



Nuestra ref.: OBS/WIS/DMA/WWR-IV

GINEBRA, 8 de junio de 2016

Anexo: 1 (disponible solamente en inglés)

Asunto: Recopilación de datos de la Región IV para su publicación en los Registros meteorológicos mundiales de 2015

Finalidad: Presentación de los datos al Centro de coordinación regional (véase la dirección más adelante) en cuanto sea posible y, en todo caso, **no más tarde del 31 de julio de 2016**

Estimado señor/Estimada señora:

Se han tomado las disposiciones pertinentes para la preparación y publicación de la serie de los Registros meteorológicos mundiales de 2015. Como sabrá, el Decimoséptimo Congreso Meteorológico Mundial tomó nota de la aplicación con éxito del nuevo sistema de presentación anual de los Registros meteorológicos mundiales e instó a los Miembros a que presentaran sus datos oportunamente, como se indica en la Resolución 14 (EC-64) – Presentación anual de los Registros meteorológicos mundiales.

La Comisión de Sistemas Básicos (CSB) invitó a sus centros principales para el Sistema Mundial de Observación del Clima (SMOC) a que participasen de forma activa en la recopilación, compilación y difusión de los Registros, de conformidad con lo indicado en la Resolución 14 (EC-64).

Los Centros Nacionales para la Información Ambiental (NCEI, antiguamente el Centro Nacional de Datos Climáticos, NCDC) en Asheville (Estados Unidos de América), en cuanto centro principal de la CSB en la Asociación Regional IV, han aceptado amablemente cumplir la función de Centro de coordinación regional para la recopilación de los Registros meteorológicos mundiales, es decir, encargarse de recopilar y editar los datos pertinentes recopilados de los Miembros de la AR IV para su publicación.

Por ello, le invito a que prepare los datos de su país, junto con los datos sobre las estaciones. Deberían presentarse los datos correspondientes al año 2015 y, **si todavía no se han presentado**, los datos para los períodos 1991-2000, 2001-2010 y los años 2011, 2012, 2013 y 2014. Los datos de que disponen nuestras bases sobre los períodos y años mencionados todavía son escasos para la mayor parte del mundo.

Los datos que se han de incluir son los promedios mensuales y anuales de la presión, en la estación y a nivel del mar, la temperatura media, máxima y mínima, y los totales mensuales y anuales de precipitación. La lista de las estaciones que han de facilitar estos datos figura en la publicación OMM-N° 9, Volumen A, *Observing stations* (Estaciones de observación), que puede consultarse en: <http://www.wmo.int/pages/prog/www/ois/volume-a/vola-home.htm>).

A los Representantes Permanentes de los Miembros de la Asociación Regional IV (AMN-567)

copias: presidente y vicepresidente de la Asociación Regional IV)
presidente y vicepresidente de la CCI)
presidente y vicepresidente de la CSB) (para información)
Director de los Centros Nacionales para la Información)
Ambiental (NCEI, Asheville, Estados Unidos))

Asimismo, serán bien recibidos los datos de otras estaciones, que deberían proceder del registro más antiguo disponible.

Los datos deben estar digitalizados y proporcionarse en una hoja de cálculo de Microsoft Excel o en formato de texto, **de preferencia siguiendo el proyecto de directrices nuevo que se adjunta a la presente carta**. Una **plantilla Excel nueva** está disponible en la siguiente dirección: http://www.wmo.int/pages/prog/wcp/wcdmp/GCDS_2.php. Las directrices anteriores junto con la plantilla anterior también están disponibles en la misma dirección y pueden utilizarse en caso de dificultad al aplicar el proyecto de directrices nuevo.

Nótese que la opción de presentar los datos en formato ASCII se ha eliminado de las directrices nuevas. Además, se han realizado varias modificaciones menores técnicas y editoriales y se ha agregado información práctica de contexto. Le agradecería que, si tuviera observaciones con respecto al proyecto de directrices nuevo, nos las enviara a más tardar el 30 de septiembre de 2016 (véase la información de contacto más adelante). Sobre la base de las observaciones recibidas, se planea publicar las nuevas directrices antes de finales de 2016 y se prevé que sean plenamente operativas a partir de 2017, es decir, cuando se vayan a recopilar los datos para los Registros meteorológicos mundiales de 2016.

