REPORT OF THE CBS-LC-NOAA/NCDC FOR GCOS

Bryant Korzeniewski

GCOS Lead Centre Workshop

Santiago, Chile

8-10 October 2013

NCDC Lead/Archive Centre Responsibilities

- Mr. Bryant Korzeniewski joined the team in 2012 to oversee collection of GCOS Data for WMO Region Association (RA) IV.
  - This enables NCDC to have an available Point-Of-Contact with the RA IV Technical Representatives.
  - His activities extend to other WMO Regions, especially for those related to GUAN Data.

- Mr. Jay Lawrimore, Chief of NCDC's Ingest and Analysis Branch, continues leadership of these activities.
  - This has enabled NCDC to provide the most optimal attention to Lead Centre activities.

US CLIMAT Messages

- NOAA/NCDC continues to calculate and transmit US CLIMAT messages
  - This transferred from NOAA's Climate Prediction Center to NCDC that in October 2009.

- Few problems have occurred during the production of the US CLIMAT Messages.
  - One instance of the US CLIMAT reports being reproduced after notification by DWD:
    - To correct processing errors for some stations.
    - Were retransmitted post-correction.

Web Accessible Summary Reports

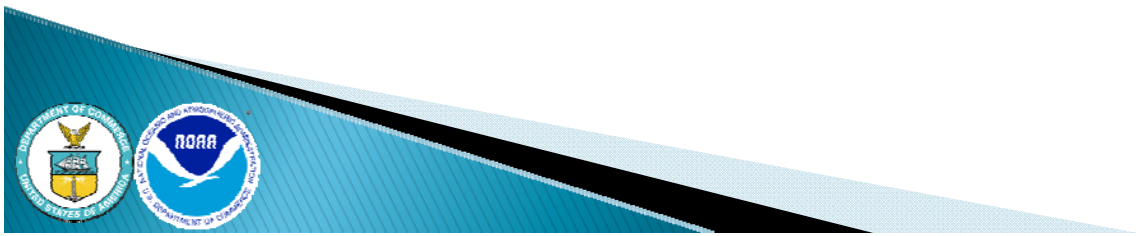
- The Lead/Archive Center at NCDC continues to provide web accessible GSN and GUAN reports on a monthly basis.
- The reports are available at ftp://ftp0.ncdc.noaa.gov/pub/data/gcos/.
- The reports provide monthly summaries of the total number of hourly and synoptic reports received at NCDC.
- Lead Centres are invited to review the reports and provide feedback on their usefulness and recommendations for enhancements.
- NCDC updates these reports around the 15th of each calendar month for the previous data-month.

GSN Summary Reports

- Report Types
  - Annual by hour and report type
    - GSN_types_short_term.txt
  - Month-year totals of hourly and synoptic reports
    - GSN_POR_Summary (Period of Record)
    - GSN_sum_short_term.txt (Current year)
    - GSN_sum_long_term.txt (2001 through Current yr)
    - WW_REGx_POR_summary (Period of Record by region)
    - WW_ALLREG_POR_summary (Period of Record all)
- Maximum of 744 hourly reports each month for each station and a maximum of 248 synoptic reports from 2005 through Present
  - Some years preceding 2005 still contain totals exceeding those limits, but will be reprocessed following agreement that these changes are acceptable.

GSN Summary Report Details

- HOURLY: Often more than one report is received each hour.
  - The revised calculations tally only one report received within 10 minutes of the top of each hour (e.g., FM-15, FM-16, AUTO) no matter how many are provided each hour
- SYNOPTIC: Often more than one synoptic report is received in a single 3-hour synoptic period.
  - The software only tallies one synoptic report in any 3-hour period regardless of the number of synoptic reports (e.g., FM-12, SY-MT) provided.



