

PARIS Detectors Status | PARIS Managing Board ZAKOPANE 2026

- **107** PARIS detectors are available **65** CeBr₃ + **42** LaBr₃ (29 B380 + B390)
- **11** clusters = **7** clusters CeBr₃ (+2 spares) + **4** clusters LaBr₃ (+ 6 spares)
- 5 detectors from BARC and Kolhanta are not taken into account
- 9 CeBr₃ in Russia are not taken into account

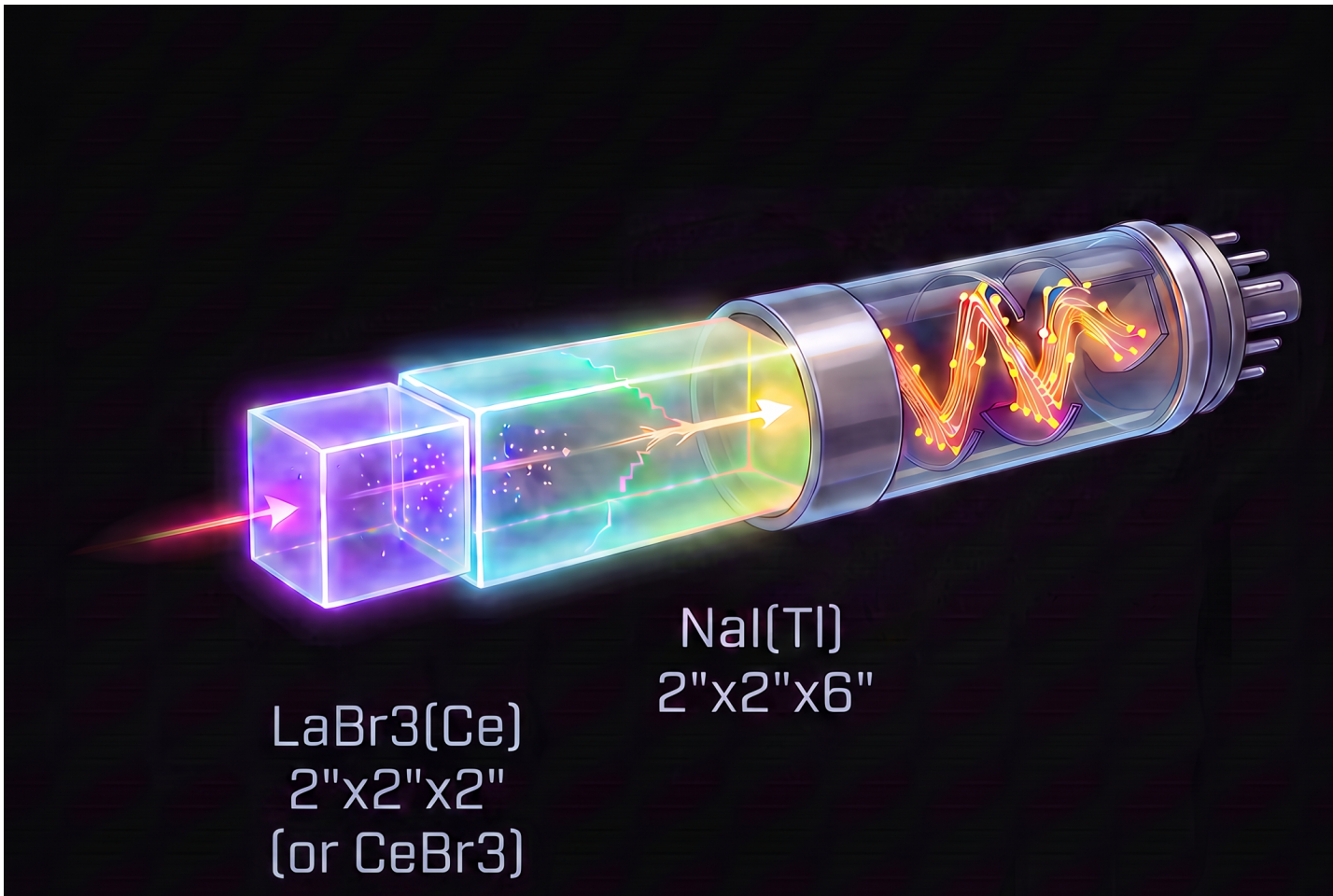
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Country/ Funder		IN2P3	GANIL	POLAND/ GANIL	POLAND	ITALY	INDIA	ROMANIA	GREAT BRITAIN	TURKEY	Total
Detector type	LaBr3	19	7	3	6	4	2		2		43
	CeBr3	6	13	3	11	13	9	8		1	64
TOTAL		25	20	6	17	17	11	8	2	1	107

