

Figure 1

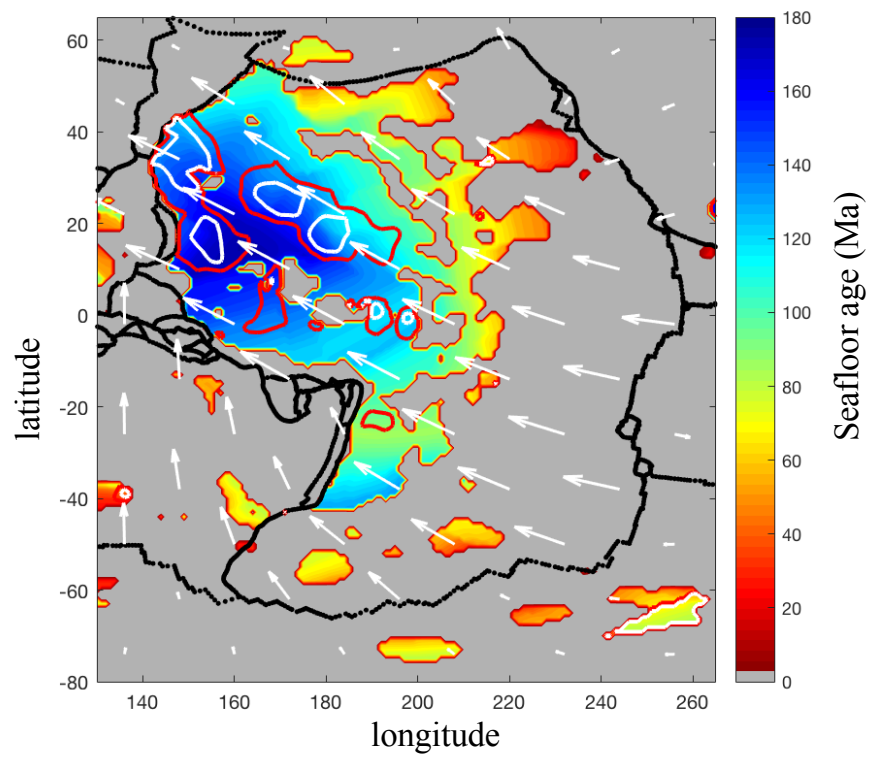


Figure 2

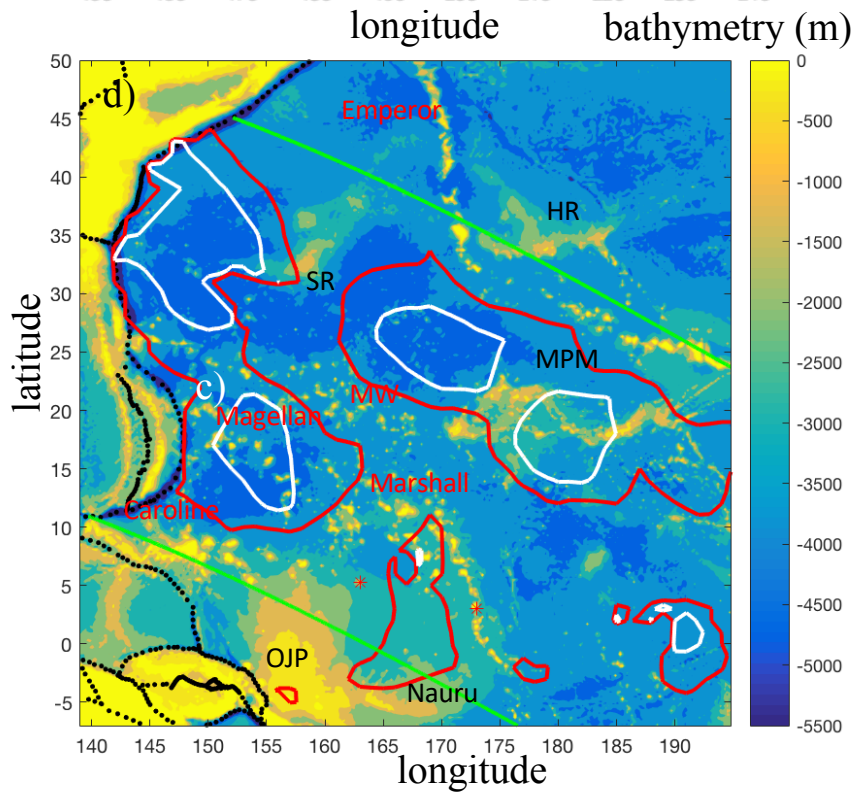