Example Of Changes Since 2005

ftp://ftp0.ncdc.noaa.gov/pub/data/gcos/GSN_sum_long_term.txt

				January			February		
R	WMO	Station	Year	HLY	SYN	M	HLY	SYN	M
2	48900	TAN SON HOA	2001	793	243	-	719	221	-
2	48900	TAN SON HOA	2002	805	245	-	719	216	-
2	48900	TAN SON HOA	2003	1430	230	-	1313	218	-
2	48900	TAN SON HOA	2004	1439	237	-	1385	225	-
2	48900	TAN SON HOA	2005	738	246	-	667	209	-
2	48900	TAN SON HOA	2006	726	233	-	664	208	-
2	48900	TAN SON HOA	2007	724	241	-	645	208	-
2	48900	TAN SON HOA	2008	733	240	-	669	219	-
2	48900	TAN SON HOA	2009	743	217	-	657	175	-
2	48900	TAN SON HOA	2010	731	243	-	653	223	-
2	48900	TAN SON HOA	2011	729	245	-	658	224	-
2	48900	TAN SON HOA	2012	730	243	-	679	229	-
2	48900	TAN SON HOA	2013	714	12	-	644	12	-

Data Types Modifications

- Report information is included in
  - GSN_types_short_term.txt (Current year)
  - GSN_types_YYYY.txt (YYYY = 4-Digit Year)

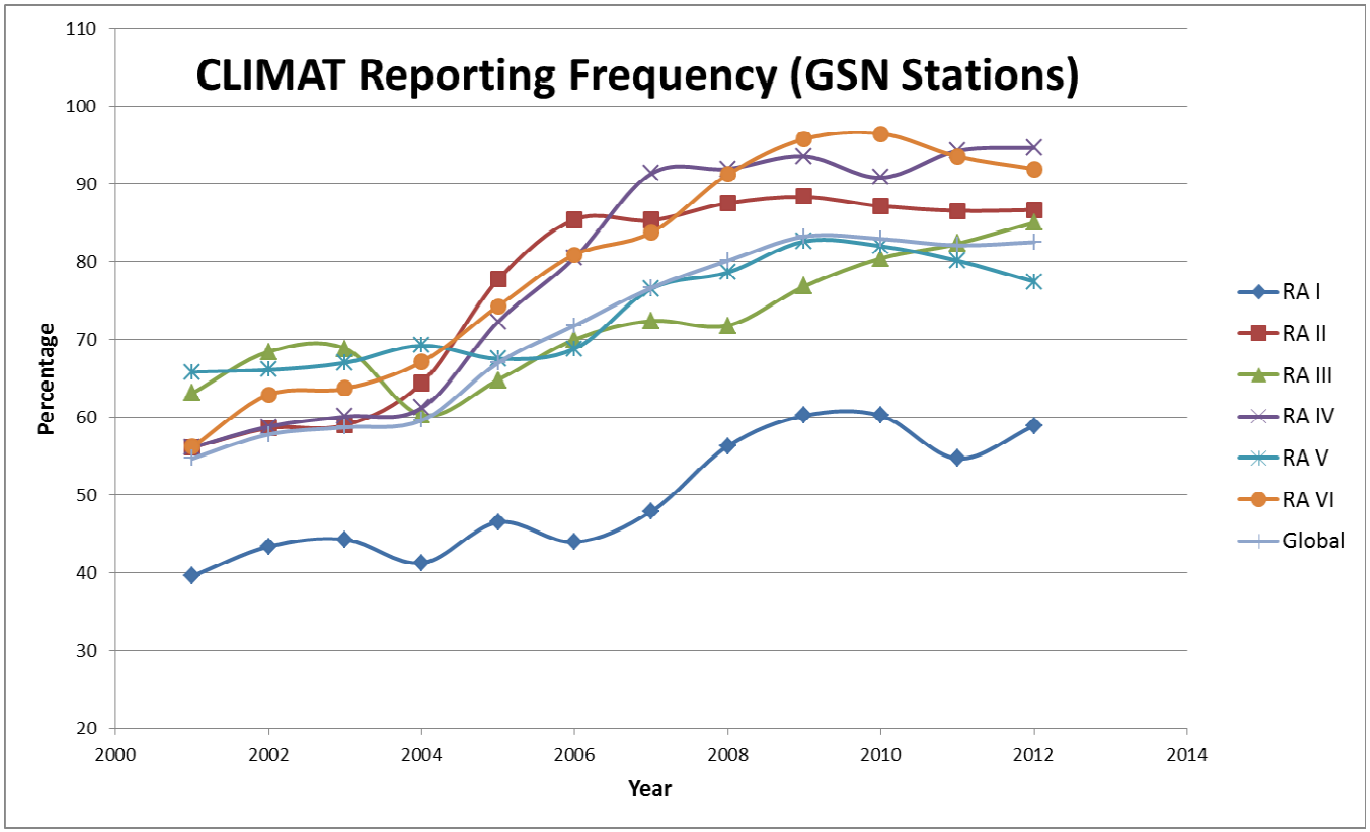
R	WMO	STATION	TYPE	H0	H1	H2	H3	H4	H5	....TOTAL
1	68262	PRETORIA EEN	AUTO	0	2	1	0	0	1	 25
1	68262	PRETORIA EEN	FM-12	159	0	0	0	0	0	 390
1	68262	PRETORIA EEN	FM-15	13	82	111	157	184	189	 3401
1	68262	PRETORIA EEN	FM-16	1	4	1	4	0	3	 55
1	68262	PRETORIA EEN	SY-MT	64	0	0	0	0	0	 497

