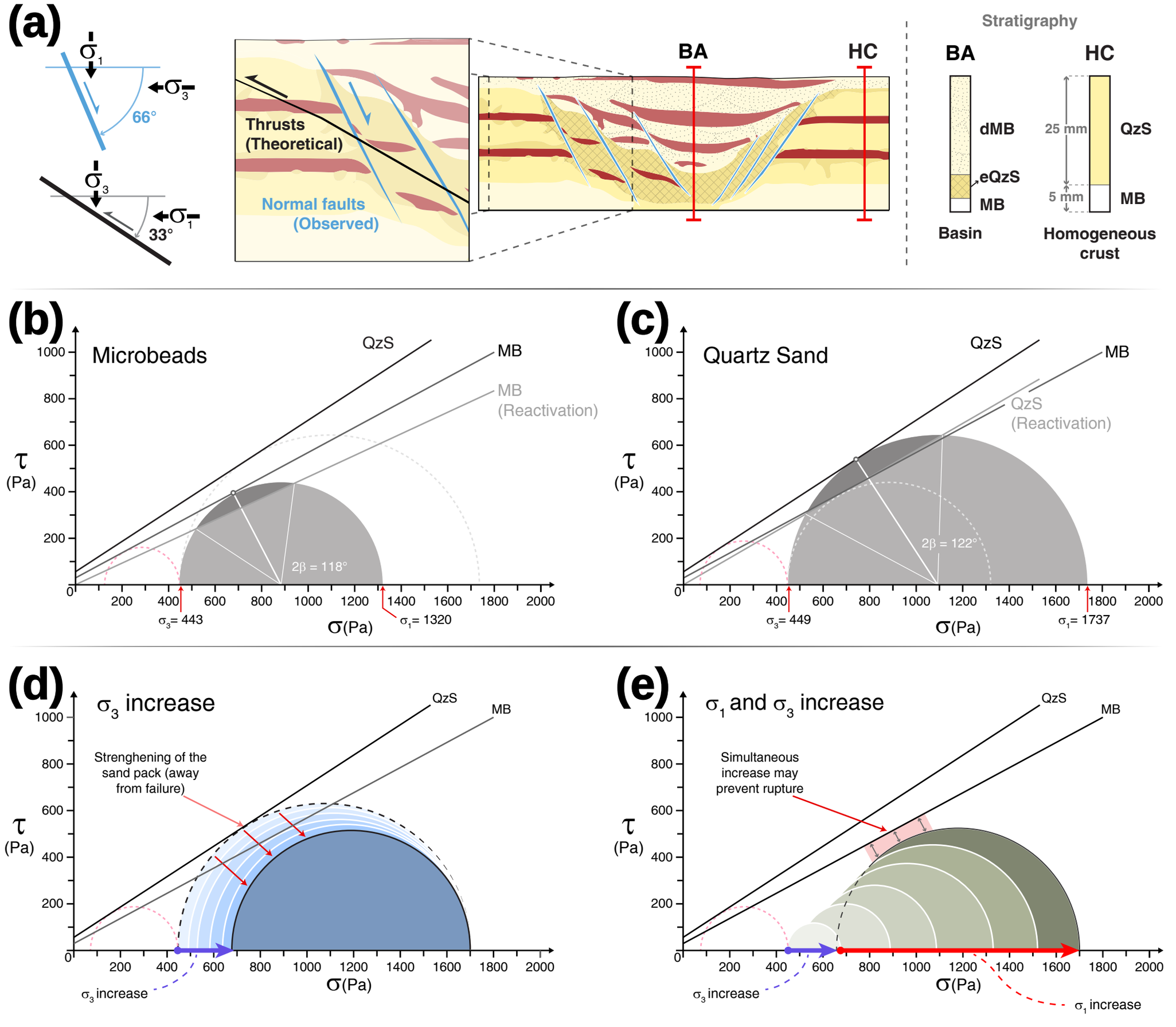
(a)
σ1
σ3
66°
σ3
σ1
33°
Thrusts
(Theoretical)
Normal faults
(Observed)
BA
HC
Stratigraphy
BA
dMB
eQzS
MB
Basin
HC
25 mm
QzS
5 mm
MB
Homogeneous
crust
(b)
Microbeads
QzS
MB
MB
(Reactivation)
τ
(Pa)
2β = 118°
σ3= 443
σ1= 1320
σ(Pa)
(c)
Quartz Sand
QzS
MB
QzS
(Reactivation)
τ
(Pa)
2β = 122°
σ3= 449
σ1= 1737
σ(Pa)
(d)
σ3 increase
QzS
MB
Strenghening of the
sand pack (away
from failure)
τ
(Pa)
σ3 increase
σ(Pa)
(e)
σ1 and σ3 increase
QzS
MB
Simultaneous
increase may
prevent rupture
τ
(Pa)
σ3 increase
σ1 increase
σ(Pa)