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Spin liquids and magnetic ordering in pyrochlores LUDOVIC JAUBERT, HAN YAN, OWEN BENTON, NIC SHANNON, OIST — By their diversity, rare earth pyrochlores have proven to be a very fertile testing ground for exotic phenomena in magnetism, ranging from monopoles in spin ice (Dy2Ti2O7), to textbook order-by-disorder transitions (Er2Ti2O7), Higgs mechanism in quantum spin ice (Yb2Ti2O7), potential spin liquid phases (Er2Sn2O7) mediated by lattice fluctuations (Tb2Ti2O7), and many more. In this talk, I will give a brief overview of this pyrochlore diversity, illustrated by direct comparison with experiments, both from the point of view of spin liquid stabilization and magnetic ordering processes.

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