

Deutscher Wetterdienst

Meteorological Observatory Lindenberg
Richard Aßmann Observatory

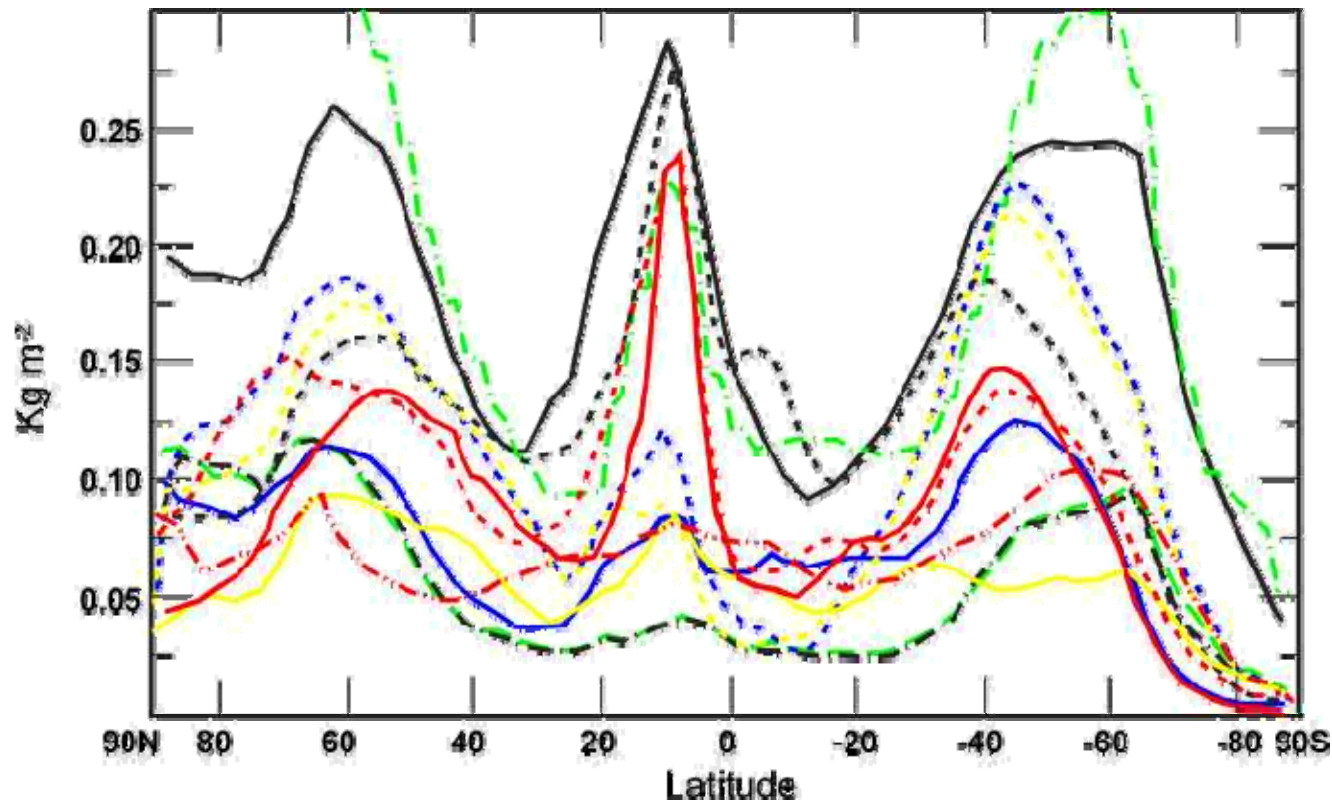


GCOS Reference Upper-Air Network (GRUAN)

Franz H. Berger

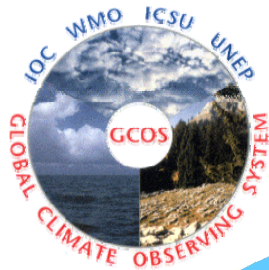


Motivation



zonal and vertical integrated cloud liquid water (14 GCMs)
(Le Treut and McAvaney, 2000)

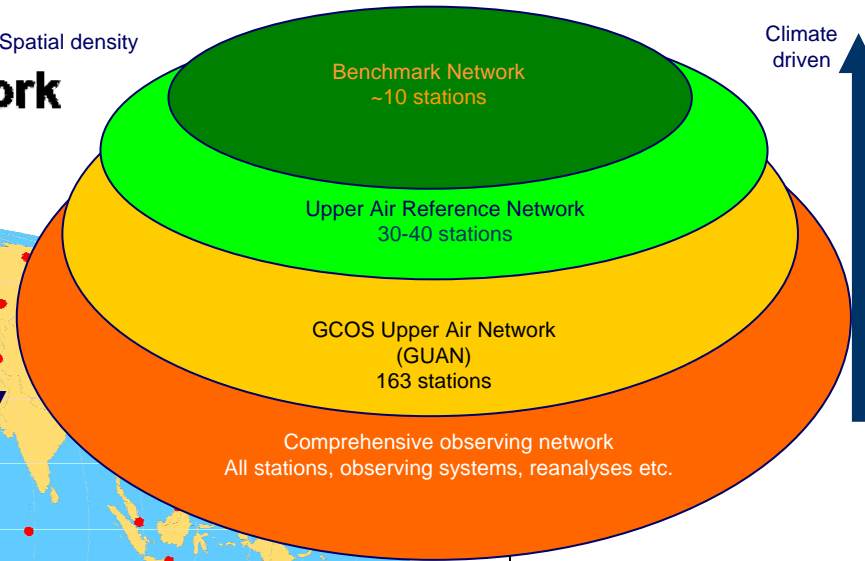
GCOS: GSN, GUAN and GRUAN



GCOS Upper-air Network (163 Stations)



Spatial density



MOL-RAO

- GSN and GUAN Station
- Lead Centre for Reference network (GRUAN)
- Reference Site for GUAN
- nominated *Benchmark Site*

GSN: 1003 stations / 128 countries



GCOS Upper-Air Network (GUAN)

two radiosondes per day (00 and 12 UTC)

GCOS Reference Upper-Air Network (GRUAN)

PLUS independent radiosonde / weekly

GCOS Benchmark Upper-Air Network

PLUS independent other measurements, like
active and passive remote sensing





GRUAN (GCOS-112, WMO/TD No. 1379, April 2007)

currently 15 candidates, but 35 worldwide necessary

- ➔ qualitatively improved (and harmonised) longterm monitoring of vertical profiles
- climate monitoring
- supply of quality-controlled data for model validation (GCM, RCM, NWP)
- anchorstation for satellite programmes / validation of satellite products (e.g. MetOp IASI profile, SAFs)
- replacement of satellite observation





26-28 February 2008 - Initiation GRUAN Workshop in Lindenberg

tasks:

- optimize GRUAN programme (launch time, ...)
- definition of reference sites
- discussion of a potential ***Mentoring / Partnership Programme***
- definition of needed (new?) reference sounding systems (in close collaboration with manufacturers)
- ...

thank you.

