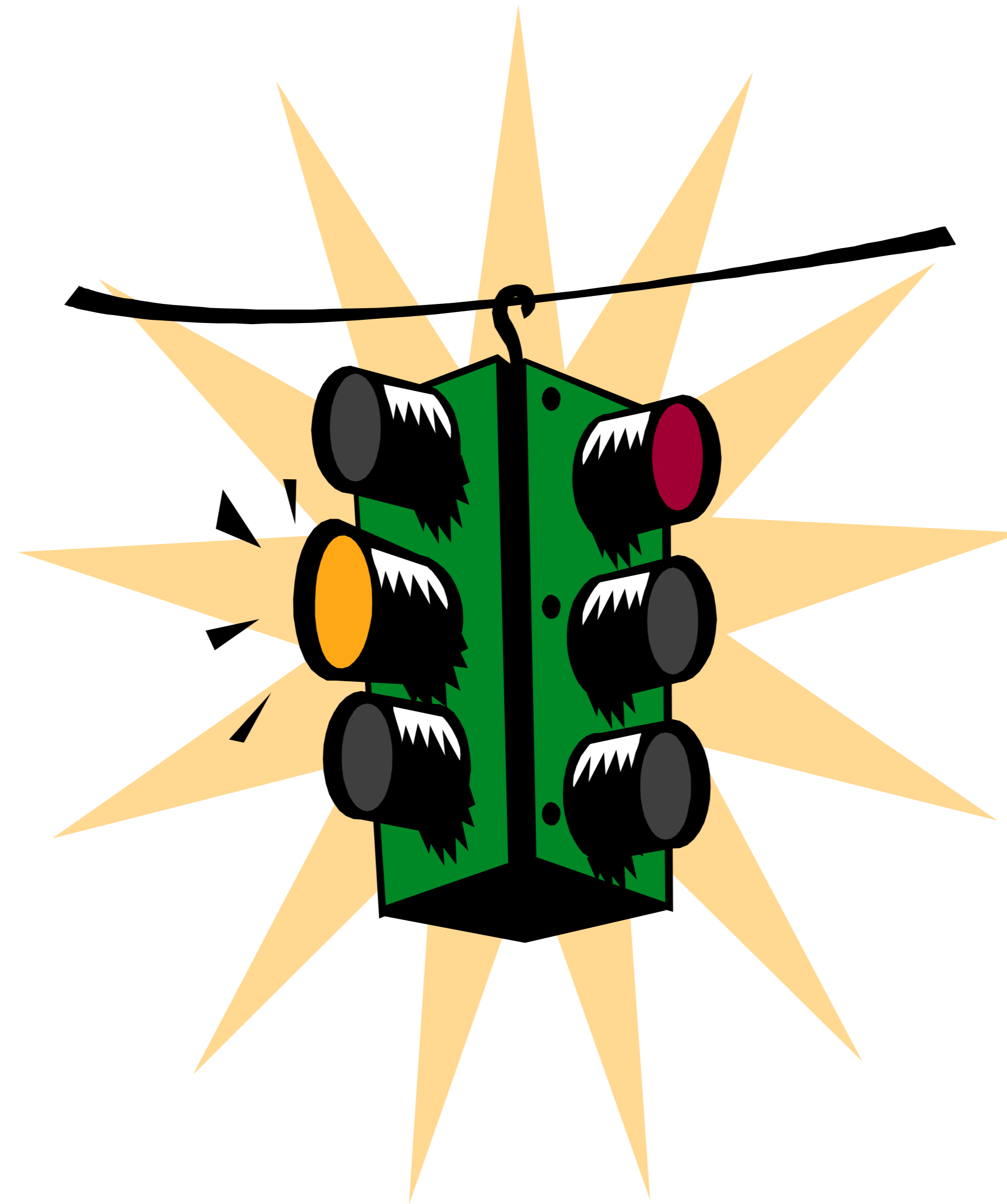


AIRBORNE GEOSPATIAL TECHNOLOGIES – CONSTRAINTS ON IMAGING

Alexander Koh, Geotechnologies, Bristol, United Kingdom

Supporting the airborne data acquisition and mapping industries



To view in full screen in Adobe Acrobat press the Ctrl + L key on your computer. Press Esc to return to normal view

