

Tests of ultra-light dark matter



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EUROPEAN UNION
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:: References ::

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 J. M. Armaleo, D. López Nacir and FU, [arXiv:1909.13814 \[astro-ph.HE\]](#) 

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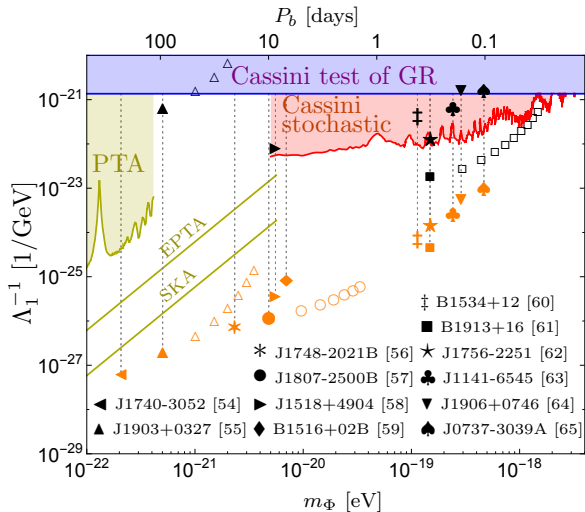
 C. Unal, FU and E. D. Kovetz, [arXiv:2209.02741 \[astro-ph.CO\]](#) 



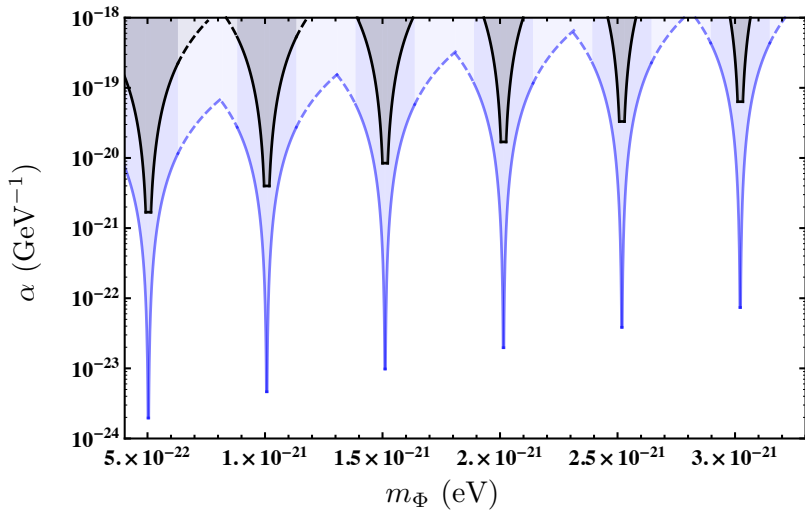
ultra light dark matter



:: scalar field ::

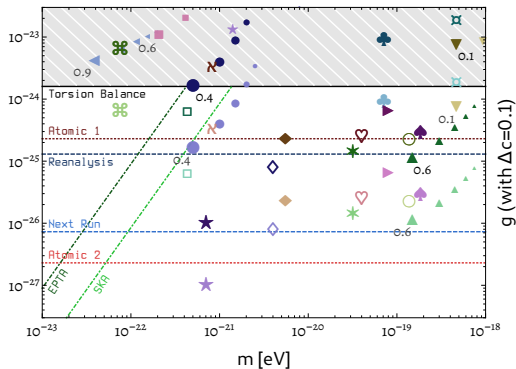


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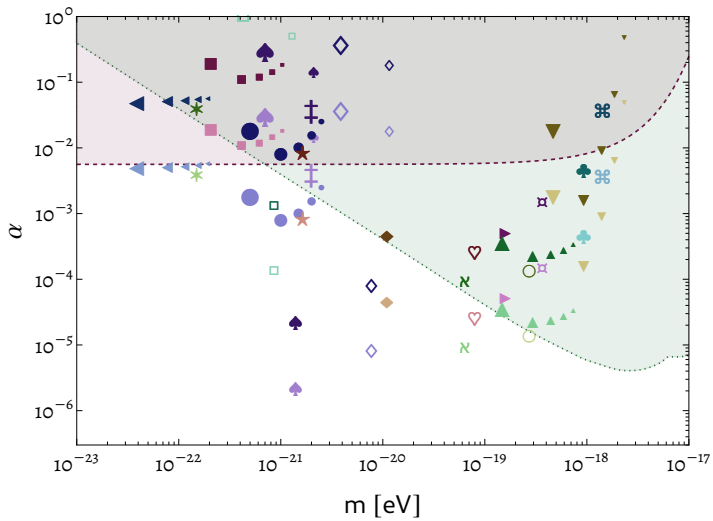
:: vector field ::