RA IV CLIMAT REPORTING

- State of CLIMAT reporting in RA IV remains generally strong
- NCDC continued to collect and process CLIMAT messages on a routine basis
- These provide an important foundation for US and WMO climate monitoring activities through the Global Historical Climatology Network-Monthly (GHCN-M) dataset
  - Enables ongoing perspectives on the state of the global climate
  - Average of 425 stations in Region IV provided CLIMAT messages in 2013

RA IV CLIMAT REPORTING

- Percentage of reporting GSN stations exceeded 90% in each of past 6 years in Region IV



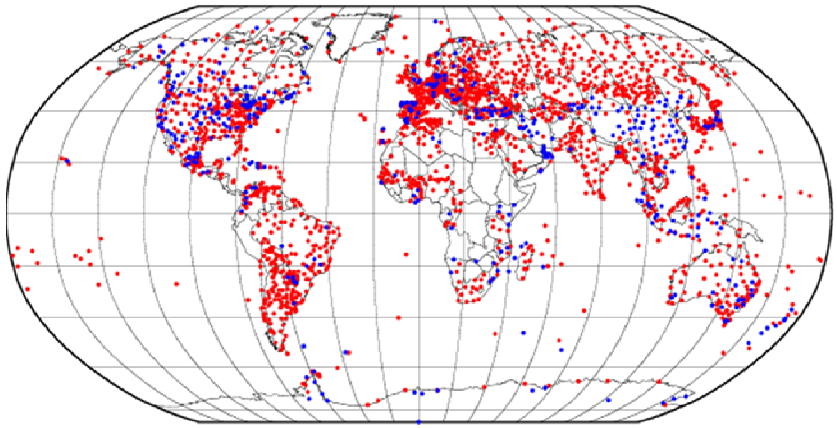
CLIMAT Receipt

- By September 2013, approximately 2300 CLIMAT messages were being received at NCDC each month, compared to only ~1200 in 2004.
- CLIMAT Messages for less than 200 Stations received via e-mail or parcel posts.
- Approximately 400 Stations are not identified as CLIMAT Stations in WMO Pub 9 Vol A (shown as blue dots).

2341 CLIMAT Stations reporting via GTS

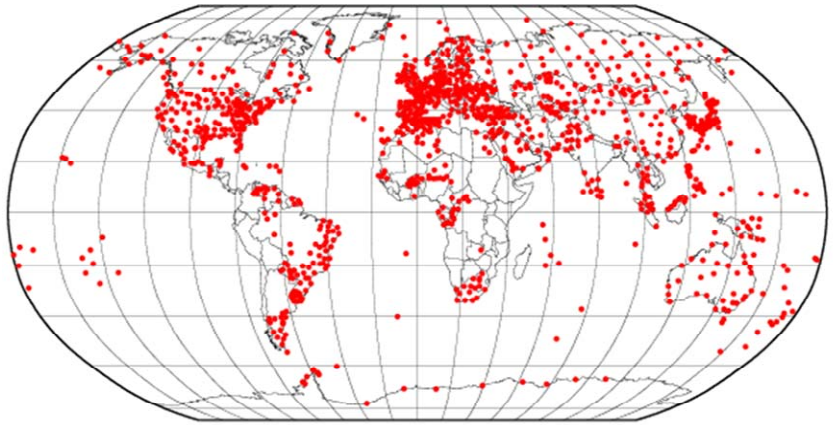
September 19, 2013

(red=published, blue=non-published, WMO Vol A.)



