

INTRODUCTION TO SUNPATH DIAGRAMMS

Sun-path diagrams are a 2D representation of the annual movement of the sun through the sky. The calculated sunpath diagrams display the times and days of the year during which a selected surface/point is shaded.

The parameters in the sunpath diagrams are described below

- **AZIMUTH LINES:**

Azimuth angles run around the edge of the diagram in 15° increments. A point's azimuth from the reference position is measured in a clockwise direction from true north on the horizontal plane. True North on the stereographic diagram is marked with an N.

- **ALTITUDE LINES:**

Altitude angles are represented as concentric circular dotted lines that run from the centre of the diagram out, in 10° increments from 90 to 0. A point's altitude from the reference position is measured from the horizontal plane up.

- **DATE LINES:**

Date lines represent the path of the sun through the sky on one particular day of the year. They start on the eastern side of the graph and run to the western side. There are twelve of these lines shown, for the 1st day of each month. The first six months are shown as solid lines (Jan-Jun) whilst the last six months are shown as dotted (Jul-Dec), to allow a clear distinction even though the path of the sun is cyclical.

- **HOURLY LINES:**

Hour lines represent the position of the sun at a specific hour of the day, throughout the year. They are shown as figure-8 type lines (*Ana lemma*) that intersect the date lines. The intersection points between date and hour lines give the position of the sun. Half of each hour line is shown as dotted, to indicate that this is during the latter six months of the year.

The following figures are the sunpath diagrams for 'before' and 'after' scenarios for the proposed development at the selected points of study. These diagrams have been used to calculate the skylight and sunlight levels which are displayed in the results page of this report.

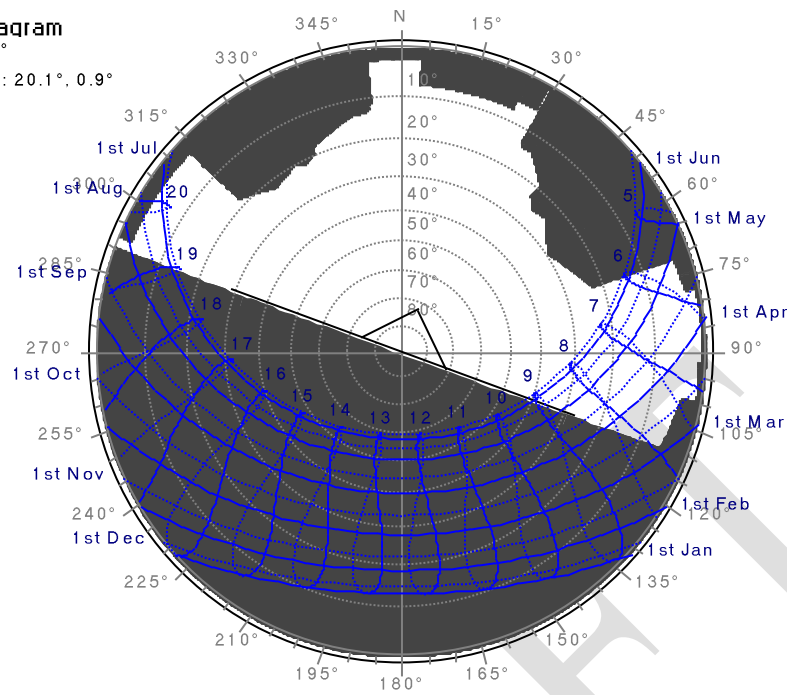
Point A

Before

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7572 Orientation: 20.1°, 0.9°

