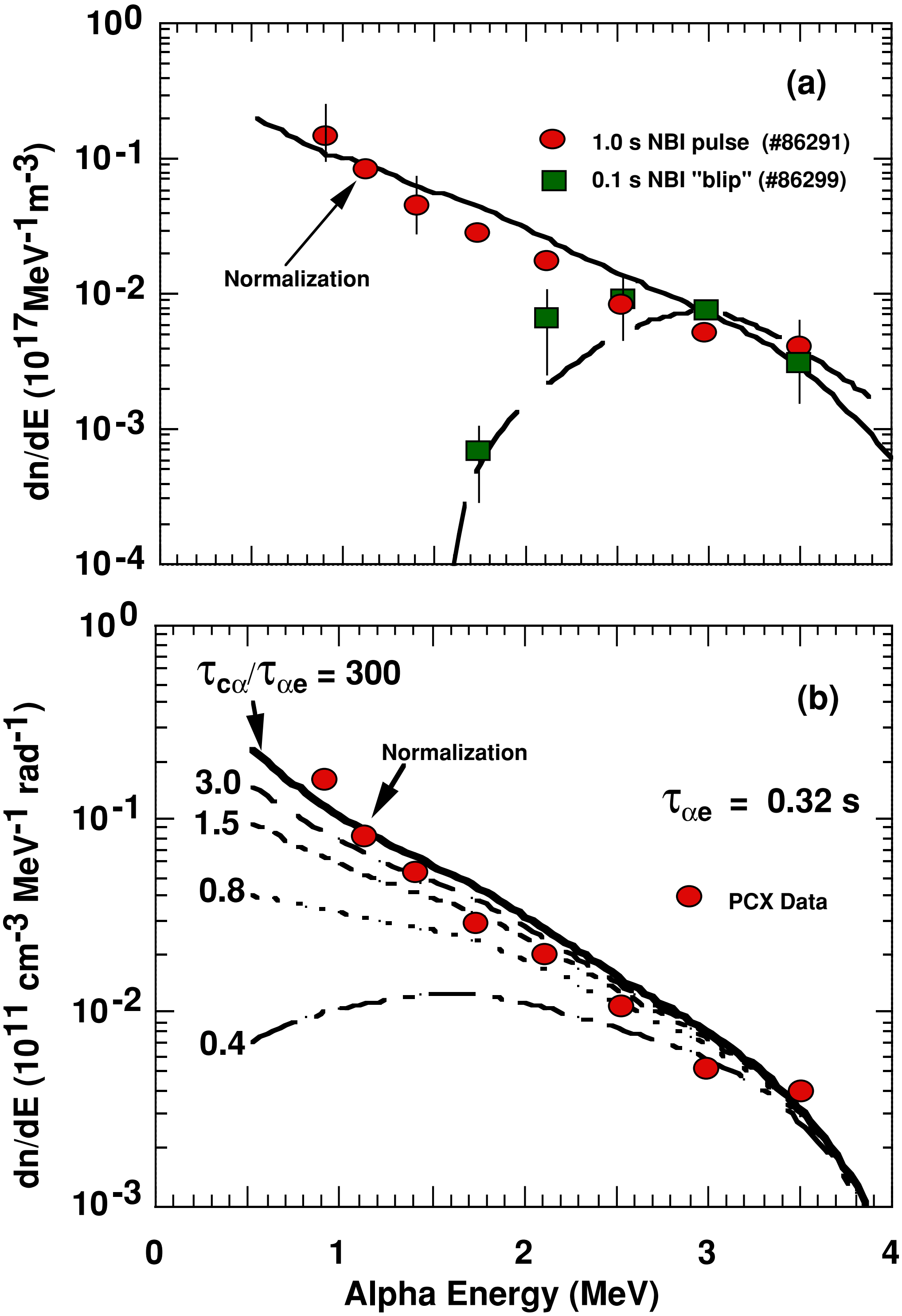
