GOAL
To provide network connectivity in hard-to-reach areas using a nanosatellite constellation

PROBLEM STATEMENT
How would nanosatellites schedule their message delivery effectively and efficiently considering nanosatellite limitations in terms of size, power onboard data storage, energy capacity and contact time windows?

OPTIMIZATION MODELS
Nanosat Scheduling Decision Making for Single-hop Architecture
- Optimization model (P1) is a binary linear program that minimizes priority weighted delivery completion time
- Optimization model (P2) is a standard linear program with a very special structure that minimizes priority weighted mean busy times
- Optimization model (P2) has an equivalent minimum cost network flow representation, and thus the integer optimal solution is guaranteed with integer input parameters

NUMERICAL RESULTS
Weighted mean busy time strategy (P2) outperforms highest priority first strategy by 3 hours in total delivery time