



Australian Academy of Science Elizabeth and Frederick White Research Conference: Multiscale Dynamics of the Southern Ocean

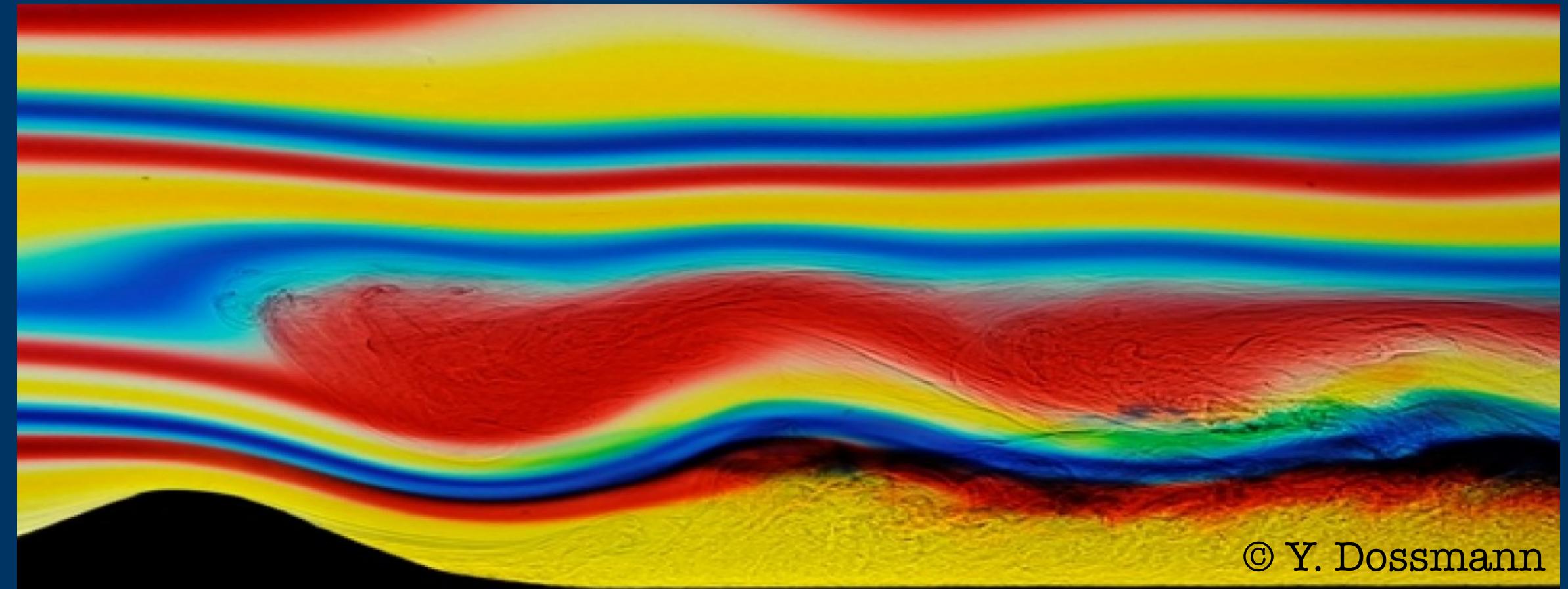


Monday 6th – Wednesday 8th December 2021, Finkel lecture theatre, Australian National University

The Southern Ocean controls the flux of heat to Australia's south, governing the formation of key water masses which drive global ocean circulation, and is the gateway to Antarctica. It has rich dynamics spanning millimetre-scale turbulent mixing, metre-scale surface waves, kilometre-scale convection and eddies, and thousand-kilometre scale atmospheric weather systems.

The Southern Ocean is changing rapidly, and a key research question is whether it can continue soaking up anthropogenic heat and carbon dioxide, and providing other services that mitigate climate change. Numerical models founded on physical laws are the sole means for predicting future scenarios. Higher confidence in models, and hence better resilience for Australian and global communities, requires breakthroughs in understanding dynamics at all scales.

Sessions: Convection & circulation; Eddies, jets & mixing; Internal waves; Sea ice & surface processes.



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