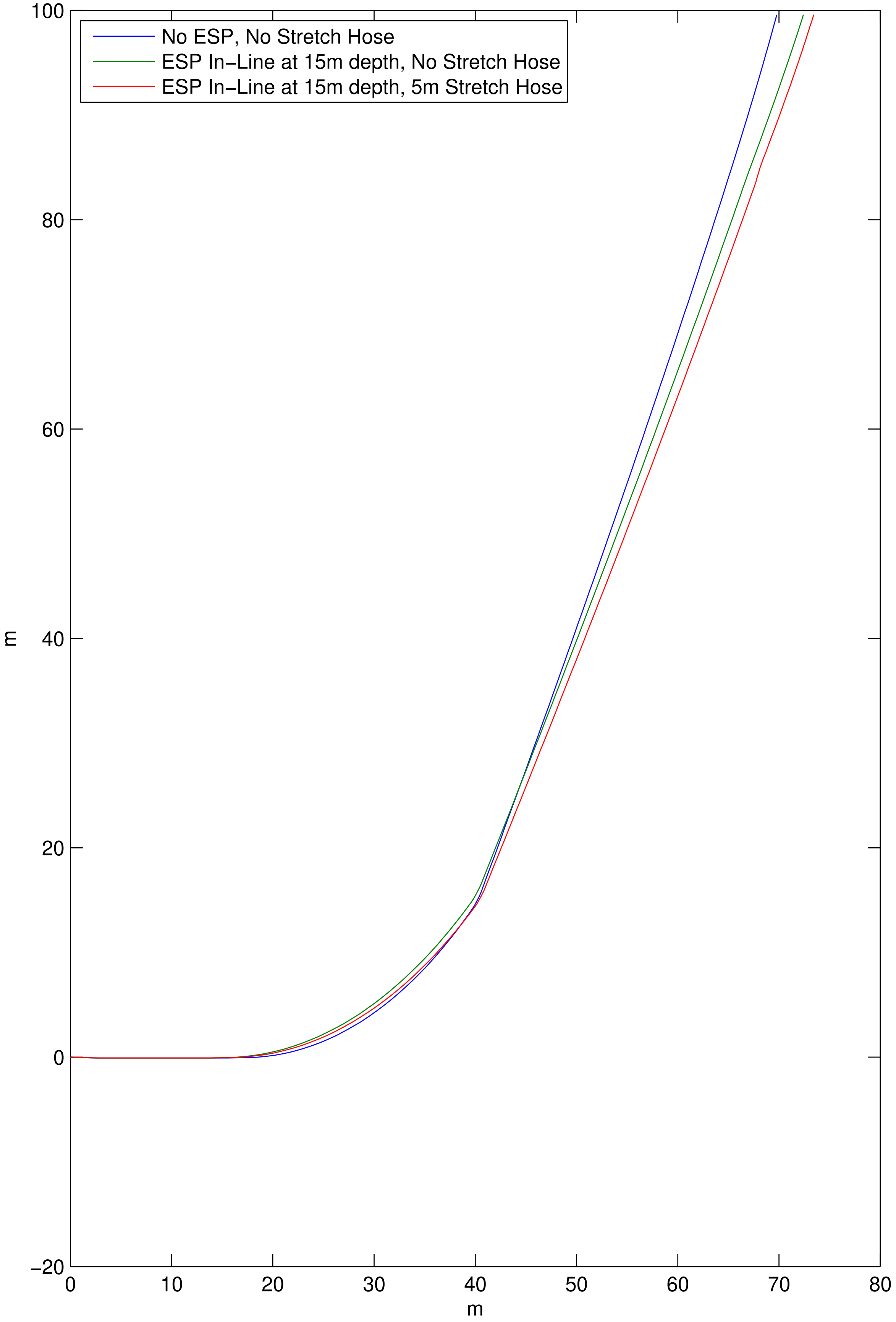
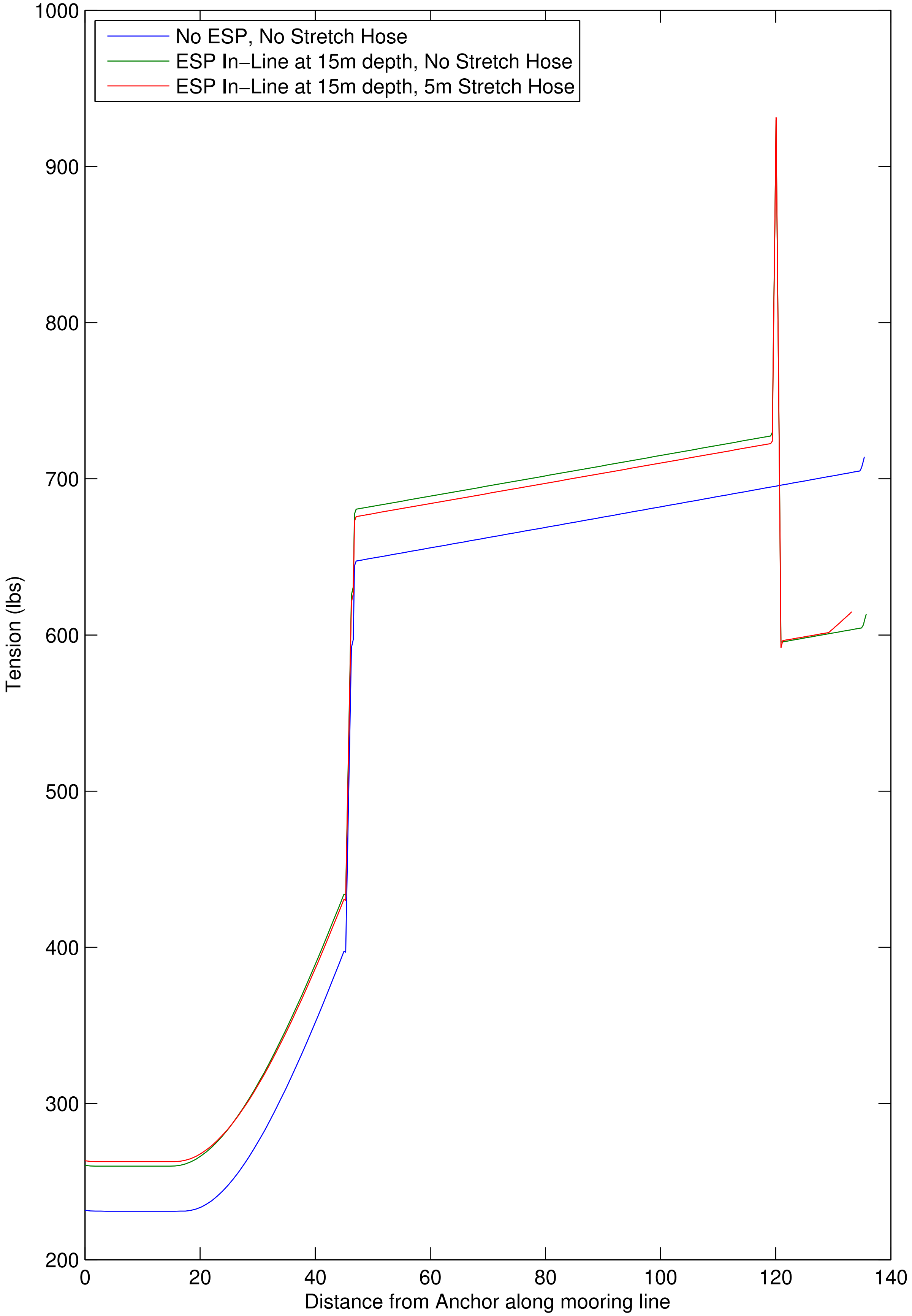
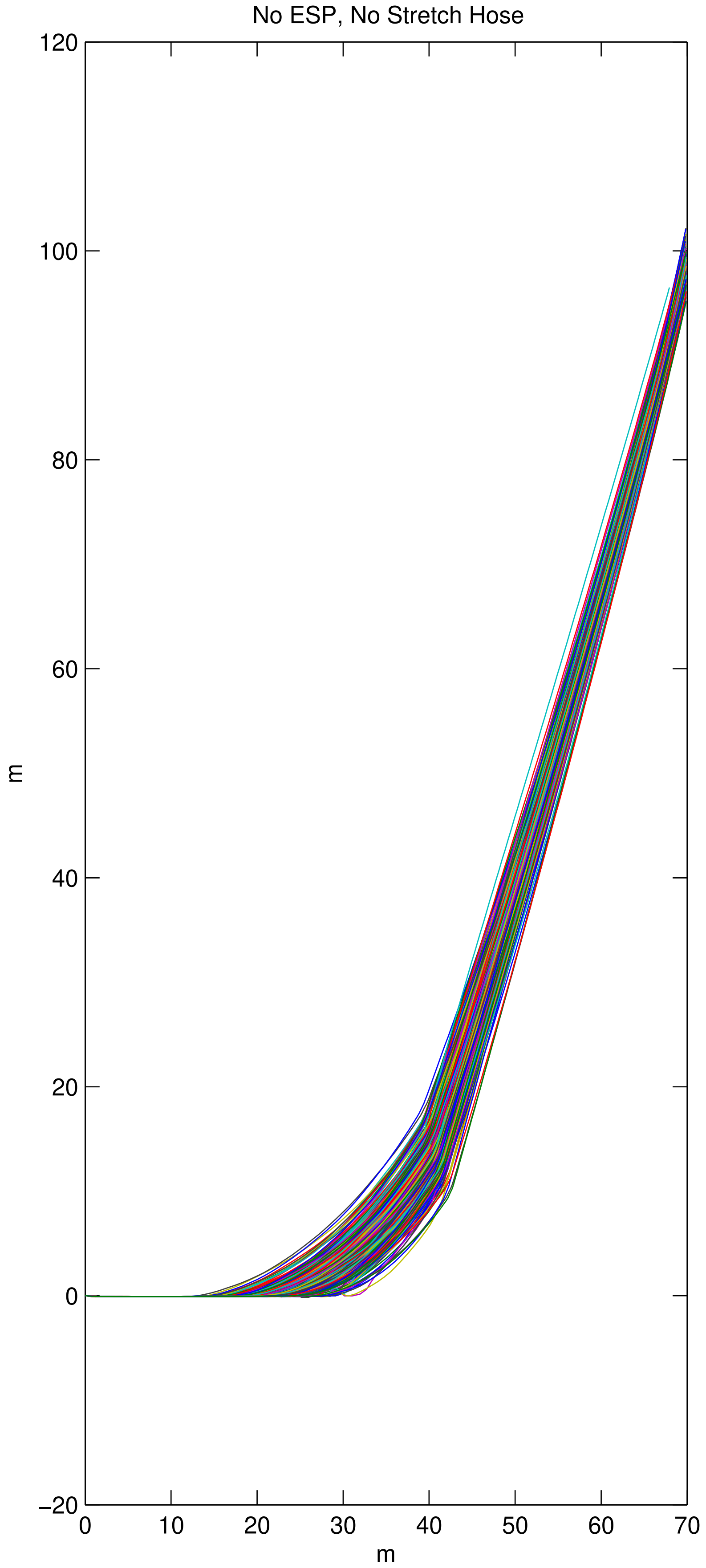
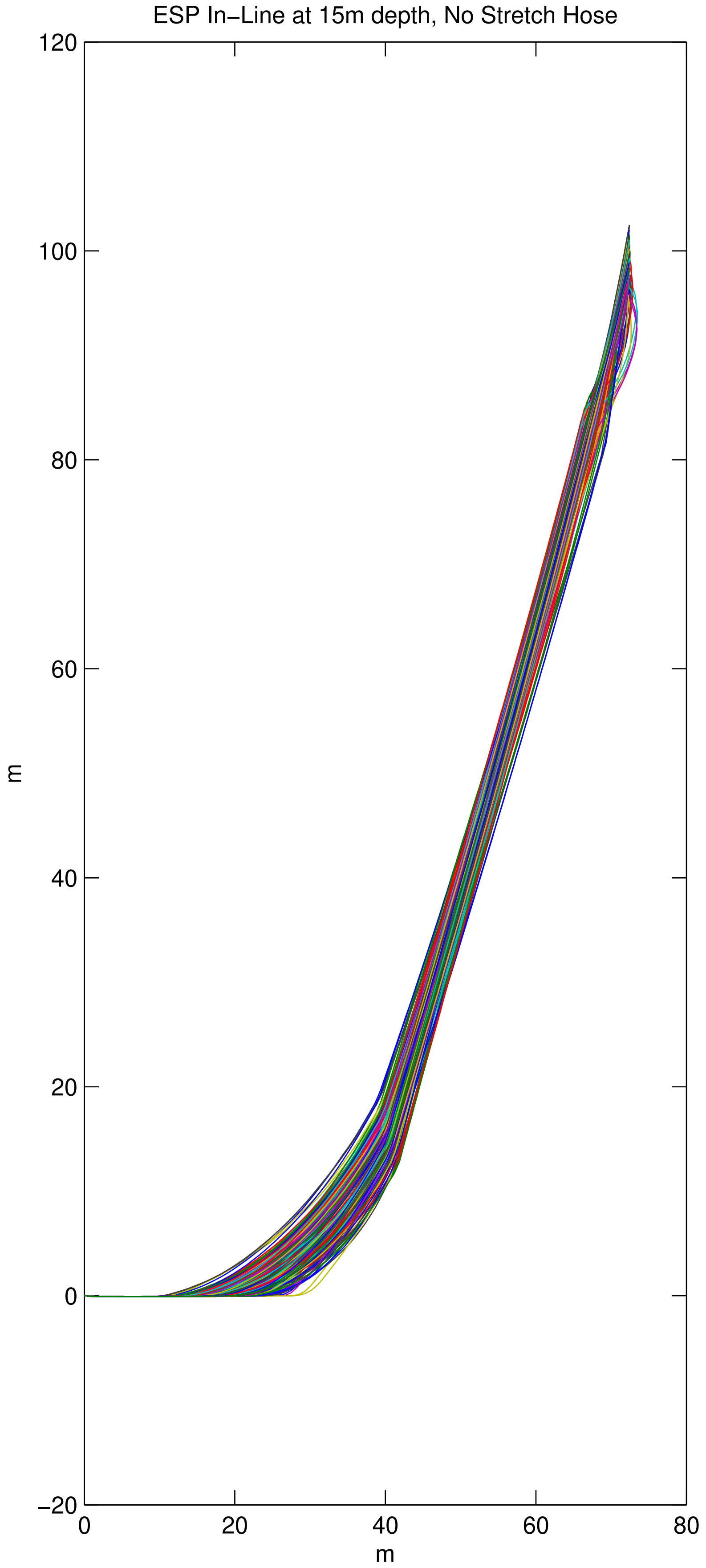
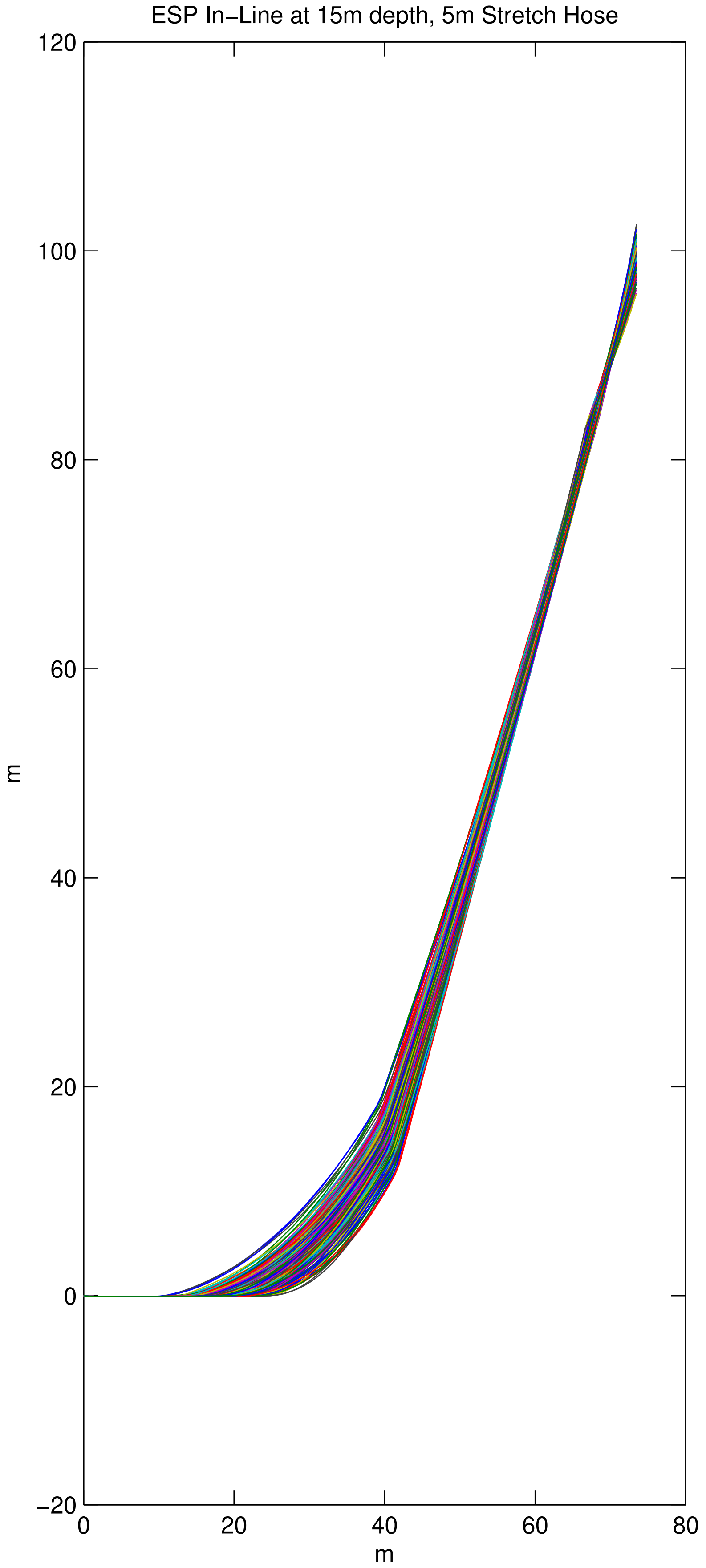
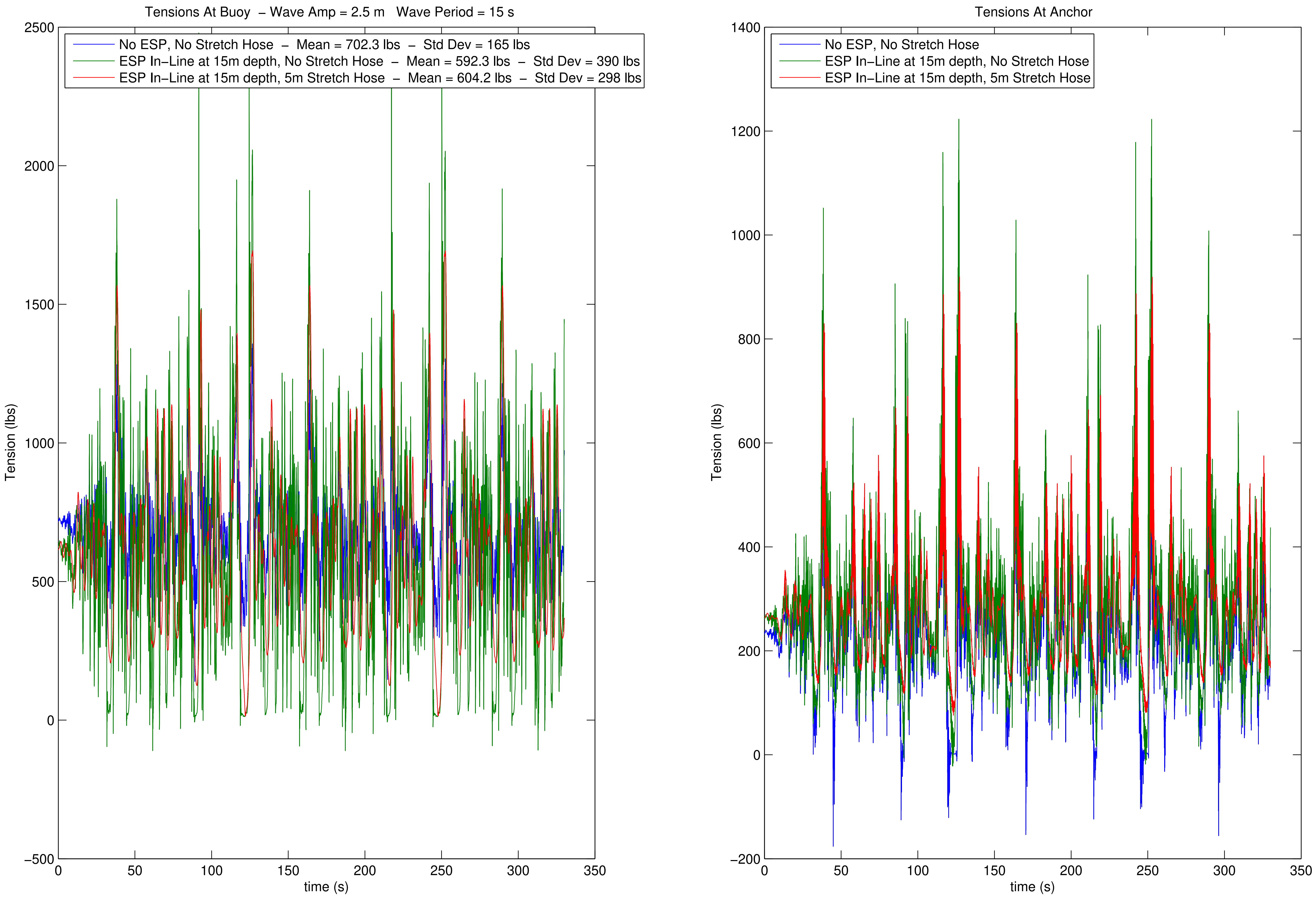

No ESP, No Stretch Hose
ESP In–Line at 15m depth, No Stretch Hose
