Is your satellite maneuverable?

FLOCK satellites do not have propulsion. However their physical design allows us to control the drag force by changing the attitude of the satellite. Nominally, this is used to phase and stationkeep production capable satellites in the FLOCK fleet. We generally refer to this capability as “diffdrag”.

With the exception of SKYSAT A (39418) and SKYSAT B (40072), all SKYSAT satellites have a propulsion system and are capable of performing maneuvers.

Our RapidEye satellites are retired and completely non-operational.

Additionally, we keep our satellite information up-to-date in Space-Track. If you have workflows that make use of the satellite endpoint of the Space-Track API, then rest assured that you can rely on that information.

Do your Ephemeris predictions contain drag maneuvers?

As of Q4 2021, all FLOCK ephemerides for satellites in our production fleet are generated taking into account the upcoming diffdrag maneuvers in its schedule for phasing and stationkeeping.

How often are diffdrag schedules generated?

Diffdrag schedules are generated daily from 7 days out to 180 days out. Therefore at any time, the next 7 days of maneuvers can be considered to be frozen. This is to prevent any surprises for operators we might be at risk of conjuncting with.

My satellite has a conjunction with you in a few days, can you stop doing diffdrag maneuvers?

Absolutely. If there is significant risk to our missions, we can leave our satellite in a fixed attitude mode until the time has passed. We have automated systems to do this based on our own internal thresholds, however we understand that different

missions have different risk thresholds and we are happy to be good neighbors. Please reach out to orbital-neighbors@planet.com to let us know how we can help.

What are your CA thresholds?

Our CA thresholds follow the general guidelines that we should take action if the Pc > 1e-4. We perform our own conjunction analysis of each CDM using the procedure described by Alfano and Oltrogge in their paper Probability of Collision: Valuation, variability, visualization, and validity.

What is the hard body radius (HBR) for your satellites?

Both FLOCK and SKYSAT fleets use a 1 meter HBR. This information is also available from the satellite endpoint of the Space-Track API should you wish to rely on that as a source of information for your workflows.