

**skyscapeR v0.4b**

<https://app.skyscaper.net>

User Guide  
v0.4b (17 IV 2017)

*skyscapeR* (pronounced *sky-scaper*) is an online app focused on the visualization and analysis of archaeoastronomical data.

It is built in *R* using *RStudio* and *Shiny*. It also uses the *R* packages *astrolibR* and *palinsol* for its astronomical calculations.



<https://www.r-project.org/>



<https://www.rstudio.com>



<https://shiny.rstudio.com>

It is run on an Amazon Web Services E2 Compute Cloud server.

It is optimised (thanks to *Shiny*) to run on any device (desktops, laptops, tablets and phones)!

This is still under construction: help pages, more information and more modules will be added later. You are all part of the closed beta testing programme. If the site is offline, if something isn't clear, if something doesn't work or if you'd like some facility to be added, email me!!

This is the main page. It shows the typical panels that are found throughout *skyscapeR*:

skyscapeR v0.4b    About    Data Entry    Visualization    Horizon    Tools ▾    Help

## Welcome to the skyscapeR app

v0.4 (13 IV 2017) - beta build

skyscapeR is an online app focused on the visualization and analysis of archaeoastronomical data. It is built in R using RStudio and Shiny. It also uses the R packages *astrolibR* and *palinsol* for its astronomical calculations.

This is still under construction: help pages, more information and more modules will be added later.

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This is the main page. It shows the typical panels that are found throughout *skyscapeR*:

The screenshot displays the main interface of the *skyscapeR* application. At the top, a blue header bar contains the text "skyscapeR v0.4b" on the left and a navigation menu with tabs: "About", "Data Entry", "Visualization", "Horizon", "Tools ▾", and "Help". The "About" tab is highlighted with a red box. Below the header, the main content area has a dark background featuring a large, circular star trail photograph. On the left side of this area, there is a white sidebar containing the following text and logos:

Welcome to the *skyscapeR* app  
v0.4 (13 IV 2017) - beta build  
*skyscapeR* is an online app focused on the visualization and analysis of archaeoastronomical data. It is built in *R* using *RStudio* and *Shiny*. It also uses the *R* packages *astrolibR* and *palinsol* for its astronomical calculations.

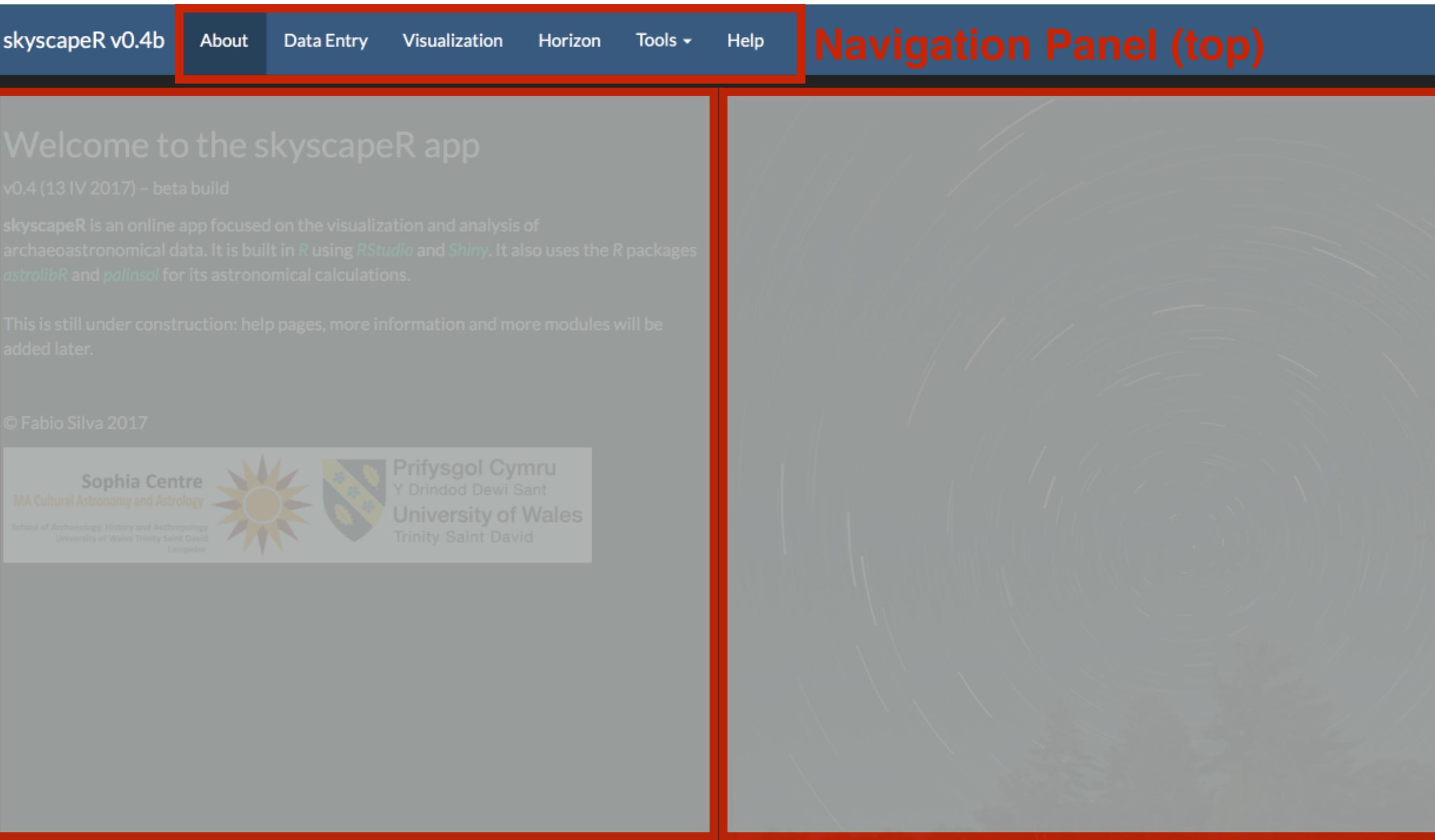
This is still under construction: help pages, more information and more modules will be added later.

© Fabio Silva 2017

**Sophia Centre**  
MA Cultural Astronomy and Astrology  
School of Archaeology, History and Anthropology  
University of Wales Trinity Saint David Lampeter

  Prifysgol Cymru  
Y Drindod Dewi Sant  
University of Wales  
Trinity Saint David

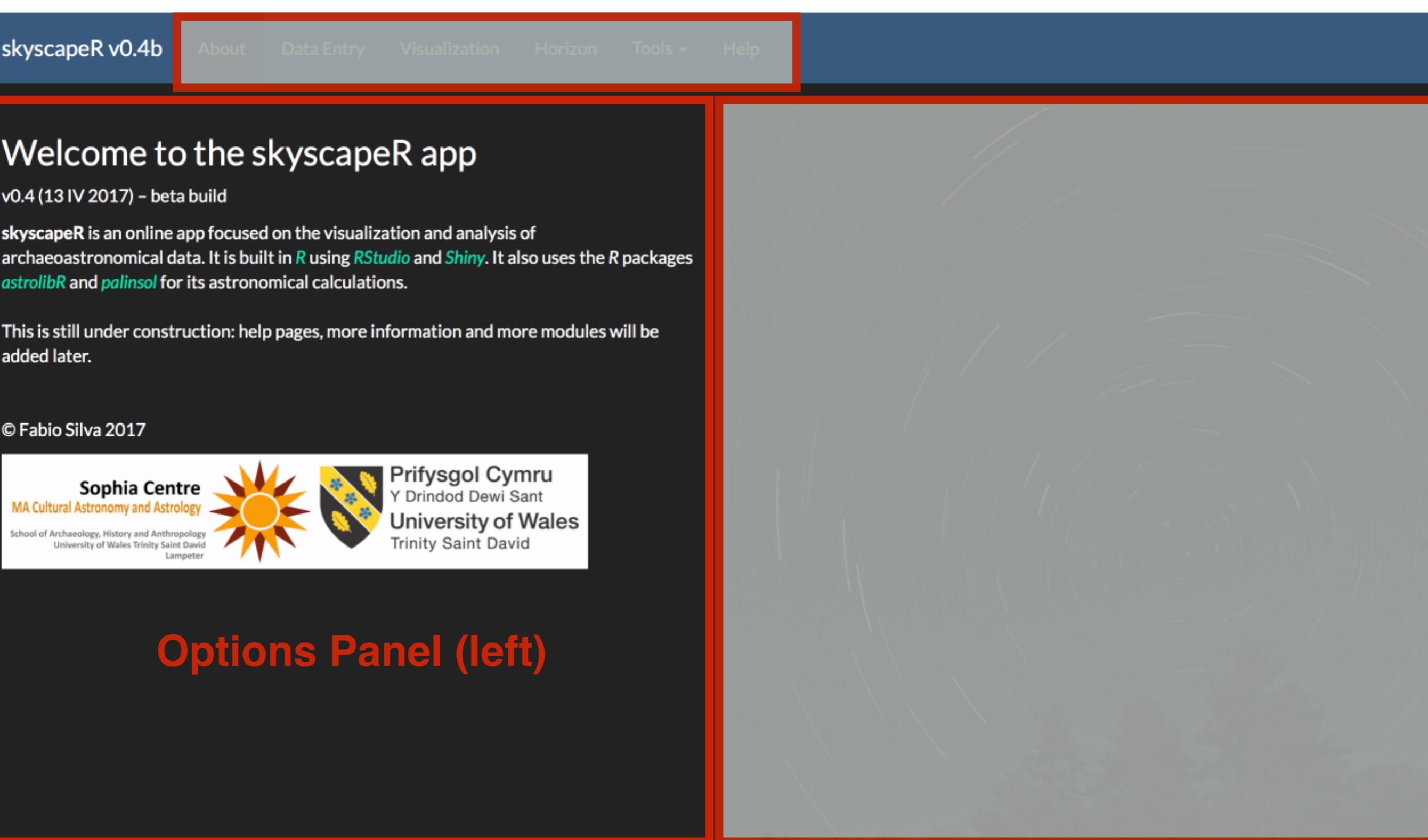
This is the main page. It shows the typical panels that are found throughout *skyscapeR*:



The screenshot displays the skyscapeR application interface. At the top, there is a blue header bar with the text "skyscapeR v0.4b" on the left and a navigation menu on the right. The navigation menu items include "About", "Data Entry", "Visualization", "Horizon", "Tools ▾", and "Help". The "About" item is highlighted with a red border. To the right of the menu, the text "Navigation Panel (top)" is displayed in red. Below the header, the main content area has a light gray background. On the left side of this area, the text "Welcome to the skyscapeR app" is displayed in large, bold, black font. Underneath it, the text "v0.4 (13 IV 2017) - beta build" is shown in a smaller, gray font. Further down, a detailed description of the app's purpose and technology is provided: "skyscapeR is an online app focused on the visualization and analysis of archaeoastronomical data. It is built in R using RStudio and Shiny. It also uses the R packages astrolibR and palinsol for its astronomical calculations." At the bottom left, there is a footer section containing logos and text for the Sophia Centre and the University of Wales Trinity Saint David. The Sophia Centre logo features a stylized sun icon, and the university logo features a shield with three blue flowers. The footer text includes "Sophia Centre", "MA Cultural Astronomy and Astrology", "School of Archaeology, History and Anthropology", "University of Wales Trinity Saint David Lampeter", "Prifysgol Cymru", "Y Drindod Dewi Sant", "University of Wales", and "Trinity Saint David".

# skyscapeR v0.4b

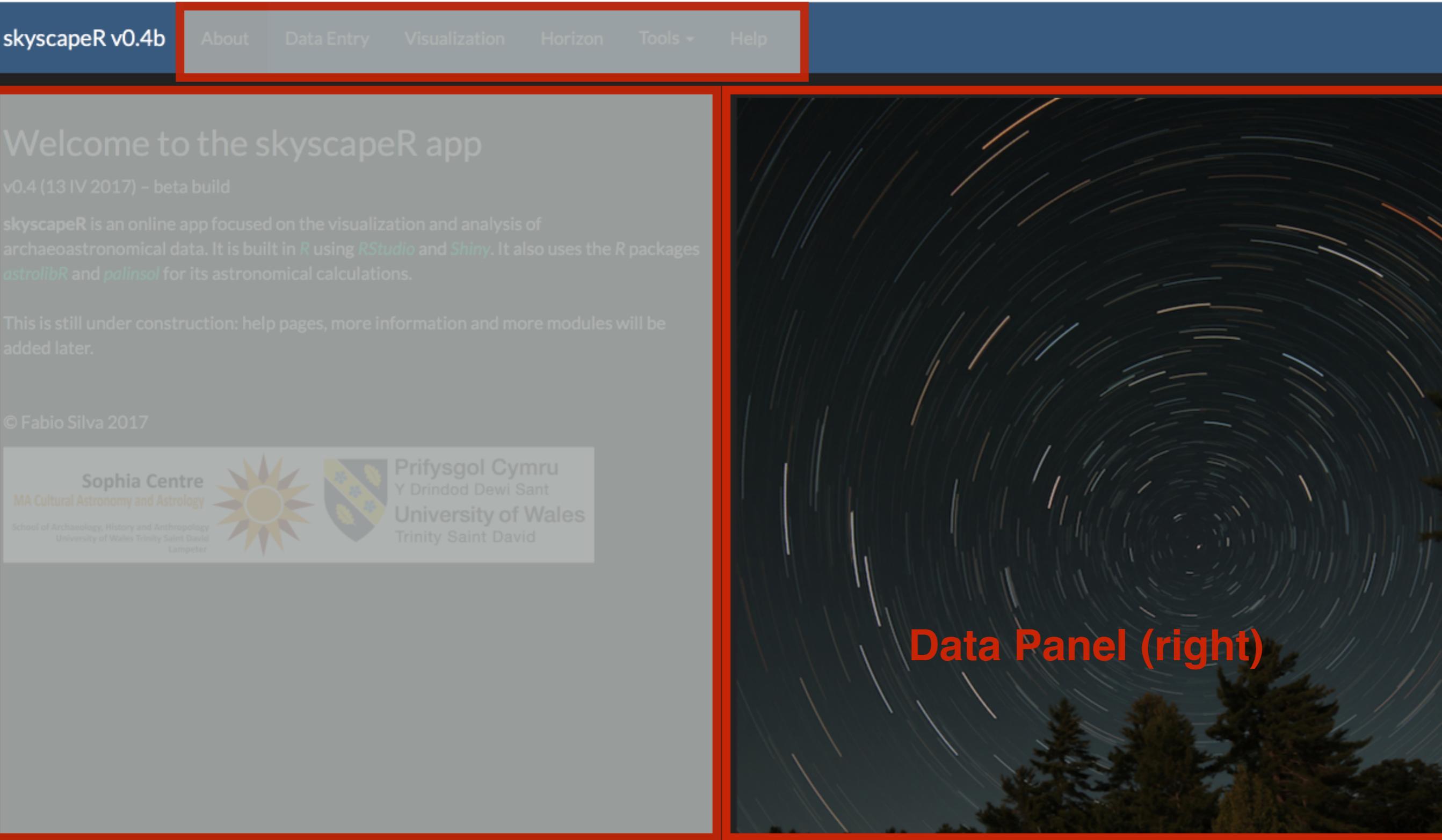
This is the main page. It shows the typical panels that are found throughout *skyscapeR*:



The screenshot shows the main interface of the *skyscapeR* application. At the top, there is a blue header bar with the text "skyscapeR v0.4b" on the left and a navigation menu on the right containing "About", "Data Entry", "Visualization", "Horizon", "Tools ▾", and "Help". The "About" item is highlighted with a red box. Below the header, the main content area has a dark background. On the left side of this area, the text "Welcome to the skyscapeR app" is displayed in large white font, followed by "v0.4 (13 IV 2017) - beta build". Below this, a paragraph describes the app as an online tool for archaeoastronomical data visualization and analysis, built using R, RStudio, and Shiny, and utilizing the *astrolibR* and *palinsol* packages. Further down, a note states "This is still under construction: help pages, more information and more modules will be added later." In the bottom left corner of the main content area, there is a copyright notice: "© Fabio Silva 2017". At the very bottom of the page, there are two logos: "Sophia Centre MA Cultural Astronomy and Astrology" with a stylized sun icon, and "Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David" with its heraldic crest. The right side of the interface features a large, faint circular graphic.

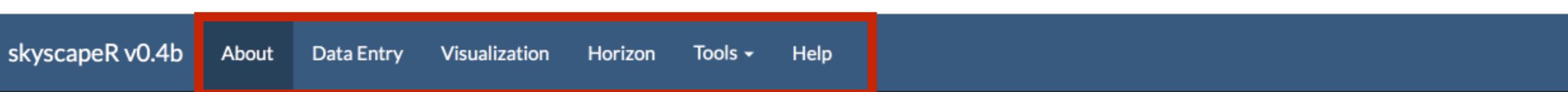
Options Panel (left)

This is the main page. It shows the typical panels that are found throughout *skyscapeR*:



The screenshot displays the skyscapeR application interface. At the top, a blue header bar contains the text "skyscapeR v0.4b". Below this is a navigation menu with tabs: "About", "Data Entry", "Visualization", "Horizon", "Tools ▾", and "Help". The "About" tab is highlighted with a red border. The main content area on the left is titled "Welcome to the skyscapeR app" and includes the version information "v0.4 (13 IV 2017) - beta build". It also provides a brief description of the app: "skyscapeR is an online app focused on the visualization and analysis of archaeoastronomical data. It is built in R using RStudio and Shiny. It also uses the R packages astrolibR and palinsol for its astronomical calculations." A note states: "This is still under construction: help pages, more information and more modules will be added later." The bottom left corner credits "© Fabio Silva 2017". The bottom right corner features a large, circular star trail visualization against a dark background, with the text "Data Panel (right)" overlaid in red.

The Navigation panel shows the different *Modules* (or pages) that are available.



**Data Entry:** allows users to either: a) choose a published dataset, which is useful to learn how to use the app, or b) upload their own field data

**Visualization:** allows for visualization of the data entered as a) data points, b) a histogram and/or c) a curvigram

**Horizon:** allows the user to download a previously created HeyWhatThat panorama into skyscapeR and display orbits of celestial objects, as well as measurements on top of it

**Tools:** smaller apps to assist the skyscape researcher

**Help:** a help page — out-of-date and will be replaced by this pdf soon!!

# The Data Entry module

[skyscapeR v0.4b](#)   [About](#)   [Data Entry](#)   [Visualization](#)   [Horizon](#)   [Tools ▾](#)   [Help](#)

This is the Data Entry page

skyscapeR v0.4b   About   **Data Entry**   Visualization   Horizon   Tools ▾   Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

none

data

Please upload or select a dataset

or Upload your own Data

Browse...

No file selected

Note : Make sure the datafile follows the template which [can be downloaded here](#)

 Download Data

# skyscapeR v0.4b

This is the Data Entry page

skyscapeR v0.4b

About Data Entry Visualization Horizon Tools ▾ Help

## Navigation Panel (top)

### Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

none

data

Please upload or select a dataset

or Upload your own Data

Browse...

No file selected

Note : Make sure the datafile follows the template which [can be downloaded here](#)

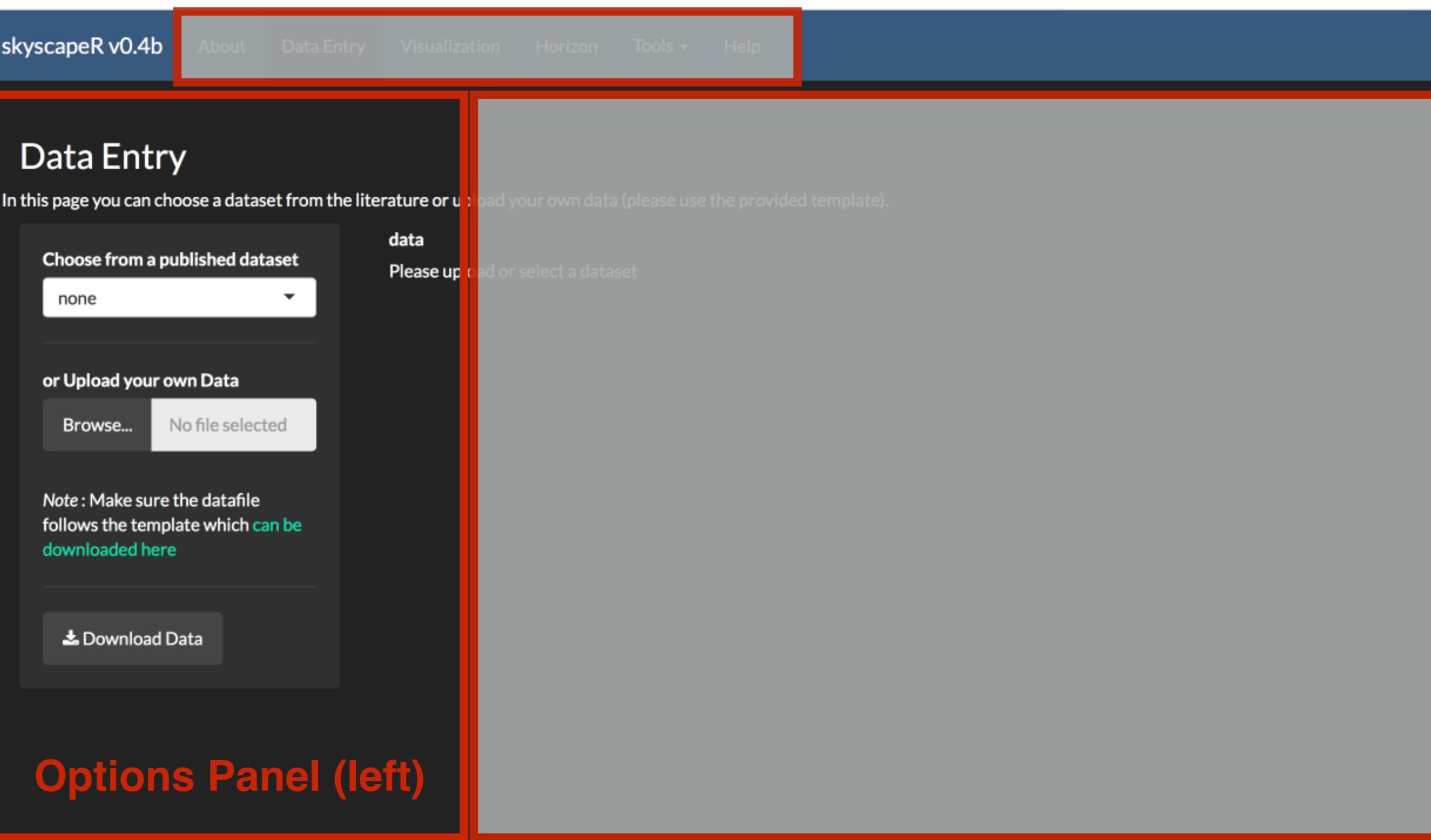
 Download Data

## Data Panel (right)

## Options Panel (left)

# skyscapeR v0.4b

Lets take a closer look at the Options Panel



skyscapeR v0.4b

About Data Entry Visualization Horizon Tools Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

data

Please upload or select a dataset

none

or Upload your own Data

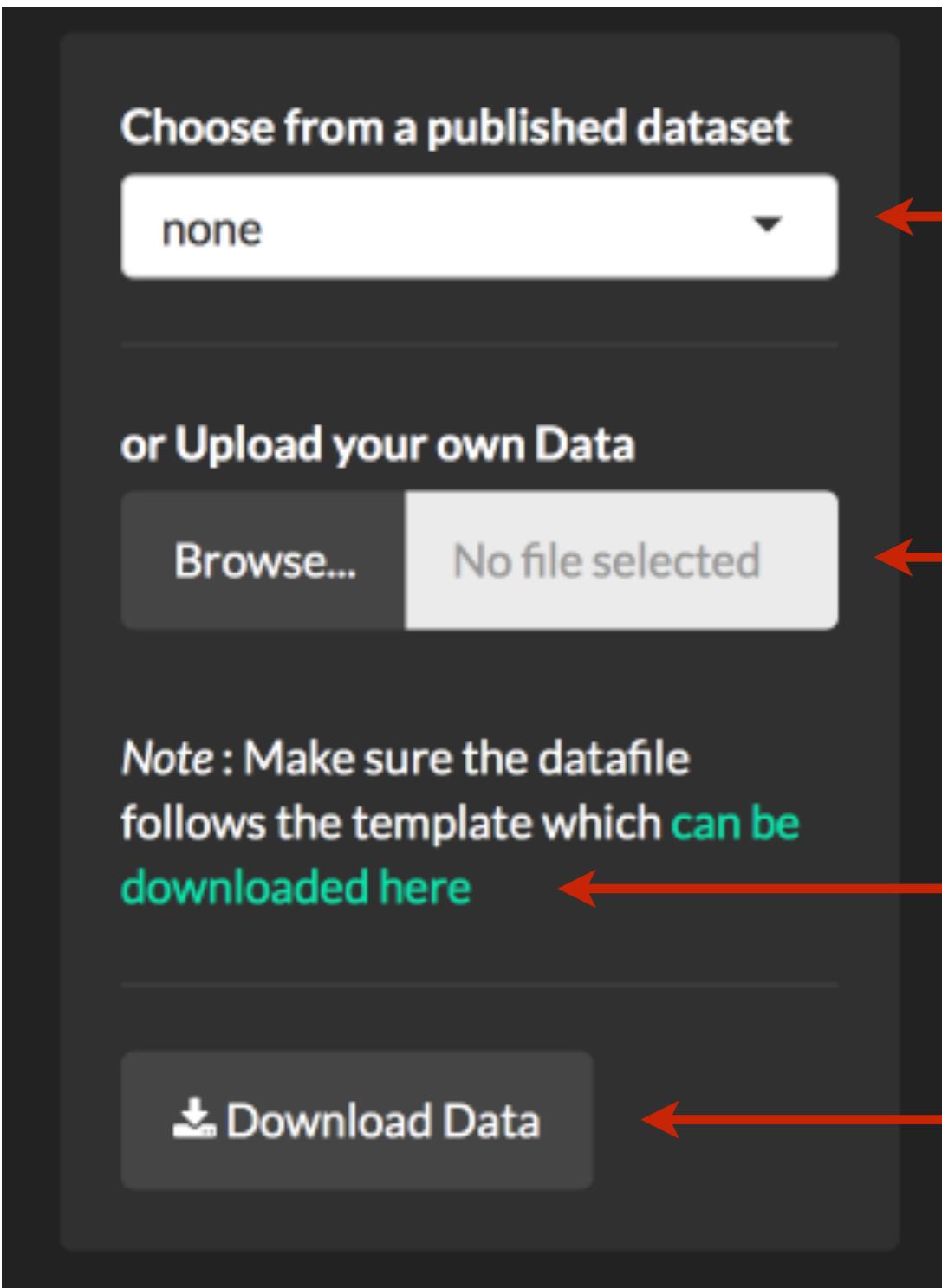
Browse... No file selected

Note : Make sure the datafile follows the template which [can be downloaded here](#)

Download Data

**Options Panel (left)**

This is the Options Panel for the Data Entry module. With it you can:



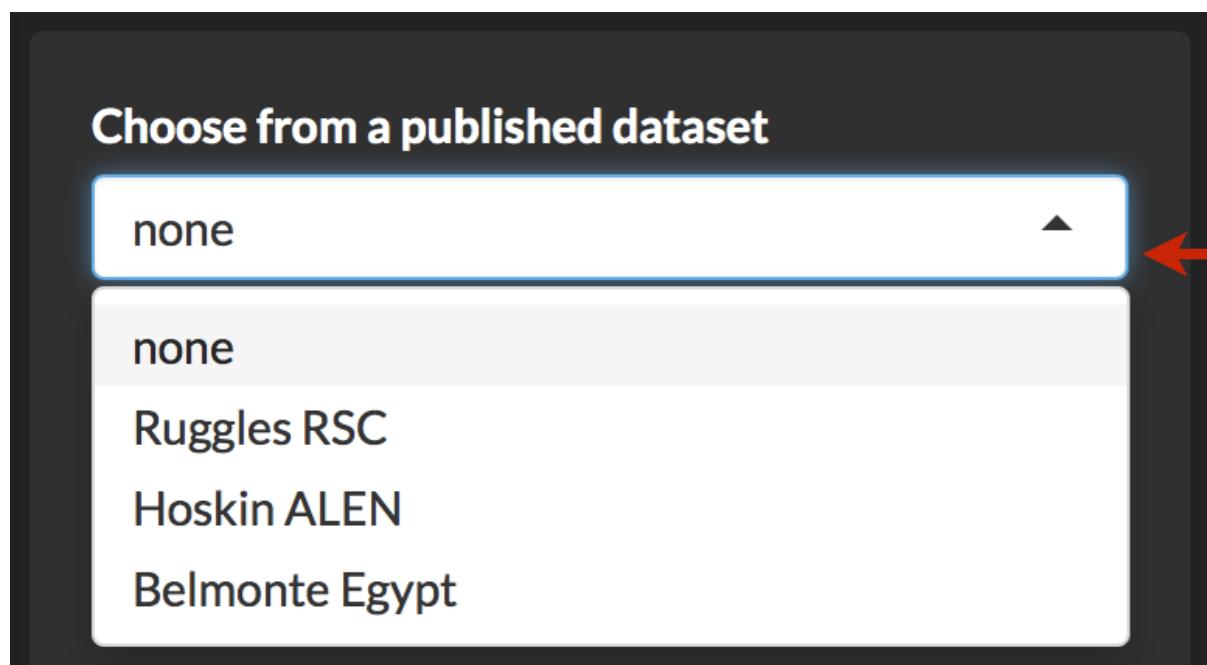
Choose a pre-existing dataset

Upload your data

Download a data template

Download the data that is on screen

This is the Options Panel for the Data Entry module. With it you can:



## Choose a pre-existing dataset

- 1) Scottish Recumbent Stone Circle (RSC) data from Ruggles 1999
- 2) Alentejan (ALEN) Seven-Stone Anta data from Hoskin 2001
- 3) Egyptian Temple data from Belmonte and Shaltout 2009

These datasets include only declinations (so you can't display them on the Horizon module, for which azimuths and altitudes are needed, as we will see later)

When you click on one of these, the Data panel (right side) will display the data

When you click on a dataset, the Data panel will display the data. You can scroll down to see it all.

skyscapeR v0.4b   About   Data Entry   Visualization   Horizon   Tools ▾   Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

Ruggles RSC

or Upload your own Data

Browse...