1199 CLIMAT Stns Rcvd at NCDC

September 2004



CLIMAT Receipt

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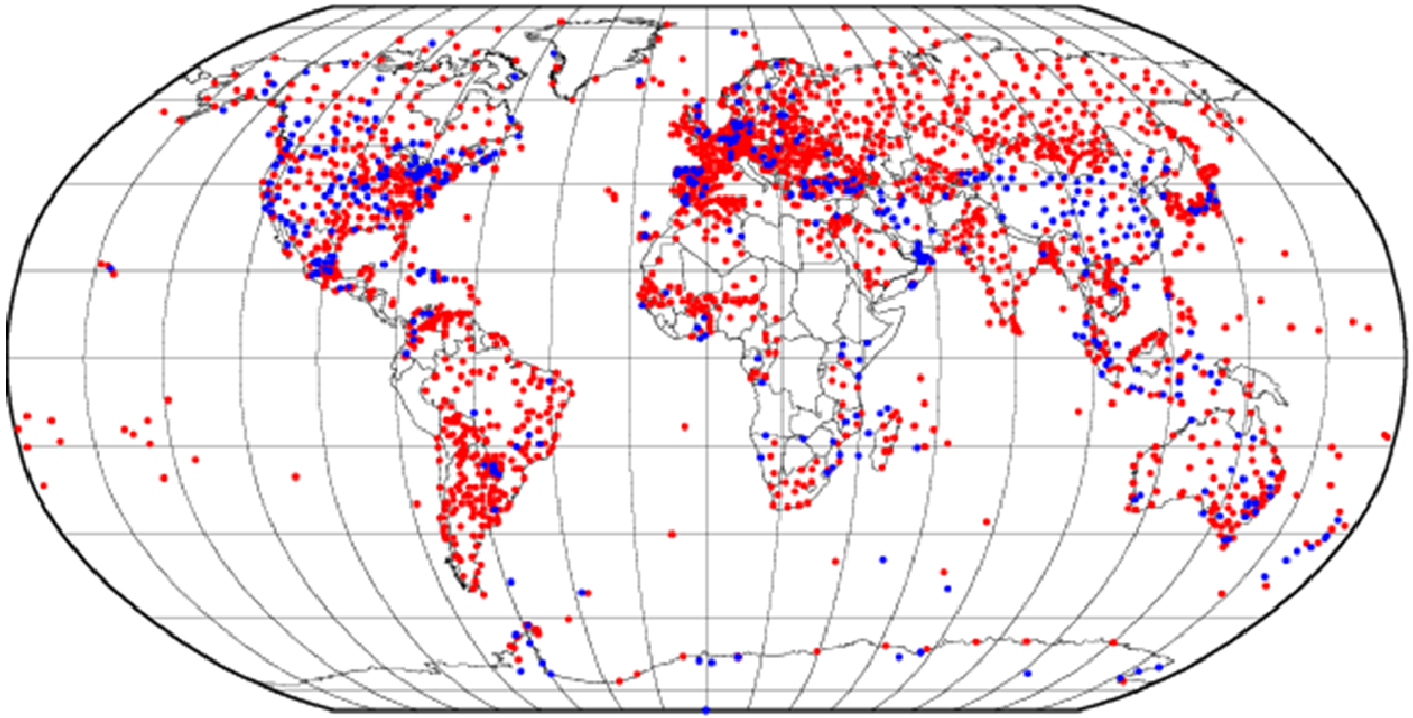