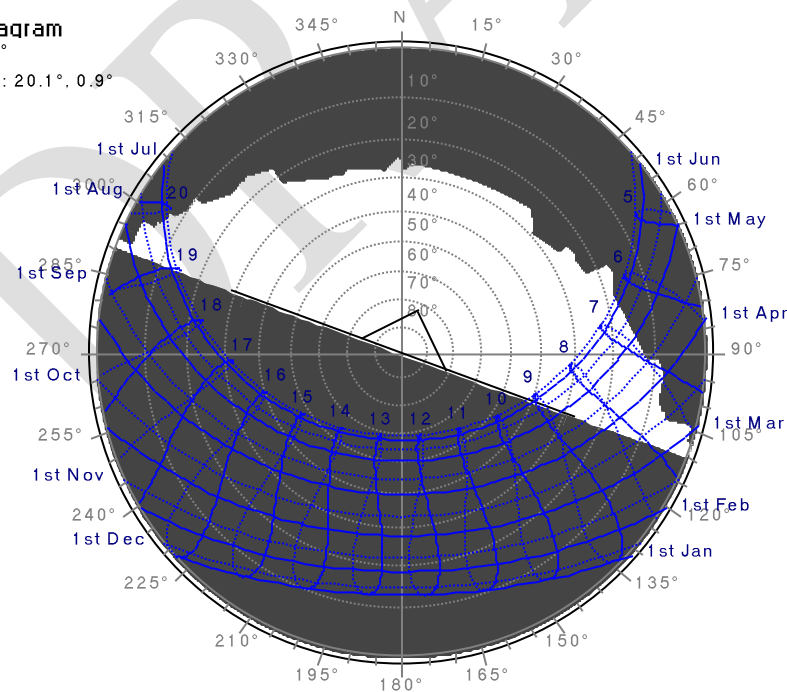


After

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7572 Orientation: 20.1°, 0.9°



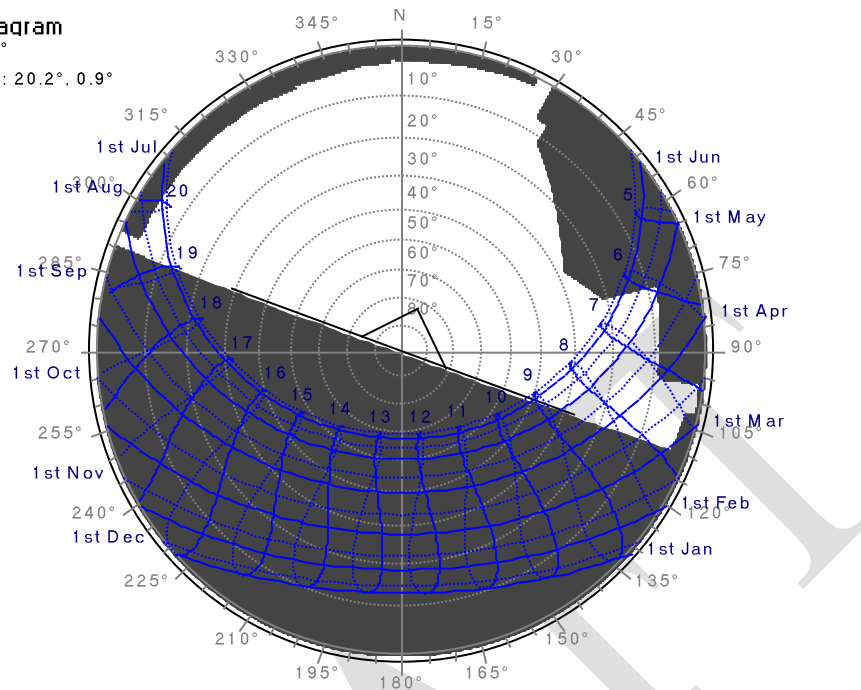
Point B

Before

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7583 Orientation: 20.2°, 0.9°

