

Aix\*Marseille

Socialement engagée

## Suppression of wall modes in rapidly-rotating Rayleigh-Bénard convection

Louise Terrien, Benjamin Favier and Edgar Knobloch



Images of several extreme rotating convection setups. (a) "RoMag" at UCLA (liquid gallium, Pr $\approx$ 0.025), (b) Trieste experiment at ICTP (cryogenic liquid He, Pr $\approx$ 0.7) (c) "NoMag" at UCLA (water, Pr $\approx$ 4–7), (d) "U-Boot" at the Max Planck Institute for Dynamics and Self-Organization (SF6, N2, He gas, Pr $\approx$ 0.8) and (e) "TROCONVEX" at Eindhoven University of Technology (water, Pr $\approx$ 2–7). (*Cheng et al.* 2018)



Heat flux field over a section of the cylinder, at z=H/2. ( Zhang et al. 2019)





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Suppression of the wall modes with a barrier by increasing the width  $\epsilon$  (*Terrien et al.* 2023)



