

# SATELLITE COLLECTOR

CONCEPT &  
INNOVATION



RECYCLE DECAYING SATELLITES



# COLLECTOR

CONCEPT &  
INNOVATION



I recently watched a documentary about the SpaceX process of reusable boosters and how they are changing the way that space travel is accomplished.

So it got me to thinking...

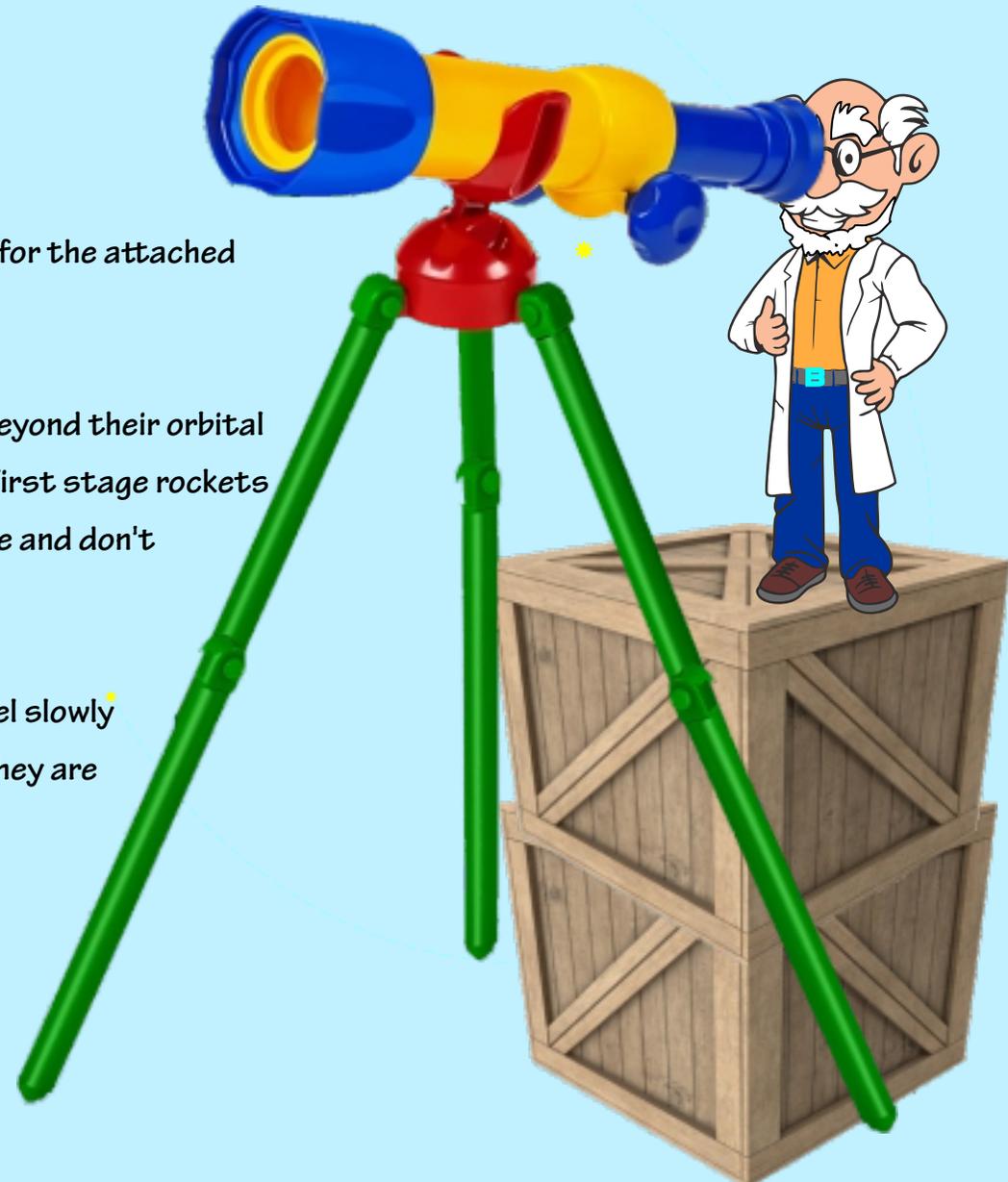
Is this the best secondary use of boosters?

These are basically massive cylinders that hold propellant for the attached thruster engines.

Couldn't these be engineered to continue flying (drifting) beyond their orbital mission and sent on to achieve even more use elsewhere? First stage rockets are currently only designed to travel in Earth's atmosphere and don't have the ability to go far.. but Second stages...?

Perhaps they could be smart and energetic enough to travel slowly and sit at a Lagrange point and collect cosmic dust until they are ready to be bolted together as another space station, or landed on the Moon for spare parts for future missions.

So, I had this idea...



Scale = 1 : ∞

# COLLECTOR

## CONCEPT & INNOVATION

**Collector** is a 'defunct satellite' collection station that can act as a temporary final stage for Satellites, Rocket Stages and non functional equipment that can (A) Keep space junk from causing damage, both in space or on Earth re-entry and (B) Eventually eject part or all of it to the Sun, Moon, Earth or elsewhere as agreed.