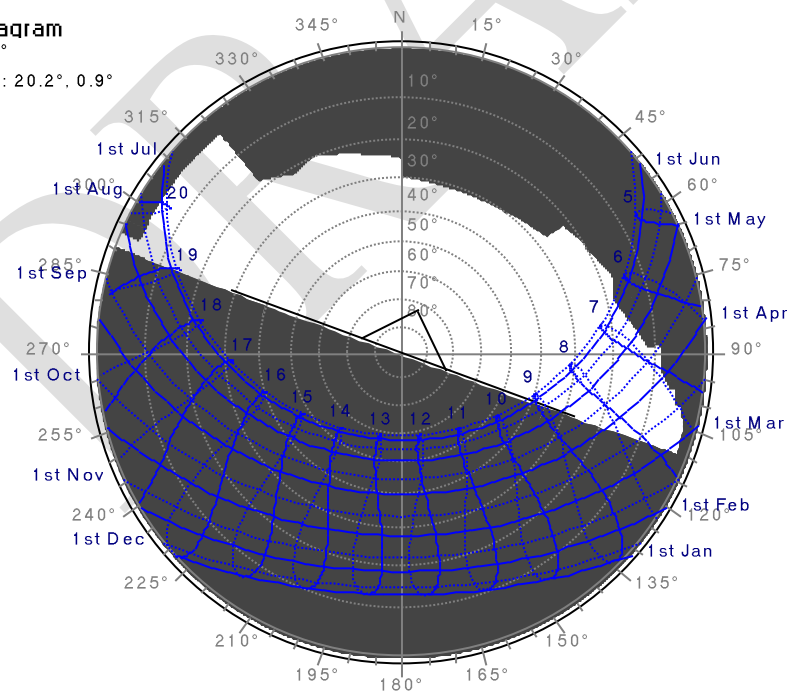


After

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7583 Orientation: 20.2°, 0.9°



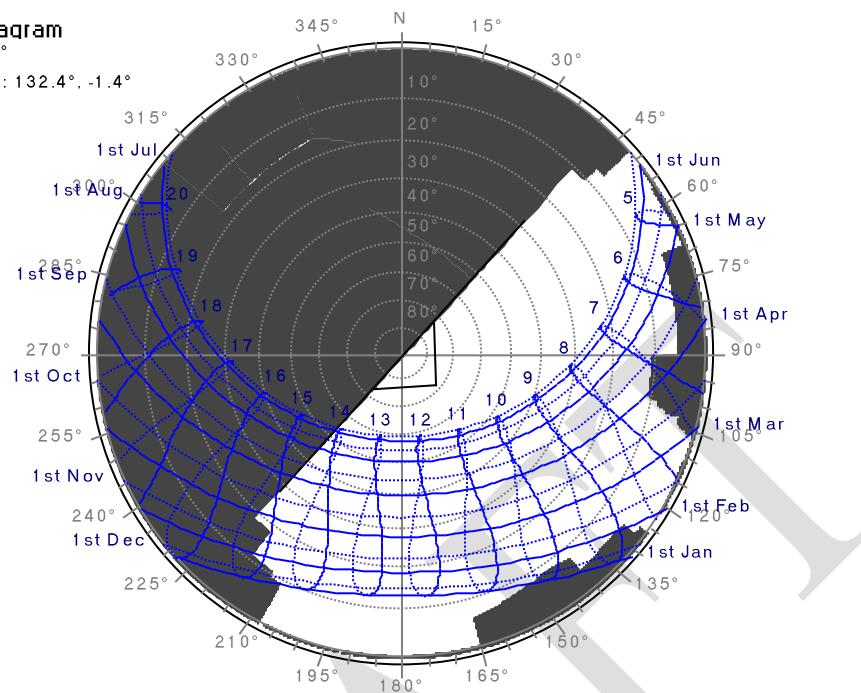
Point C

Before

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7584 Orientation: 132.4°, -1.4°

