

Pseudosection setups

Pseudosections were calculated in NCKFMASH system using perpleX 6.8.3 (Connolly 2009) and the following parameters:

1) Bulk composition (wt.%)

Na ₂ O	3.07
MgO	4.66
Al ₂ O ₃	15.9
SiO ₂	60.60
K ₂ O	1.81
CaO	6.41
FeO	6.71
H ₂ O	0.50 (P-T); 0.50 to 10.50 (T-X)

10 wt.% H₂O is actually a very generous amount, the system being saturated at all temperatures below this value. As a result, in T-X diagram not much happens on the right hand side.

2) Solution models for setup with “old” models

Mineral	Model code	Reference
Biotite	Bio(TCC)	(Tajčmanová et al. 2009)
Orthopyroxene	Opx(HP)	(Powell & Holland 1999)
Melt	melt(HP)	(White et al. 2001)
Chlorite	Chl(HP)	(Holland et al. 1998)
Feldspar (ternary)	feldspar	(Fuhrman & Lindsley 1988)
Garnet	Gt(WPH)	(White et al. 2007)
Clinopyroxene	Cpx(HP)	(Holland & Powell 1996)
Amphibole	cAmph(DP)	(Diener & Powell 2012)

Equation of state: code 5 (CORK; Holland & Powell 1998)

Thermodynamic database: hp02ver.dat (Thermocalc cycle 5; Holland & Powell 2001)