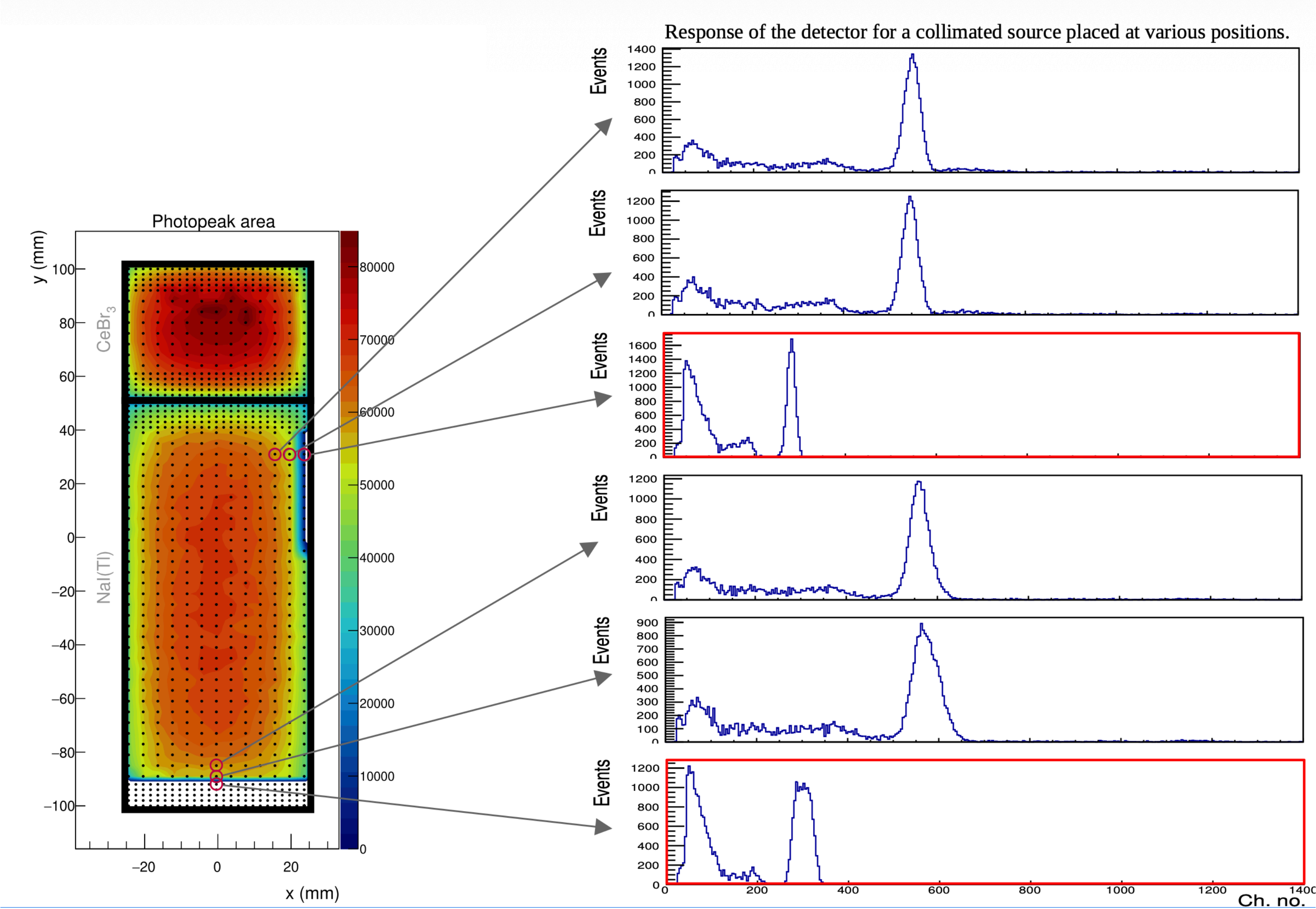
Location (beginning of 2026)					
ALTO	IPHC	Krakow	Milano	Mumbai/ India	Romania
40	4	38	11	11	3

