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## Difficulties in modifications of front-end X-ray Beam Position Monitors to cope with increased power loads from source point upgrades

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As Diamond Light Source moves towards its upgrade to a 4th generation synchrotron many of the beamlines are upgrading insertion devices resulting in source points with increased power. Consequently, the power loads expected on the front-end diagnostics will be significantly higher. Simulations of the X-ray beam have shown the power absorbed by the front-end tungsten blades could exceed the limits provided by the manufacturer. To mitigate this risk, in-house modifications were conducted to increase the separation of the blades to account for the more intense beam. These modifications had varying success and are some-what limited by the original design of the blade holders. This talk will discuss some of the challenges we have encountered.

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