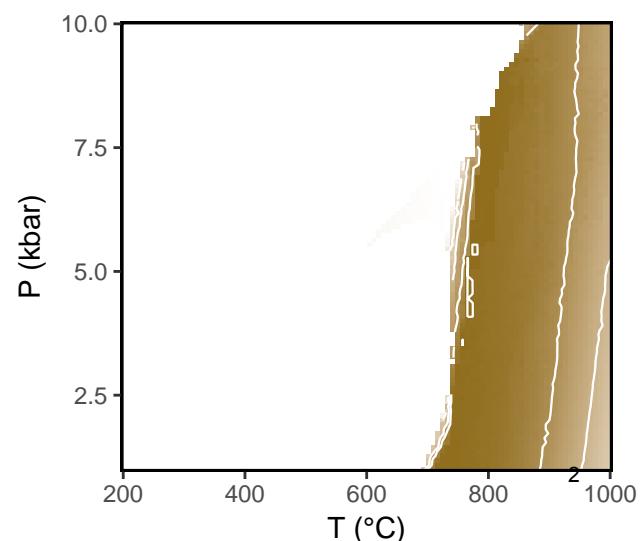
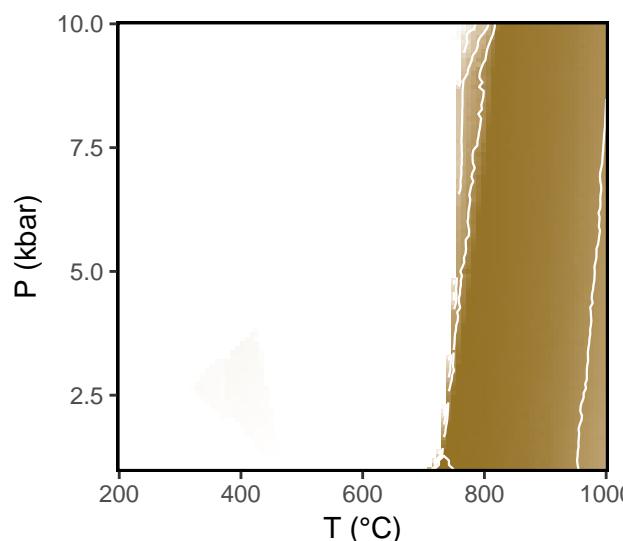
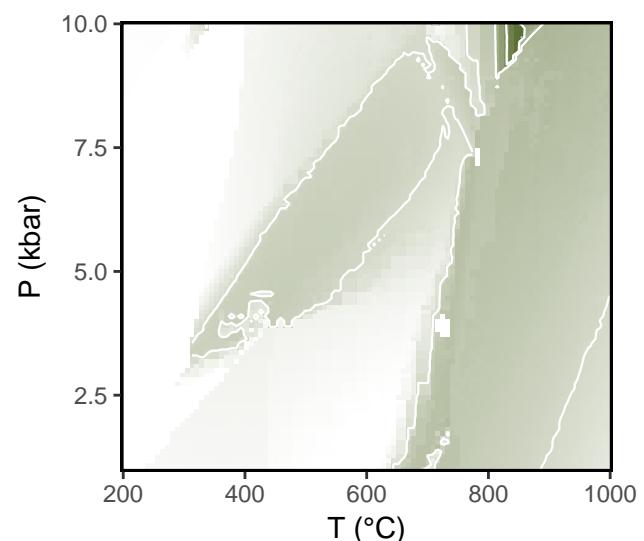
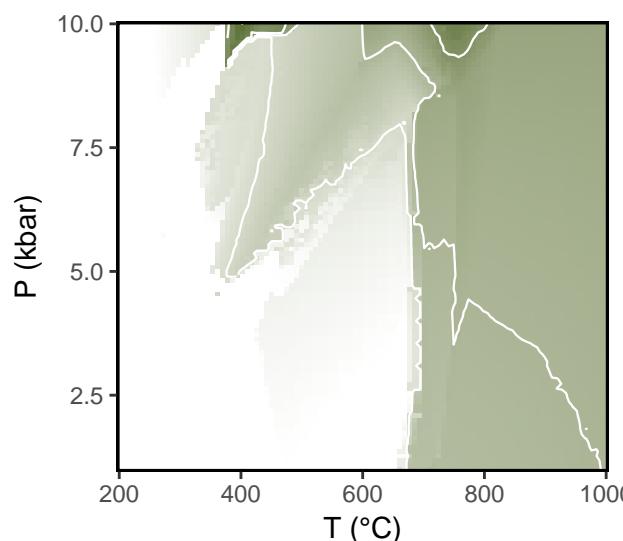
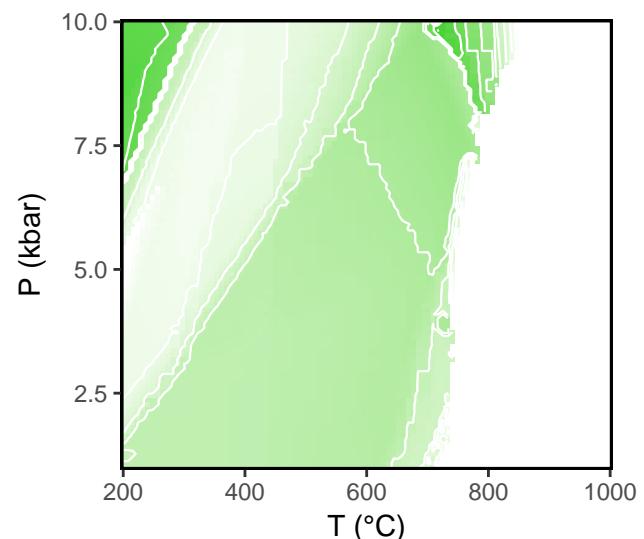
