



# Obs rejection at Met Office

Richard Renshaw

ECMWF reanalysis feedback 11<sup>th</sup> to 13<sup>th</sup> Nov 2014

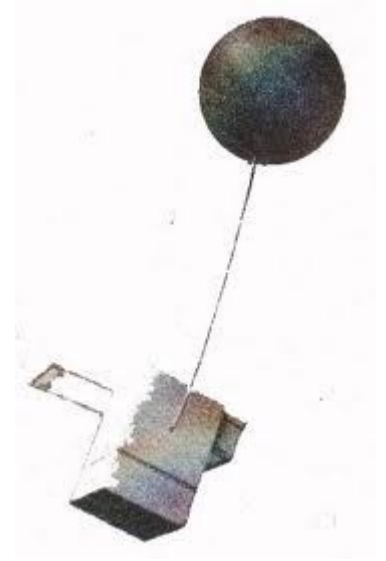
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# In Situ Obs

- Surface (SYNOP, marine, ...)
- Upper Air (sonde, pilots, profilers)
- Aircraft

Based on monthly monitoring of O-B

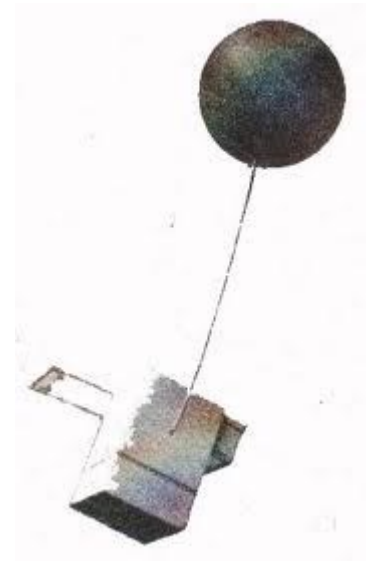
- O-B bias
- O-B standard deviation
- number of gross errors



# Stationlists

Observation error R for use in Var

$\text{ErrP}=100.0$ ,  $\text{ErrUV}=2.0$ ,  $\text{ErrT}=2.0$ ,  $\text{ErrRH}=10.0$ ,  $\text{ErrVIS}=0.32$





# Stationlists

## Top-level switches

! Synops

```
&Station ObsTypes(1:2)='10101','10102',
```

```
RejP='F', RejUV='T', RejT='F', RejRH='F', RejVis='T'
```

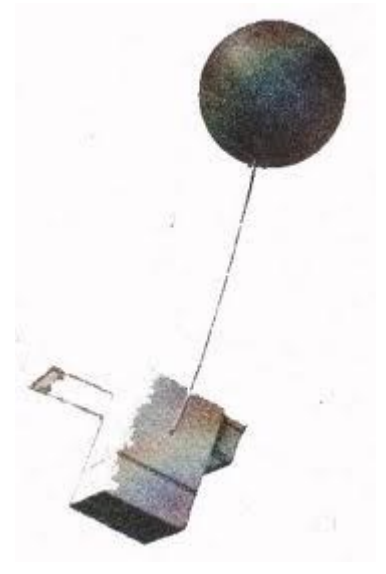
## Modifiers based on location

! Use winds over land

```
SurfaceType='Land', UseUV='T'
```

! Reject winds between 30S and 30N

```
NorthLimit=30.0, SouthLimit=-30.0, UseUV='F'
```

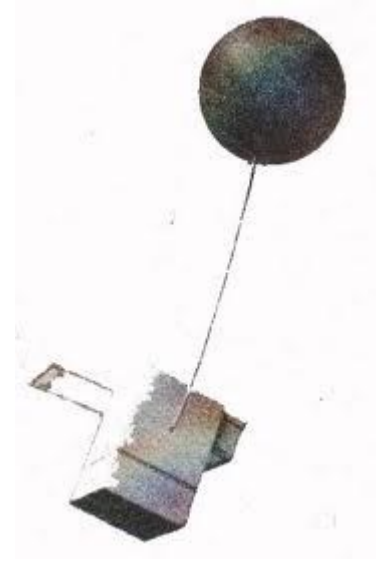




# Stationlists

## Further options

! Do not use daytime marine RH near land (ModelOrog/=0)  
&Station ObsTypes(1:7)='10201','10202','10204','10210',  
MaxSolarZenith=90.0, SurfaceType='Land', UseRH='F'



# Stationlists

## Individual station decisions

! Start of Synop correction/rejection lists

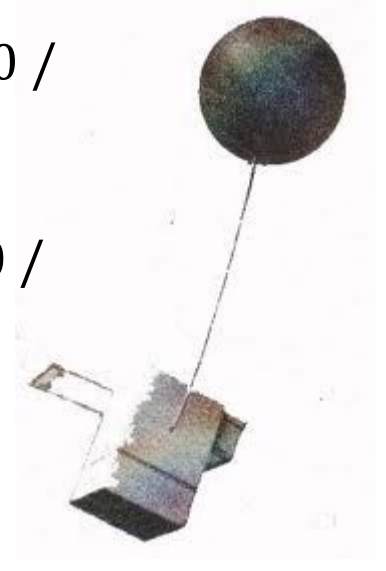
&Station ObsType='101\*',Id='01203',PstnCor= 460.0 /

&Station ObsType='101\*',Id='01238',PmslCor= -150.0 /

&Station ObsType='101\*',Id='01245',PstnCor= -230.0 /

&Station ObsType='101\*',Id='01258',RejT='T' /

&Station ObsType='101\*',Id='01317',PstnCor= -280.0 /





# Stationlists for Reanalysis (2015)

Jemma Davie

Old system is complex, difficult to use, operational only.

.New system will be written in Python using ODB SQL, to be

Flexible

Portable

Automated with email-based warning system