ANALYZING OUTCOMES OF KUIPER BELT OBJECTS DURING EARLY EVOLUTION OF SOLAR SYSTEM

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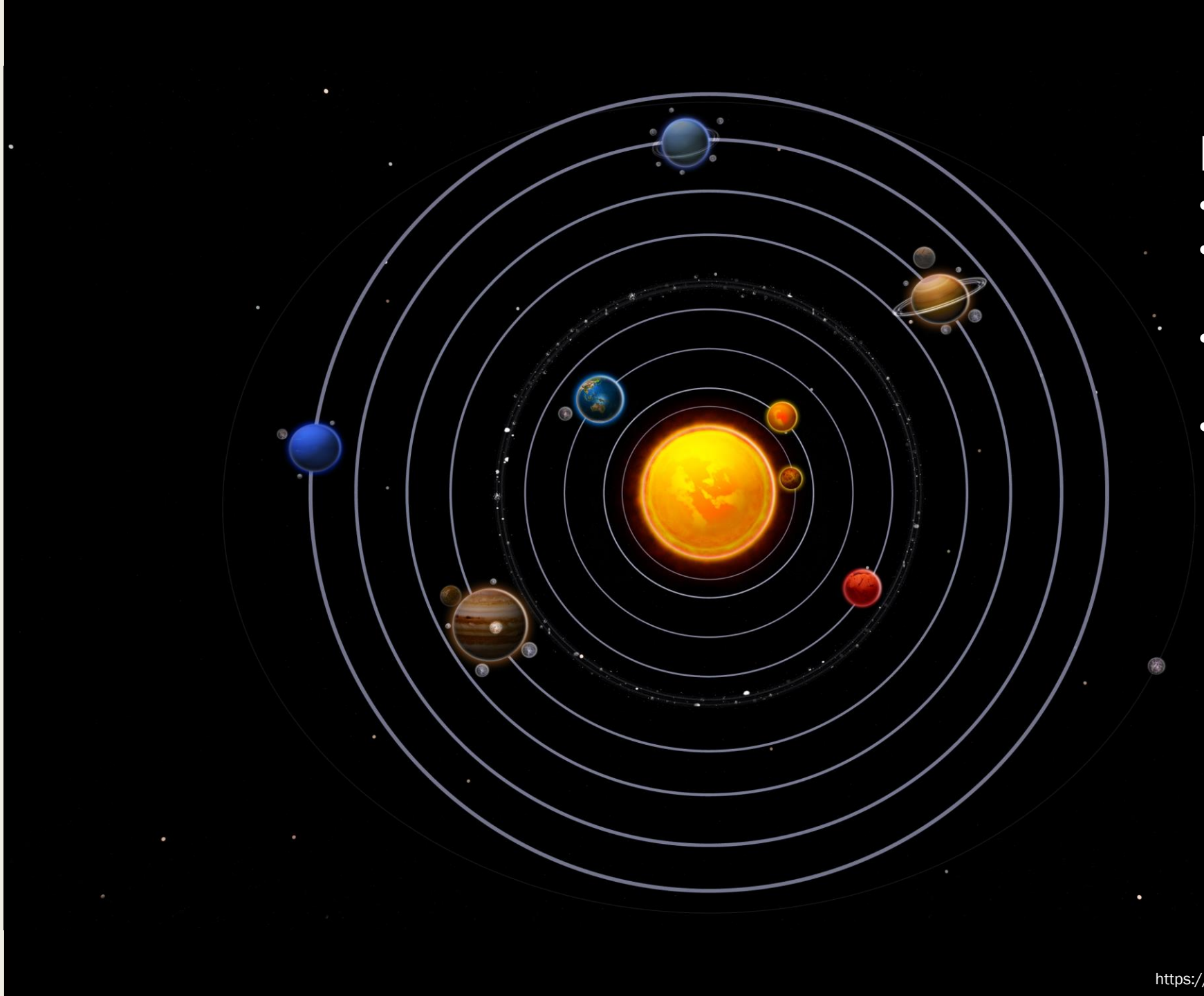
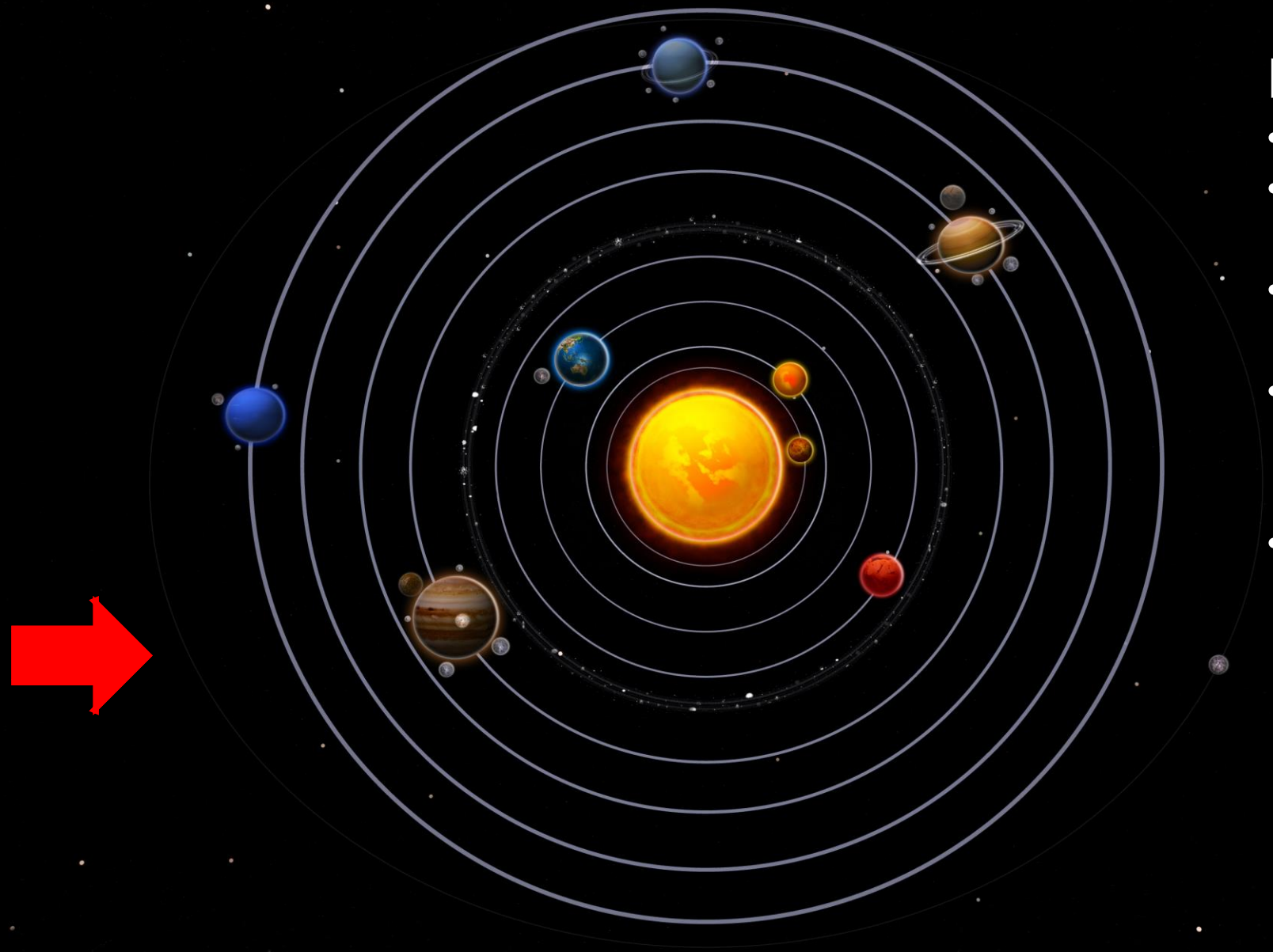


