



Low to High

UTM - Wide Range of Aircraft & Operations



UTM enables deconfliction of a range of aircraft

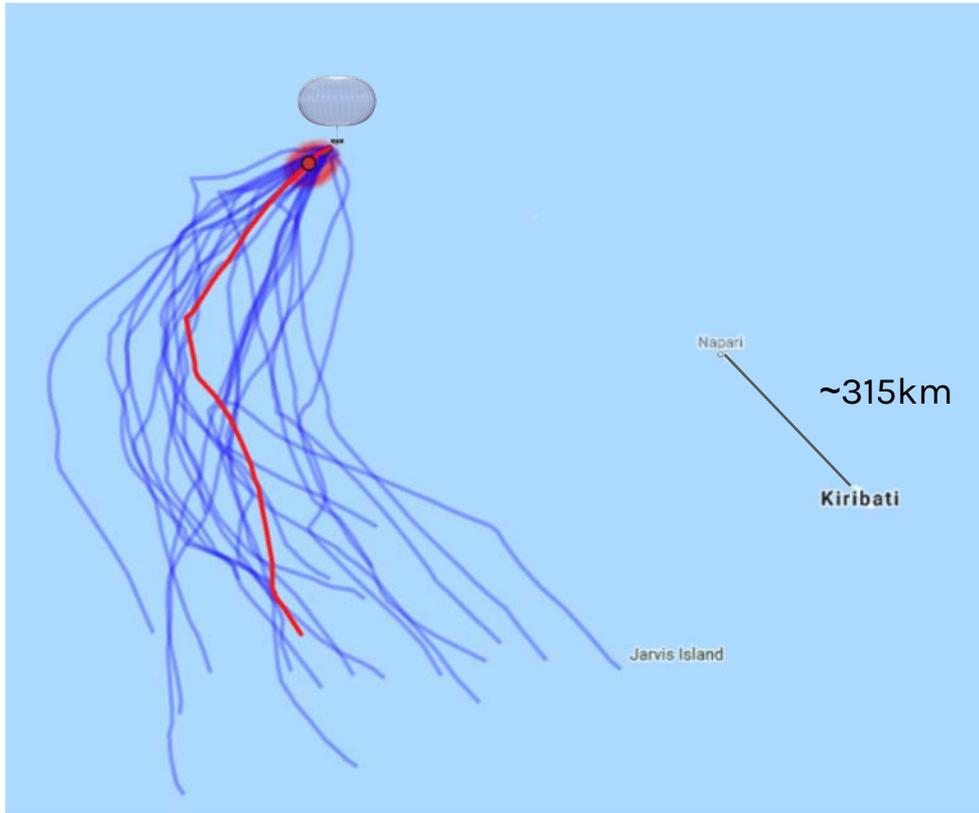
- Cooperative data sharing
- Common situational awareness of flight intent
- Strategic deconfliction based on
 - 4D Trajectory
 - Aircraft Performance



Very High Altitude - Wide Range of Aircraft & Operations



Complex Flight Planning Requires Automation and Operator Knowledge



Possible Paths a Single Balloon Can Take Over 5 Days

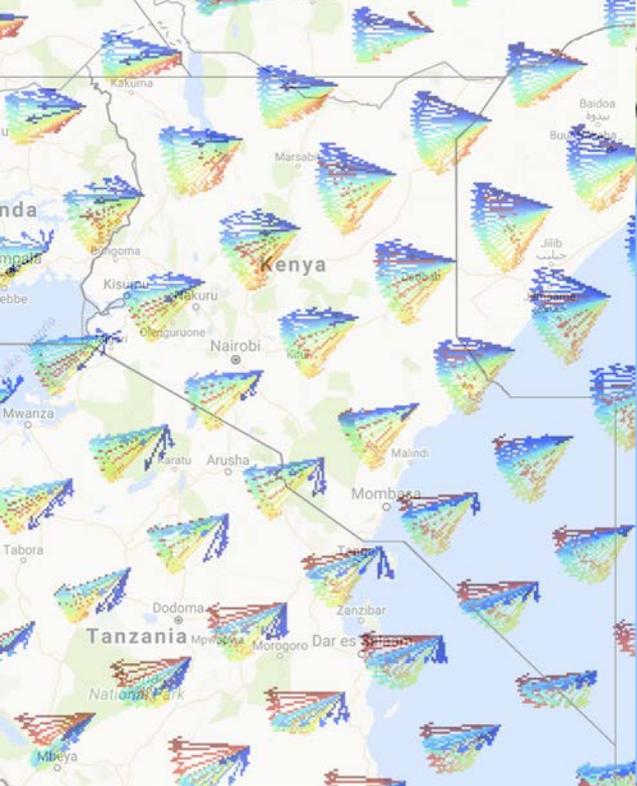
Aircraft Performance can change

Per Environment

- Amount of Sunlight
- Winds

Per Specific Vehicle

- Battery charge
- Balloon Pressure



Simulation

Stop Video

Viewing Time 1987-06-03 08:15:00 WET (Timestep 26 of 299)

Very High Altitude learning from UTM

Project Multiple 4D Trajectory (30 mins increments)



Applied in UTM



Very High Altitude learning from UTM

Strategic deconfliction and **collaborative data sharing** can be used for Very High Altitude at global scale

UTM supports **per specific vehicle, per specific environment performance** that Very High Altitude requires

Very High Altitude UTM can be **realized quickly** with a blend of **strategic conflict detection** and **operator-to-operator** managed deconfliction.

Loon and Wing are **collaborating with industry** to realize **UTM for Very High Altitude flights**