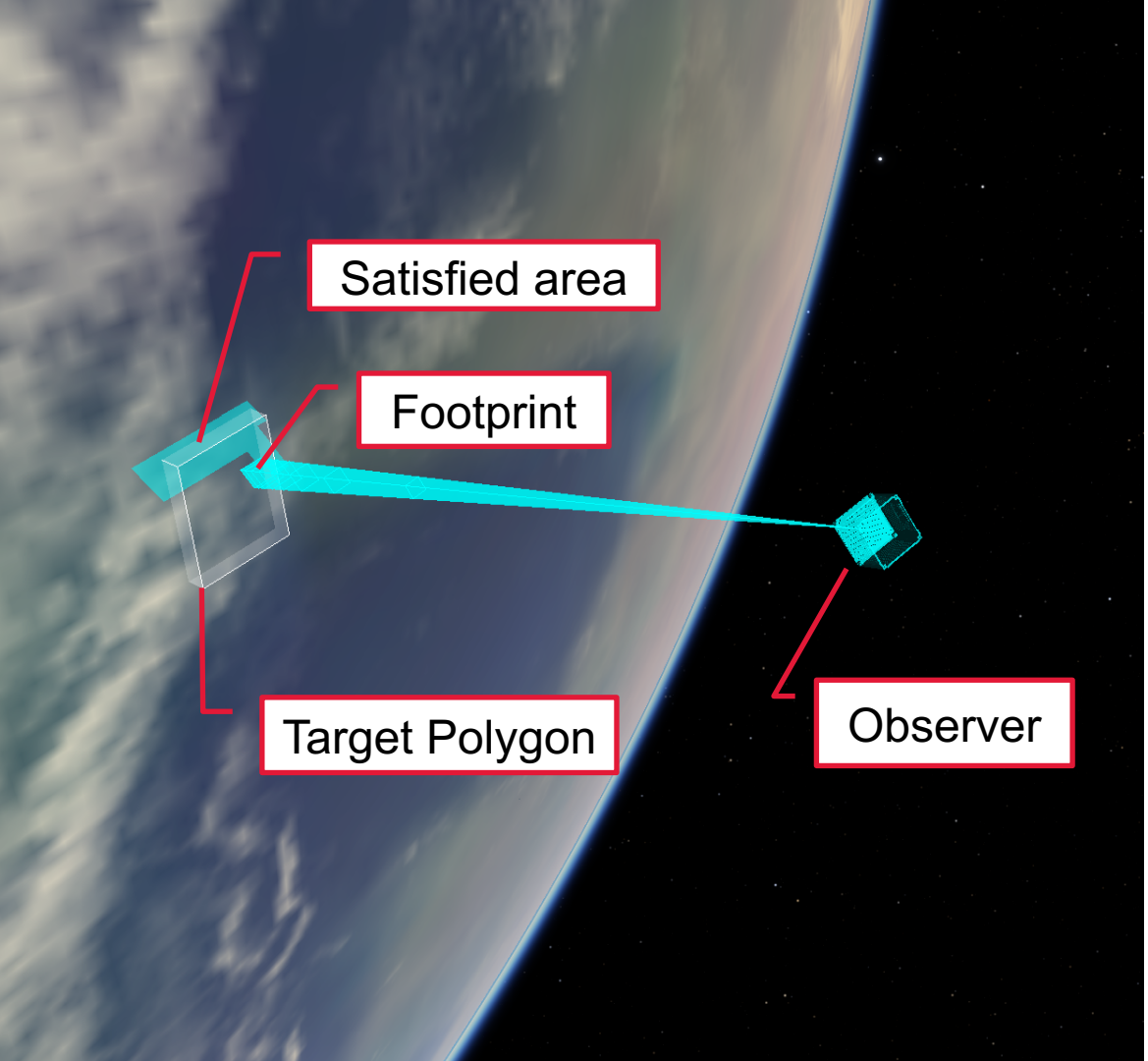

Area Coverage Planning with 3-axis Steerable, 2D Framing Sensors

Elly Shao, Amos Byon, Chris Davies, Evan Davis, Russell Knight, Garett Lewellen, Michael Trowbridge and Steve Chien

