

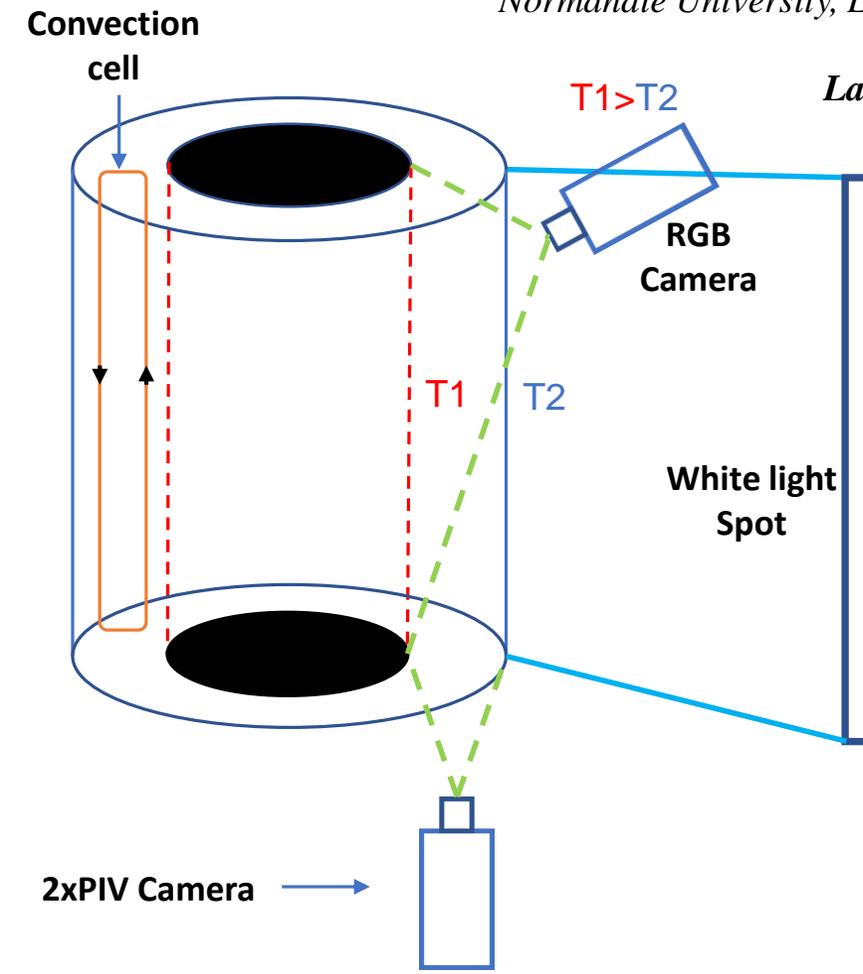
Patterns of convection in THETACO, the large thermal Taylor-Couette facility

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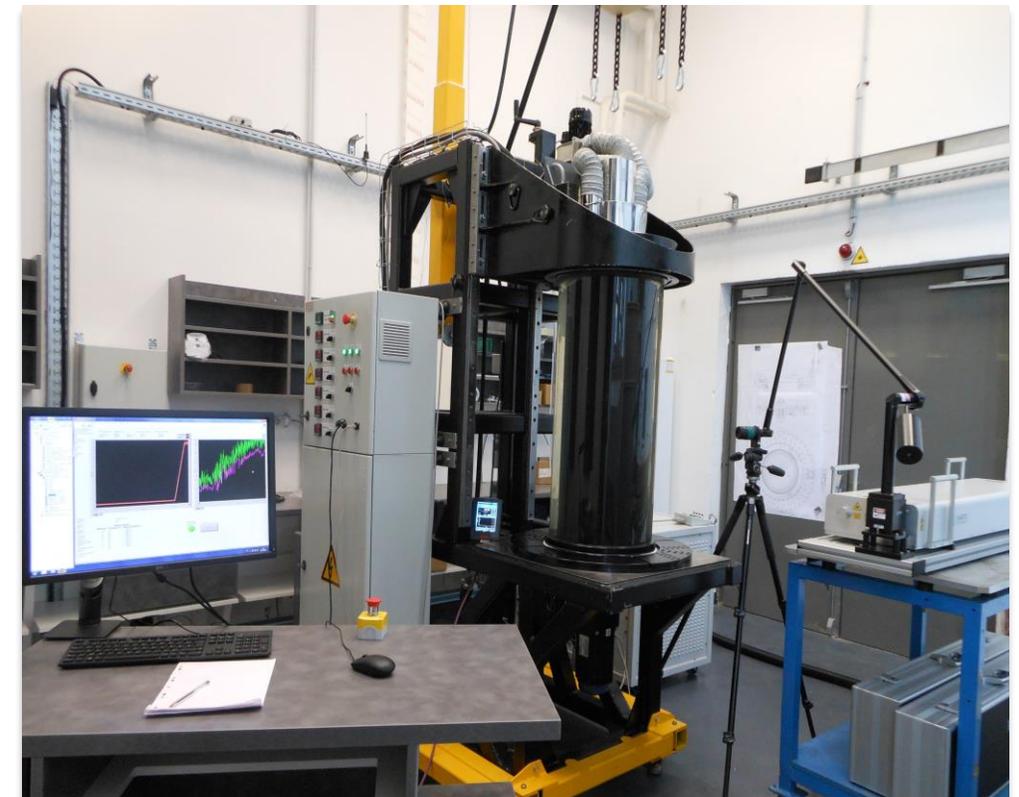
La 25^{ème} Rencontre du non-linéaire, 30/03/2022