No file selected

Note : Make sure the datafile follows the template which [can be downloaded here](#)

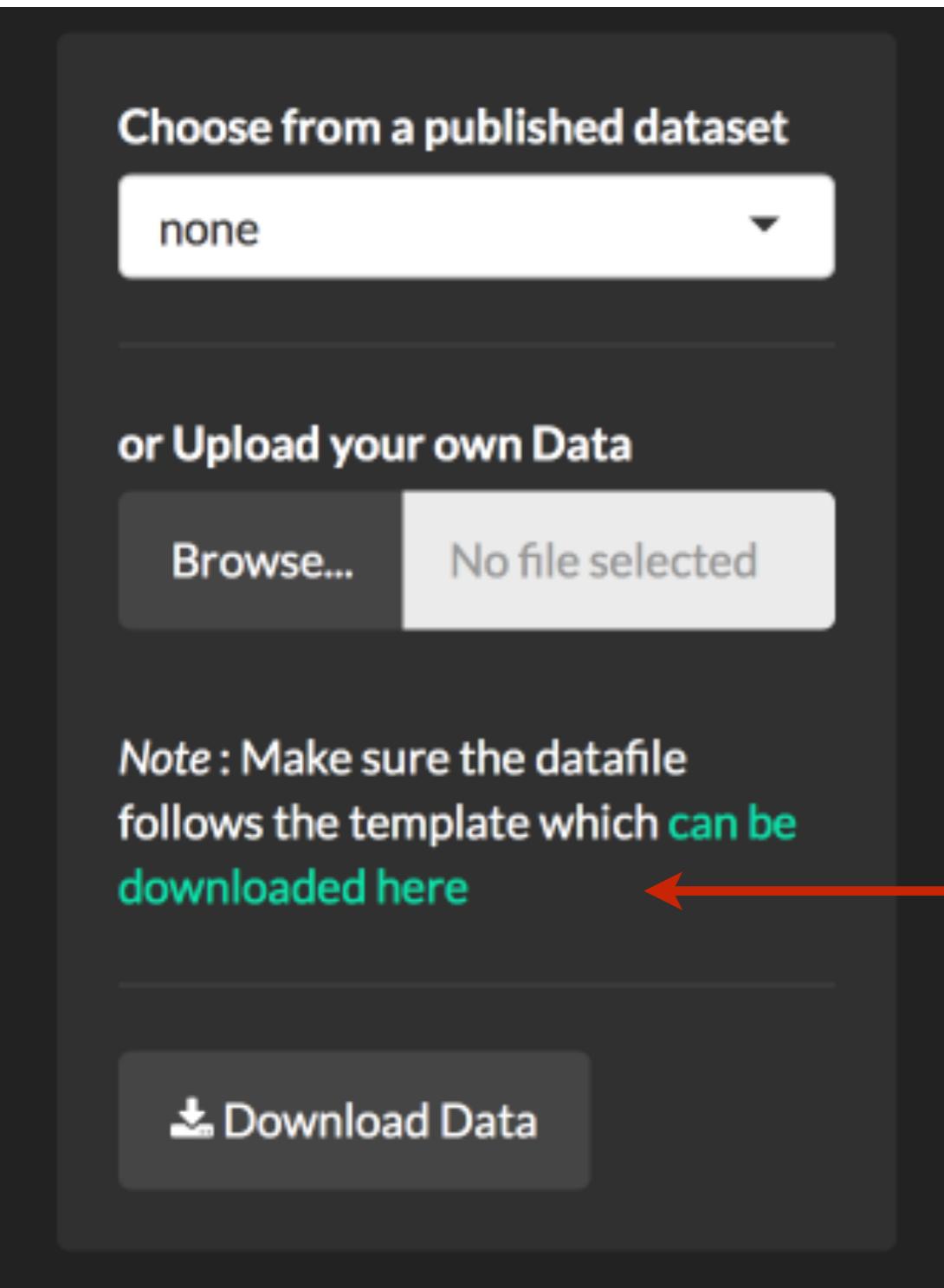
 Download Data

ID	Dec
RSC5	-19.40
RSC6	-31.60
RSC7	-29.40
RSC11	-30.80
RSC12	-32.20
RSC17	-32.20
RSC20	-31.60
RSC23	-24.80
RSC24	-31.20
RSC25	-31.80
RSC37	-29.00
RSC39	-31.00
RSC47	-30.80
RSC48	-30.20
RSC49	-26.80
RSC54	-32.60
RSC55	-27.80
RSC56	-24.20
RSC59	00.00

## Data Panel (right)

To upload your own data the process is slightly different:

To upload your own data the process is slightly different:



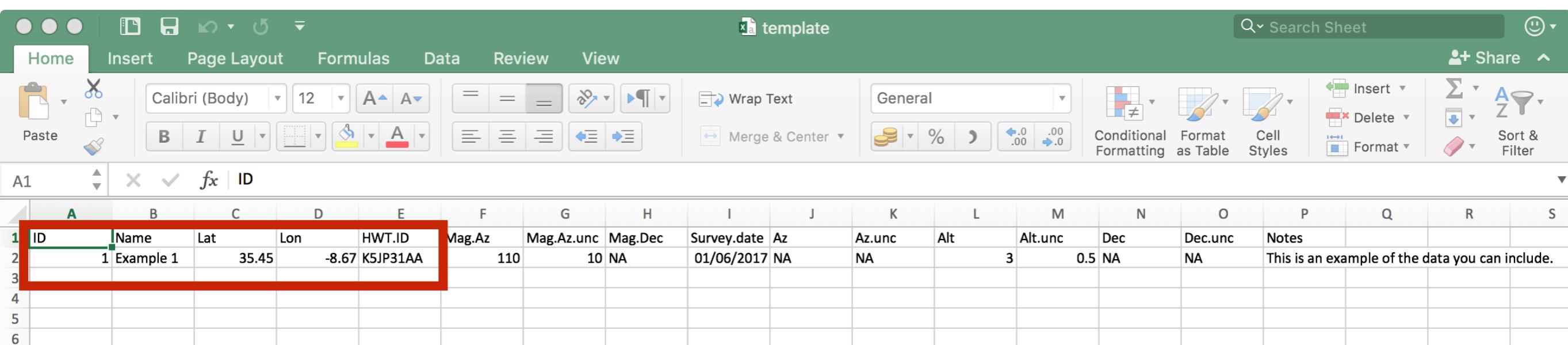
First, download the data template

The data template is a spreadsheet you can open with Microsoft Excel, Apple Numbers or Google Docs. It looks like this:

The screenshot shows a Microsoft Excel interface with the following details:

- Top Bar:** Includes standard icons for file operations (New, Open, Save, Print, Undo, Redo), a "template" tab, a search bar ("Search Sheet"), and a smiley face icon.
- Home Tab:** Selected tab, showing ribbon options: Insert, Page Layout, Formulas, Data, Review, View.
- Clipboard Tools:** Paste, Cut, Copy, Undo, Redo.
- Font & Style Tools:** Calibri (Body) font, 12pt size, bold (B), italic (I), underline (U).
- Text Alignment & Wrapping:** Wrap Text, Merge & Center.
- Number Format:** General, with a dropdown for other formats like Currency or Percentage.
- Conditional Formatting:** Tools for applying conditional logic to cells.
- Table Tools:** Insert Table, Delete Table, Format as Table.
- Cell Styles:** Cell Styles, Sort & Filter.
- Cell Selection:** Active cell is A1.
- Formulas Bar:** Shows the formula bar with "ID" entered.
- Data Table:** A table starting at row 1 with columns A through S. Row 1 contains column headers: ID, Name, Lat, Lon, HWT.ID, Mag.Az, Mag.Az.unc, Mag.Dec, Survey.date, Az, Az.unc, Alt, Alt.unc, Dec, Dec.unc, Notes. Row 2 contains data: 1, Example 1, 35.45, -8.67, K5JP31AA, 110, 10, NA, 01/06/2017, NA, NA, 3, 0.5, NA, NA, This is an example of the data you can include.

The data template is a spreadsheet you can open with Microsoft Excel, Apple Numbers or Google Docs. It looks like this:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes			
2	1	Example 1	35.45	-8.67	K5JP31AA	110	10	NA	01/06/2017	NA	NA	3	0.5	NA	NA	This is an example of the data you can include.			
3																			
4																			
5																			
6																			

Site Information and Location (first 5 columns):

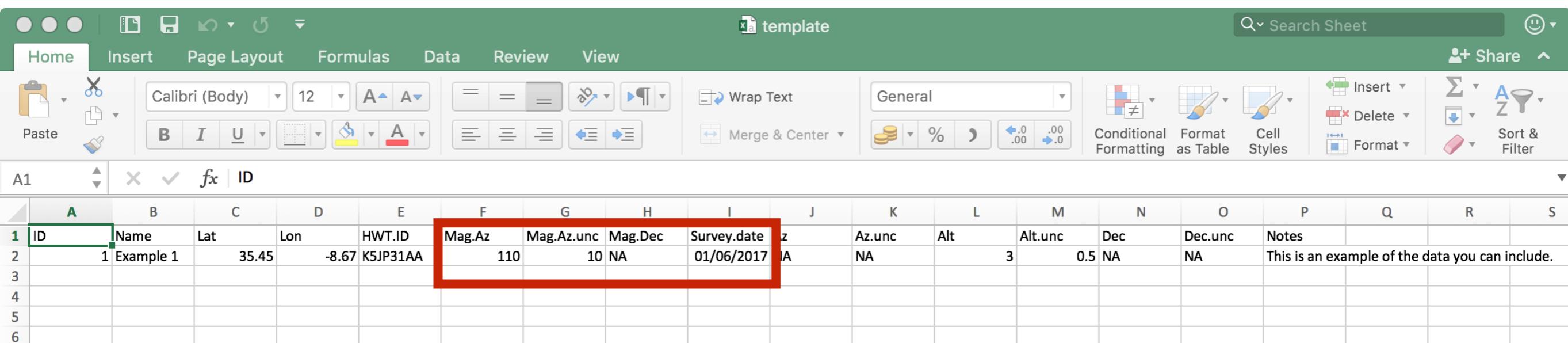
**ID**: a number or code to identify each measurement

**Name**: a label to identify each measurement (e.g. name of site)

**Lat**: latitude of site }  
**Lon**: longitude of site } these need to be in decimal point format, with negative sign for S latitudes and W longitudes

**HWT.ID**: HeyWhatsThat ID code to retrieve landscape data

The data template is a spreadsheet you can open with Microsoft Excel, Apple Numbers or Google Docs. It looks like this:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	z	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes			
2	1	Example 1	35.45	-8.67	K5JP31AA	110	10	NA	01/06/2017	NA	NA	3	0.5	NA	NA	This is an example of the data you can include.			
3																			
4																			
5																			
6																			

Magnetic Compass Survey data (next 4 columns):

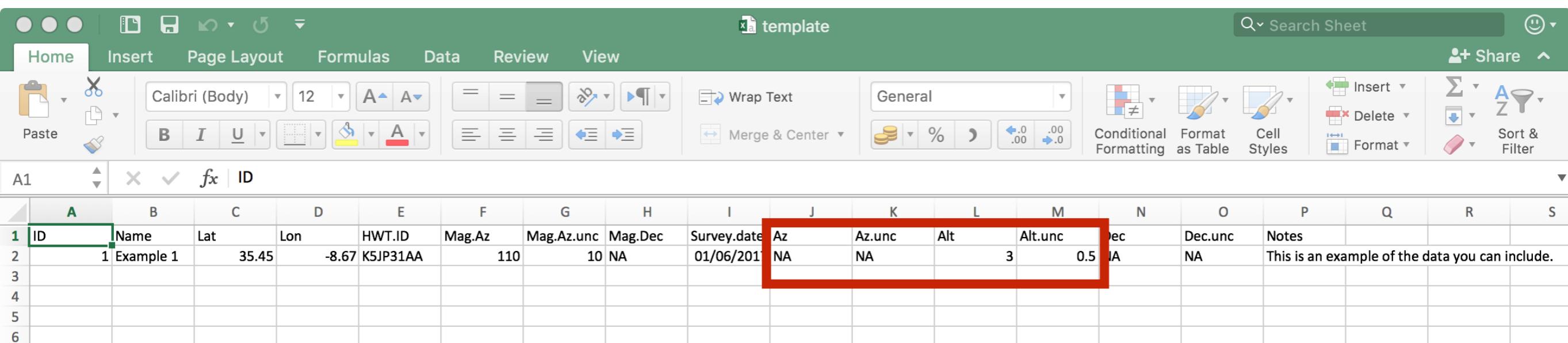
**Mag.Az**: magnetic azimuth

**Mag.Az.unc**: uncertainty associated with magnetic measurement

**Mag.Dec**: magnetic declination

**Survey.date**: date of survey in day/month/year format

The data template is a spreadsheet you can open with Microsoft Excel, Apple Numbers or Google Docs. It looks like this:



A screenshot of a Microsoft Excel spreadsheet titled "template". The ribbon menu shows "Home" selected. The data starts at row 1, column A. Row 1 contains column headers: ID, Name, Lat, Lon, HWT.ID, Mag.Az, Mag.Az.unc, Mag.Dec, Survey.date, Az, Az.unc, Alt, Alt.unc, Dec, Dec.unc, Notes. Row 2 contains data: 1, Example 1, 35.45, -8.67, K5JP31AA, 110, 10, NA, 01/06/2017, NA, NA, 3, 0.5, NA, NA, This is an example of the data you can include.. The cells from J to M are highlighted with a red box.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes			
2	1	Example 1	35.45	-8.67	K5JP31AA	110	10	NA	01/06/2017	NA	NA		3	0.5	NA	NA	This is an example of the data you can include.		
3																			
4																			
5																			
6																			

True Azimuth and Altitude data (next 4 columns):

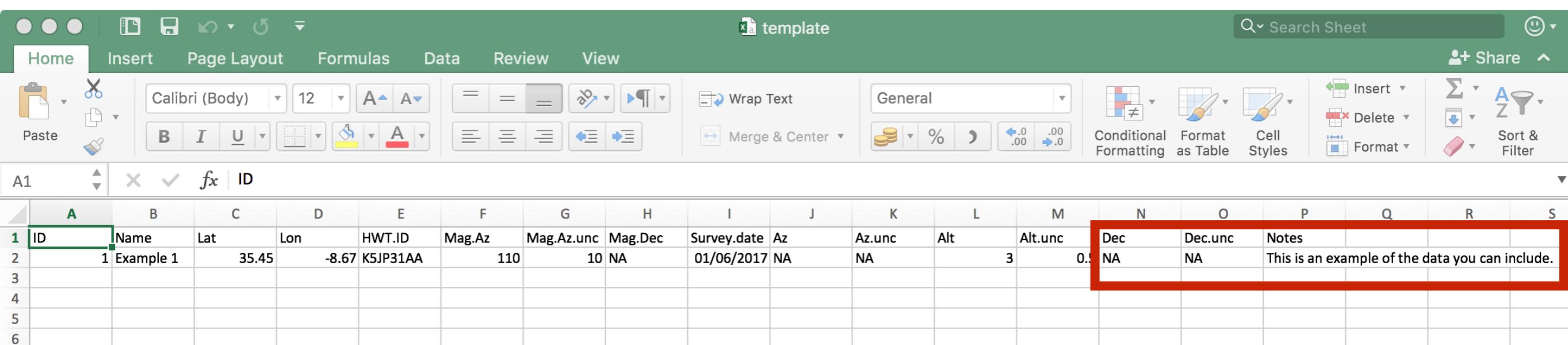
**Az**: true azimuth

**Az.unc**: uncertainty associated with true azimuth

**Alt**: altitude

**Alt.unc**: uncertainty associated with altitude

The data template is a spreadsheet you can open with Microsoft Excel, Apple Numbers or Google Docs. It looks like this:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes			
2	1	Example 1	35.45	-8.67	K5JP31AA	110	10	NA	01/06/2017	NA	NA	3	0.1	NA	NA	This is an example of the data you can include.			
3																			
4																			
5																			
6																			

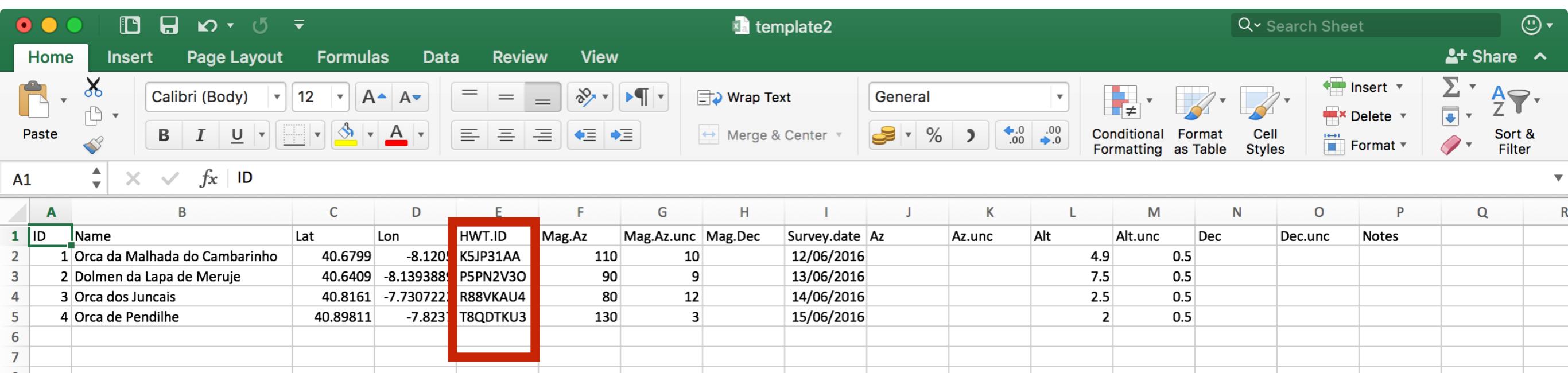
Declination and Notes (last 3 columns):

**Dec**: declination

**Dec.unc**: uncertainty associated with declination

**Notes**: free-form text field to enter any notes or comments

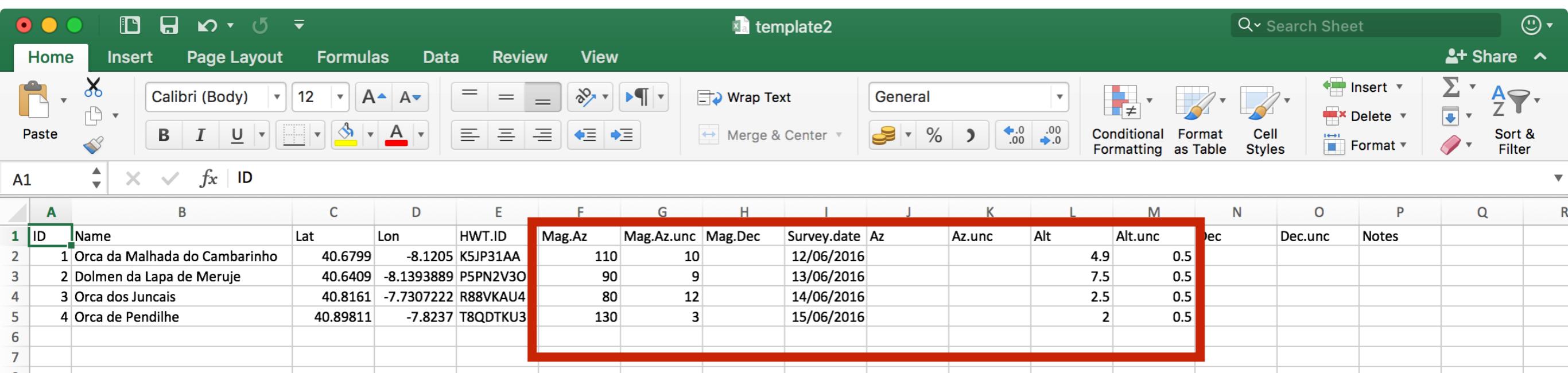
Fill it with your own data (use the Tools module if necessary) and save it somewhere where you will remember later



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes		
2	1	Orca da Malhada do Cambarinho	40.6799	-8.1201	K5JP31AA	110	10		12/06/2016			4.9	0.5					
3	2	Dolmen da Lapa de Meruje	40.6409	-8.139388	P5PN2V3O	90	9		13/06/2016			7.5	0.5					
4	3	Orca dos Juncais	40.8161	-7.730722	R88VKAU4	80	12		14/06/2016			2.5	0.5					
5	4	Orca de Pendilhe	40.89811	-7.823	T8QDTKU3	130	3		15/06/2016			2	0.5					
6																		
7																		

**HWT.ID** is not necessary but if included can help streamline work in the Horizon module

Fill it with your own data (use the Tools module if necessary) and save it somewhere where you will remember later

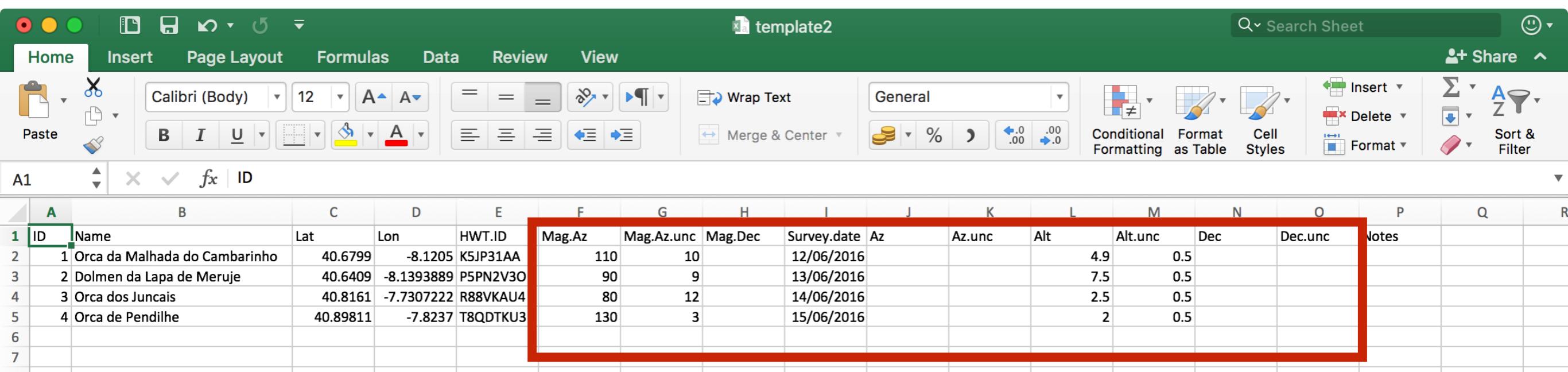


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes		
2	1	Orca da Malhada do Cambarinho	40.6799	-8.1205	K5JP31AA	110	10		12/06/2016			4.9	0.5					
3	2	Dolmen da Lapa de Meruje	40.6409	-8.1393889	P5PN2V3O	90	9		13/06/2016			7.5	0.5					
4	3	Orca dos Juncais	40.8161	-7.7307222	R88VKAU4	80	12		14/06/2016			2.5	0.5					
5	4	Orca de Pendilhe	40.89811	-7.8237	T8QDTKU3	130	3		15/06/2016			2	0.5					
6																		
7																		

**HWT.ID** is not necessary but if included can help streamline work in the Horizon module

In this example only field measurements with compass and clinometer are included. No magnetic declination is given, but the survey date is included.

Fill it with your own data (use the Tools module if necessary) and save it somewhere where you will remember later



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	ID	Name	Lat	Lon	HWT.ID	Mag.Az	Mag.Az.unc	Mag.Dec	Survey.date	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc	Notes		
2	1	Orca da Malhada do Cambarinho	40.6799	-8.1205	K5JP31AA	110	10		12/06/2016			4.9	0.5					
3	2	Dolmen da Lapa de Meruje	40.6409	-8.1393889	P5PN2V3O	90	9		13/06/2016			7.5	0.5					
4	3	Orca dos Juncais	40.8161	-7.7307222	R88VKAU4	80	12		14/06/2016			2.5	0.5					
5	4	Orca de Pendilhe	40.89811	-7.8237	T8QDTKU3	130	3		15/06/2016			2	0.5					
6																		
7																		

**HWT.ID** is not necessary but if included can help streamline work in the Horizon module

In this example only field measurements with compass and clinometer are included. No magnetic declination is given, but the survey date is included.

Once uploaded, skyscapeR will automatically calculate and populate the following fields:

**Mag.Dec**: based on Lat, Lon and Survey.date and using the IGRF model (same as NOAA website)

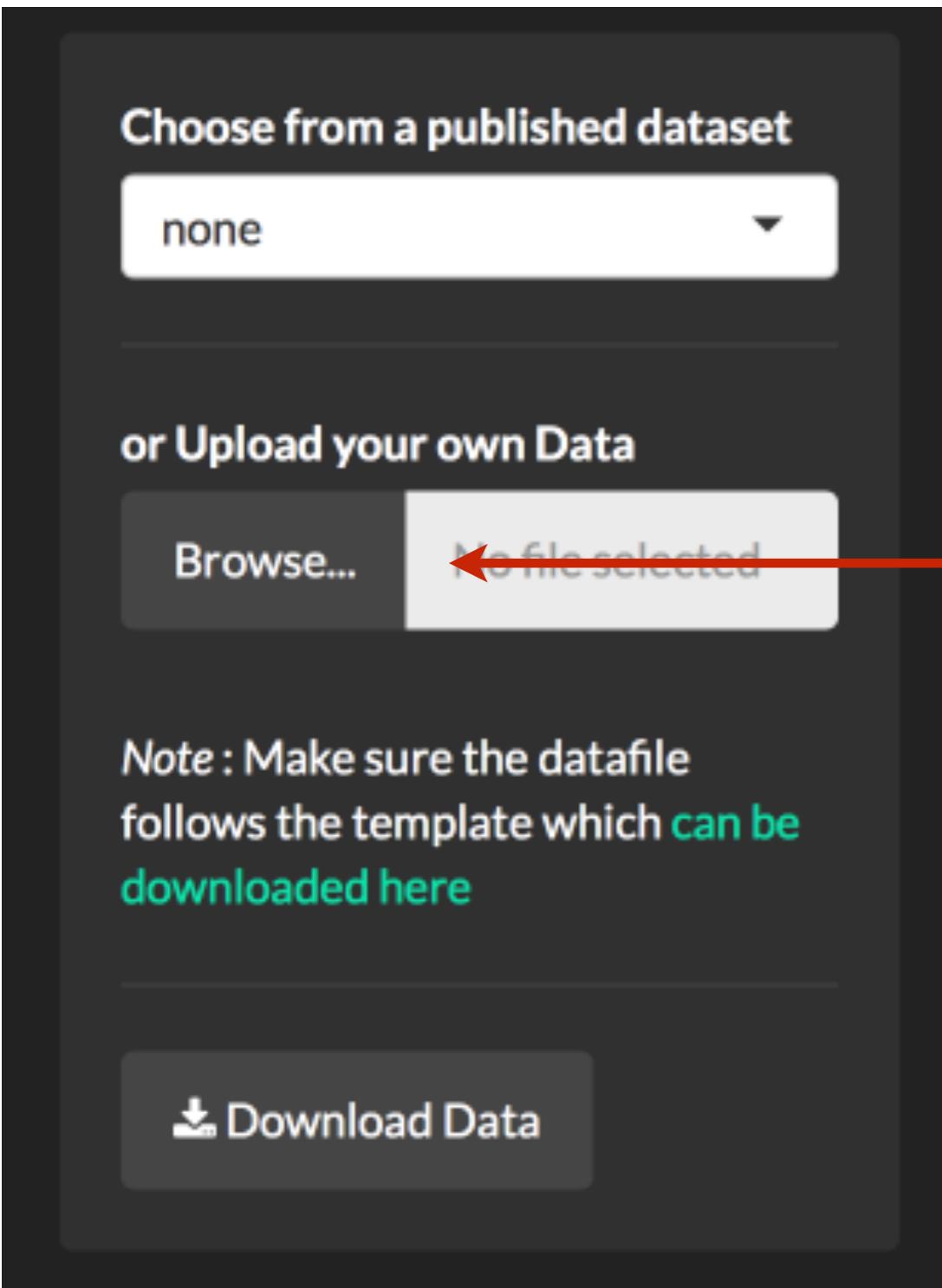
**Az**: as Mag.Az + Mag.Dec

**Az.unc**: same as Mag.Az.unc

**Dec**: including aberration refraction and nutation corrections

**Dec.unc**: based on Az.unc and Alt.unc (when available)

To upload your own data the process is slightly different:



**Then, click on Browse**

Note : Make sure the datafile follows the template which [can be downloaded here](#)

Go to the folder where you placed the spreadsheet and click on it

If something went wrong, you will be told what is wrong with the data. Follow the instructions, change the spreadsheet and try to upload again.

skyscapeR v0.4b    About    Data Entry    Visualization    Horizon    Tools ▾    Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

none ▾

or Upload your own Data

Browse...

skyscapeR\_data:

Upload complete

Note : Make sure the datafile follows the template which [can be downloaded here](#)

 Download Data

Non-numeric latitudes found in row(s) 3. Please ensure there are no N or S symbols or other characters.  
Non-numeric longitudes found in row(s) 3. Please ensure there are no W or E symbols or other characters.  
Non-numeric azimuths found in row(s) 2. Please ensure the Mag.Az field contains only numbers.  
No azimuth data found in row(s) 2. Please ensure that at least one of the Az fields are populated.  
No altitude data found in row(s) 2. Please ensure that the Alt field is populated.  
No Mag.Dec, Survey.date or Az data found in row(s) 1. Please ensure that at least one of these fields is populated.