ESP In–Line at 15m depth, 5m Stretch Hose
m
100
80
60
40
20
0
−20
0
10
20
30
40
50
60
70
80
m

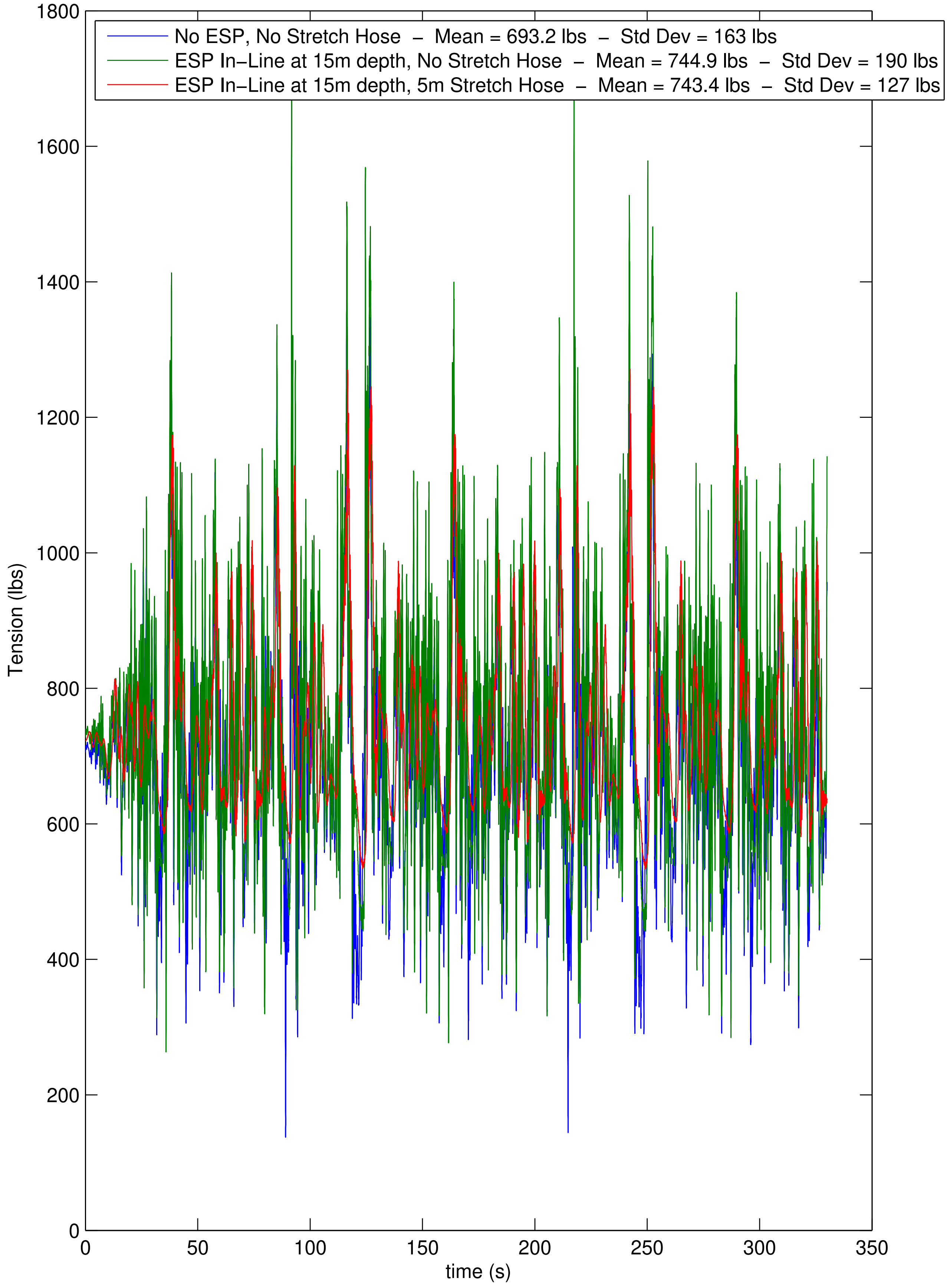

No ESP, No Stretch Hose
ESP In–Line at 15m depth, No Stretch Hose
ESP In–Line at 15m depth, 5m Stretch Hose
Tension (lbs)
1000
900
800
700
600
500
400
300
200
0
20
40
60
80
100
120
140
