

## **Analysis of a 26 kW Front End Photon Shutter**

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The CLS Phase 2 Beamlines will include a Biomedical Imaging and Therapy Beamline that will use a 4 Tesla Super Conducting Wiggler producing 26 kW of power at 500 mA. In the Front End for this Beamline we are proposing to use a tilting style Photon Shutter that is used in other Front Ends at the CLS and also at the APS. This Photon Shutter will see 26 kW and a maximum power density of 235 Watts/mm<sup>2</sup> (normal incidence). A thermal and structural Finite Element Analysis will be completed using ANSYS to determine if the current design is sufficient.