

Probability of WIMP

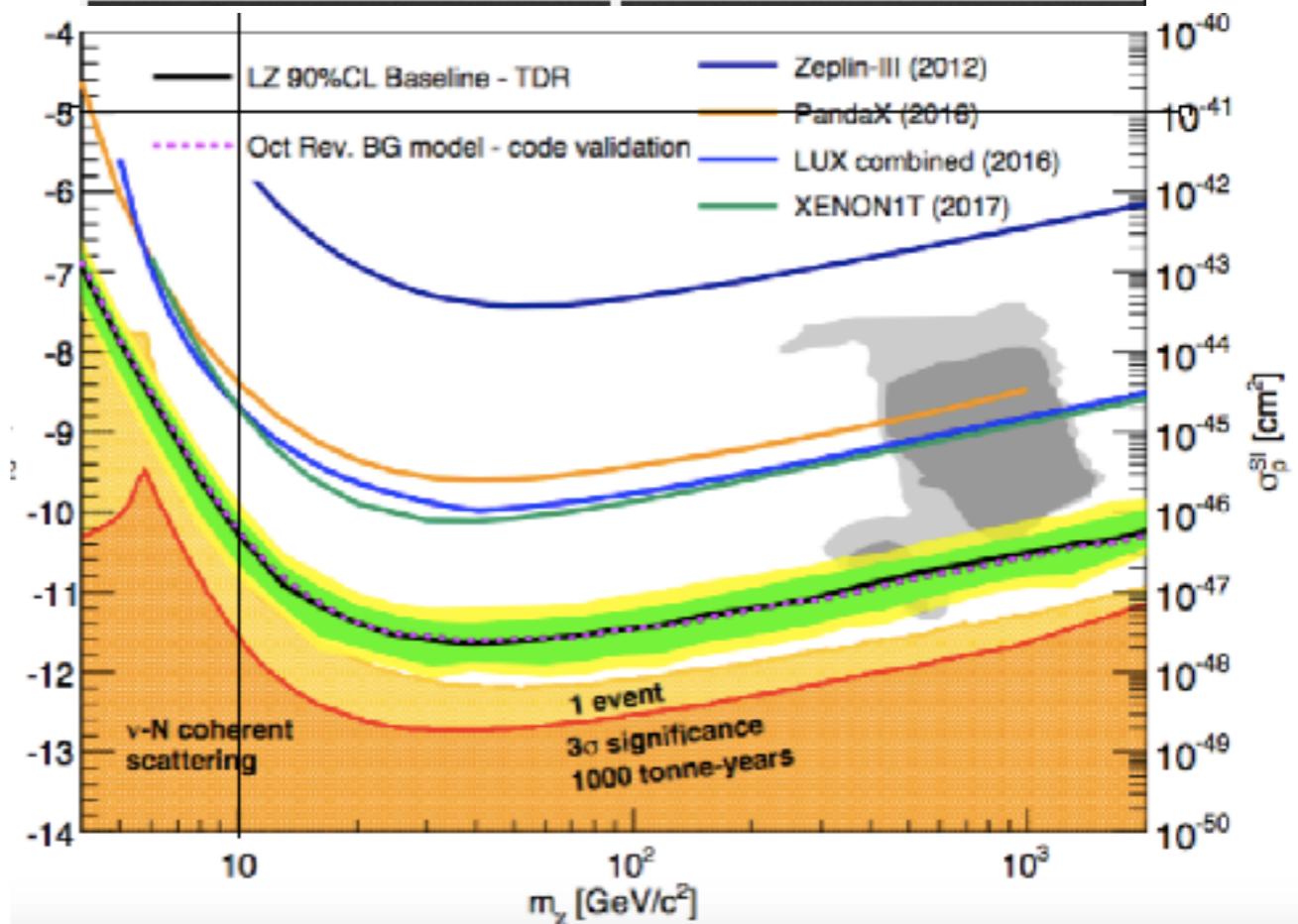
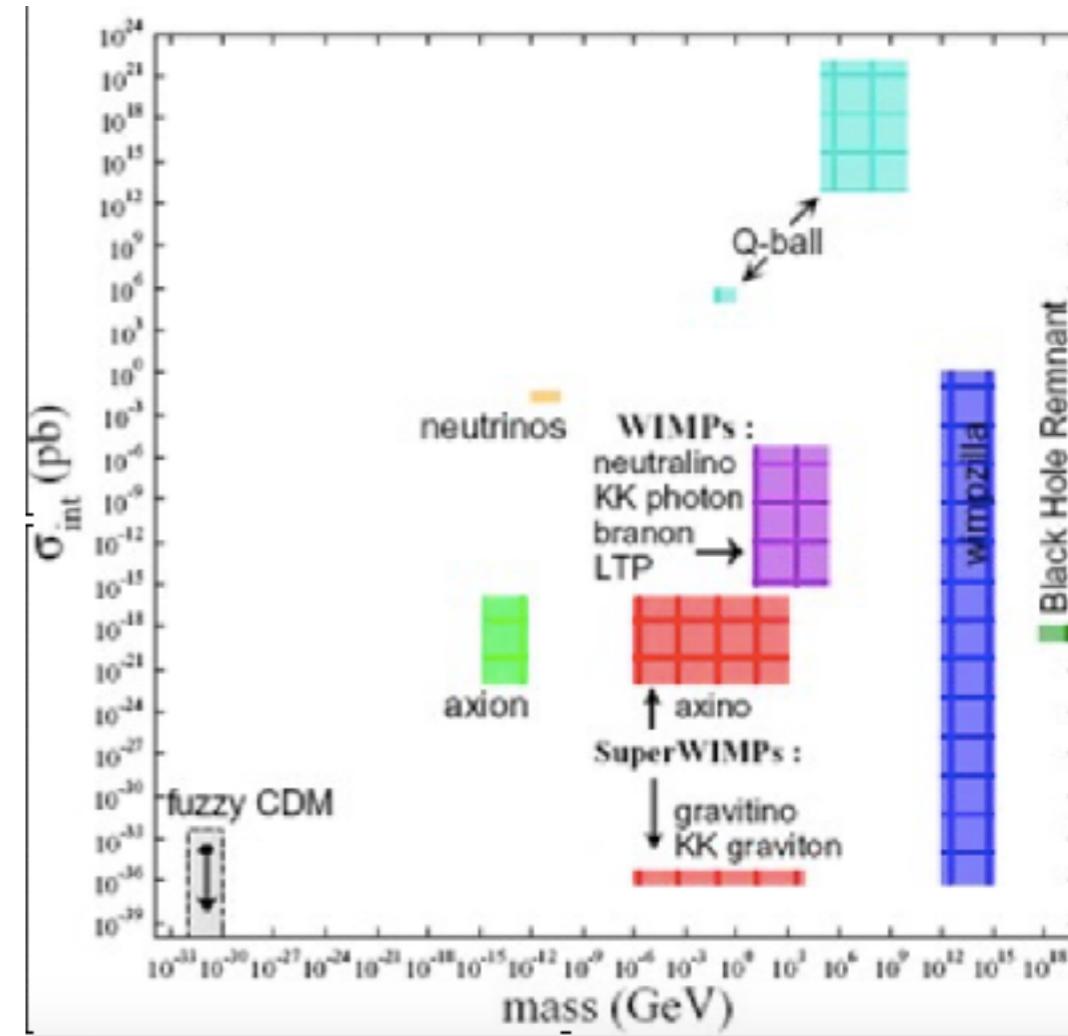
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Increase the probability of WIMP!