Aerial Survey Platforms



Partenavia Observer



Cessna 404



Bell 412



Cessna 206



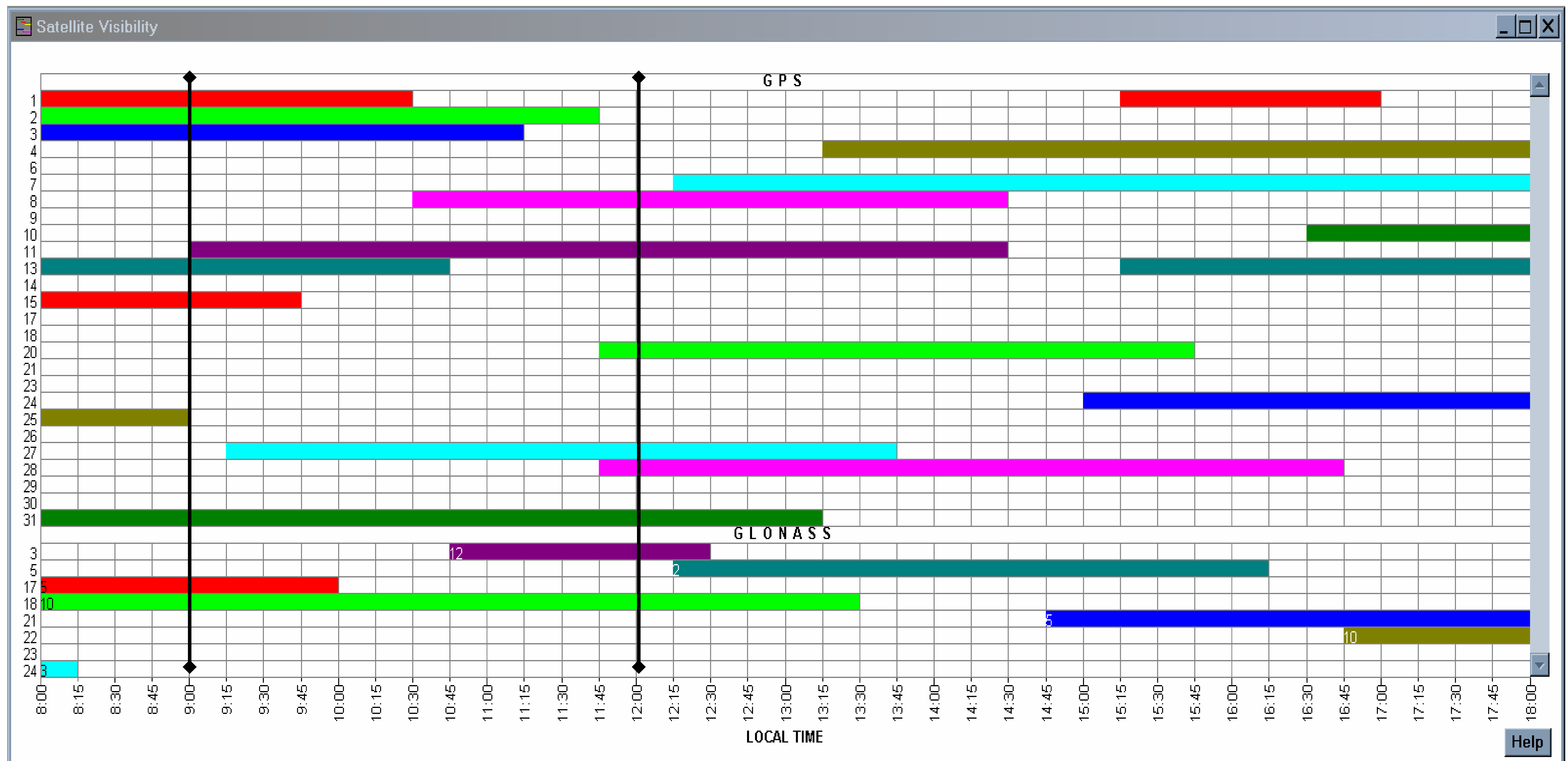
Ikarus C42

**Application - Payload – Range – Fuel