Background

- 2005- Nice Model
- Compact planet formation
- Common: 5 planet model
- Surrounded by planetesimal disk ~30 AU

https://pics-about-space.com/simple-label-the-solar-system?p=1



Background

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- Compact planet formation
- Common: 5 planet model
- Surrounded by planetesimal disk ~30 AU
- Gravitational interactions lead to interactions with Neptune's orbit

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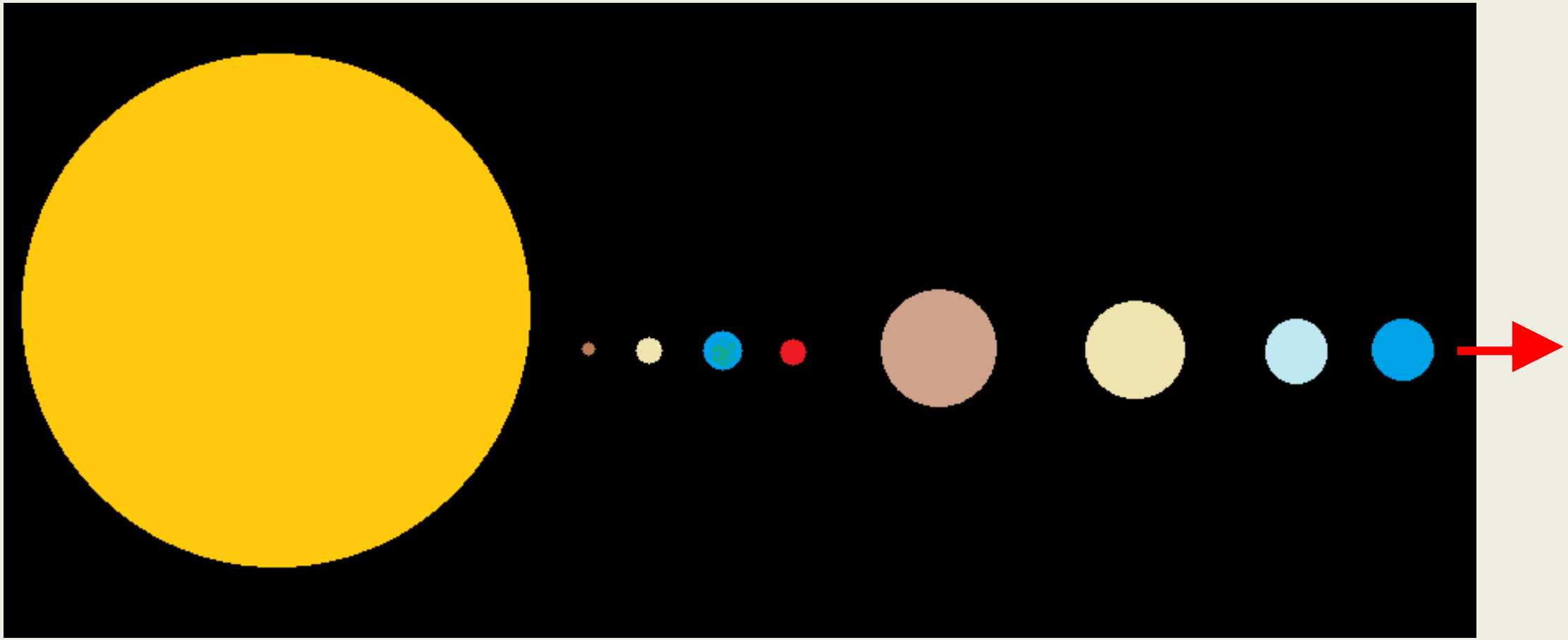
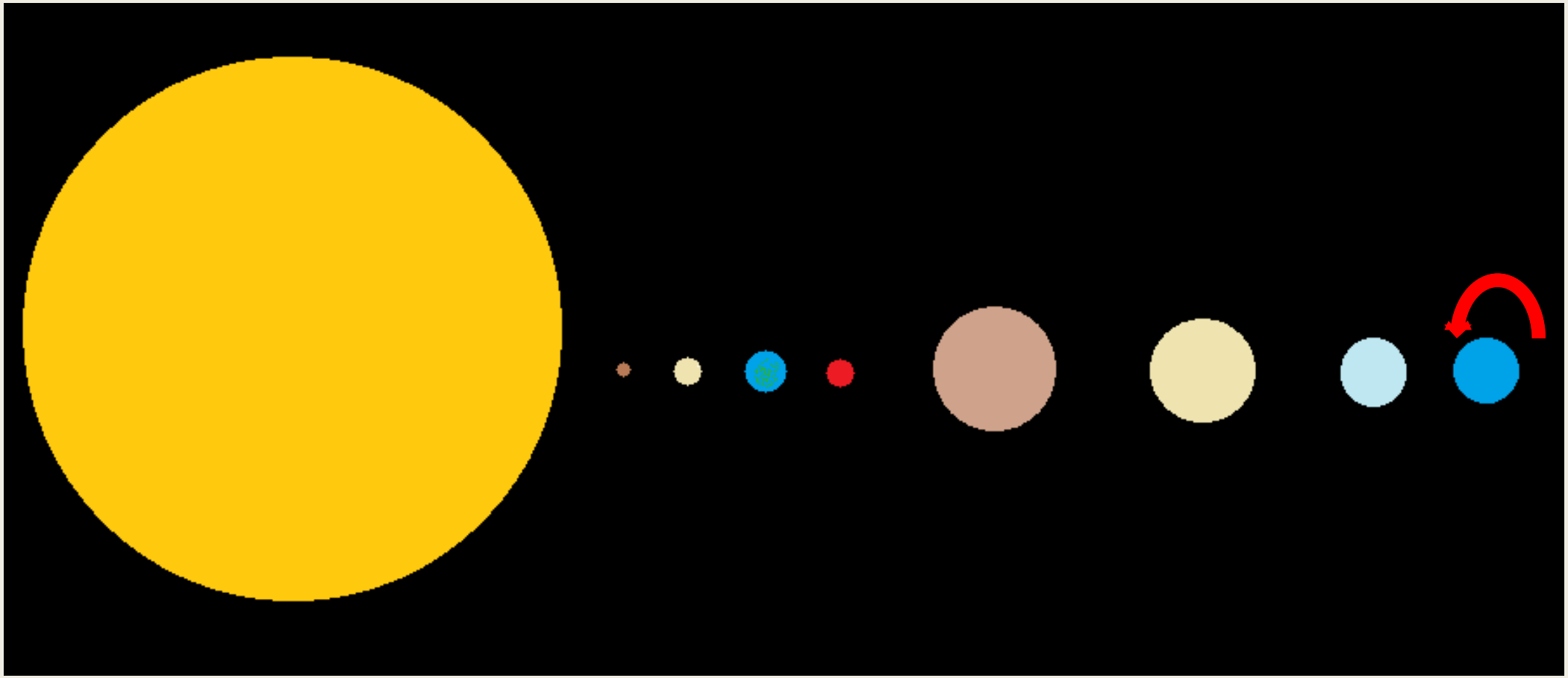
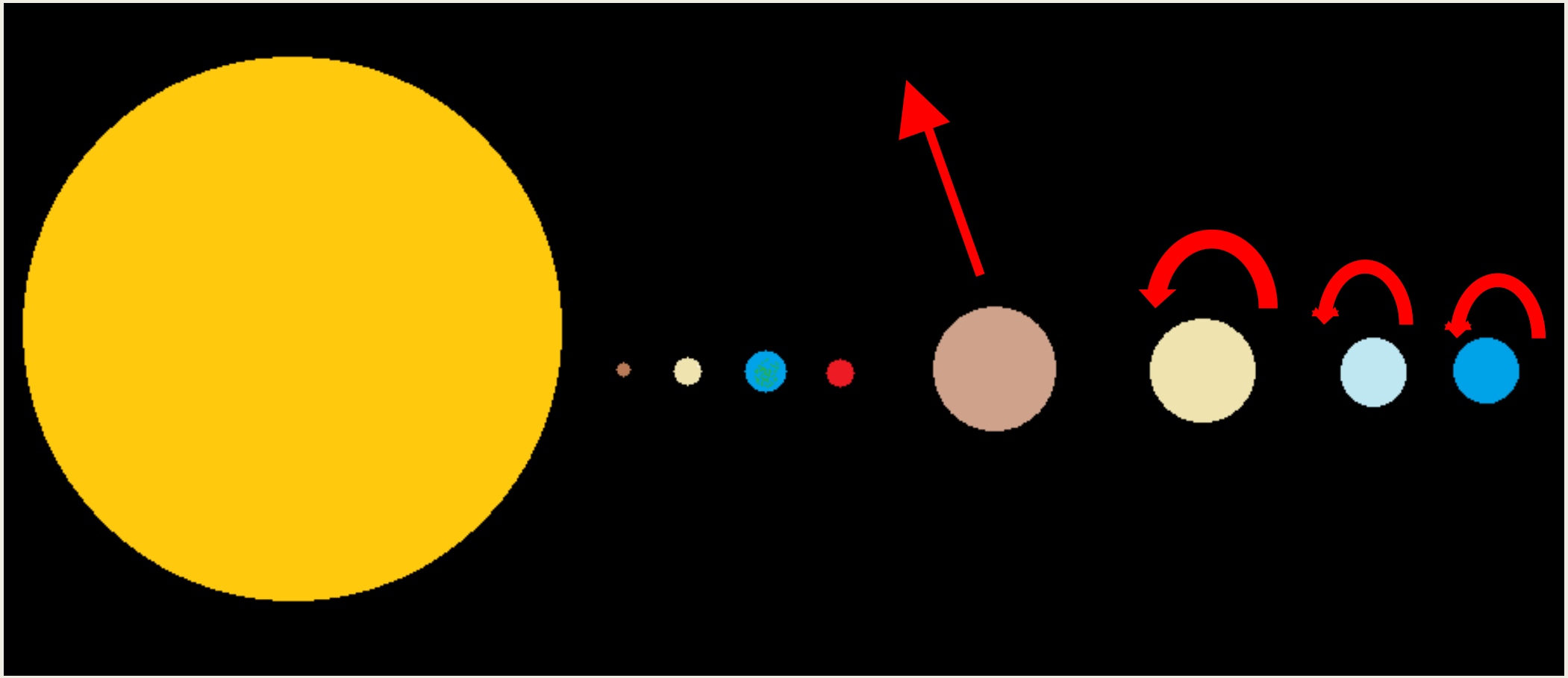
1.) Scatter Outward



