Astrodynamics.jl: A Julia-Based Open Source Framework for Orbital Mechanics
WHAT WE BUILD TODAY...
...WHAT WE NEED TO BUILD IN THE FUTURE
“Simplicity is prerequisite for reliability.”

- Edsger Dijkstra

“Simplicity is a great virtue but it requires hard work to achieve it and education to appreciate it. And to make matters worse: complexity sells better.”

- Edsger Dijkstra
Existential Complexity

- a.k.a. “things we care about”
- a.k.a. “rocket science”
- complexity of the problem we try to solve

Accidental Complexity

- a.k.a. “things we do not care about (at all)”
- a.k.a. “non-rocket science”
- complexity introduced by the tooling, programming language, environment etc.
println("Hello World!")

2 concepts

public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello World!");
    }
}

12 concepts
Existential vs. Accidental Complexity in Mission Analysis

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How about C++?

Anyway like I was saying

https://twitter.com/timur_audio/status/1004017362381795329
Live Demo
GSOC Project: Porting Essential ERFA Functions to Julia

Prakhar Srivastava (prakharcode)

22 pull requests merged in AstroTime.jl

24 pull requests merged in AstroBase.jl

🎉 🎉 🎉
OpenAstrodynamics

Astrodynamics.jl

poliastro
Astrodynamics in Python

openaststro
SatelliteToolbox.jl

Set of functions related to satellite simulation and analysis created at the Brazilian National Institute for Space Research (INPE) by Ronan Arraes Jardim Chagas.

Started as an educational project in 2014 and quickly became a comprehensive toolbox for satellite simulations, especially for the Pre-Phase A studies.

Published as a public Julia package on May 13, 2018.
Currently, it is used as the engine behind the **INPE’s FOrPlan Satellite Simulator**, which simulates the space mission operational concept for Pre-Phase A studies.
Julia Astrodynamics + Satellite Toolbox = Julia Space

https://github.com/JuliaSpace
Thank you for your attention!