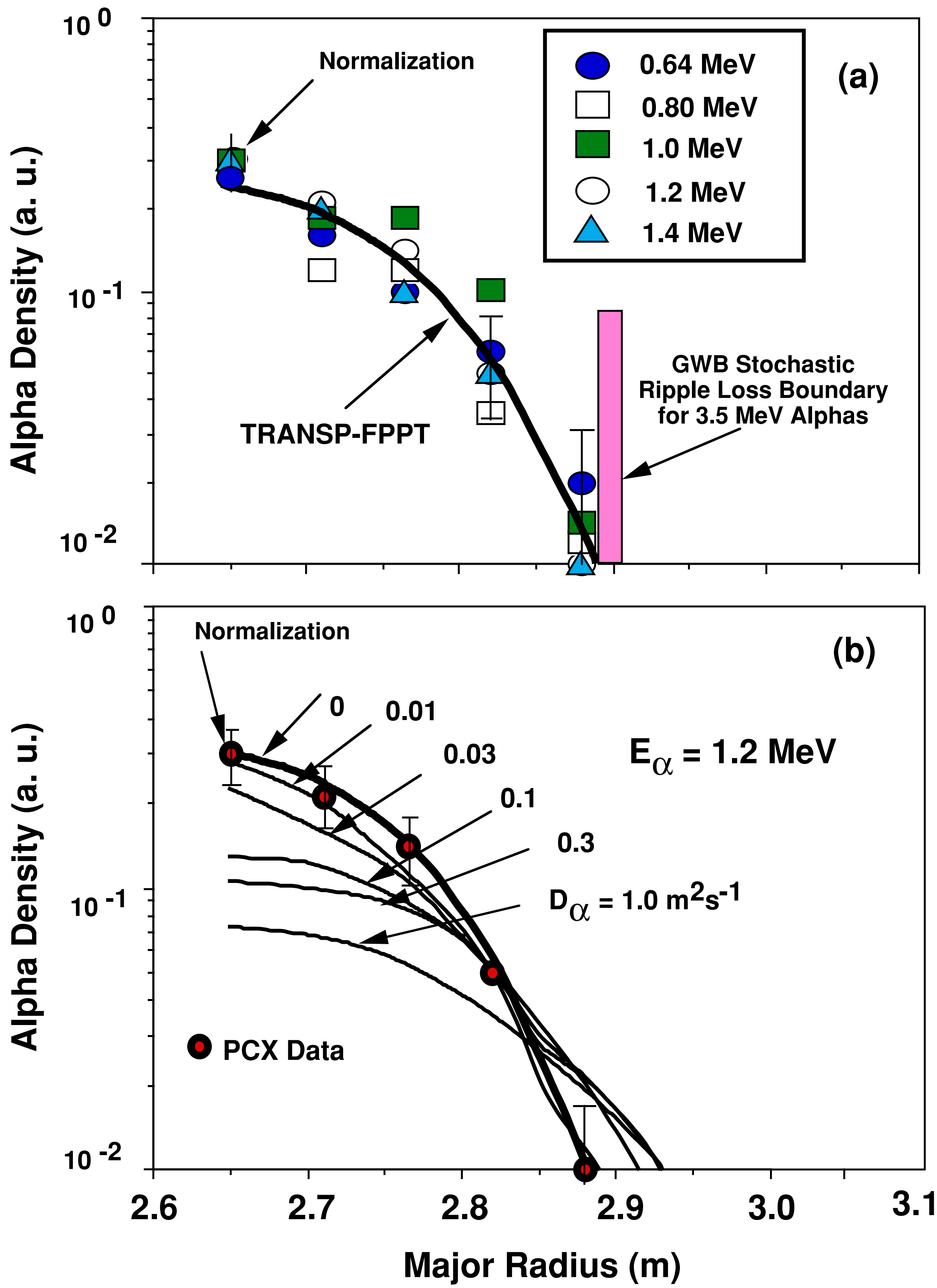


