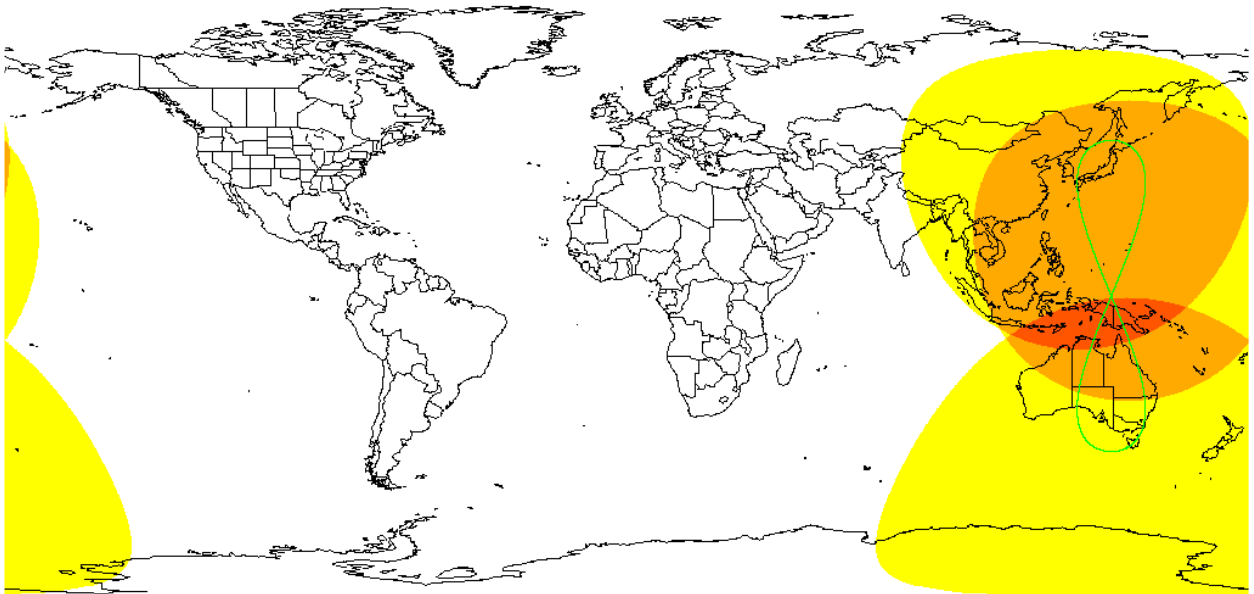# SaVi - satellite constellation visualization

EXERCISES

1. Quasi-geostationary Japanese system
Create a quasi-geostationary system for high-bandwidth high-frequency communications, with a high mask elevation, over Japan.

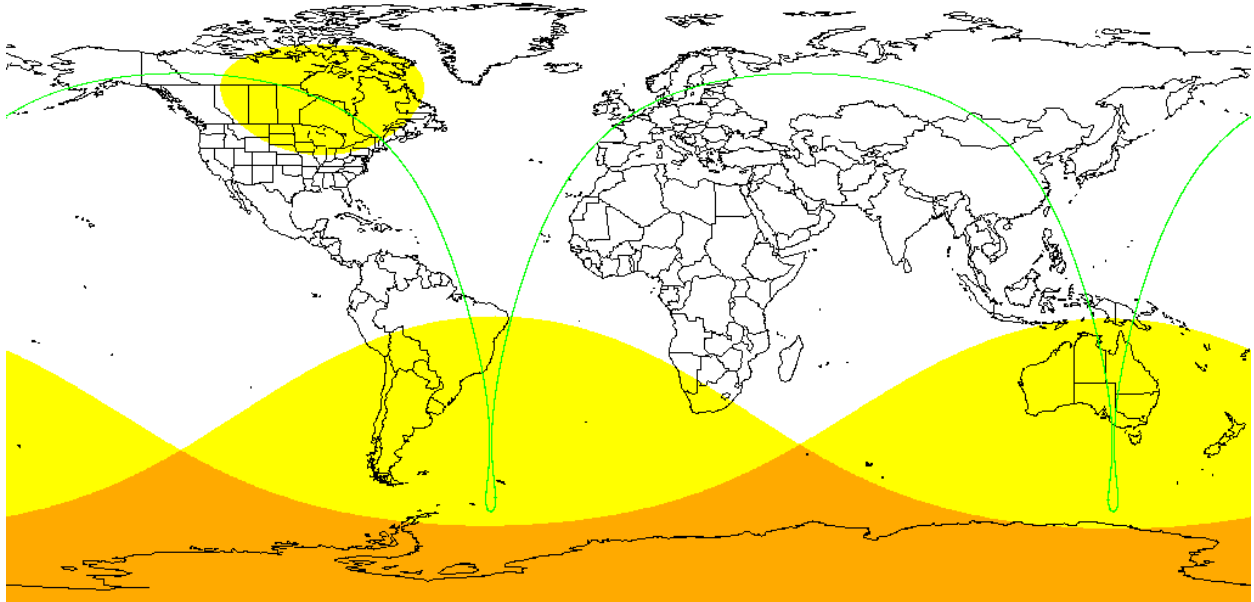Hint: start with the Clarke script, and modify the orbits…

What is the best combination of inclination and longitude that permits the highest mask angle that still covers Japan? What combination of inclination, longitude and mask elevation also covers Australia and New Zealand?

Look at the fisheye window for points in Japan and see how the satellites are seen in the sky. Why is this better for Japan that a geostationary satellite?

2. Molnya in the southern hemisphere

Create a high-bandwidth elliptical system to serve Australia and New Zealand. Hint: read the Molnya and Tundra scripts, and create your own from them and load it in…

What is the best combination of inclination and longitude that permits the highest mask angle that still covers all of Australia? What combination of inclination, longitude and mask elevation also covers New Zealand and the surrounding islands?

Look at the fisheye window for points in Australia and see how the satellites are seen in the sky. How does this compare to a geostationary satellite? Why would you want to use this with a geostationary satellite?

Further information at:
http://savi.sf.net/

Lloyd Wood (L.Wood@surrey.ac.uk)
12 July 2006.