

# Status of the CUPID-Mo bolometric experiment: searching for neutrinoless double-beta decay of $^{100}\text{Mo}$

D.V. Poda<sup>1,2</sup>

<http://cupid-mo.mit.edu>

on behalf of the CUPID-Mo Collaboration

<sup>1</sup> CSNSM, Univ. Paris-Sud, CNRS/IN2P3, Université Paris-Saclay, Orsay, France

<sup>2</sup> Institute for Nuclear Research, Kyiv, Ukraine

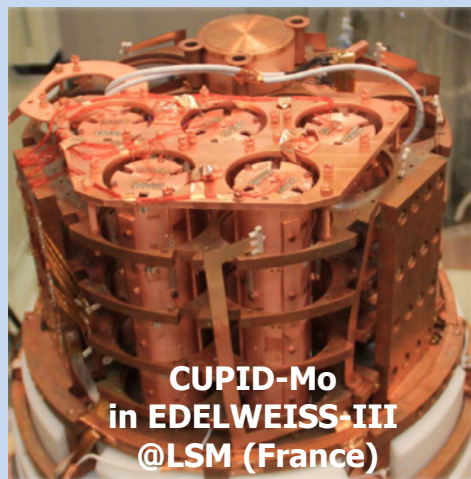
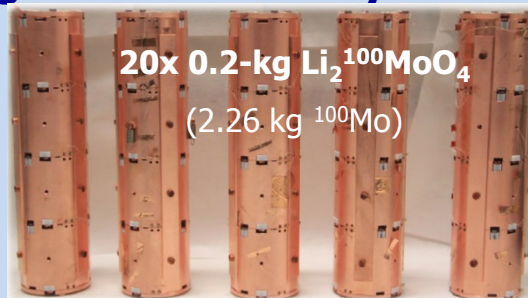
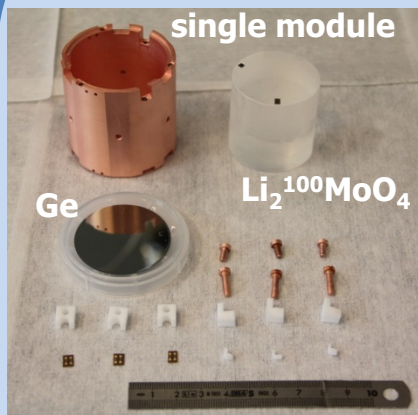


7 countries, 15 institutions  
~110 scientists

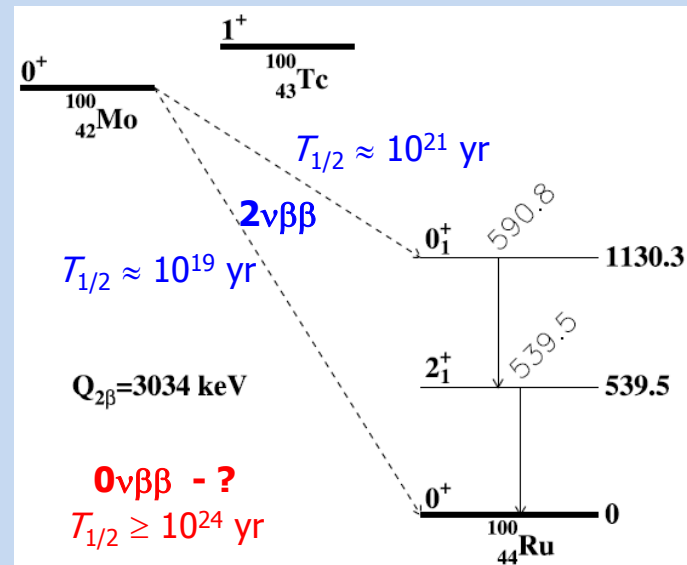


## CUPID-Mo

### 20-scintillating-bolometer array

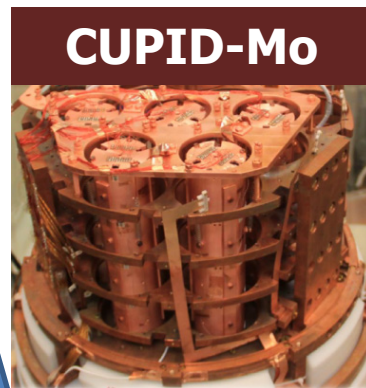
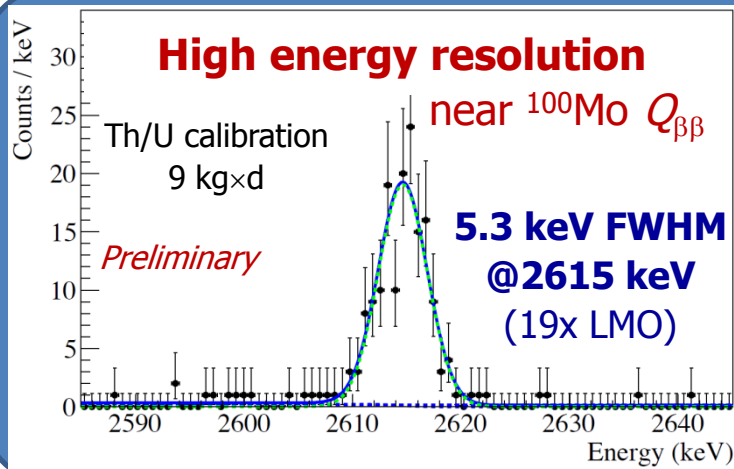


## Neutrinoless double-beta decay



**A unique probe of physics beyond the Standard Model**

- Lepton number violation
- Majorana nature of neutrinos



### High crystals' radiopurity

Chain	Nuclide	Activity [ $\mu\text{Bq/kg}$ ]
$^{238}\text{U}$	$^{210}\text{Po}$	$\sim 10^2$
	$^{226}\text{Ra}$	<b>&lt; 3</b>
$^{232}\text{Th}$	$^{232}\text{Th}$	<b>&lt; 1</b>

20  $\text{Li}_2^{100}\text{MoO}_4$  scintillating bolometers

$^{100}\text{Mo}$   $0\nu\beta\beta$  search

