

## Technical Note

# **Radiosonde parallel soundings database augmentation with site-based ancillary data: guidance to sites**

David Smyth

Monday, 28<sup>th</sup> November 2022, session 4 – 1

*Reunion Island*

## Purpose of TN

- ❑ To guide sites on the site-based ancillary data that may be submitted alongside Vaisala RS92-RS41 parallel soundings.
  - Should satellites be covered here too?
  
- ❑ Could this be expanded beyond RS92-RS41 parallel soundings?
  - Implications for sufficient personnel.

## Measurement window

- ❑ “The measurements to be shared should consider a window between 30 minutes before to 3 hours after the time of launch of each radiosonde pair” (p.5 Targeted Measures).
- Do sites need to integrate/average measurements over a time window, depending on the meteorological situation, or provide a time series of 30 minute integration time over 3 hours?
- Implications for employee resource?

## Measurement instruments (p. 5)

- GNSS
- MWR
- FTIR
- LIDAR measurements
  - Other instruments on the same payload (for example, ozonesonde, CFH/FPH)
- Other relevant measurements / measurement systems may include (but are not limited to):
  - Surface radiation (*diffuse, direct, or all available?*)
  - Synoptic observations
  - Cloud observations

## Measurement instruments (p. 5)

- ❑ “Sites will be best placed to identify the relevant instrumentation in operation which could be pertinent to the analysis of the parallel launch behaviour” (p. 5).
  - Are sites happy to be left with the decision?

## Data preparation and submission

- ❑ “If ancillary data are not available or distributed on public or GRUAN accessible links, sites should retrospectively prepare a folder [...] for as many of the radiosonde parallel launches as possible that they undertook” (p.6).
  - Is retrospective folder preparation a realistic expectation from sites?
  - The number of parallel launches is going to vary by site – some have extensive instrumentation and may need substantial time to do this. Should this be left for the site on what to submit?

## Data preparation and submission

- ❑ “For ancillary data where there is no GRUAN data product, provide the data in a consistent format and provide documentation of that format via the Lead Centre” (p. 6).
  - Restrict to netCDF/HDF, being the same standard as the GDPs? CSV can be regarded a secondary option?
  - Would any format be suitable, if provided with the documentation?

## **Data preparation and submission**

- ❑ “Sites are asked to undertake this exercise on a best endeavours basis as time and resource permits” (p. 6).
- Is this too much of a get-out clause?

## **Thank you**

I will incorporate the feedback from this session into the TN and re-circulate for final comments.