Para facilitar la publicación de los datos de América del Norte, América Central y el Caribe en los Registros meteorológicos mundiales, le agradecería que enviase su contribución de datos con la mayor brevedad a:

Sr. Bryant Korzeniewski
NOAA's National Centers for Environmental Information (NCEI)
Center for Weather and Climate (CWC)
151, Patton Avenue, Room 514
Asheville, NC 28801-5001 Estados Unidos de América
Tel.: +1 828 271 4307
Fax: +1 828 271 4022
Correo electrónico: gcoss.ncdc@noaa.gov

Como alternativa, puede enviar la información a:

Sr. Peer Hechler (OBS/WIS/DMA)
Organización Meteorológica Mundial
7 bis, avenue de la Paix
CH 1211 Genève 2
Suiza
Tel.: +41 (0) 22 730 82 24
Correo electrónico: wcdmp@wmo.int

Quisiera hacer hincapié en la necesidad de preparar los datos con sumo cuidado, ateniéndose estrictamente a los formatos indicados y facilitando toda la información requerida acerca de las estaciones. Los datos sobre las estaciones se consideran una parte esencial de la información global que se presenta en los Registros y deberían figurar siempre junto con las listas de datos.

Si necesita alguna otra aclaración, no dude en ponerse en contacto con la División de Aplicaciones de la Gestión de los Datos del SIO (señores Omar Baddour y Peer Hechler: wcdmp@wmo.int).

Le saluda atentamente.


(E. Manaenkova)
por el Secretario General

New Draft Guidelines for the Submission of the World Weather Records 2011+

Version 2.0, May 2016, WMO/DMA/PH

Draft

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I. BACKGROUND

I.1 History

The World Weather Records (WWR) database contains historical monthly climatic data from land surface stations worldwide. First released in 1927, the WWR database has been widely employed in operational climate monitoring, international climate assessments, and numerous other applications. To date, there have been nine editions of WWR, the first containing data up through 1920, with each successive release containing data for another decade (i.e., 1921-1930, 1931-1940, 1941-1950, 1951-1960, 1961-1970, 1971-1980, 1981-1990, 1991-2000, 2001-2010). Since its inception, WWR has been produced by three different institutions: the Smithsonian Institution (1927, 1934, 1947); the U.S. Weather Bureau (1959, 1967); and the U.S. National Oceanic and Atmospheric Administration (NOAA; 1983, 1991, 2005). The current edition will also be produced by NOAA. It addresses the 2011+ period, consistent with WMO Secretariat guidance. However, the previous edition lacked data for many countries, posing an impediment to climate monitoring and assessment activities because of the decline in station coverage starting in 1991. World Meteorological Congress XVI, Geneva 2011, emphasized the importance of updating the World Weather Records continuously. It requested Members to complete the data sets for WWR 1991-2000, submit WWR for 2001-2010, and -starting from 2011- move towards annual updates of the WWR. This approach has been formalised through Resolution 14 (EC-64) Submission of World Weather Records on an Annual Basis.

I.2 Submission Channels of the WWRs

Each WMO Member should submit two types of files to the responsible CBS Lead Center for GCOS or to WMO as appropriate (see suggested collection mechanisms in ANNEX-I). The first file type should contain station data for the country (single Excel file containing all stations OR single text file per station), and the second should contain a history Metadata file (ANNEX-IV). These files can be submitted via electronic mail following guidance provided by the WMO Secretariat or by a regional coordinating center. In the list of countries in ANNEX-I the responsible institutions are given for each region including an Email address. In case of any question the Members are encouraged to contact WMO: wcdmp@wmo.int.

I.3 Quality Assurance and Accessibility of WWRs

WWRs can be accessed through the World Data Centre for Meteorology, National Centers for Environmental Information (NCEI), Asheville, United States of America at <http://www1.ncdc.noaa.gov/pub/data/wwr/>. It is planned to provide access to quality-controlled WWRs within six months of the WMO's submission deadline annually. Routine quality assurance reviews of NCEI focus on gross data problems and include format consistency checks, determination of duplication and reasonableness of submitted values and metadata.

II. METHODOLOGY FOR REPRESENTING THE WWRs

II.1 Data Elements

This document provides guidance on how to format data for submission to the current edition of WWR. As in the previous edition, the database will contain six climatic elements:

- | | |
|----------|-----------------------------------|
| (code 2) | Monthly mean station pressure, |
| (code 3) | Monthly mean sea level pressure, |
| (code 4) | Monthly mean temperature, |
| (code 5) | Monthly mean maximum temperature, |
| (code 6) | Monthly mean minimum temperature, |
| (code 7) | Total monthly precipitation. |

As practiced in recent years, monthly means of daily relative humidity can be submitted too:

- | | |
|----------|---------------------------------|
| (code 8) | Monthly mean relative humidity. |
|----------|---------------------------------|

The primary goal is to capture year-by-year, month-by-month data for each element at each station (e.g., total monthly precipitation for Geneva in January 2011, February 2011, ..., December 2015+). However, station metadata are also of particular importance. At a minimum these metadata should include station name, coordinates, and elevation. Preferably, observation times, averaging formulas, instrumentation types, and station changes will also be documented. WMO Members should submit data for all of their surface stations that have an official WMO station index number.

