



PLANET
APPLICATION

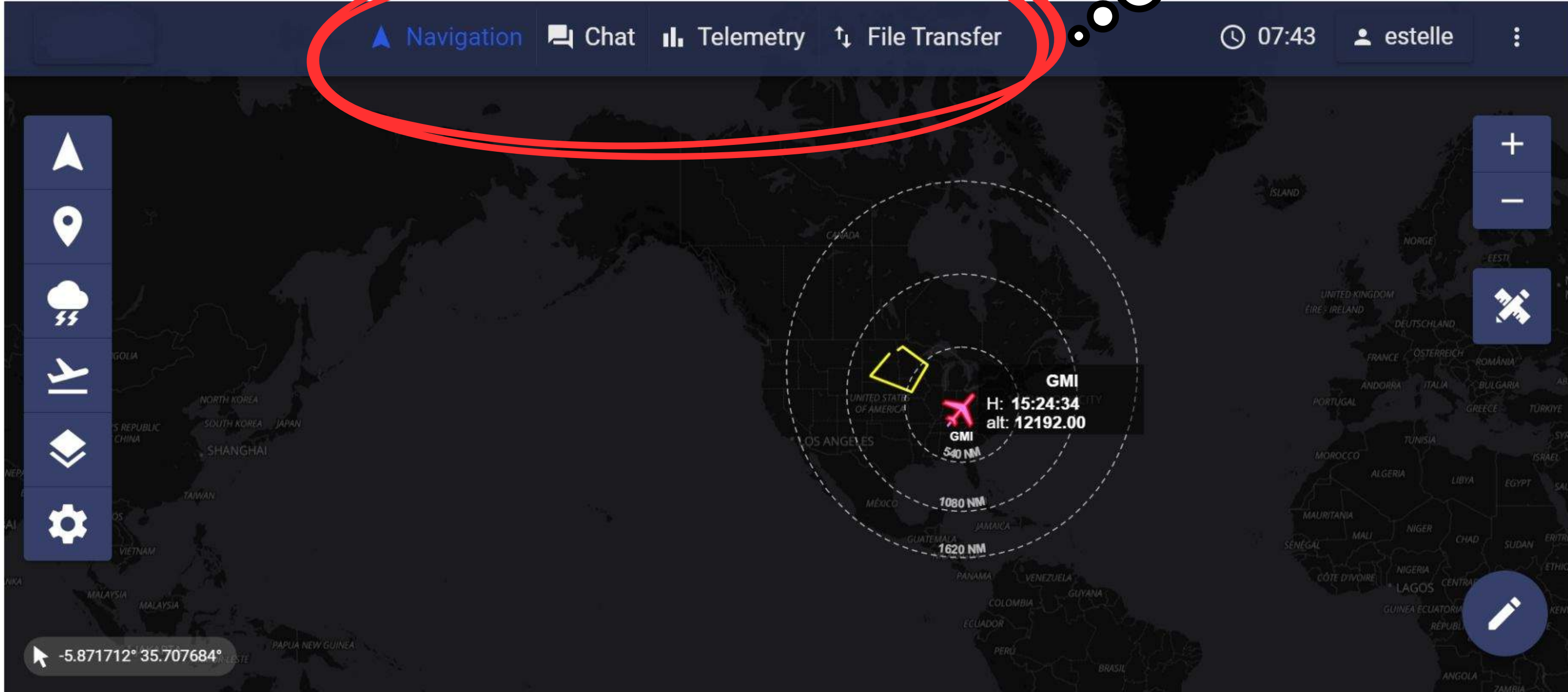
PLANET system allows exchange of data in real time between ground and on-board segments. It relies on satellite and/or cellular networks for ubiquitous connectivity.

This service is available during flights to onboard and ground users via a web application .

MISSION HOME PAGE

The app has 4 main services that can be found in the top bar of the screen.

Navigation is the default view of the application, where the fleet can be tracked.



UNDER NAVIGATION SERVICE

The FLEET menu shows details and controls about all the vehicles belonging to the current mission.

The screenshot displays a navigation application interface. At the top, there is a dark blue header with navigation options: 'Navigation' (with a blue arrow icon), 'Chat' (with a speech bubble icon), 'Telemetry' (with a bar chart icon), and 'File Transfer' (with an up/down arrow icon). On the right side of the header, the time is '08:17', the user name is 'estelle', and there is a menu icon (three dots).

The main area is a map showing a vehicle named 'GMI' (89 days ago) in an 'OFFLINE' state. The vehicle is represented by a red airplane icon with a yellow outline. The map shows concentric dashed circles around the vehicle, labeled with distances: 430 NM, 860 NM, and 1290 NM. A yellow rectangle highlights the vehicle's current position on the map.