Type – Crew -
Engineering**

Global Positioning Systems

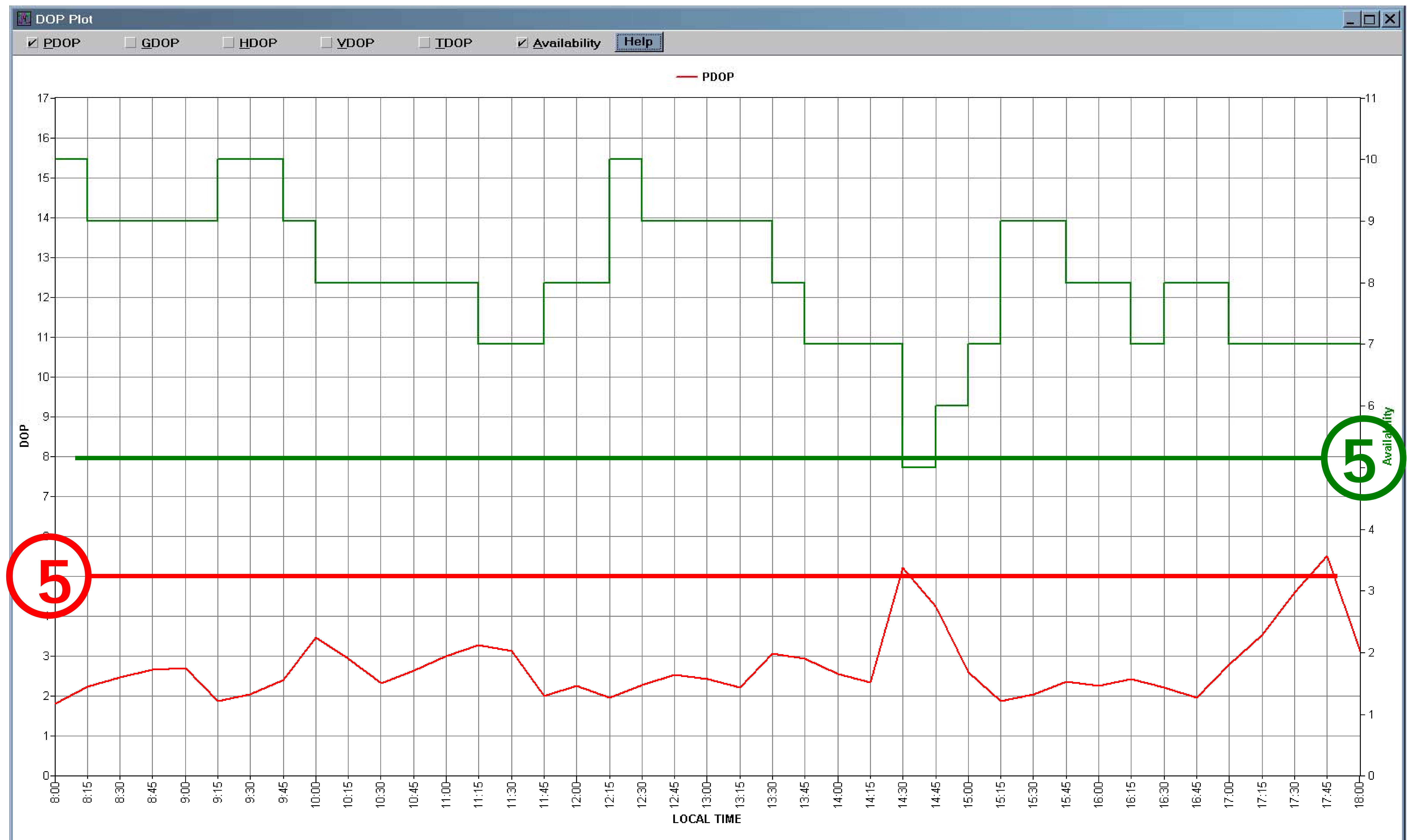
Availability satellite vehicles is critical and forward planning is required