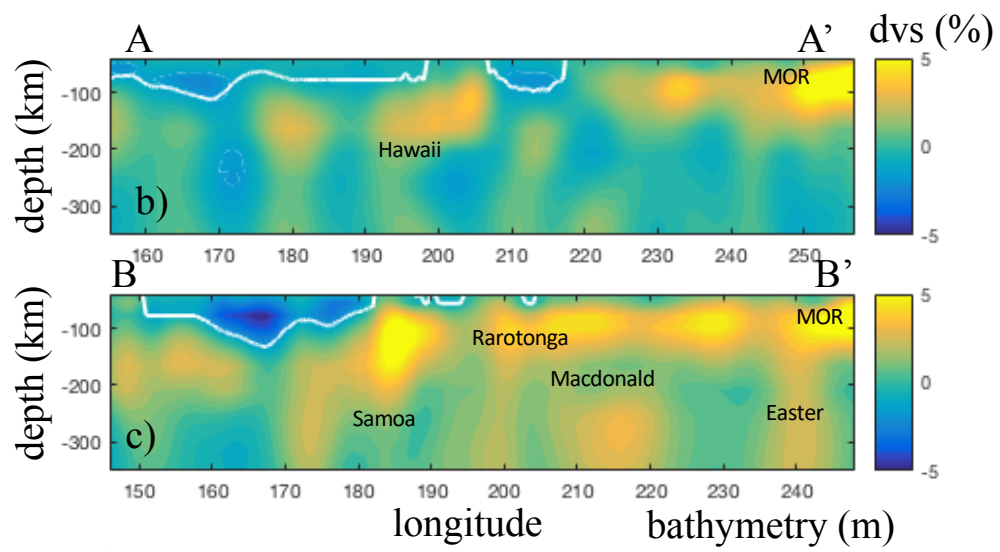
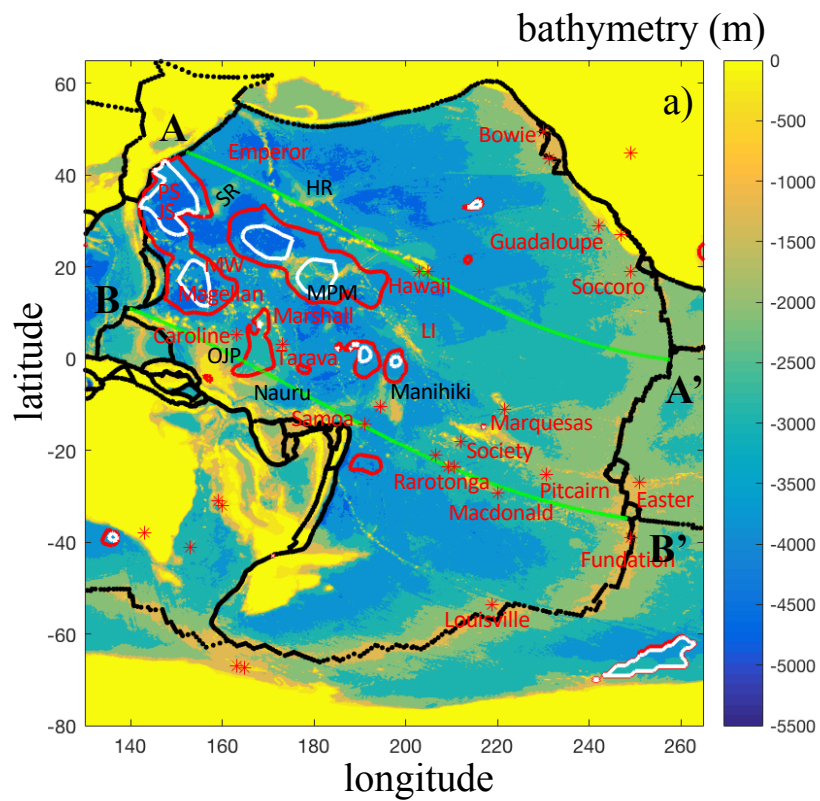