Status | *Status from experiments ALTO/GANIL (ALTO, VAMOS and NFS) : rather wide difference in resolution for the first stage crystal : from 3.2% to 7.2% @662 keV*

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• Performance differs from the interaction position



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To be undertaken | *a full characterisation of all detectors before a next campaign (LNL Legnaro, GANIL, ...) for a selection of best detectors*

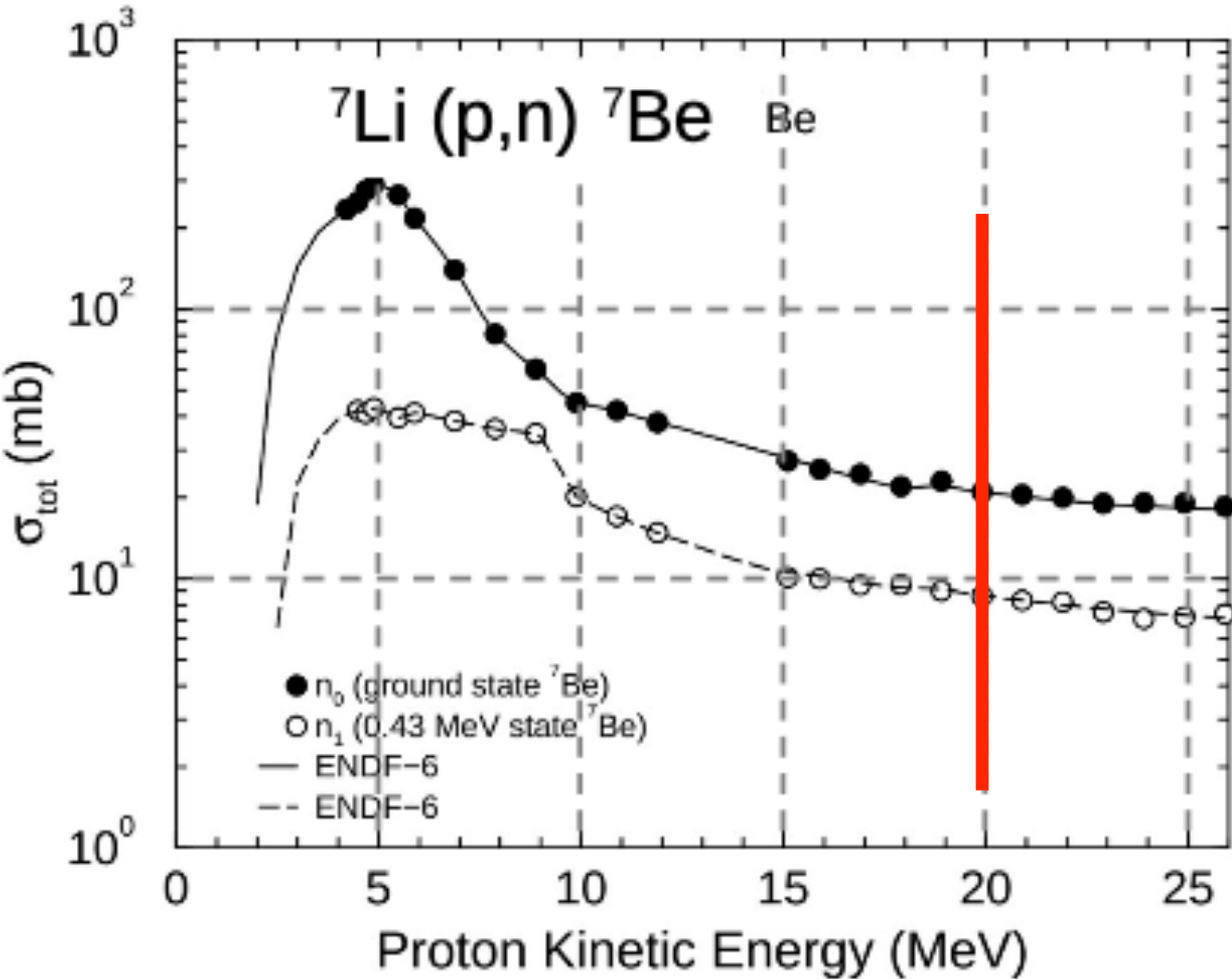
To be completed | *Neutron response efficiency*