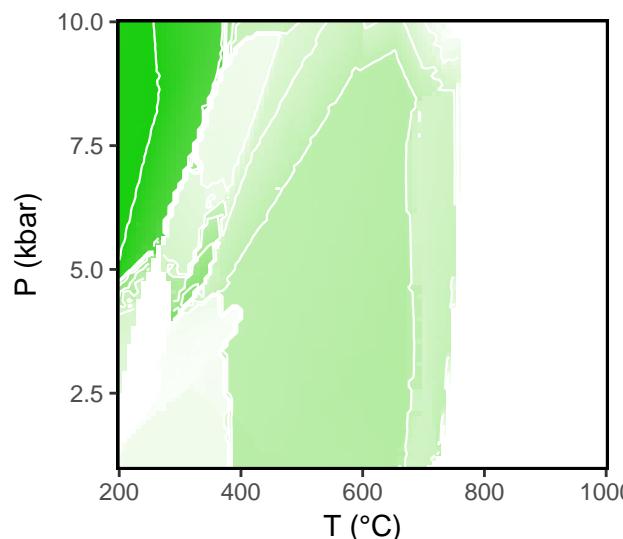
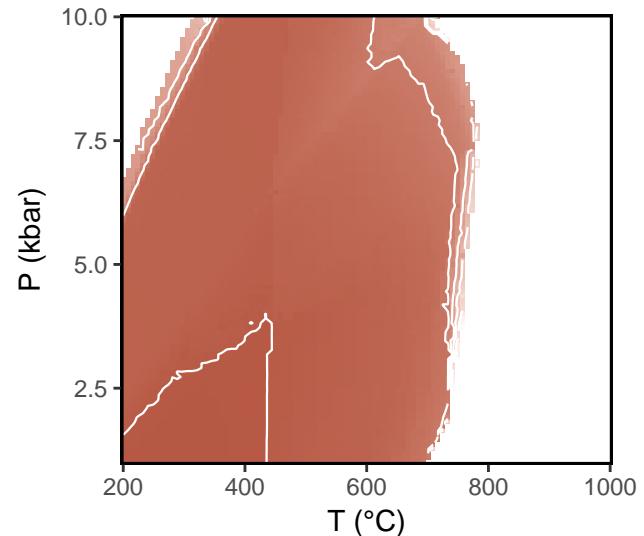
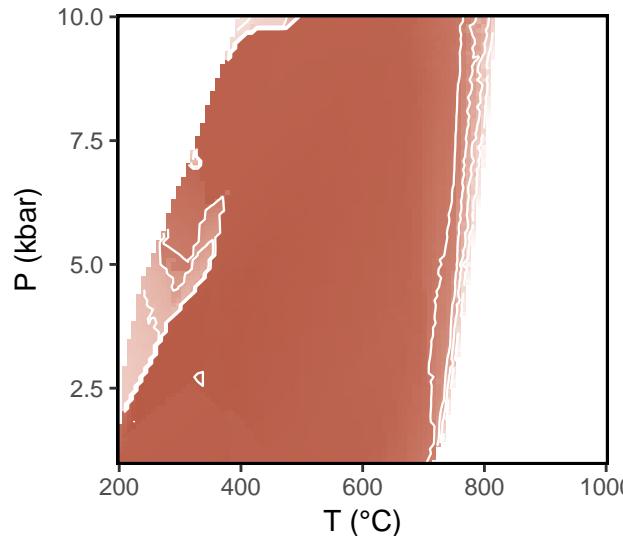
3) Solution models for setup with “new” models

