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OCT 9, 2021 AT 8:37 PM

Unlocked

Reverse Predictions

Regular users of the SondeHub tracker will be familiar with the live flight-path predictions run for all radiosondes showing up on the map. These predictions are run using the ['Tawhiri'](#) prediction software (developed by Cambridge University Space-Flight - CUSF), which itself uses the NOAA's [Global Forecast System](#) weather model. We run our own instance of Tawhiri to avoid overloading the CUSF instance, pulling wind model data from the AWS mirror of GFS.

Along with the live predictions, we added the ability for users to run flight-path predictions for known launch sites. This can be accessed by turning on 'Show Launch Sites' in the Settings tab, then clicking on a launch site (grey circle). We have been able to obtain schedule data for many launch sites through the [World Meteorological Organisation](#), though some are still unknown. For many launch sites we have been able to [analyse](#) the huge amount of data in the SondeHub DB and determine information on the average flight profile parameters (ascent rate, burst altitude, descent rate), increasing the accuracy of these forward-looking predictions.

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is creating live radiosonde data and ...

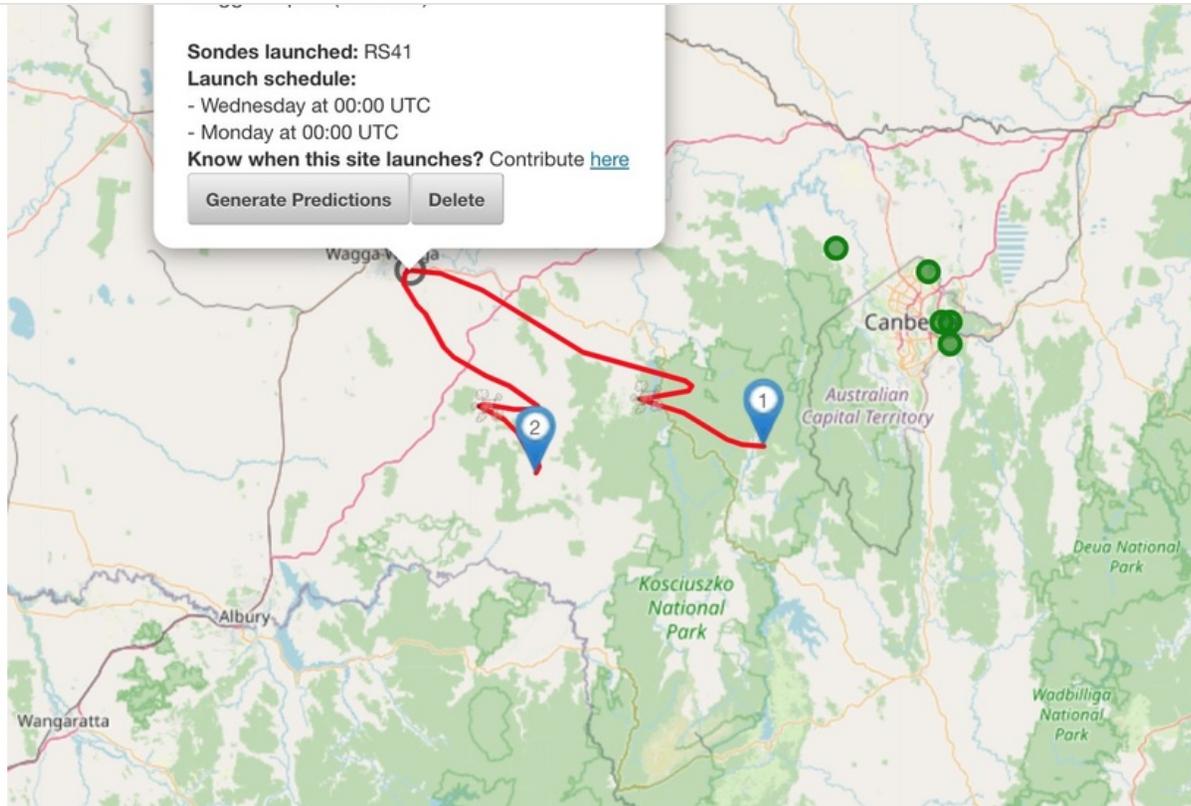


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Aa Skew-T and Historic data
December 25 at 6:36 PM

