

BPM resolution studies at PETRA III

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In order to measure the noise level of a BPM system from beam generated orbit data, the correlated beam jitter has to be removed from the position signals. There exist different ways to extract the BPM noise as the “three-BPM” correlation method or the model-independent principal components analysis (PCA). Both methods will shortly be discussed. Based on a PCA the resolution of the PETRA III Libera Brilliance based BPM system was measured. The results will be presented together with first measurements in view of an updated BPM system for the future PETRA IV project at DESY.

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Track Classification: BPM error compensation schemes