GPS Almanac published in advance to allow for planning



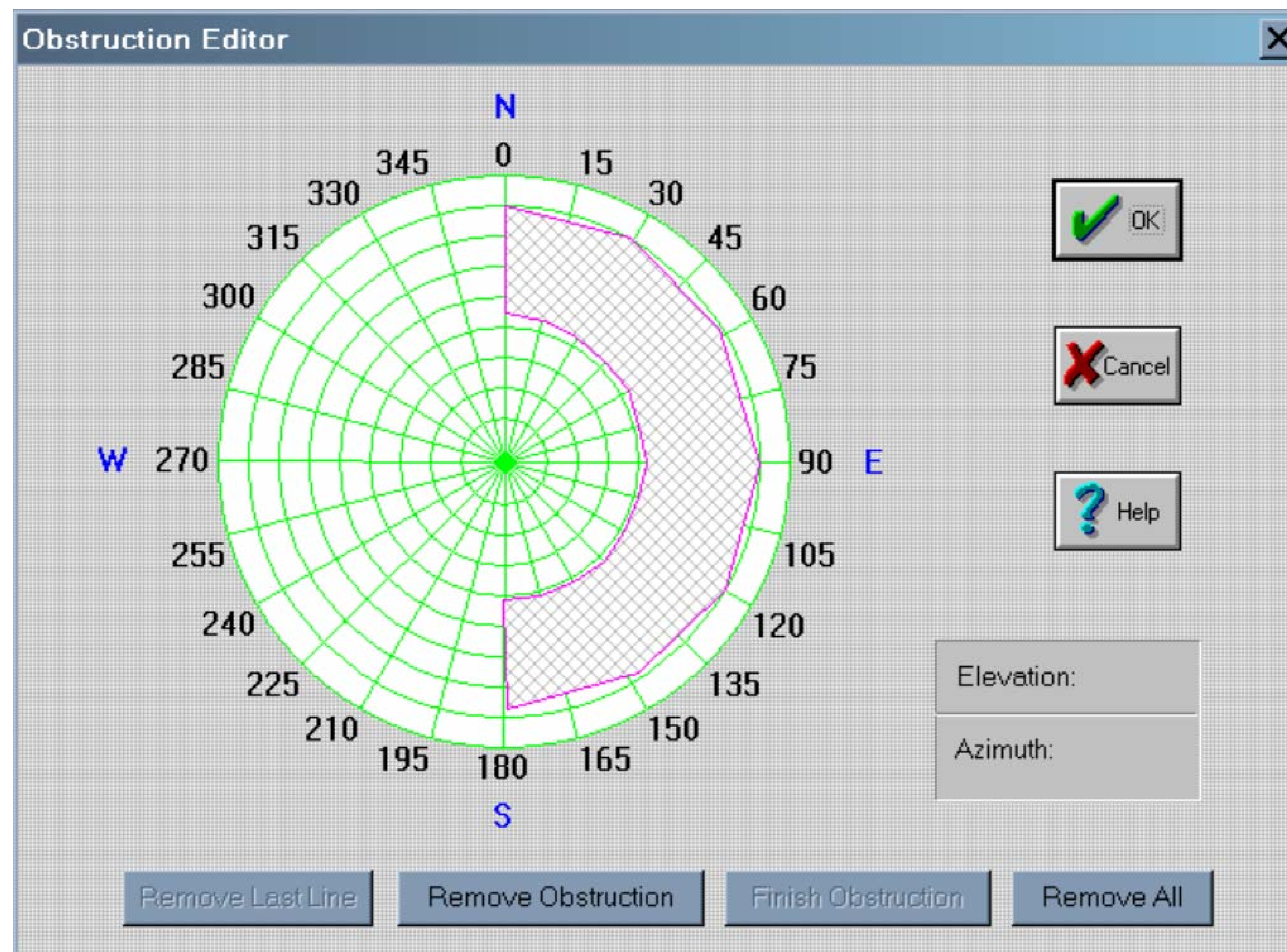
Global Positioning Systems

5 or more satellites always in view and with a dilution of precision (DOP) of less than 5 is required



