

Obtaining small Kinetic Mixing in String Theory

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work in progress with A. Hebecker & J. Jaeckel

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IMPRS
for Precision Tests of
Fundamental Symmetries
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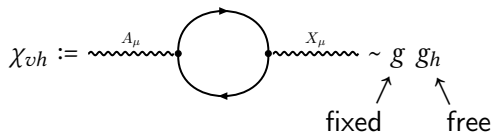


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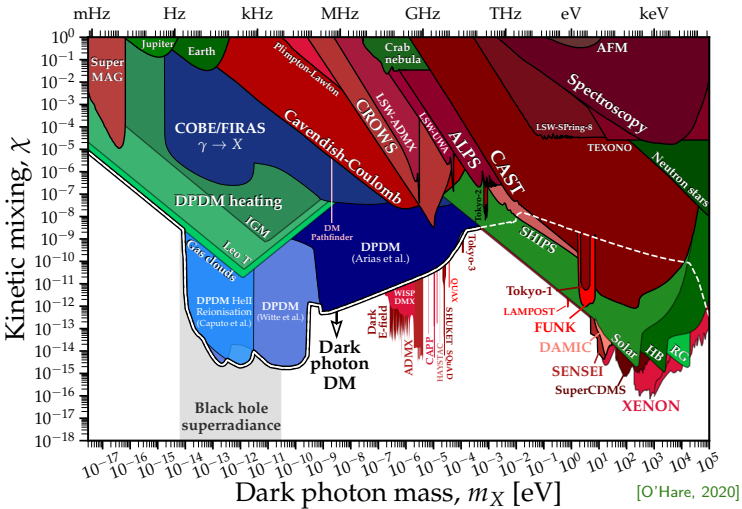
- Standard story of kinetic mixing [Okun, 1982, Holdom, 1986]

$$\mathcal{L} \supset -\frac{\chi_{vh}}{2} F^{\mu\nu} X_{\mu\nu}$$

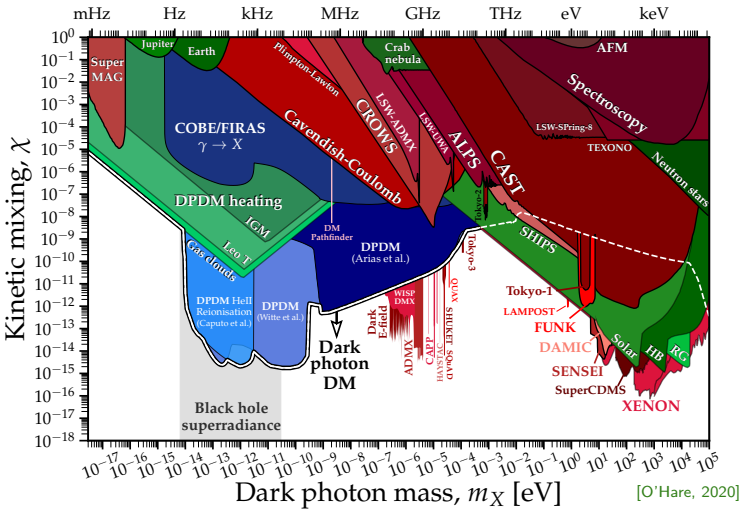
- χ_{vh} can be generated by a heavy particle running in a loop



Constraints on Kinetic Mixing

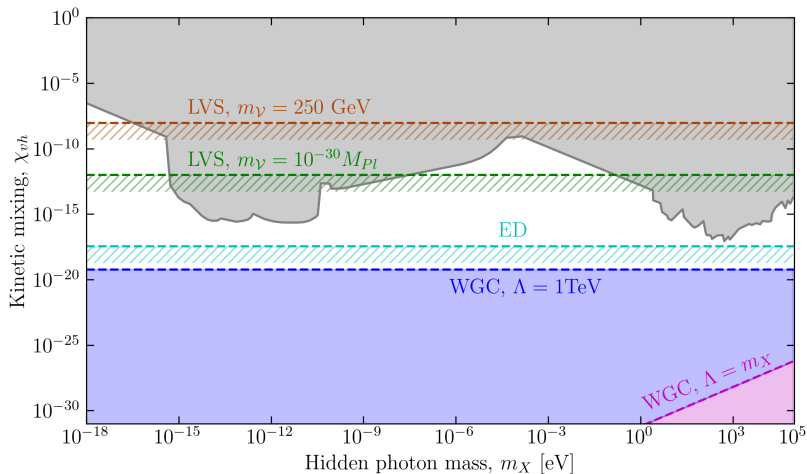


Constraints on Kinetic Mixing



⇒ Need small g_h to explain values of χ_{vh}

Stringy Bounds on Kinetic Mixing



Take Aways from Poster #45

- 1 How kinetic mixing works in string theory
- 2 Where the stringy bounds come from
- 3 Possible way to avoid stringy bounds

Thank you!