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## **Design criteria for beamline equipment protection systems at the Advanced Photon Source**

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Designing and building beamlines at third generation sources force beamline designers to place a high emphasis on the beamline equipment protection system (EPS). This work presents a set of design criteria as well as a prototype system that UNI-CAT and DND-CAT will use for the basis of their EPSs at the Advanced Photon Source. These criteria balance hardware and manpower costs in the design as well as the reusability of already existing software protocols (e.g., World Wide Web and EPICS protocols) to report conditions to the beamline staff.

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