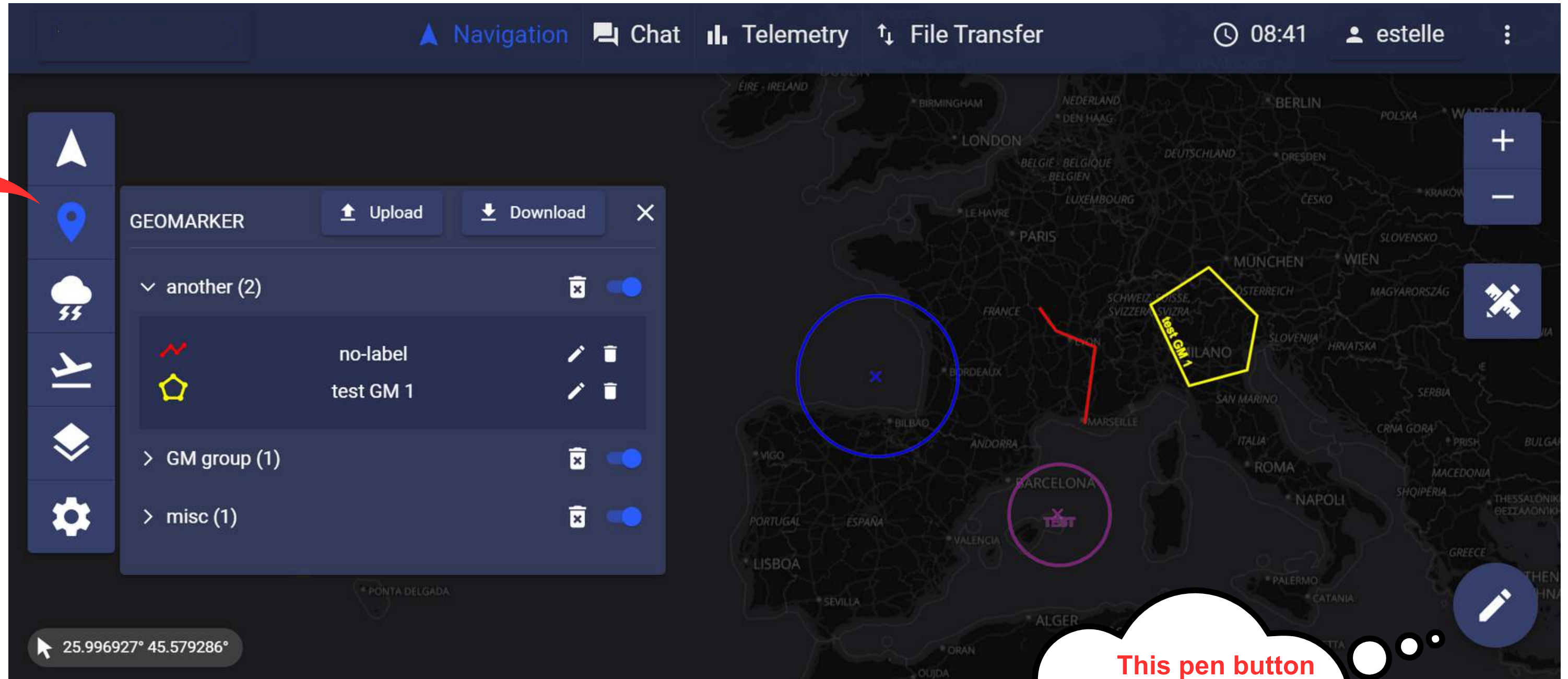
A 'FLEET' menu is open, showing details and controls for the selected vehicle. The menu includes the following options:

- Actions: A row of icons for location, target, and HUD.
- Track Length: A dropdown menu set to '30m'.
- Position Source: A dropdown menu set to 'IWG1'.
- Track Color Gradient: A dropdown menu set to 'None'.

At the bottom left of the map, the coordinates '1.524533° 31.95703°' are displayed. On the right side of the map, there are several control buttons: a zoom in (+) button, a zoom out (-) button, a close (X) button, and a pencil icon in a circle at the bottom right.

UNDER NAVIGATION SERVICE

The GEOMARKER menu provides controls on all geomarker layers.



This pen button provides actions to add geomarkers on the map.

UNDER NAVIGATION SERVICE

The WEATHER menu provides controls on all weather layers. These layers are selected up to the client's wishes upstream to the mission.

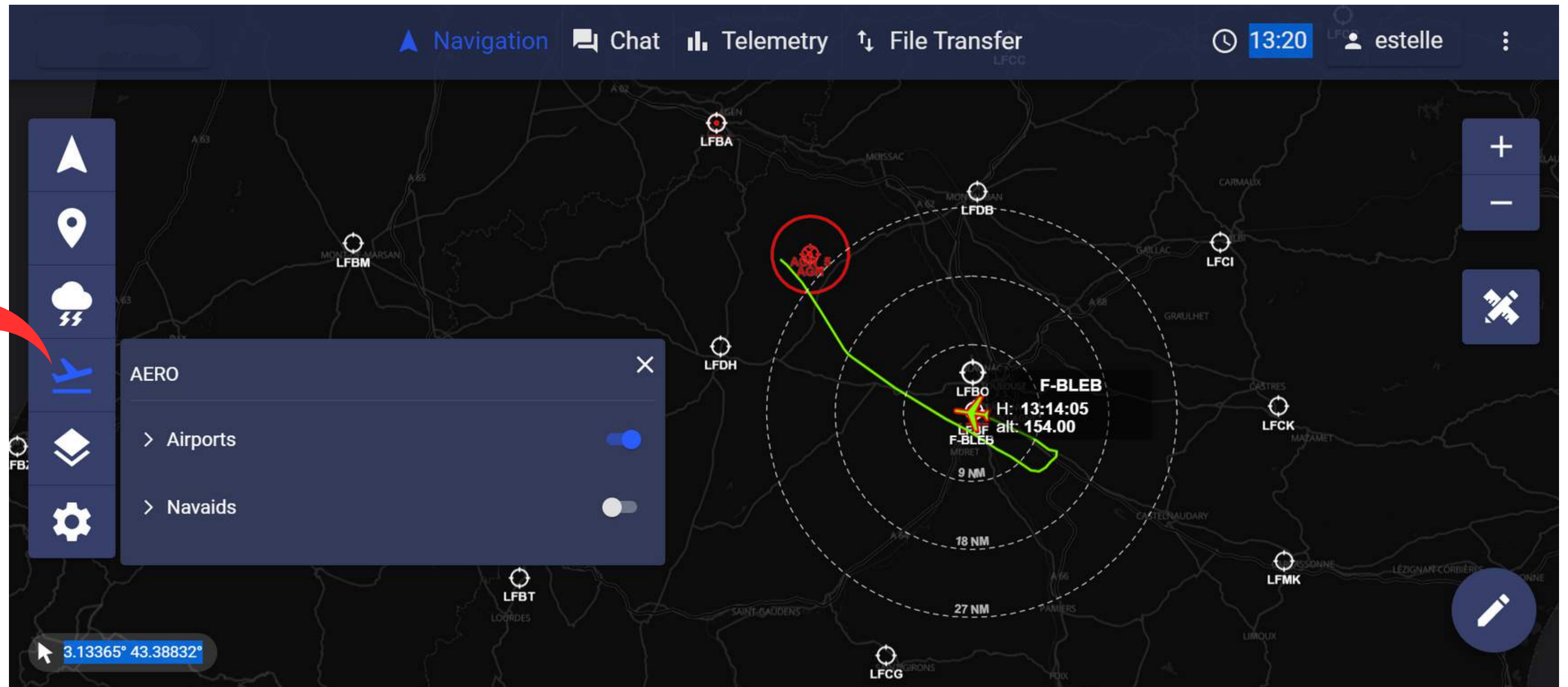
The screenshot displays a flight navigation application interface. At the top, there is a navigation bar with icons for 'Navigation', 'Chat', 'Telemetry', and 'File Transfer', along with a clock showing '12:42' and a user profile 'estelle'. The main area is a map of Europe with a weather radar overlay centered on Paris. A green airplane icon labeled 'F-BLEB' is positioned near Paris, with concentric dashed circles indicating 700 NM, 200 NM, and 300 NM ranges. A 'WEATHER' menu is open, listing several data layers with their status and controls:

Layer Name	Status	Refresh	Zoom In	Zoom Out	Toggle
sat_msg_vis	No data	↻	↑	↓	☐
radareu_mfr	Issued: 12:15:00	↻	↑	↓	●
sat_msg_ir	No data	↻	↑	↓	☐
lightning	Issued: 12:41:00	↻	↑	↓	☐
rdt_msg	No data	↻	↑	↓	☐

On the left side of the interface, there is a vertical menu with icons for navigation, location, weather (highlighted with a red arrow), flight path, layers, and settings. The bottom left corner shows a cursor icon and the number '26.3021'.

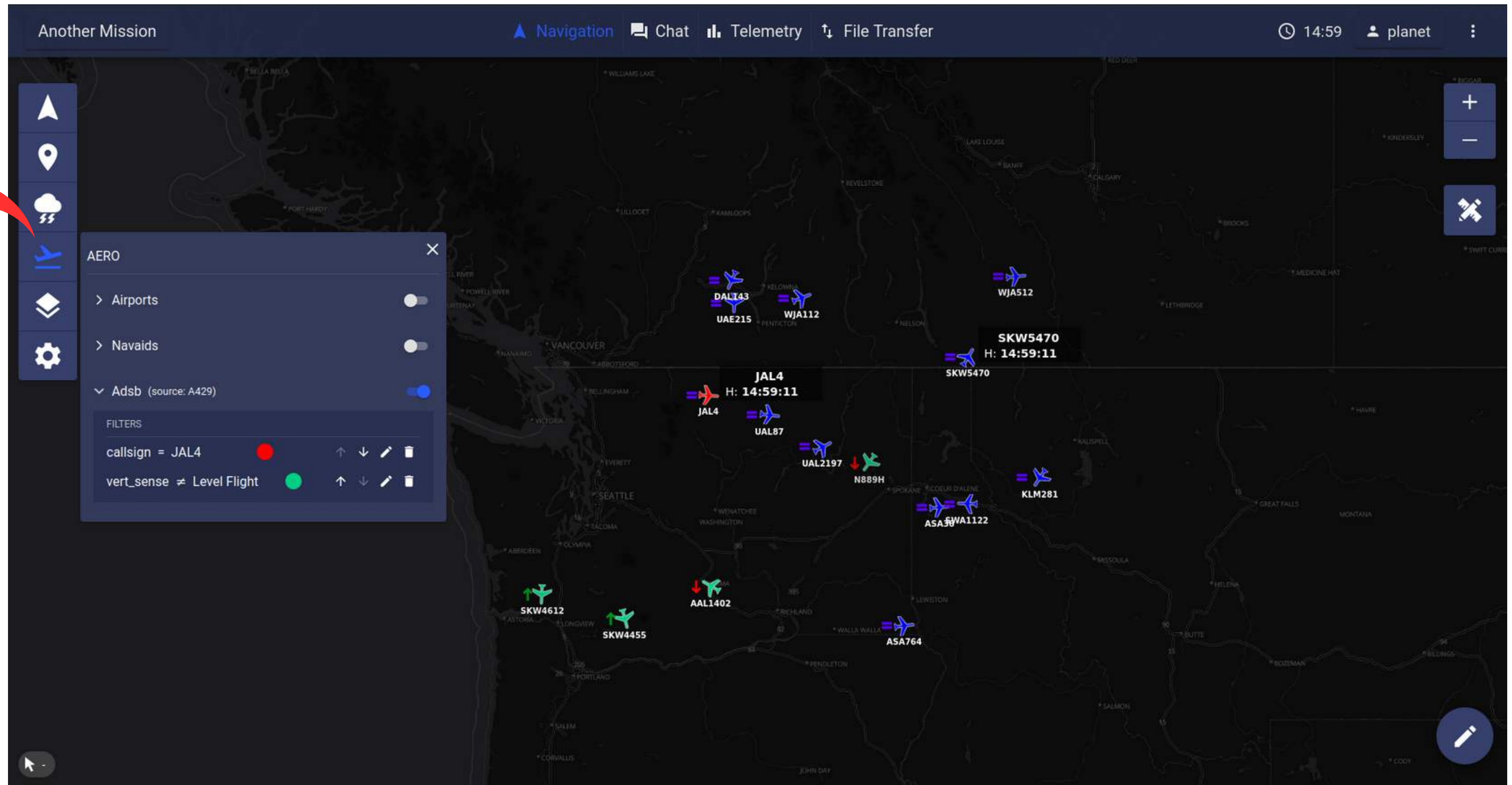
UNDER NAVIGATION SERVICE

The AERO menu provides controls on two aeronautical layers:
1) the display of airports on the map
2) the display of nav aids on the map.



