Aero Multidisciplinary Optimization Tool

Some Aircraft Company

October 1, 2020

Contents

1 Introduction

Sharks are a part of the chondricthyes family.

1.1 A subsection

More text.

2 Airplanes

Your text goes here.

2.1 Wings

More text.

2.1.1 Flaps

More text.

	Deflection	Sense	Primary effect
Ailerons	Right wing trailing edge up	+	Positive roll moment
Elevators	Trailing edge up	+	Positive pitch moment
Rudder	Trailing edge right	+	Positive yaw moment

2.2 Fuselage

More text.

3 Analysis

Your text goes here.

3.1 Balanced Field Length

More text.

3.2 Range

More text.

3.3 Specific Excess Power

More text.

3.4 Trim

More text.

3.4.1 Linear Trims

More text.

4 Modeling

Your text goes here.

4.1 Aerodynamics

More text.

4.2 Athena Vortex Lattice

Link to MIT Athena Vortex Lattice Method (AVL):
http://web.mit.edu/drela/Public/web/avl/

AVL.exe is included in the repository, and should be added to the PATH of your system. The resulting data from AVL is obtained using the avlwrapper API.

4.3 Propulsion

More text.

4.4 Mass Properties

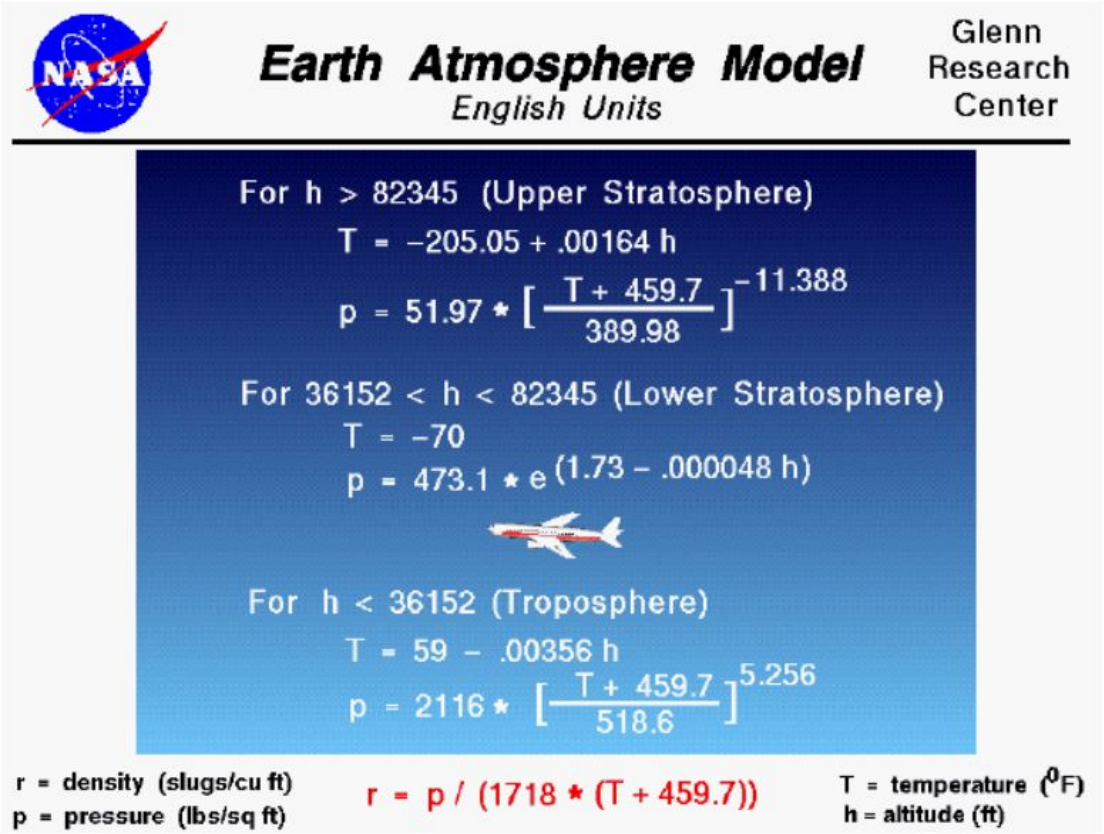
More text.

5 Common

Your text goes here.

5.1 Atmosphere

More text.



5.2 Earth

More text.

5.3 Equations of Motion

More text.

5.4 Rotations

More text.

References

[1] Douglas Wells, Bryce Horvath, Linwood McCullers. *TM-2017-219627 The Flight Optimization System Weights Estimation Method*. NASA, Hampton, VA, 2017.