If nothing went wrong, this is what you should see

skyscapeR v0.4b   About   Data Entry   Visualization   Horizon   Tools ▾   Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

none

or Upload your own Data

Browse... template2.csv

Upload complete

Note : Make sure the datafile follows the template which [can be downloaded here](#)

 Download Data

ID	Name	Lat	Lon	HWT.ID	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc
1	Orca da Malhada do Cambarinho	40.68	-8.12	K5JP31AA	107.68	10	4.90	0.50	-10.12	7.64
2	Dolmen da Lapa de Meruje	40.64	-8.14	P5PN2V3O	87.67	9	7.50	0.50	6.56	7.13
3	Orca dos Juncais	40.82	-7.73	R88VKAU4	77.80	12	2.50	0.50	10.68	9.35
4	Orca de Pendilhe	40.90	-7.82	T8QDTKU3	127.76	3	2.00	0.50	-26.31	2.40

If nothing went wrong, this is what you should see

skyscapeR v0.4b About Data Entry Visualization Horizon Tools ▾ Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

none ▾

or Upload your own Data

Browse... template2.csv

Upload complete

Note : Make sure the data file follows the template which [can be downloaded here](#)

 Download Data

ID	Name	Lat	Lon	HWT.ID	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc
1	Orca da Malhada do Cambarinho	40.68	-8.12	K5JP31AA	107.68	10	4.90	0.50	-10.12	7.64
2	Dolmen da Lapa de Meruje	40.64	-8.14	P5PN2V3O	87.67	9	7.50	0.50	6.56	7.13
3	Orca dos Juncais	40.82	-7.73	R88VKAU4	77.80	12	2.50	0.50	10.68	9.35
4	Orca de Pendilhe	40.90	-7.82	T8QDTKU3	127.76	3	2.00	0.50	-26.31	2.40

Your data should be displayed in this panel

This says 'Upload complete'

If nothing went wrong, this is what you should see

skyscapeR v0.4b   About   Data Entry   Visualization   Horizon   Tools ▾   Help

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---

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Browse...

Upload complete

Note : Make sure the datafile follows the template which [can be downloaded here](#)

---

[!\[\]\(60be10a630be903e1dba4a36ca355d60\_img.jpg\) Download Data](#)

ID	Name	Lat	Lon	HWT.ID	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc
1	Orca da Malhada do Cambarinho	40.68	-8.12	K5JP31AA	107.68	10	4.90	0.50	-10.12	7.64
2	Dolmen da Lapa de Meruje	40.64	-8.14	P5PN2V3O	87.67	9	7.50	0.50	6.56	7.13
3	Orca dos Juncais	40.82	-7.73	R88VKAU4	77.80	12	2.50	0.50	10.68	9.35
4	Orca de Pendilhe	40.90	-7.82	T8QDTKU3	127.76	3	2.00	0.50	-26.31	2.40



Note the fields that were automatically calculated for you

If nothing went wrong, this is what you should see

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2	Dolmen da Lapa de Meruje	40.64	-8.14	P5PN2V3O	87.67	9	7.50	0.50	6.56	7.13
3	Orca dos Juncais	40.82	-7.73	R88VKAU4	77.80	12	2.50	0.50	10.68	9.35
4	Orca de Pendilhe	40.90	-7.82	T8QDTKU3	127.76	3	2.00	0.50	-26.31	2.40

**Not all fields are displayed (no need to see the magnetic measurements anymore)**

This is what you should see

skyscapeR v0.4b   About   Data Entry   Visualization   Horizon   Tools ▾   Help

## Data Entry

In this page you can choose a dataset from the literature or upload your own data (please use the provided template).

Choose from a published dataset

none
 

▼

---

or Upload your own Data

Browse...

Upload complete

Note : Make sure the datafile follows the template which [can be downloaded here](#)

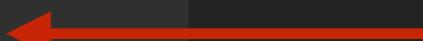
---

[Download Data](#)

ID	Name	Lat	Lon	HWT.ID	Az	Az.unc	Alt	Alt.unc	Dec	Dec.unc
1	Orca da Malhada do Cambarinho	40.68	-8.12	K5JP31AA	107.68	10	4.90	0.50	-10.12	7.64
2	Dolmen da Lapa de Meruje	40.64	-8.14	P5PN2V3O	87.67	9	7.50	0.50	6.56	7.13
3	Orca dos Juncais	40.82	-7.73	R88VKAU4	77.80	12	2.50	0.50	10.68	9.35
4	Orca de Pendilhe	40.90	-7.82	T8QDTKU3	127.76	3	2.00	0.50	-26.31	2.40

You can download the entire spreadsheet, including magnetic data and newly calculated entries by clicking this button.

Download Data



Save it in a safe place, not only it has your calculations of declination but it should also be your starting point for any future work in skyscapeR with this data

You can now move on to the Visualisation module

skyscapeR v0.4b   About   Data Entry   **Visualization**   Horizon   Tools ▾   Help

## Data Entry

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4	Orca de Pendilhe	40.90	-7.82	T8QDTKU3	127.76	3	2.00	0.50	-26.31	2.40

## The Visualisation module

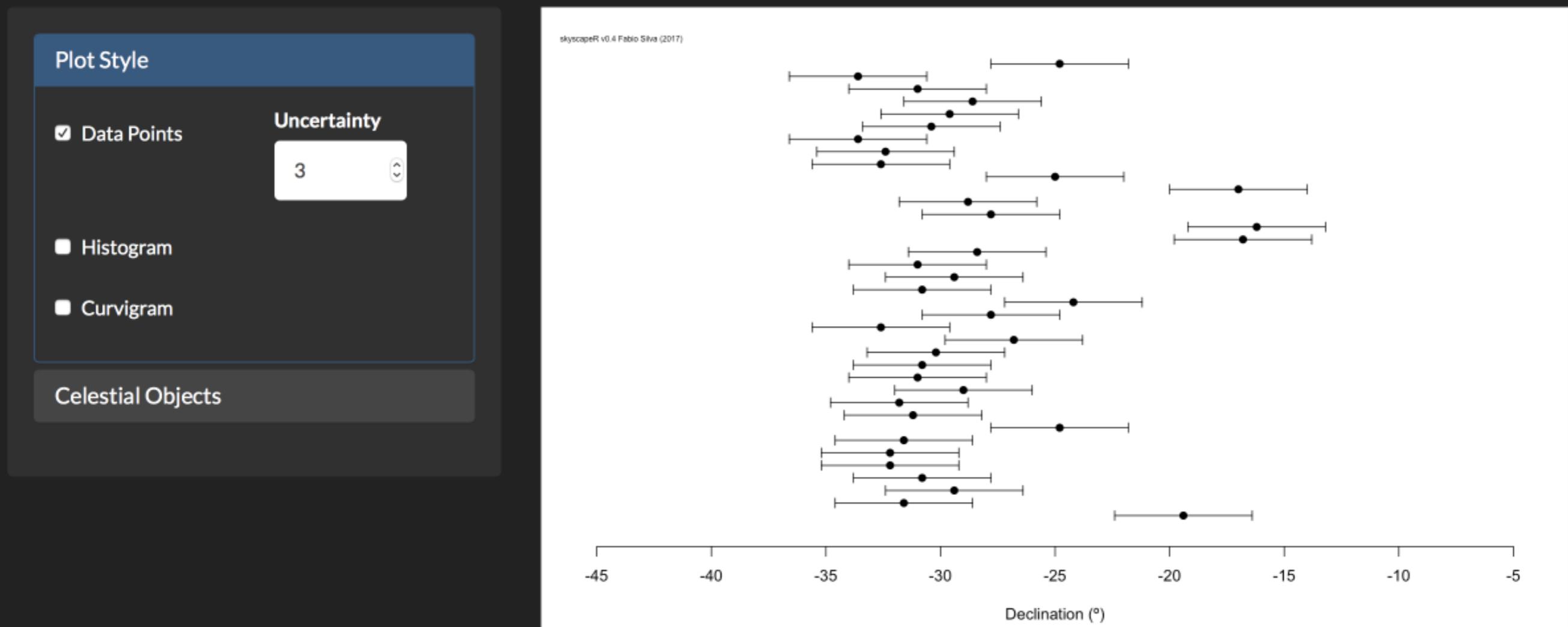
skyscapeR v0.4b    About    Data Entry    **Visualization**    Horizon    Tools ▾    Help

This is the Data Visualisation page

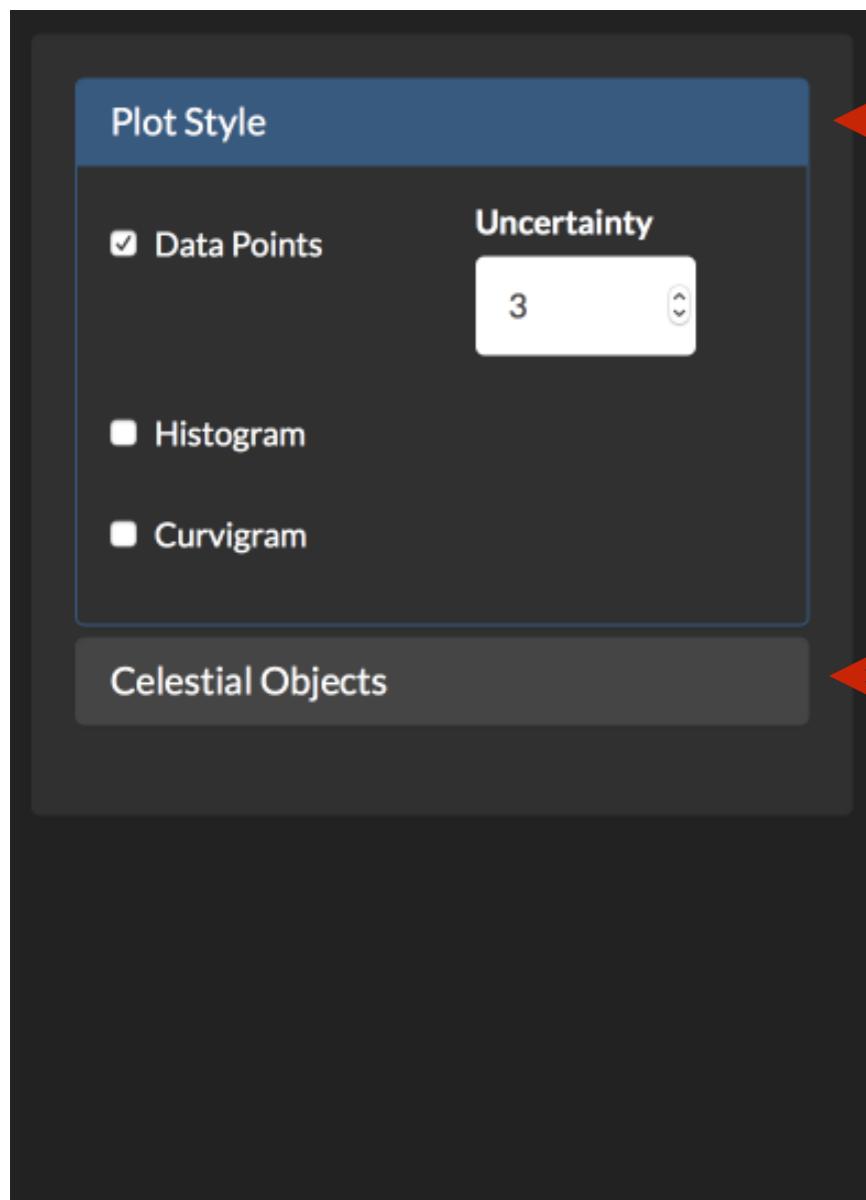
skyscapeR v0.4b   About   Data Entry   **Visualization**   Horizon   Tools ▾   Help

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.



Lets take a closer look at the Options Panel

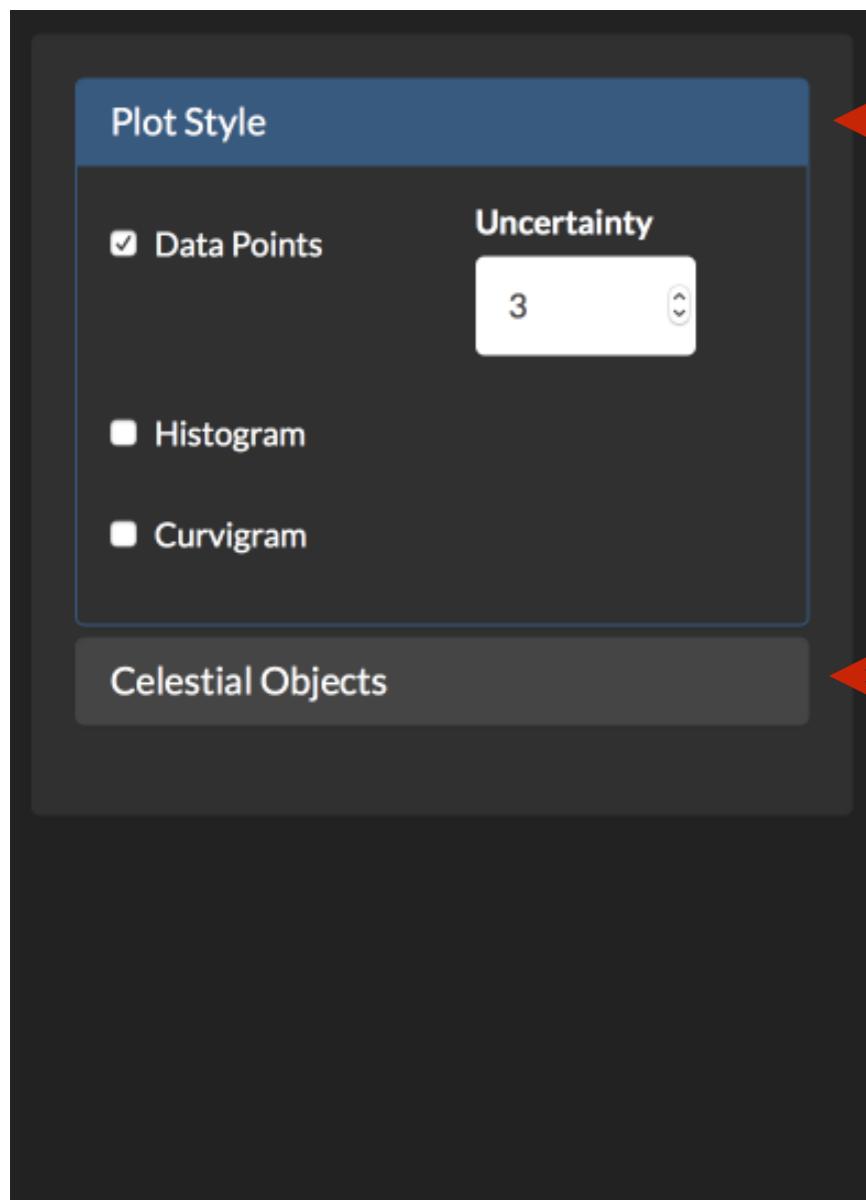


This is a collapsible panel

This is a collapsible panel

Meaning that you can click on them to open or close them

Lets take a closer look at the Options Panel

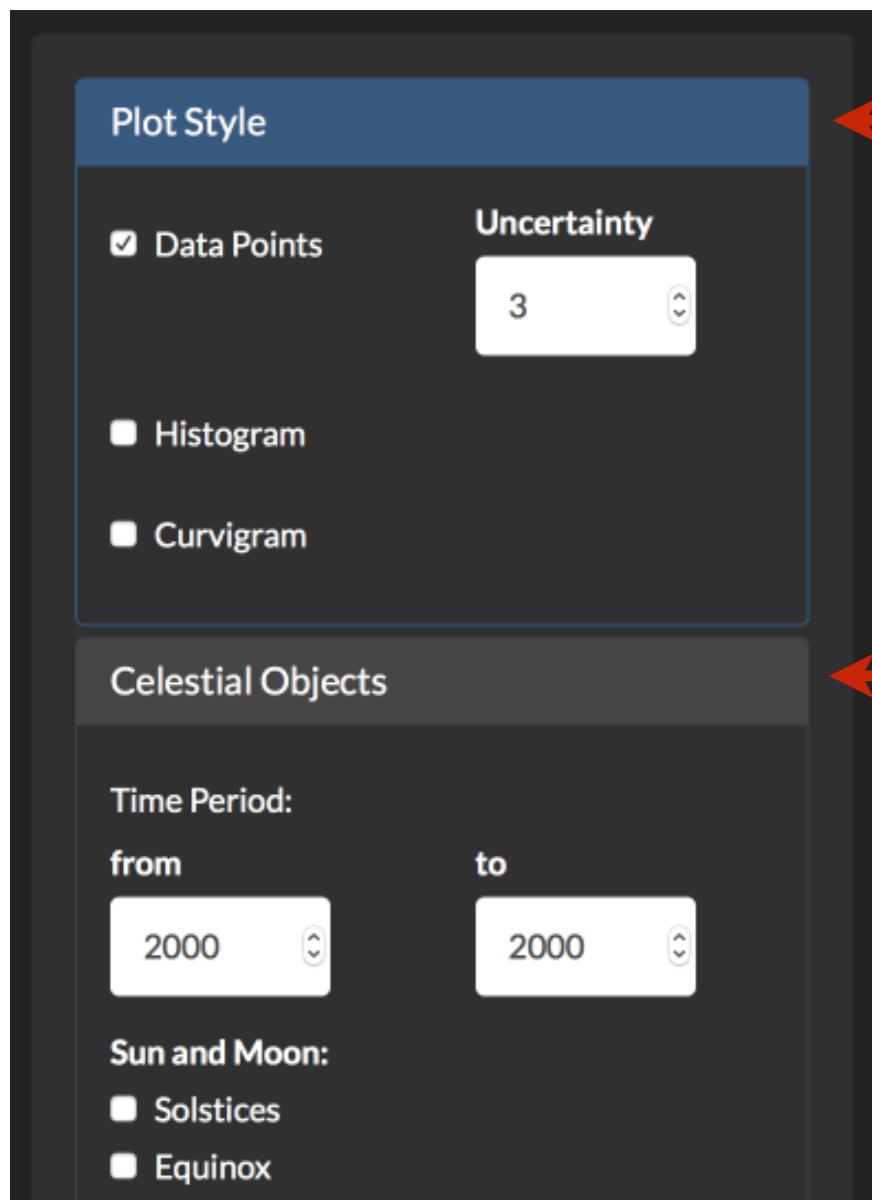


This is an open collapsible panel

This is a closed collapsible panel

Meaning that you can click on them to open or close them

Lets take a closer look at the Options Panel

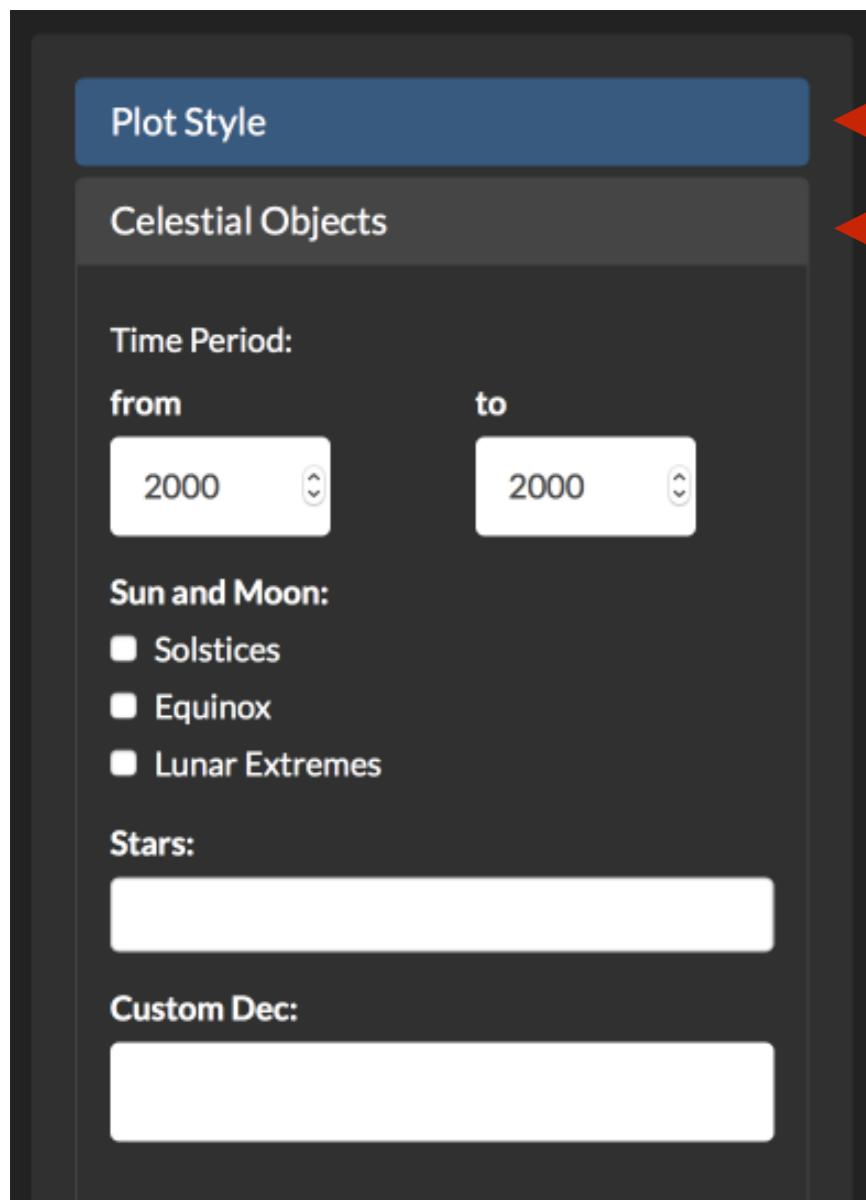


This is an open collapsible panel

This is now open

Meaning that you can click on them to open or close them

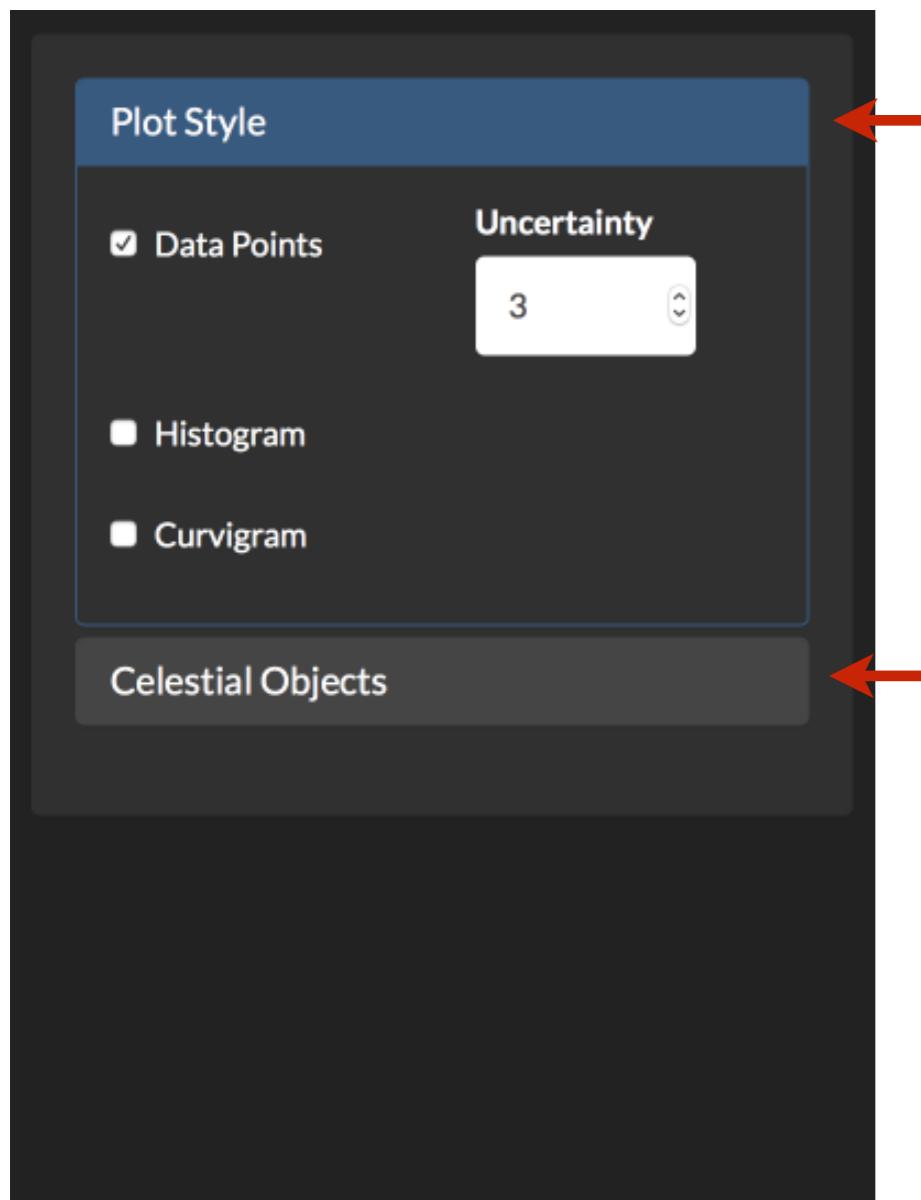
Lets take a closer look at the Options Panel



This is now closed  
This is open

Meaning that you can click on them to open or close them

Lets take a closer look at the Options Panel



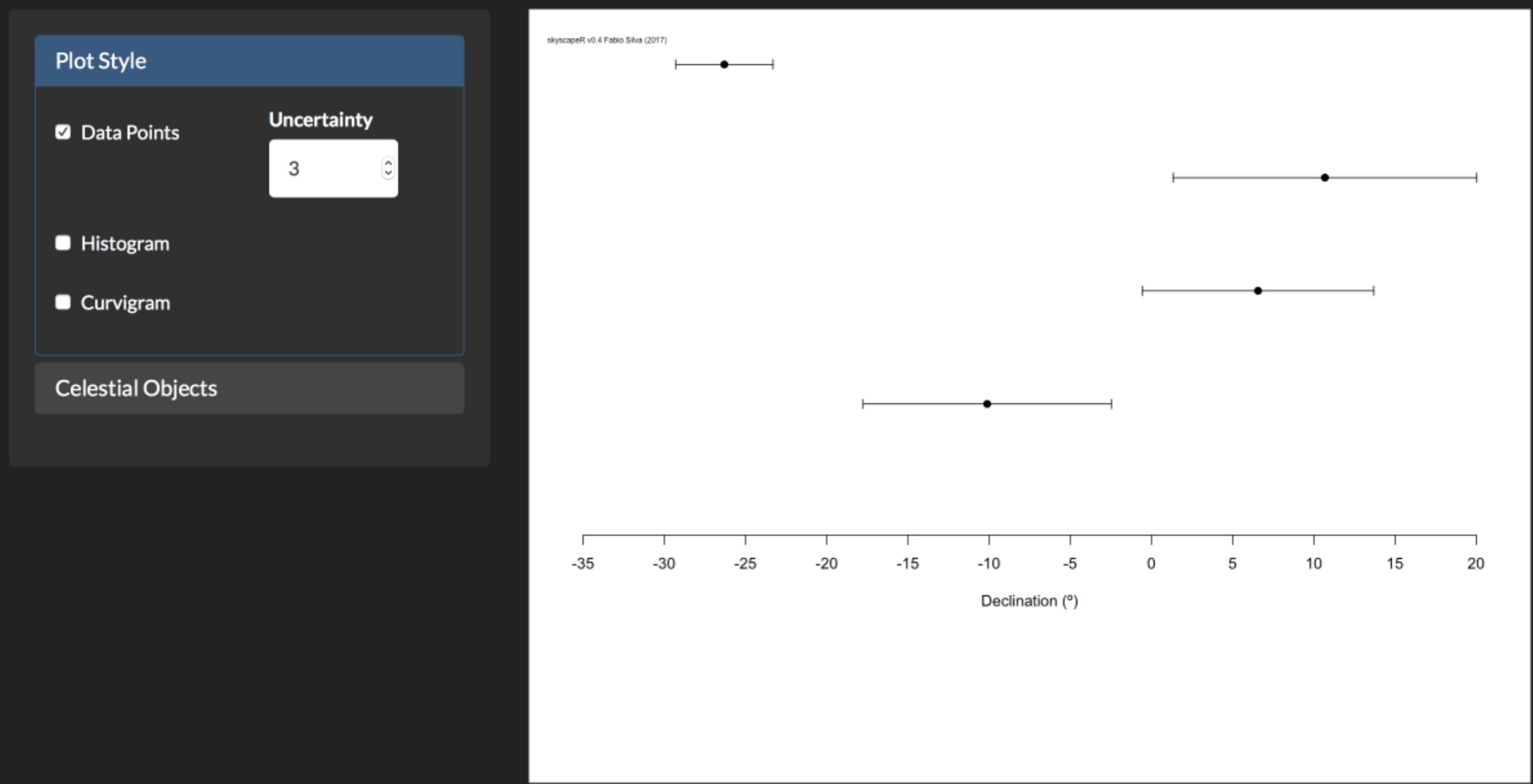
This lets you choose what visualisation style you want

This lets you display celestial objects on top of your data

This is what the **Data Points** style looks like

## Data Visualization

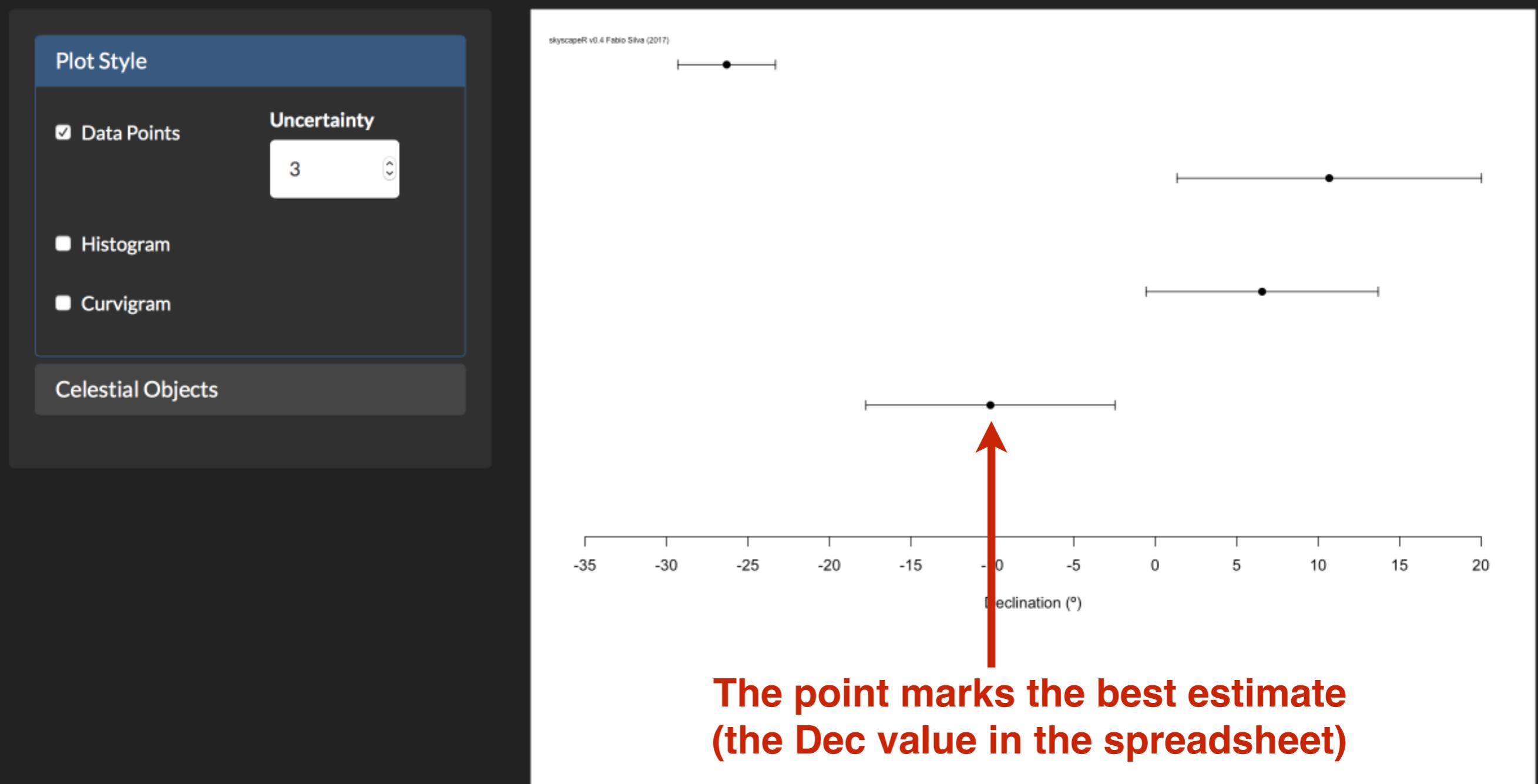
In this page you can visualize the data selected in the 'Data Entry' page.



