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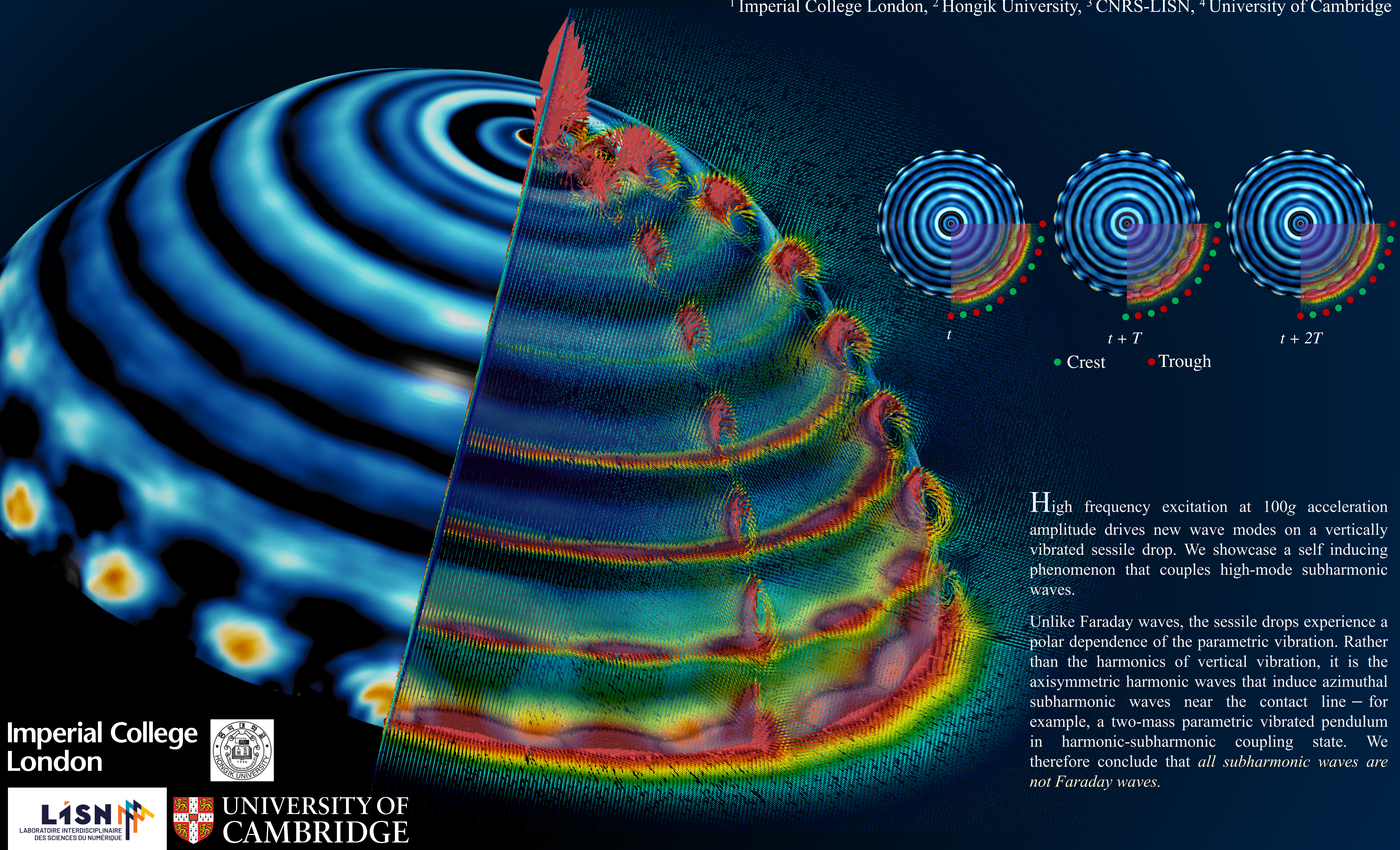


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SELF INDUCING SUBHARMONIC WAVES

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High frequency excitation at 100g acceleration amplitude drives new wave modes on a vertically vibrated sessile drop. We showcase a self inducing phenomenon that couples high-mode subharmonic waves.

Unlike Faraday waves, the sessile drops experience a polar dependence of the parametric vibration. Rather than the harmonics of vertical vibration, it is the axisymmetric harmonic waves that induce azimuthal subharmonic waves near the contact line – for example, a two-mass parametric vibrated pendulum in harmonic-subharmonic coupling state. We therefore conclude that *all subharmonic waves are not Faraday waves*.