Cross section of $^{3}He(^{3}He,2p)^{4}He$ reaction measured near the Gamow peak

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We have measured at nuclear fusion cross sections for $^{3}He(^{3}He,2p)^{4}He$ over the center of mass energy region of 25 to 50 keV [1-4]. At the lowest energy of the measurement, different atomic states of incident particle will be applied to obtain the accurate information of the S-factor without any modification due to the atomic electrons of the projectile.

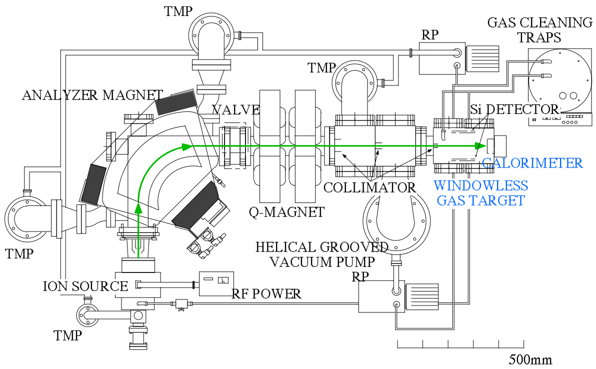

Figure 1: Total system of a compact accelerator, beam transport and gas target for experiments in nuclear astrophysics.

References

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