



Feasibility of sub-GeV mass dark matter search using STJ detector for COBAND experiment

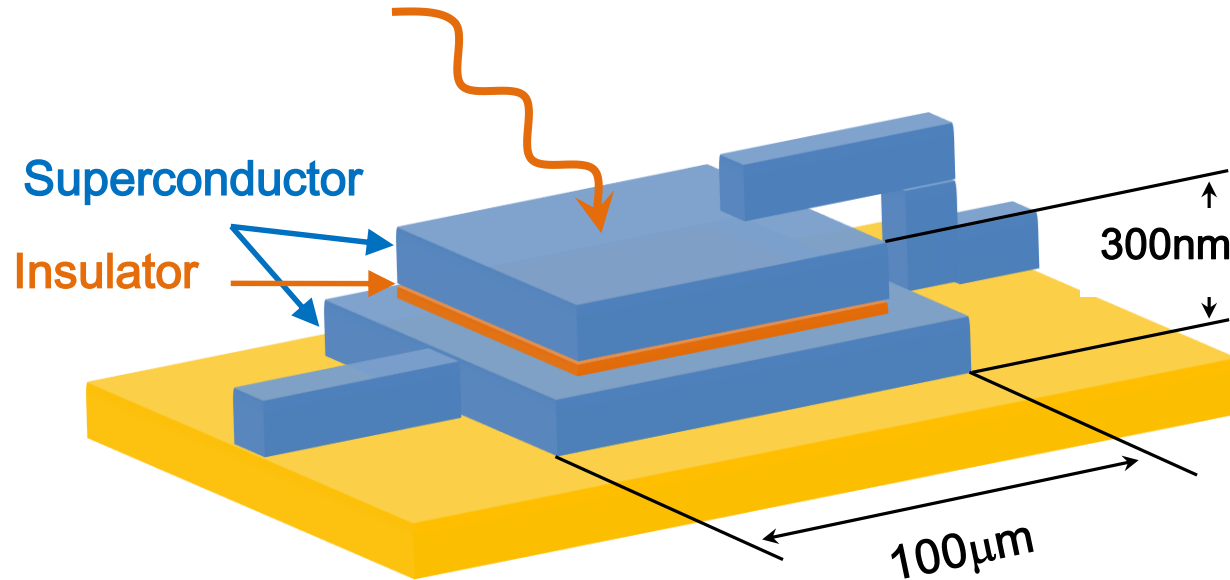
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on behalf of COBAND Collaboration

