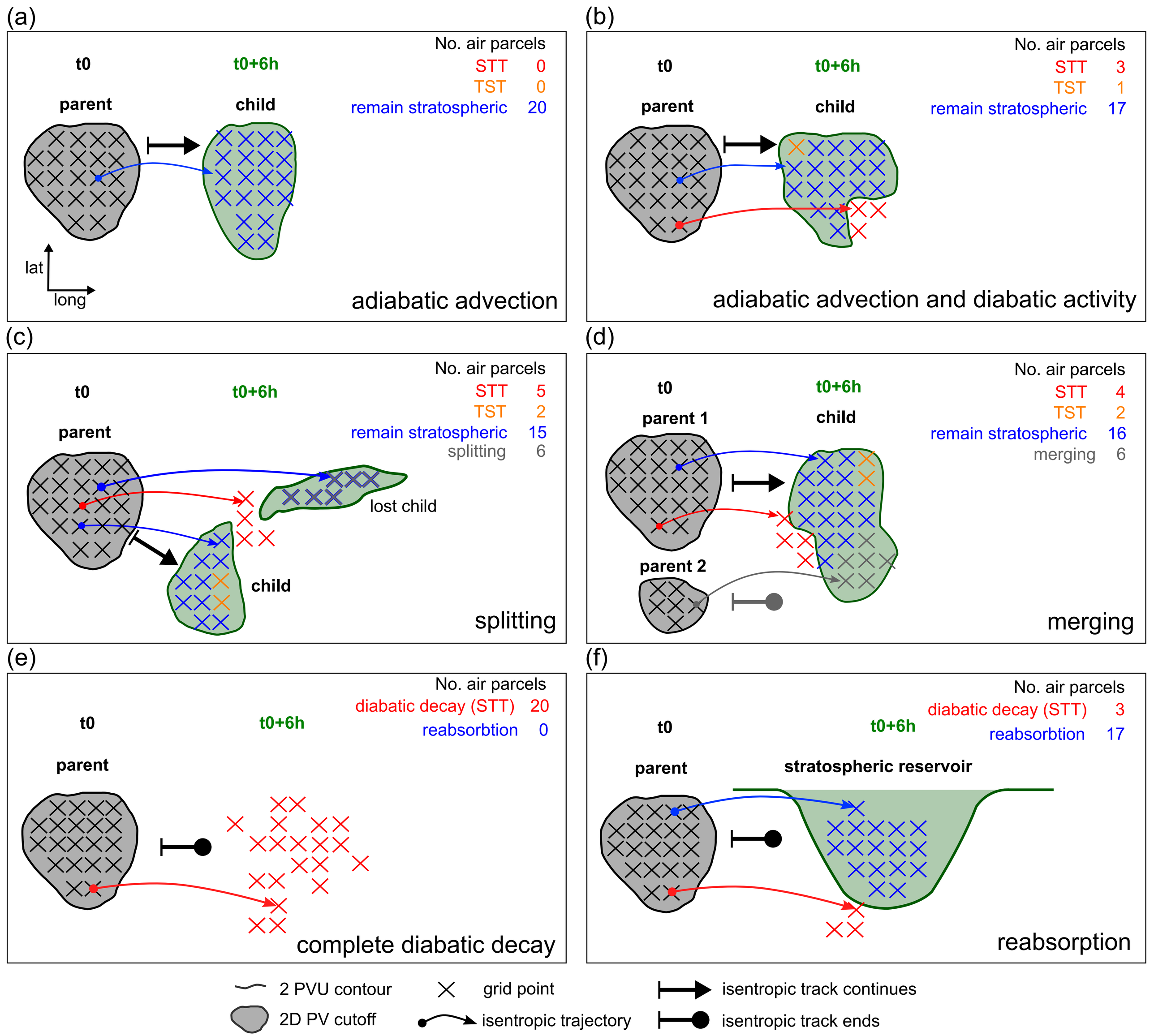
(a)
No. air parcels
STT 0
TST 0
remain stratospheric 20
t0
t0+6h
parent
child
lat
long
adiabatic advection
(b)
No. air parcels
STT 3
TST 1
remain stratospheric 17
t0
t0+6h
parent
child
adiabatic advection and diabatic activity
(c)
No. air parcels
STT 5
TST 2
remain stratospheric 15
splitting 6
t0
t0+6h
parent
lost child
child
splitting
(d)
No. air parcels
STT 4
TST 2
remain stratospheric 16
merging 6
t0
t0+6h
parent 1
child
parent 2
merging
(e)
No. air parcels
diabatic decay (STT) 20
reabsorbtion 0
t0
t0+6h
parent
complete diabatic decay
(f)
No. air parcels
diabatic decay (STT) 3
reabsorbtion 17
t0
t0+6h
parent
stratospheric reservoir
reabsorption
2 PVU contour
2D PV cutoff
grid point
isentropic trajectory
isentropic track continues
isentropic track ends