

G-2 ANSYS Mechanical Simulation for Lithium Lens

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Lithium Collection Lenses were used to collect anti-protons for decades during the Tevatron collider run at Fermilab. This investigation looks at using the same Lithium Lens design for future use for muon production during the g-2 experiment at Fermilab; where thermal loading is much less per pulse, but the repetition rate is much higher. A transient ANSYS analysis was performed comparing the two cases. Results and failure modes are presented along with some special operating conditions that are possible with the g-2 timeline.

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