Latest Data for Parachute Sizing

Vehicle Total Launch Mass

13.7780

Apogee time, sec

19.652

Drogue Deployment Altitude
MSL: 1757.77 meters

Final Vehicle Mass, kg

11.5906

Drogue Deploy Altitude, AGL

1517.77

Launch Altitude, km

0.24

CO2 Propellant Margin, %

37.1485

Drogue Deploy Velocity, m/sec

46.6297

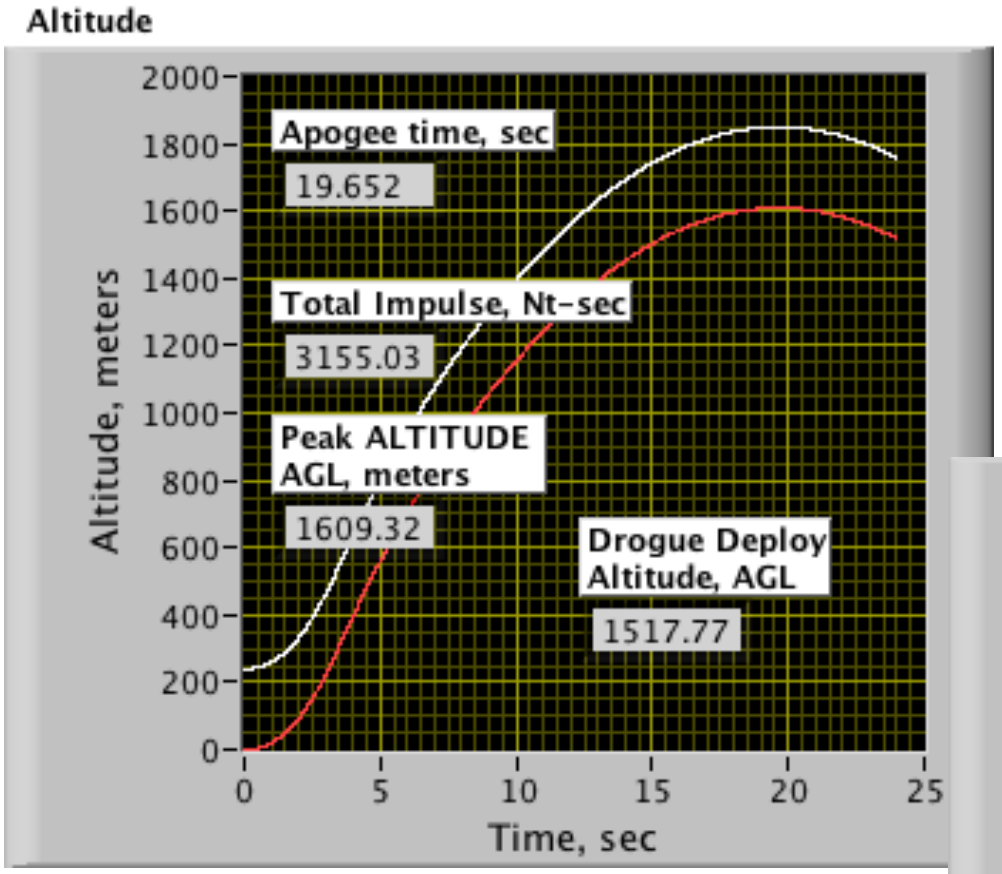
Drogue Deploy Qbar, kPa

1.12112

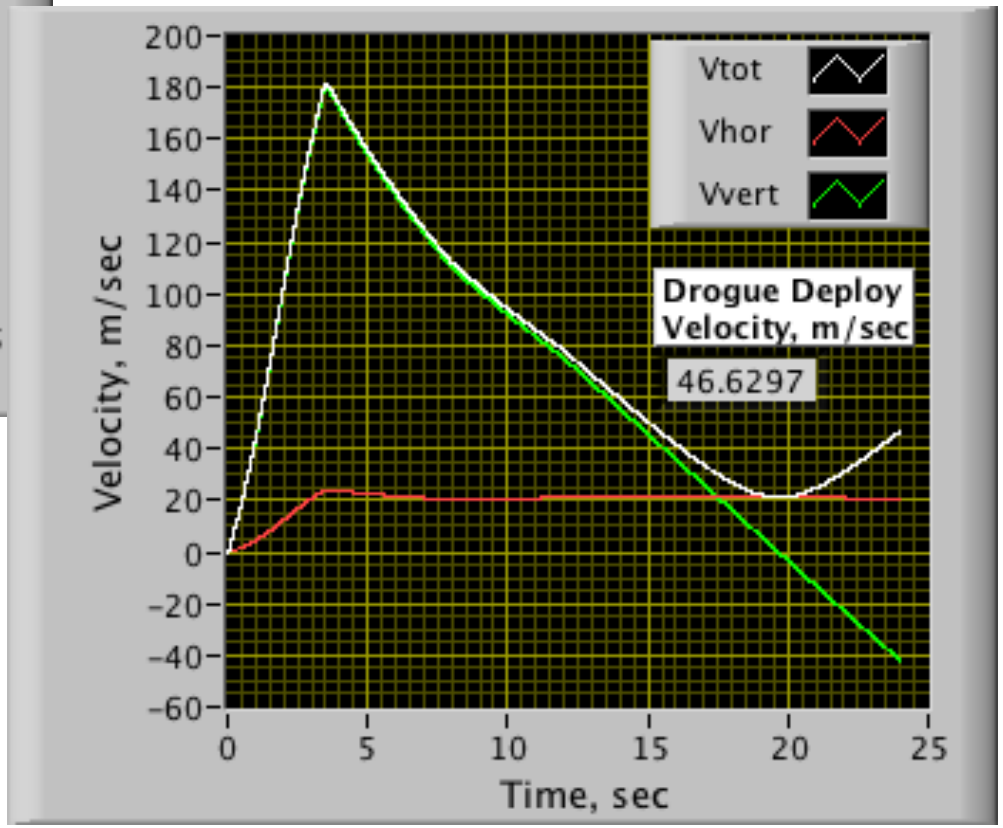