Aa Predictor performance impr...
December 5 at 4:30 PM



Recently we added functionality to [our fork](#) of Tawhiri to allow 'reverse' predictions. These are performed by stepping backwards in time from a provided time and position, allowing an estimation of where a radiosonde was launched from. Reverse predictions are run automatically on the first data points received for each radiosonde serial, stored into the SondeHub database, and shown on the map as a partially transparent path preceding the normal flight path.

Aa Predictions update
September 13 at 12:30 AM

Aa Station icon updates and ing...
August 19 at 9:47 PM

CURRENT TIER

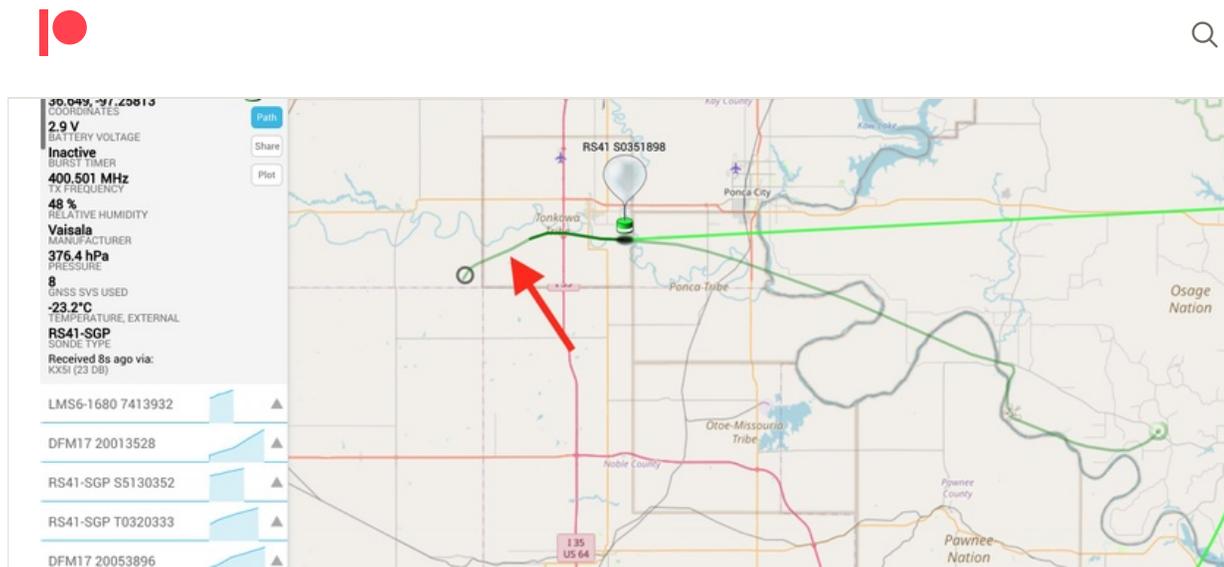
Weather Modeller

\$8.50 per month



If you access any of our data in bulk for analytics or research, then this is the suggested tier level to help us continue to be able to supply this level of data.

- General Support



This helps us in a few ways:

- We can estimate which launch site a particular radiosonde originated from, and use known flight profile information from that launch site to improve the accuracy of the live predictions.
- We can maintain a record of what serial numbers were launched from each launch site, enabling easier lookup of historical flight data for a particular site.
- We can discover previously unknown launch sites, including temporary launch locations such as ships and fire-fighting areas.

Access to the reverse predictor is also available as a flight profile option at

<https://predict.sondehub.org/>

~ Mark VK5QI



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