 turns. As shown here only the data points in green were used for the sinusoidal fit.

TBT DATA

With no pinger device in Recycler Ring to excite beam oscillation TBT data had to be taken at injection with intentional steering error in either horizontal or vertical plane. The oscillation amplitudes of TBT data were limited to somewhere between one and two millimeter, for reasons beyond the scope of this paper.

In the Main Injector Ring extraction kicker at MI52 was used to excite horizontal plane oscillation and injection

● Why are margins so important?

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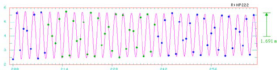


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T03 Beam Diagnostics and Instrumentation

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How Marginal?

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- **But a distance of less than 7 pt is critical**

How Marginal?

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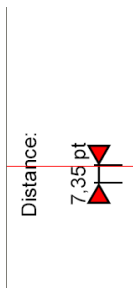
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Soon after the installation of new Recycler BPM system a set of TBT data was taken for lattice analysis, and gain calibration analysis as well. The gain distribution found is shown in Figure 3 with the horizontal plane plotted in blue and the vertical plane in magenta. There are two visi-

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