

# **N-body Simulation of Binary Star Mass Transfer using Nvidia GPUs**

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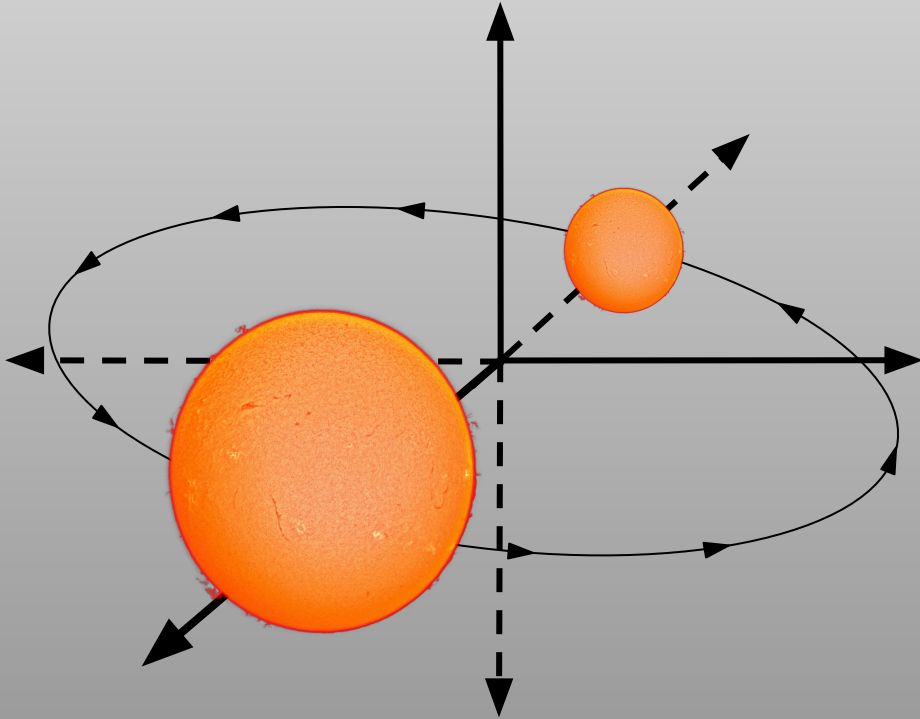


“What inspires you? What do you love about the future? If the future does not include being out there among the stars and being a multi-planet species, I find that incredibly depressing.”

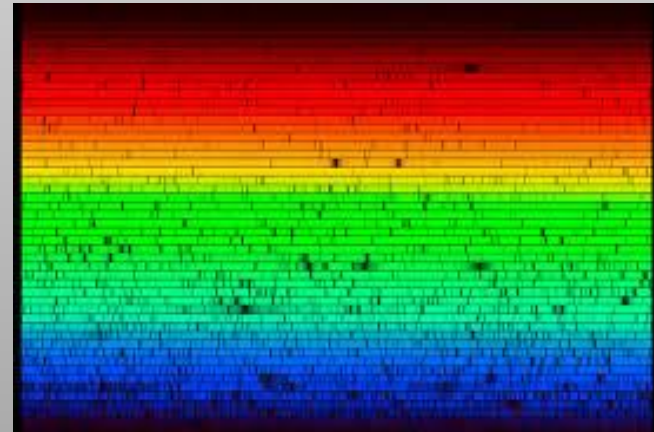
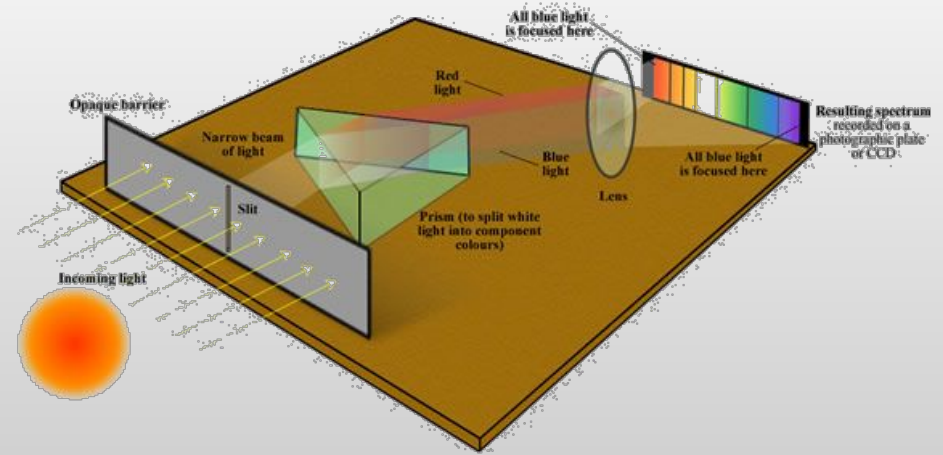
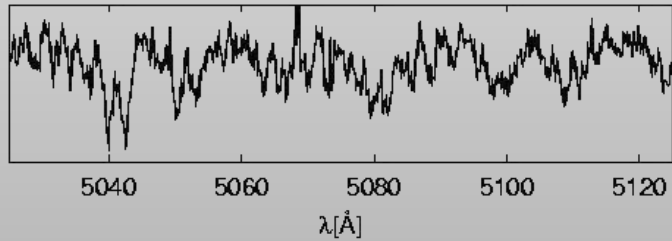
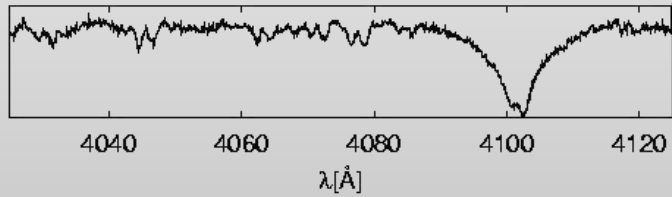
- Elon Musk