Figure 3

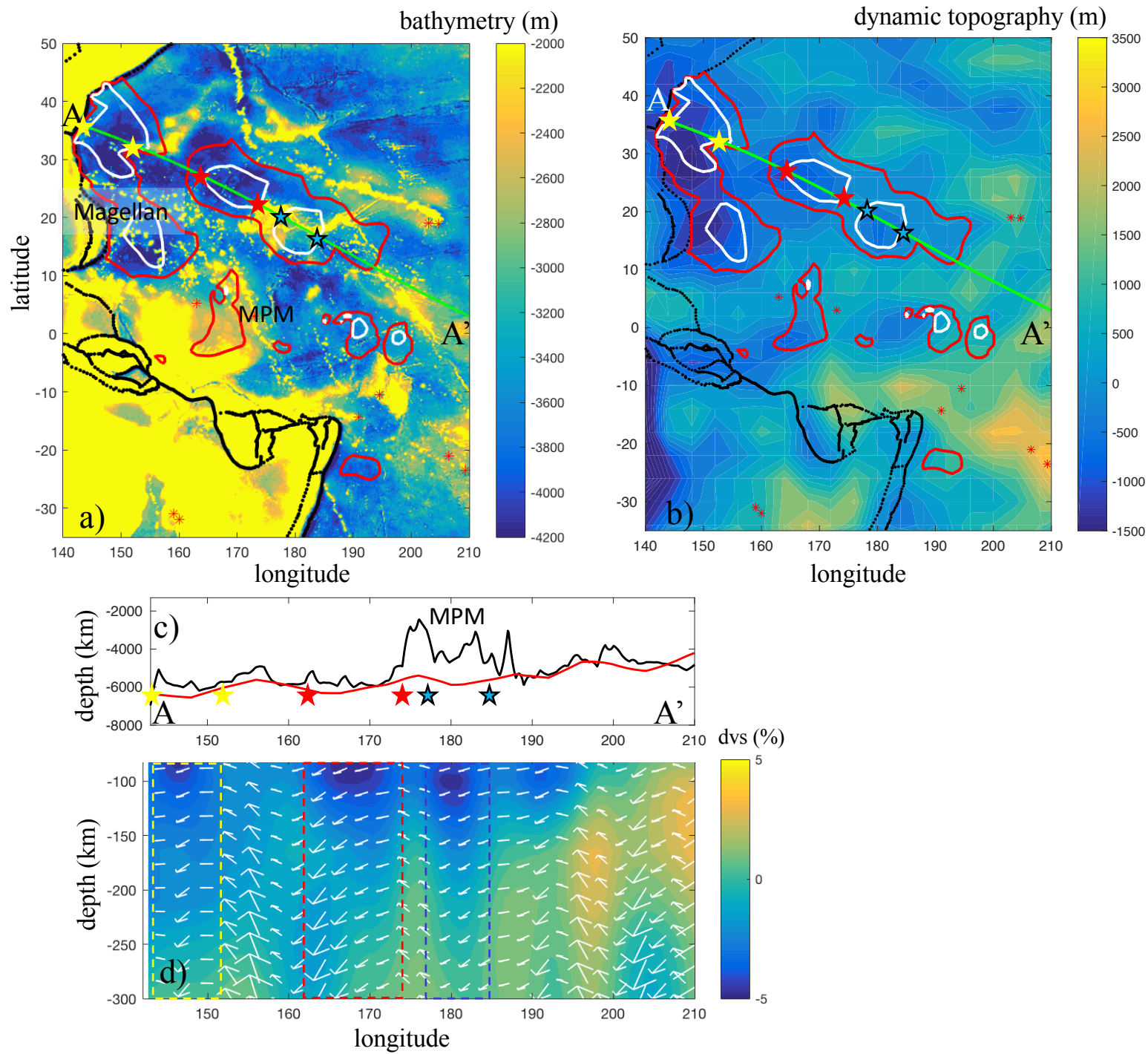


Figure 4

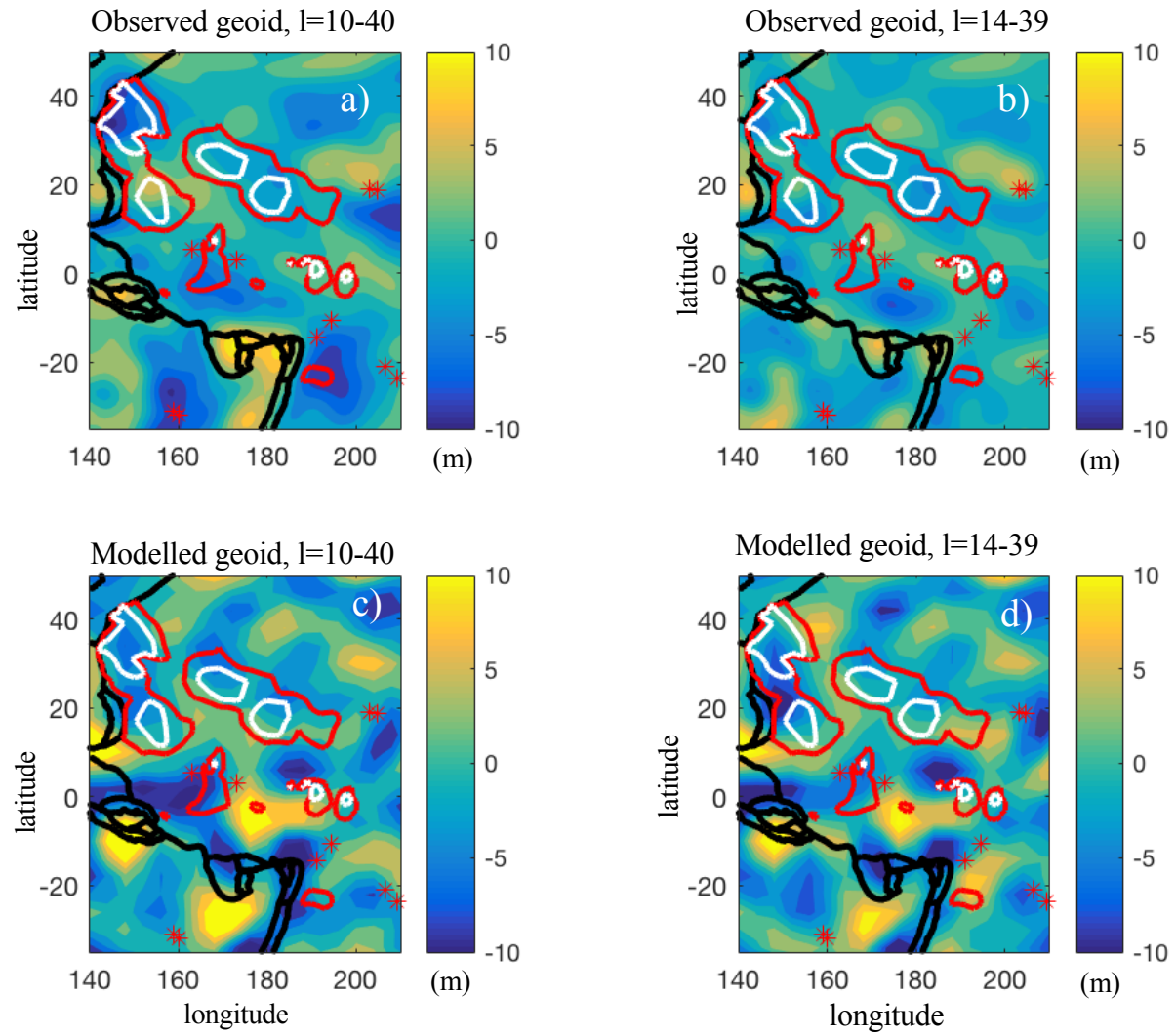