- 1. increase the experimental area
- 2. increase the probability of word searching in wimp

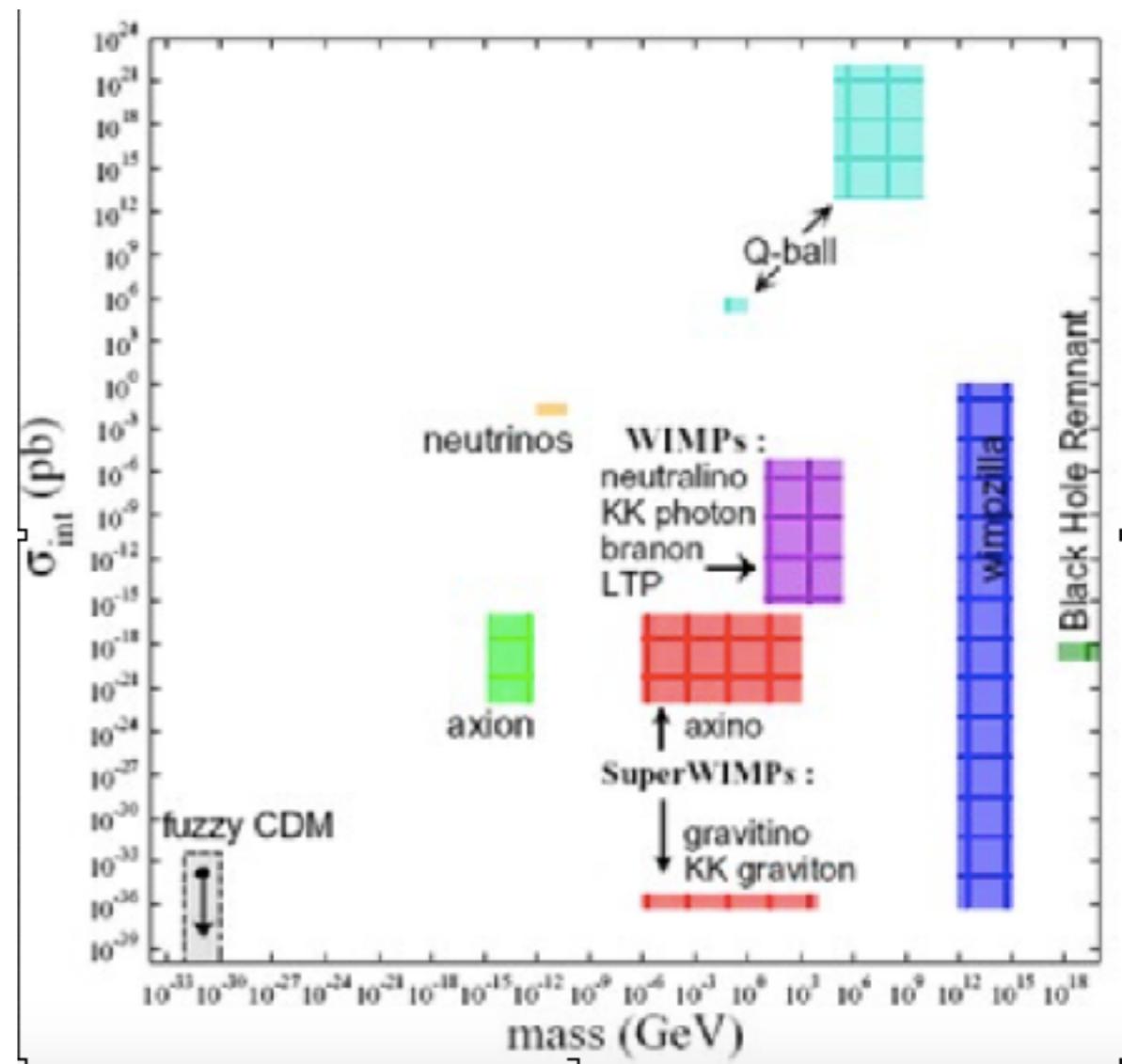
Experimental area

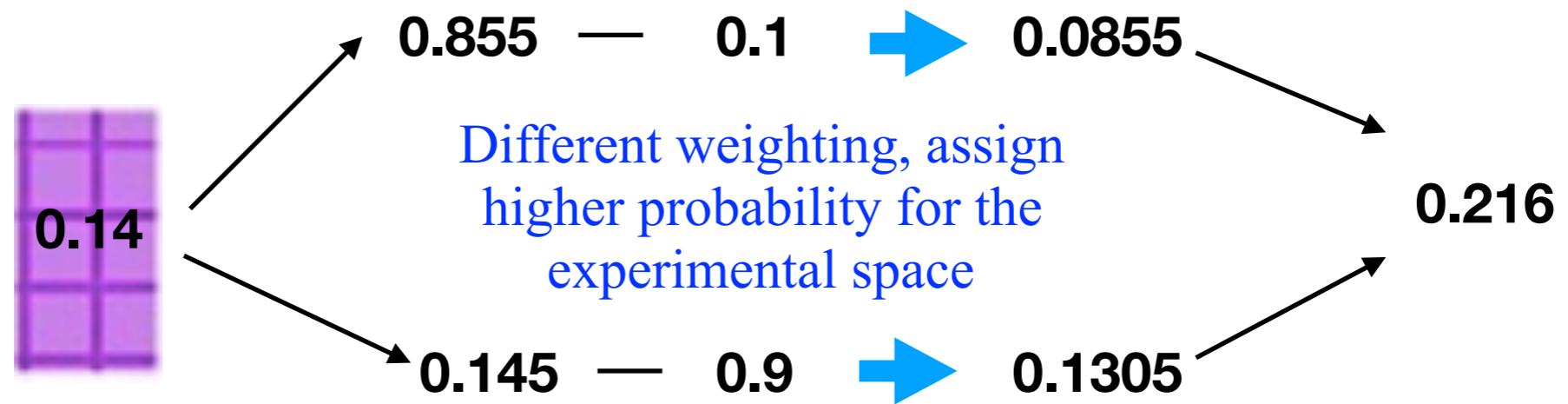
(Area between the orange and the red line)/
 (Area of WIMP)=0.145
 (Area between the orange and the red line)/
 (All colored space)=0.020