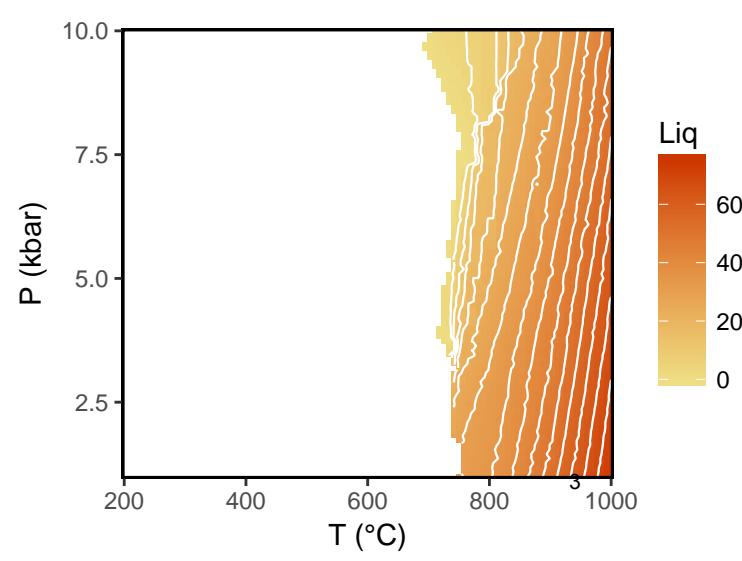
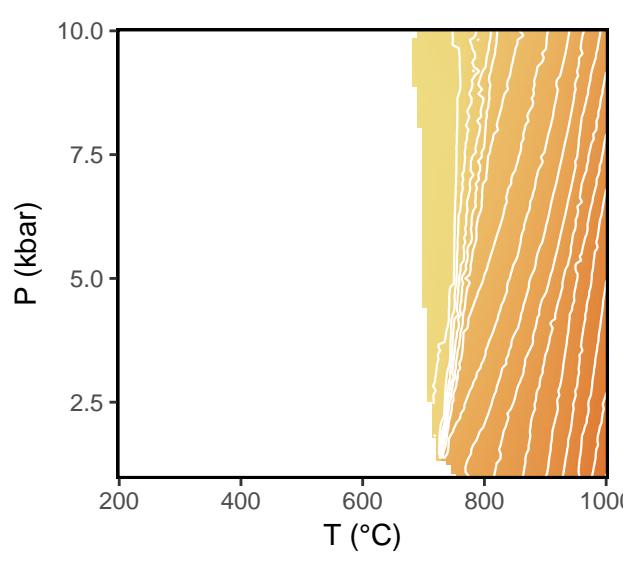
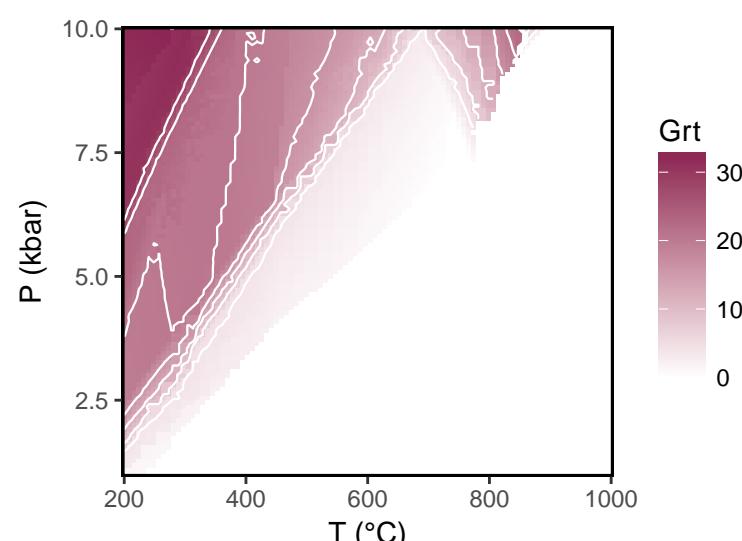
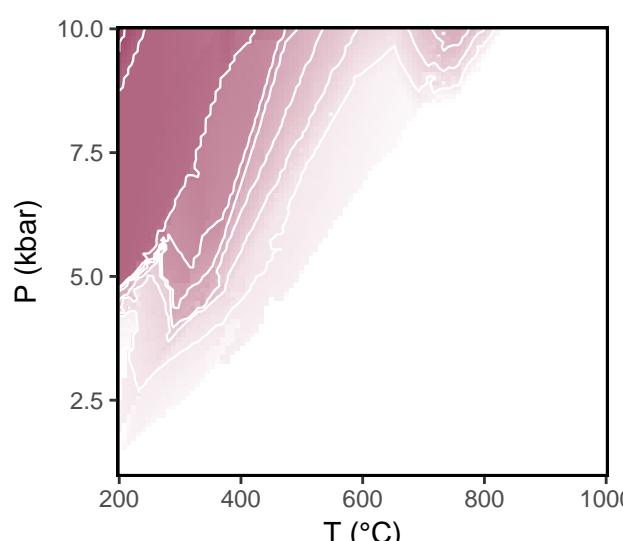
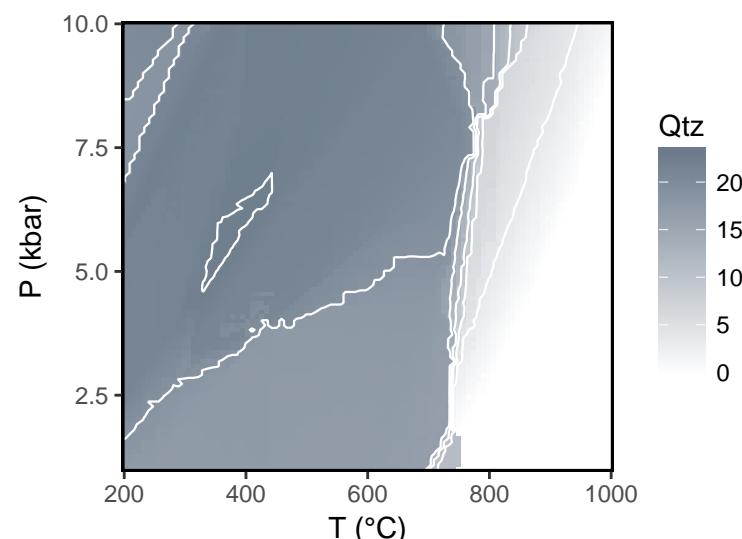
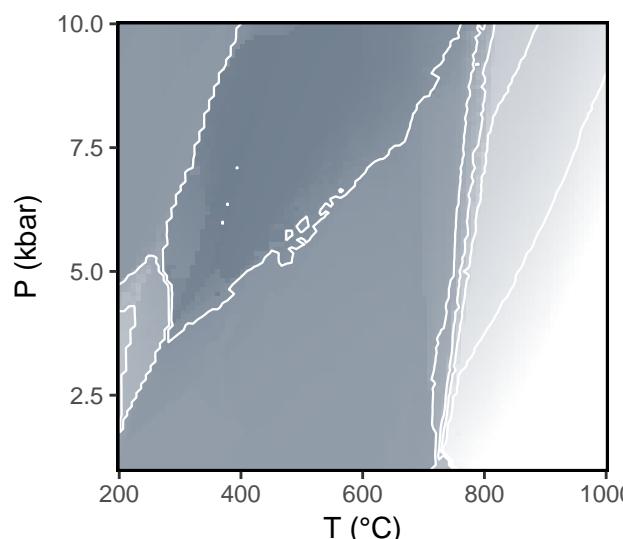
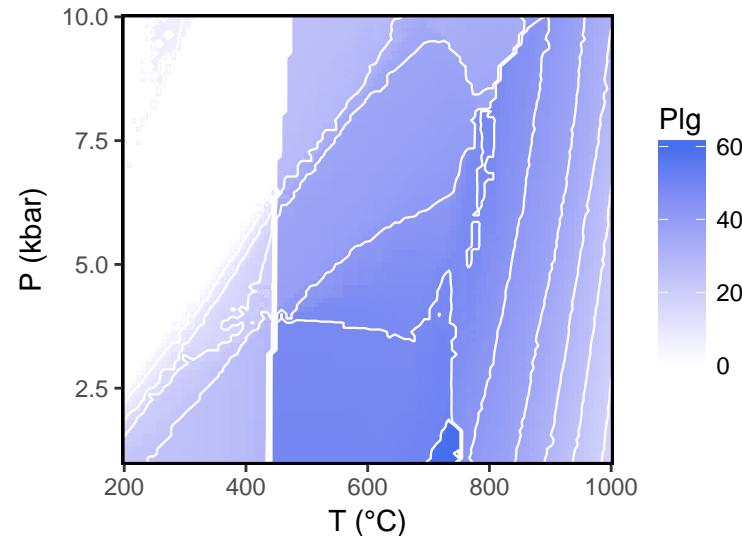
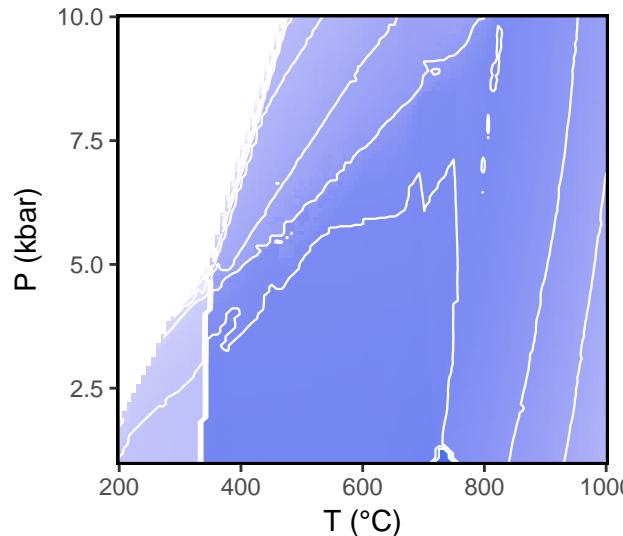
Mineral	Model code	Reference
Biotite	Bi(W)	(White et al. 2014)
Orthopyroxene	Opx(W)	(White et al. 2014)
Melt	melt(G)	(Green et al. 2016)
Chlorite	Chl(W)	(White et al. 2014)
Feldspar (ternary)	Fsp(C1) & Pl(I1,HP)	(Holland & Powell 2003)
Garnet	Gt(W)	(White et al. 2014)
Clinopyroxene	Cpx(G)	(Green et al. 2016)
Amphibole	cAmph(G)	(Green et al. 2016)