Figure 5

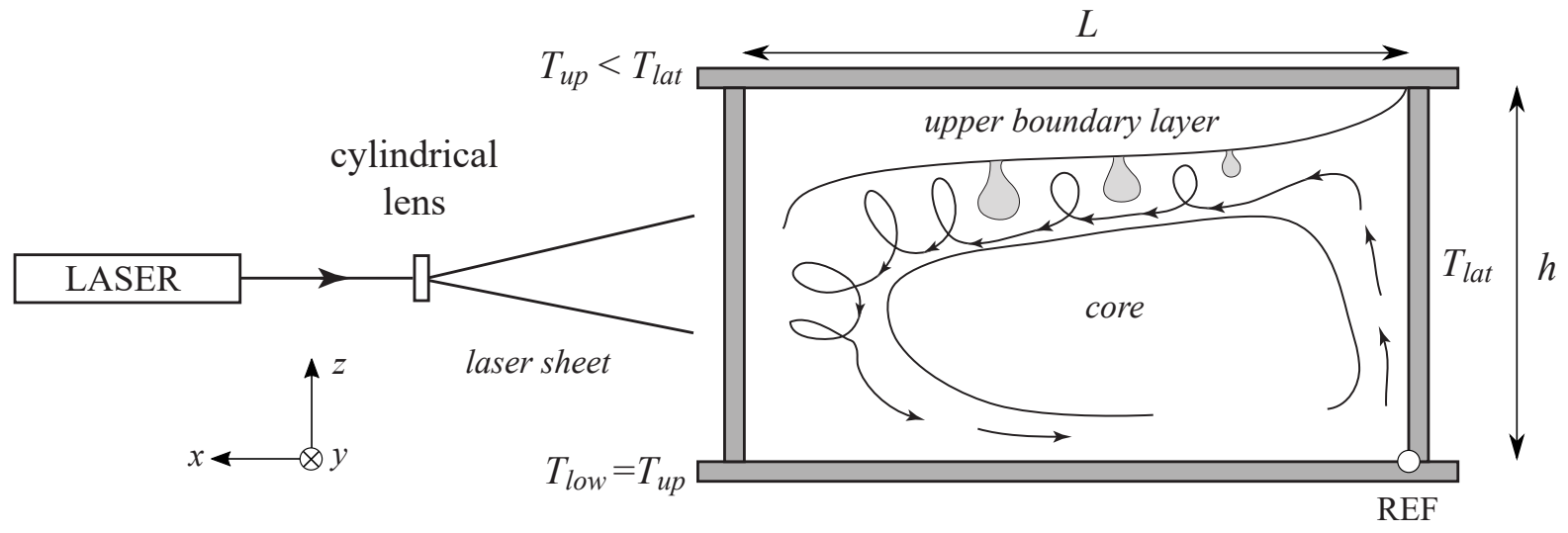


Figure 6

