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## **Bragg-Fresnel multilayer electron beam monitors for third generation storage rings**

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In anticipation of the low emittance of the third generation light source BESSY II we developed a new approach to source imaging for soft X-rays based on Bragg-Fresnel multilayer optical components. A diagnostic system of proven workability at BESSY I using W/C and MO/Si Bragg Fresnel lenses will be presented. Results of real time imaging of the BESSY I source in a low emittance section of the storage ring using automatic image analysis showing the source shape as a function of time and the operation modes of the storage ring will be reported. The emittance can be detected with a resolution down to 0.005 nm rad. An improved design based on a Bragg-Fresnel telescope as well as a diagnostic front end being built for BESSY II will be presented.