



WMO/IOC/UNEP/ICSU  
GLOBAL CLIMATE OBSERVING  
SYSTEM (GCOS)

Doc. 5.07  
(01.III.2024)

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**15th GRUAN Implementation-  
Coordination Meeting (ICM-15)**

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Session 5

Bern

11 March - 15 March 2024

## GRUAN Site Report for Darwin

*(Submitted by Andrew Winchester)*

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### **Summary and Purpose of this Document**

Report from the GRUAN site Darwin for the period January 2022 to December 2023.

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## **Overview**

Darwin Airport is currently performing 2 soundings a day at 23Z and 11Z, however due to internal security issues we are unable to provide the required data to GRUAN.

## **Change and change management**

Vaisala RS41-SG radiosondes have been in use since 2019 with no foreseeable change, however we are likely to move to the RS41-SGE (biosonde) by the end of 2024. There are plans to automate the station by installing a Vaisala AS41 in 2024-25 at a new site, after which there will be no staff on station. There will be a comparison period of minimum 30 days between the two sites.

## **Resourcing**

Station to be automated in 2024-25. Currently funded to release 2 radiosondes a day.

## **Operations**

The 23Z uses 500g balloons and reaches 9-15 hpa. The 11Z flights use 350g balloons and reach heights 15-25 hpa. The Bureau is unlikely to perform frostpoint hygrometer soundings due to both funding and resources (station automation). At this stage we are not using RsLaunchClient due to internal security restrictions.

## **Covid-19**

NIL impact

## **Site assessment and certification**

NA

## **GRUAN-related research**

NIL

## **WG-GRUAN interface**

NIL. I have forwarded requests to management to properly support the GRUAN network however at this stage we do not have the ability to submit data that meets GRUAN requirements.

## **Other archiving centres**

GUAN

## **Participation in campaigns**

NIL

## **Future plans**

Automation of the balloon launches using AS41



# GRUAN Site Report for Darwin (DAR), 2022

Reported time range is Jan 2022 to Dec 2022  
Created by the Lead Centre  
Version from 2024-03-01

## 1 General GRUAN site information

| Object                | Value                                  |
|-----------------------|--|
| Station name          | Darwin                                 |
| Unique GRUAN ID       | DAR                                    |
| Geographical position | -12.4300 °S, 130.8900 °E, 30.0 m       |
| Operated by           | BOM   Australian Bureau of Meteorology |
| Main contact          | Winchester, Andrew                     |
| WMO no./name          | 94120 DARWIN                           |
| Operators             | currently 0, changes +0 / -0           |
| Sounding Site         | 1                                      |
| GNSS                  | 1                                      |

### 1.1 General information about GRUAN measurement systems

| System    | Name                          | Type          | Setups | Measurements    |
|-----------|-------------------------------|---------------|--------|-----------------|
| DAR-GN-01 | GNSS Site SA39                | GNSS          | 0      | not operational |
| DAR-RS-01 | Darwin radiosonde launch site | Sounding Site | 2      | 0               |

### 1.2 General comments from Lead Centre

#### 1.2.1 General

No operational data stream has been established yet.

#### 1.2.2 Request

In view of the prolonged absence of data submission to the Lead Centre, the site is encouraged to take the necessary steps to establish an operational data flow. In this regard, establishing a data stream for the radiosoundings has priority, followed by data submission of GNSS water vapor measurements.

## 2 System: GNSS Site SA39 (DAR-GN-01)

| <b>Object</b>         | <b>Value</b>                           |
|-----------------------|--|
| System name           | GNSS Site SA39                         |
| Unique GRUAN ID       | DAR-GN-01                              |
| System type           | GNSS (GN - GNSS)                       |
| Geographical position | -12.4246 °S, 130.8916 °E, 84.9 m       |
| Operated by           | BOM   Australian Bureau of Meteorology |
| Instrument contact    | Winchester, Andrew                     |
| Started at            | -                                      |
| Defined setups        | -                                      |
| Possible streams      | -                                      |

### 2.1 Lead Centre comments

#### 2.1.1 Dataflow

No GNSS dataflow to LC has been established yet.

### 3 System: Darwin radiosonde launch site (DAR-RS-01)

| <b>Object</b>         | <b>Value</b>                           |
|-----------------------|--|
| System name           | Darwin radiosonde launch site          |
| Unique GRUAN ID       | DAR-RS-01                              |
| System type           | Sounding Site (RS - Radiosonde)        |
| Geographical position | -12.4239 °S, 130.8925 °E, 30.4 m       |
| Operated by           | BOM   Australian Bureau of Meteorology |
| Instrument contact    | Winchester, Andrew                     |
| Started at            | -                                      |
| Defined setups        | 2 (ROUTINE, DUAL1)                     |
| Possible streams      | RS41, RS92                             |

#### 3.1 Lead Centre comments

##### 3.1.1 Dataflow

No dataflow of radiosonde measurements to LC has been established yet.



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