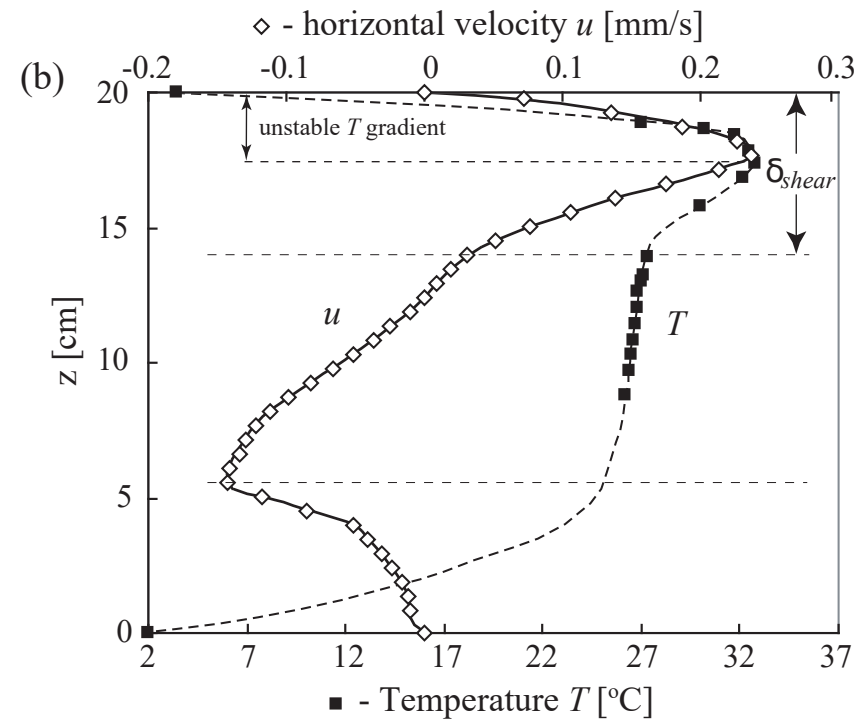
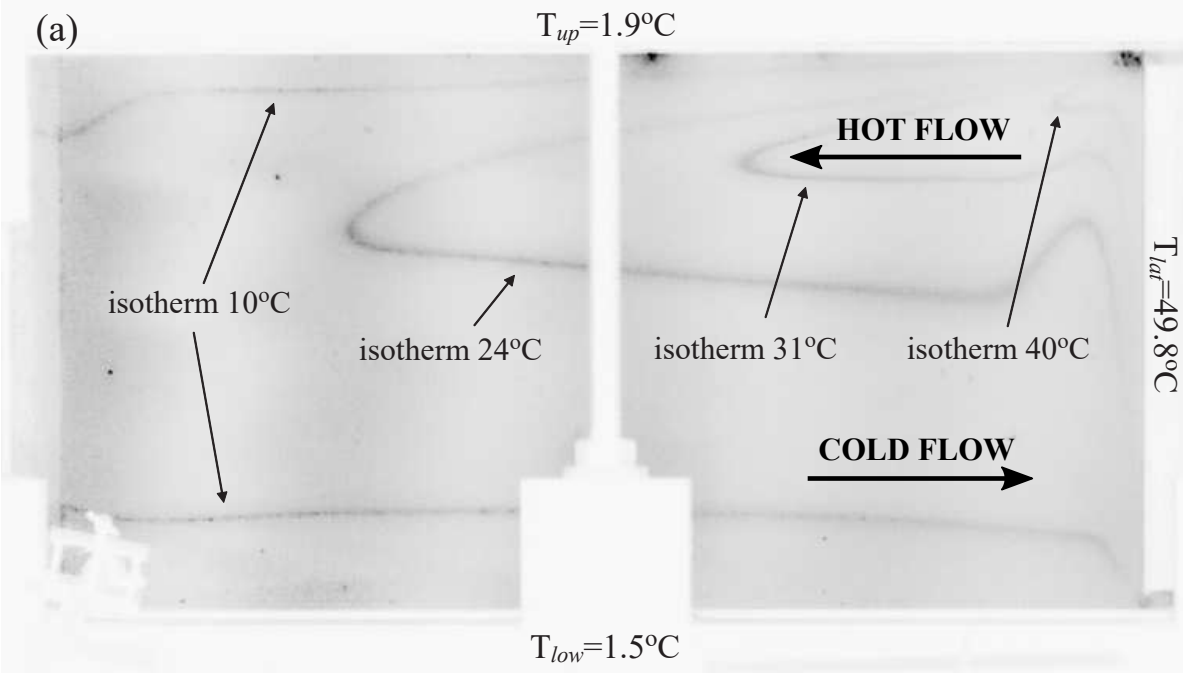