This is what the **Data Points** style looks like

## Data Visualization

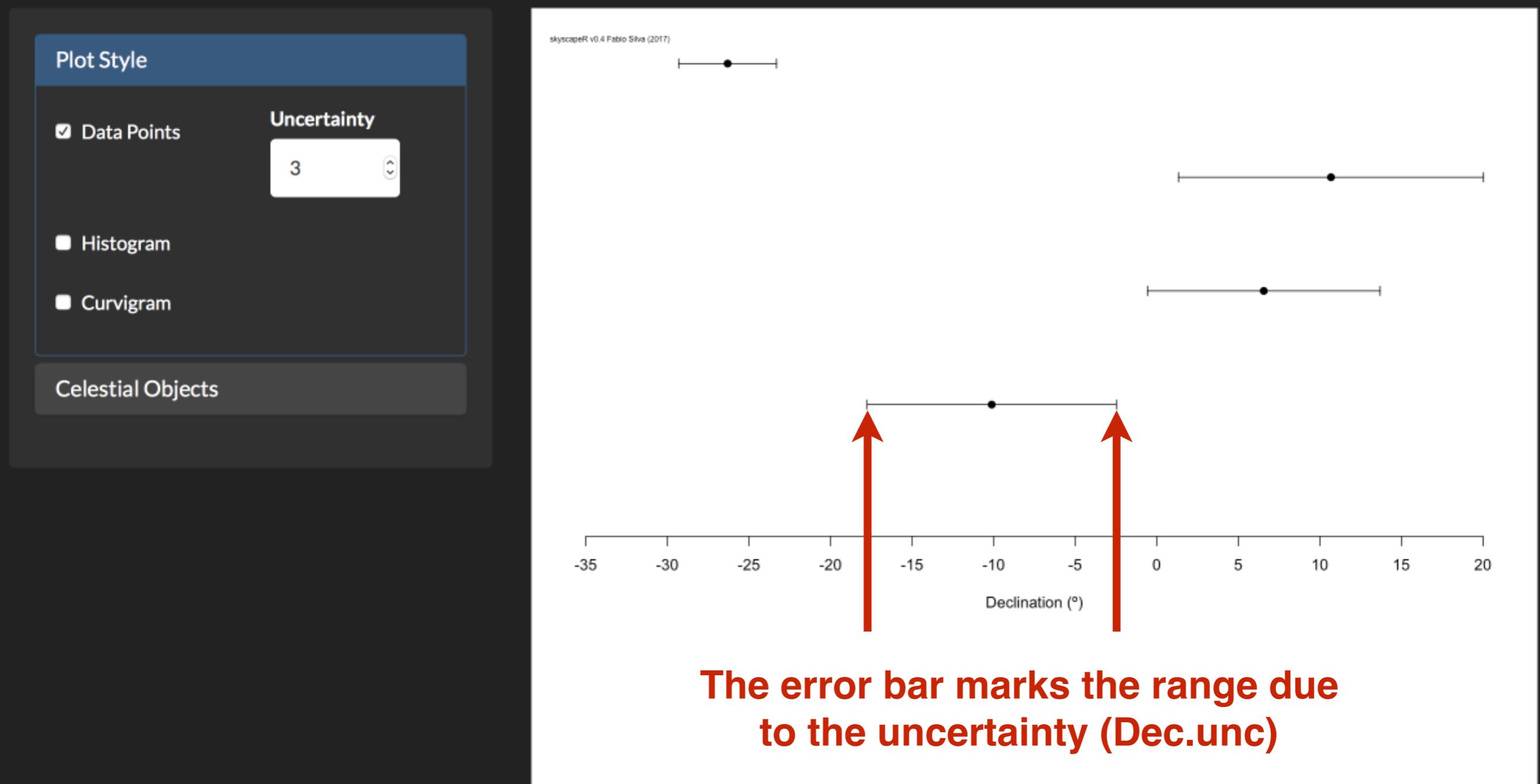
In this page you can visualize the data selected in the 'Data Entry' page.



This is what the **Data Points** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.



This is what the **Data Points** style looks like

## Data Visualization

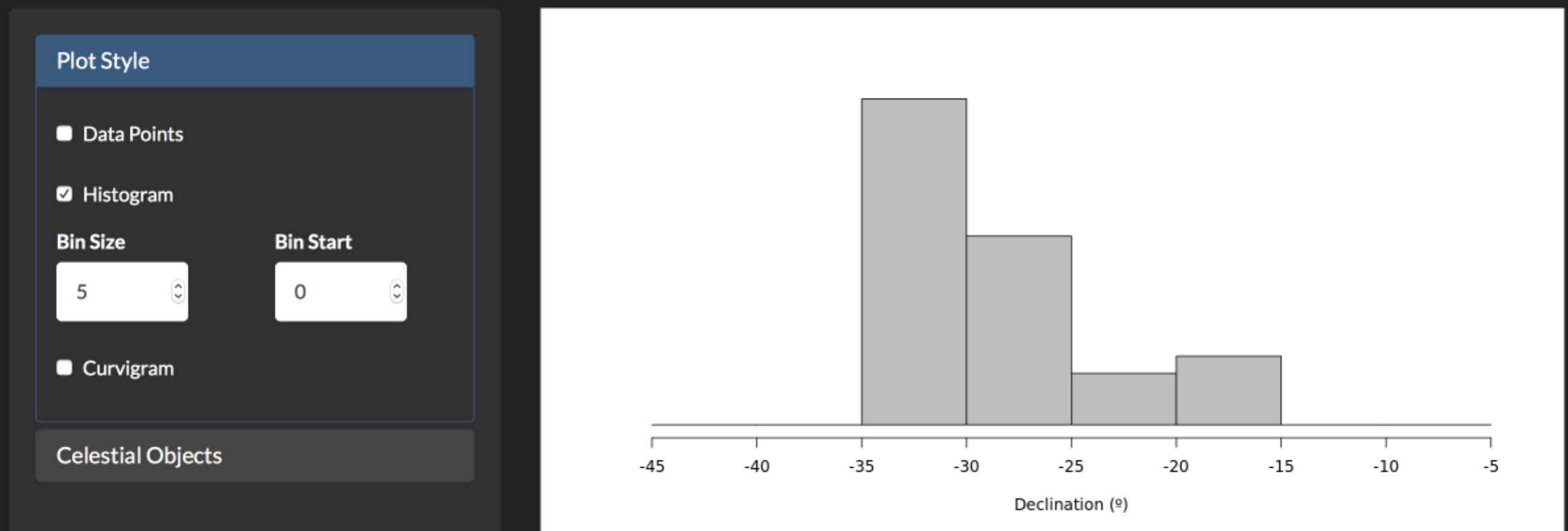
In this page you can visualize the data selected in the 'Data Entry' page.



This is what the **Histogram** style looks like

## Data Visualization

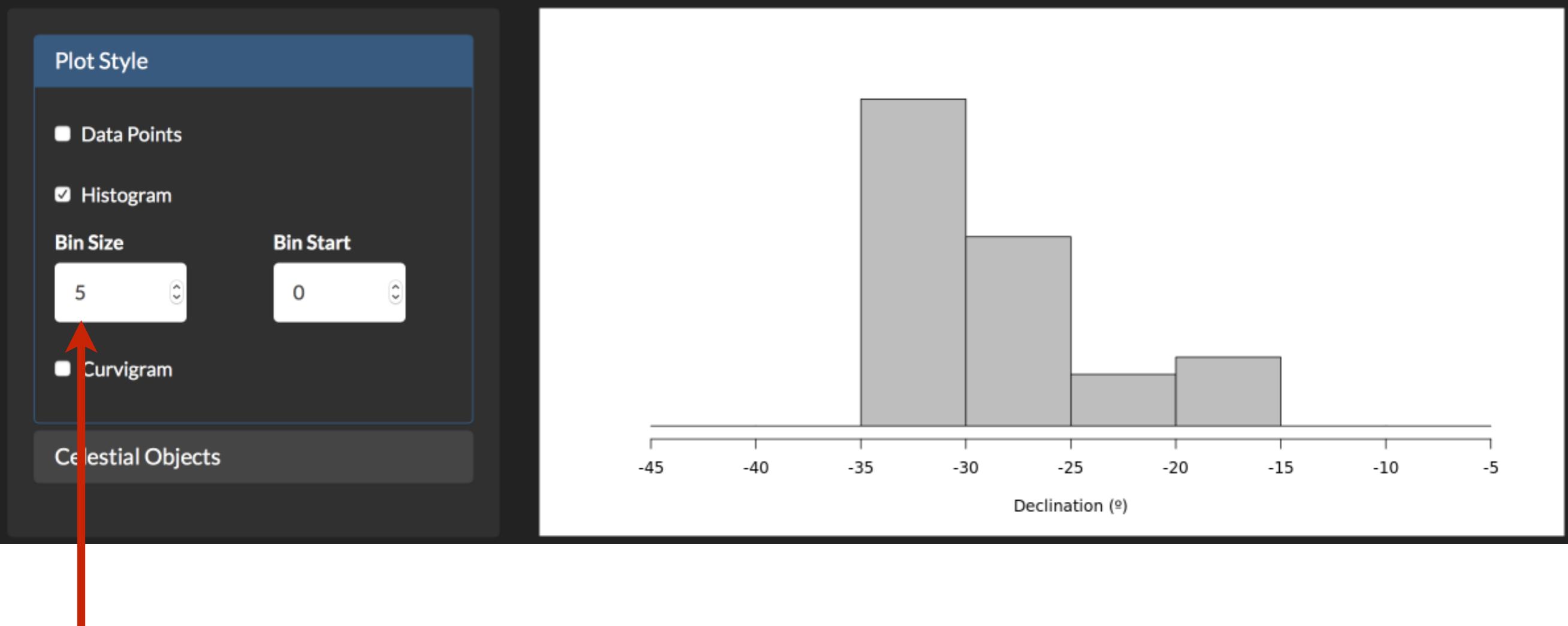
In this page you can visualize the data selected in the 'Data Entry' page.



This is what the **Histogram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

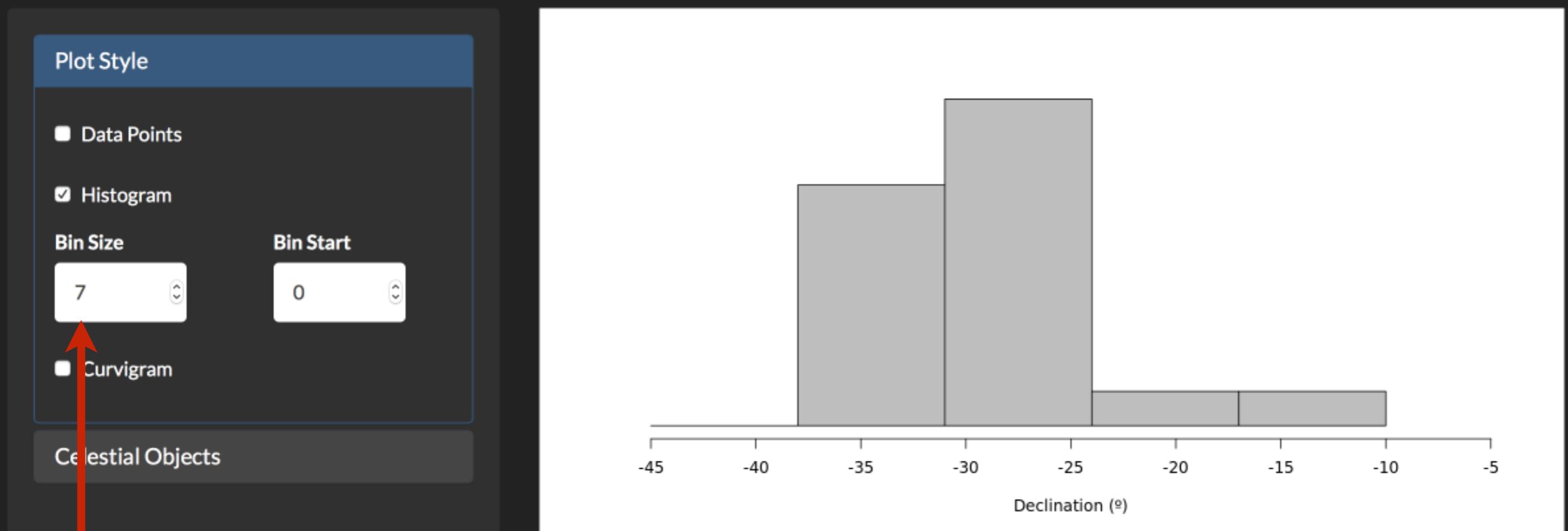


**Bin size controls the width of each bar (which should be related to the uncertainty)**

This is what the **Histogram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

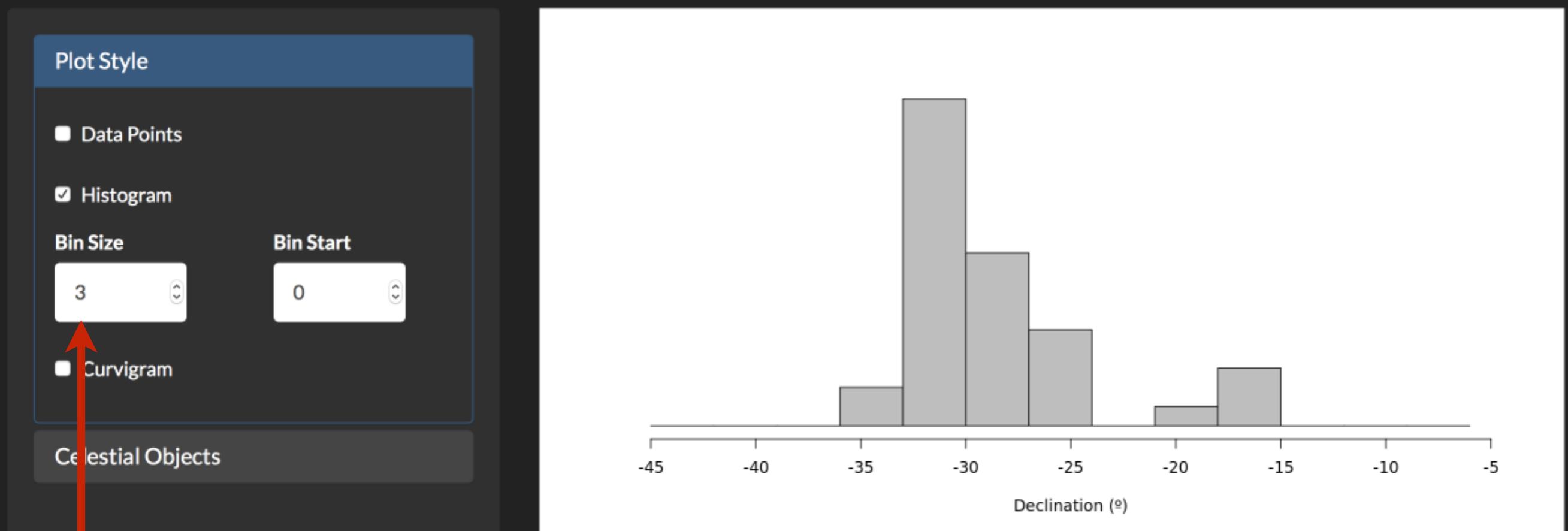


**Bin size controls the width of each bar (which should be related to the uncertainty)**

This is what the **Histogram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

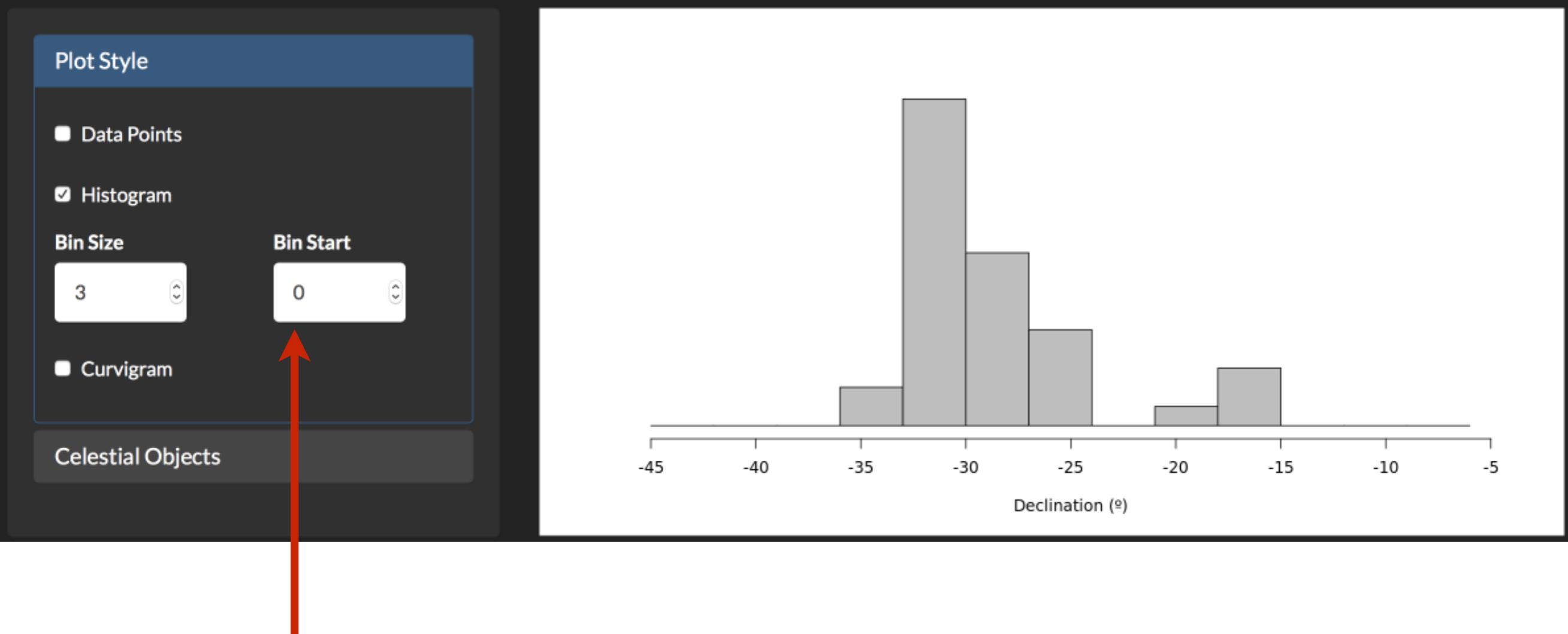


**Bin size controls the width of each bar (which should be related to the uncertainty)**

This is what the **Histogram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

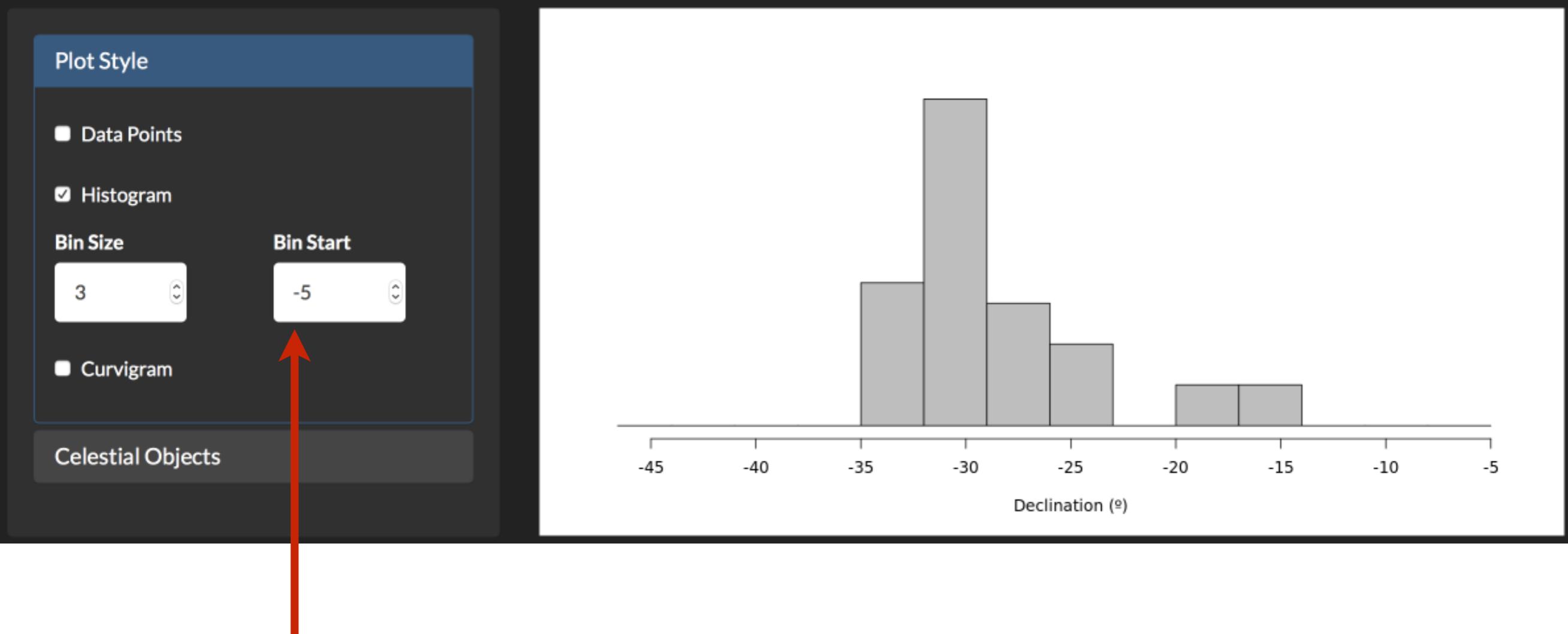


**Bin Starts controls where each bar starts**

This is what the **Histogram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

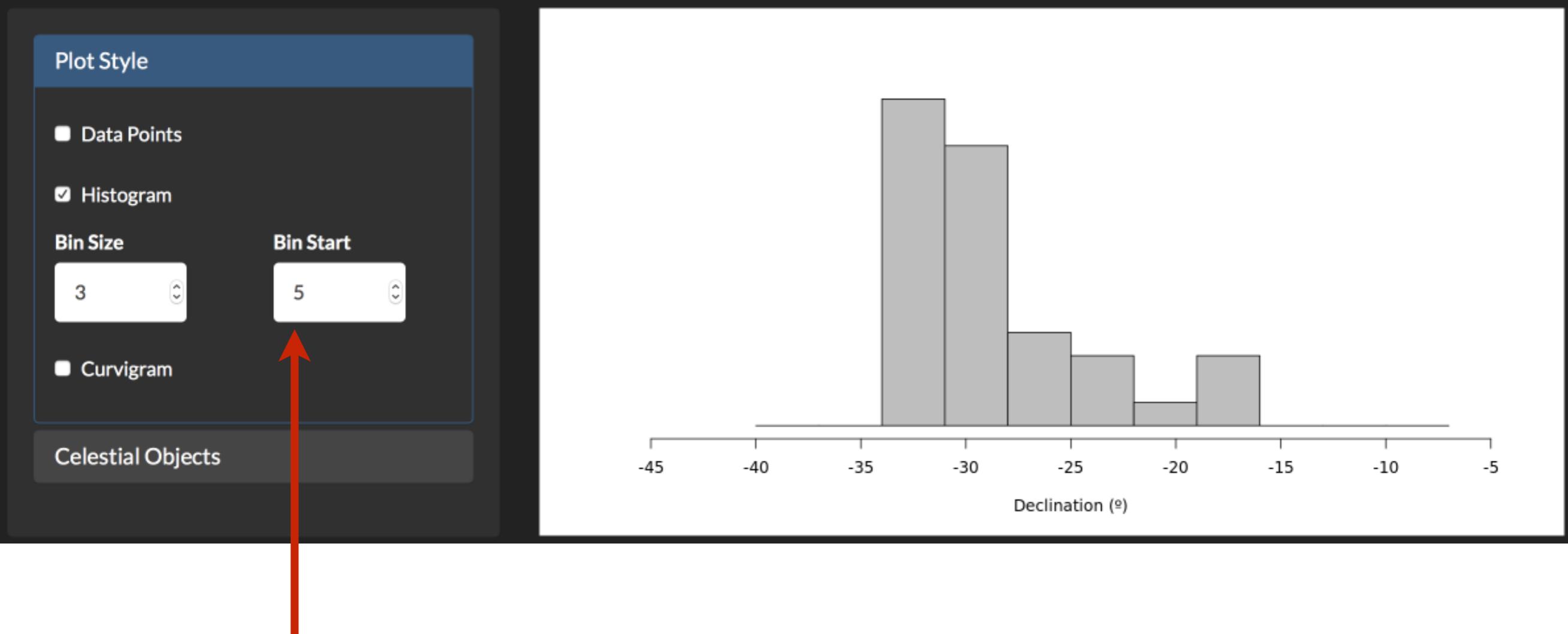


**Bin Starts controls where each bar starts**

This is what the **Histogram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

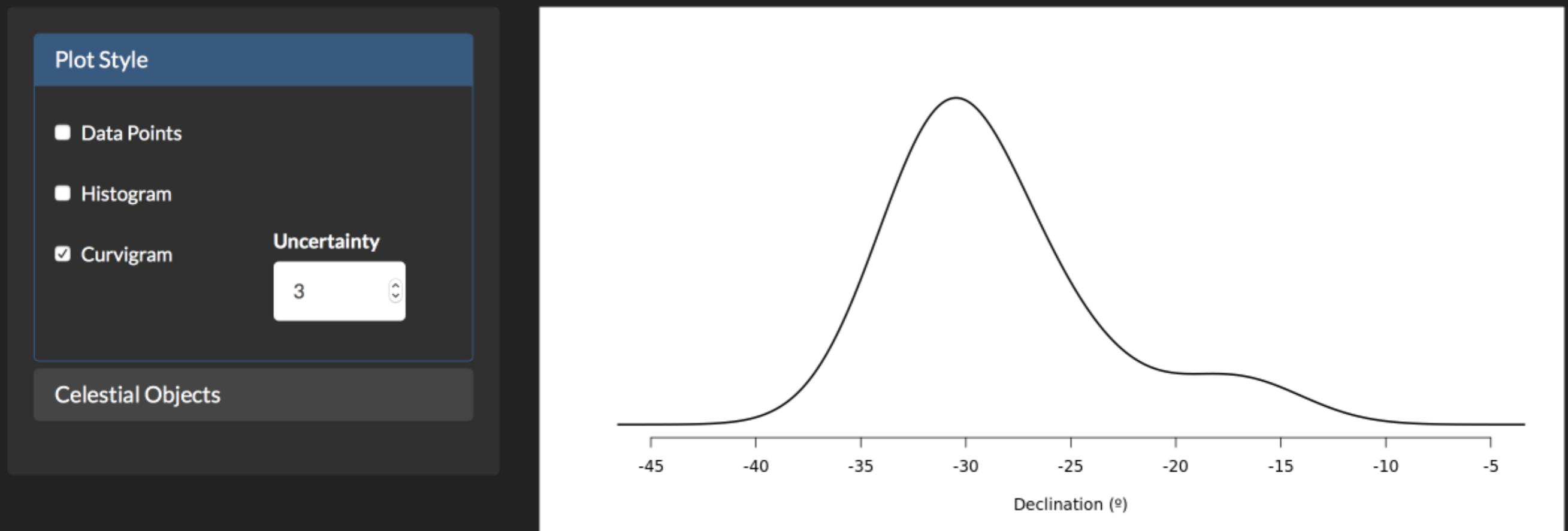


**Bin Starts controls where each bar starts**

This is what the **Curvigram** style looks like

## Data Visualization

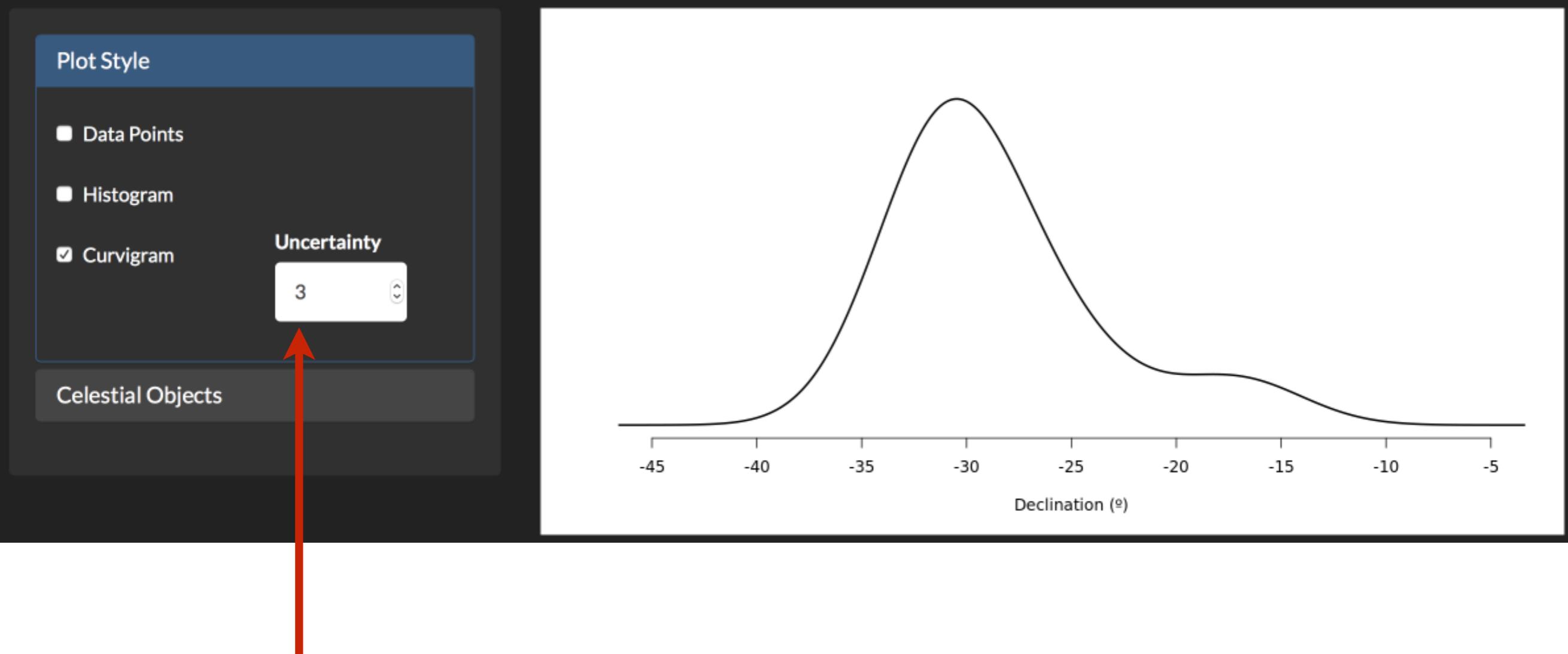
In this page you can visualize the data selected in the 'Data Entry' page.