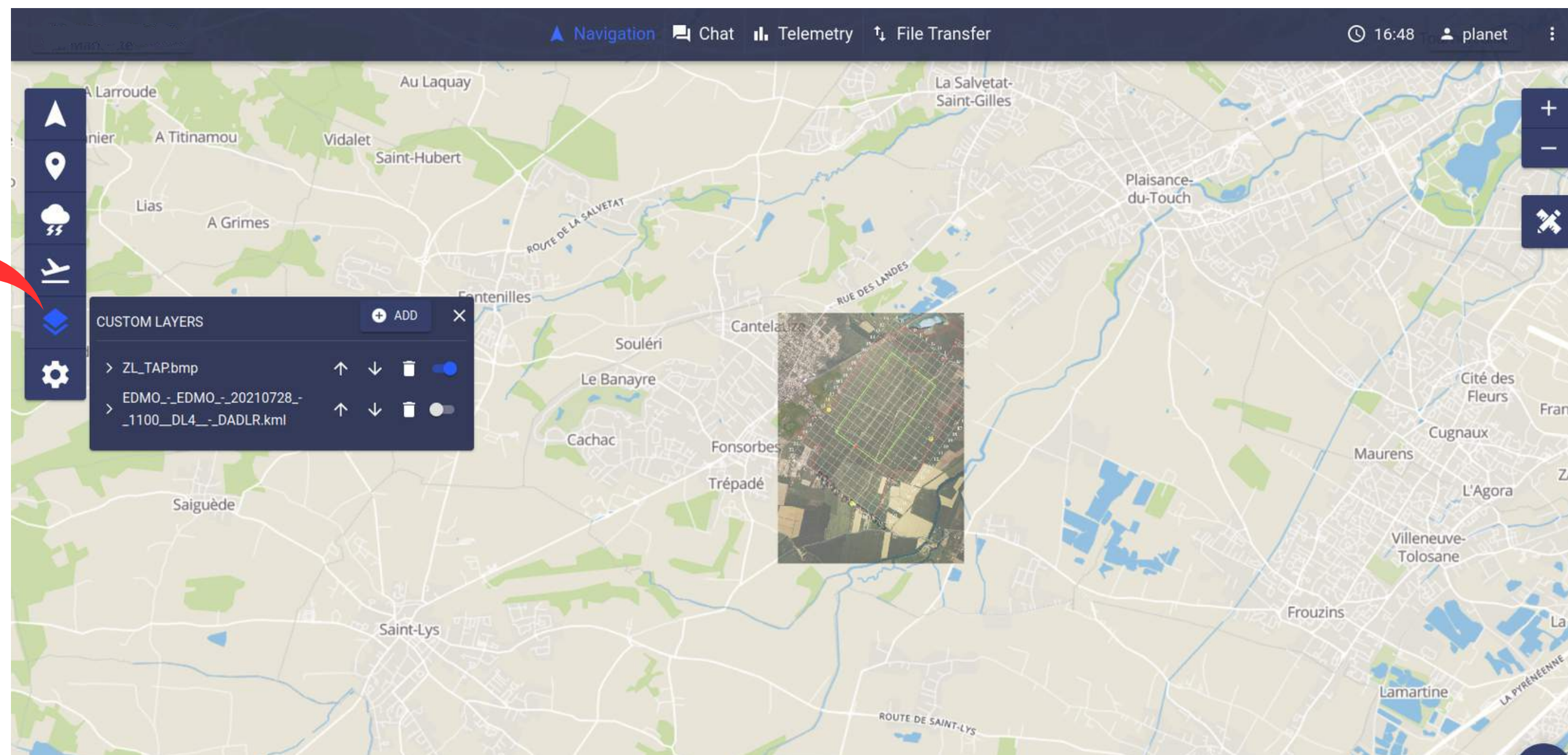
UNDER NAVIGATION SERVICE

The AERO menu may also provides controls on ADSB. Two potential sources for ADSB data that can be activated: either an onboard receiver which will get the surrounding traffic or an external ground server which provides such information.