Figure 7

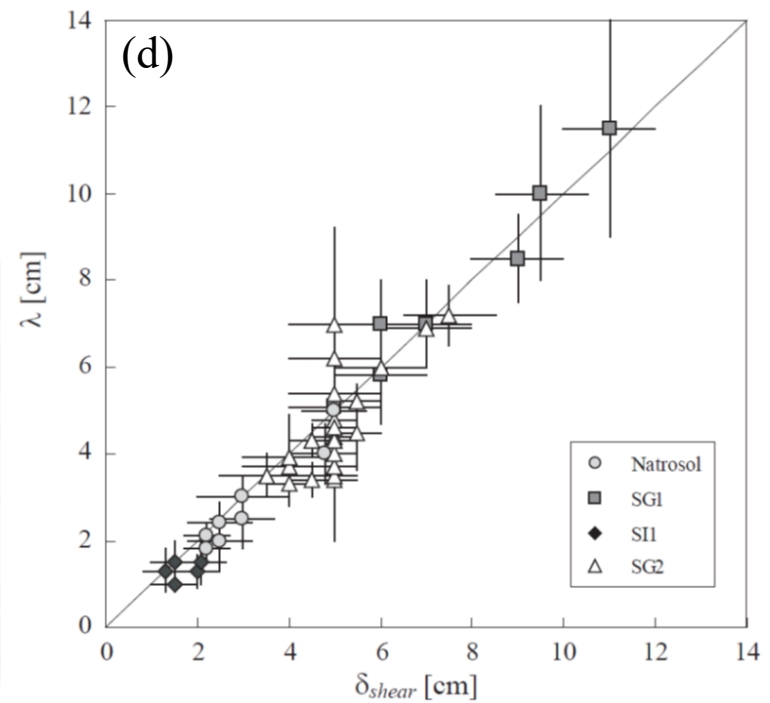
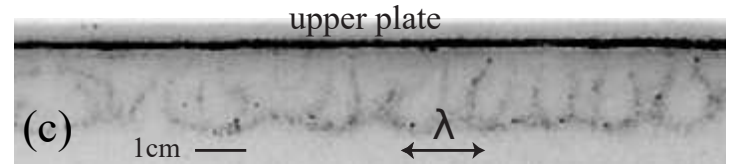
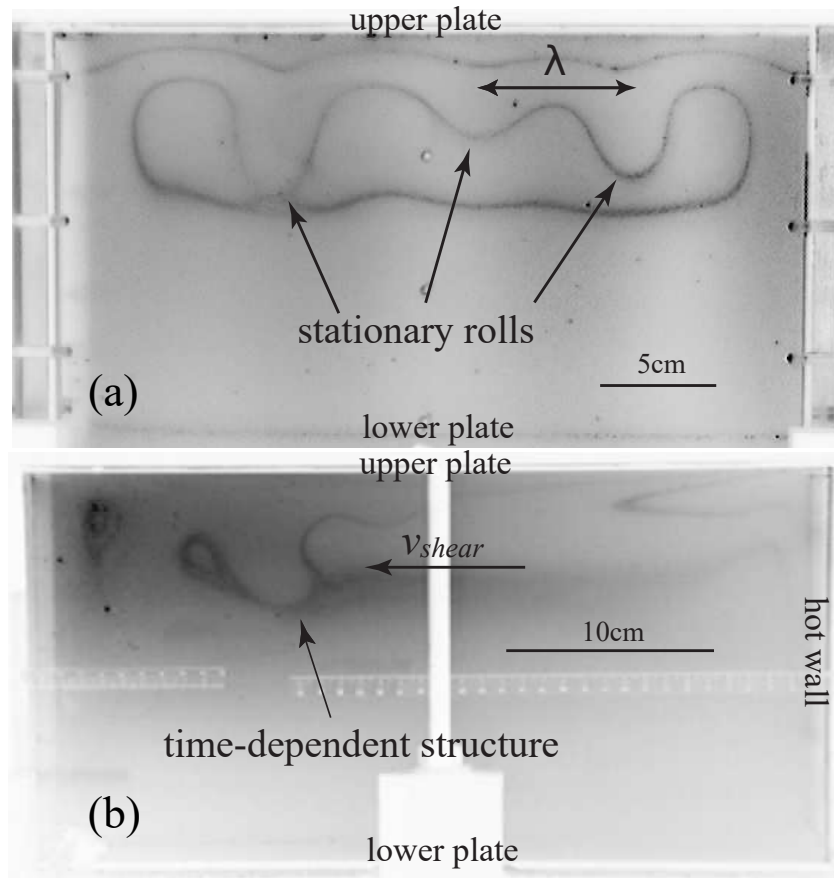