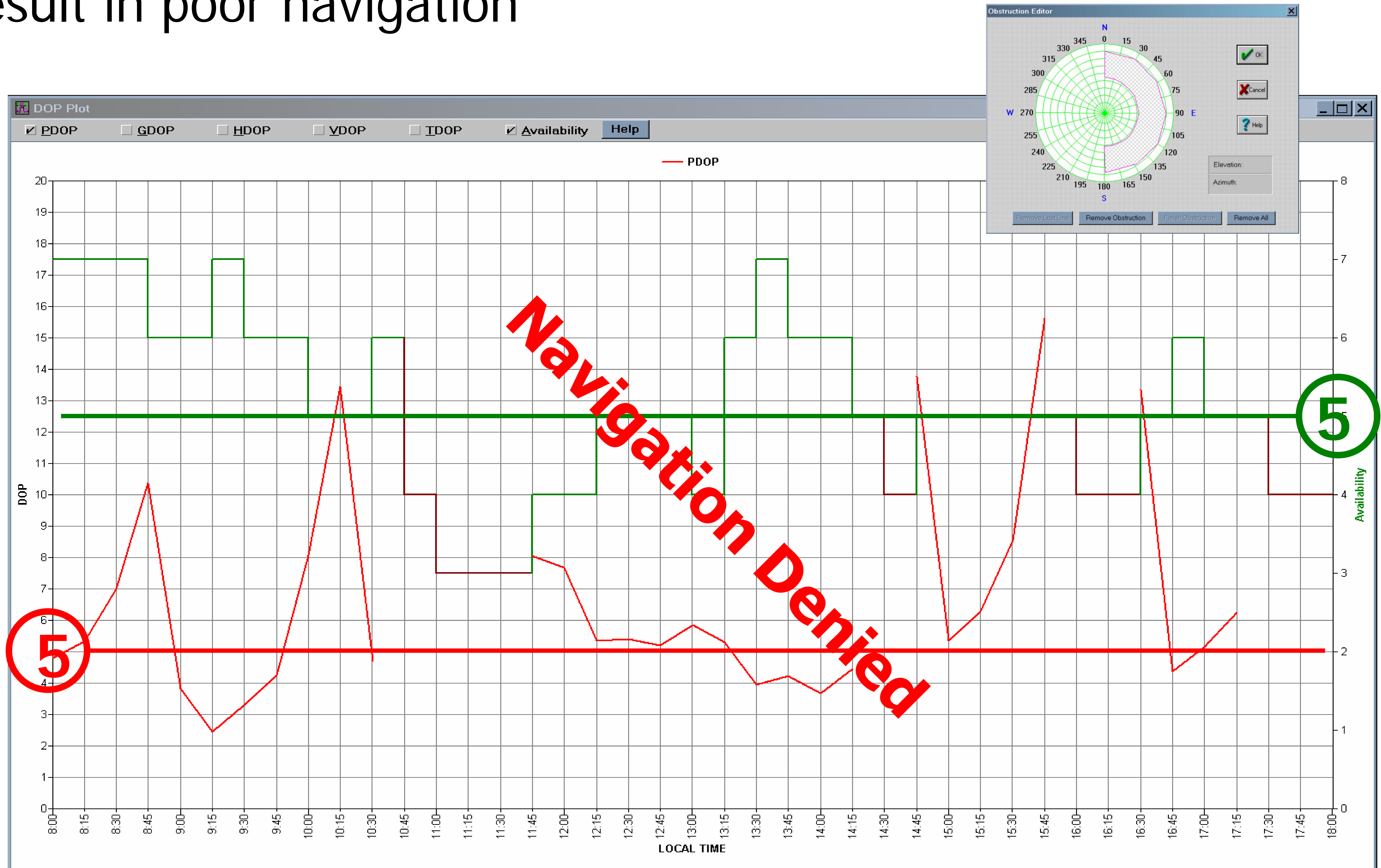
Global Positioning Systems

Obstructions to GPS constellation at an
Azimuth of 0° to 180° and with an Elevation of 48°
Minimum ground level is 0 meters above mean sea level