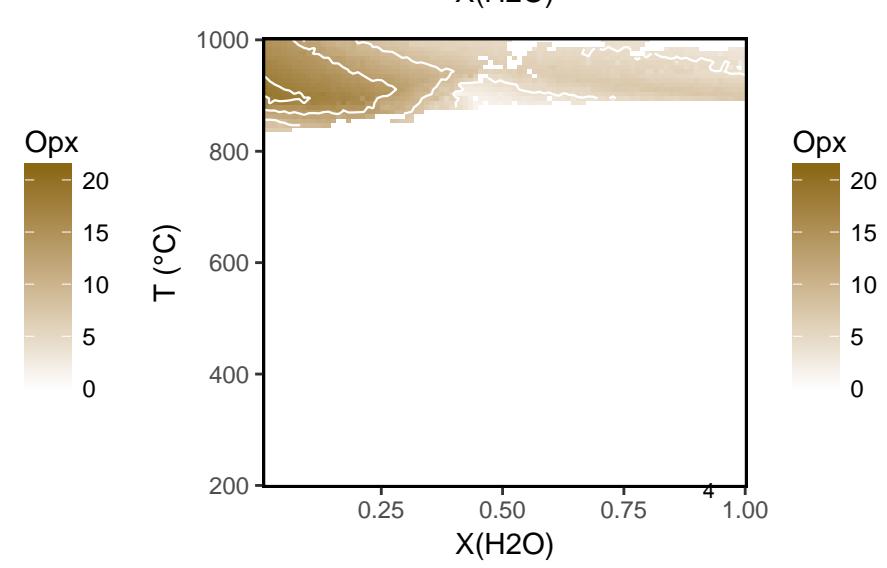
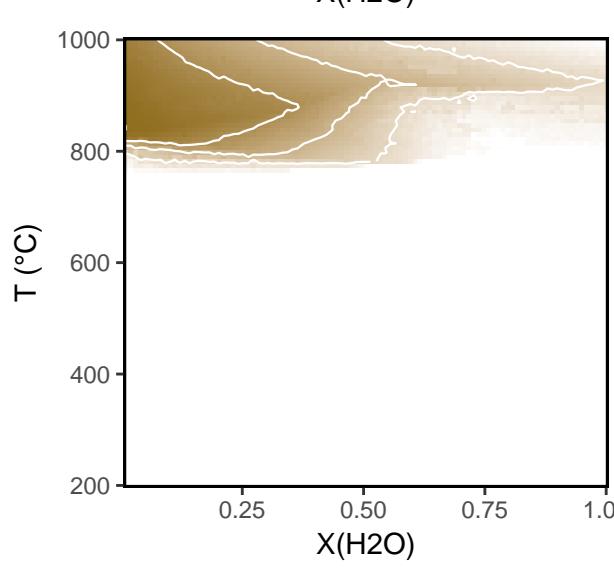
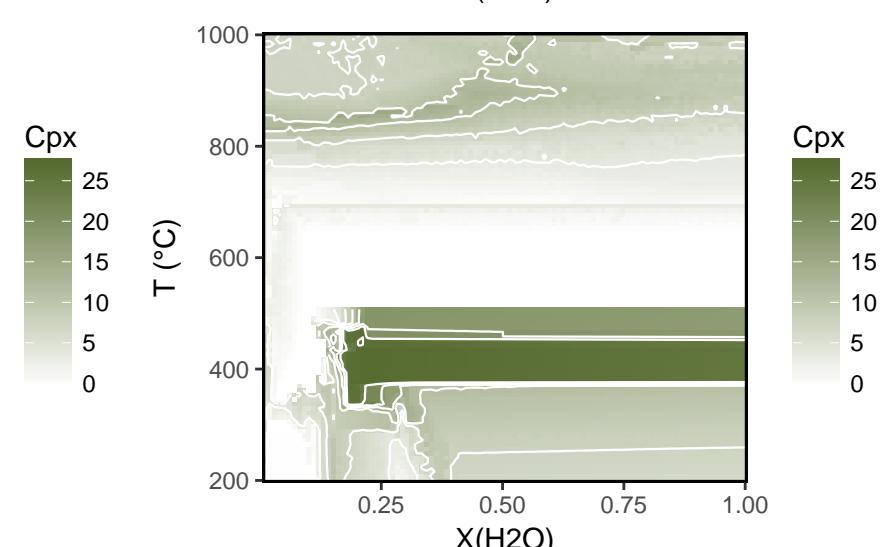
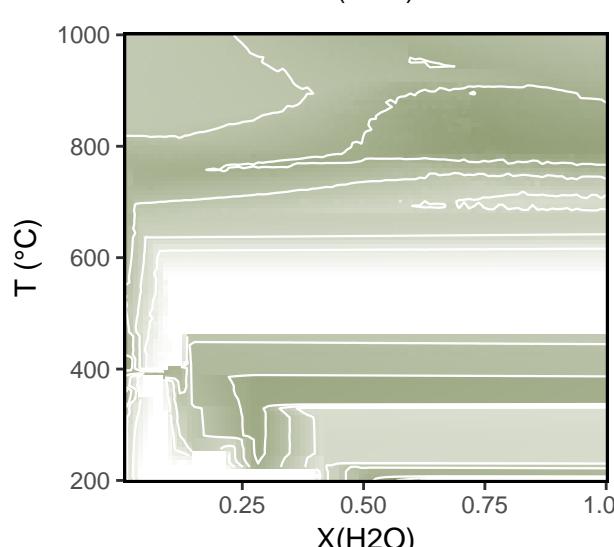
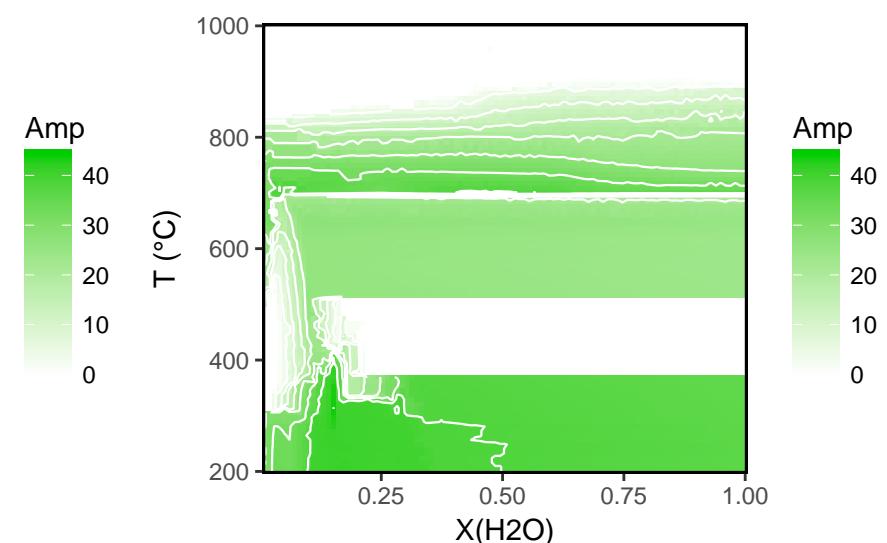