# What is a Binary Star System?



# Spectroscopy

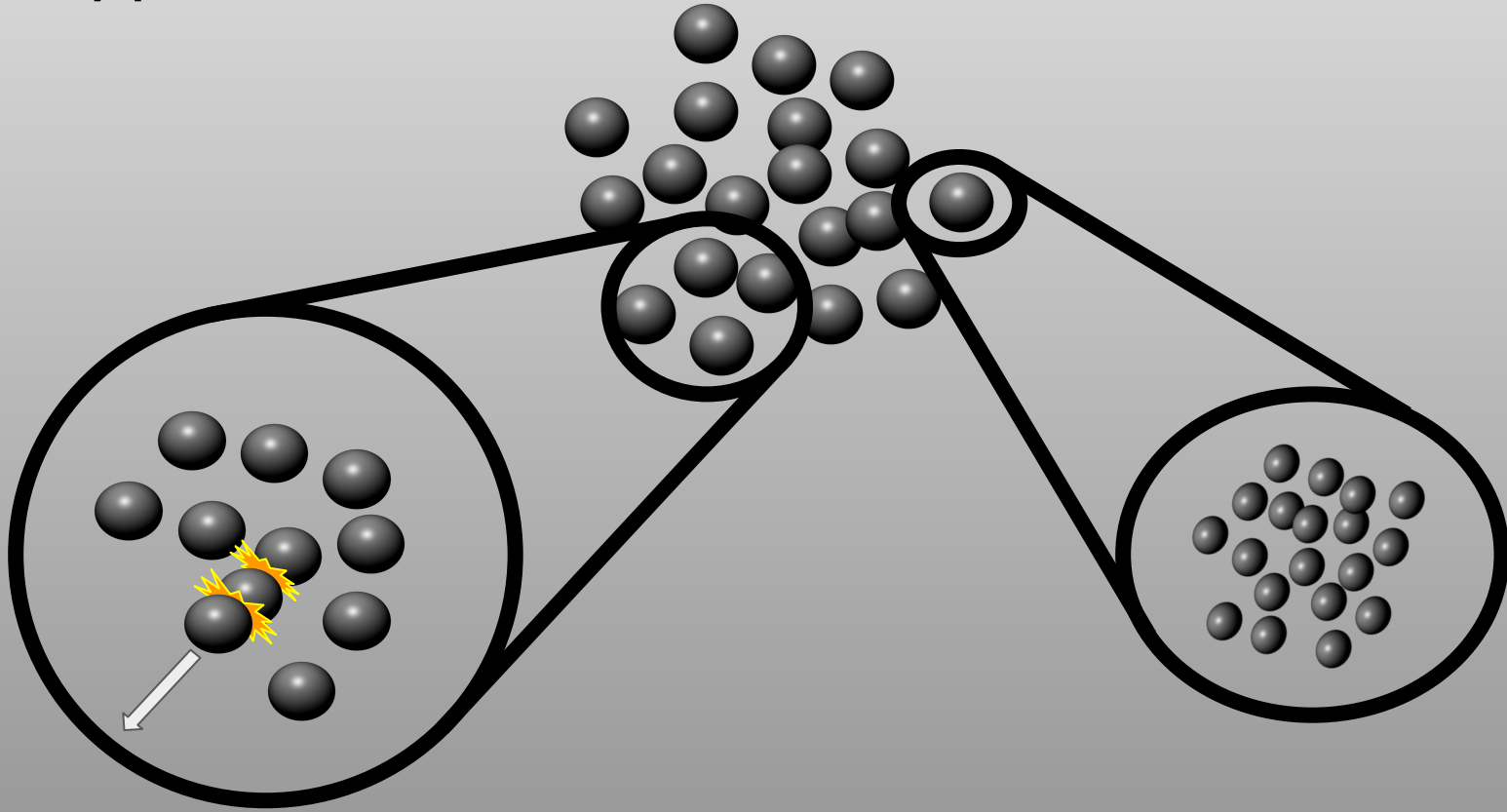


# Our Goal



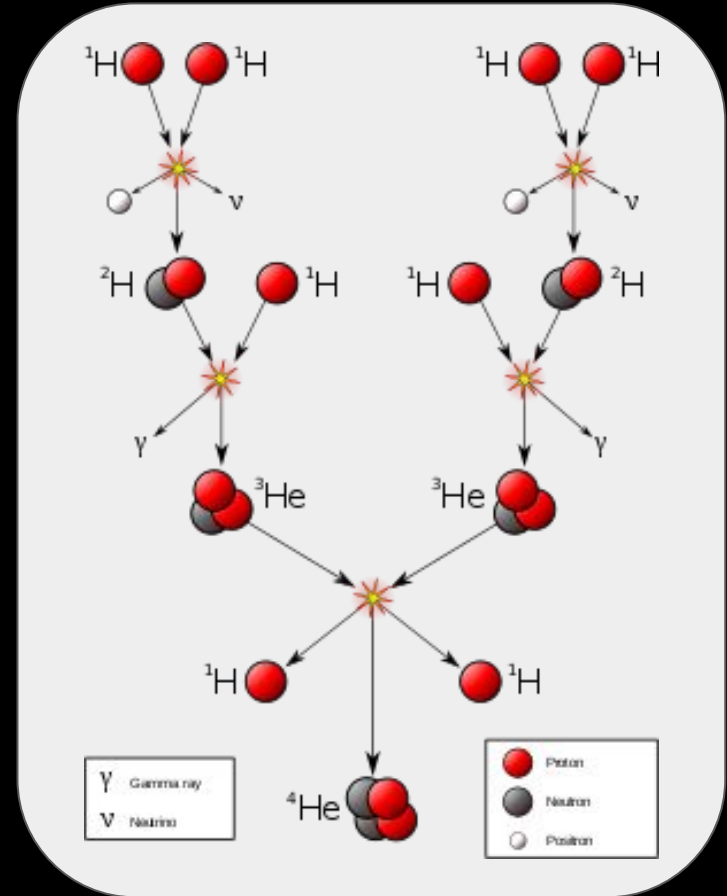