Bounds on B or $B-L$ fifth force

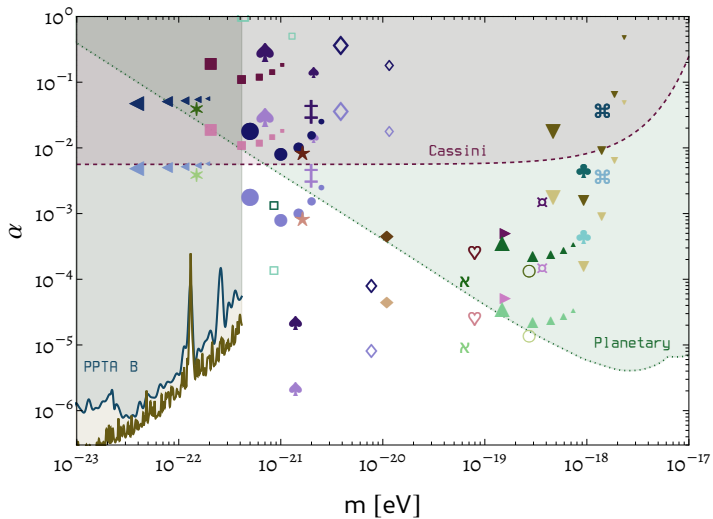


● J1903+0327	■ J1740-0352	▼ J0737-3039	▲ B1913+16	◀ B1259-63	▶ J1012+5307
◆ J1614-2230	* J1909-3744	♣ J0636+5128	♠ J0751+1807	✕ J1910+1256	⊗ J2016+1948
⊠ J0348+0432	★ J1713+0747	♡ J0613-0200	○ J1738+0333	◻ J1751-2857	◇ J1857+0943

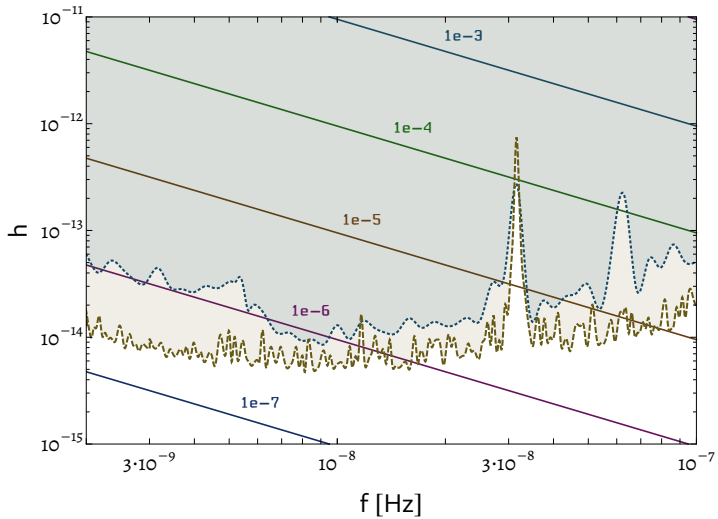
:: tensor field ::



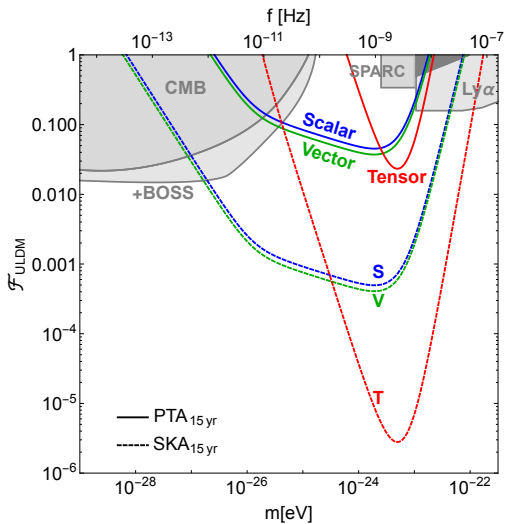
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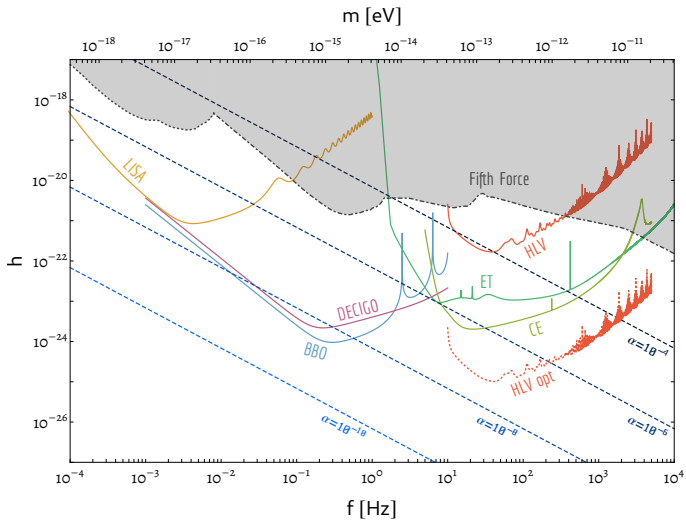
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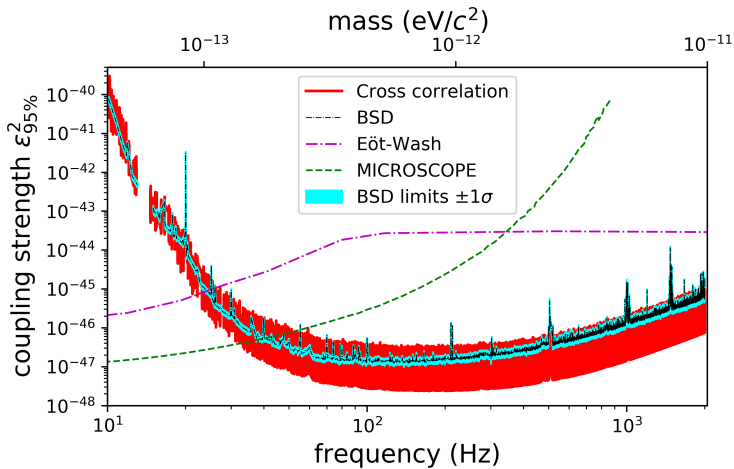
:: all spins ::



:: tensor field ::



:: vector field ::





∴ thank you ∴