Figure 8

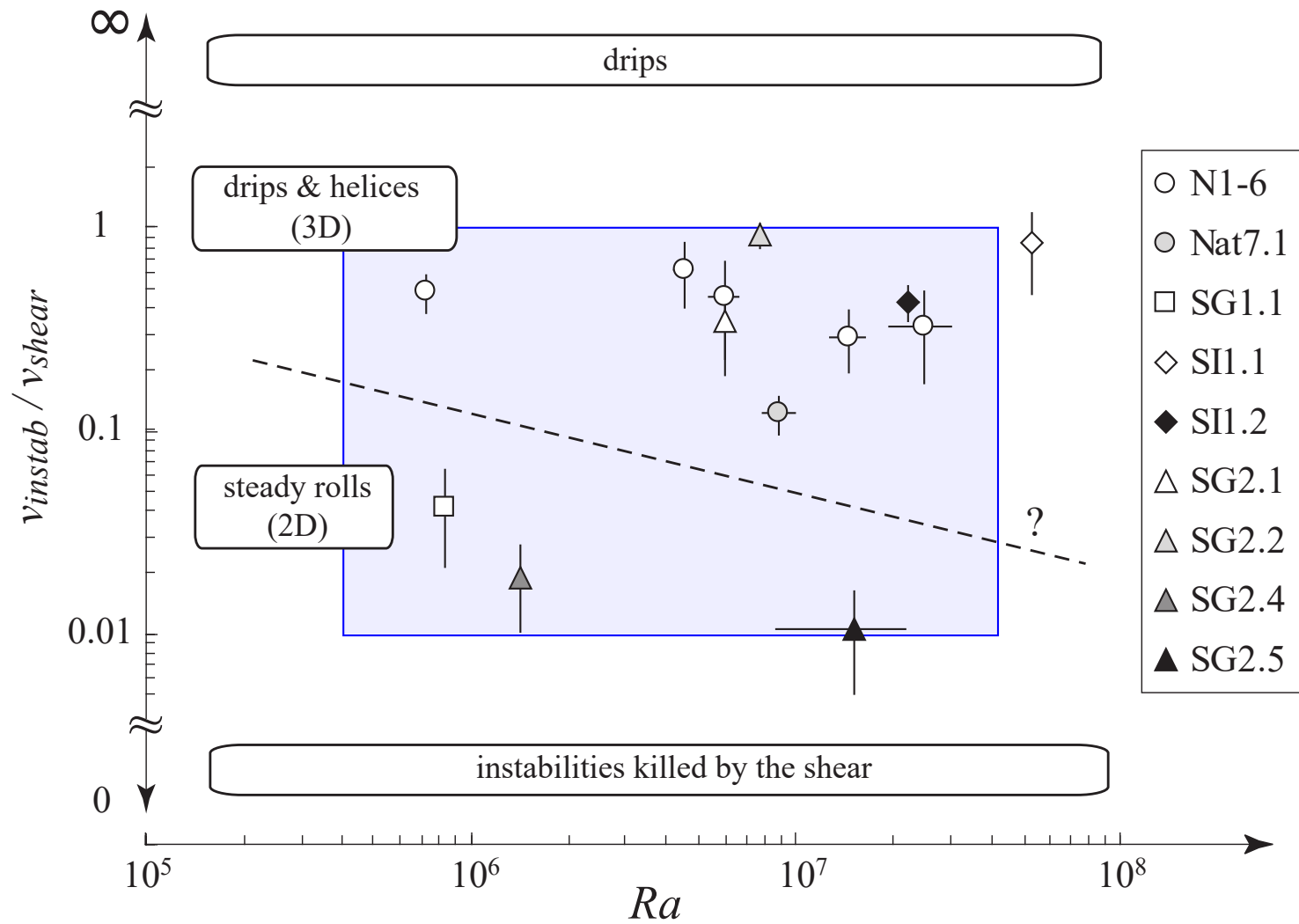


Figure 9

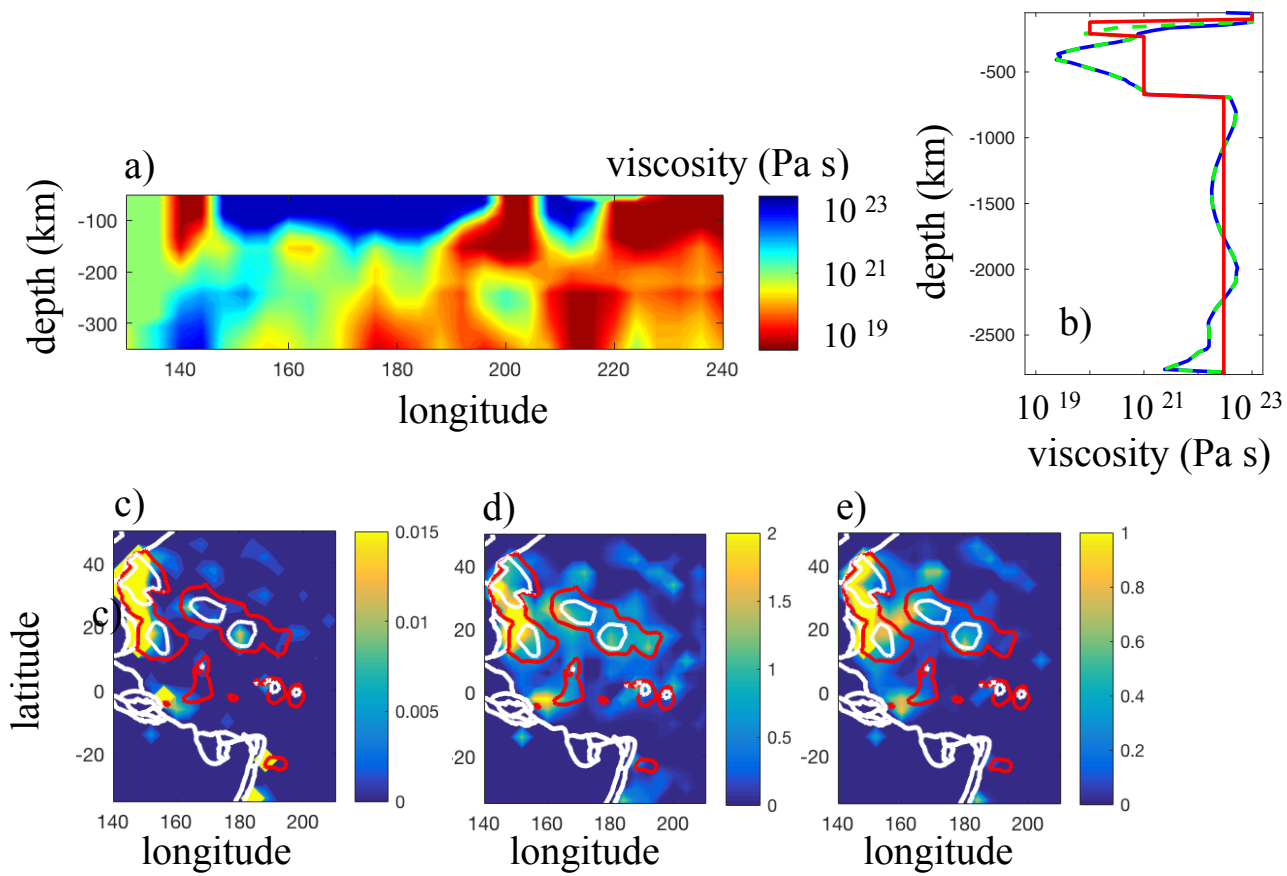


Figure 10

Fluid name	N1	N2	N3	N4	N6	Nat7.1	SG1	SG2	SI
ρ_0 [kg m ⁻³]	999	999	1013	999	1000	999	1418	1393	1322
η_0 [Pa s]	0.55	0.10	0.57	0.17	4.4	0.10	66.0	6.2	0.87
α_0 [10 ⁻⁴ K ⁻¹]	1.18	1.17	1.66	1.17	1.24	1.17	5.44	5.35	5.39
κ [10 ⁻⁷ m ² s ⁻¹]	1.42	1.42	1.42	1.42	1.42	1.42	1.13	1.15	1.42
τ_{diff} [<i>h</i>]	78.2	78.2	78.2	78.2	78.2	78.2	98.3	96.6	78.2

Table 1

Experiment	Fluid	T_{lat} [°C]	T_{up} [°C]	T_{low} [°C]	T_m [°C]	γ	Ra_{lat}	Pr
N1.1	Natrosol	$39.8 \pm 0.2^*$	$6.5 \pm 1.0^*$	$6.0 \pm 0.5^*$	-	1.0	4.5×10^6	3,900
N1.2	Natrosol	$49.7 \pm 0.3^*$	$6.5 \pm 1.0^*$	$6.0 \pm 0.5^*$	-	1.0	6.8×10^6	3,900
N2	Natrosol	$39.8 \pm 0.2^*$	$6.5 \pm 1.0^*$	$6.0 \pm 0.5^*$	-	1.0	2.5×10^7	700
N3	Natrosol	$39.8 \pm 0.2^*$	$6.5 \pm 1.0^*$	$6.0 \pm 0.5^*$	-	1.0	6.0×10^6	4,000
