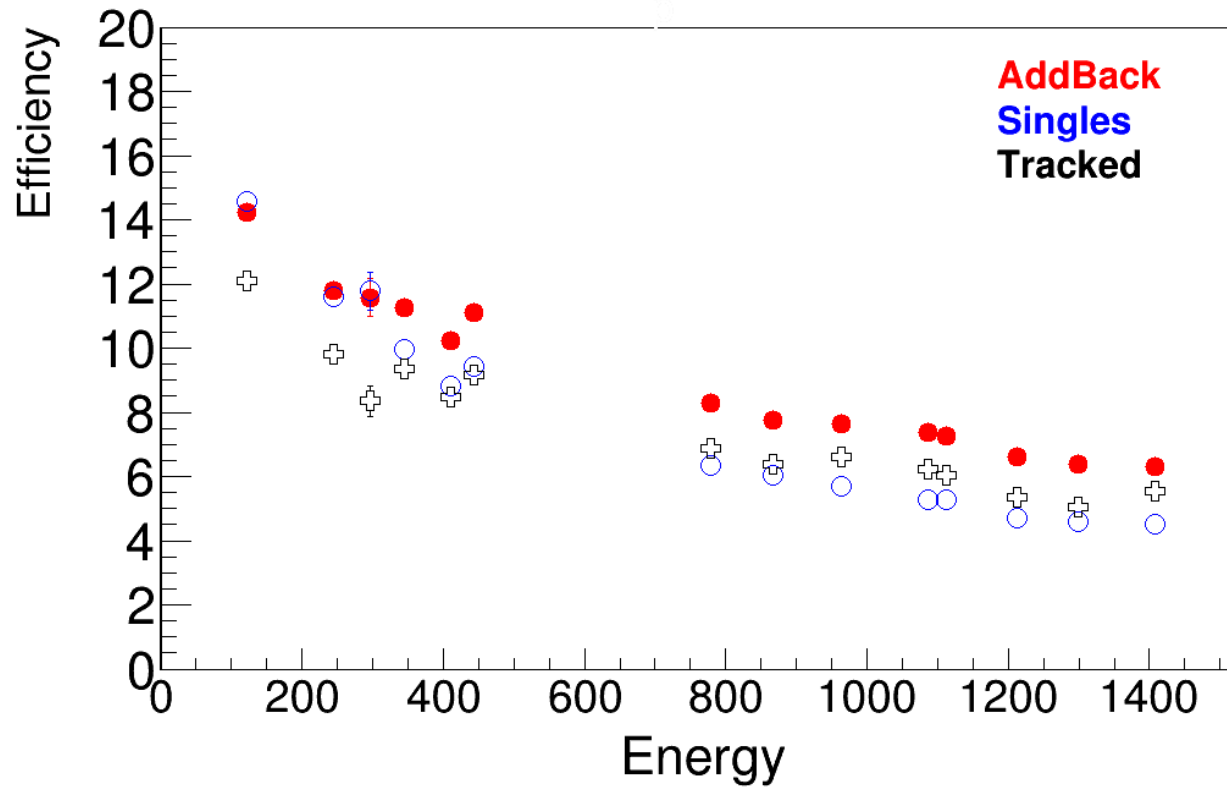


How well AGATA performed in 2019 ?