Distance from Anchor along mooring line


No ESP, No Stretch Hose
120
100
80
60
40
20
0
−20
m
0
10
20
30
40
50
60
70
m

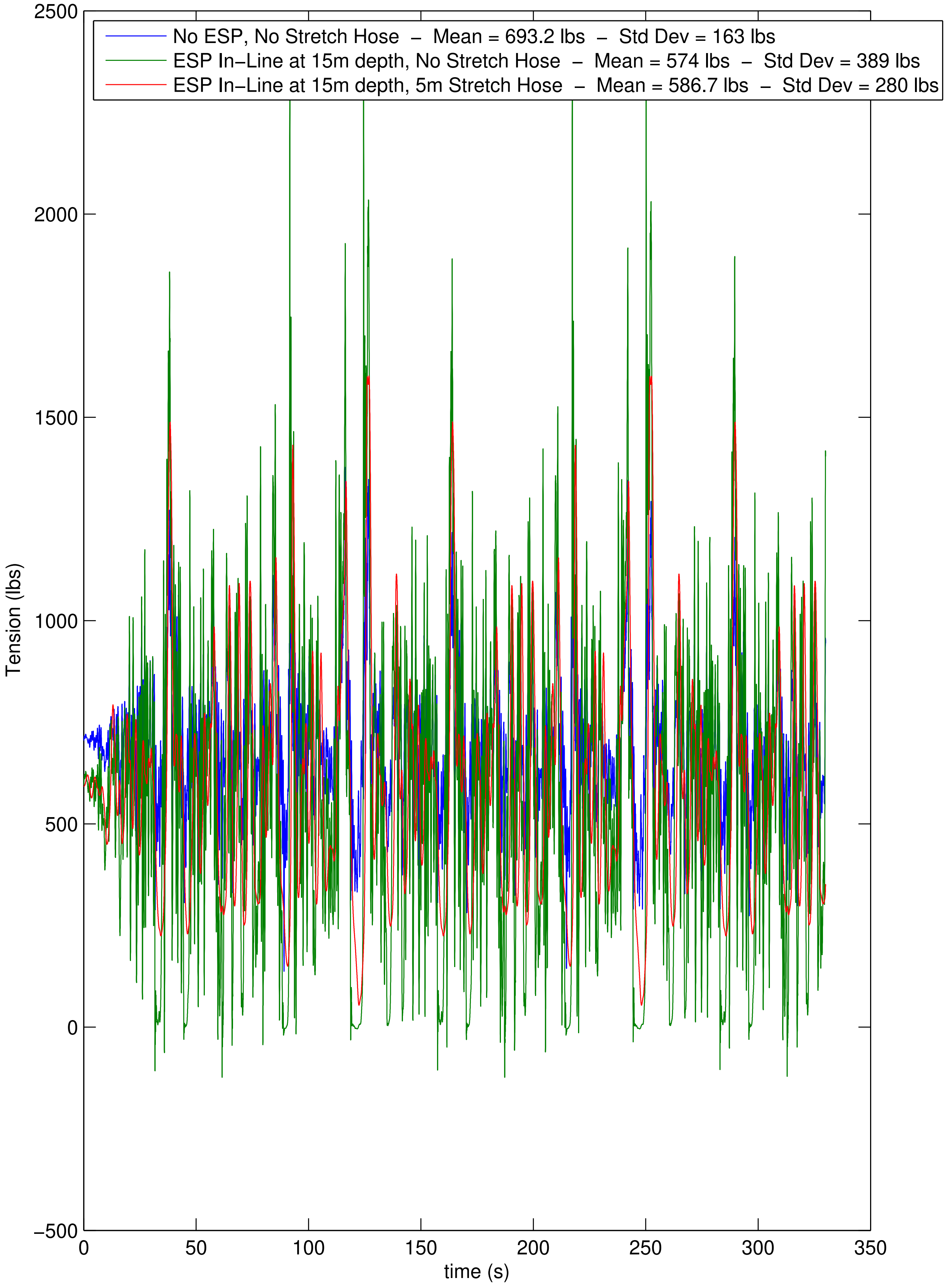

ESP In−Line at 15m depth, No Stretch Hose
120
100
80
60
40
20
0
−20
m
0
20
40
60
80
m


ESP In−Line at 15m depth, 5m Stretch Hose
120
100
80
60
40
20
0
−20
m
0
20
40
60
