C16

On the discrimination of dipole background from 4 blade photon BPMs for insertion devices

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The position response of blade monitors is mainly determined by their spectral sensitivity for low energy photoelectrons. For insertion devices with high energy first harmonics the signals are contaminated by the light from the upstream and downstream bending magnets. A blade monitor design using energy selective detection of the photoelectrons from the blades will be presented. This way the background signals from the dipoles can be supressed and only position information from the insertion device beam can be obtained. A simulation code and experimental results at BESSY I will be presented.