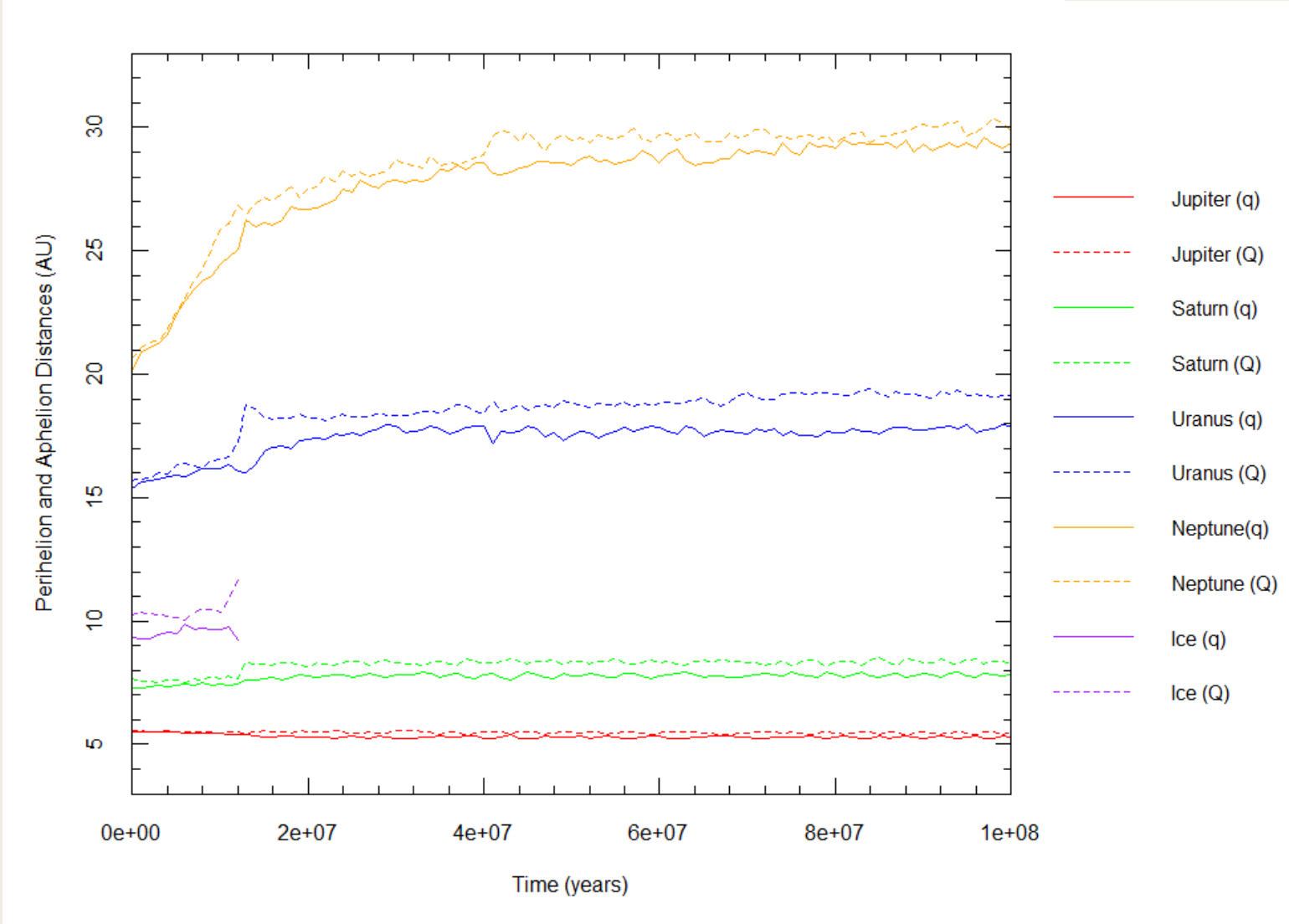
2.) Scatter Inward



Interactions with Jupiter



- Jupiter slowly migrating inwards
- Saturn, Uranus, Neptune and Ice slowly migrating outwards
- Ice ejected from system around 18Myr