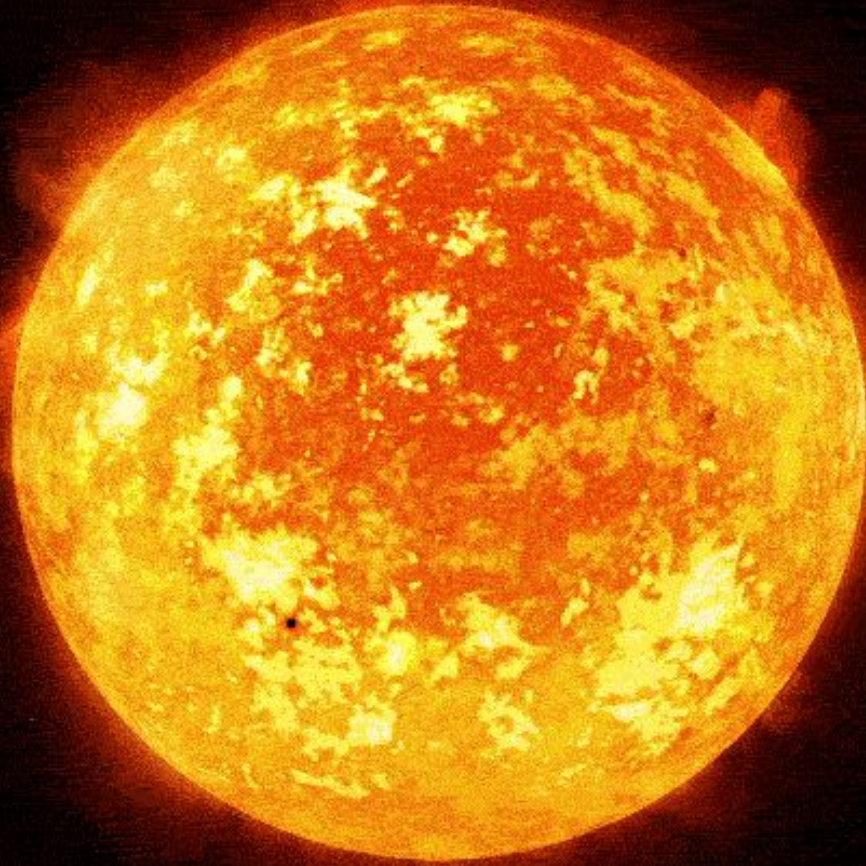
**Determine initial conditions  
for a contact binary system  
to remain in stable orbit.**