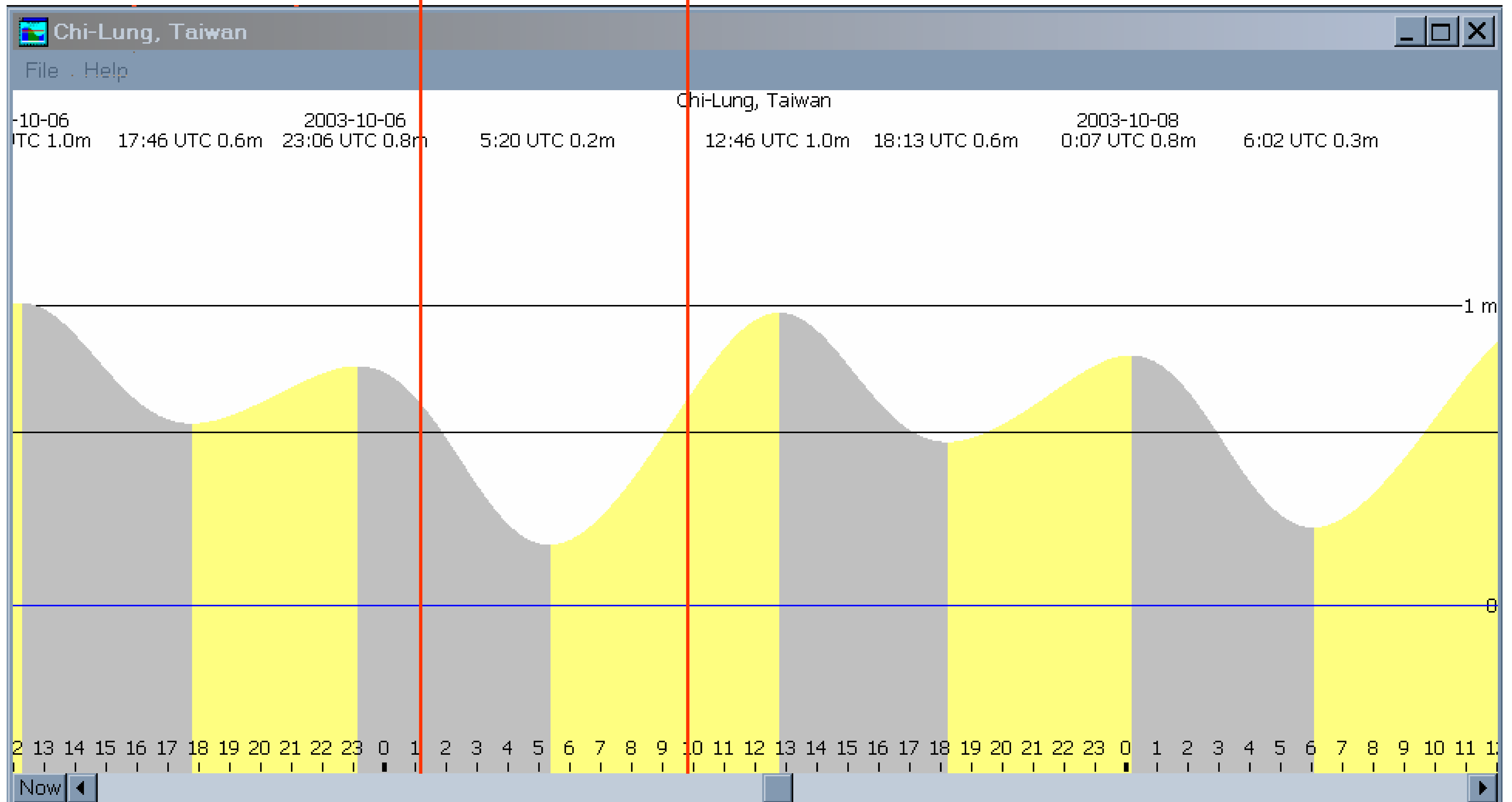
Global Positioning Systems

Navigation Denied - Obstructed Satellite Vehicles will result in poor navigation



Tidal Constraints on Image Acquisition

Aerial data acquisition windows of opportunities are severely limited on coastal zones or tidal areas



Weather

World Area Forecast Centres (WAFC)

- ✓ WAFC London & WAFC Washington
- ✓ Providing global upper wind and temperature data twice each day
- ✓ Delivering significant weather data (SIGWX) charts every six hours for FL250 and above
- ✓ SIGWX covers international flights operating over Europe, the Middle East, Asia, Australasia, Africa and the Atlantic
- ✓ Includes operational meteorology (OPMET) TAFs, METARs and SIGMETs

Weather


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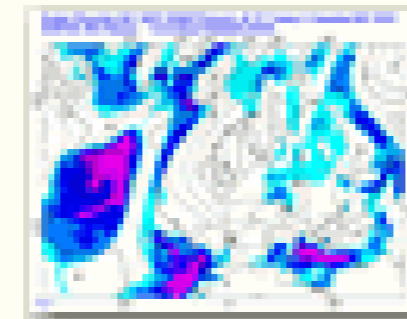


[Employment](#)

