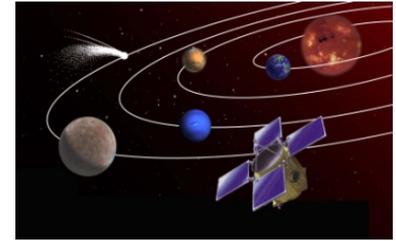


# Technology Infusion

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Lead Discovery Program Scientist



# Approaches



- ◆ Three approaches (and some hybrids) are being taken for this AO:
  - Government Furnished Equipment (GFE)
    - NASA develops technology, guarantees its readiness and provides it; TMC will *not* evaluate the technology, just the appropriateness of its use
  - Incentivization
    - NASA develops technology, guarantees its readiness and provides an increase to the AO Cost Cap but missions must purchase any hardware; TMC will not evaluate the technology, just the appropriateness of its use
  - Commercialization



# Technology Infusion Approaches



## Gov't Furnished Equipt.

- NASA develops technology, guarantees its readiness and provides it.
- TMC will not evaluate the technology, just the appropriateness of its use.

## Incentivization

- NASA develops technology, guarantees its readiness and provides an increase to the AO Cost Cap but missions must purchase any hardware.
- TMC will not evaluate the technology, just the appropriateness of its use.

## Commercialization

- NASA invents, develops, and demonstrates a technology in a relevant environment and then transfers the technology to a for-profit entity.
- TMC will treat as a commercial procurement of a mature product from a proven vendor(s).
- Mission specific accommodation will be evaluated, but. TRL of the component itself is not evaluated nor considered a risk)



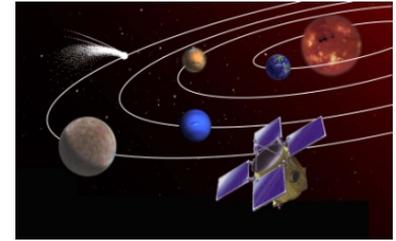
# Government Furnished Equipment



- ◆ *NEXT-C*: Commercialized version of the NEXT ion propulsion system.
  - NASA will provide 2 thrusters and 2 PPU's.
- ◆ *DSOC*: Next generation optical communications.
  - NASA will provide the hardware, labor costs for DSOC team's participation in integration and operations, and a **\$30M incentive**.
- ◆ *LWRHU*: Lightweight Radioisotope Heater Units
  - NASA will provide up to 30 (all that are available)



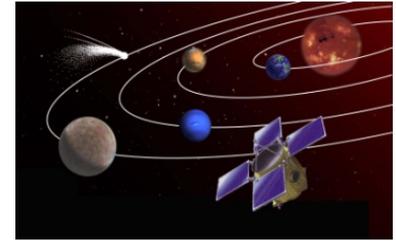
# Incentivization



- ◆ *DSAC*: Deep Space Atomic Clock
  - NASA will provide a **\$5M incentive** for use. Fabrication of a copy of the as-demonstrated unit will be funded by the mission, as will any modifications needed.
- ◆ *HEEET*: 3D-woven thermal protection system.
  - NASA will pay for up to **\$10M** of the HEEET material and the labor costs for the HEEET team to work with the mission.



# Commercialization



- ◆ **Advanced Solar Arrays**
  - Available from 2 vendors, ATK and DSS
- ◆ **Green Propellant**
  - Available from Aerojet-Rocketdyne