This is what the **Curvigram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

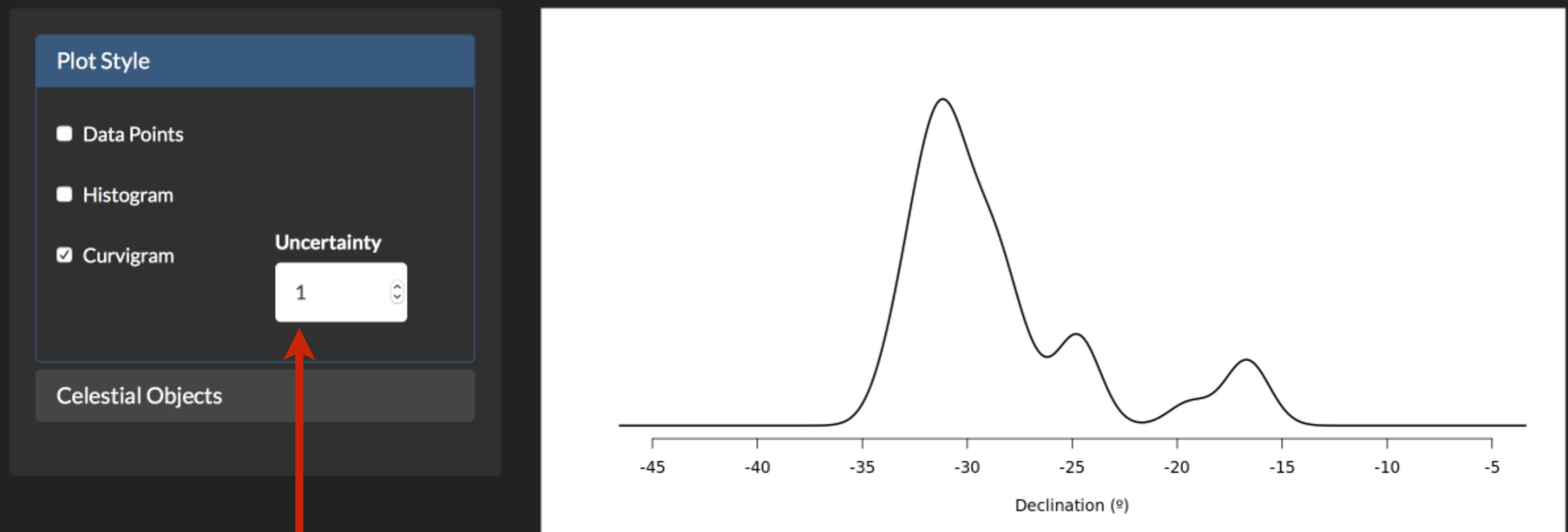


**Uncertainty controls the size of the error bar used in the curvigram calculation**

This is what the **Curvigram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

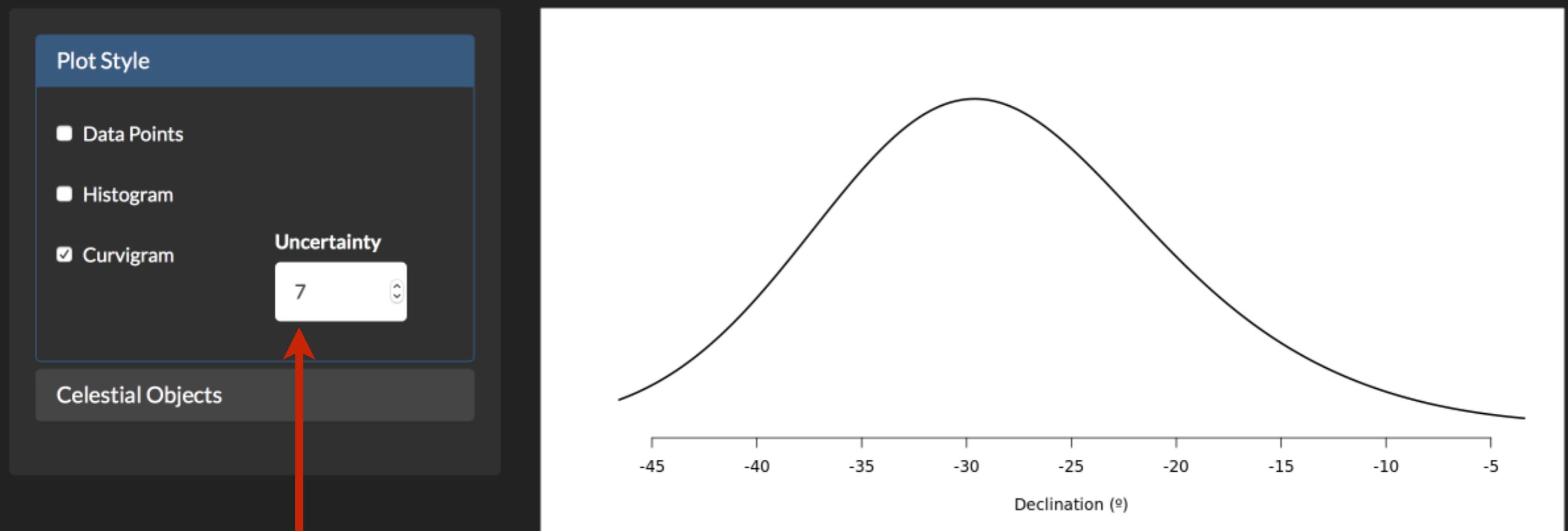


**Uncertainty controls the size of the error bar used in the curvigram calculation**

This is what the **Curvigram** style looks like

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

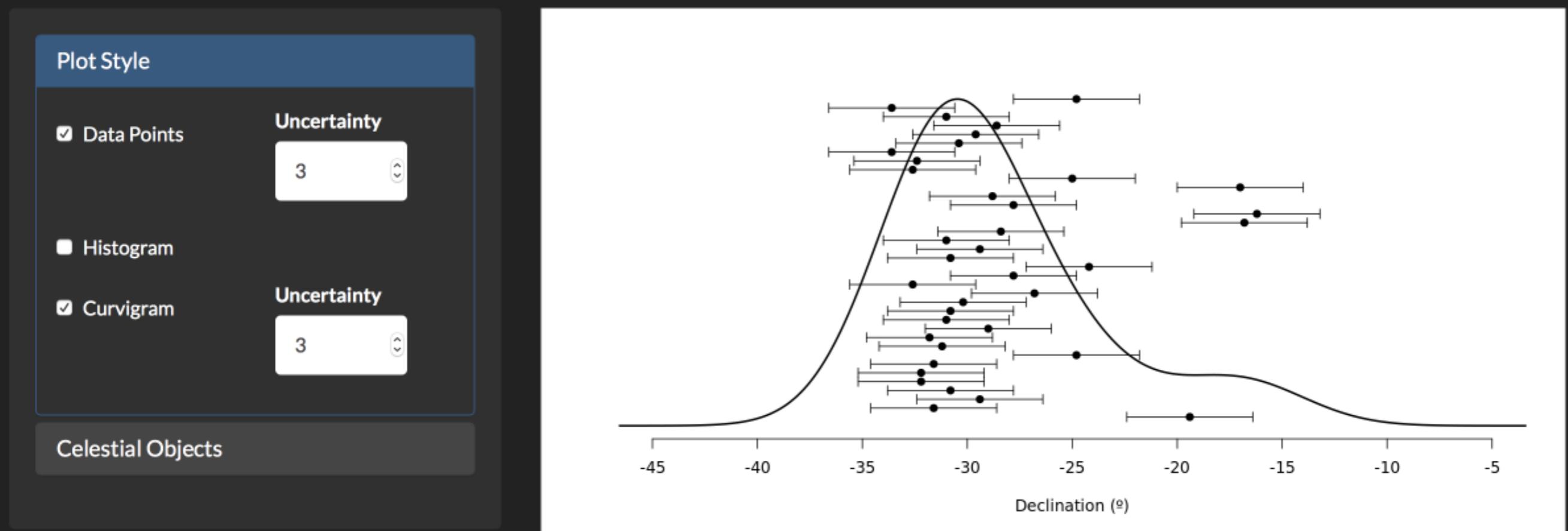


**Uncertainty controls the size of the error bar used in the curvigram calculation**

You can mix and match them

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.



To help you check whether any identified patterns might align with celestial objects, use the Celestial Objects collapsible panel

skyscapeR v0.3b   About   Data Entry   **Visualization**   Horizon   Tools ▾   Help

## Data Visualization

In this page you can visualize the data selected in the 'Data Entry' page.

### Plot Style

Data Points

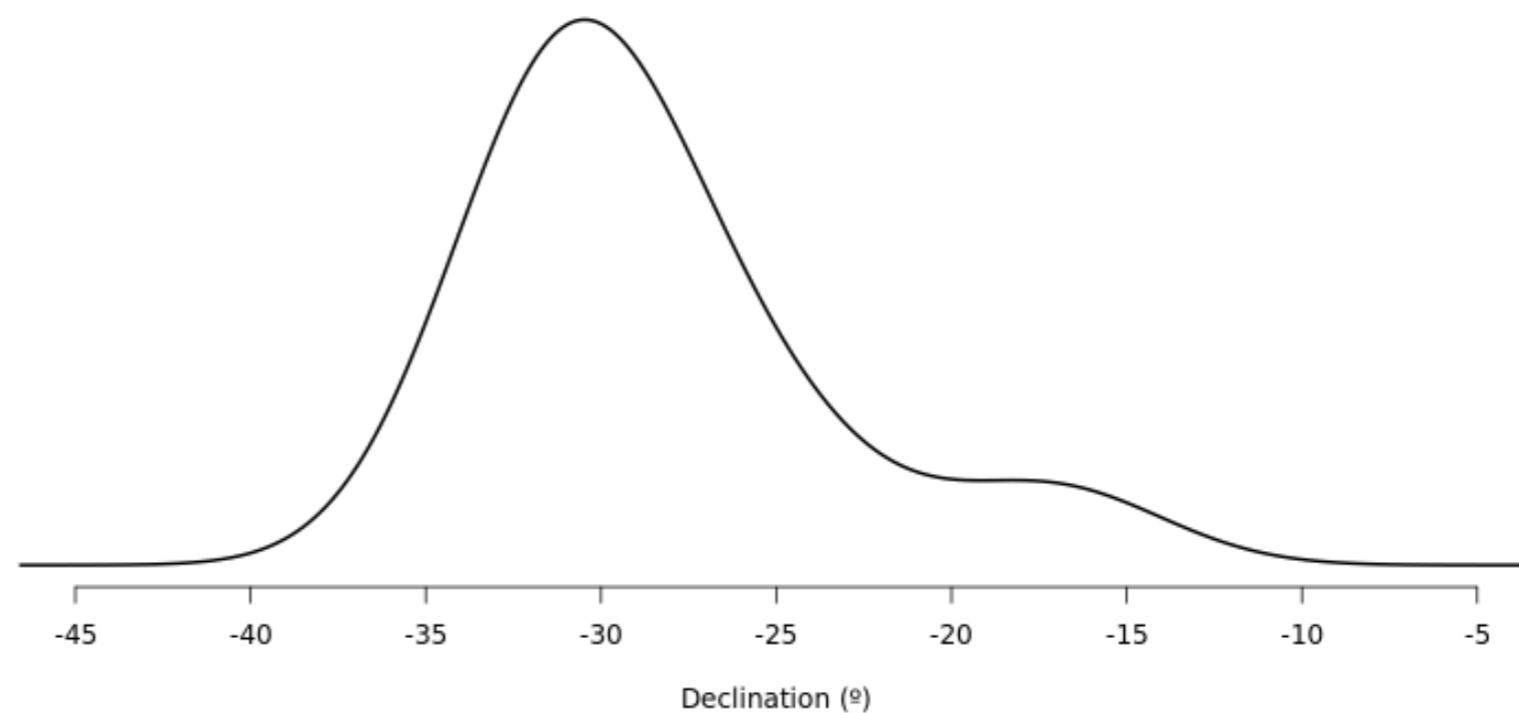
Histogram

Curve

Uncertainty

3

### Celestial Objects



To help you check whether any identified patterns might align with celestial objects, use the Celestial Objects collapsible panel

### Celestial Objects

Time Period:

from                      to

2000                      2000      }

Sun and Moon:

- Solstices
- Equinoxes
- minor Lunar Extremes
- major Lunar Extremes
- Spring Full Moon
- Autumn Full Moon

Stars:

Custom Dec:

Choose the time period of interest

Leave them equal if interested in single year. Use negative numbers for BCE

To help you check whether any identified patterns might align with celestial objects, use the Celestial Objects collapsible panel

### Celestial Objects

Time Period:

from                          to

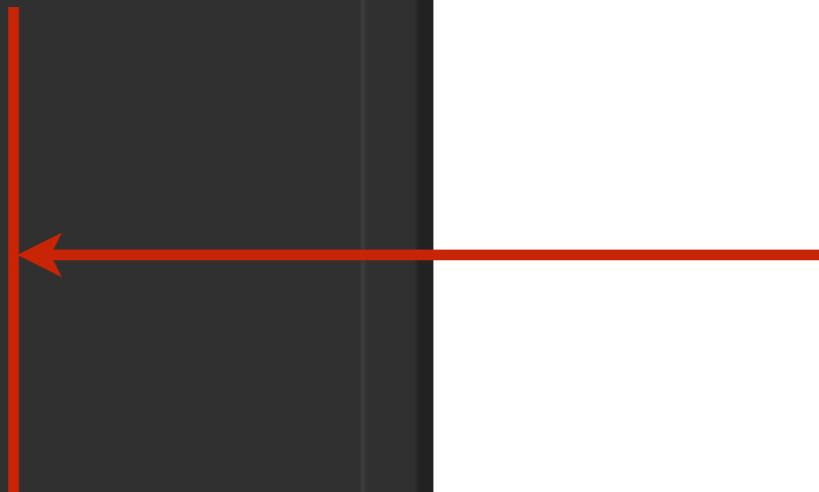
2000                          2000

**Sun and Moon:**

- Solstices
- Equinoxes
- minor Lunar Extremes
- major Lunar Extremes
- Spring Full Moon
- Autumn Full Moon

**Stars:**

**Custom Dec:**



Choose to display solstices, equinox, lunar extremes (standstill) and equinoctial full moon declinations

To help you check whether any identified patterns might align with celestial objects, use the Celestial Objects collapsible panel

### Celestial Objects

Time Period:

from                      to

2000                  2000

**Sun and Moon:**

- Solstices
- Equinoxes
- minor Lunar Extremes
- major Lunar Extremes
- Spring Full Moon
- Autumn Full Moon

**Stars:**

**Custom Dec:**

Click here and choose from the list or type to search through a list of bright stars (up to magnitude 3)



To help you check whether any identified patterns might align with celestial objects, use the Celestial Objects collapsible panel

### Celestial Objects

Time Period:

from                      to

2000                  2000

**Sun and Moon:**

- Solstices
- Equinoxes
- minor Lunar Extremes
- major Lunar Extremes
- Spring Full Moon
- Autumn Full Moon

**Stars:**

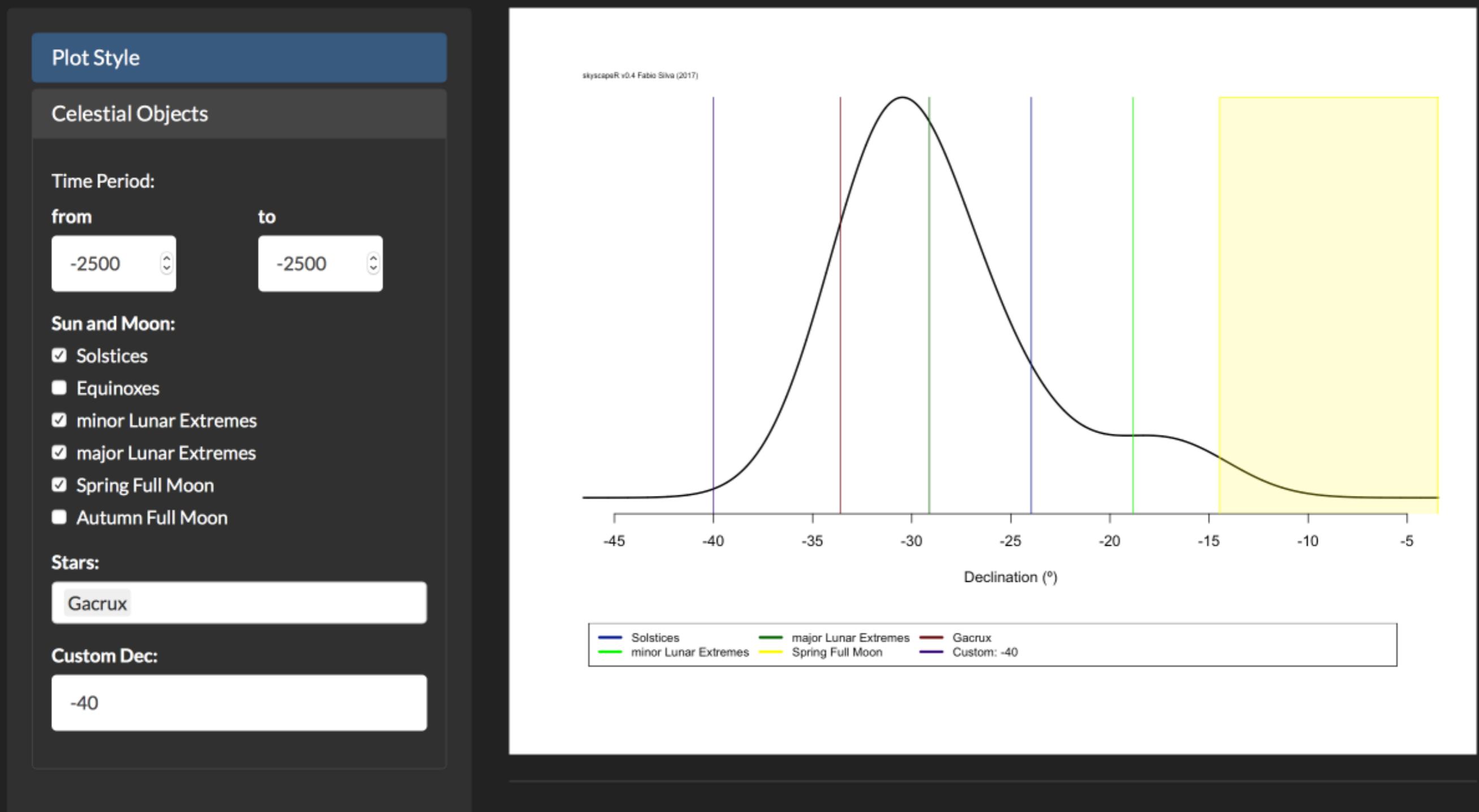
**Custom Dec:**

Type any declination value you wish to display



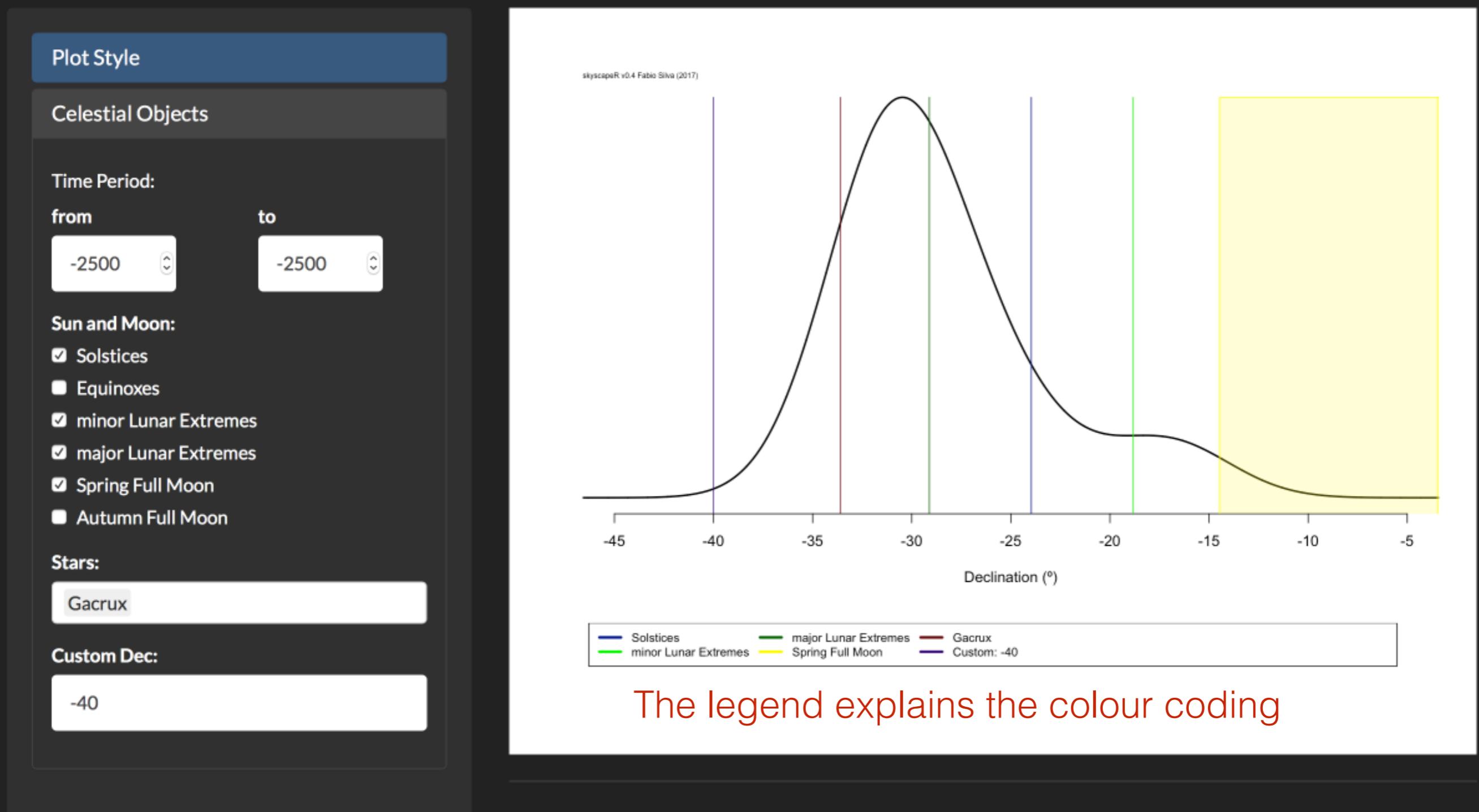
Coloured lines will appear on your plot so you can look for possible celestial targets

In this page you can visualize the data selected in the 'Data Entry' page.



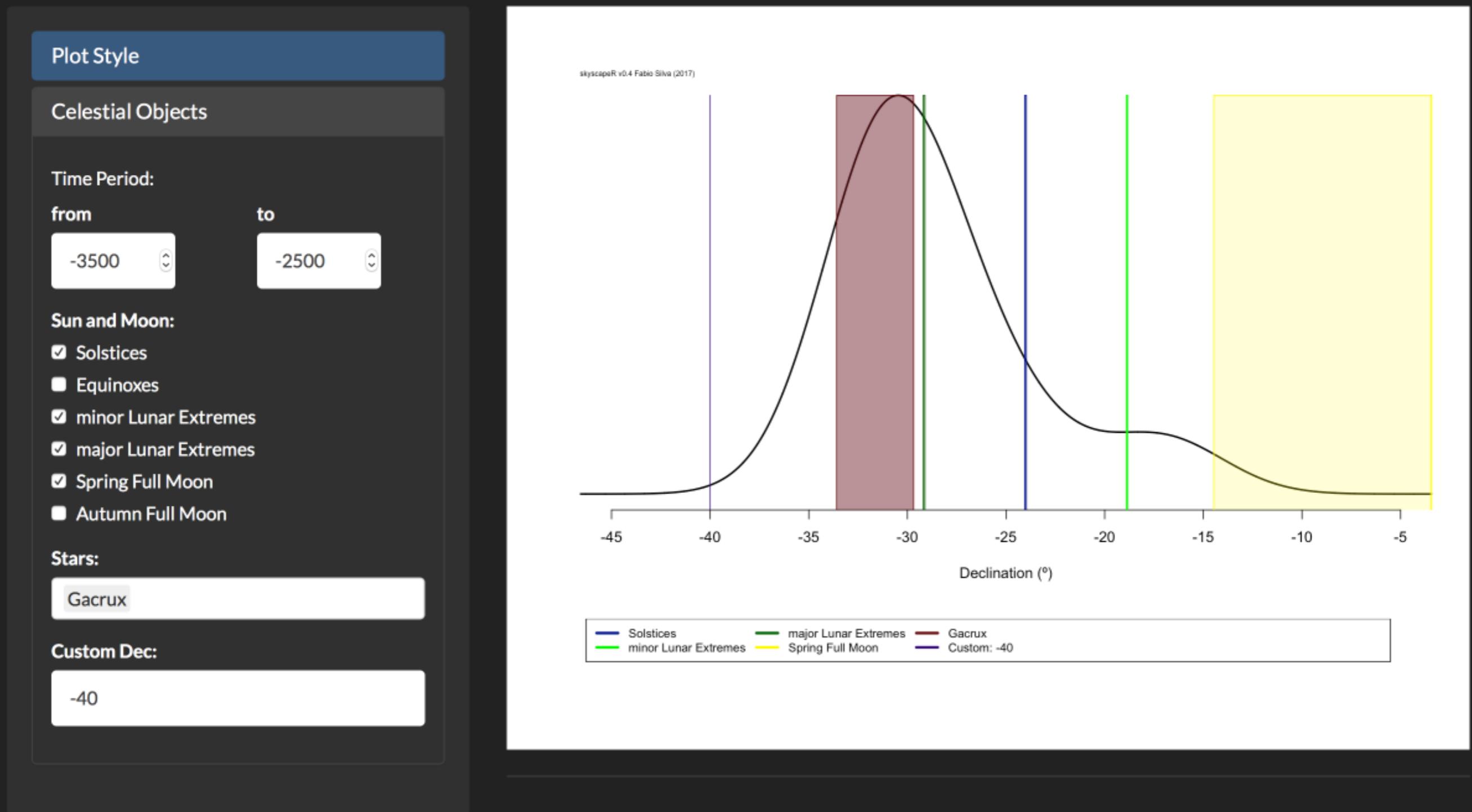
Coloured lines will appear on your plot so you can look for possible celestial targets

In this page you can visualize the data selected in the 'Data Entry' page.