Probability=wimp/all colored space

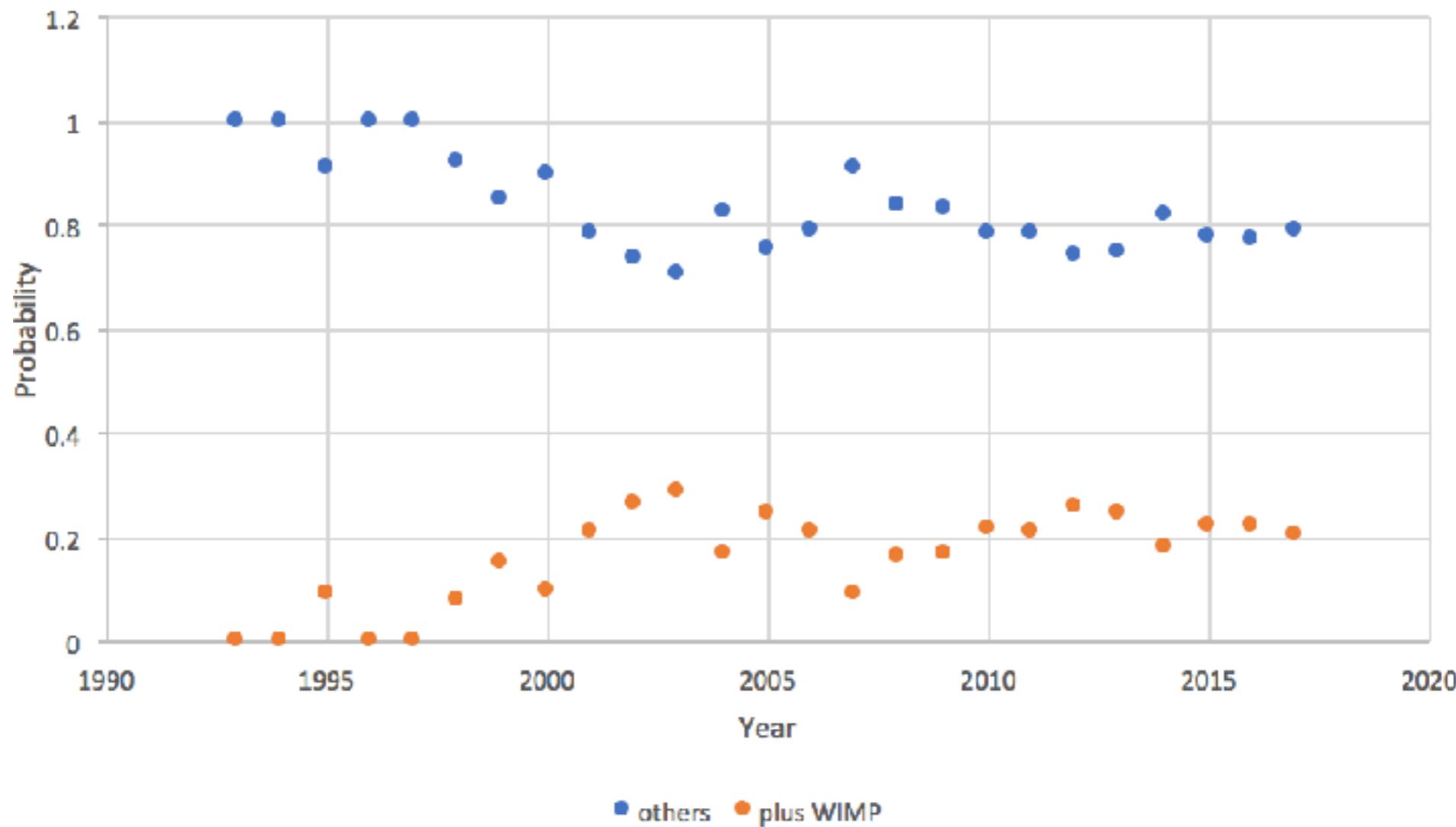
- In arXiv (“dark matter” theory wimp/“dark matter” theory all colored space): average is 0.16
- In the area graph: 0.14
- experimental area in wimp is 0.145; in all colored space is 0.02
- The idea here is to treat the word search in arXiv as the parameter space.





$$0.14 * 0.216 = 0.03 \quad 0.02 \rightarrow 0.03$$

ArXiv wimp probability



- 1) Average: 0.16
- 2) last 10 years(2008~2017) with weighting 0.75, first 15 years(1993~2007) with weighting 0.25: 0.19
- 3) only care about the last 10 years: average 0.21

- use 1), we get 0.035
- use 2), we get 0.040
- use 3), we get 0.045