Moon



Perhaps initially used as a Transit Station for launching trips to the Moon and Mars, this could also be used as an Emergency Response Center to be able to deploy (relatively) lightweight Rescue and Response services to the Moon or the ISS (etc..)

Rather than have space debris burn on re-entry, potentially causing damage to the atmosphere and environment, it is possible to provide enough final power to orbiting bodies to aim them on a trajectory toward the collector, where they can be 'parked' and made available for controlled return to Earth, or used as recycled materials on a Moon Station.

Fuel Stages could one day provide basic protection for equipment that would be help guard against radiation exposure. Panels could be used to support regolith (Moon Dirt) that together reduce exposure to near Earth levels.

Collector path  
750 - 3000 miles  
from Earth

Starlink path  
330 miles

ISS

ISS path  
250 miles

Satellite path

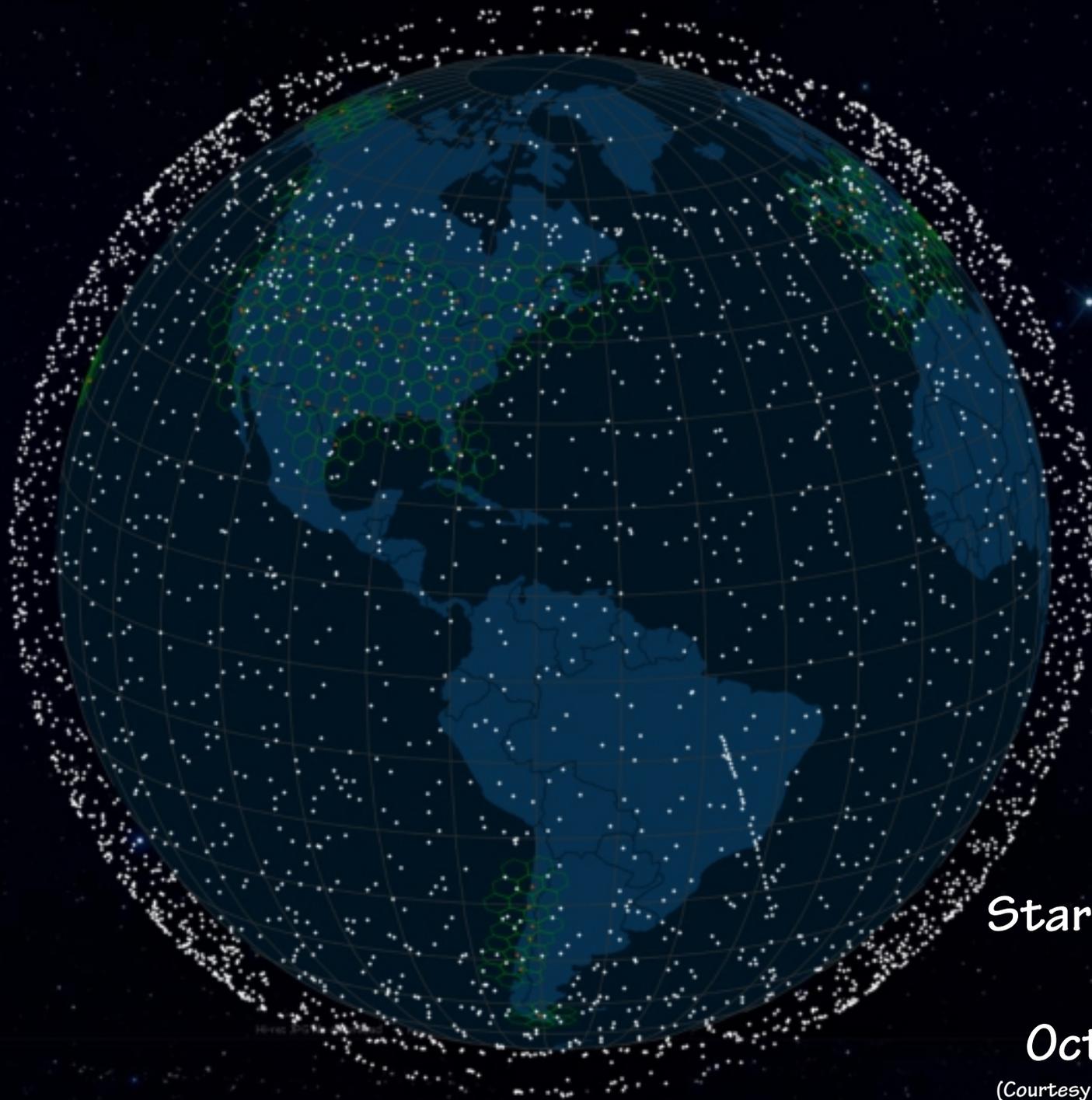


Not to Scale

GPS Sat path  
10-20,000 miles

# COLLECTOR

CONCEPT &  
INNOVATION



Starlink Satellites  
as of  
October 2023

(Courtesy of <https://satellitemap.space>)

# LAGRANGE POINTS

CONCEPT &  
INNOVATION