... the best we could

Commissioning/E744 efficiencies : 37 capsules

AGATA is approached by 51 mm for the MUGAST campaign



Efficiencies @ 1.4 MeV

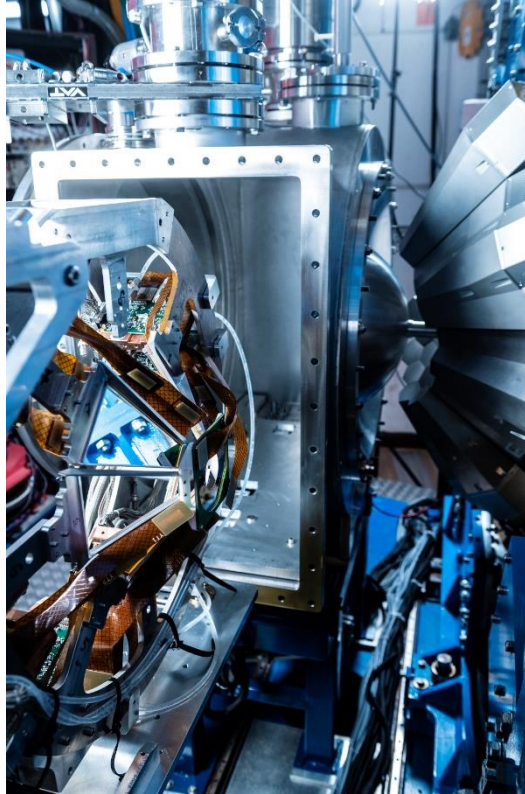
AddBack 6.3(1)%

Tracked 5.5(1)%

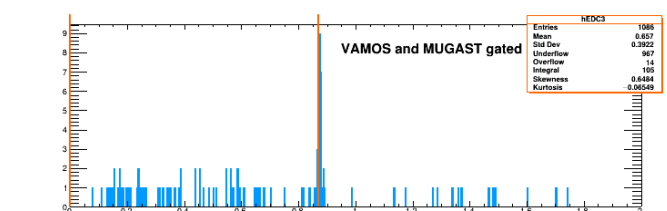
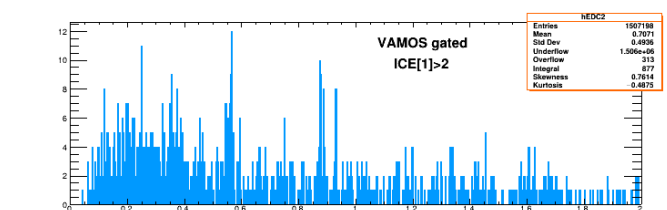
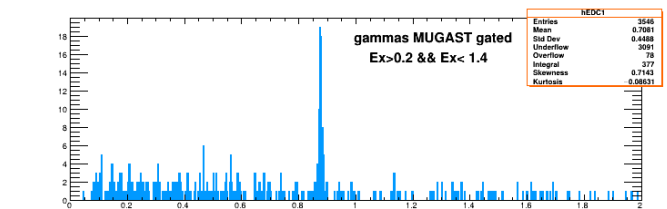
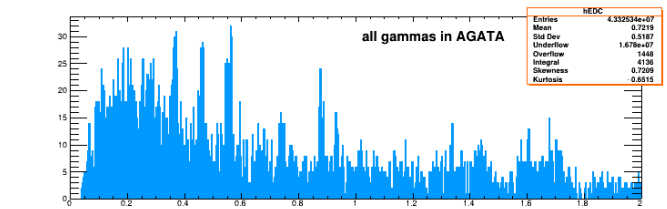
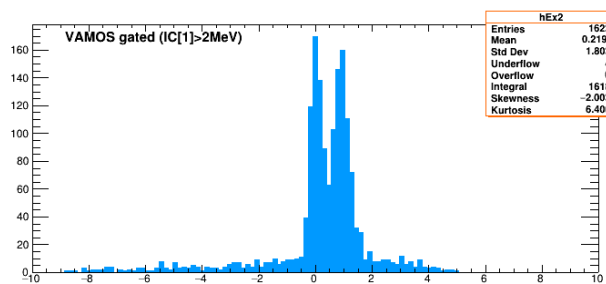
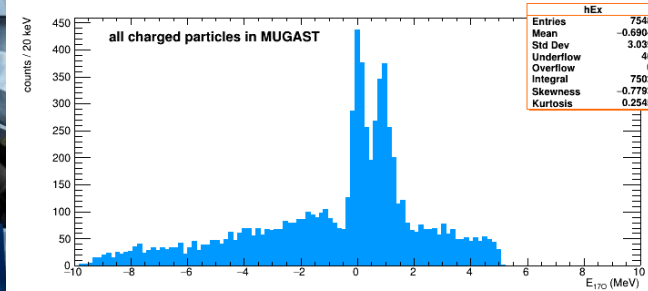
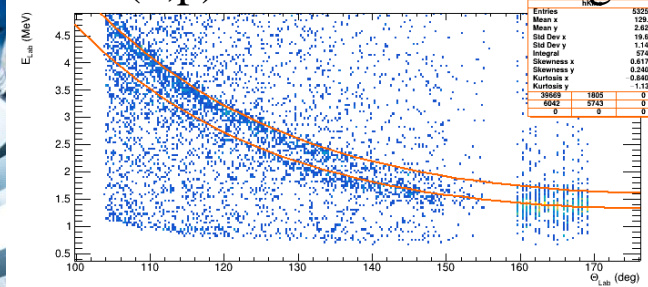
According to G4 with adjusted
 crystal relative efficiencies

