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Domain wall collapse is catastrophic.

Friday 5 December 2025 08:20 (20 minutes)

The evolution of domain wall networks is essential to understanding our cosmological history. We will consider the scenery after which the degeneracy of the vacuum is broken, and bubbles of the false vacuum will start to collapse. I will discuss the interesting dynamics in these processes, caustics formation, and the fascinating connection to Catastrophe theory and geometric optics through the eikonal equation. Finally, we will discuss the possible implications for primordial black hole formation and gravitational wave radiation.

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