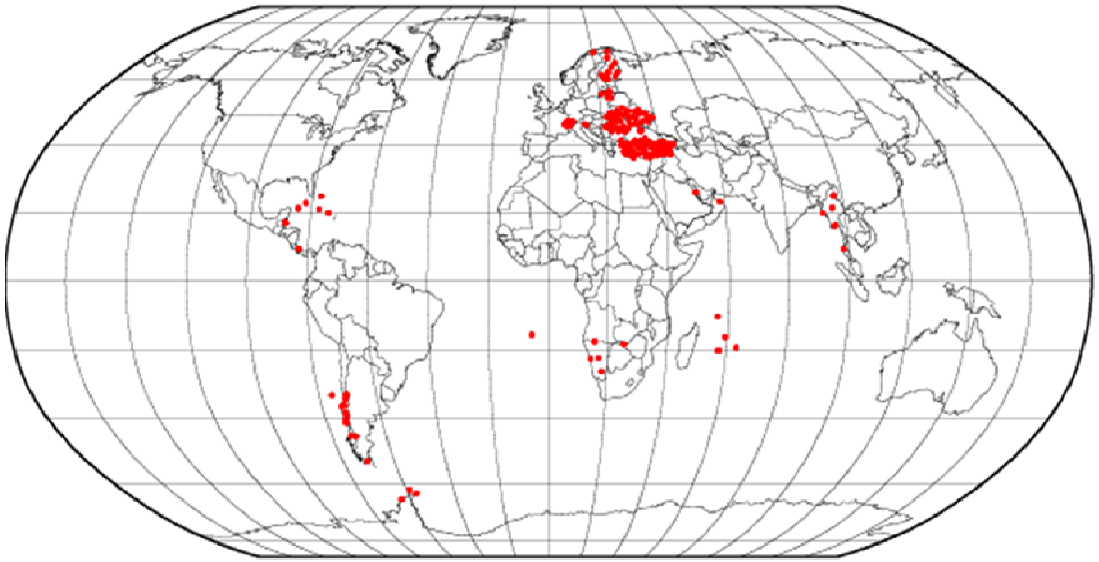
Canadian CLIMAT

- In Canada some periods of system outage occurred in the past two years
  - This caused the loss of CLIMAT data at Baker Lake (71356), Robertson Lake (71490), and Pangnirtung (71826).
  - These stations have now returned to service.

- Other stations are no longer contributing to the GSN program
  - Smithers, BC (71950), Quesnel AWOS, BC (71103) and Gore Bay AWOS, ONT (71733) were closed in 2012.
  - Whitehorse A, YT (71964) was replaced by Whitehorse Auto, YT (71773) in 2013.

Delayed Mode CLIMAT reports

- NCDC now receives less than 200 e-mail reports of CLIMAT summaries and corrections on a regular basis each month as well as a number of paper copies sent by parcel post, which combined provide many reports either are not available or correct those that have been received via the GTS.
- Many of these are provided by sources in Eastern Europe, the Caribbean, Chile, and other scattered areas around the world.