- $R_1 = 13.25$ cm
- $R_2 = 15.25$ cm
- $\eta = 0.869$
- $d = 2$ cm
- $L = 97.5$ cm
- $\Gamma = L/d = 48.75$

- $\Delta T: 0.5^\circ\text{C} \rightarrow 27^\circ\text{C}$
- $Gr: 8 \cdot 10^3 \rightarrow 5.5 \cdot 10^5$
- $Ra: 5.2 \cdot 10^4 \rightarrow 3.3 \cdot 10^6$

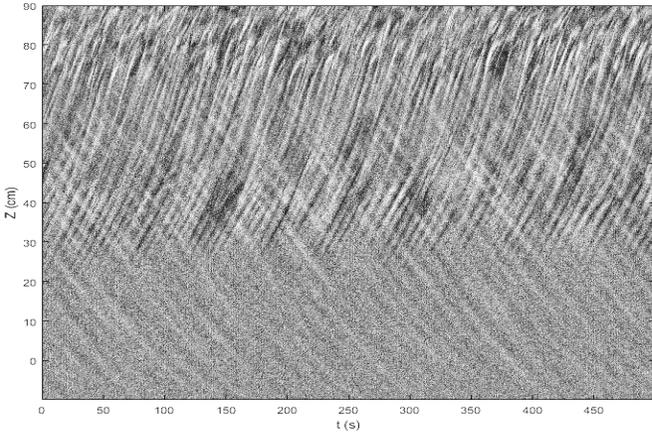
THETACO/GTCT



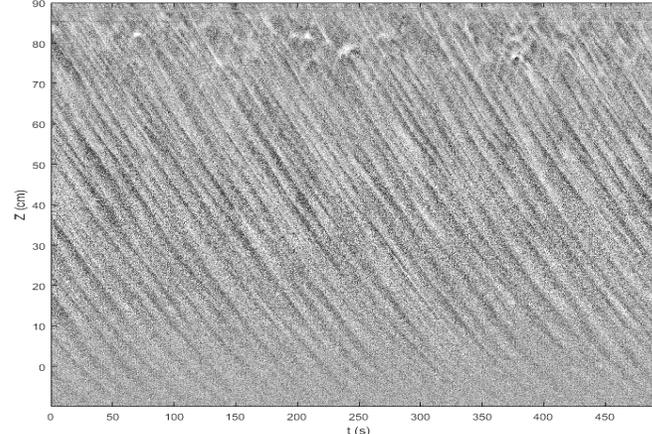
Light intensity space-time diagrams

$Ra = 5.8 \cdot 10^5$

