Resolving the discrepancies in the spectroscopy of ^{39}Ca for the ^{38}K$(p,\gamma)^{39}$Ca reaction

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This work is based on the research supported in part by the National Research Foundation (NRF) of South Africa (Grant numbers: 141287 and KIC240412213800), and the SAINTS Prestigious Doctoral Scholarship.

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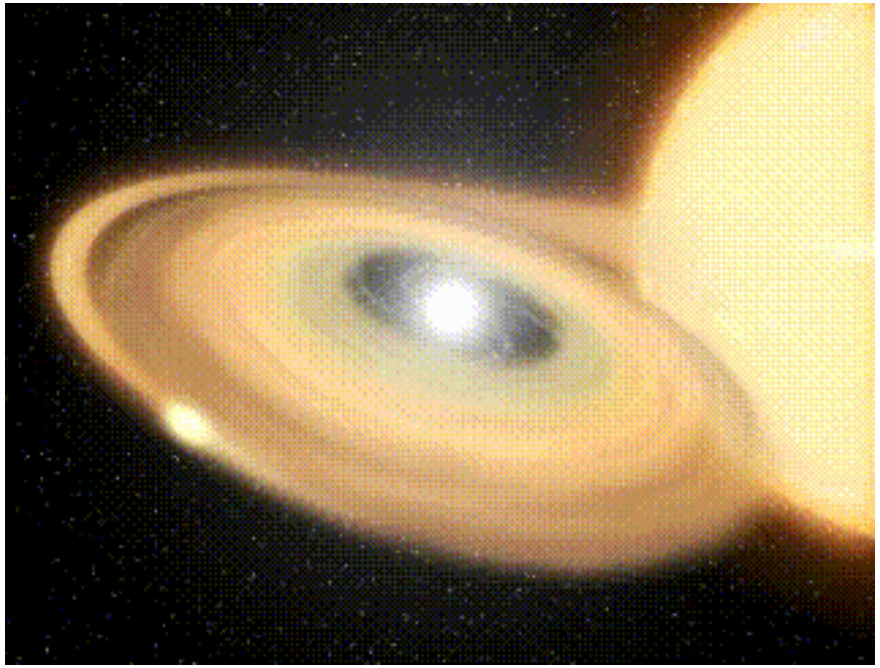
Astrophysical motivation

- Resolving disagreements in the **spectroscopy of ^{39}Ca** relevant for the **^{38}K$(p,\gamma)^{39}$Ca** reaction which influences the **abundance of Ca** in classical novae nucleosynthesis.



An artist's concept of Z Camelopardalis (Z Cam)
gif credit: NASA/JPL-Caltech

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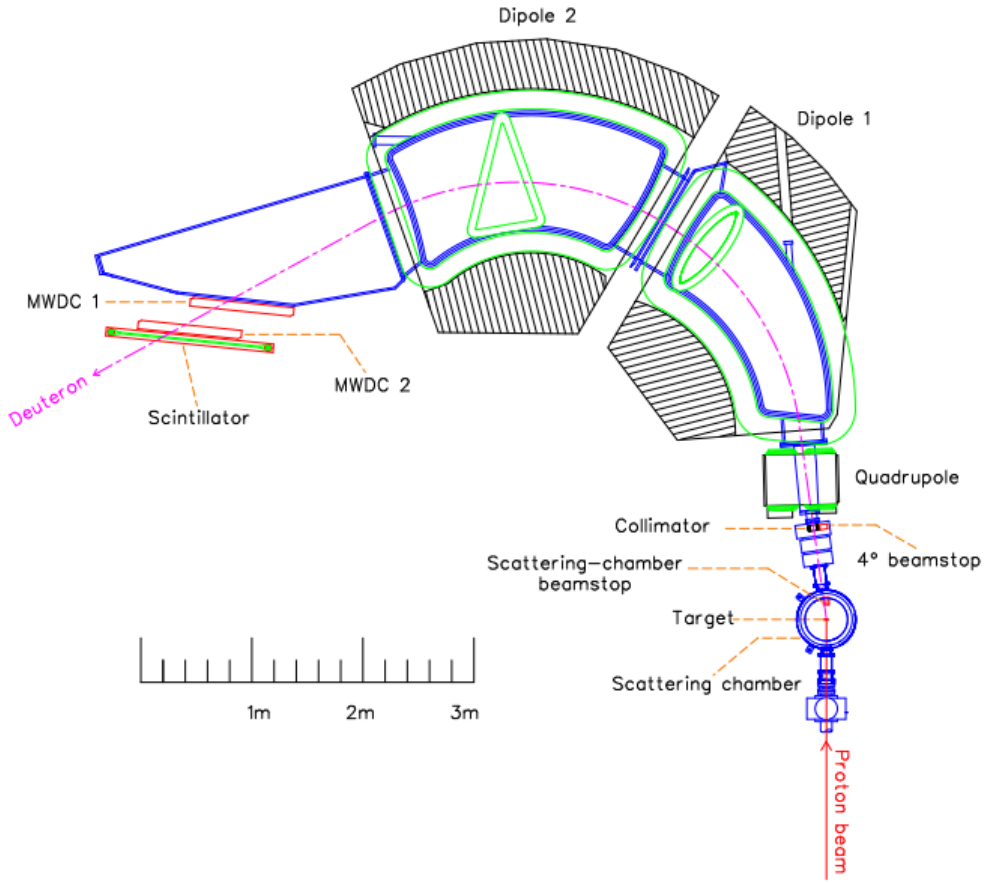
Method

- We performed a **^{40}Ca$(p,d)^{39}$Ca** reaction with a **66 MeV** proton beam using the **K600 magnetic spectrometer** at **forward angles**.



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Results

- **Come and see my poster!**