No loss at low energy was measured due to MUGAST

MUGAST commissioning



$^{16}\text{O}(d,p)^{17}\text{O}$ commissioning



AGATA in full trigger less
→ In-beam efficiencies

AddBack efficiencies
867 keV:: 152Eu= 7.7(2)%.
870 keV ^{17}O = 7.8%.
Geant4 = 7.5%



MUGAST commissioning

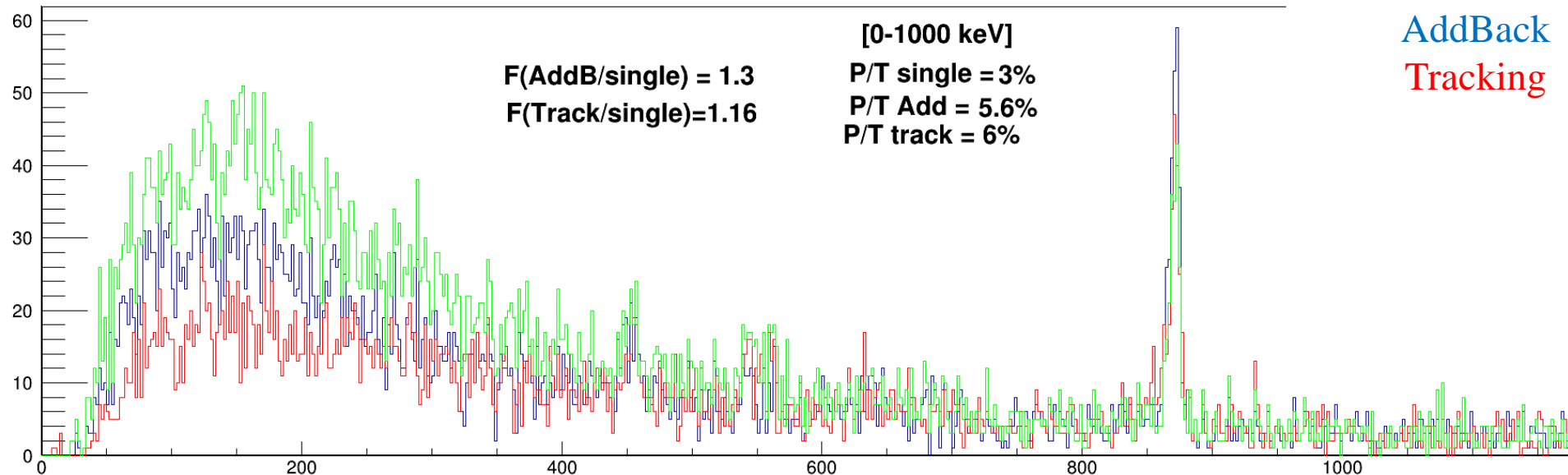
The MUGAST campaign is characterized by very low rate (200 Hz/core), almost only multiplicity 1 and rather high energy γ -rays.