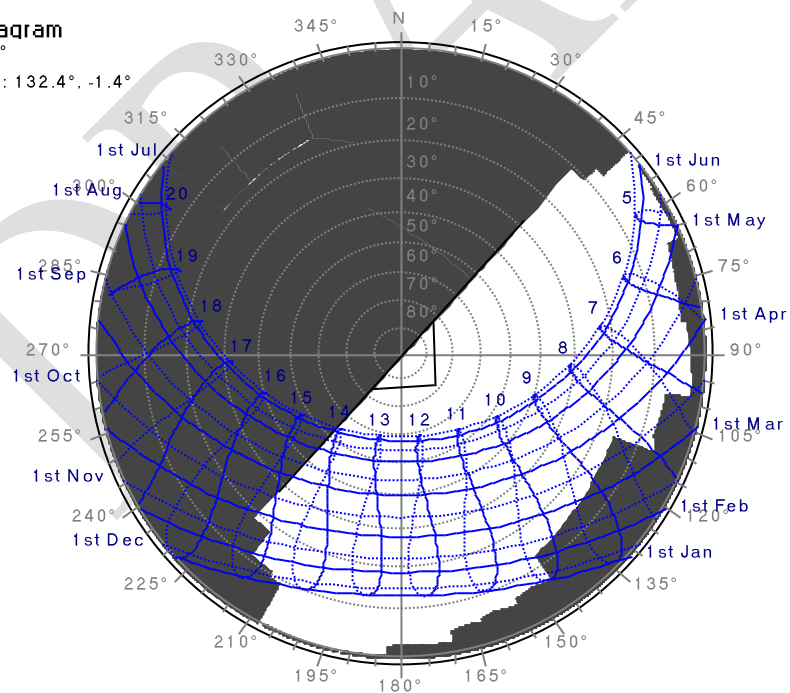


After

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7584 Orientation: 132.4°, -1.4°

