

2.3 Calculator I/O section

This section deals with the specific calculations the user might be interested in performing. Most of the conversions / calculations are self explanatory if the user has a little background in orbital mechanics. If not, please see the references section for reading.

3 Future Work

Some of the planned additions that can be expected in the future versions:

1. Rendezvous phasing - circular coplanar
2. Hyperbolic trajectories (for fly-by's & assists)
3. Non-coplanar non-tangent burn manoeuvres
4. ΔV & ToF calculator for transfers (two tangent burns)

4 Glossary

Most of the parameters are named and/or abbreviated as per convention used in either the literature or the industry. Nevertheless, some of them are listed below for convenience of the user.

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| 1. | SMA | Semi Major Axis |
| 2. | RAAN | Right Ascension of Ascending Node |
| 3. | AoP | Argument of Perigee |
| 4. | μ | μ - Product of gravitational constant and mass of the body |
| 5. | Vesc | Escape Velocity |
| 6. | Sp. | Specific |
| 7. | Nu | ν - True Anomaly |
| 8. | FPA | Flight Path Angle |
| 9. | ToF | Time of Flight |
| 10. | deg | degrees - planar angle |
| 11. | (SI) | meaning ' <i>in SI units</i> ' |

5 Author & Feedback

This work is available on my github. Feedback is most welcome.

- [Github](#)
- [This work](#)
- E-mail: kaalayaatrin@gmail.com

References

- [1] NASA "Basics of Space Flight", Section-1, Chapters 3-5, <https://solarsystem.nasa.gov/basics/chapter3-1>
- [2] Vallado, David A., 1997, "Fundamentals of Astrodynamics and Applications".
- [3] NASA "General Mission Analysis Tool (GMAT)", <https://software.nasa.gov/software/GSC-17177-1>