Near the inner cylinder



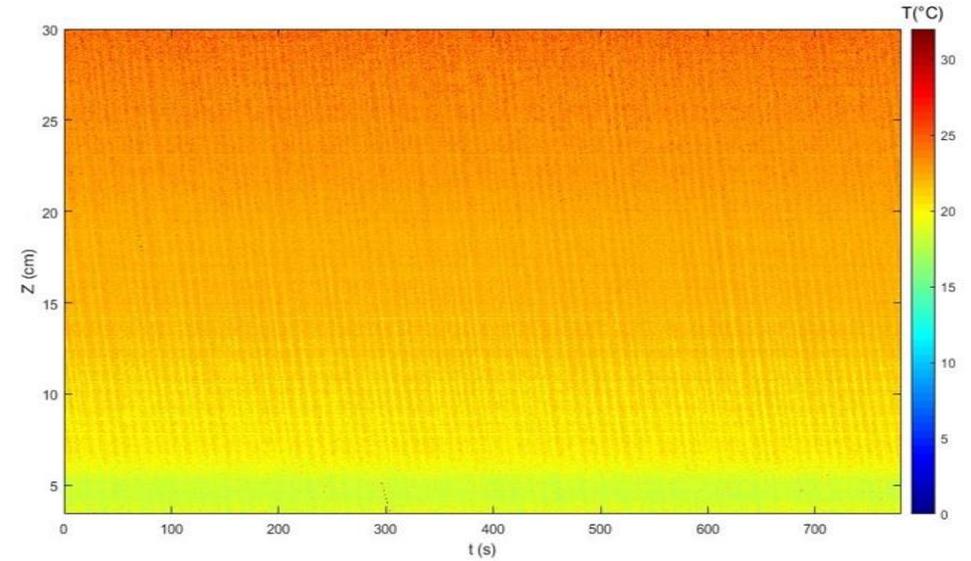
Near the outer cylinder



Near the outer cylinder

Temperature space-time diagram

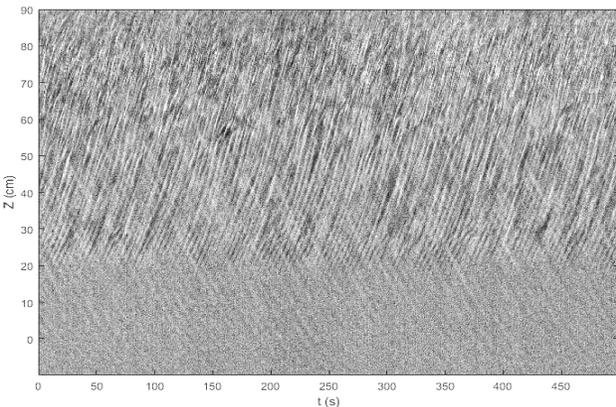
$Ra = 2.8 \cdot 10^6$



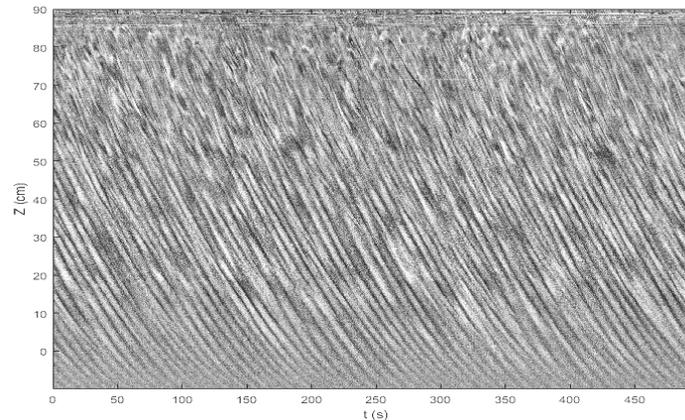
Velocity space-time diagrams

$Ra = 2.8 \cdot 10^6$

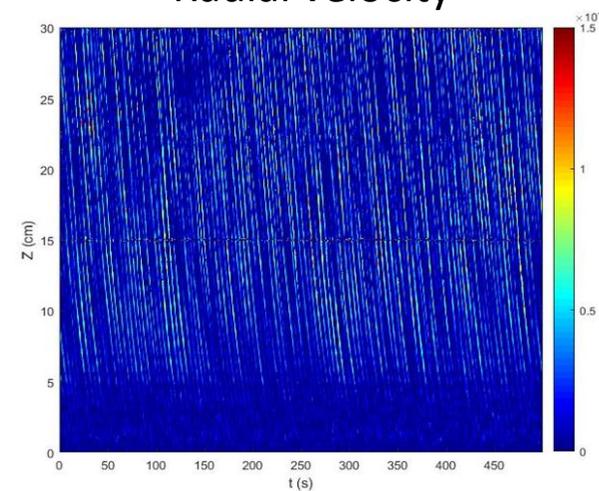
Near the inner cylinder



Near the outer cylinder



Radial velocity



Axial velocity