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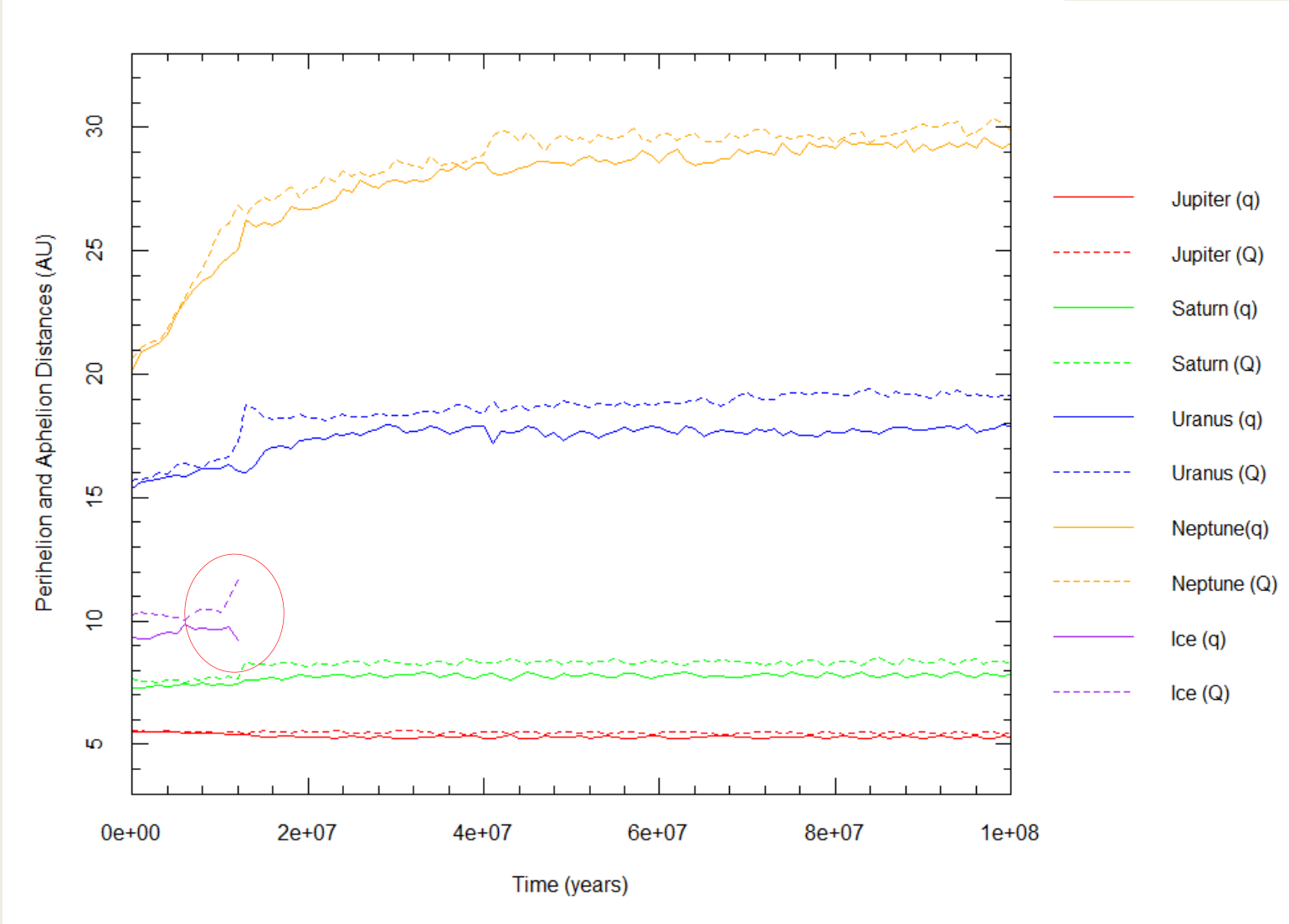

Current and Future Research:

- Analyzing data from several simulations
- Tracking the positions of each Kuiper Belt Object during close encounters with the planets
  - *1.) Scattered outward*
  - *2.) Scattered inward*

THANK YOU

ANY QUESTIONS?