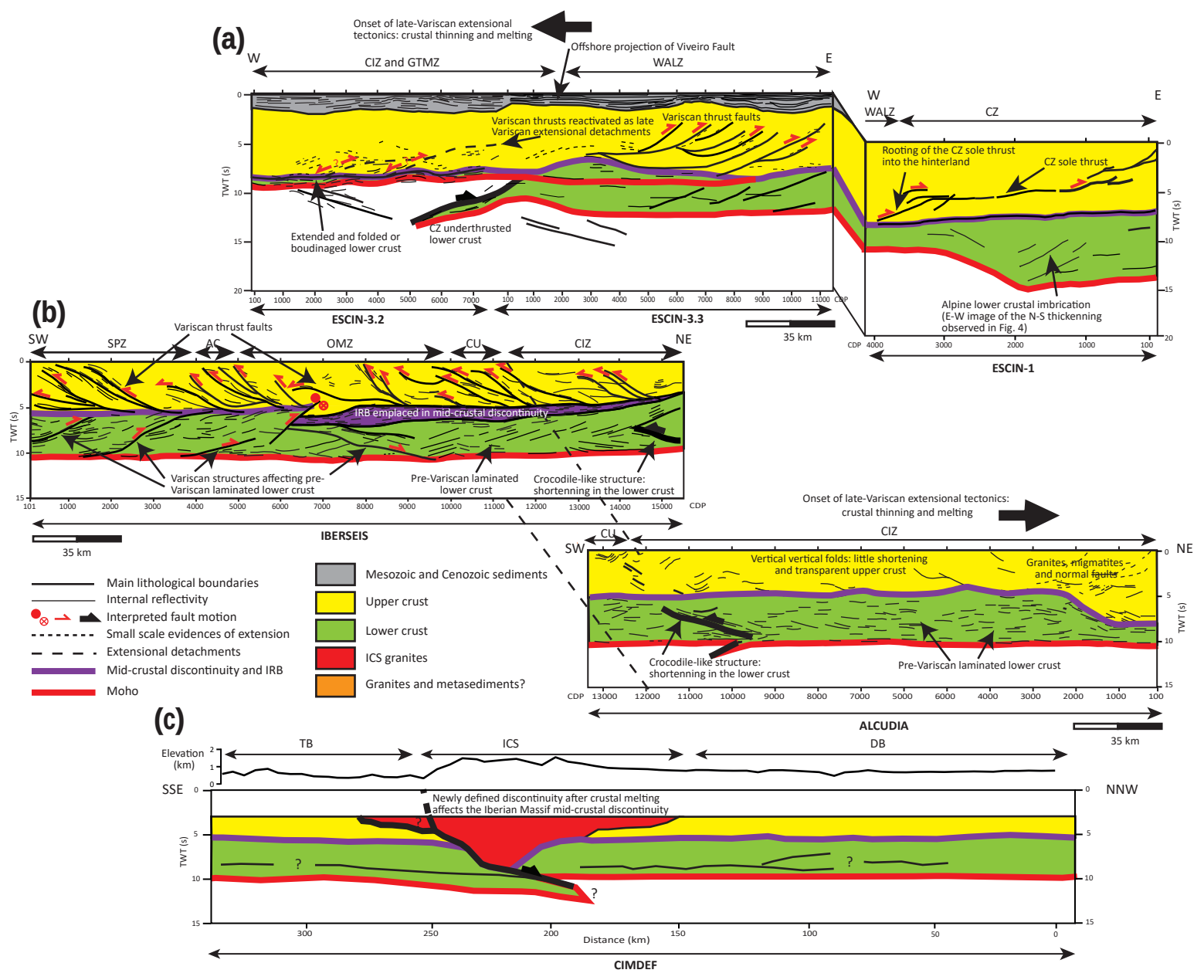
(a)
Onset of late-Variscan extensional tectonics: crustal thinning and melting
Offshore projection of Viveiro Fault
W
CIZ and GTMZ
WALZ
E
Variscan thrusts reactivated as late Variscan extensional detachments
Variscan thrust faults
Extended and folded or boudinaged lower crust
CZ underthrusted lower crust
TWT (s)
ESCIN-3.2
ESCIN-3.3
35 km
W
WALZ
CZ
E
Rooting of the CZ sole thrust into the hinterland
CZ sole thrust
Alpine lower crustal imbrication (E-W image of the N-S thickenning observed in Fig. 4)
CDP
ESCIN-1
(b)
SW
SPZ
AC
OMZ
CU
CIZ
NE
Variscan thrust faults
IRB emplaced in mid-crustal discontinuity
Variscan structures affecting pre-Variscan laminated lower crust
Pre-Variscan laminated lower crust
Crocodile-like structure: shortenning in the lower crust
IBERSEIS
35 km
Onset of late-Variscan extensional tectonics: crustal thinning and melting
CU
CIZ
SW
NE
Vertical vertical folds: little shortening and transparent upper crust
Granites, migmatites and normal faults
Crocodile-like structure: shortenning in the lower crust
Pre-Variscan laminated lower crust
ALCUDIA
35 km
Main lithological boundaries
Internal reflectivity
Interpreted fault motion
Small scale evidences of extension
Extensional detachments
Mid-crustal discontinuity and IRB
Moho
Mesozoic and Cenozoic sediments
Upper crust
Lower crust
ICS granites
Granites and metasediments?
(c)
Elevation (km)
TB
ICS
DB
SSE
NNW
Newly defined discontinuity after crustal melting affects the Iberian Massif mid-crustal discontinuity
Distance (km)
CIMDEF