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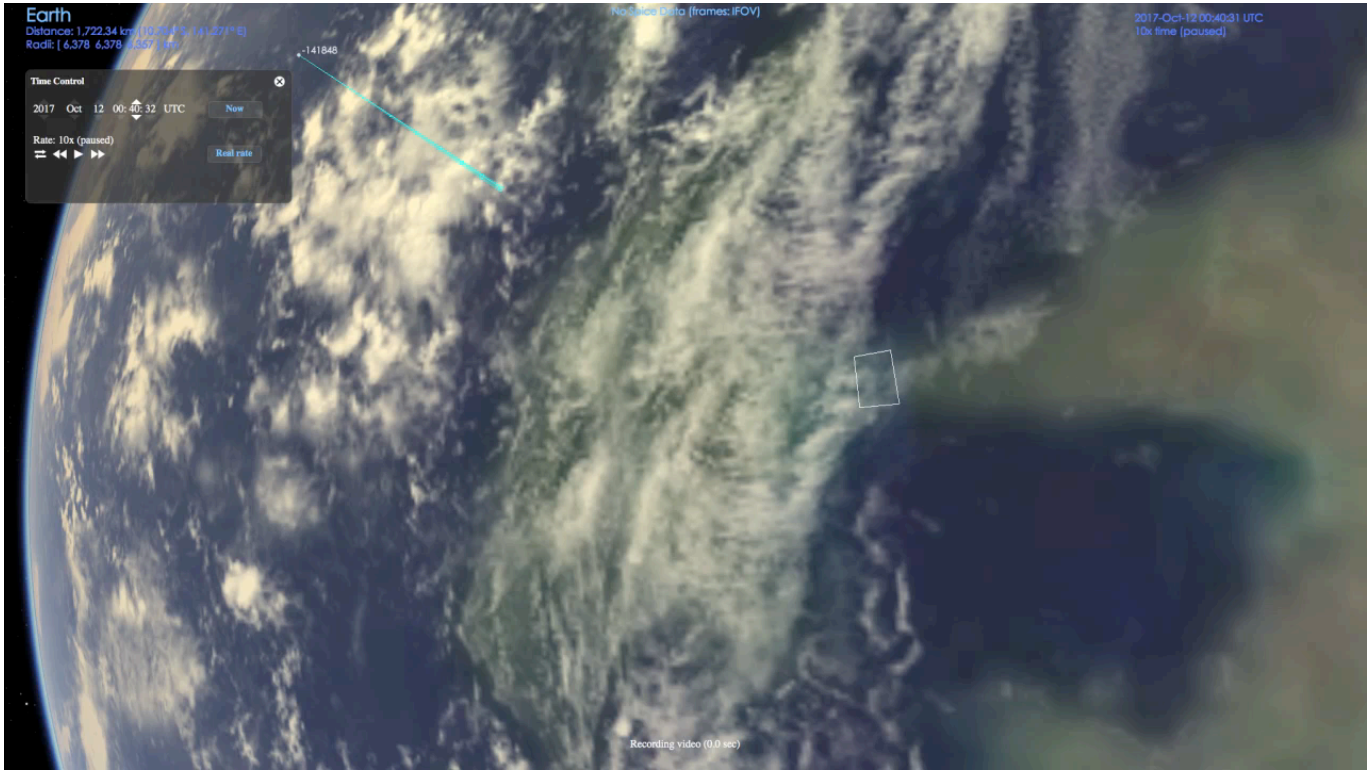
Example of Area Coverage with a 2D Framing Sensor



Research Highlights

- Shortest schedule tiling strategies for an agile space telescope
- Formalized as an optimization problem, proved NP-hardness
- Four approximation algorithms presented and tested

- Related Work
  - Area Coverage Planning for Sub-dividable Framing Instruments (Knight 2014)
  - Machine-learning heuristics for resources needed to schedule a mosaic (Lewellen et al. 2017)
  - Hybrid Traveling Salesman Problem – Squeaky Wheel Optimization scheduler (Lewellen et al. 2017)

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