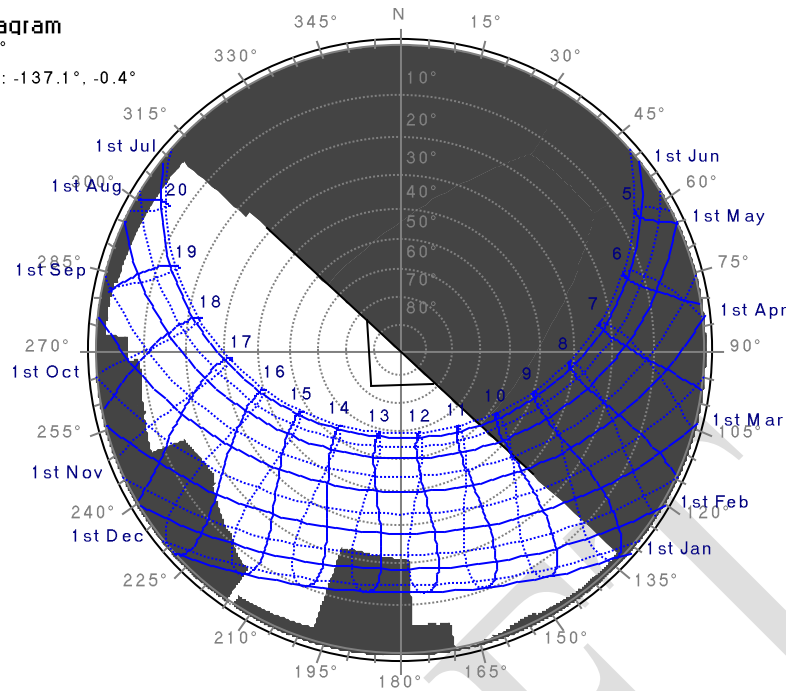


Point D

Before**Stereographic Diagram**

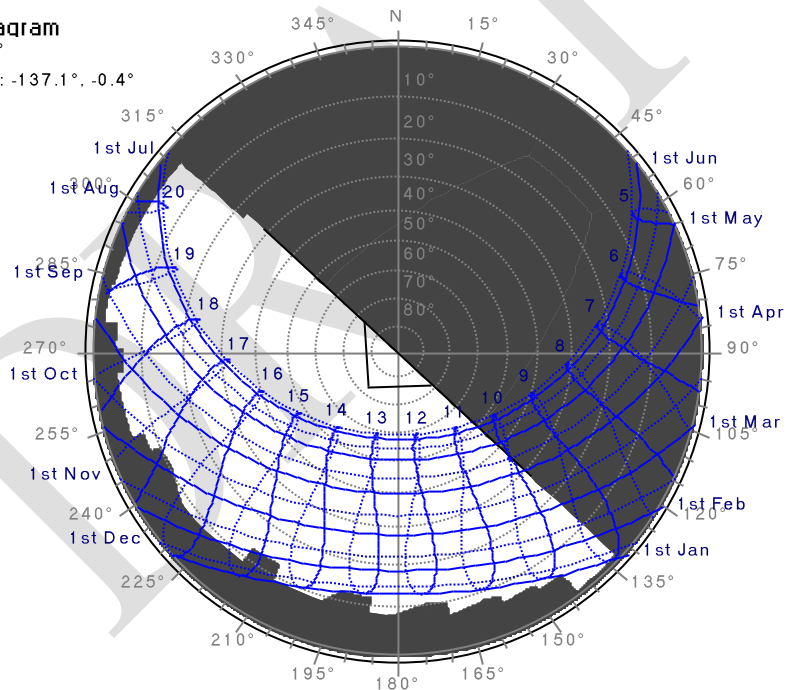
Location: 53.4°, -6.2°

Obj 7590 Orientation: -137.1°, -0.4°

**After****Stereographic Diagram**

Location: 53.4°, -6.2°

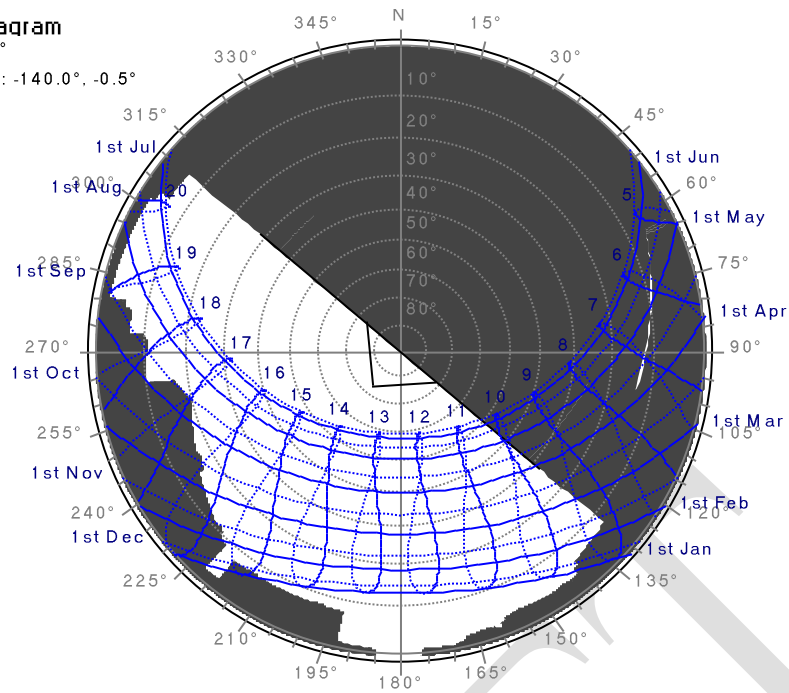
Obj 7590 Orientation: -137.1°, -0.4°

**Point E****Before**

Stereographic Diagram