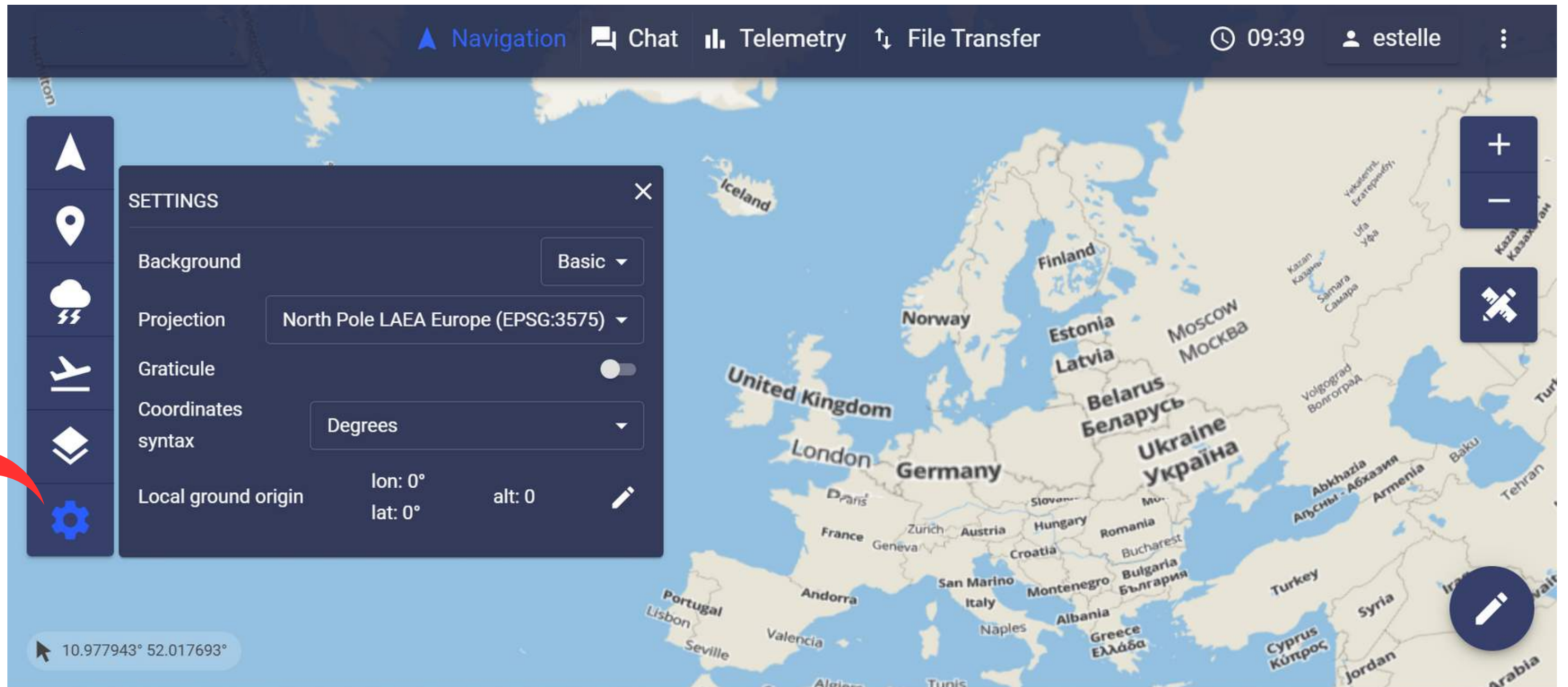
UNDER NAVIGATION SERVICE

The CUSTOM LAYERS tab allows to add and manage user selected images (png, jpg, jpeg, bmp) and vectors (KML and geojson) over the map.

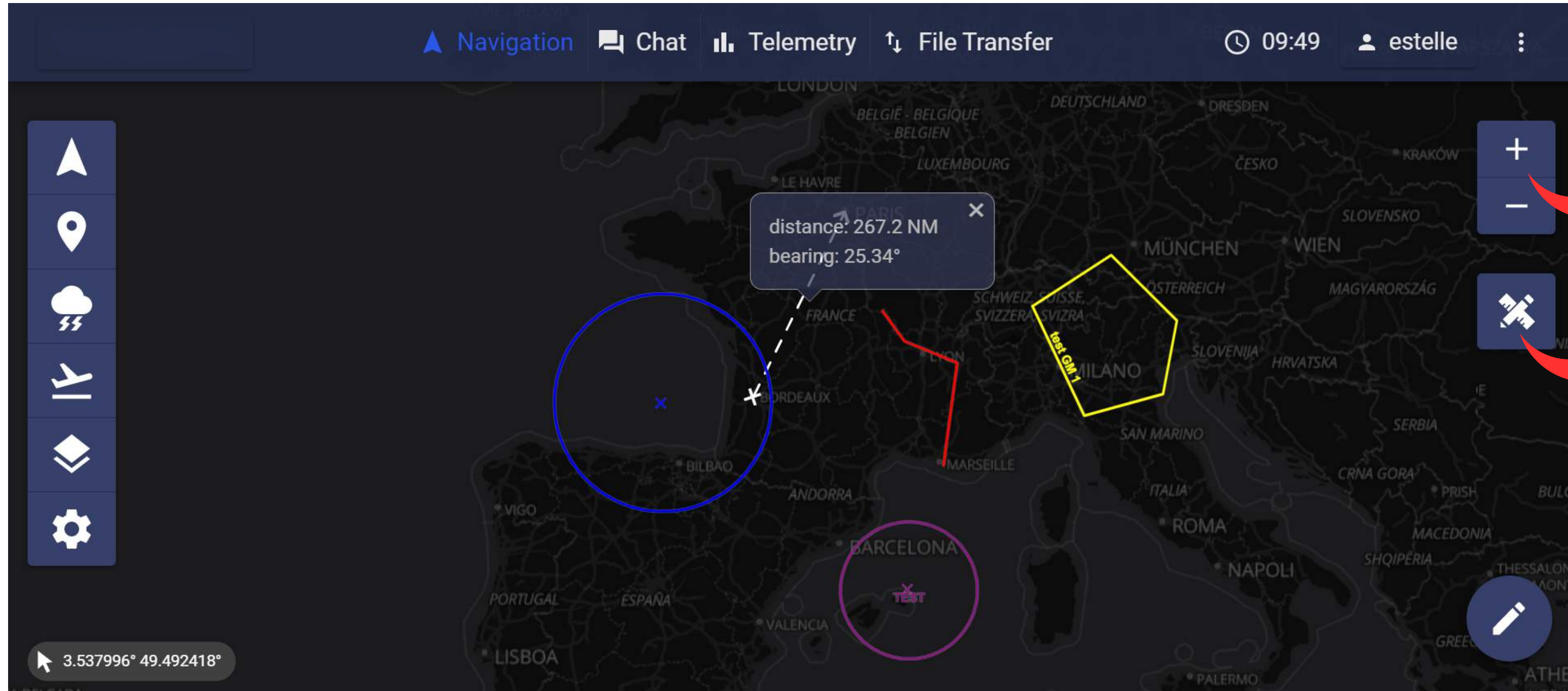


UNDER NAVIGATION SERVICE

The map SETTINGS menu provides controls to tune the cartography layer (style, projection...) and other basic settings.