The triple coincidence AGATA-MUGAST-VAMOS leads to very clean spectra

We have favored the efficiency during the near-line analysis and did not perform tracking

→ Worst P/T at low energy but increased efficiency of the addback vs Tracking

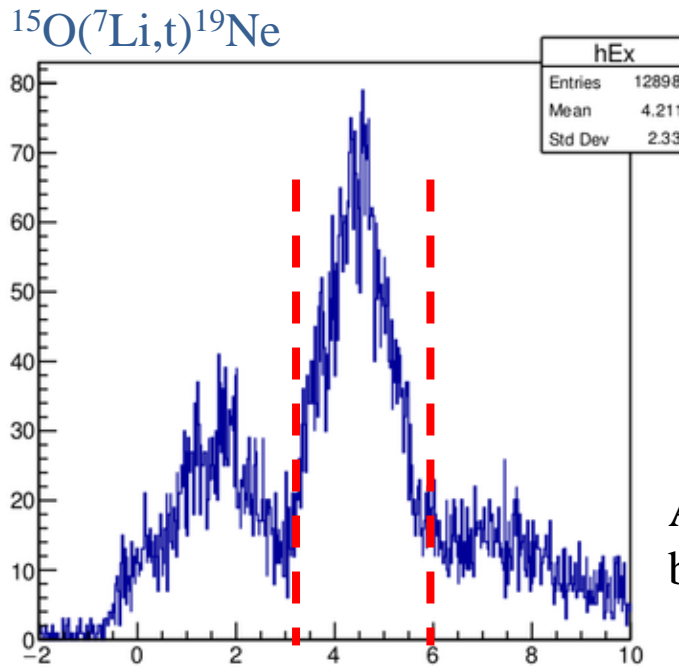
$^{16}\text{O}(d,p)^{17}\text{O}$ commissioning



The MUGAST campaign is characterized by very low rate, almost only multiplicity 1 and rather high energy γ -rays.



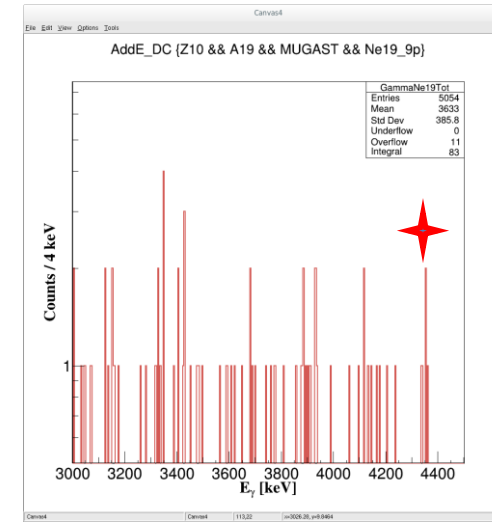
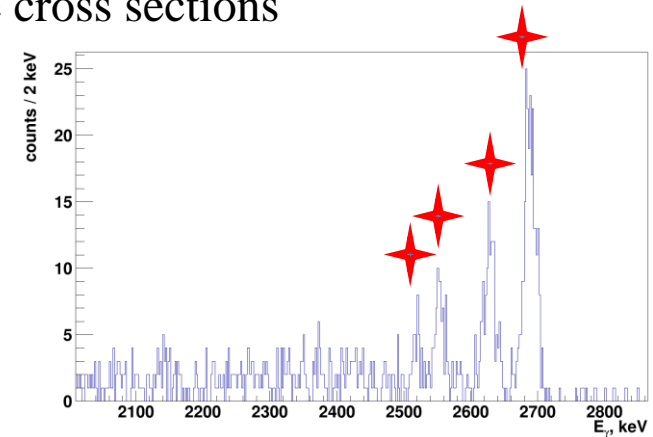
Often beyond 2 MeV in these direct reactions
The AGATA resolution is needed to disentangle excited states, not resolved by the MUGAST analysis and to extract the cross sections



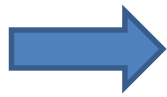
$^{19}\text{Ne}^*$ spectrum from MUGAST



Accurate efficiency value beyond 2 MeV in AGATA ?