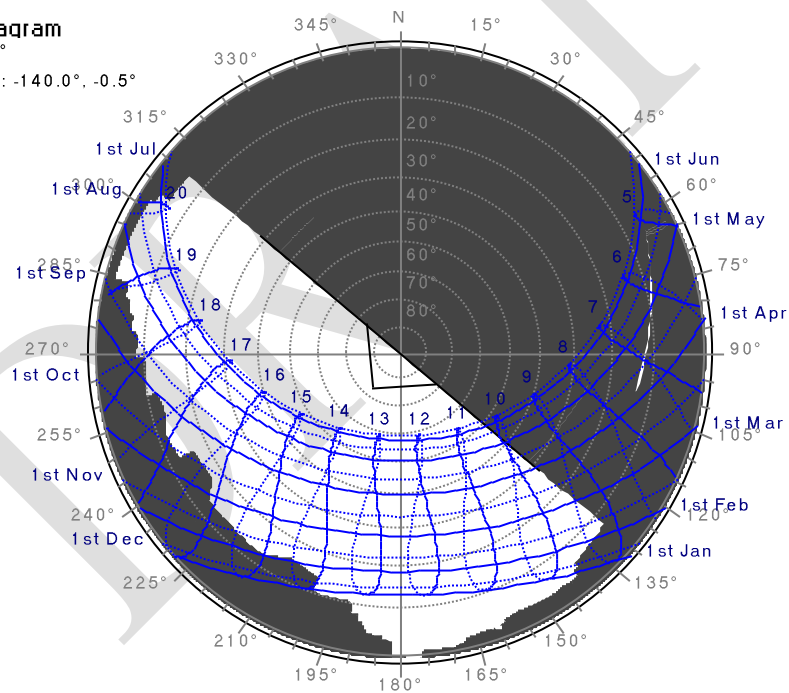
Location: 53.4°, -6.2°

Obj 7591 Orientation: -140.0°, -0.5°

**After****Stereographic Diagram**

Location: 53.4°, -6.2°

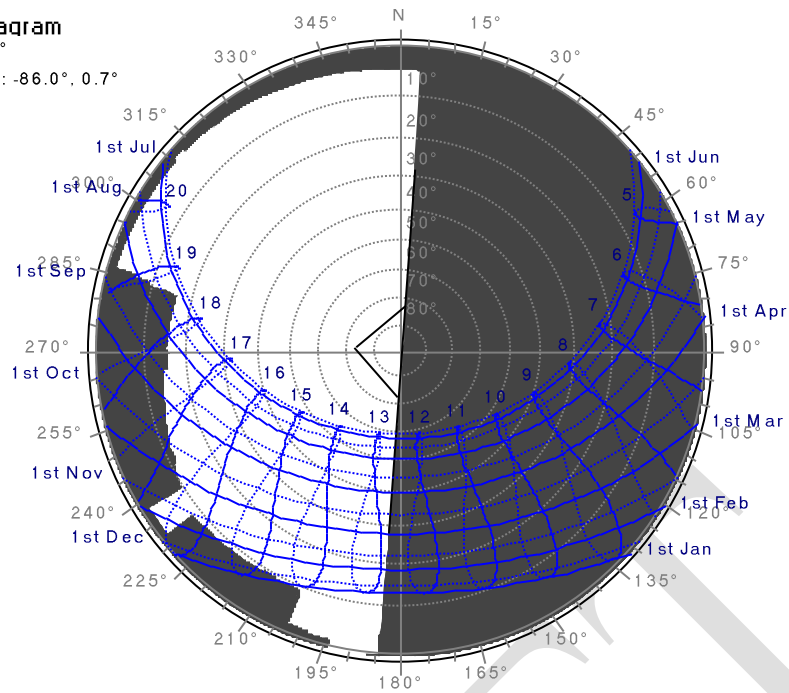
Obj 7591 Orientation: -140.0°, -0.5°

**Point F****Before**

Stereographic Diagram

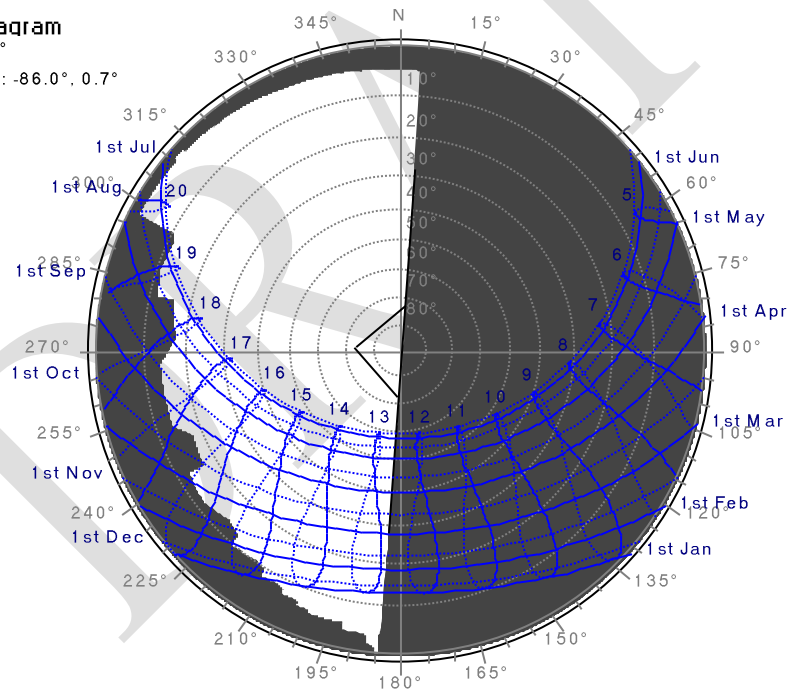
Location: 53.4°, -6.2°