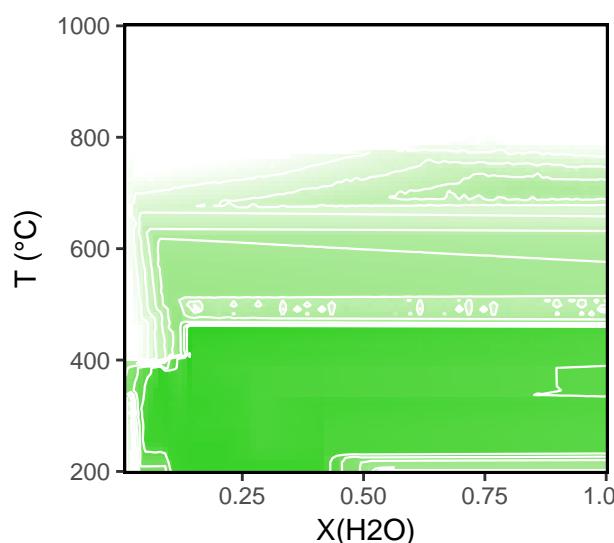
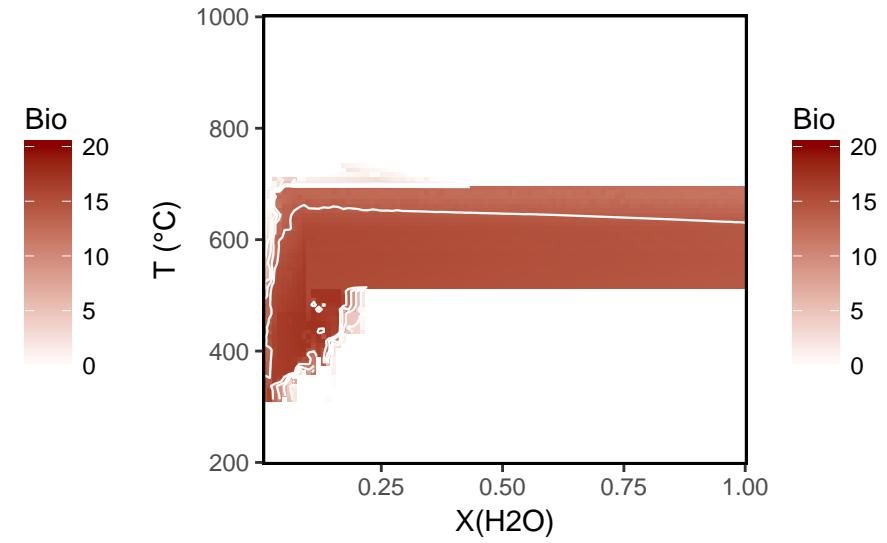
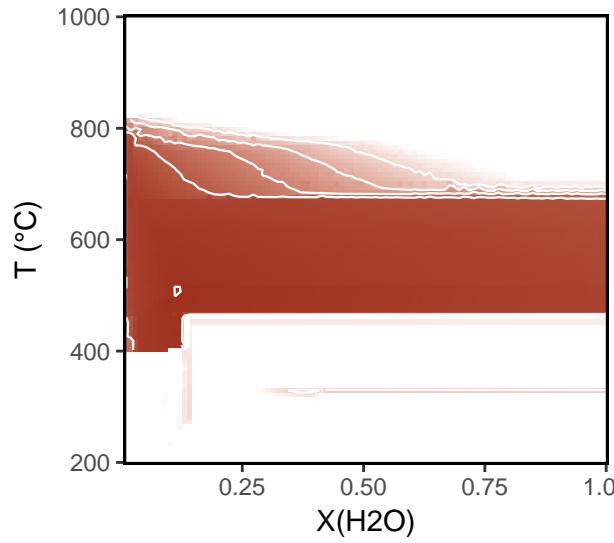
Equation of state: code 5 (CORK; Holland & Powell 1998)

