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WITHDRAWN - Direct study of the ^{22}Ne(*p,γ*)^{23}Na reaction in inverse kinematics using the DRAGON recoil separator

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The ^{22}Ne(p,γ)^{23}Na reaction largely impacts the abundance of the only stable sodium isotope, ^{23}Na, in various stellar environments, such as AGB stars, massive enough to undergo hot-bottom burning, type Ia supernovae and novae. However, the ^{22}Ne(p,γ)^{23}Na reaction rate still carries one of the highest uncertainties among the astrophysical reactions involved in the NeNa cycle, thereby also affecting the abundance predictions of elements between ^{20}Ne and ^{27}Al.
With the discovery of the anticorrelation between sodium and oxygen abundances in globular cluster stars, constraining the relevant reaction rates in order to reduce uncertainties in the abundance predictions for NeNa cycle elements has becomes of increased importance.
The thermonuclear reaction rate for the ^{22}Ne(p,γ)^{23}Na proton capture reaction is dominated by a number of narrow resonances within the Gamow window.
Recently, a study with the objective to directly measure the strengths of the most relevant resonances in the ^{22}Ne(p,γ)^{23}Na reaction in inverse kinematics was carried out using the DRAGON (Detector of Recoils and Gammas Of Nuclear Reactions) recoil separator at TRIUMF. Resonances within an energy range from $E_{c.m.}$=178~keV to $E_{c.m.}$=1.222~keV were investigated.
In this contribution the astrophysical motivation behind this measurement, as well as first results of this inverse kinematics study of the ^{22}Ne(p,γ)^{23}Na reaction will be presented.

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