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Test for Neutron response @Cyrce facility - IPHC Strasbourg (Courtesy of Neeraj KUMAR)

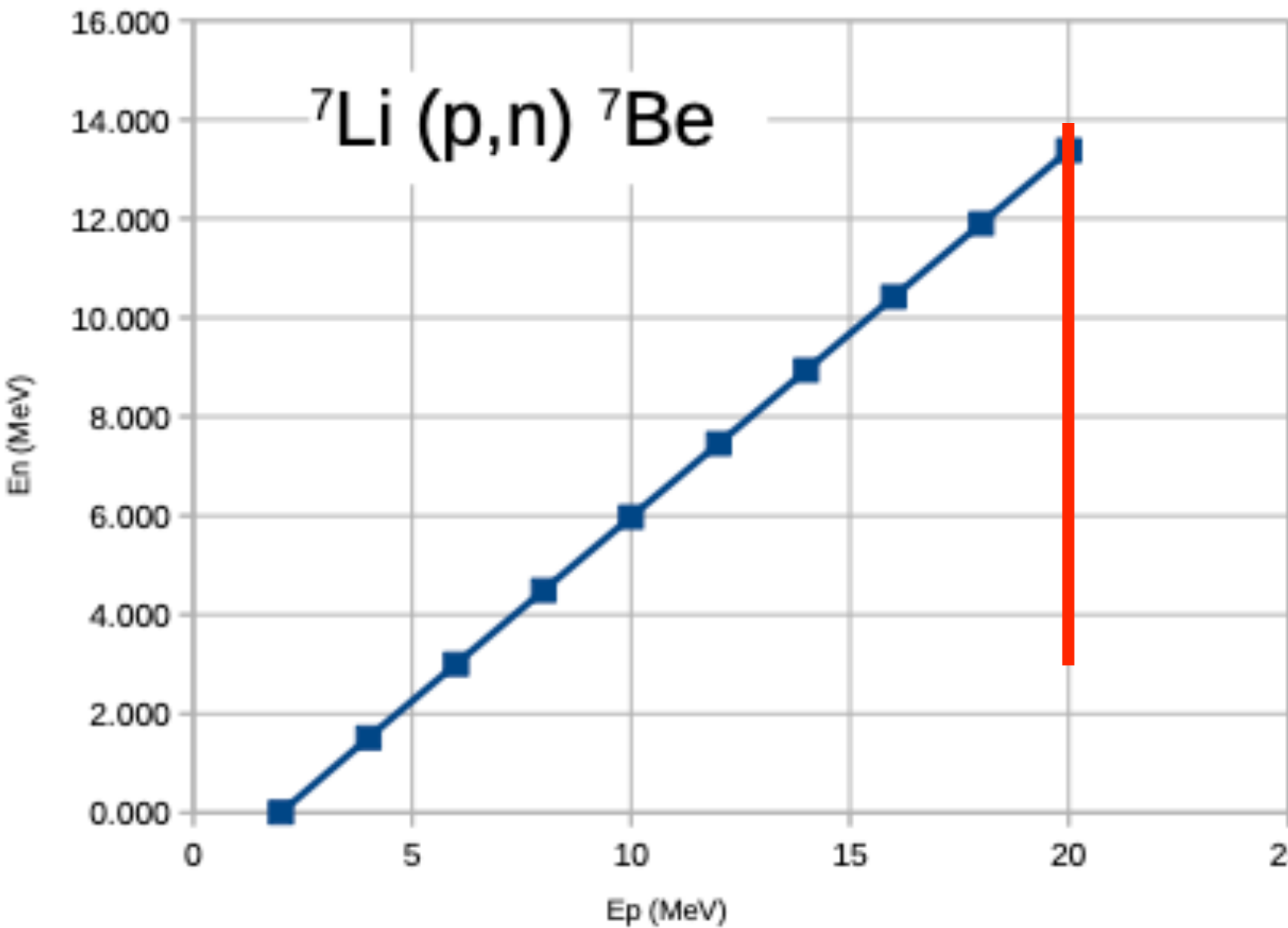
$p(@20\text{MeV}) + {}^7\text{Li} \rightarrow n + {}^7\text{Be}$ - beam intensity of ~500 pNA

Cross section



Phys. Rev. C, 14, 438 (1976).

