

(γ,n) -Rates of Short-Lived Carbon Isotopes with the R³B-CaveC Setup

Marcel Heine for the R³B collaboration
496. Wilhelm und Else Heraeus-Seminar



R³B



GSI



(n, γ)-Rates in Inverse Kinematics Neutron-Capture

$^{14}\text{C}(\text{n},\gamma)^{15}\text{C}$:

- ▶ R. Reifarth et al.,
PR. C77, 015804

(n, γ)-Rates in Inverse Kinematics

Reversion of Time



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$^{14}\text{C}(\text{n},\gamma)^{15}\text{C}$:

- ▶ R. Reifarth et al.,
PR. C77, 015804

(n,γ) -Rates in Inverse Kinematics

Coulomb-Breakup



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$^{14}\text{C}(n,\gamma)^{15}\text{C}$:

- ▶ R. Reifarth et al.,
PR. C77, 015804

$^{15}\text{C}(\gamma,n)^{14}\text{C}$:

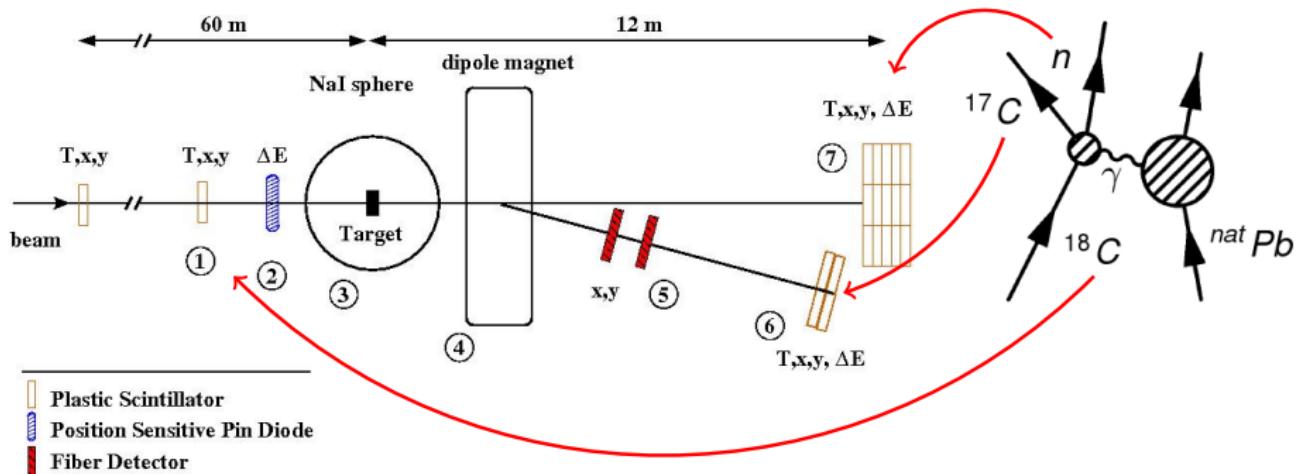
- ▶ U. Pramanik et al.,
PL. B551, 63

... all momenta/energies have to be measured: **R³B-CaveC Setup**

^{18}C Coulomb-Breakup at the R³B-CaveC Setup



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- ▶ the reaction channel $^{18}\text{C}(\gamma, n)^{17}\text{C}$ has been identified
- ▶ a preliminary excitation spectrum of the $(^{17}\text{C}, n)$ system was derived