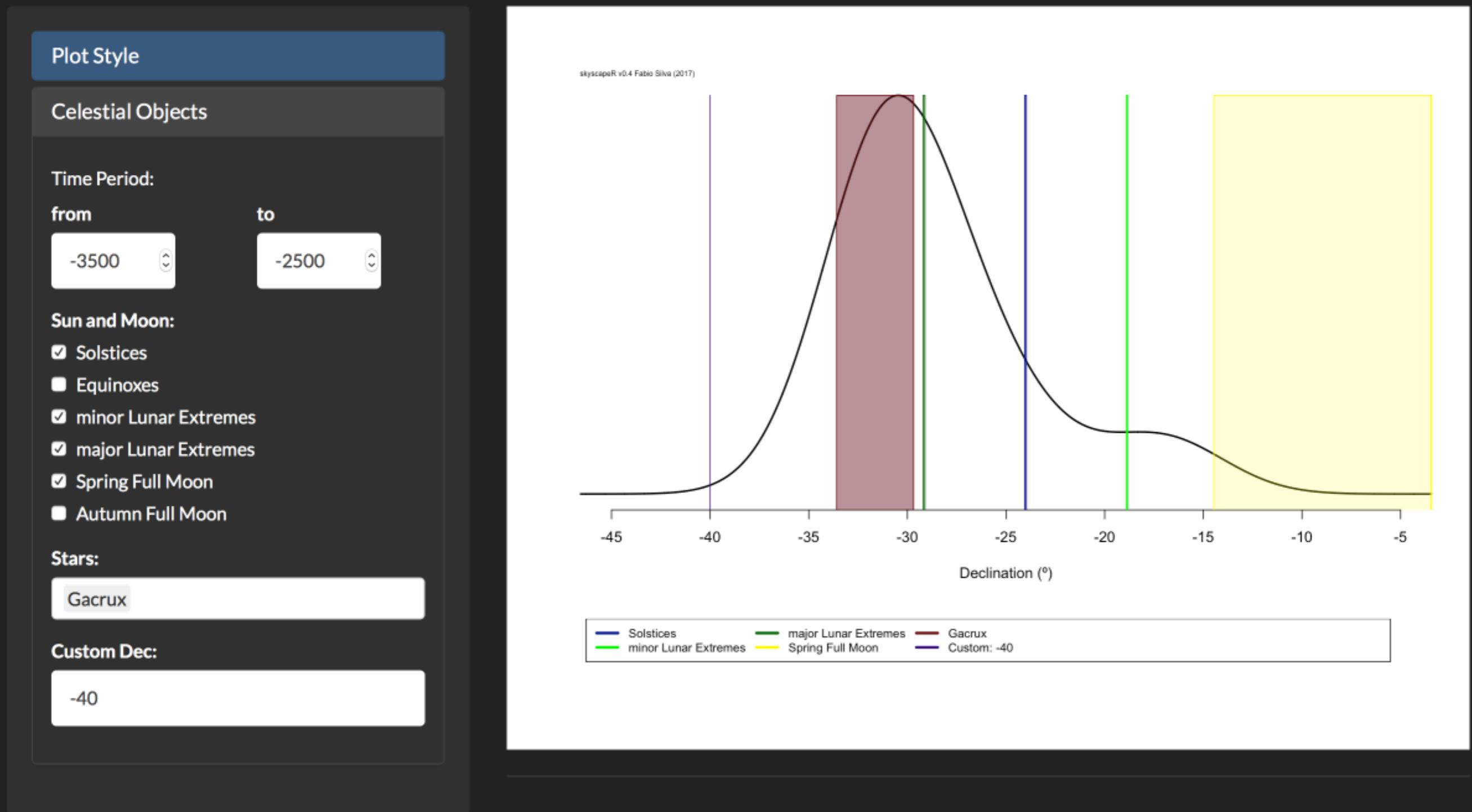
If a time period is chosen the lines will get thicker due to movement of the celestial objects

In this page you can visualize the data selected in the 'Data Entry' page.



This concludes the Data Visualisation tutorial. Happy pattern hunting!

In this page you can visualize the data selected in the 'Data Entry' page.



## The Horizon module

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This is the Horizon page. Not much to look at.

skyscapeR v0.4b    About    Data Entry    Visualization    **Horizon**    Tools ▾    Help

## Horizon Visualization

In this page you can visualize and handle horizon data.

Select or type in a HeyWhatsThat ID

Please enter a valid HWT ID



By clicking this box you can either select a site from the Data you uploaded (if HWT.ID field has been populated) or type in a new ID

skyscapeR v0.4b    About    Data Entry    Visualization    **Horizon**    Tools ▾    Help

## Horizon Visualization

In this page you can visualize and handle horizon data.

Select or type in a HeyWhatsThat ID

Please enter a valid HWT ID



skyscapeR will then download the horizon data from HeyWhatsThat. After a few seconds you should see something like this

skyscapeR v0.4b   About   Data Entry   Visualization   **Horizon**   Tools ▾   Help

## Horizon Visualization

In this page you can visualize and handle horizon data.

Select or type in a HeyWhatsThat ID

Orca da Malhada do Cambarinho

### Horizon Info

Site: Orca da Malhada do Cambarinho

Latitude: 40.6799 N

Longitude: 8.1205 W

Elevation: 787.2 m

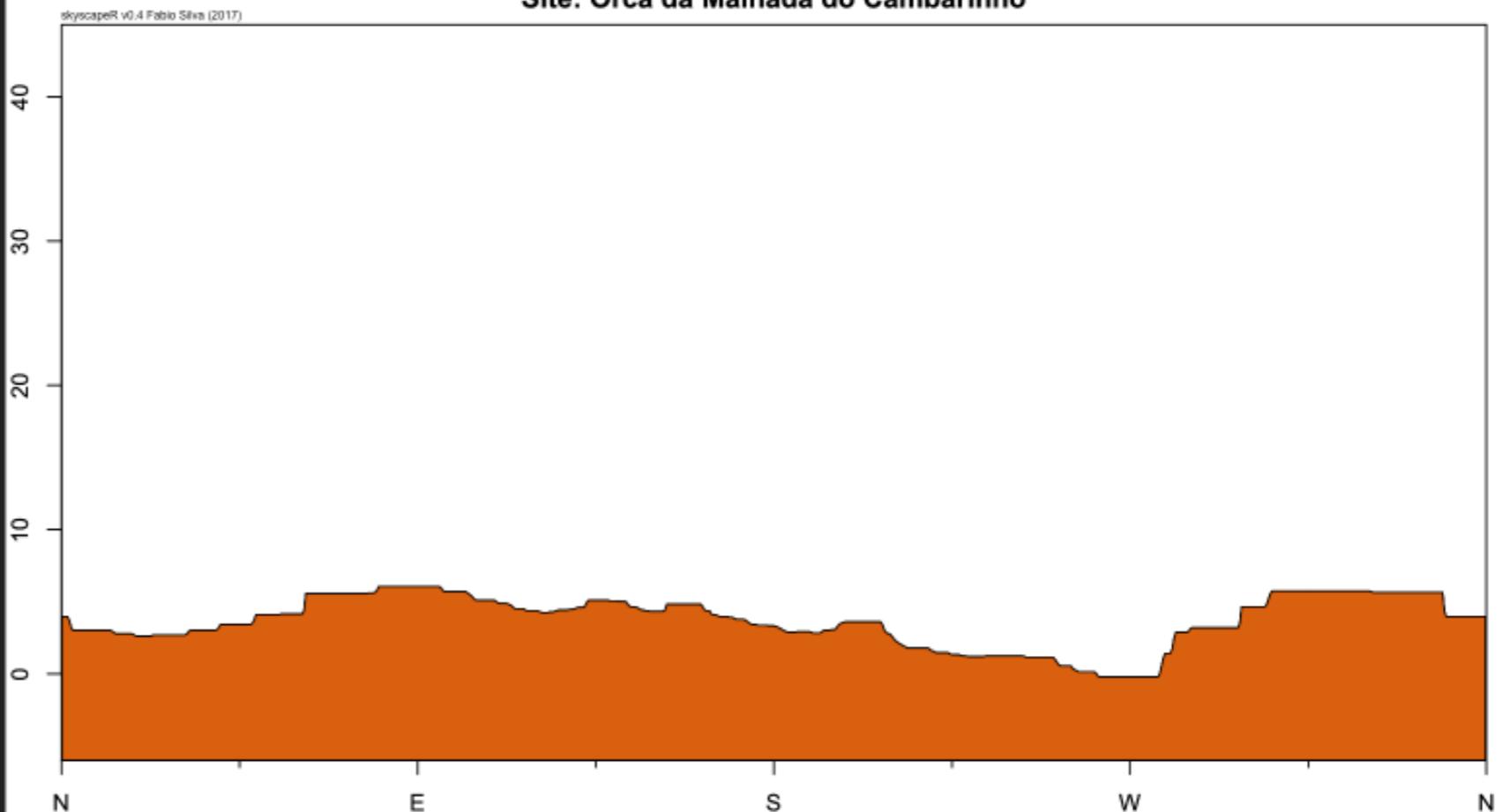
ID: K5JP31AA

 Download Horizon

### Celestial Objects

### Display Measurements

Site: Orca da Malhada do Cambarinho



skyscapeR will then download the horizon data from HeyWhatsThat. After a few seconds you should see something like this

skyscapeR v0.4b   About   Data Entry   Visualization   **Horizon**   Tools ▾   Help

## Horizon Visualization

In this page you can visualize and handle horizon data.

Select or type in a HeyWhatsThat ID

Orca da Malhada do Cambarinho

Horizon Info

Site: Orca da Malhada do Cambarinho  
Latitude: 40.6799 N  
Longitude: 8.1205 W  
Elevation: 787.2 m  
ID: K5JP31AA

Download Horizon

Celestial Objects

Display Measurements

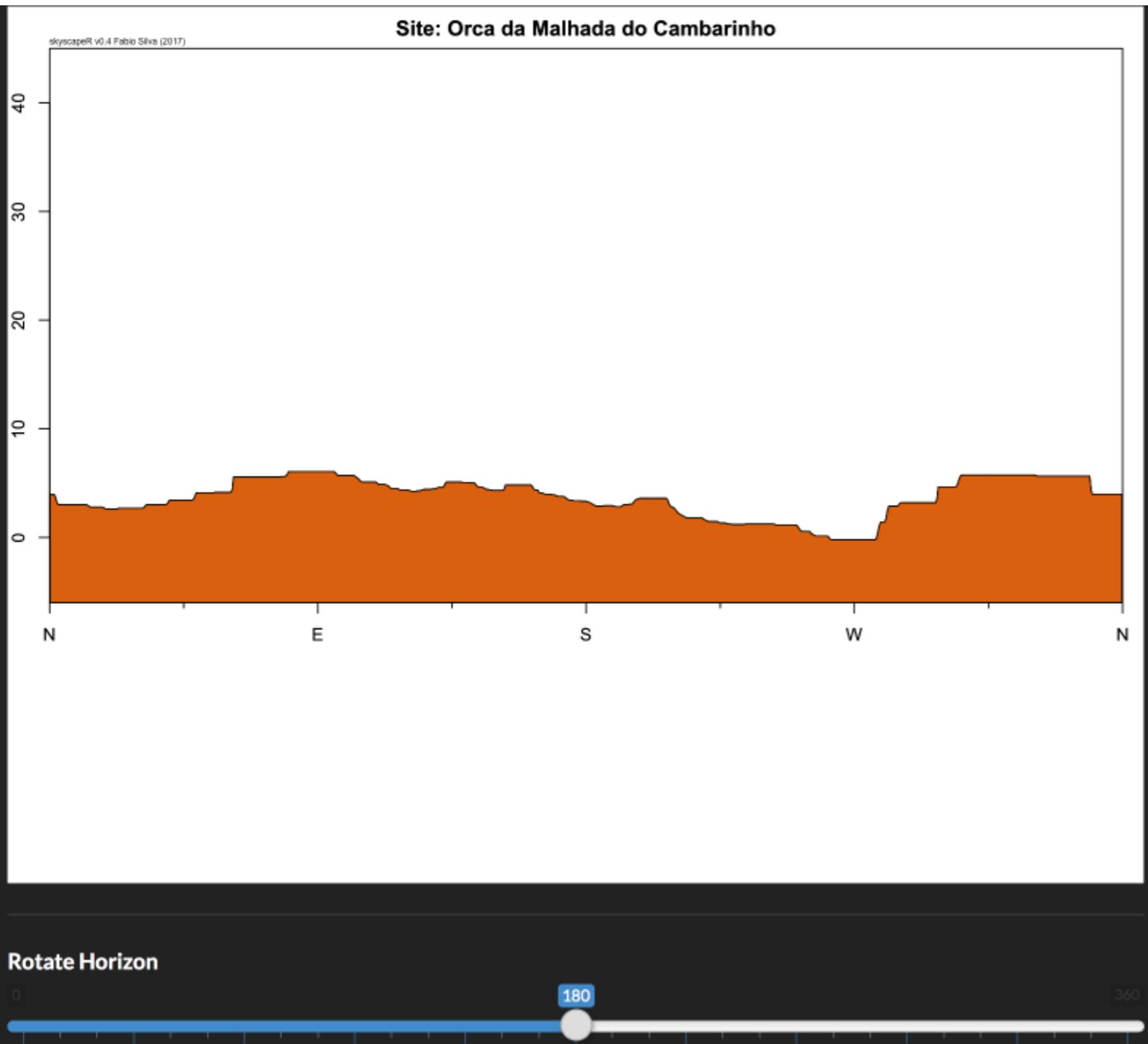
**Options Panel (left)**

**Site: Orca da Malhada do Cambarinho**

**Horizon Panel (right)**

skyscapeR v0.4 Fabio Silva (2017)

Let's look at the Horizon panel first



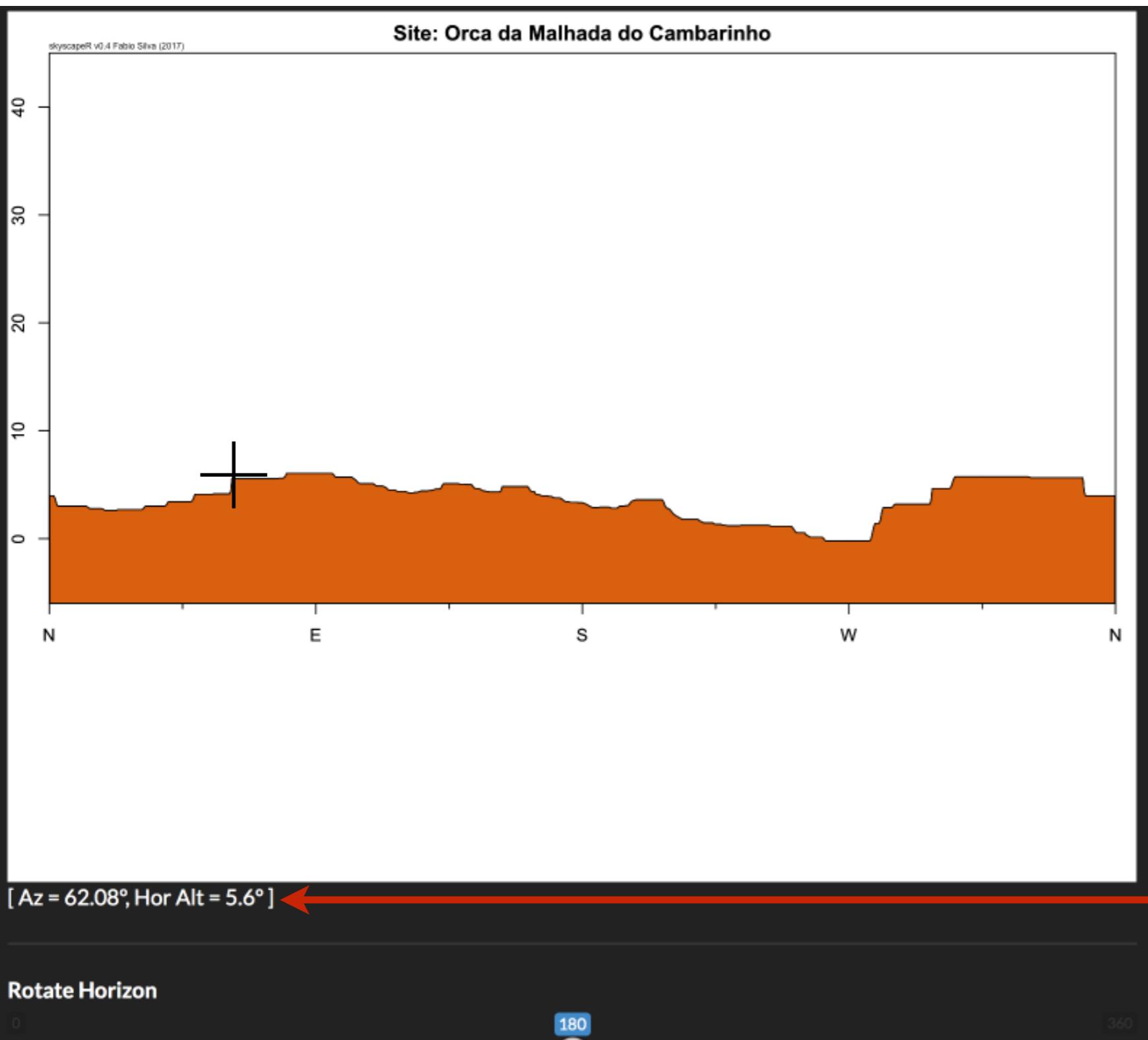
This gives you a view of the horizon at your site, not unlike that of HeyWhatsThat

It uses HeyWhatsThat data

You can see the cardinal points at the bottom, and the altitude on the left

You can also rotate the horizon by using the slider at the very bottom

Let's look at the Horizon panel first



If you click inside the plot the azimuth of the point you clicked will appear beneath the plot together with the horizon altitude that corresponds to that azimuth

Now, the Options panel

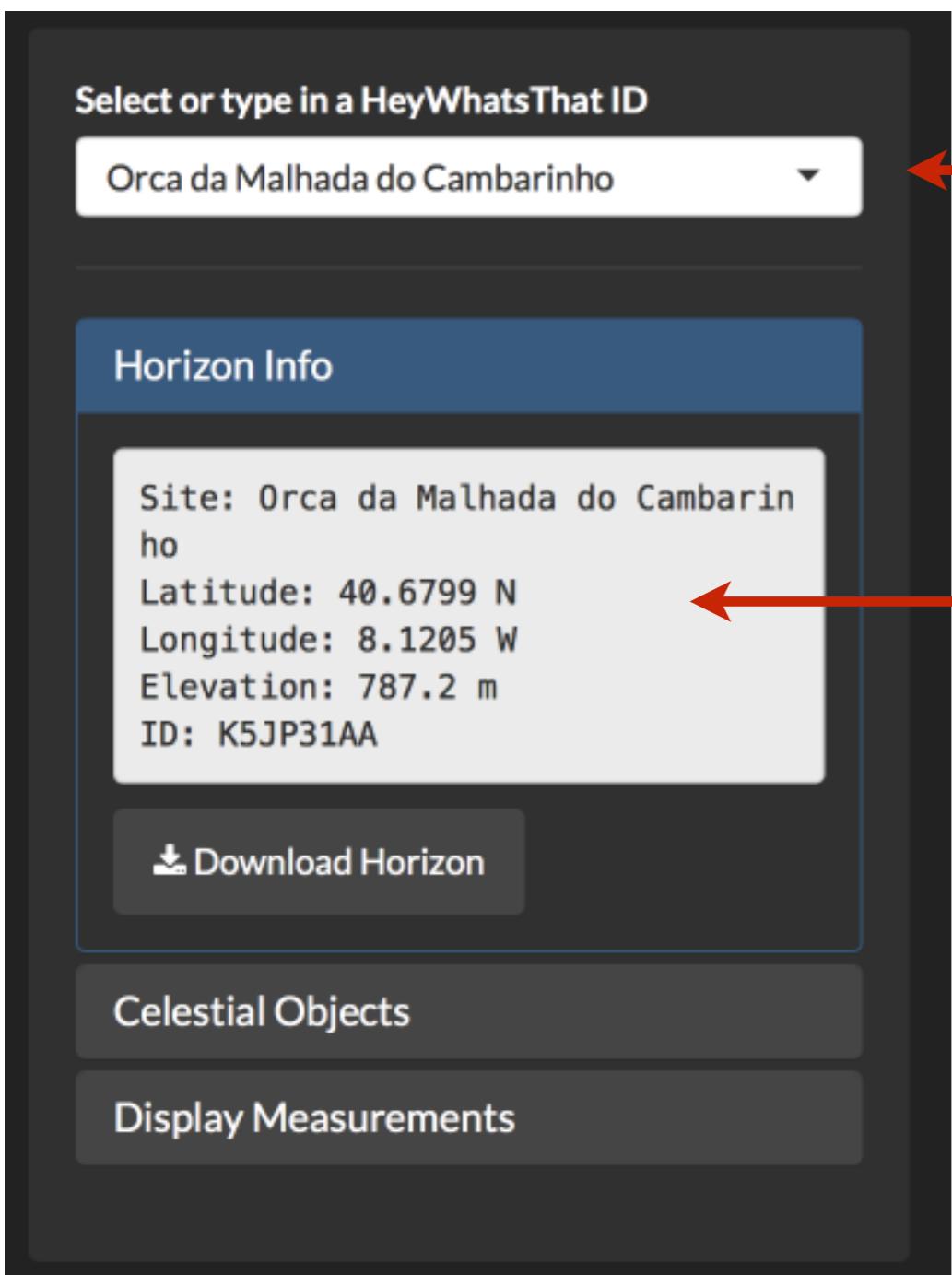
The screenshot shows the 'Options' panel of the skyscapeR application. At the top, there is a dropdown menu labeled 'Select or type in a HeyWhatsThat ID' containing the value 'Orca da Malhada do Cambarinho'. Below this is a 'Horizon Info' section with the following details:

- Site: Orca da Malhada do Cambarinho
- Latitude: 40.6799 N
- Longitude: 8.1205 W
- Elevation: 787.2 m
- ID: K5JP31AA

Below the 'Horizon Info' section is a button labeled 'Download Horizon' with a download icon.

At the bottom of the panel, there are two additional sections: 'Celestial Objects' and 'Display Measurements'.

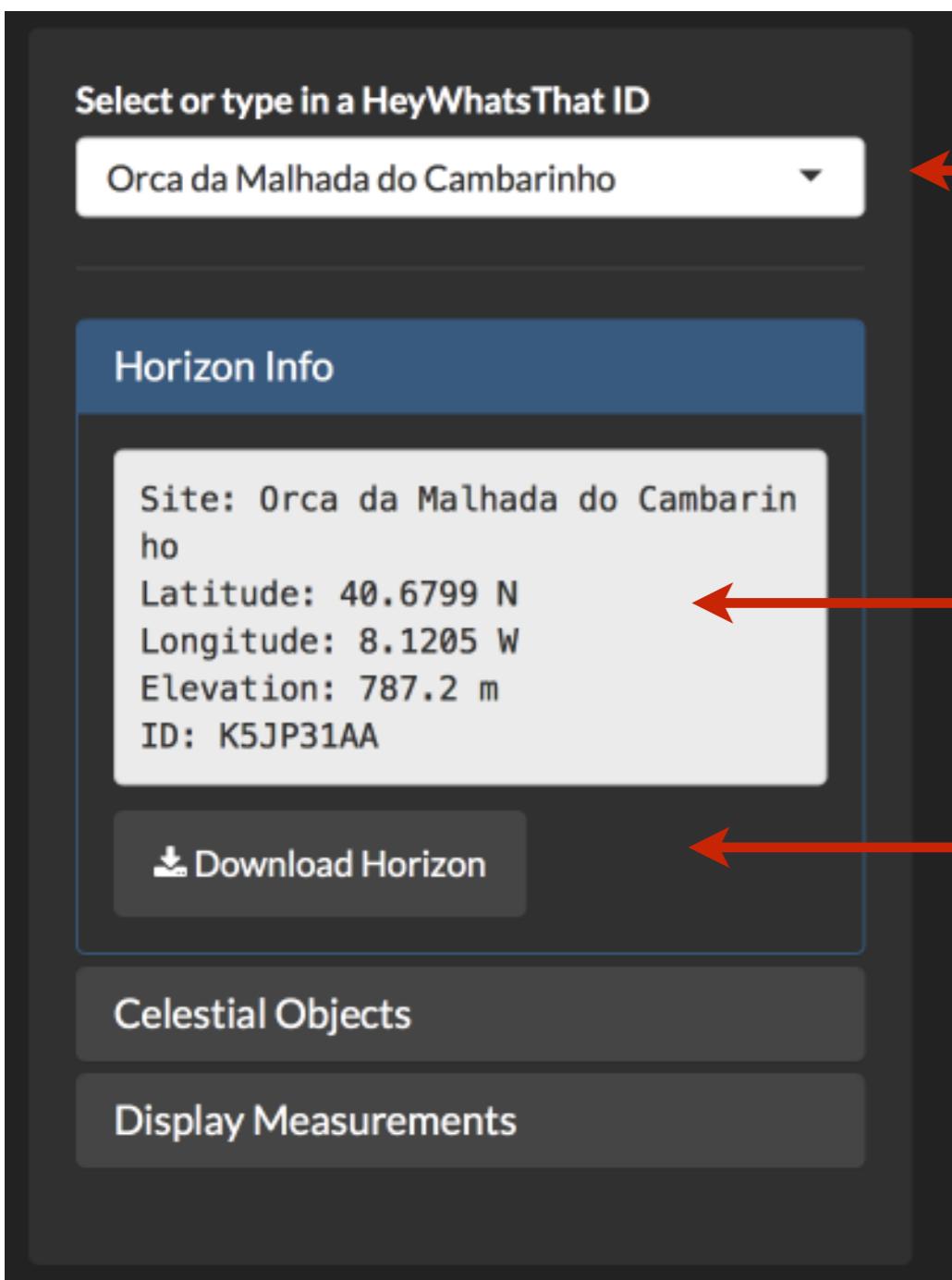
Now, the Options panel



You can import a different horizon

This gives you the information from HeyWhatsThat

Now, the Options panel

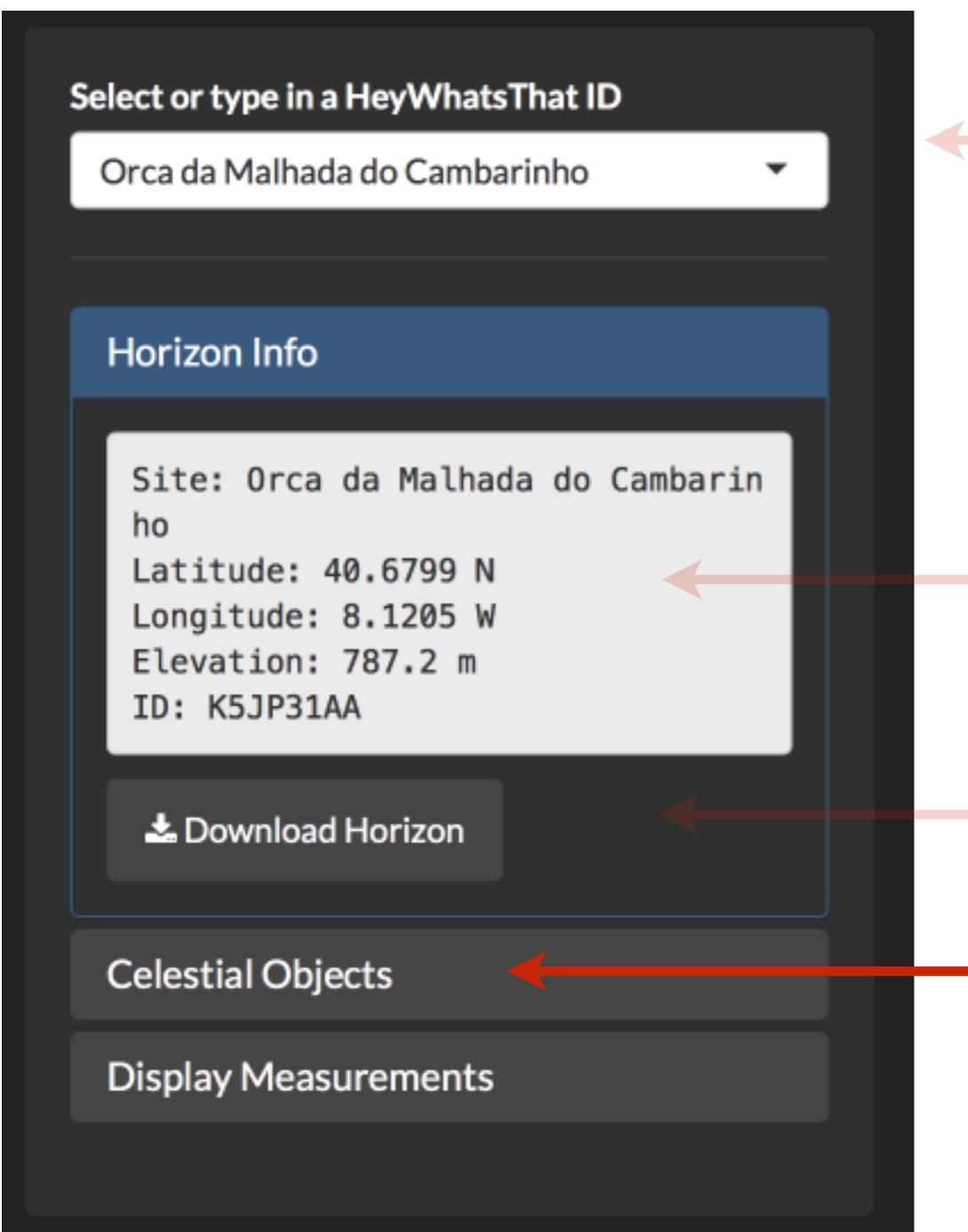


You can import a different horizon

This gives you the information from HeyWhatsThat

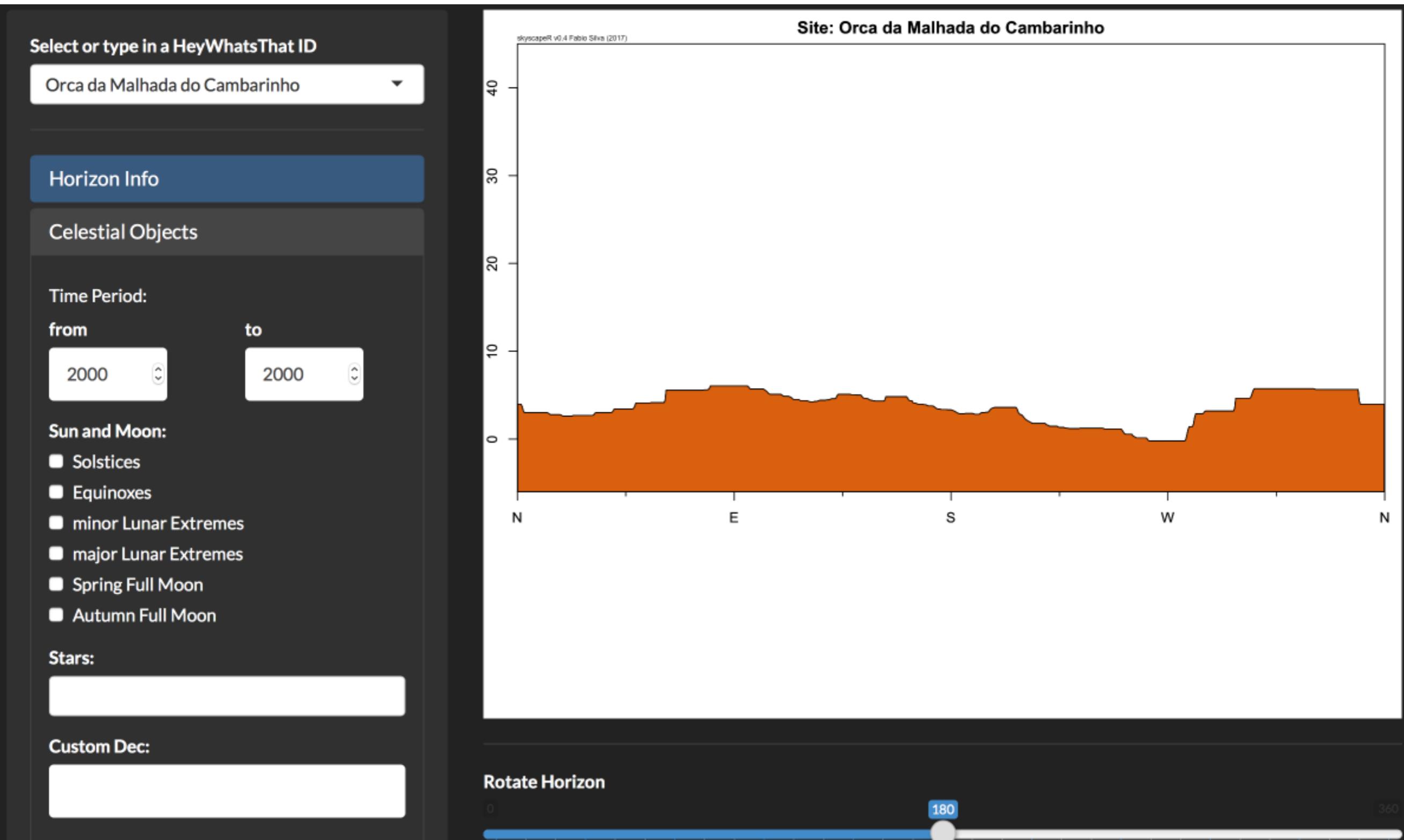
You can download the horizon in a format ready to be imported into Stellarium