Neutron energy @ 90°



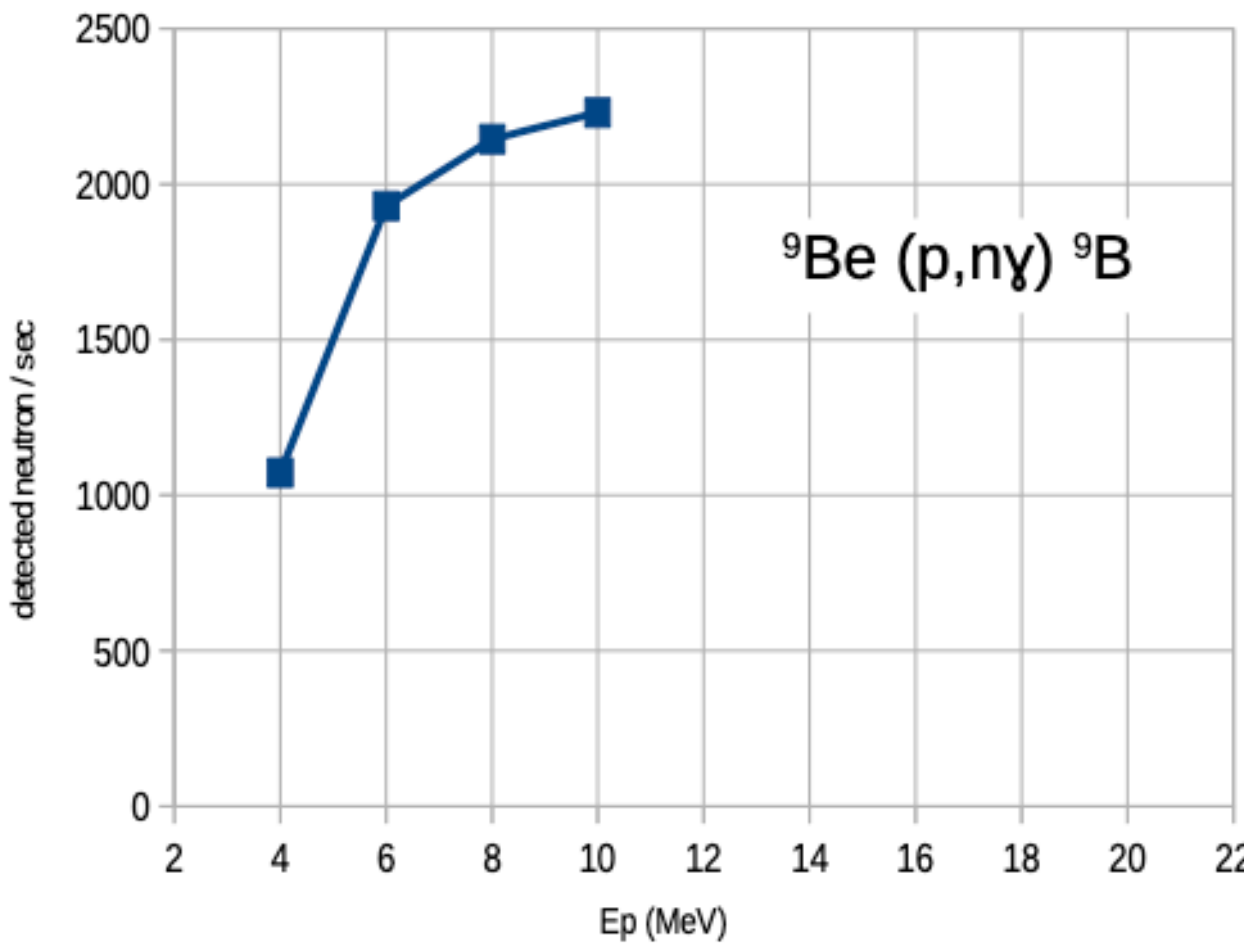
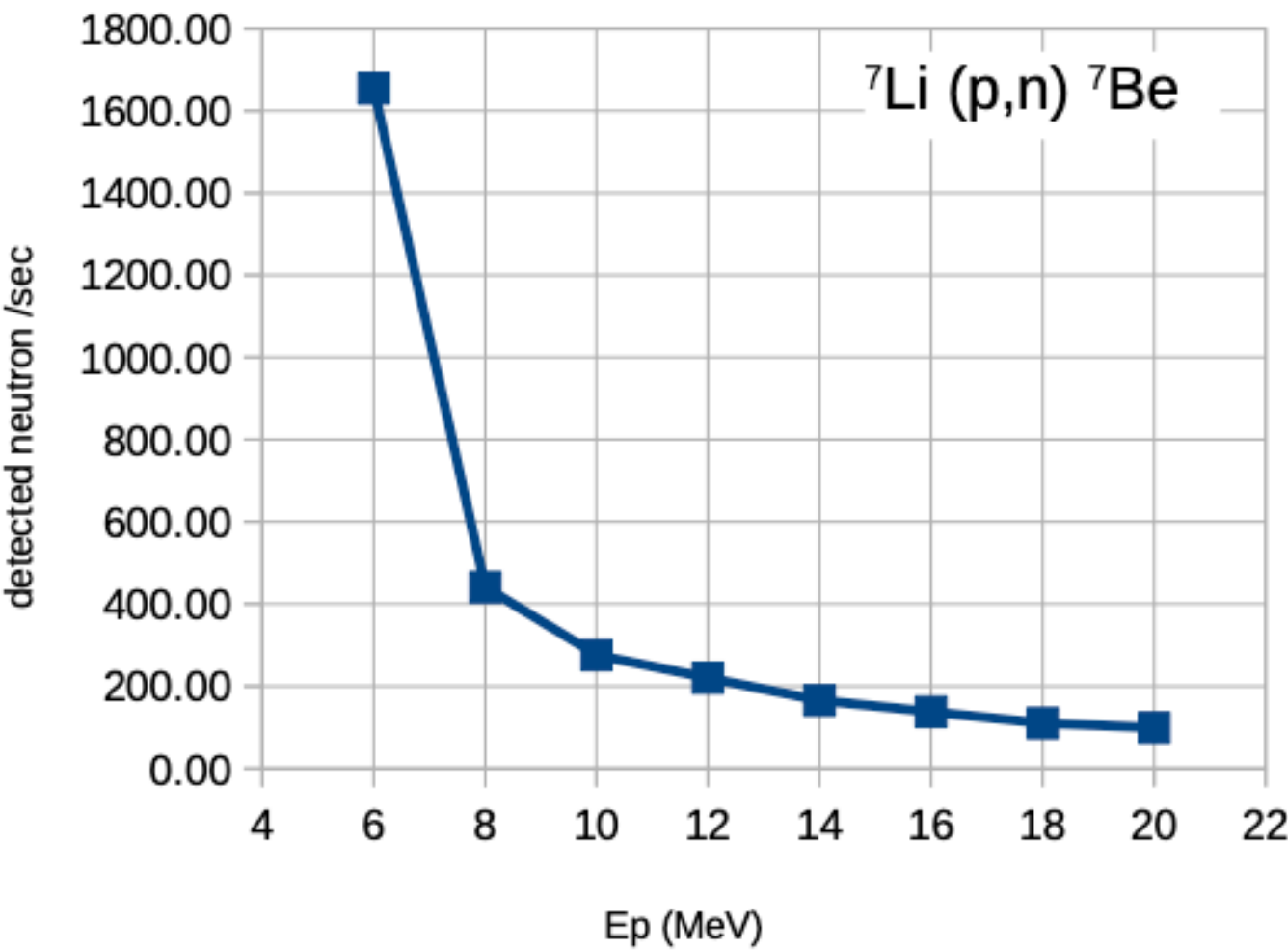
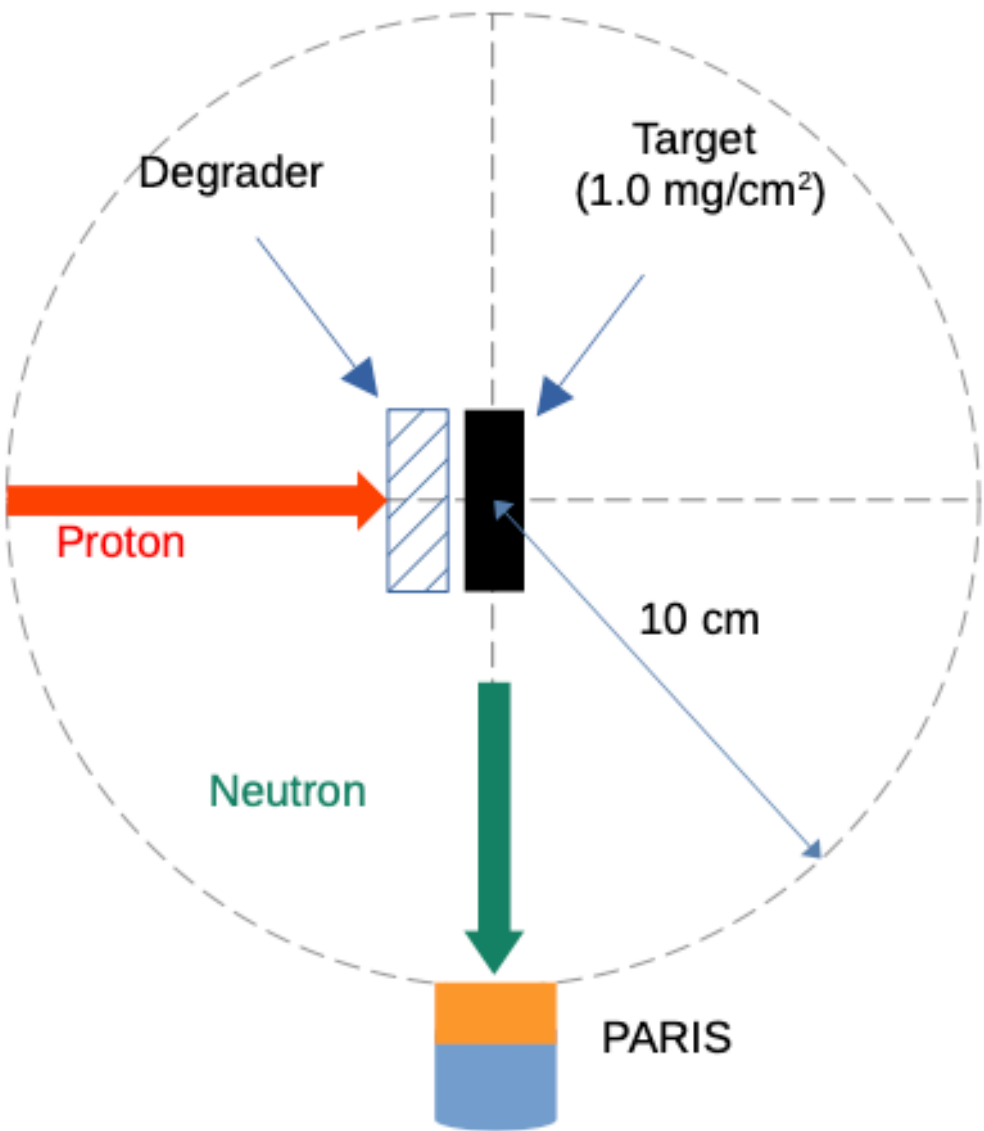
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● Event rate estimation:

$$n_0 = \frac{2.3}{m_t} I_0 \sigma t \times \Delta\Omega \epsilon_{PARIS}$$

$I_0=1$ pnA
 $t=1$ mg/cm²
 $\Delta\Omega$ =fraction of solid angle covered(~245 msr)
 ϵ =Paris detection efficiency (~60%)



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To be completed | *Neutron response efficiency*

Future | *To fulfil the MoU*

Buy some dedicated suitcase for transportation of clusters/detectors