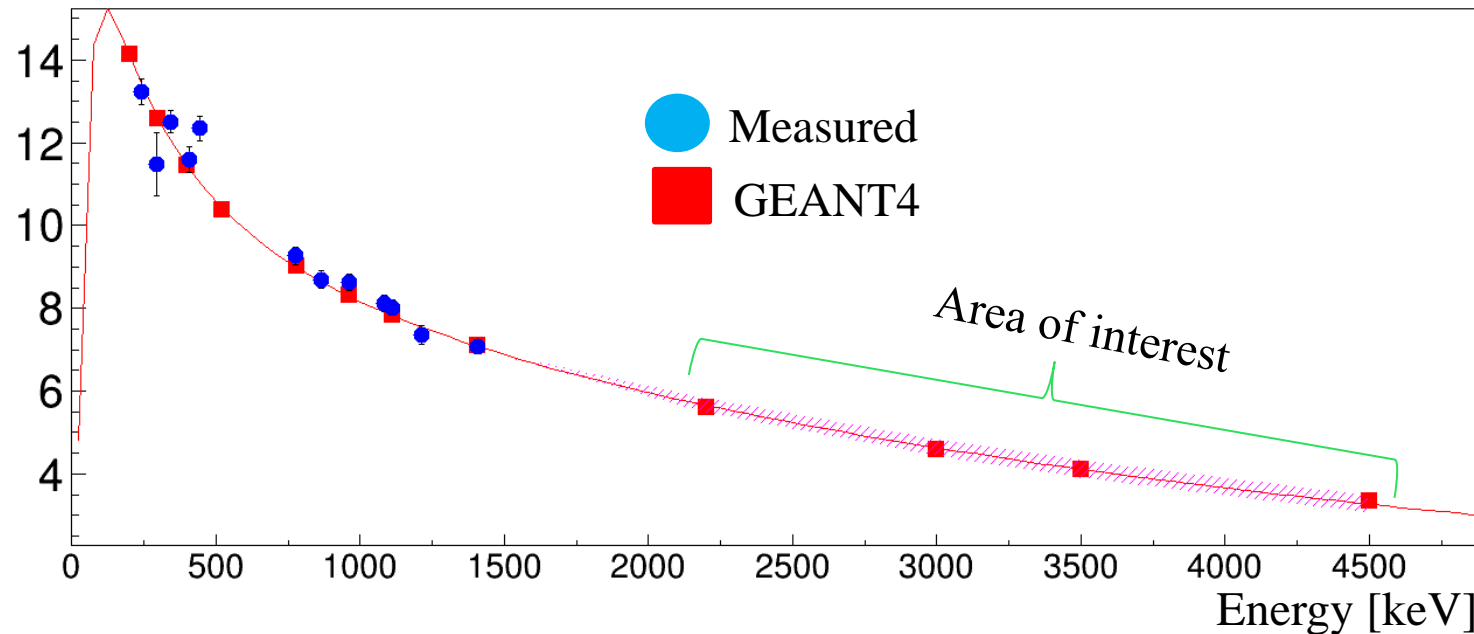


The MUGAST campaign is characterized by very low rate, almost only multiplicity 1 and rather **high energy γ -rays**.



Often beyond 2 MeV in these direct reactions
The AGATA resolution is needed to disentangle excited states, not resolved by the MUGAST analysis and to extract the cross sections

AddBack efficiencies



Accurate efficiency value beyond 2 Mev in AGATA ?

Was it measured ? Checked ? Can we trust simulations for a cross section measurement ?

Accurate efficiency value beyond 2 Mev in AGATA ?

Was it measured ? Checked ? Can we trust simulations for a cross section measurement ?

The example of the EXOGAM clovers ($\text{Eu} + \text{Cl}(n_{\text{th}})$)