## Now, the Options panel

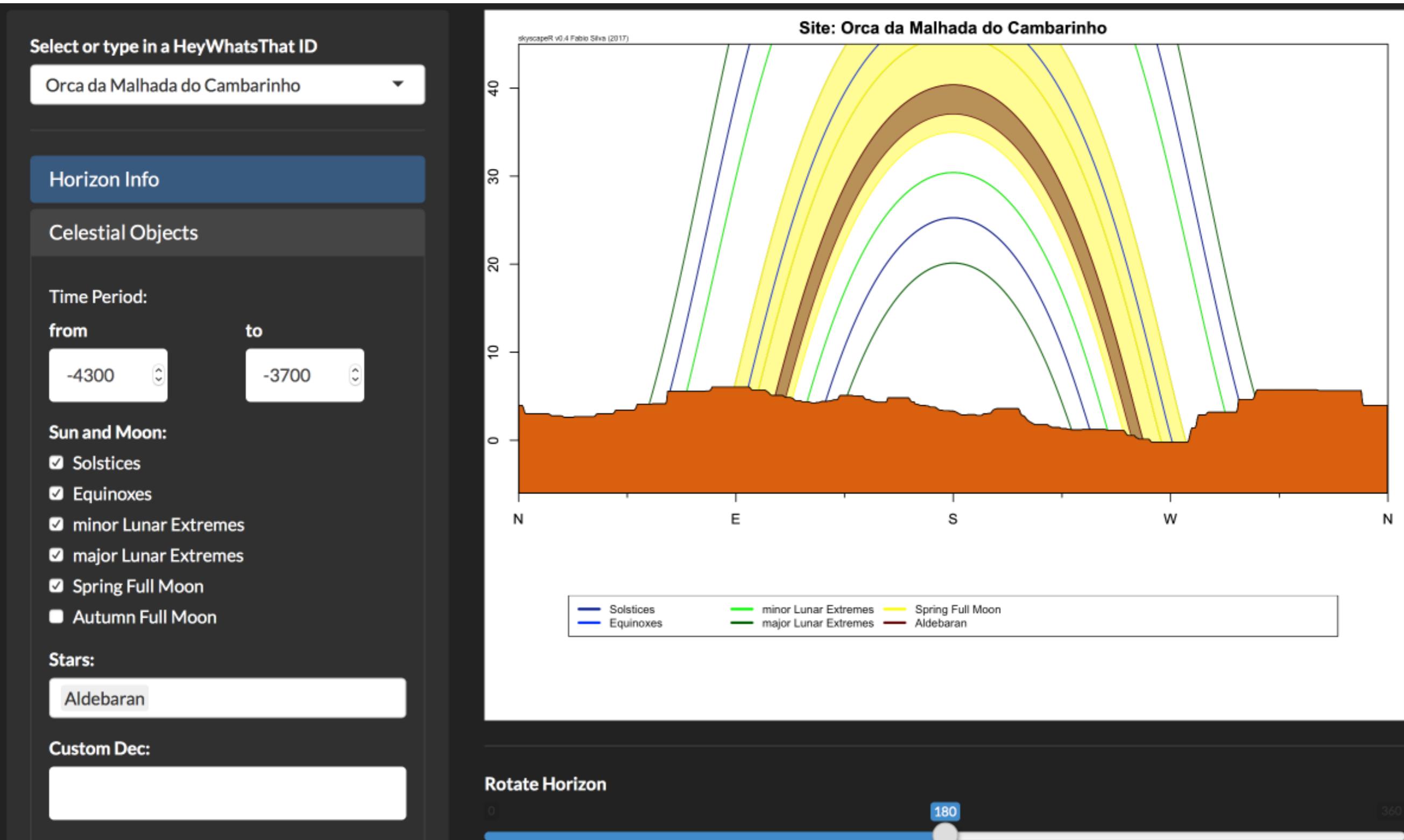


- You can import a different horizon
- This gives you the information from HeyWhatsThat
- You can download the horizon in a format ready to be imported into Stellarium
- This lets you display celestial objects on top of your horizon

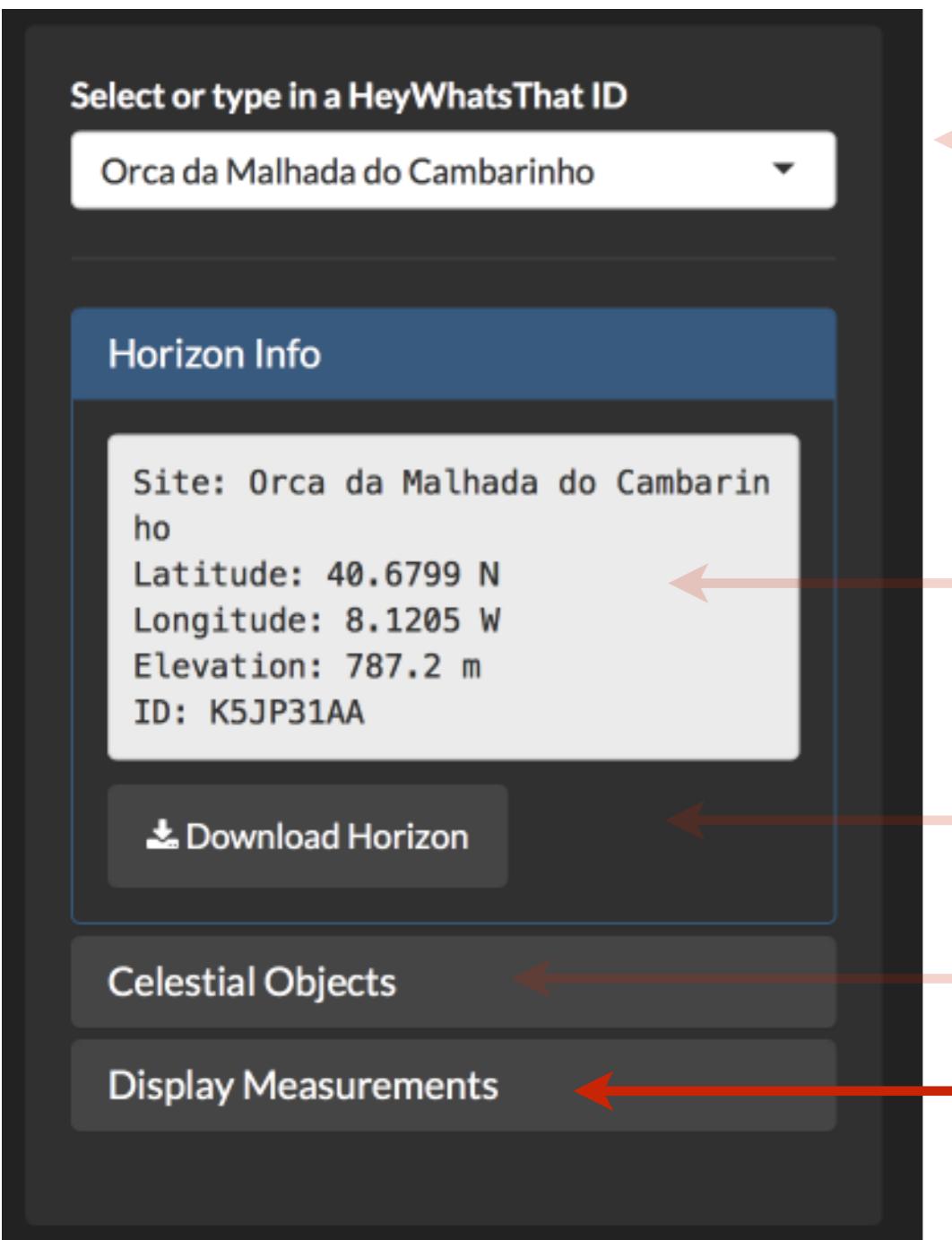
You can plot the orbit(s) of celestial objects on your horizon data



You can plot the orbit(s) of celestial objects on your horizon data



## Now, the Options panel



- You can import a different horizon

This gives you the information from HeyWhatsThat
- You can download the horizon in a format ready to be imported into Stellarium
- This lets you display celestial objects on top of your horizon
- This lets you display your uploaded data on top of your horizon

This lets you display your uploaded data on top of your horizon

The screenshot shows a dark-themed user interface for the skyscapeR application. At the top, there is a dropdown menu labeled "Select or type in a HeyWhatsThat ID" containing the text "Orca da Malhada do Cambarinho". Below this is a horizontal navigation bar with three items: "Horizon Info" (highlighted in blue), "Celestial Objects", and "Display Measurements". Under "Display Measurements", there is a section titled "Choose Measurements:" with a dropdown menu also containing "Orca da Malhada do Cambarinho". To the right of this dropdown is a red arrow pointing left. Below the measurement section are two input fields: "Uncertainty in Azimuth:" with the value "3" and "Uncertainty in Altitude:" with the value "3". At the bottom, there is a section titled "Show uncertainty as:" with two radio button options: "error-bar" (which is selected) and "window".

Automatically selects measurement whose HWT.ID matches that of the Horizon being displayed. Click here to remove and/or add others

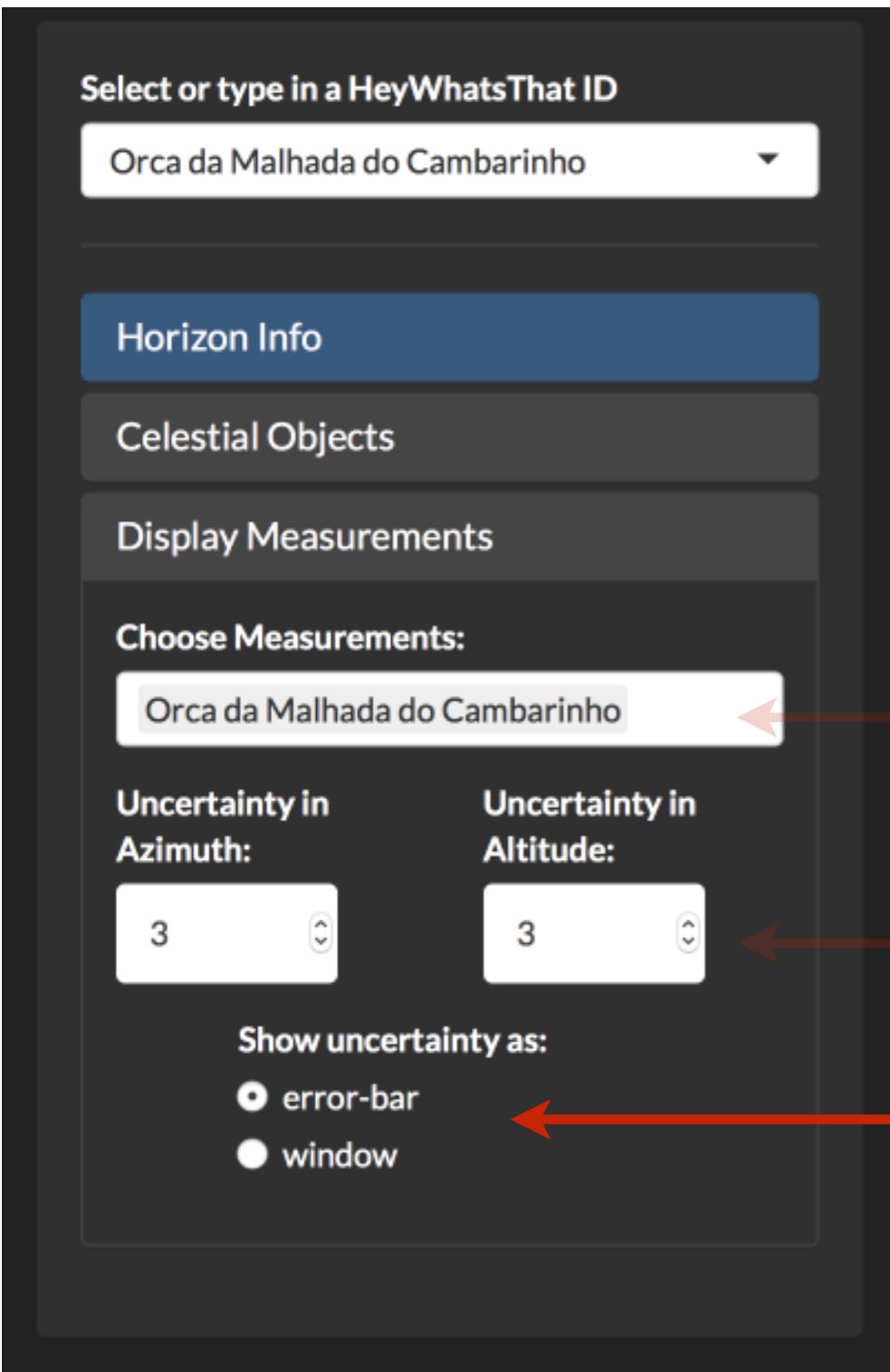
This lets you display your uploaded data on top of your horizon

The screenshot shows the 'Choose Measurements:' section of the software. It includes a dropdown menu for selecting a measurement ID ('Orca da Malhada do Cambarinho'), a list of measurements ('Orca da Malhada do Cambarinho'), and two input fields for 'Uncertainty in Azimuth' and 'Uncertainty in Altitude', both set to '3'. Below these are options for 'Show uncertainty as' (radio buttons for 'error-bar' and 'window').

Automatically selects measurement whose HWT.ID matches that of the Horizon being displayed. Click here to remove and/or add others

Uncertainty, used for measurements without uncertainty, or if larger than that of measurement

This lets you display your uploaded data on top of your horizon



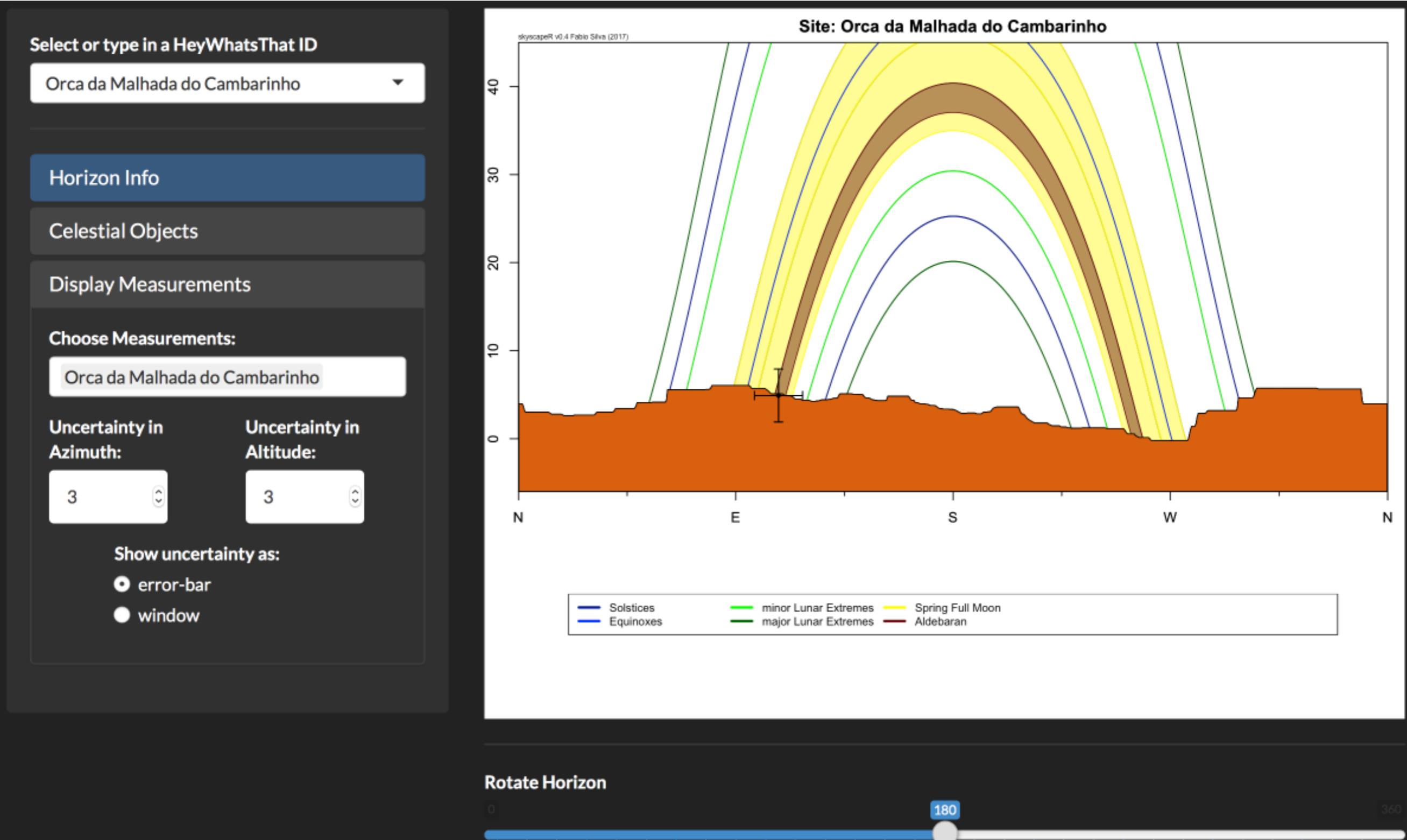
The screenshot shows the 'Choose Measurements:' section of the software. It includes a dropdown menu for selecting a HeyWhatsThat ID ('Orca da Malhada do Cambarinho'), two input fields for uncertainty in azimuth and altitude (both set to '3'), and a radio button group for 'Show uncertainty as:' with 'error-bar' selected. A red arrow points from the text 'How to display Measurement' to the 'Show uncertainty as:' section.

Automatically selects measurement whose HWT.ID matches that of the Horizon being displayed. Click here to remove and/or add others

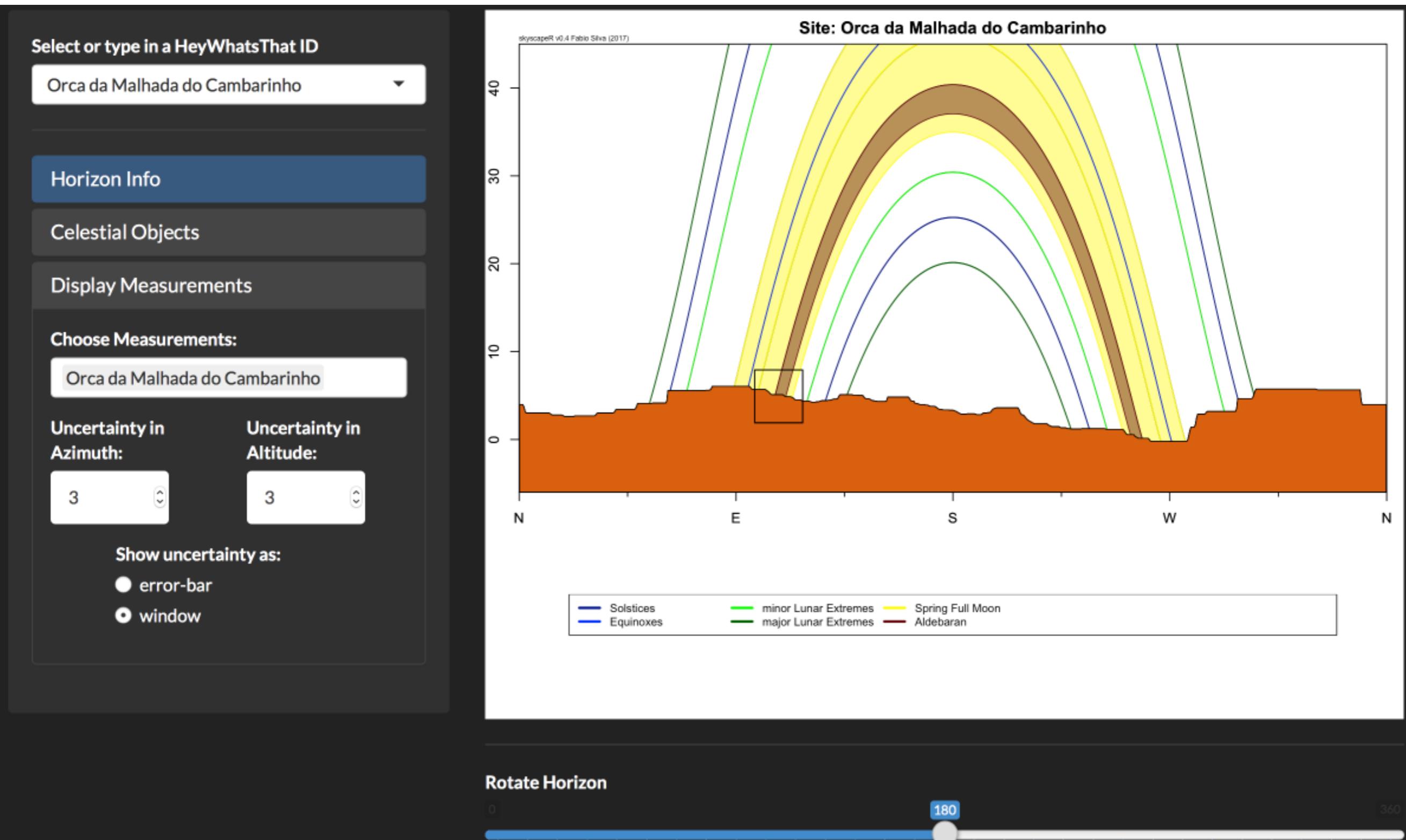
Uncertainty, used for measurements without uncertainty, or if larger than that of measurement

How to display Measurement

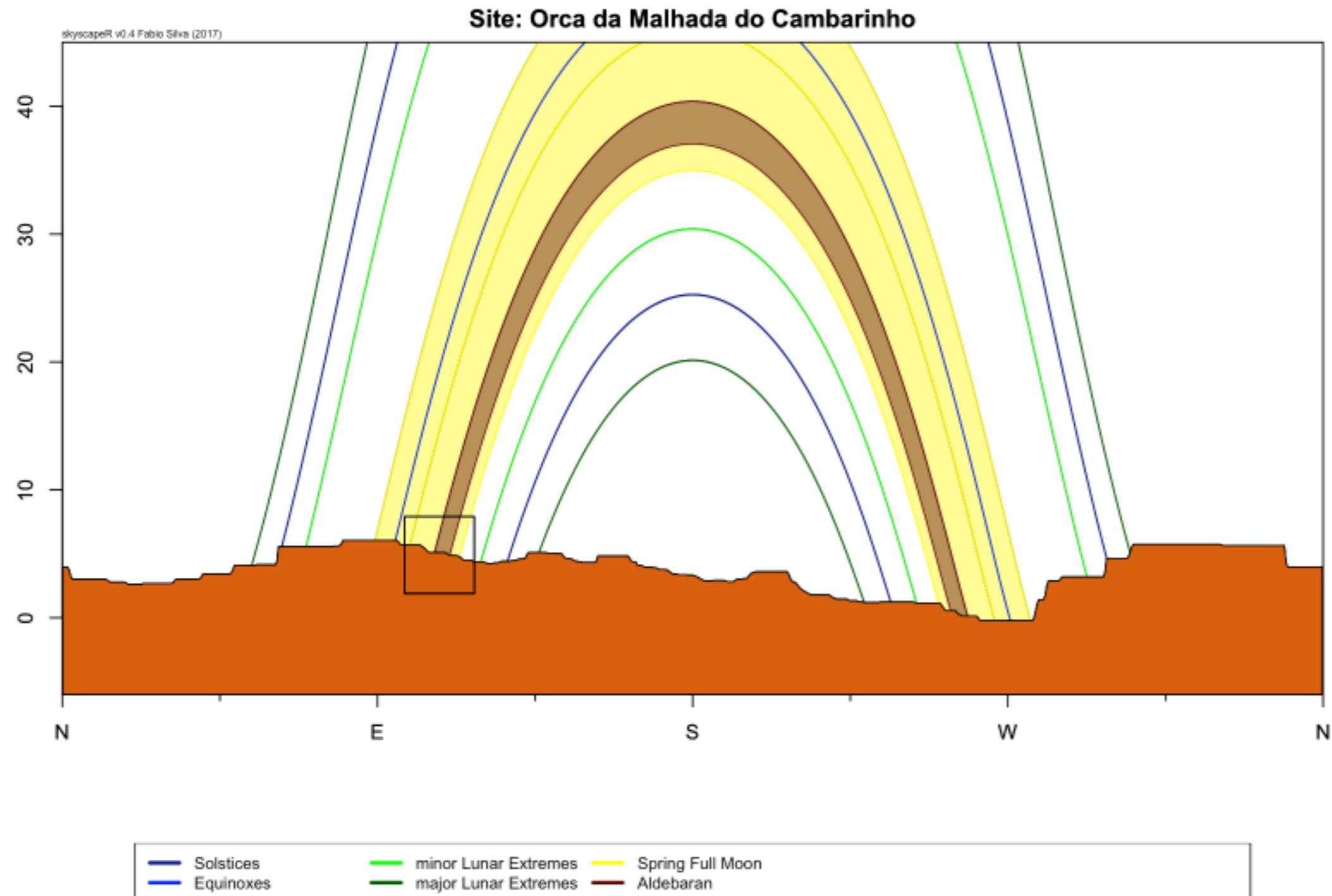
This is what a error-bar representation looks like:



This is what a window representation looks like

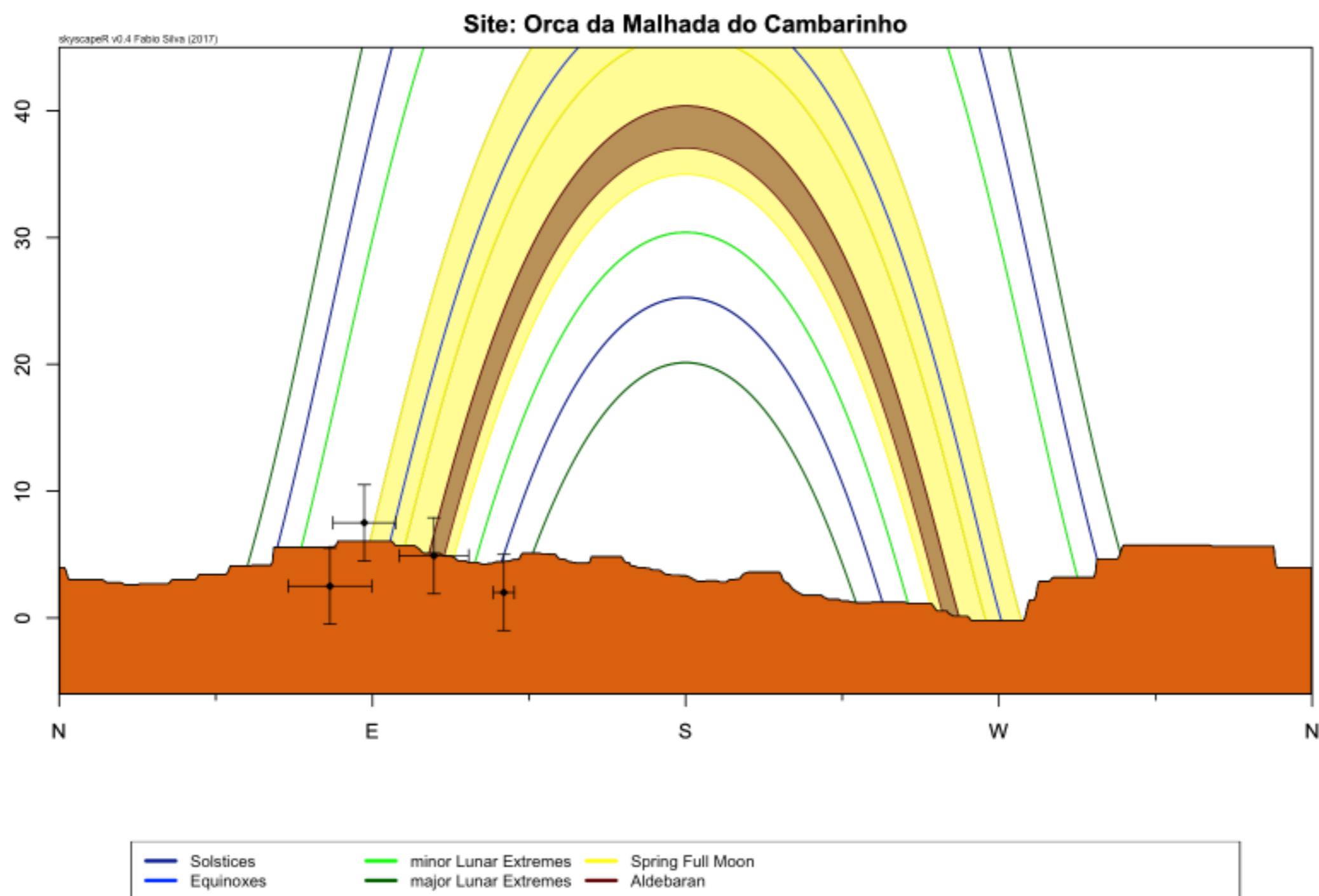


You can use this to identify potential celestial targets:



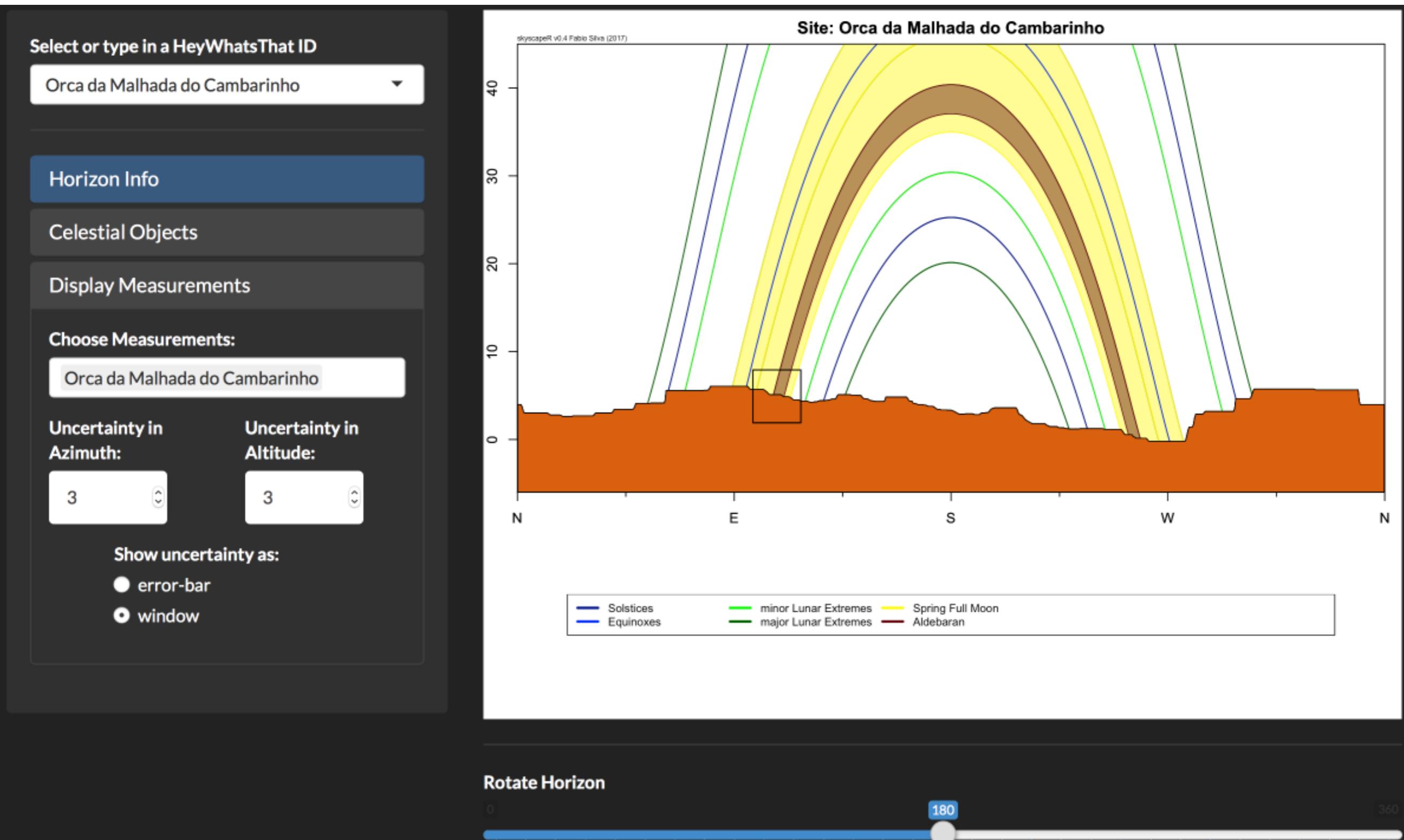
You can look for what objects rise (or set) within a specific window...

You can use this to identify potential celestial targets:



... or what objects rise (or set) in alignment with multiple stones at one site

This concludes the Horizon tutorial. Happy celestial object hunting!



## The Tools module

skyscapeR v0.4b

About

Data Entry

Visualization

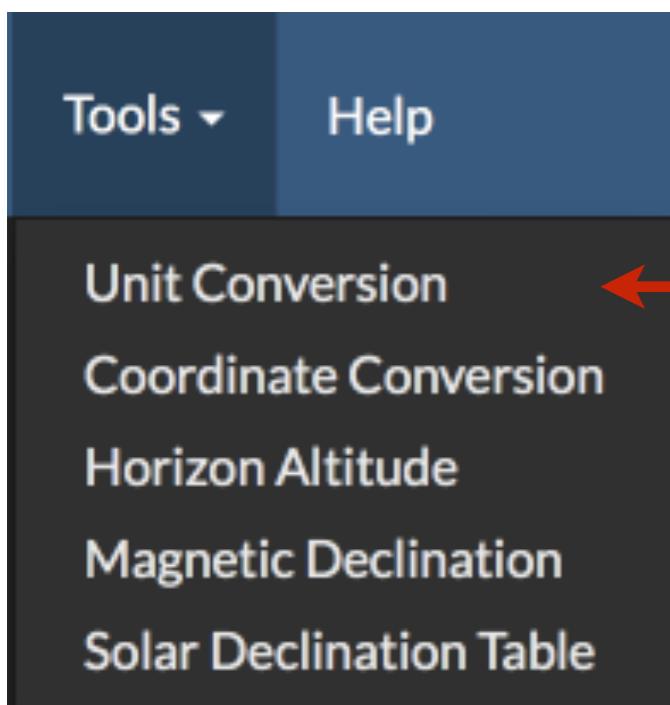
Horizon

Tools ▾

Help

- Unit Conversion
- Coordinate Conversion
- Horizon Altitude
- Magnetic Declination
- Solar Declination Table

# skyscapeR v0.4b



Convert between degrees in .° and ° ' “ formats

Convert between degrees in  $.^{\circ}$  and  $^{\circ} ' " "$  formats

## Tools :: Unit Conversion

This tool converts degrees between the  $xx^{\circ} yy' zz"$  form and the decimal-point form (ie  $xx.yyzz$ )

Degree ( $^{\circ}$ )	Arcminute (')	Arcsecond ("")
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
	V	A
Degree with decimal point( $^{\circ}$ )		
<input type="text" value="0"/>		

Convert between degrees in  $.^{\circ}$  and  $^{\circ} ' "$  formats

## Tools :: Unit Conversion

This tool converts degrees between the  $xx^{\circ} yy' zz"$  form and the decimal-point form (ie  $xx.yyzz$ )

The screenshot shows a user interface for unit conversion. At the top, there are three input fields: 'Degree ( $^{\circ}$ )' containing '0', 'Arcminute (')' containing '0', and 'Arcsecond (")' containing '0'. Below these are two large grey buttons labeled 'v' and '^'. Underneath the buttons is a section titled 'Degree with decimal point( $^{\circ}$ )' containing an input field with '0'. Red arrows from the numbered steps below point to each of these elements.

Either...

(1) Type your values here

(2) Click here

(3) Converted value appears here

Convert between degrees in  $.^{\circ}$  and  $^{\circ} ' "$  formats

## Tools :: Unit Conversion

This tool converts degrees between the  $xx^{\circ} yy' zz"$  form and the decimal-point form (ie  $xx.yyzz$ )

Degree ( $^{\circ}$ )      Arcminute ( $'$ )      Arcsecond ( $"$ )

v      ^

Degree with decimal point( $^{\circ}$ )

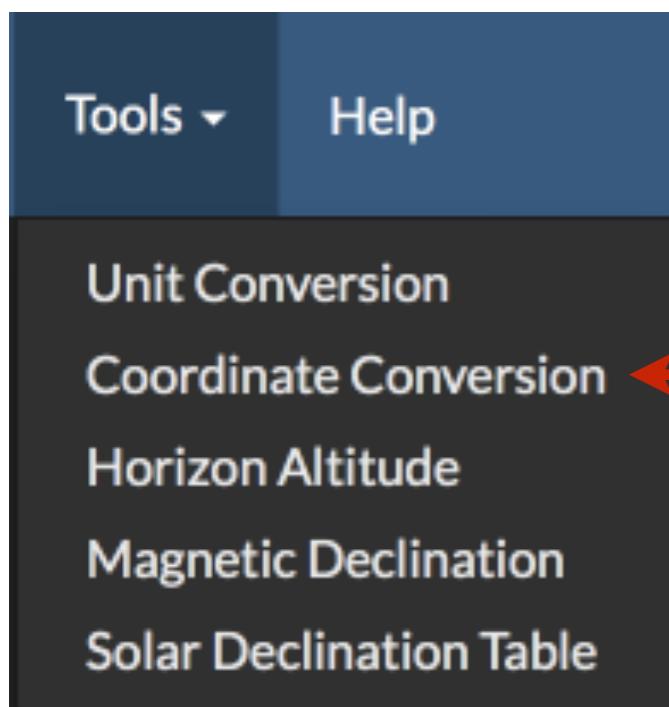
...Or

(3) Converted values appears here

(2) Click here

(1) Type your value here

# skyscapeR v0.4b



Convert between horizontal and equatorial coordinates

i.e. convert between az/alt and ra/dec

Convert between horizontal and equatorial coordinates

## Tools :: Coordinate Conversion

This tool converts between horizontal (azimuth, altitude) and equatorial (declination, right ascension) coordinates.

### Parameters

- Nutation correction
- Refraction correction
- Aberration correction

Latitude ( $^{\circ}$ )

Longitude ( $^{\circ}$ )

Elevation (m)

Azimuth ( $^{\circ}$ )

Altitude ( $^{\circ}$ )

V

A

Declination ( $^{\circ}$ )

Right Ascension ( $^{\circ}$ )

Convert between horizontal and equatorial coordinates

Latitude (°) <input type="text" value="0"/>	Longitude (°) <input type="text" value="0"/>	Elevation (m) <input type="text" value="0"/>
Azimuth (°) <input type="text" value="0"/>	Altitude (°) <input type="text" value="0"/>	
Declination (°) <input type="text" value="0"/>	Right Ascension (°) <input type="text" value="0"/>	

v      ^

Insert location values here

longitude and elevation are necessary only  
for refraction correction

Horizontal values here

Use this button as in other Tools

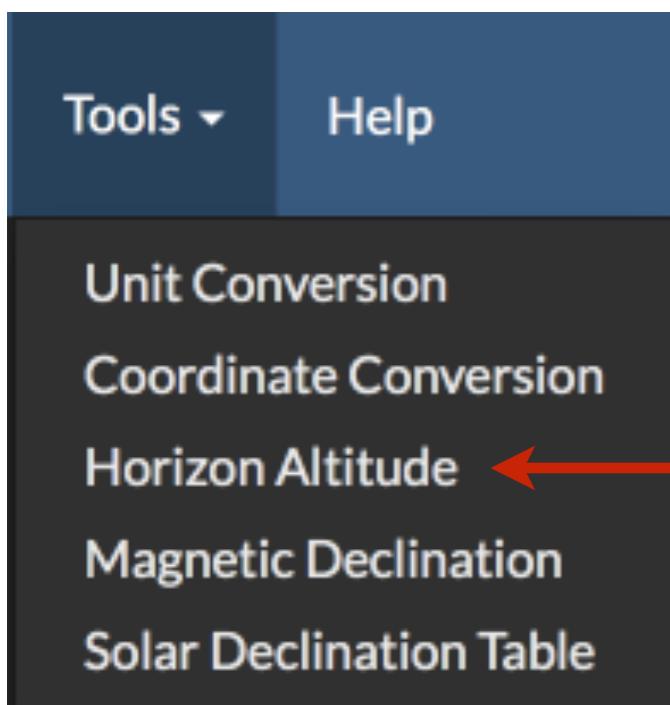
Equatorial values here

**Parameters**

Nutation correction  
 Refraction correction  
 Aberration correction

These checkboxes control whether  
to apply these corrections or not.  
By default, they are all applied and  
this is the recommended setting.

# skyscapeR v0.4b



Calculate horizon altitude from  
two elevation measurements

Calculate horizon altitude from two elevation measurements

## Tools :: Horizon Altitude

This tool calculates horizon altitudes from two elevation measurements (site and horizon point).

Site Elevation (m)

Horizon Elevation (m)

Horizon Distance (m)

Calculate

?

Horizon Altitude (°)



Click here for more information

Calculate horizon altitude from two elevation measurements

## Tools :: Horizon Altitude

This tool calculates horizon altitudes from two elevation measurements (site and horizon point).

Site Elevation (m)      Horizon Elevation (m)      Horizon Distance (m)

0

0

0

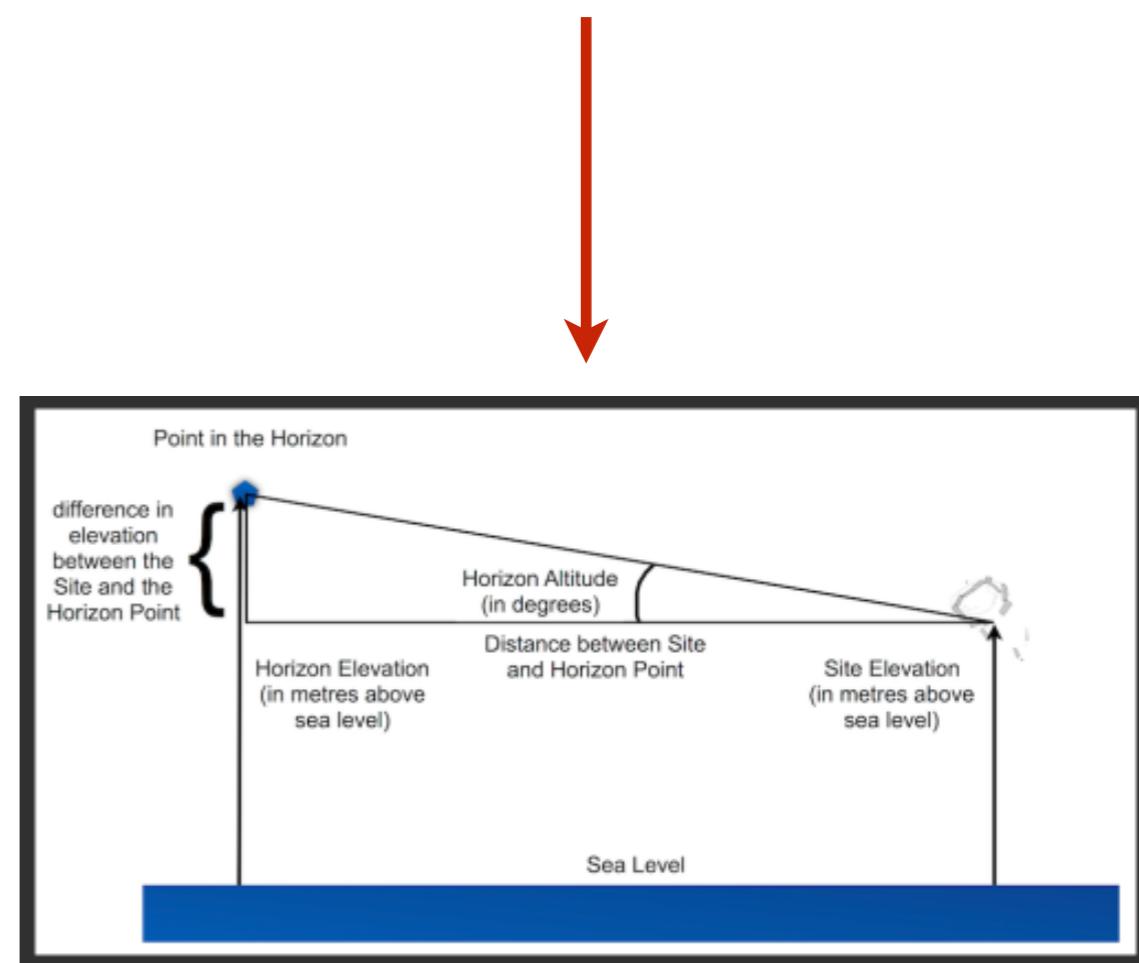
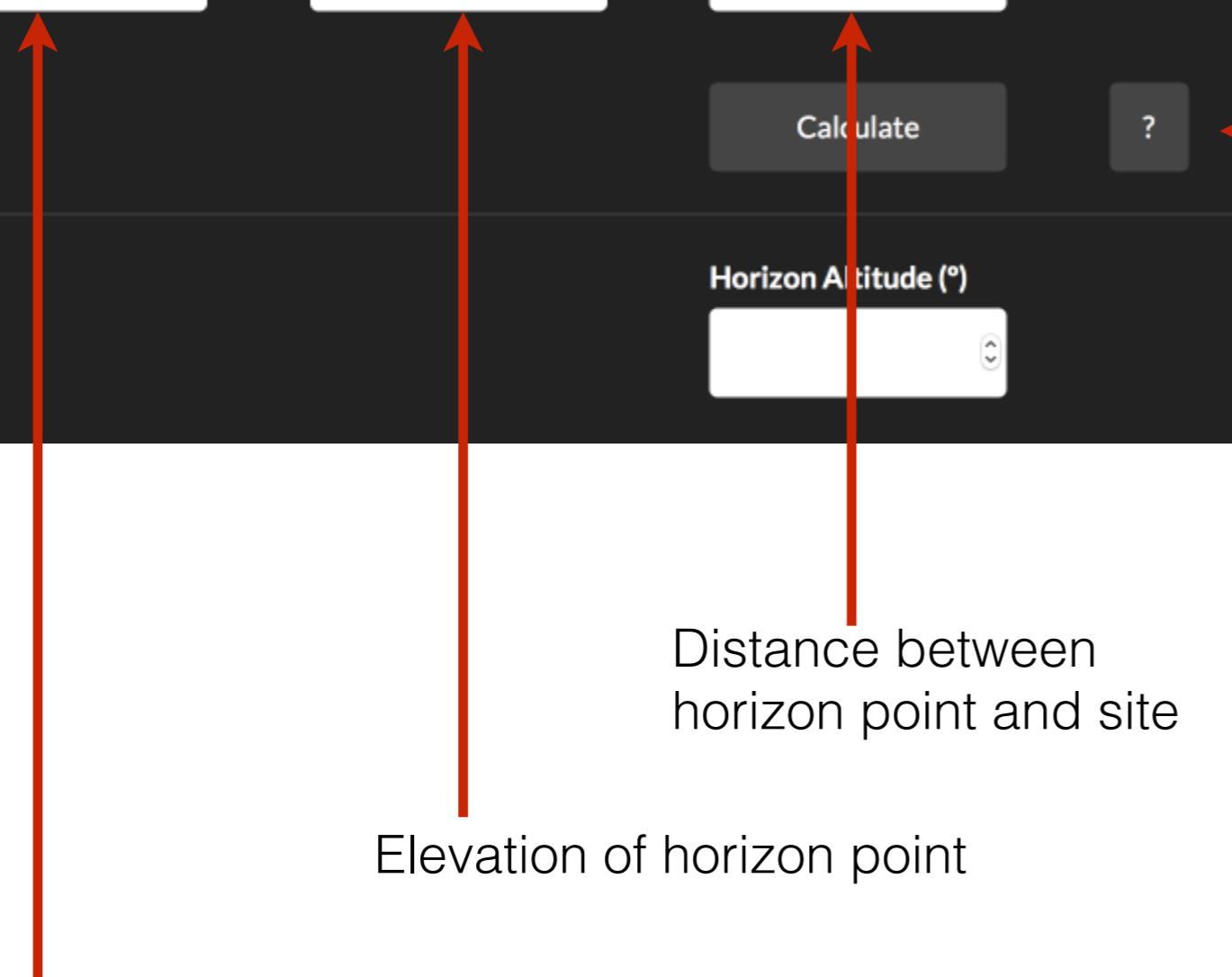
Calculate

?

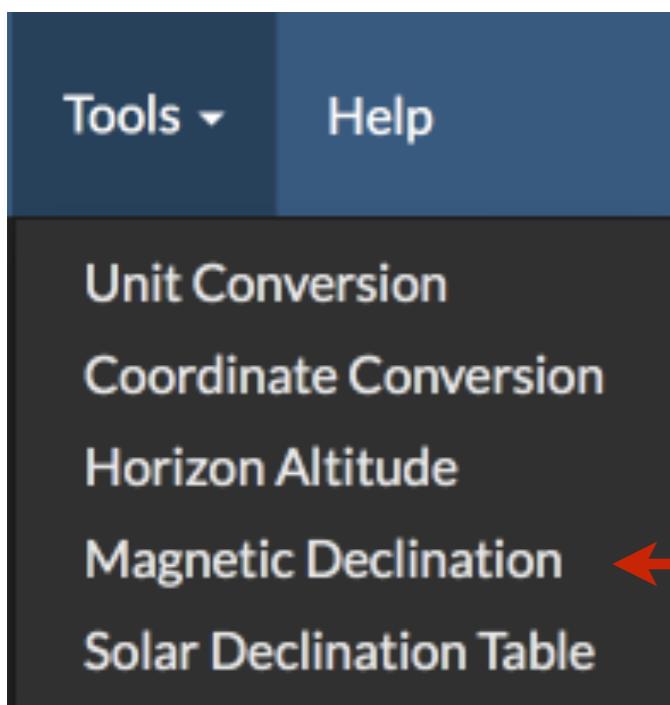
Horizon Altitude (°)

0

Click here for more information



# skyscapeR v0.4b



Estimate the magnetic declination at a site

Estimate the magnetic declination at a site

## Tools :: Magnetic Declination

This tool helps you estimate the magnetic declination (difference between magnetic and true north) using a variety of methods.

Latitude	Longitude	Date
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="17/03/2017"/>

Enter details here

### IGRF Model

Mag Dec: -5.13°

[For more information click here](#)

IGRF model estimate  
(same as NOAA website)

### Radial Technique

Estimate the magnetic declination at a site

## Tools :: Magnetic Declination

This tool helps you estimate the magnetic declination (difference between magnetic and true north) using a variety of methods.

Latitude	Longitude	Date
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="17/03/2017"/>

Enter details here

### IGRF Model

#### Radial Technique

[Read Me First!](#)

Insert the geo-coordinates of your reference points, as well as their azimuth (as measured from the site)

Latitude	Longitude	Azimuth
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
<a href="#">+</a>		<a href="#">Calculate</a>

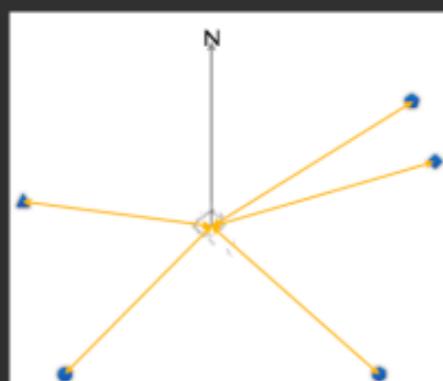
Radial technique  
Click here for more details

## Estimate the magnetic declination at a site

### Instructions :: Radial Technique

X

This tool estimates the magnetic declination (difference between magnetic and true north) using the radial GPS technique of Silva (2010).



In the field:

- (1) With the site of interest at the centre choose four or more markers (the reference points) in the local landscape (the blue shapes in the figure above). The more you choose the better, but four to six seems to give good results. Still at your site, measure their azimuths with your compass;
- (2) Move to each of the markers you've chosen and take their GPS coordinates. (Remember to measure the azimuth from each of these markers to your site as well to check, and correct for, local anomalies);

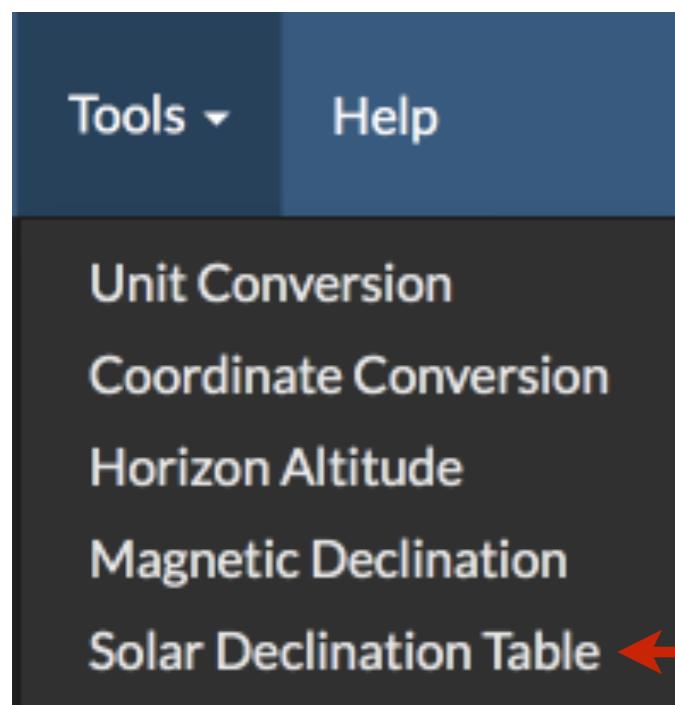
On *skyscapeR*:

- (3) Insert the GPS coordinates of your site at the top of the *skyscapeR* tool page;
- (4) Insert the GPS coordinates and azimuth to your first reference point in the appropriate section;
- (5) Click on the + button to add another marker;
- (6) Repeat steps (4) and (5) until all of your reference point data has been input;
- (7) Press the Calculate button.

Reference:

Silva, Fabio (2010). A New Survey of Neolithic Dolmens in Central Portugal. *Journal of Cosmology* 9: 3094-3106. Available online [here](#)

# skyscapeR v0.4b



Displays a table of the sun's declination  
for every day in a typical year

# skyscapeR v0.4b

Displays a table of the sun's declination for every day in a typical year. You can download it using the button provided.

skyscapeR v0.4b    [About](#)    [Data Entry](#)    [Visualization](#)    [Horizon](#)    [Tools ▾](#)    [Help](#)

Epoch:

2000



Download

Declination values calculated for noon on given day. Dates given in the proleptic Gregorian calendar.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-23.03	-17.21	-7.74	4.38	14.95	22	23.13	18.12	8.43	-3.03	-14.29	-21.74
2	-22.95	-16.93	-7.36	4.77	15.25	22.13	23.07	17.87	8.07	-3.41	-14.61	-21.89
3	-22.86	-16.64	-6.98	5.15	15.55	22.26	22.99	17.61	7.7	-3.8	-14.93	-22.04
4	-22.76	-16.34	-6.6	5.53	15.85	22.38	22.91	17.35	7.33	-4.19	-15.24	-22.18
5	-22.65	-16.04	-6.21	5.92	16.13	22.5	22.82	17.08	6.96	-4.57	-15.55	-22.31
6	-22.54	-15.74	-5.82	6.3	16.42	22.61	22.73	16.81	6.59	-4.96	-15.85	-22.44
7	-22.42	-15.43	-5.44	6.67	16.7	22.71	22.63	16.53	6.22	-5.34	-16.15	-22.56
8	-22.29	-15.12	-5.05	7.05	16.98	22.81	22.52	16.25	5.85	-5.72	-16.45	-22.67
9	-22.16	-14.8	-4.66	7.42	17.25	22.9	22.4	15.97	5.47	-6.1	-16.74	-22.77
10	-22.01	-14.48	-4.27	7.8	17.51	22.98	22.28	15.68	5.09	-6.48	-17.02	-22.87
11	-21.86	-14.15	-3.87	8.17	17.77	23.05	22.16	15.39	4.71	-6.86	-17.3	-22.96
12	-21.71	-13.83	-3.48	8.53	18.03	23.12	22.02	15.09	4.33	-7.24	-17.58	-23.04
13	-21.54	-13.49	-3.09	8.9	18.28	23.19	21.88	14.79	3.95	-7.62	-17.85	-23.12
14	-21.37	-13.16	-2.69	9.26	18.53	23.24	21.74	14.49	3.57	-7.99	-18.11	-23.18
15	-21.19	-12.82	-2.3	9.62	18.77	23.29	21.59	14.18	3.19	-8.36	-18.37	-23.24

At the moment the app doesn't allow users to save their data or settings (an implementation of this is in the works, however).

The best way to work with it is to keep the spreadsheet of your data in a folder where you should easily retrieve it in the future and upload if and when necessary. You can use the Tools module to help you build your own spreadsheet, if necessary. Include corresponding HWT IDs in this spreadsheet (for instance in the Notes column). This is good research practice anyway, particularly if you are working with several sites.

You then have all the information you need in the Data Entry page (including the HWT IDs which you can simply copy from there and paste into the Horizon page).

Graphical analyses (e.g. in the Visualisation or Horizon modules) can be saved to your computer by right-clicking on the image and saving it (as you do with any online image).

Have fun playing with the beta version of skyscapeR

If you encounter any bugs, if the website is down, if something is not clear or if you want to suggest some new functionalities... **[email me!](#)**

**You are helping to develop the app and making it easy to use.**

If you use it in your research, you should cite it as software (not website!). Make sure you include the version number and author. Below is an example in Chicago 16 style:

Silva, Fabio (2017) *skyscapeR* v0.4b.