II.2 Data Format

Each WMO Member should submit the WWRs data in either Excel or text file format. This section describes the format of these files, which are similar to previous editions of WWR. There are generally two record types in these formats:

- (a) Station Header records documenting basic station characteristics;
- (b) Yearly Data records with monthly and annual data for a particular year;

Note that Decadal Average (MEAN) and Climate Normal (CLINO) records are no longer necessary with this data submission.

Option 1: Excel

An example of a properly formatted Excel submission is given in ANNEX-II, and an electronic template is provided to Members. *A single Excel file should contain all stations for a given country, with a single station on each tab, and each tab containing a single station's elements.*

The first line for each station must be a Station Header record. There must be only one Station Header record for each station, and it should contain the most recent information for the station.

The next Yearly Data record section contains data for each climatic element for that station. Leave the element section blank if the station does not report that element.

(a) Station Header Records

Station Header records contain 14 fields documenting basic station characteristics. These characteristics should represent the most recent location of the station. Stated in tabular form, the contents include the following:

FIELD	COLUMNS	CONTENTS	NOTES
	1-2		Leave these columns blank
1	3-7	WMO number	5-digit with leading 0 if applicable, right-justified
2	8-8	Record type	1 = Station Header record
3	9-10	Degrees of latitude (0-90)	Right-justified
4	11-12	Minutes of latitude (0-59)	Right-justified
5	13-14	Seconds of latitude (if available, 0-59)	Right-justified
6	15-15	Hemisphere of latitude	N (Northern) or S (Southern)
7	16-18	Degrees of longitude (0-180)	Right-justified
8	19-20	Minutes of longitude (0-59)	Right-justified
9	21-22	Seconds of longitude (if available, 0-59)	Right-justified
10	23-23	Hemisphere of longitude	E (Eastern) or W (Western)
11	24-47	Name of country in English	Left-justified
12	48-71	Name of station in English	Left-justified
13	72-76	Height of station above sea level (whole meters)	Right-justified
14	77-83	Height of barometer above sea level (tenths of meters)	Right-justified

(b) Yearly Data Records

Each Yearly Data record contains monthly and annual data for a particular year. These records contain 17 fields documenting the WMO number, element type, year, monthly data values, and the annual value. Stated in tabular form, the contents include the following:

FIELD	COLUMNS	CONTENTS	NOTES
	1-2		Leave these columns blank
1	3-7	WMO number	5-digit with leading 0 if applicable, right-justified
2	8-8	Element type	2 = mean station pressure in tenths of hpa. 3 = mean sea level pressure in tenths of hpa. 4 = mean daily air temperature in tenths of a °C. 5 = total precipitation in tenths of a mm. 6 = mean daily maximum air temperature in tenths of a °C. 7 = mean daily minimum air temperature in tenths of a °C. 8 = mean of the daily relative humidity in whole percent.
3	9-12	Year	4-digits
4	13-13	Record type	Blank = Yearly Data record
5	14-18	January	If a value is missing, then leave the field blank. All values should be right-justified.
6	19-23	February	
7	24-28	March	

8	29-33	April	Decimal points are implied (e.g., 1014.1 hpa should be entered as "10141"). If there is no value after the decimal, the last character should be "0" (e.g., 1014.0 hpa should be "10140"). If the temperature is negative, the 1st value of the field should be "-" (e.g., -13). If precipitation is zero, the field should be "0". If there was trace precipitation, the field should be "T".
9	34-38	May	
10	39-43	June	
11	44-48	July	
12	49-53	August	
13	54-58	September	
14	59-63	October	
15	64-68	November	
16	69-73	December	
17	74-78	Annual	

If data are missing for an entire year, then only complete Fields 1-4.

Yearly Data can be provided only for the data-year in question but also for other data-years where data were not previously submitted or need to be corrected.

Option 2: Text

An example of a properly formatted text file submission is given in ANNEX-III, and a template is provided. A single text file should contain one station containing that single station's elements.