80
m

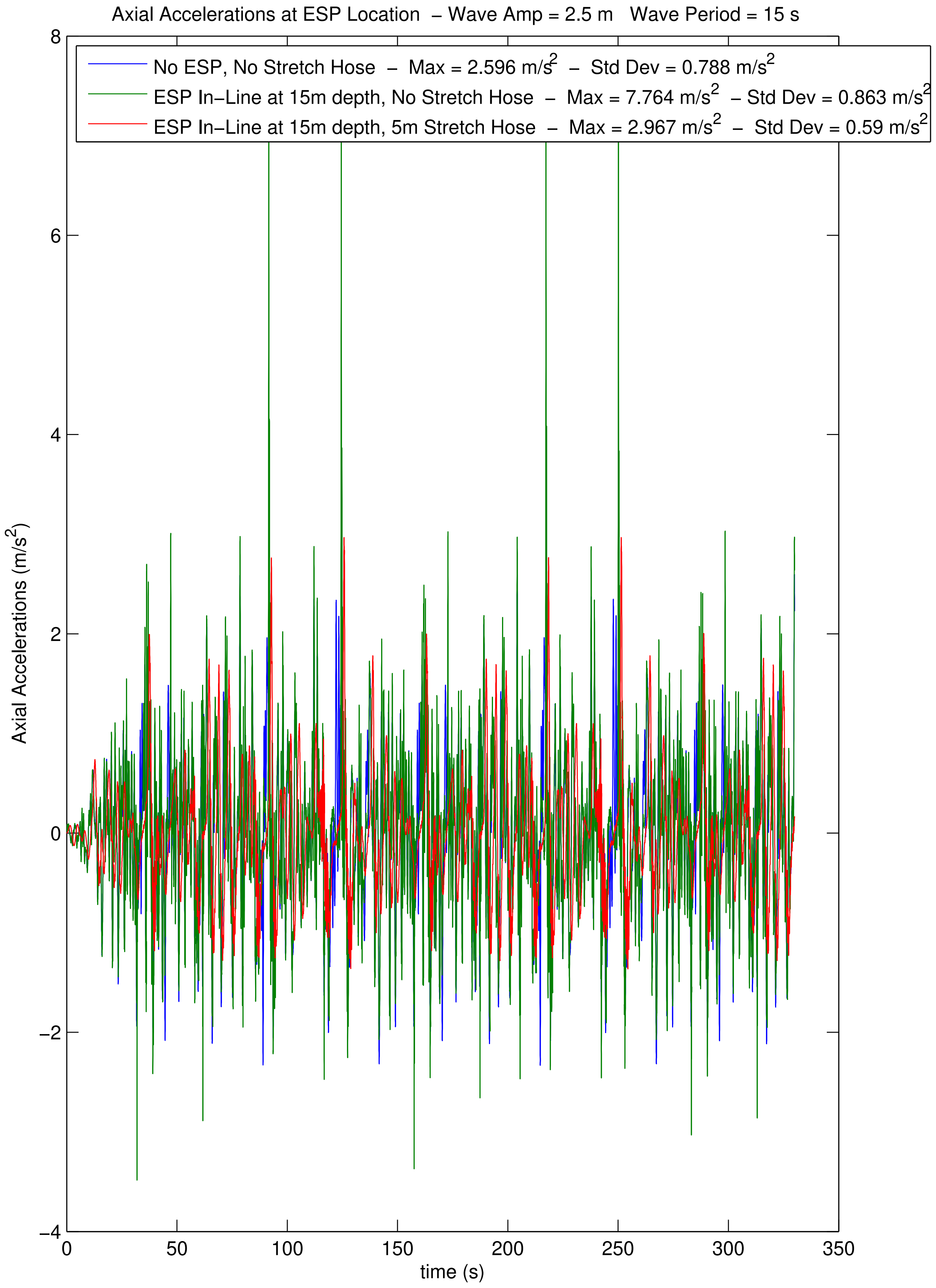

Tensions At Buoy – Wave Amp = 2.5 m Wave Period = 15 s
No ESP, No Stretch Hose – Mean = 702.3 lbs – Std Dev = 165 lbs
ESP In–Line at 15m depth, No Stretch Hose – Mean = 592.3 lbs – Std Dev = 390 lbs
ESP In–Line at 15m depth, 5m Stretch Hose – Mean = 604.2 lbs – Std Dev = 298 lbs