Our approach



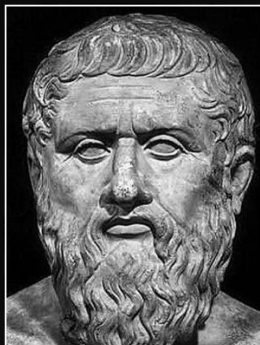


# The life cycle of a Star



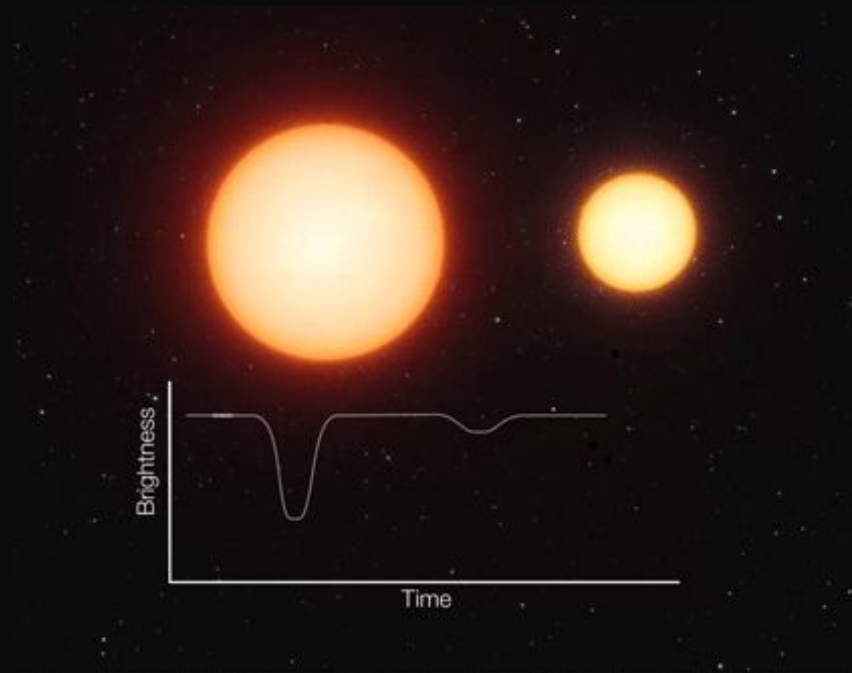
# Goals and Future Work

- Develop model on more powerful hardware
- Develop graphics engine to analyze simulation



Astronomy compels the soul to look upwards and leads us from this world to another.

— Plato —







# Thank you for your time!

## Acknowledgments:

- Dr. Bryant Wyatt and Dr. Shaukat Goderya
- Tarleton State University

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