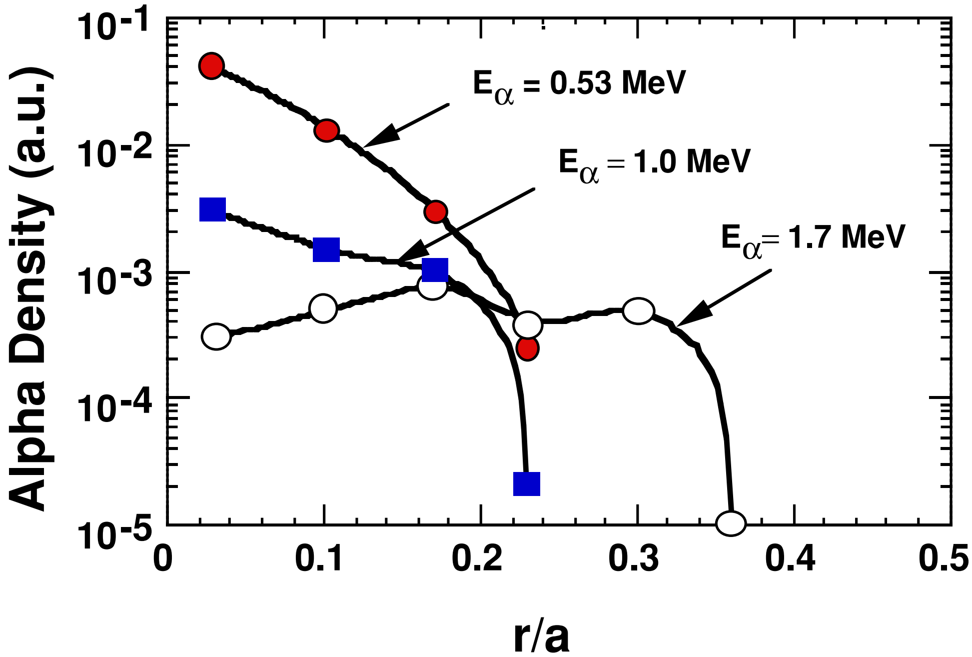
(a)
1.0 s NBI pulse (#86291)
0.1 s NBI "blip" (#86299)
Normalization
dn/dE (10^{17}MeV^{-1}m^{-3})
10^0
10^{-1}
10^{-2}
10^{-3}
10^{-4}
(b)
$\tau_{c\alpha}/\tau_{\alpha e}$ = 300
Normalization
3.0
1.5
0.8
0.4
$\tau_{\alpha e}$ = 0.32 s
PCX Data
dn/dE (10^{11} cm^{-3} MeV^{-1} rad^{-1})
10^0
10^{-1}
10^{-2}
10^{-3}
0
1
2
3
4
Alpha Energy (MeV)