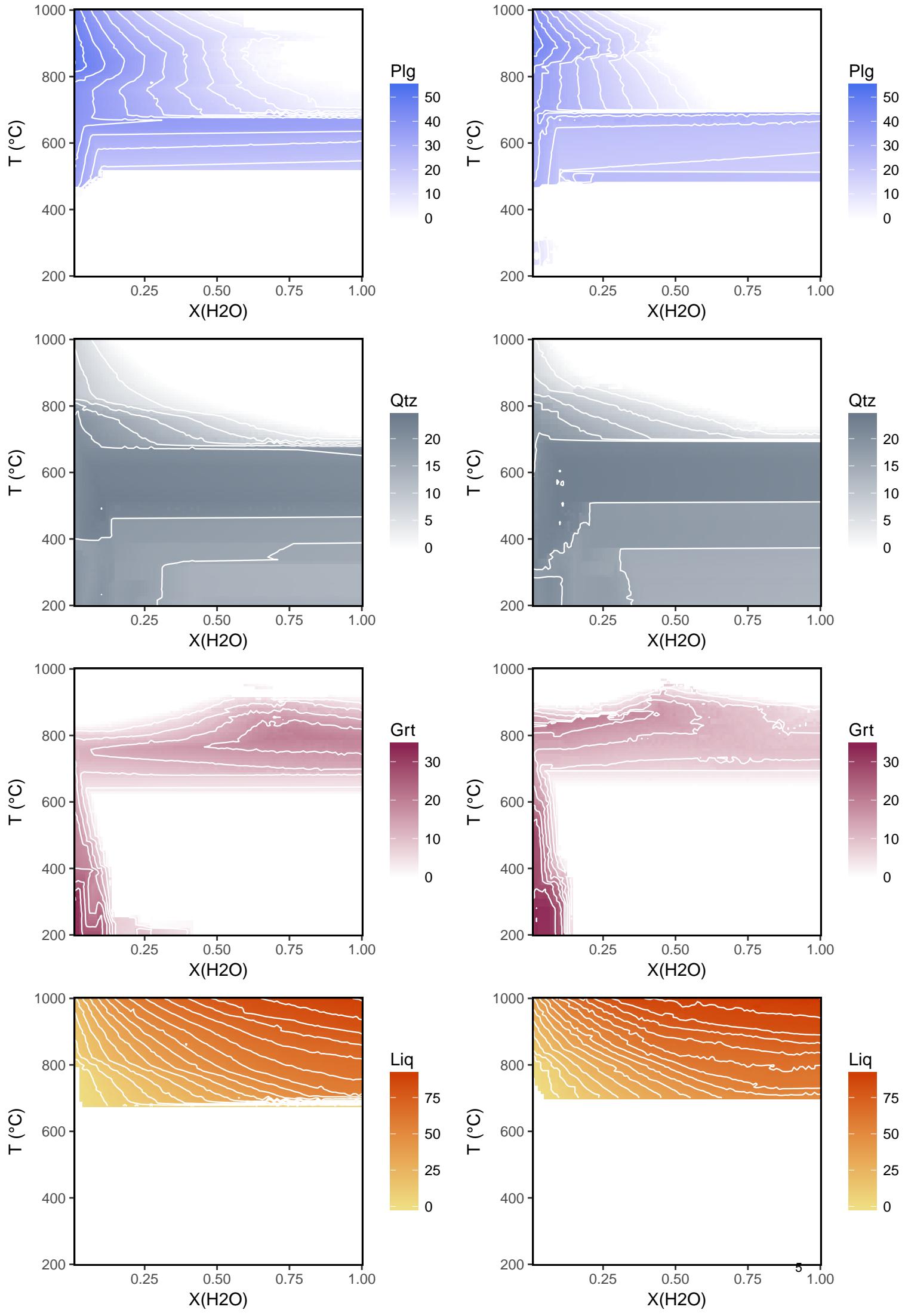
Thermodynamic database: hp622ver.dat (Thermocalc cycle 6; Holland & Powell 2011)

4) Phase maps for PT section (pages 2 and 3) and TX section (pages 4 and 5) – left column using “old” (White et al. 2001) and right using “new” (Green et al. 2016) models.









References

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