Tension (lbs)
2500
2000
1500
1000
500
0
–500
0
50
100
150
200
250
300
350
time (s)
Tensions At Anchor
No ESP, No Stretch Hose
ESP In–Line at 15m depth, No Stretch Hose
ESP In–Line at 15m depth, 5m Stretch Hose
Tension (lbs)
1400
1200
1000
800
600
400
200
0
–200
0
50
100
150
200
250
300
350
time (s)

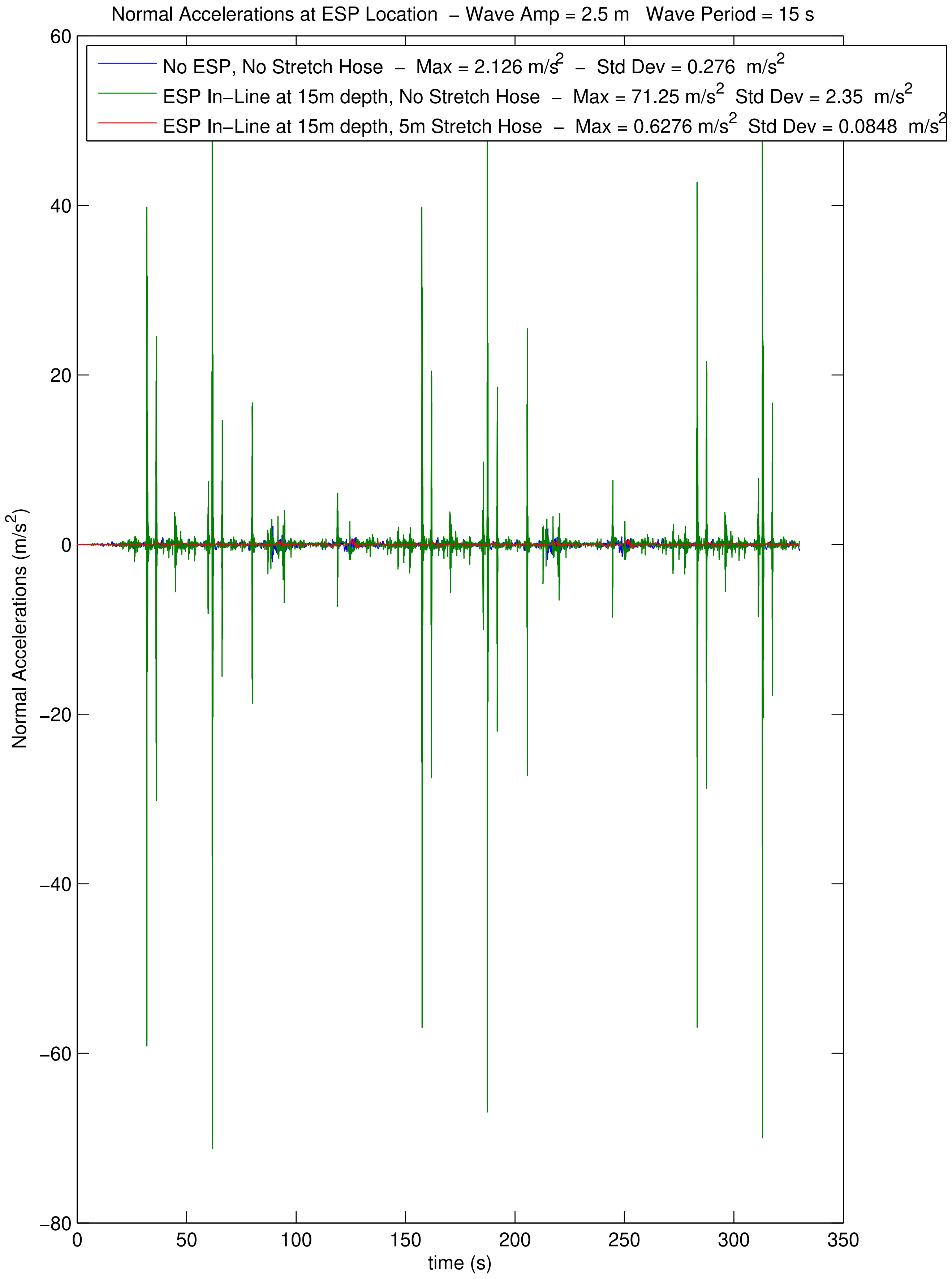


Tensions Below ESP Location – Wave Amp = 2.5 m Wave Period = 15 s



Tensions Above ESP Location – Wave Amp = 2.5 m Wave Period = 15 s


Axial Accelerations at ESP Location – Wave Amp = 2.5 m Wave Period = 15 s
No ESP, No Stretch Hose – Max = 2.596 m/s^2 – Std Dev = 0.788 m/s^2
ESP In–Line at 15m depth, No Stretch Hose – Max = 7.764 m/s^2 – Std Dev = 0.863 m/s^2
ESP In–Line at 15m depth, 5m Stretch Hose – Max = 2.967 m/s^2 – Std Dev = 0.59 m/s^2
Axial Accelerations (m/s^2)
8
6
4
2
0
−2
−4
0
50
100
150
200
250
300
350
time (s)


Normal Accelerations at ESP Location – Wave Amp = 2.5 m Wave Period = 15 s
No ESP, No Stretch Hose – Max = 2.126 m/s^2 – Std Dev = 0.276 m/s^2
ESP In–Line at 15m depth, No Stretch Hose – Max = 71.25 m/s^2 Std Dev = 2.35 m/s^2
ESP In–Line at 15m depth, 5m Stretch Hose – Max = 0.6276 m/s^2 Std Dev = 0.0848 m/s^2
Normal Accelerations (m/s^2)
60
40
20
0
−20
−40
−60
−80
0
50
100
150
200
250
300
350
time (s)