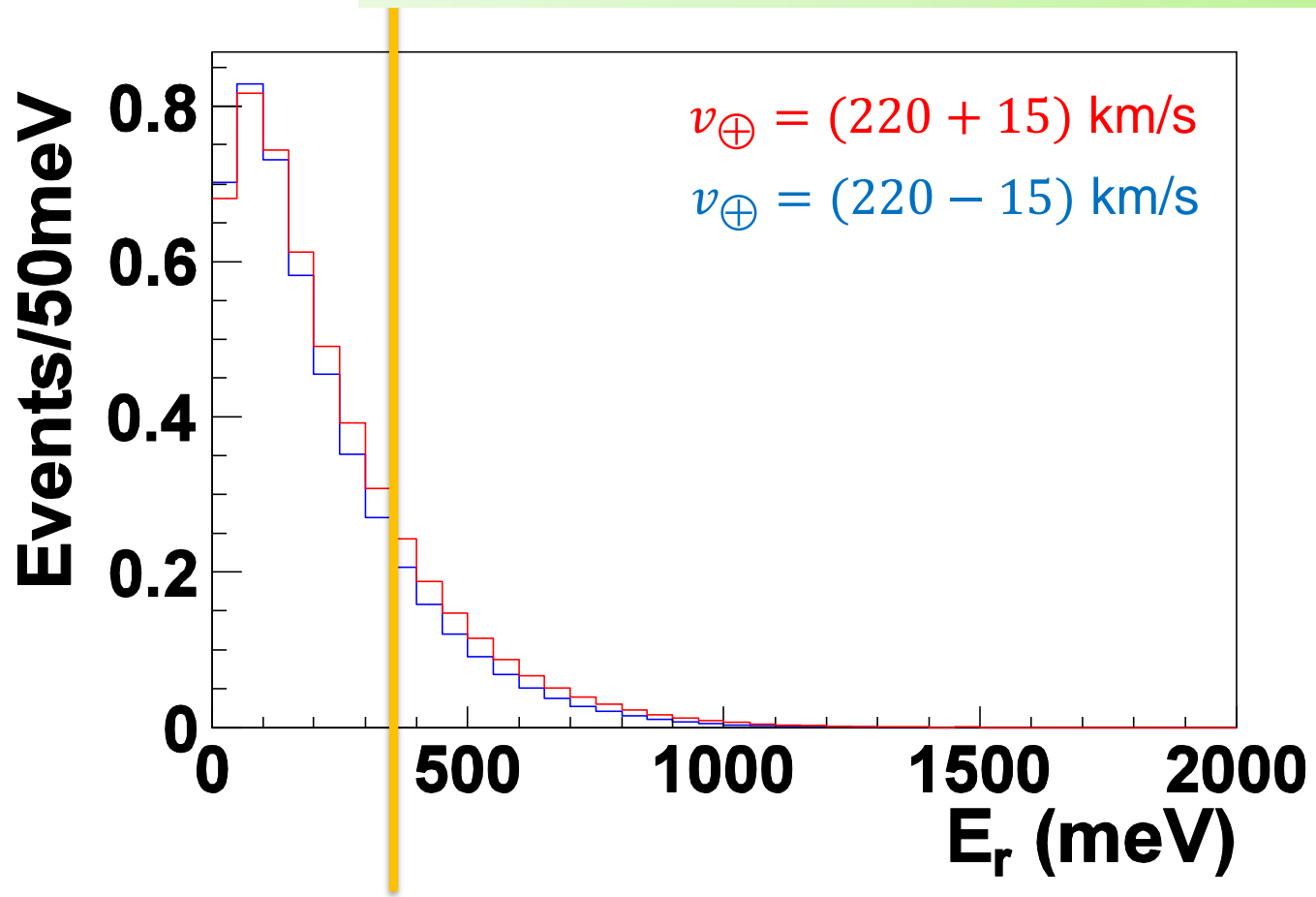
Superconducting Tunnel Junction (STJ)



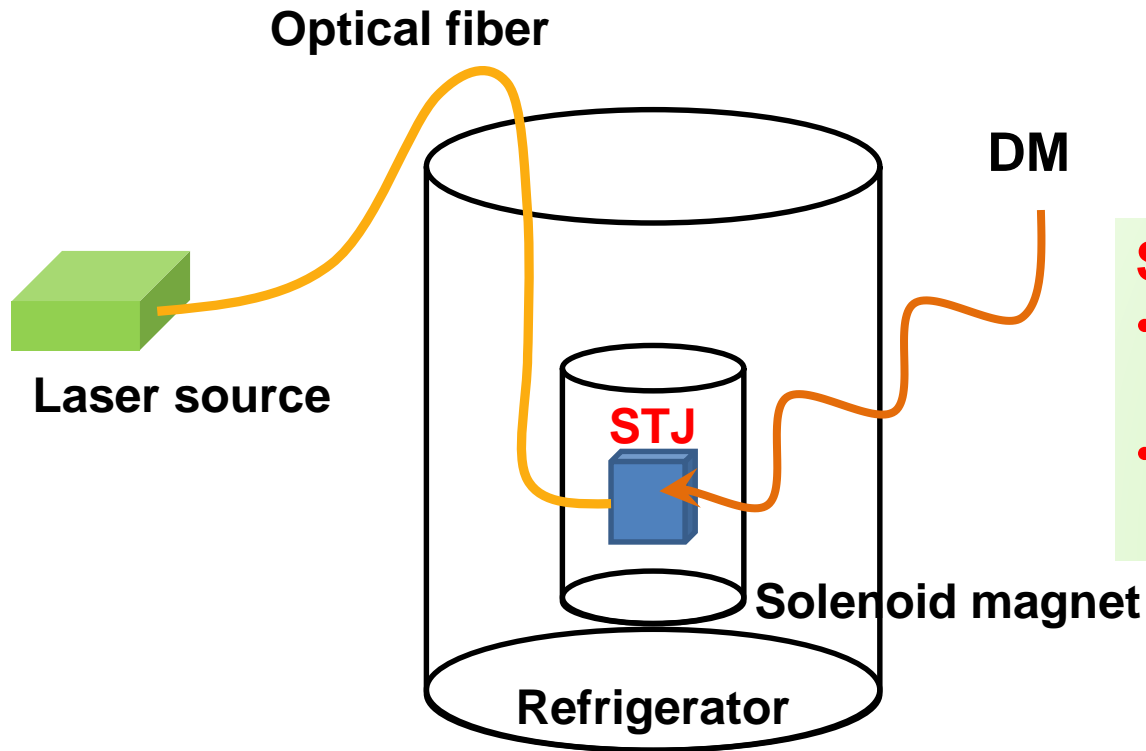
**Sensitive to 25meV
for COBAND experiment
Under development**

