

The relationship between OSCAR/Surface and the WIGOS Data Quality Monitoring System

Online Training Workshop on Regional WIGOS Centre
(RWC) Functions and Tools for Regional Association V
(RA V)



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World Meteorological Organization
Organisation météorologique mondiale

WIGOS Data Quality Monitoring System (WDQMS)

- Operational since March 2020
- One of the pillars of WIGOS
- Monitor availability, quality and timeliness of WIGOS component observing systems
- First phase: surface and upper-air stations
- Second phase: Global Climate Observing Systems stations
- Monitoring reflects observations as seen by WIGOS monitoring centers. Currently: DWD, ECWMF, NCEP and JMA (other centers are welcome to join)
- Next phases: add additional WIGOS component observing systems & WIS GTS monitoring



WDQMS (cont.)

Availability of surface observations

Interface for availability of surface observations:

- Type of period: Six-hour
- Monitoring category: Availability
- Variable*: Surface press
- Monitoring Centre: All
- Date: 2020-04-17
- Six-hour period: 00, 06, 12, 18
- Baseline: OSCAR, GBON*

- Monitoring by variable (temperature, pressure, wind, precipitation)
- Monitoring by 6h and daily intervals (monthly to be implemented)
- User can choose which monitoring center to use, or select «best of all»
- Also: quality

Live system

- <https://wdqms.wmo.int>



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Which stations are monitored?

- WDQMS obtains station information from OSCAR/Surface
 - Surface stations
 - facilityType: seaFixed, lakeRiverFixed, lakeRiverMobile, landFixed, landMobile, landOnIce and airFixed
 - International Exchange == True
 - Observes one of the variables monitored (pressure, temperature, precipitation, wind)
 - Upper Air stations
 - StationClass: upperAirRadiosonde, upperAirPilot
 - Only currently «operational» or «partlyOperational» stations are considered.
 - The operating status of the network/program affiliated with the variable is used



Live system

- <https://oscar.wmo.int/surface>



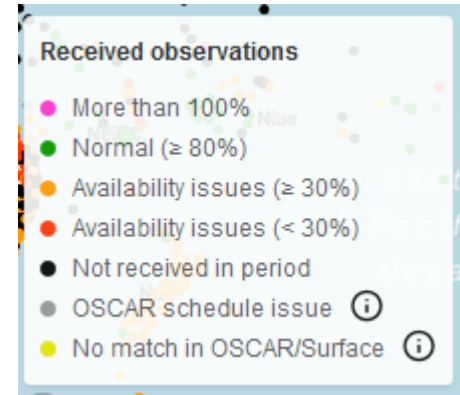
What determines the status/color of a station?

- The number of observations received at monitoring centers is compared either, to
 1. OSCAR/Surface schedule metadata
 2. A provisional GBON baseline (1h surface and 2-daily upper-air observations)
- OSCAR/Surface schedules
 - Combine all schedules for the variable and compute number expected for given 6-h period
 - Default schedule applied if none in OSCAR/Surface (3h for surface and 12h for upper air)
 - [Online tool](#) allows to find out number of expected



Status/color (cont.)

- Number received is compared with number expected (green, orange, red, black, pink)
- **Yellow**: data received by monitoring center but no entry in OSCAR/Surface
- **Grey**: data received by monitoring center & OSCAR/Surface entry, but schedule indicated no report
- Examples:
 - number expected 6, number received 3 => orange (50%)
 - Number expected 6, number received 7 => pink (>100%)



Most critical elements in OSCAR/Surface

▼ Observations / measurements

+ Add measurement program * ?

▼ Air temperature (at specified distance from reference surface) - [Geometry: Point]

[✎ Edit data series information](#) [🗑 Delete data series information](#)

Variable: Air temperature (at specified distance from reference surface)

Geometry: Point

Programs / network affiliation:

RBSN(S)

GOS

Last updated: On 2019-06-04 by NMHS CHE

▼ Deployments

+ Add deployment ?

- > From 1981-01-01 to 1982-07-19
- > From 1982-07-19 to 2006-12-05
- > From 2006-12-05
- > From 1964-07-01 to 1980-12-31
- > From 1981-01-01 to 1982-07-19
- > From 1982-07-19 to 2006-12-05
- > From 2006-12-05



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FAQ

- Why is my station being monitored in WDQMS?
 1. Check international exchange flag
 2. You are observing a variable tracked by WDQMS (pressure, temperature, wind, humidity)
 3. Deployment not closed?
 4. Operating status of affiliated network?
 5. Reporting interval in data generation
- Why is my station _not_ being monitored in WDQMS?
 - See above
- Why is my station red/orange but I am making all the observations
 - Observations get lost in transit
 - Schedule information in OSCAR/Surface not correct

New (OSCAR/Surface release 1.7)

- OSCAR/Surface to obtain network affiliation status from WDQMS
- Release planned for October 2021

Programs / network affiliations

Note: Assessed statuses are provided by external systems. The validity of the assessed status is shown in the expanded view. For further information please consult the FAQ.

| Program / network affiliation | Program specific ID | Status | Declared status | Assessed status |
|---------------------------------|---------------------|----------|-----------------|-----------------------|
| ▼ Centennial Observing Stations | | Approved | Operational | Stand-by (2021-07-31) |
| | Operating Status | Type | From | To |
| | Operational | Declared | 2021-08-05 | |
| | Stand-by | Assessed | 2021-06-01 | 2021-07-31 |
| ▼ GOS | | Approved | Stand-by | Unknown |
| | Operating Status | Type | From | To |
| | Stand-by | Declared | 2021-07-28 | |
| | Partly operational | Assessed | 2021-06-01 | 2021-06-30 |
| | Operational | Assessed | 2021-04-01 | 2021-05-31 |
| | Partly operational | Declared | 2021-05-30 | 2021-06-08 |

Thank you

Questions?



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