The first section for each station must be a Station Header record. There must be only one Station Header record for each station, and it should contain the most recent information for the station.

The next Yearly Data record section contains data for each climatic element for that station. Leave the element section blank by using spaces if the station does not report that element. Do not use 9's or -9's or tabs to represent missing data.

(a) Station Header Records

Station Header records contain 7 rows documenting basic station characteristics. These characteristics should represent the most recent location of the station.

LINE	POSITION	CONTENTS	NOTES
1	40-44	WMO number	5-digit with leading 0 if applicable, left-justified
2	40-63	Name of station in English	Left-justified
3	40-63	Name of country in English	Left-justified
4	40-49	Latitude Degrees (0-90) Minutes (0-59) Seconds (0-59) Direction (N or S)	Left-justified, example 09 04 00N
5	40-50	Longitude Degrees (0-180) Minutes (0-59) Seconds (0-59) Direction (E or W)	Left-justified, example 000 45 59S
6	40-49	Height of station above sea level	Left-justified, whole meters
7	40-49	Height of barometer above sea level	Left-justified, tenths of meters, explicit decimal

(b) Yearly Data Records

Each Yearly Data record contains monthly and annual data for a particular year. These records contain 14 fields documenting the year, element type, monthly data values, and the annual value. Stated in tabular form, the contents include the following:

FIELD	COLUMNS	CONTENTS	NOTES
1	1-4	Year	4-digits
2	6-11	January	If a value is missing, then leave the field blank. All values should be right-justified. Decimal points should be explicitly noted except for relative humidity (which is rounded to whole percent). If there is no value after the decimal, the last character should be "0" (e.g., 1014 hpa should be "1014.0"). If the temperature is negative, the 1 st value of the field should be "-" (e.g., -13). If precipitation is zero, the field should be "0". If there was trace precipitation, the field should be "T".
3	13-18	February	
4	20-25	March	
5	27-32	April	
6	34-39	May	
7	41-46	June	
8	48-53	July	
9	55-60	August	
10	62-67	September	
11	69-74	October	
12	76-81	November	
13	83-88	December	
14	90-95	Annual	

If data are missing for an entire year, then only complete Field 1. *If data are missing for any months, use spaces to fill (not the tab key).*

Yearly Data can be provided only for the data-year in question but also for other data-years where data were not previously submitted or need to be corrected.

II.3 History Metadata (Station Notes)

Each WMO member should submit one file containing all of the Metadata (station notes) for all of the stations in their country. There is no required format for this information, but there is some preferred content to make the greatest possible use of the submitted climatic data. Critical content includes the times of observation, the formulas used in computing means, and the types of instrumentation. To the extent possible, this information should be specific to each climatic element. Furthermore, it is extremely helpful if historical changes are explicitly documented for all types of metadata, including observation times, averaging formulas, instrumentation types, and basic parameters such as location and elevation. An example of station notes is given in ANNEX-IV.

Annex I: Proposed Collection Mechanism By Region

Note: Members may choose to submit their WWRs through any of the below mentioned CBS Lead Centers for GCOS. Members are invited to notify WMO (wcdmp@wmo.int) should they decide to deviate from the below proposed scheme.

REGION	Countries (ENG)	Collection mechanism	Alternative
RA I	All Members of RA I	CBS Lead Center for GCOS Africa, Morocco (DMN), cbs.lead.centre.4gcoss@gmail.com	WMO, Geneva; wcdmp@wmo.int
RA II	All Members of RA II	CBS Lead Center for GCOS Asia, Japan (JMA); climatemonitor@met.kishou.go.jp	WMO, Geneva; wcdmp@wmo.int
RA III	All Members of RA III	CBS Lead Center for GCOS South America, Chile (DMC)	WMO, Geneva; wcdmp@wmo.int
RA IV	All countries of RA IV	CBS Lead Center for GCOS North and Central America, Caribbean, USA (NCEI); gcoss.ncdc@noaa.gov	WMO, Geneva; wcdmp@wmo.int
RA V	All Members of RA V	CBS Lead Center for GCOS South West Pacific, Australia, (BOM); GCOS_Lead_Centre_RAV@bom.gov.au	WMO, Geneva; wcdmp@wmo.int
RA VI	All Members of RA VI	CBS Lead Center for GCOS Europe, Germany (DWD); christiana.lefebvre@dwd.de	WMO, Geneva; wcdmp@wmo.int

World Weather Records

Data Sheet, Single Station (All Elements)

[Scroll to Detailed Column Description Instructions](#)