UNDER NAVIGATION SERVICE : MAP ACTION CONTROLS



Zoom in - Zoom out control.

RULER control: once clicked, select two consecutive points on the map to get distance and bearing information between those two points.

CHAT SERVICE

This button allows to display the concatenation of all the channels in one single window.

Channels can be created at anytime by users, making them more dynamic. A notification button is available for each channel.

The screenshot shows a chat application interface with a dark blue theme. At the top, there is a navigation bar with icons for 'Navigation', 'Chat', 'Telemetry', and 'File Transfer'. Below this is a sidebar on the left labeled 'Chat Sidebar' in red text. The sidebar contains a list of channels: 'All Messages' (with an infinity icon), 'broadcast' (with a pin icon), and a 'Channels' section with a dropdown arrow. Under 'Channels', there are four items: '# mission 1', '# support', '# general' (highlighted in blue), and '# another'. Each channel item has a notification bell icon to its right, which is circled in red. A red arrow points from the text box on the left to the 'All Messages' button. Another red arrow points from the text box below to the notification bell icons. The main chat area on the right shows a conversation in the '# general' channel. It displays 'Total messages: 45' and four messages from 'planet' at 12:31, 12:31, 12:32, and 12:33. The messages are: 'Thanks. Suggest to exchange mission data in dedicated channel', 'Mission 1 channel created', 'Doors now closed. Ready for departure', and 'Have a good flight'. At the bottom of the chat area is a text input field with the placeholder 'Send a message on #general...' and a send button.

The CHAT allows users from multiple instances belonging to the same mission to exchange textual messages between each others.

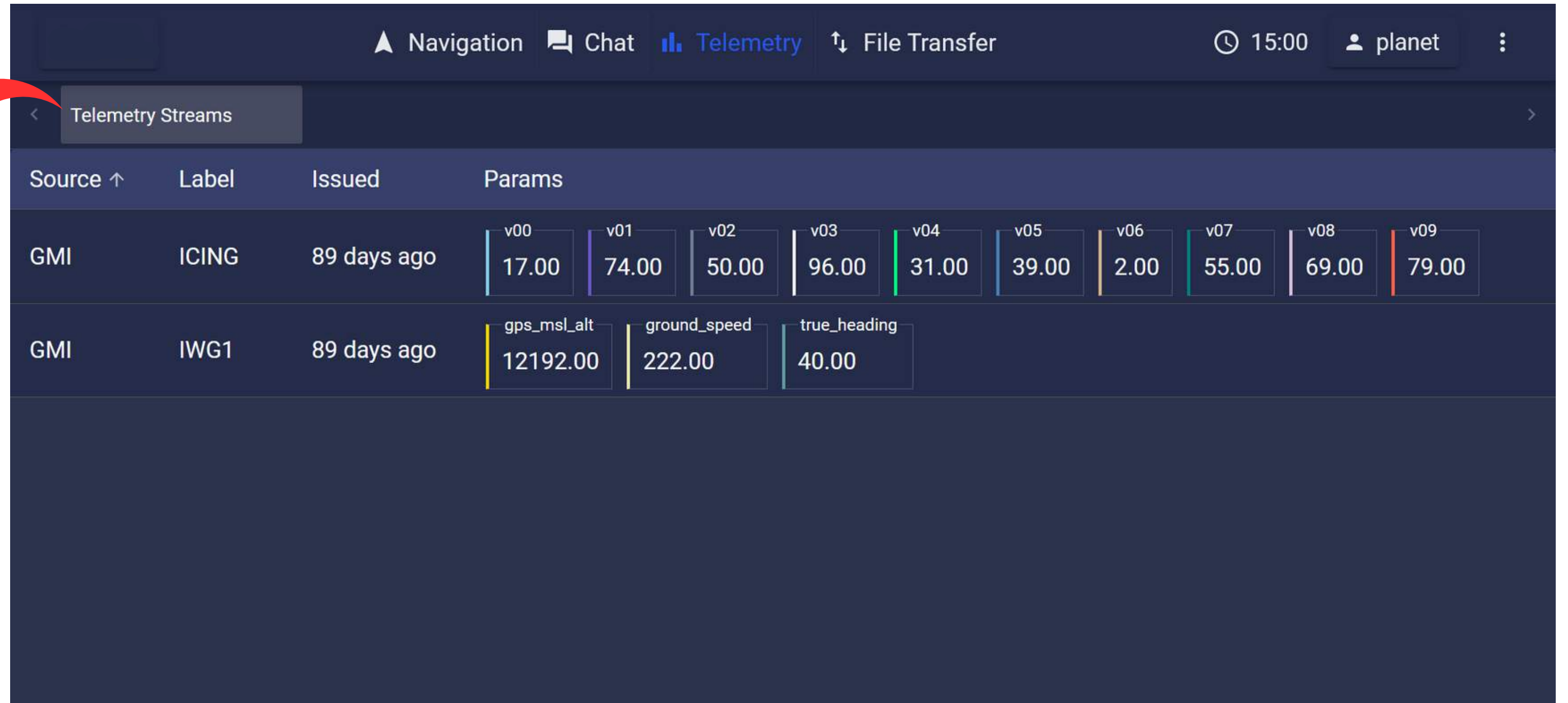
CHAT SERVICE

In this channel, all the broadcast messages will be displayed. Moreover, if you send a message from this channel, it will be sent in broadcast mode, which means it will be displayed (in red) in all the other channels.

