Abstract Submitted
for the SES12 Meeting of
The American Physical Society

ANC measurement on (^{6}Li,d) reactions M.L. AVILA, G.V. ROGACHEV, E. KOSHCHIY, Florida State University — Direct measurement of many astrophysically important reactions cannot be done due to small cross sections. An alternative can be to obtain the Asymptotic Normalization Coefficient (ANC) as an effective method to determine the astrophysical S factor. Combination of the sub-Coulomb α-transfer reaction and application of the ANC technique in the analysis of the experimental data practically eliminates all dependence of the result on model parameters, making this approach a very valuable tool for studies of astrophysically important reaction rates. In this study we report the ANC measurements of near threshold states for (^{6}Li,d) reactions performed at sub-Coulomb energies at the Florida State University Tandem-LINAC facility. The reactions that were studied using this technique are ^{16}O(^{6}Li,d)^{20}Ne, ^{13}C(^{6}Li,d)^{17}O and ^{12}C(^{6}Li,d)^{16}O.

Melina Avila
Florida State University

Date submitted: 24 Sep 2012 Electronic form version 1.4