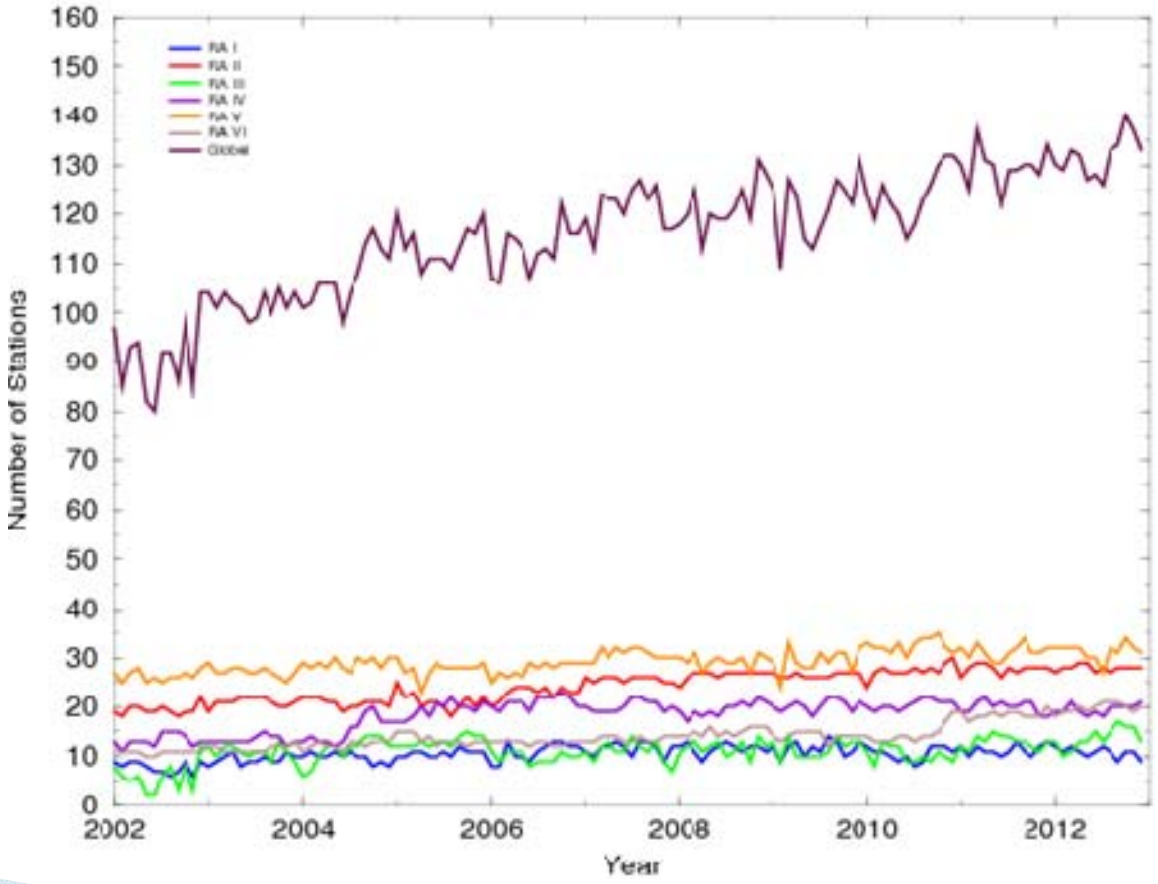


GUAN

- Ongoing rehabilitation and system improvement efforts have led to the continued increases in the collection of and reporting of data from the GUAN Network
  - More than 160 GUAN stations were operating at some point during 2012.
  - NCDC's Integrated Global Radiosonde Archive (DSI-6351) serves as the database for the GUAN.
  - WMO is provided a monthly report of inquiries submitted and feedback received by NCDC of 'silent' stations that are missing data based on the NCEP and NCDC GUAN Monthly Reports.