Fig. 15



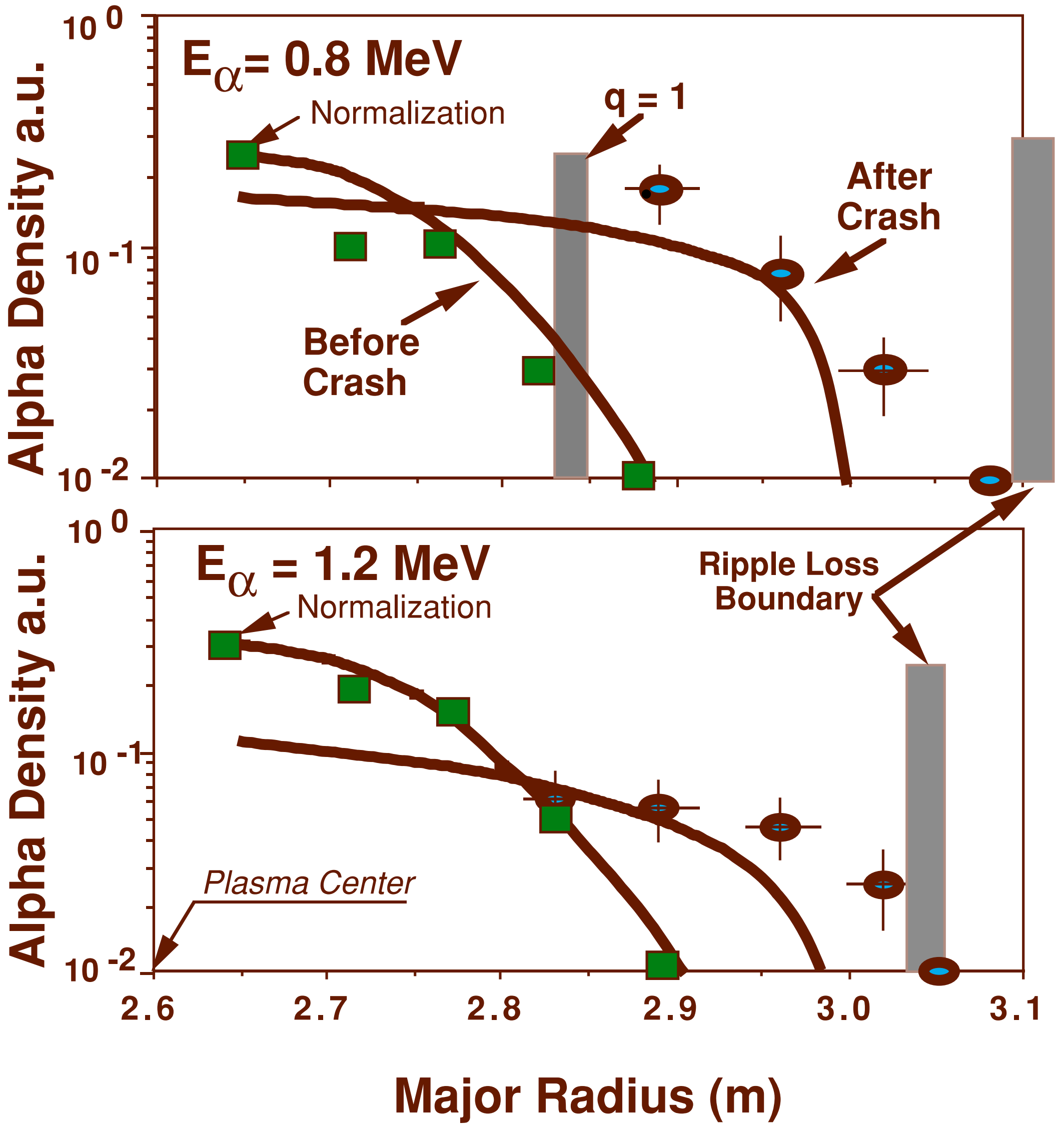
Normalization
0.64 MeV
0.80 MeV
1.0 MeV
1.2 MeV
1.4 MeV
(a)
TRANSP-FPPT
GWB Stochastic
Ripple Loss Boundary
for 3.5 MeV Alphas
Alpha Density (a. u.)
Normalization
(b)
0
0.01
0.03
0.1
0.3
$D_\alpha = 1.0\ m^2s^{-1}$
$E_\alpha = 1.2$ MeV
PCX Data
Alpha Density (a. u.)
Major Radius (m)