Data is now available from the new ECMWF Data Server



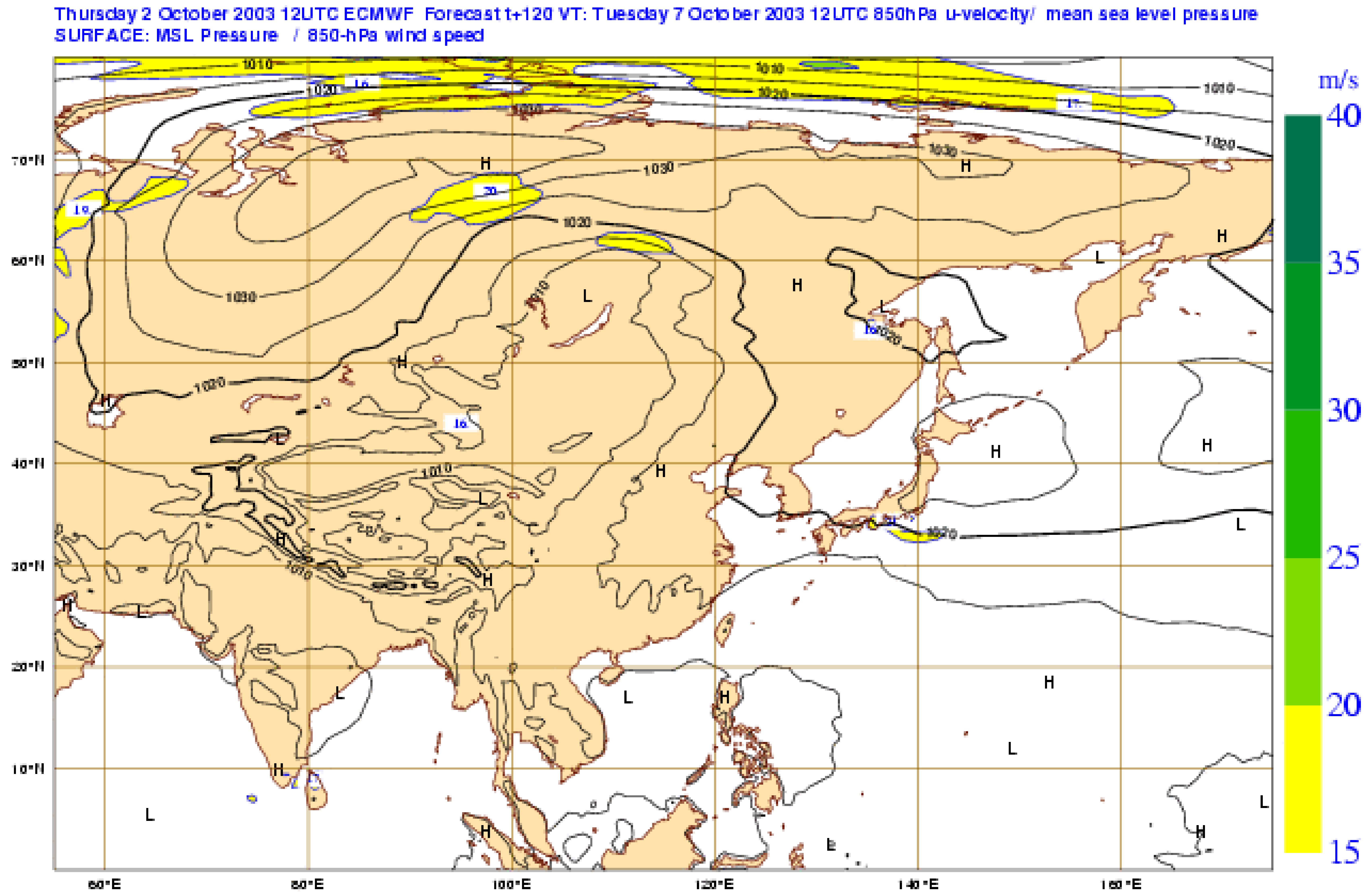
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Weather Constraints on Image Acquisition

Mean sea level pressure, wind speed at 850 hPa and geopotential 500 hPa for Tuesday 07 October 2003



Weather Constraints on Image Acquisition

Mean sea level pressure, wind speed at 850 hPa and geopotential 500 hPa for Thursday 09 October 2003

Thursday 2 October 2003 12UTC ECMWF Forecast t+168 VT: Thursday 9 October 2003 12UTC 850 hPa u-velocity/ mean sea level pressure
SURFACE: MSL Pressure / 850-hPa wind speed