Motor Name

CTI 2946-L820-SK-P

Latest Data for Parachute Sizing



Drogue deploy 4 seconds after apogee



Drogue Deployment Calculations I

Desired Terminal Velocity, m/sec

21.336

Opening Trajectory Data

Deployment Velocity m/sec

46.6297

Deployment Altitude (AGL), meters

1517.77

Launch altitude, (MSL) meters

240

Vehicle Drag /mass data

Vehicle CD

0.35

Vehicle Aref, m^2

0.015328

Mass, kg

11.768

Chute

Drogue

Parachute Inflation Parameters

Parachute CD

0.8

Parachute Inflation Constant, n

4

Parachute Inflation Exponent

0.85

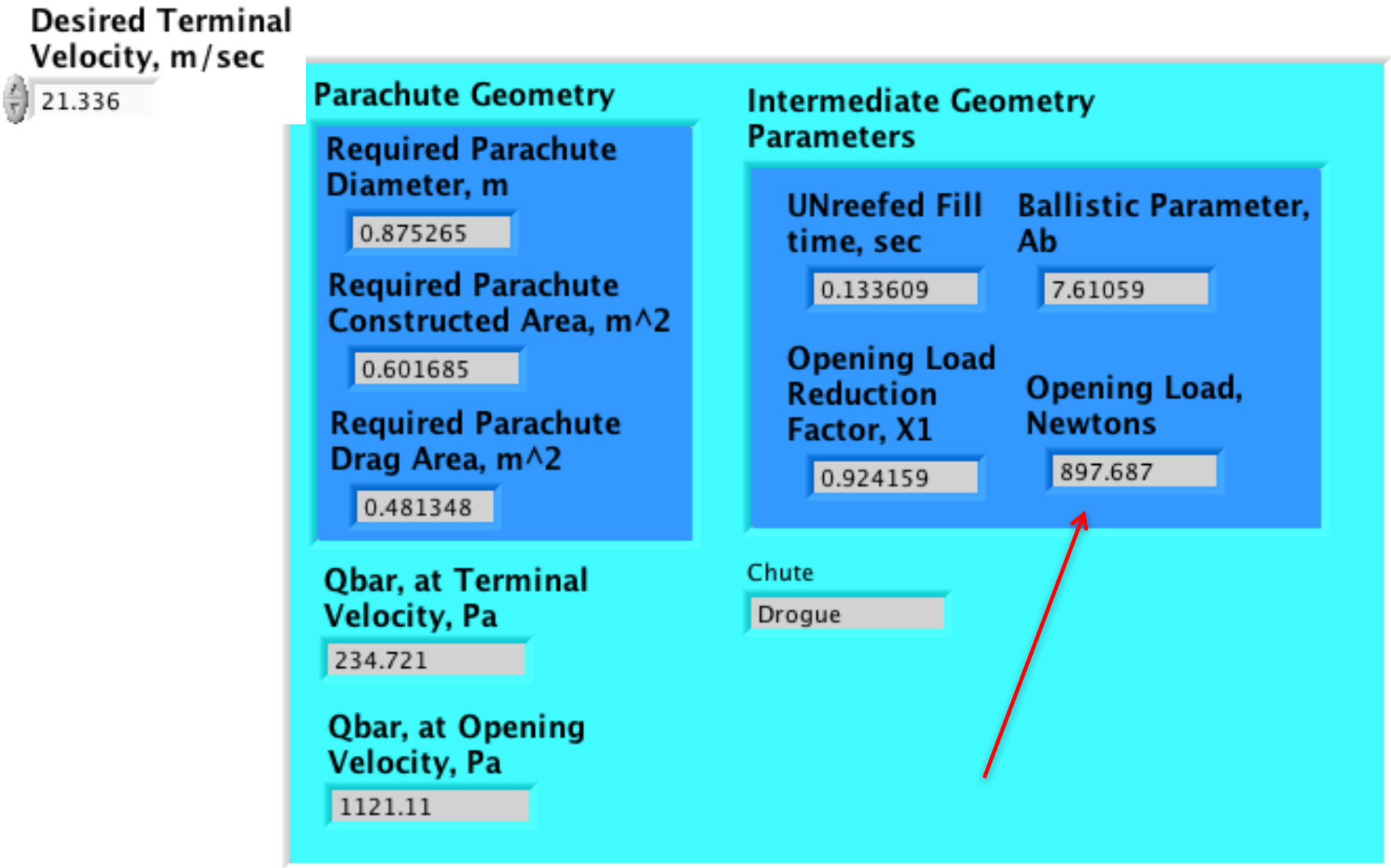
Fill Time Shape exponent

2

Opening Load Shock factor

1.8

Drogue Deployment Calculations I



Main Deployment Calculations I

Desired Terminal Velocity, m/sec

5.182

Opening Trajectory Data

Deployment Velocity m/sec

18.9228

Deployment Altitude (AGL), meters

300

Launch altitude, (MSL) meters