Station Header Record

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Blank	WMO Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	JL	JM	JN	JO	JP	JQ	JR	JS	JT	JU	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	

(2) Mean Station Pressure (tenths of hPa, decimal implied, example 10228 means 1022.8)

(3) Mean Sea Level Pressure (tenths of hPa, decimal implied, example 10269 means 1026.9)

(4) Mean Daily Air Temperature (tenths of degree Celsius, decimal implied, example -54 means -5.4 C)

(5) Total Precipitation (tenths of mm. decimal implied, example 122 means 12.2 mm)

(6) Mean Daily Maximum Air Temperature (tenths of degree Celsius, decimal implied, example -13 means -1.3 C)

(7) Mean Daily Minimum Air Temperature (tenths of degree Celsius, decimal implied, example -93 means -9.3 C)

[illegible][illegible]

A World Meteorological Organization (WMO) Number. 99999=Unassigned.

B	*Element Designator Code. 1=Header Record,
---	--

2=Mean Station Pressure (tenths of hPa),

3=Mean Sea Level Pressure (tenths of hPa),

4=Mean Air Temperature (tenths of deg C),

5=Total Amount of Precipitation (tenths of mm)

7-Mean of the Daily Minimum Air Temperature

8=Mean of the Daily Relative Humidity in whole

C. Latitude. Format: DDMMSS (N or S), where DD=Degrees (00 to 90), MM=

D Longitude. Format: DDDMMSS (E or W), where DDD=Degrees (000 to 360)

E	Country Name (in English)
---	---------------------------

[illegible][illegible]

H	Height of Barometer. Format: tenths of a meter (decimal implied).	
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[illegible]

J	#Average Value Designator Code. Format: Blank=Yearly Data		
K	Monthly/Annual Data Values. Format: tenths of a deg C mm or hPa (d)		

Precipitation: All values to tenths of a mm; annual value sum of mo

zero precipitation indicated with a 0, trace precipitation total (≥ 0 and

		zero precipitation indicated with a 0, trace precipitation total (>0 and	
--	--	--	--