Obj 7592 Orientation: -86.0°, 0.7°

**After****Stereographic Diagram**

Location: 53.4°, -6.2°

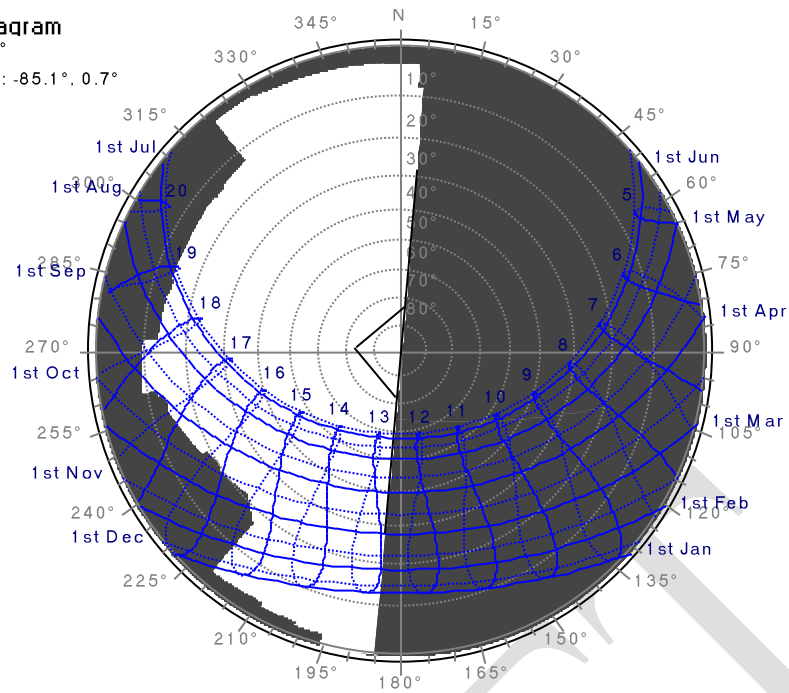
Obj 7592 Orientation: -86.0°, 0.7°

**Point G****Before**

Stereographic Diagram

Location: 53.4°, -6.2°

Obj 7593 Orientation: -85.1°, 0.7°

**After****Stereographic Diagram**

Location: 53.4°, -6.2°

Obj 7593 Orientation: -85.1°, 0.7°