240

Vehicle Drag /mass data

Vehicle CD

0.35

Vehicle Aref, m^2

0.015328

Mass, kg

11.768

Chute

Main

Parachute Inflation Parameters

Parachute CD

0.8

Parachute Inflation Constant, n

4

Parachute Inflation Exponent

0.85

Fill Time Shape exponent

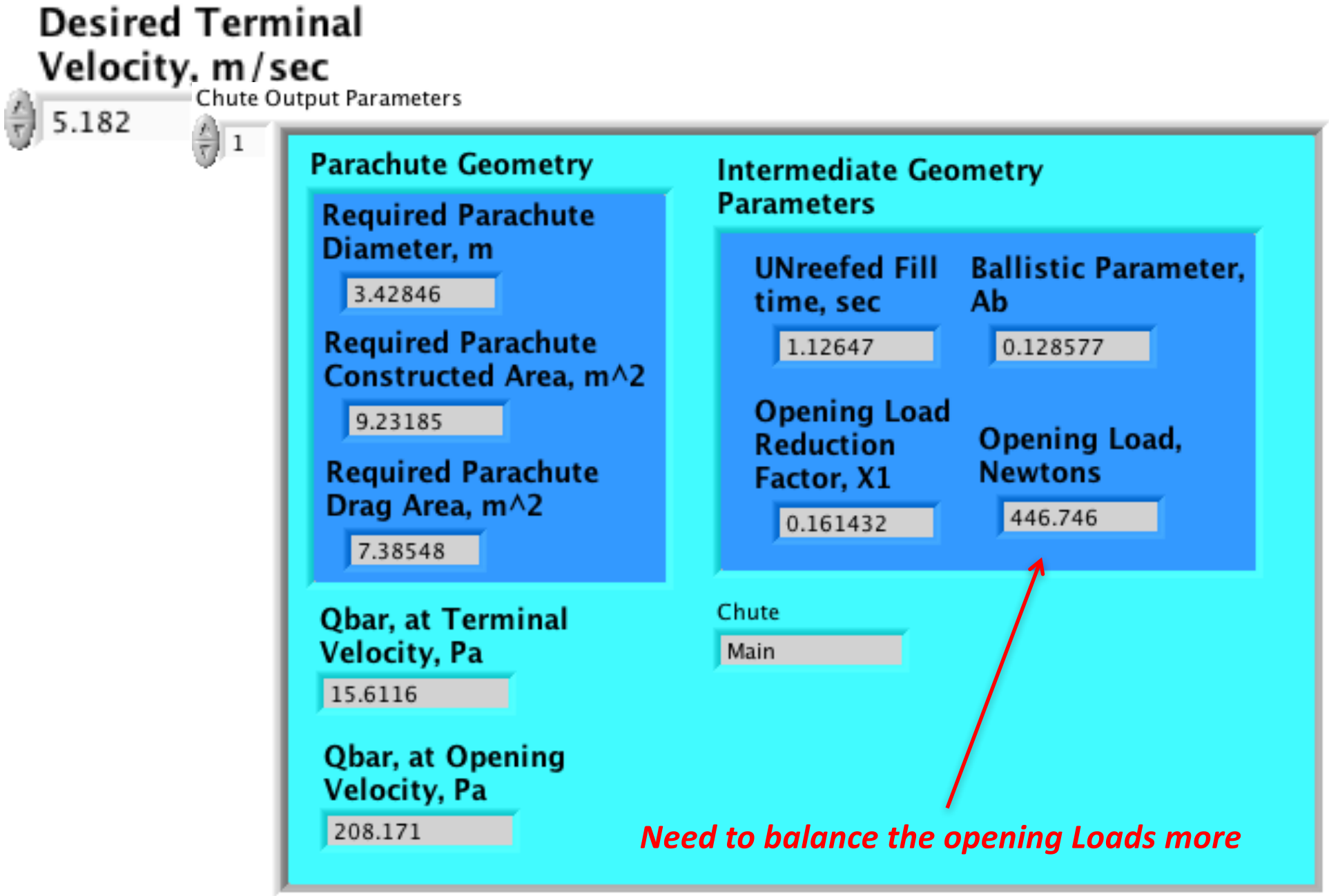
2

Opening Load Shock factor

1.8

Opening velocity Accounts for Chute deceleration due to higher density at Opening Altitude