N4	Natrosol	$39.8 \pm 0.2^*$	$6.5 \pm 1.0^*$	$6.0 \pm 0.5^*$	-	1.0	1.4×10^7	1,200
N6	Natrosol	$44.7 \pm 0.2^*$	$6.5 \pm 1.0^*$	$6.0 \pm 0.5^*$	-	1.0	7.3×10^5	31,000
Nat7.1	Natrosol	29.3	7.7	6.5	13.7	1.0	8.9×10^6	1,200
SG1.1	GS6080	49.8	1.9	1.5	16	609.8	8.2×10^5	196,000
SG1.2	GS6080	49.9	11.0	10.8	21.5	125.2	1.2×10^6	111,000
SG1.3	GS6080	49.9	22.0	21.1	28.0	24.0	1.6×10^6	59,000
SI1.1	SI9566	48.8	20.9	20.9	27.6	9.9	5.3×10^7	1,200
SI1.2	SI9566	39.4	21.2	21.8	24.6	5.3	2.2×10^7	1,800
SI1.3	SI9566	$30.0 \pm 0.5^*$	$21.0 \pm 0.5^*$	$21.0 \pm 0.5^*$	-	2.5	7.7×10^6	2,900
SG2.1	GS6075	44.6	7.1	6.5	20.6	53.3	6.0×10^6	20,000
SG2.2	GS6075	49.5	2.7	1.8	21.2	148.8	7.7×10^6	19,600
SG2.3	GS6075	49.6	12.0	11.3	24.6	42.5	9.7×10^6	12,400
SG2.4	GS6075	30.1	21.0	20.9	24.7	2.6	1.4×10^6	20,600
SG2.5	GS6075	59.4	3.4	2.0	26.4	202.6	1.5×10^6	11,900

Table 2