Recoil energy of Nb for $0.1\text{GeV}/c^2$ DM

Use $E=350\text{meV}$ threshold



Setup



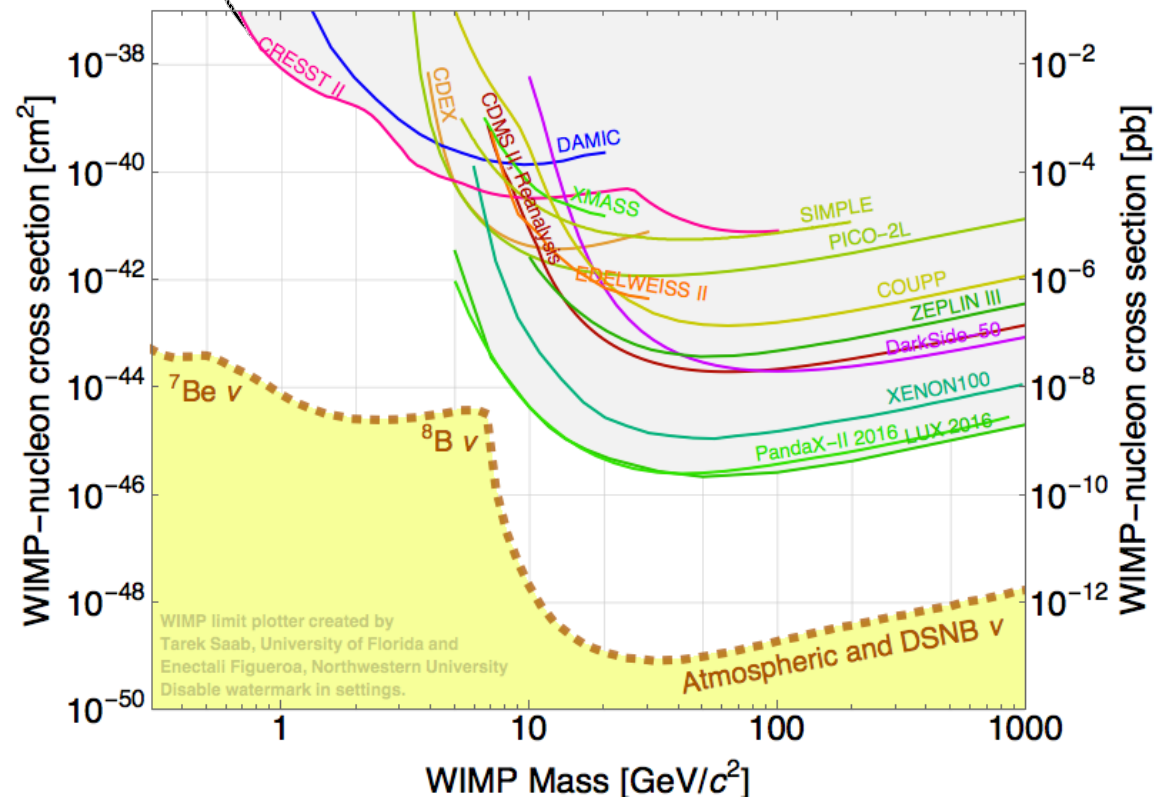
STJ

- $100\mu\text{m sq.} \times 1\mu\text{m thick}$
 $\times 10$ cells
- 3 hours

^3He sorption refrigerator
Solenoid magnet
STJ
Optical fiber & Laser source

That's all

We can exclude here



http://cdms.berkeley.edu/limitplots/mm/WIMP_limit_plotter.html