WMO Number:					85629								
Station Name:					CURICO GENERAL FREIRE								
Country Name:					CHILE								
Latitude (DD MM SS N/S):					34 58 00 S								
Longitude (DDD MM SS E/W):					071 14 00 W								
Station Height (whole meters):					228								
Barometer Height (meters, to tenths):					228.0								
(2) Mean Station Pressure (tenths of hPa)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN
2011	989.0	986.9	989.1	989.8	990.0	993.8	993.2	992.9	993.5	991.6	989.9	988.3	990.7
2012	988.3	988.5	988.7	990.7	990.5	991.5	990.7	991.3	990.9	991.6	988.6	986.3	989.8
2013	985.2	986.3	987.3	988.3	989.5	991.4	991.2	991.9	992.9	990.1	989.1	987.8	989.3
2014	986.9	986.2	987.3	989.8	990.7	992.0	989.0	992.7	990.9	990.7	990.0	986.2	989.4
2015	987.5	986.1	986.3	990.3	990.1	990.0	991.4	992.7	990.4	989.6	988.7	988.1	989.3
2016													
(3) Mean Sea Level Pressure (tenths of hPa)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN
2011	1015.1	1012.9	1015.4	1016.5	1016.9	1021.2	1020.6	1020.2	1020.6	1018.4	1016.3	1014.4	1017.4
2012	1014.3	1014.6	1015.0	1017.5	1017.7	1018.8	1017.9	1018.5	1017.8	1018.5	1015.0	1012.3	1016.5
2013	1011.0	1012.3	1013.6	1015.1	1016.7	1019.0	1018.6	1019.2	1020.0	1016.7	1015.3	1013.7	1015.9
2014	1012.8	1012.3	1013.6	1016.7	1018.0	1019.5	1016.3	1020.0	1017.8	1017.4	1016.6	1012.3	1016.1
2015	1013.5	1012.1	1012.6	1017.3	1017.2	1017.1	1018.7	1020.1	1017.3	1016.3	1015.0	1014.2	1016.0
2016													
(4) Mean Daily Air Temperature (tenths of degrees Celsius)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN
2011	19.4	19.3	16.7	13.6	12.0	7.2	7.7	8.2	9.8	12.8	15.9	18.8	13.5
2012	19.9	18.6	16.4	12.7	9.6	8.3	9.3	8.8	11.7	12.5	14.9	19.7	13.5
2013	20.5	19.1	16.1	12.2	7.9	5.4	6.5	8.6	9.7	14.0	17.3	19.9	13.1
2014	20.3	18.2	16.4	11.4	8.3	6.1	7.4	7.6	10.9	13.1	15.1	18.1	12.7
2015	19.3	18.6	15.8	10.6	9.6	9.6	7.6	7.6	11.0	13.0	16.2	18.6	13.1
2016													
(5) Total Precipitation (tenths of mm)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN
2011	11.7	0	0	2.4	191.1	75.2	44.6	110.8	33.7	18.9	0.2	0	488.6
2012	7.0	0	37.7	14.7	168.9	408.8	208.7	115.1	186.7	43.9	2.0	0	1193.5
2013	8.3	1.0	0.3	17.5	55.9	147.9	139.7	116.0	24.9	0.4	0	0.2	512.1
2014	0	1.5	3.0	22.4	203.7	135.2	390.3	108.3	65.2	47.4	6.7	0	983.7
2015	0.3	0	29.9	25.0	127.1	26.1	126.5	6.6	46.7	71.9	0.2	0	460.3
2016													
(6) Mean Daily Maximum Air Temperature (tenths of degree Celsius)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN
2011	1.3	3.6	13.9	20.4	29.5	30.8	32.3	30.5	26.7	19.1	11.1	1.6	18.2
2012	5.9	10.1	16.3	20.0	27.9	28.5	32.7	30.6	27.1	16.1	8.3	0.5	18.7
2013	1.6	6.1	11.0	20.8	26.8	30.4	31.0	31.7	25.5	18.6	7.1	5.3	18.0
2014	2.6	8.2	13.4	22.3	26.4	30.4	30.7	29.3	26.7	20.0	11.9	3.1	18.8
2015	2.1	1.3	12.5	22.7	25.6	31.5	32.7	30.3	27.2	20.6	13.4	1.6	18.5
2016													
(7) Mean Daily Minimum Air Temperature (tenths of degree Celsius)													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	MEAN
2011	9.3	6.0	1.3	8.3	15.8	20.7	22.7	21.2	16.0	8.8	0.3	6.6	7.7
2012	5.2	2.8	3.2	8.9	15.4	19.4	22.8	21.5	14.3	5.7	1.6	6.2	8.0
2013	1.6	6.1	11.0	20.8	26.8	30.4	31.0	31.7	25.5	18.6	7.1	5.3	18.0
2014	2.6	8.2	13.4	22.3	26.4	30.4	30.7	29.3	26.7	20.0	11.9	3.1	18.8
2015	2.1	1.3	12.5	22.7	25.6	31.5	32.7	30.3	27.2	20.6	13.4	1.6	18.5
2016													
(8) Mean of the Daily Relative Humidity (whole percent)													

Annex IV: Station Notes Example

TRINIDAD AND TOBAGO (2 stations)

General:

All observation hours were in local time. A total of 24 hourly observations per day were used in computing the means of temperature and pressure except at Crown Point. At this station, part time operation existed during June to December 1980; January 1976; 1977, and 1978; February, March, April 1976; and for February, March, and April 1978. Observation hours during these periods were 0700 to 2300 hours or 0800 to 22 hours.

At Piarco, the period of record of CLINO values for sea level pressure and temperature was 1946-1975. For precipitation it was 1946-1980. No CLINO exists for Crown Point since past records begin only in 1970.

Pressure:

Pressure was measured by a Kew Pattern barometer until 1974 after which a precision Aneroid type was used. Heights of the barometers were 13.4 meters at Piarco and 6.7 meters at Crown Point.

Temperature:

Thermometers, housed in a standard Stevenson Screen, were 1.2 meters above ground at both stations.

Precipitation:

Rainfall was measured by a pot gauge. A Tilting – Siphon rain recorder adjusted the pot gauge. Rainfall was measured four times daily at 0200, 0800, 1400, and 2000 hours local time at both stations except during part time operations at Crown Point. Heights of the rain gauges were .3 meters at Piarco, and 3 meters at Crown Point.

URUGUAY (13 stations)

General:

CLINO values correspond to the period 1951-80 for precipitation and 1946-1980 for other elements. Rain gauges and thermometers were located 1.5 meters above the ground.

Pressure and Temperature:

The monthly pressure and temperature values were both computed from the equation:
 $1/10(00+03+06+09+12+15+18+21 \text{ hours GMT} + \text{Mean Max} + \text{Mean Min})$

Precipitation:

The daily values were measured at 0900 hours GMT.