Main Deployment Calculations I



Drogue Deployment Calculations II

Desired Terminal Velocity, m/sec

25.67

Opening Trajectory Data

Deployment Velocity m/sec

46.6297

Deployment Altitude (AGL), meters

1517.77

Launch altitude, (MSL) meters

240

Vehicle Drag /mass data

Vehicle CD

0.35

Vehicle Aref, m^2

0.015328

Mass, kg

11.768

Chute

Drogue

Parachute Inflation Parameters

Parachute CD

0.8

Parachute Inflation Constant, n

4

Parachute Inflation Exponent

0.85

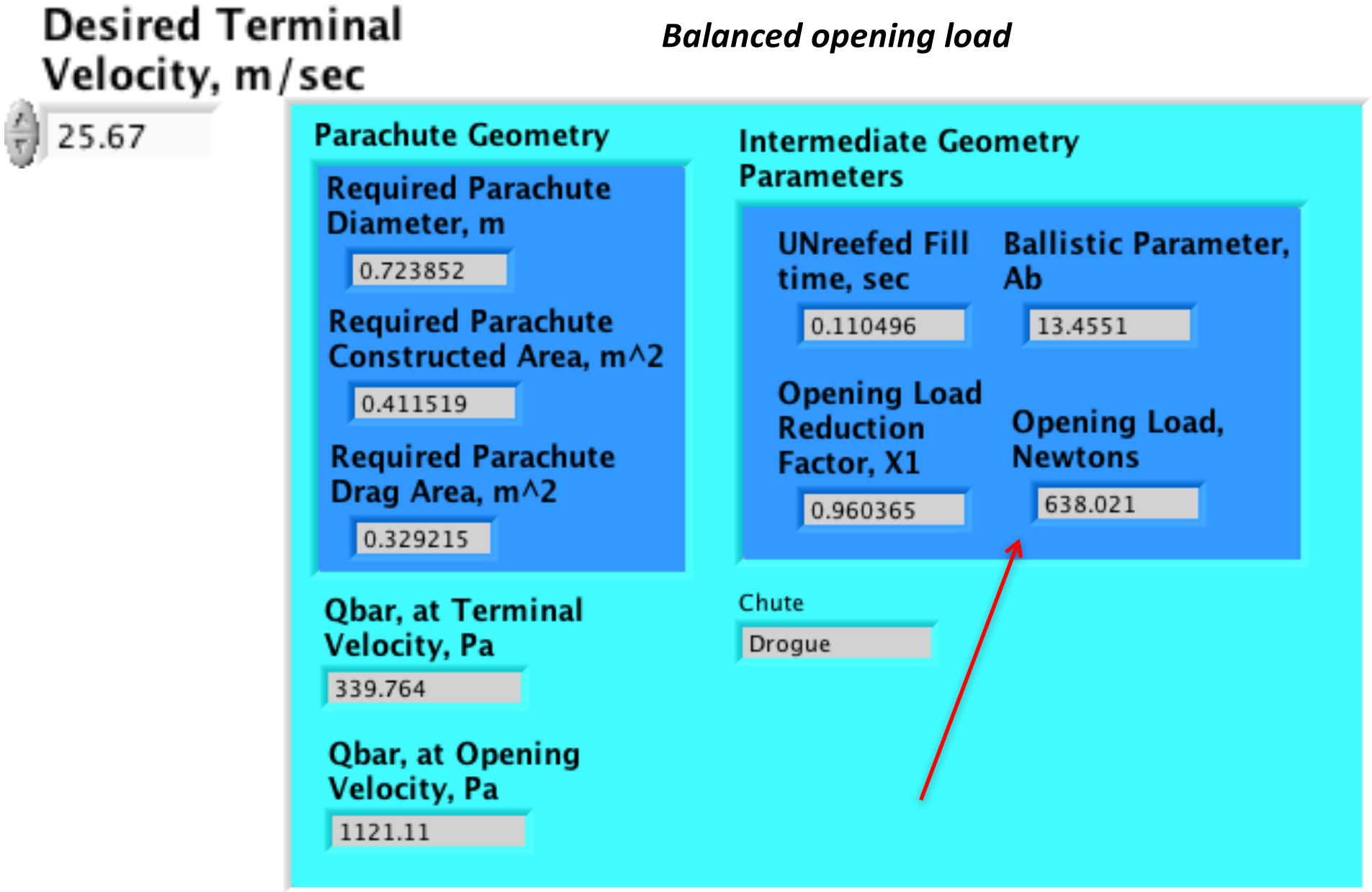
Fill Time Shape exponent

2

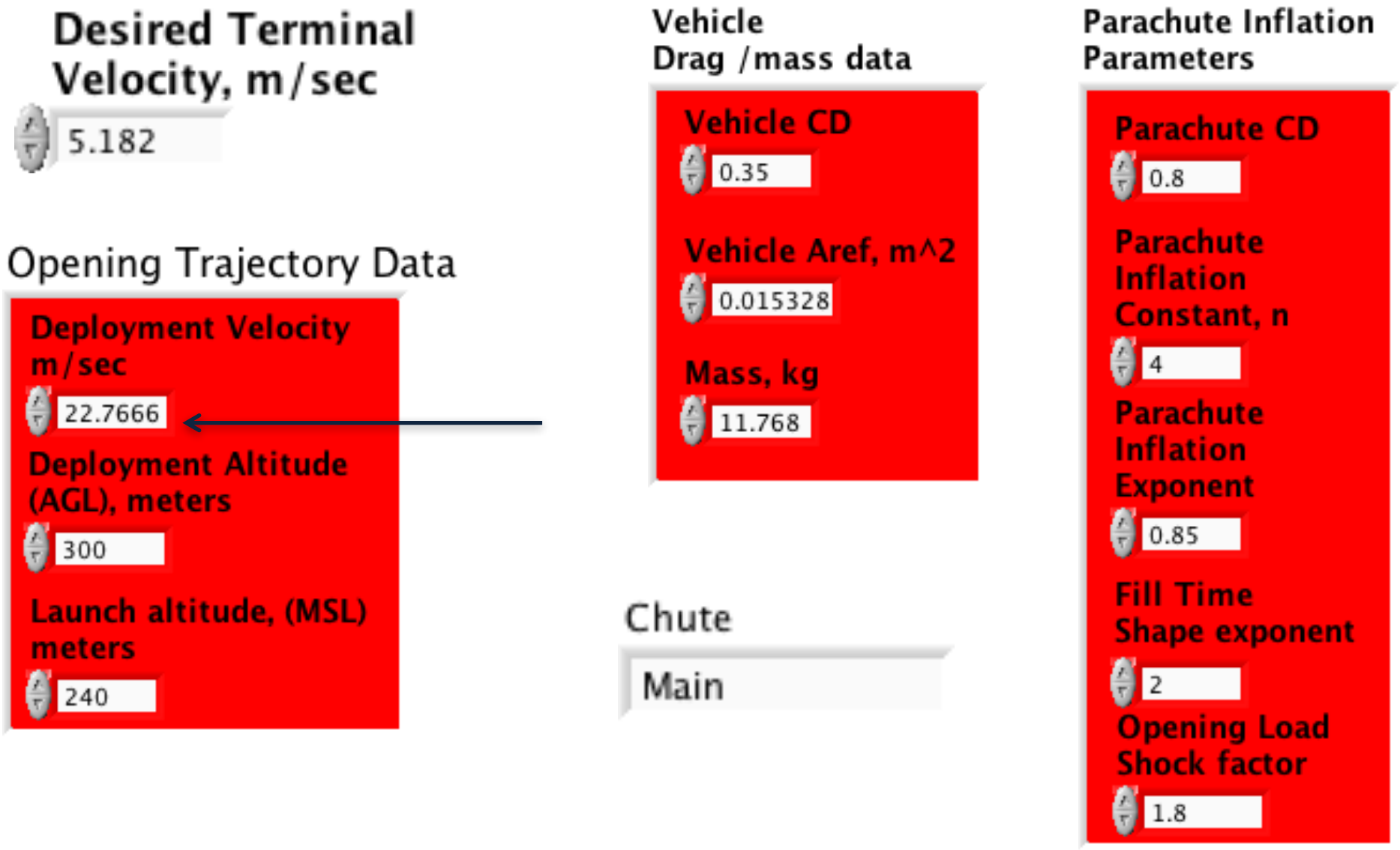
Opening Load Shock factor

1.8

Drogue Deployment Calculations II



Main Deployment Calculations II



Opening velocity Accounts for Chute deceleration due to higher density at Opening Altitude

Main Deployment Calculations II