The screenshot displays a chat application interface with a dark theme. At the top, there is a navigation bar with icons for 'Navigation', 'Chat', 'Telemetry', and 'File Transfer', along with a clock showing '12:07' and a user profile for 'planet'. Below the navigation bar is a sidebar menu with options: 'All Messages', 'broadcast', 'Channels', '# mission 1', '# support', '# general', and '# another'. The main chat area is titled '# mission 1' and shows a list of messages. A message from 'estelle' at 12:31 says 'GROUND Roger moved to mission 1'. A message from 'planet' at 12:32 says 'GROUND Thanks !'. A message from 'estelle' at 13:38 says 'GROUND test broadcast', which is circled in red. The interface also includes a date separator for 'Friday, April 14th' and 'Monday, April 17th', an 'ADD WIDGET' button, and a message input field at the bottom.

TELEMETRY SERVICE

This section lists each telemetry streams received by PLANET from each aircraft within the current mission. Click on a parameter to open a new tab with the plot of the time series of this parameter.



The screenshot shows a user interface for the Telemetry Service. At the top, there are navigation options: Navigation, Chat, Telemetry (selected), and File Transfer. The current time is 15:00 and the user is identified as 'planet'. Below the navigation bar is a header for 'Telemetry Streams'. The main content is a table with columns for Source, Label, Issued, and Params. Two rows of data are visible. The first row shows a stream from source 'GMI' with label 'ICING', issued '89 days ago', and parameters v00 through v09. The second row shows a stream from source 'GMI' with label 'IWG1', issued '89 days ago', and parameters gps_msl_alt, ground_speed, and true_heading. A red arrow points from the text on the left to the 'Telemetry Streams' header.

Source ↑	Label	Issued	Params																				
GMI	ICING	89 days ago	<table border="1"><tr><td>v00</td><td>v01</td><td>v02</td><td>v03</td><td>v04</td><td>v05</td><td>v06</td><td>v07</td><td>v08</td><td>v09</td></tr><tr><td>17.00</td><td>74.00</td><td>50.00</td><td>96.00</td><td>31.00</td><td>39.00</td><td>2.00</td><td>55.00</td><td>69.00</td><td>79.00</td></tr></table>	v00	v01	v02	v03	v04	v05	v06	v07	v08	v09	17.00	74.00	50.00	96.00	31.00	39.00	2.00	55.00	69.00	79.00
v00	v01	v02	v03	v04	v05	v06	v07	v08	v09														
17.00	74.00	50.00	96.00	31.00	39.00	2.00	55.00	69.00	79.00														
GMI	IWG1	89 days ago	<table border="1"><tr><td>gps_msl_alt</td><td>ground_speed</td><td>true_heading</td></tr><tr><td>12192.00</td><td>222.00</td><td>40.00</td></tr></table>	gps_msl_alt	ground_speed	true_heading	12192.00	222.00	40.00														
gps_msl_alt	ground_speed	true_heading																					
12192.00	222.00	40.00																					

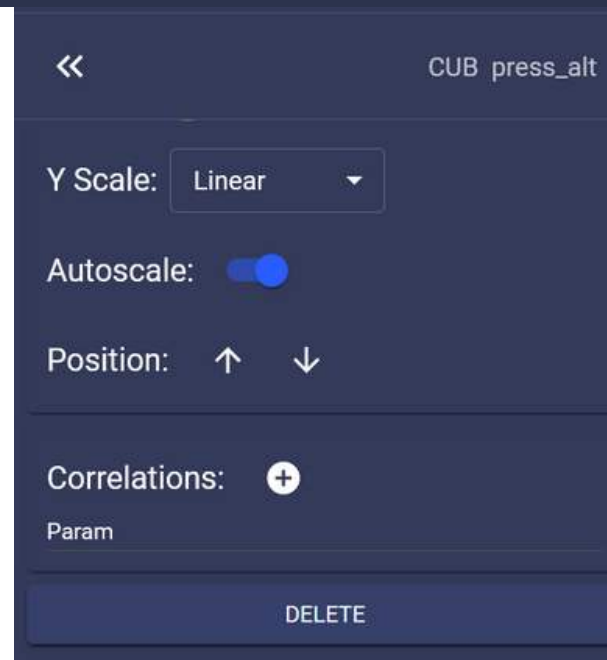
TELEMETRY SERVICE : DISPLAYS



When you click on ADD PLOT it will display the graph of another parameter below your first graph.