Fig. 16



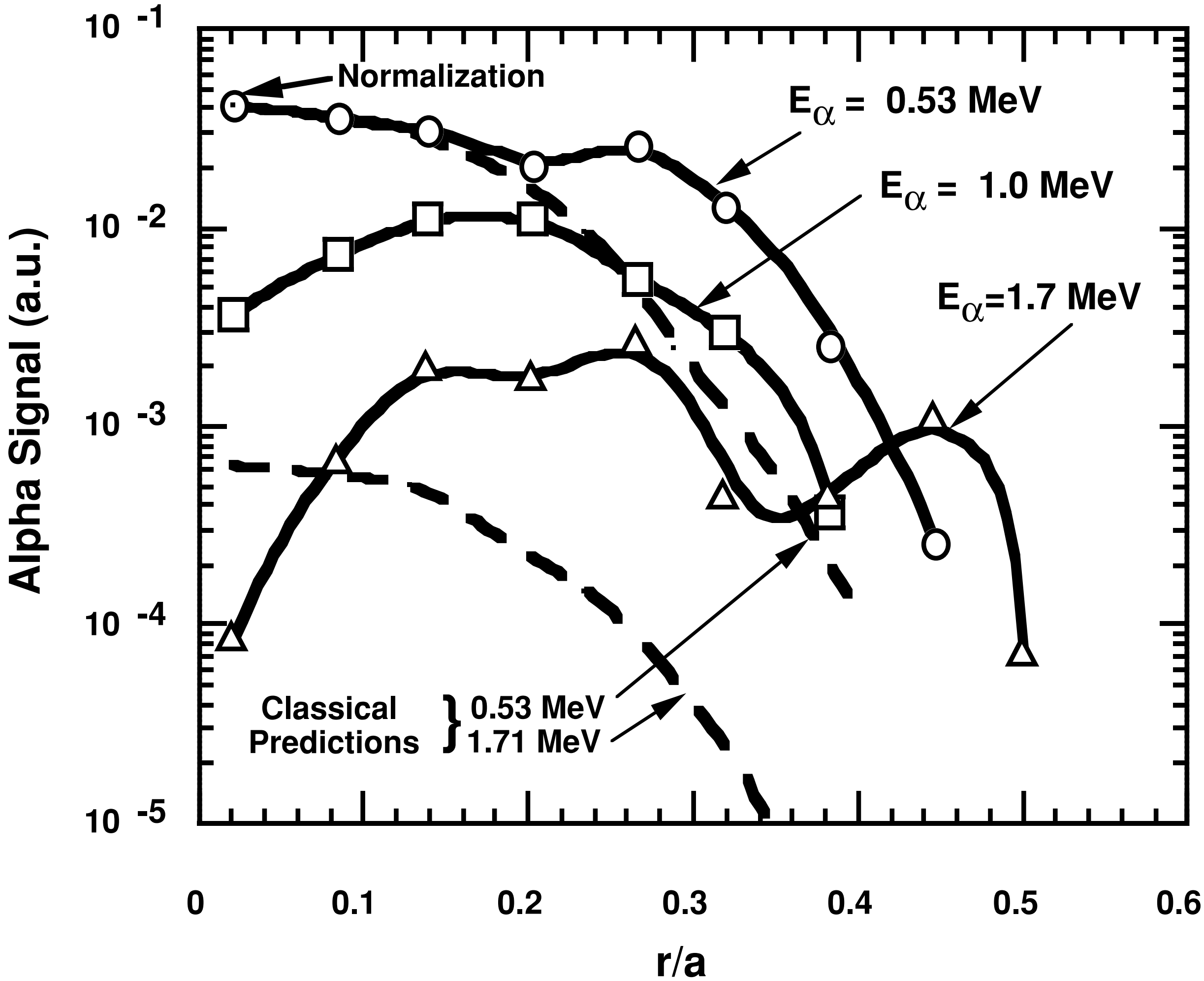
Alpha Density (a.u.)
10-1
10-2
10-3
10-4
10-5
0
0.1
0.2
0.3
0.4
0.5
r/a
E_α = 0.53 MeV
E_α = 1.0 MeV
E_α= 1.7 MeV

Fig. 17



E_α= 0.8 MeV
Normalization
q = 1
After Crash
Before Crash
E_α = 1.2 MeV
Normalization
Ripple Loss Boundary
Plasma Center
Alpha Density a.u.
Alpha Density a.u.
10^{0}
10^{-1}
10^{-2}
10^{0}
10^{-1}
10^{-2}
2.6
2.7
2.8
2.9
3.0
3.1
Major Radius (m)

Fig. 18



Normalization
Eα = 0.53 MeV
Eα = 1.0 MeV
Eα=1.7 MeV
Classical Predictions
0.53 MeV
1.71 MeV
Alpha Signal (a.u.)
r/a
10 -1
10 -2
10 -3
10 -4
10 -5
0
0.1
0.2
0.3
0.4
0.5
0.6

Fig. 19