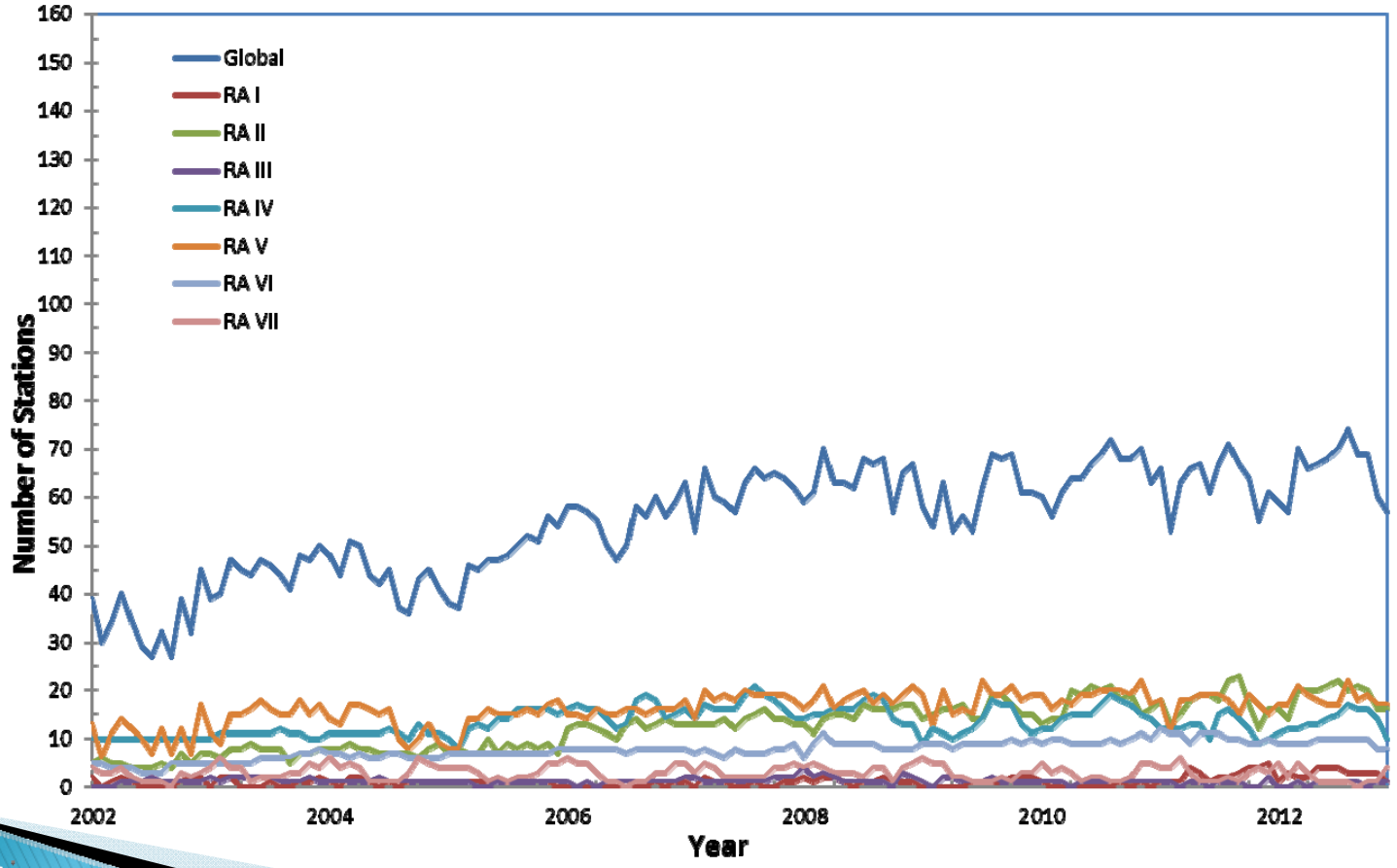
GUAN

- The number of GUAN sites exceeding 50 hPa, and humidity to tropopause from 2002 through 2012 (one observation on at least 25 days each month).



GUAN

- The number of GUAN sites exceeding 10 hPa from 2002 through 2012 (one observation on at least 25 days each month).



GUAN Problem Sites

- During the past 6 months, the following stations have either provided no observations (in bold) or have had recent problems:
  - **78397 Kingston, Jamaica (Tracking system in process of repair)**
  - **78988 Curacao Island (Awaiting parts for antenna/motor repair)**
  - **61902 Ascension Island (Closed due to funding constraints)**
  - **92035 Papua, New Guinea (No sondes in stock)**
  - **15120 Cluj-Napoca, Romania (Closed due to funding constraints)**
  - 48453 Bangna, Thailand (Much of 2013 missing; restarted recently)
  - 91517 Honiara, Solomon Islands (Awaiting new sponsor for purchase of sondes)
  - 68906 Gough Island (Generator problems; expected restart in September 2013)

To Contact NCDC's GCOS Team

- Report Issues with GSN and GUAN Stations
- Reply To NCDC's Inquiries for GSN or GUAN Data
- Inquiries About NCDC's Monthly Reports

GCOS.NCDC@noaa.gov

GCOS Team Members:

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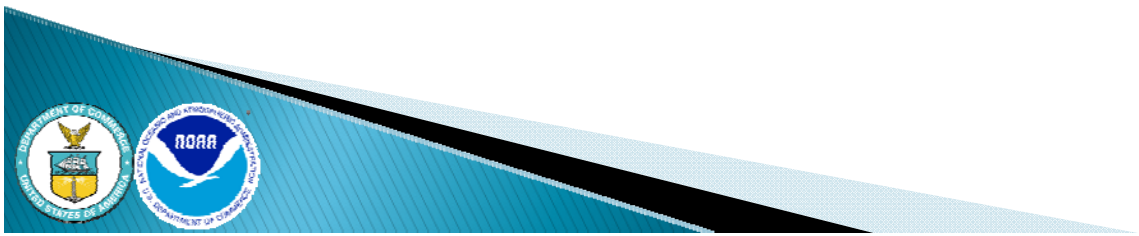

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