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Heat transport by liquid metal convection with and without rotation ERIC KING, UC Berkeley, JONATHAN AURNOU, UC Los Angeles — Convection in liquid metals can be quite different than in other fluids such as air or water, due to their small Prandtl numbers. Studying such systems can therefore give us a different perspective on convective turbulence. Furthermore, rotating convection in liquid metal is responsible for the generation magnetic fields on Earth and other planets. We present results from Rayleigh-Bénard convection experiments in liquid gallium with and without rotation. The key measurement of interest is heat transport, and heat transport by liquid metal is contrasted with that by water in a similar system.

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