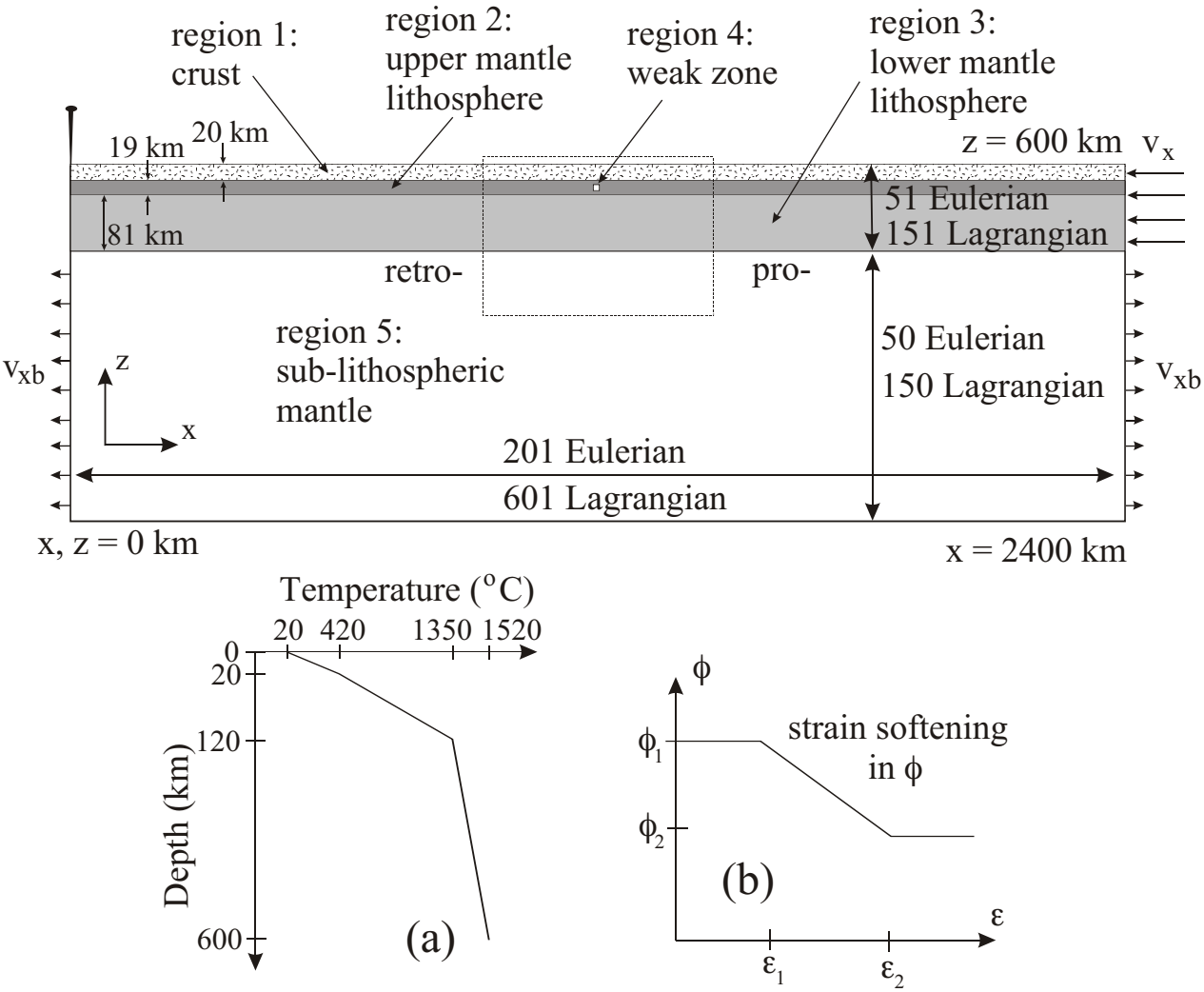
region 1:
crust
region 2:
upper mantle
lithosphere
region 4:
weak zone
region 3:
lower mantle
lithosphere
19 km
20 km
z = 600 km
$v_x$
51 Eulerian
151 Lagrangian
81 km
retro-
pro-
region 5:
sub-lithospheric
mantle
50 Eulerian
150 Lagrangian
$v_{xb}$
z
x
$v_{xb}$
201 Eulerian
601 Lagrangian
x, z = 0 km
x = 2400 km
Temperature (°C)
20 420 1350 1520
0
20
120
600
Depth (km)
(a)
$\phi$
$\phi_1$
$\phi_2$
strain softening
in $\phi$
(b)
$\varepsilon$
$\varepsilon_1$
$\varepsilon_2$