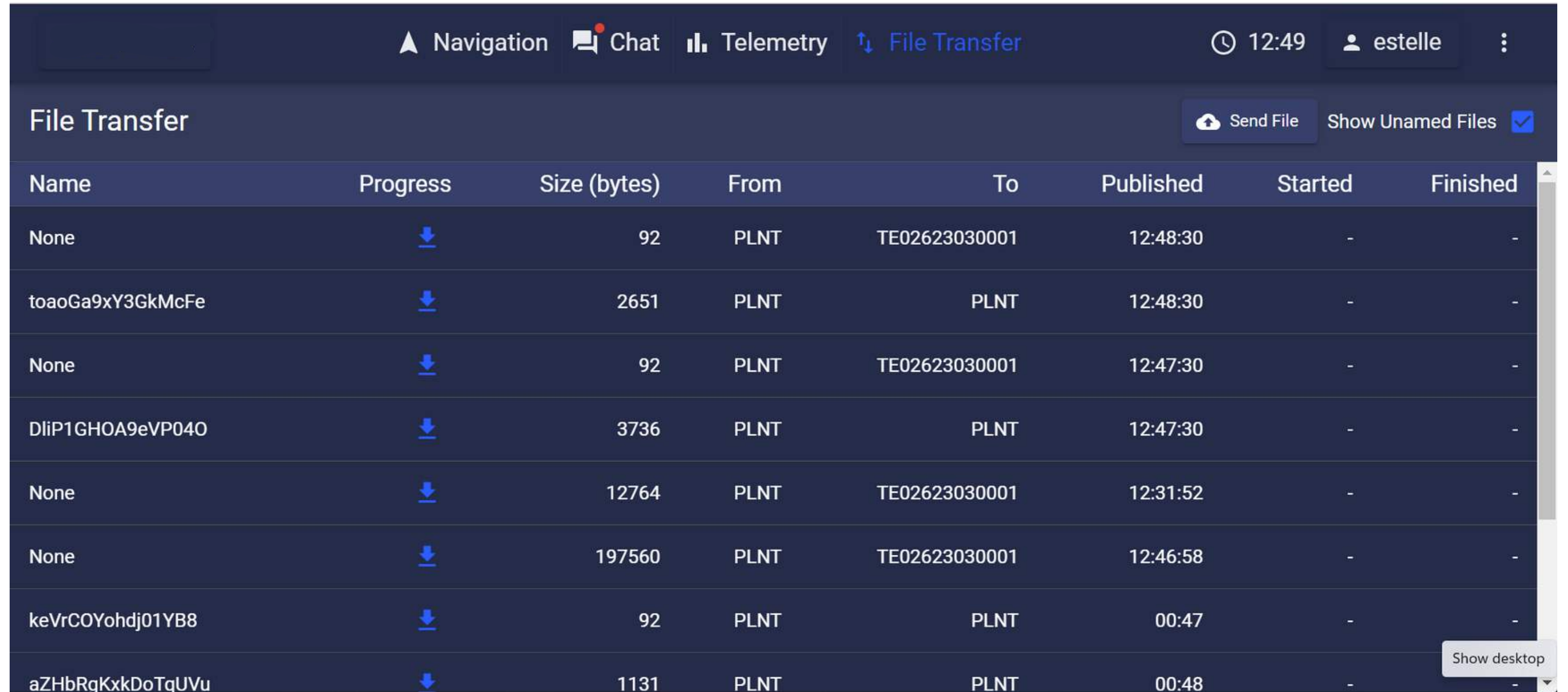


When you click on ADD WIDGET it will display the graph on the Navigation page.



FILE TRANSFER SERVICE

The FILE TRANSFER view displays a summary of all the files exchanged between the ground and the onboard segments. It also allows to send any file from the local device.



The screenshot shows the 'File Transfer' view in a dark-themed application. At the top, there is a navigation bar with icons for 'Navigation', 'Chat', 'Telemetry', and 'File Transfer'. The 'File Transfer' icon is highlighted. To the right of the navigation bar, the time is 12:49 and the user is 'estelle'. Below the navigation bar, there is a 'File Transfer' header with a 'Send File' button and a 'Show Unnamed Files' checkbox which is checked. The main content is a table with the following columns: Name, Progress, Size (bytes), From, To, Published, Started, and Finished. The table contains 9 rows of data. Each row has a blue download icon in the Progress column. The 'From' and 'To' columns are either 'PLNT' or 'TE02623030001'. The 'Published' column shows times like 12:48:30, 12:47:30, 12:31:52, and 12:46:58. The 'Started' and 'Finished' columns are mostly empty, with some rows showing '00:47' and '00:48'. A 'Show desktop' button is visible in the bottom right corner of the table area.

Name	Progress	Size (bytes)	From	To	Published	Started	Finished
None	↓	92	PLNT	TE02623030001	12:48:30	-	-
toaoGa9xY3GkMcFe	↓	2651	PLNT	PLNT	12:48:30	-	-
None	↓	92	PLNT	TE02623030001	12:47:30	-	-
DliP1GHOA9eVP040	↓	3736	PLNT	PLNT	12:47:30	-	-
None	↓	12764	PLNT	TE02623030001	12:31:52	-	-
None	↓	197560	PLNT	TE02623030001	12:46:58	-	-
keVrCOYohdj01YB8	↓	92	PLNT	PLNT	00:47	-	-
aZHbRgKxkDoTqUVu	↓	1131	PLNT	PLNT	00:48	-	-

DROPDOWN MENU : HISTORY

The screenshot shows a table titled 'Flights History' with columns for Date, From, and Actions. A dialog box titled 'Select data to download' is overlaid on the table, allowing users to choose data types and formats for download.

Date	From	Actions
2023-04-19	07:56	Download Replay
2023-04-18	12:29	Download Replay
2023-04-17	14:04	Download Replay
2023-04-14	08:13	Download Replay
2023-04-13	09:19	Download Replay
2023-04-12	07:28	Download Replay
2023-04-11	14:26	Download Replay
2023-04-07	08:26	Download Replay

Select data to download

- Telemetry JSON CSV
- F-BLEB GPS
- Chat JSON CSV
- Geomarker JSON KML

Download Cancel

The dropdown menu for user 'estelle' contains three items: 'History' (with a clock icon), 'Admin' (with a group of people icon), and 'User Manual' (with a document icon).

- History
- Admin
- User Manual

Dropdown menu with access to History, Admin and this Documentation.

The HISTORY action allows to make a data extraction.

Or to launch the replay of a flight.

The replay interface shows a map with a flight path for F-BLEB. The current time is 09:58:39 and the altitude is 1286.00. The interface includes a playback speed control (1 sec) and a Stop button.

Replayer Wed, 19 Apr 2023 09:58:40 GMT

1 sec Stop

F-BLEB
H: 09:58:39
alt: 1286.00

4.774393° 46.783904°

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