Data Rescue activities in AEMET

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DARE-EUMETNET Meeting (Budapest, May 13, 2014)

Outline

- Territorial structure of AEMET
- Data Rescue achievements
- Data Rescue pending tasks
- Problems and prospects

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Territorial structure of AEMET

Achievements

- Digitization of (almost) all *modern* data (from around 1950)
- Scanning (1998) of old manuscript data reports ($\sim$1860 to $\sim$1950)
- Digitization of old monthly values

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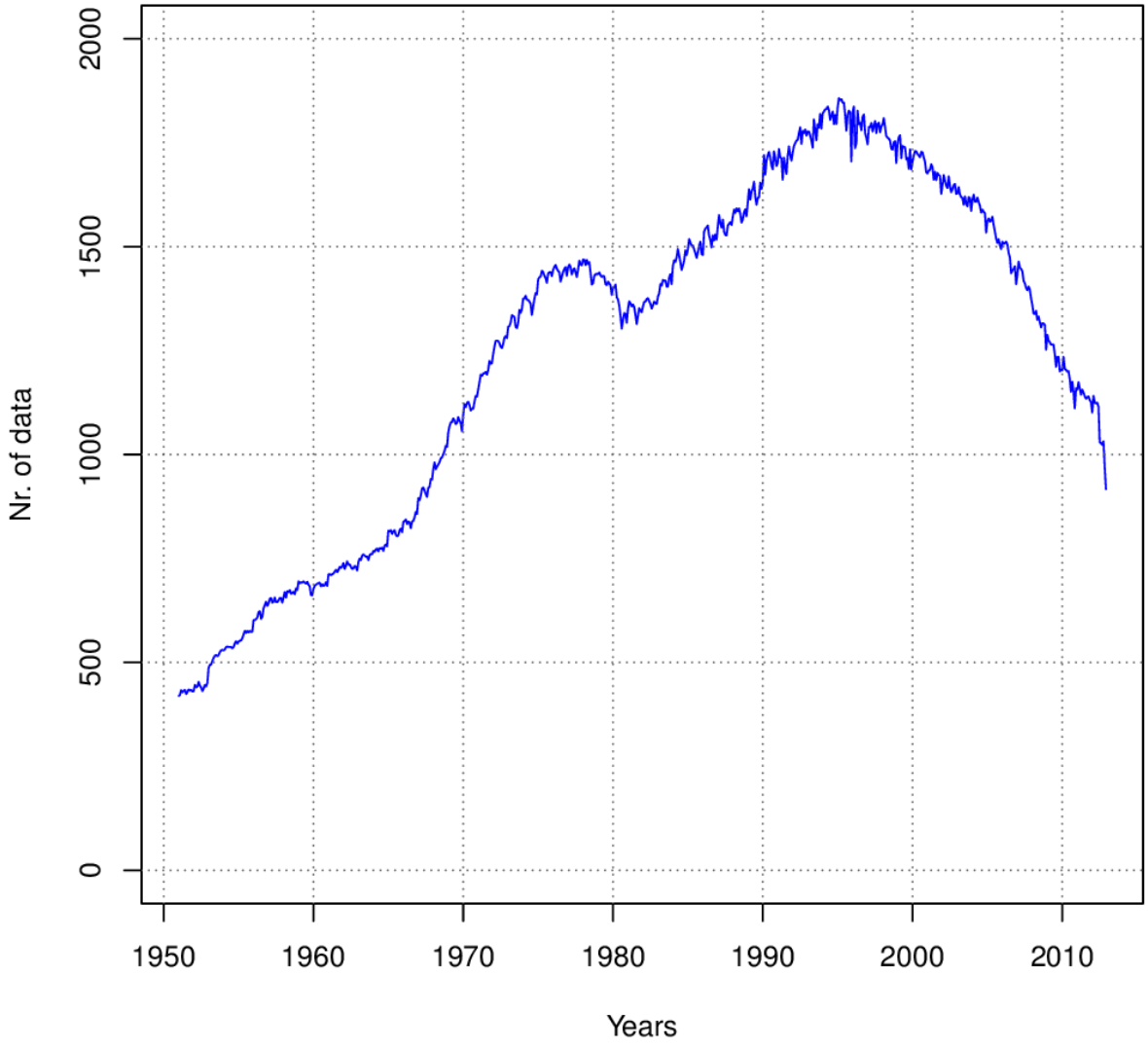
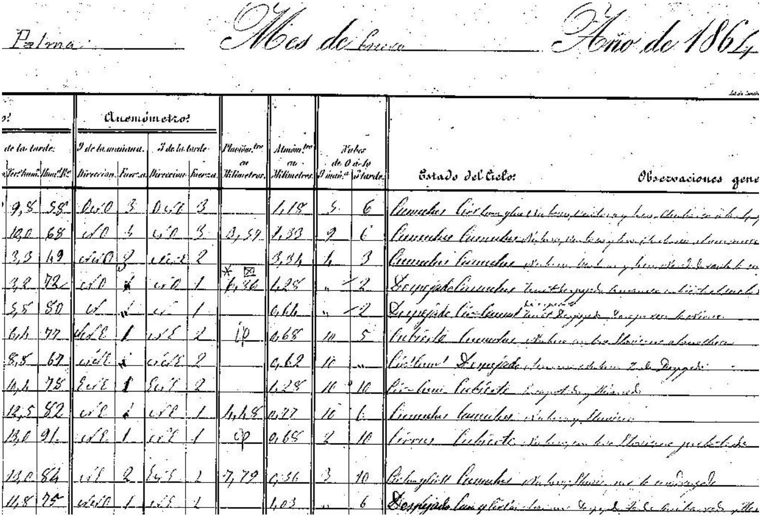


Temperature data (series with 10 or more years)



Palma — Mes de Enero — Año de 1864

Psicrómetro, 3 de la tarde: Ter. hum.	Hum. Rel.	Anemómetro, 9 de la mañana: Dirección	Fuerza	Anemómetro, 3 de la tarde: Dirección	Fuerza	Pluvióm. en Milímetros	Atmióm. en Milímetros	Nubes de 0 á 10: 9 mañ.	Nubes de 0 á 10: 3 tarde	Estado del Cielo
9,8	58	OSO	3	OSO	3		1,18	5	6	Cumulus [illegible]
10,0	68	[illegible]	4	[illegible]	3	3,59	1,33	9	6	Cumulus Cumulus [illegible]
3,3	49	[illegible]	2	[illegible]	2		3,34	4	3	Cumulus Cumulus [illegible]
3,2	72	[illegible]	[illegible]	[illegible]	1	6,36	1,28	„	2	Despejado Cumulus [illegible]
5,5	80	[illegible]	„	[illegible]	1		0,66	„	2	Despejado [illegible]
6,4	77	[illegible]	1	[illegible]	2	ip	0,68	10	5	Cubierto Cumulus [illegible]
8,8	67	[illegible]	[illegible]	[illegible]	2		0,62	10	„	[illegible] Despejado [illegible]
10,4	75	ESE	1	ESE	2		1,28	10	10	[illegible] Cubierto [illegible]
12,5	82	[illegible]	[illegible]	[illegible]	1	4,48	0,27	10	6	Cumulus Cumulus [illegible]
13,0	91	[illegible]	1	[illegible]	1	ip	0,65	2	10	Cirrus Cubierto [illegible]
13,0	84	[illegible]	2	[illegible]	2	7,79	0,36	3	10	[illegible] Cumulus [illegible]
11,8	75	[illegible]	1	[illegible]	1		1,03	„	6	Despejado [illegible]

Old (1864) Palma data (black & white)

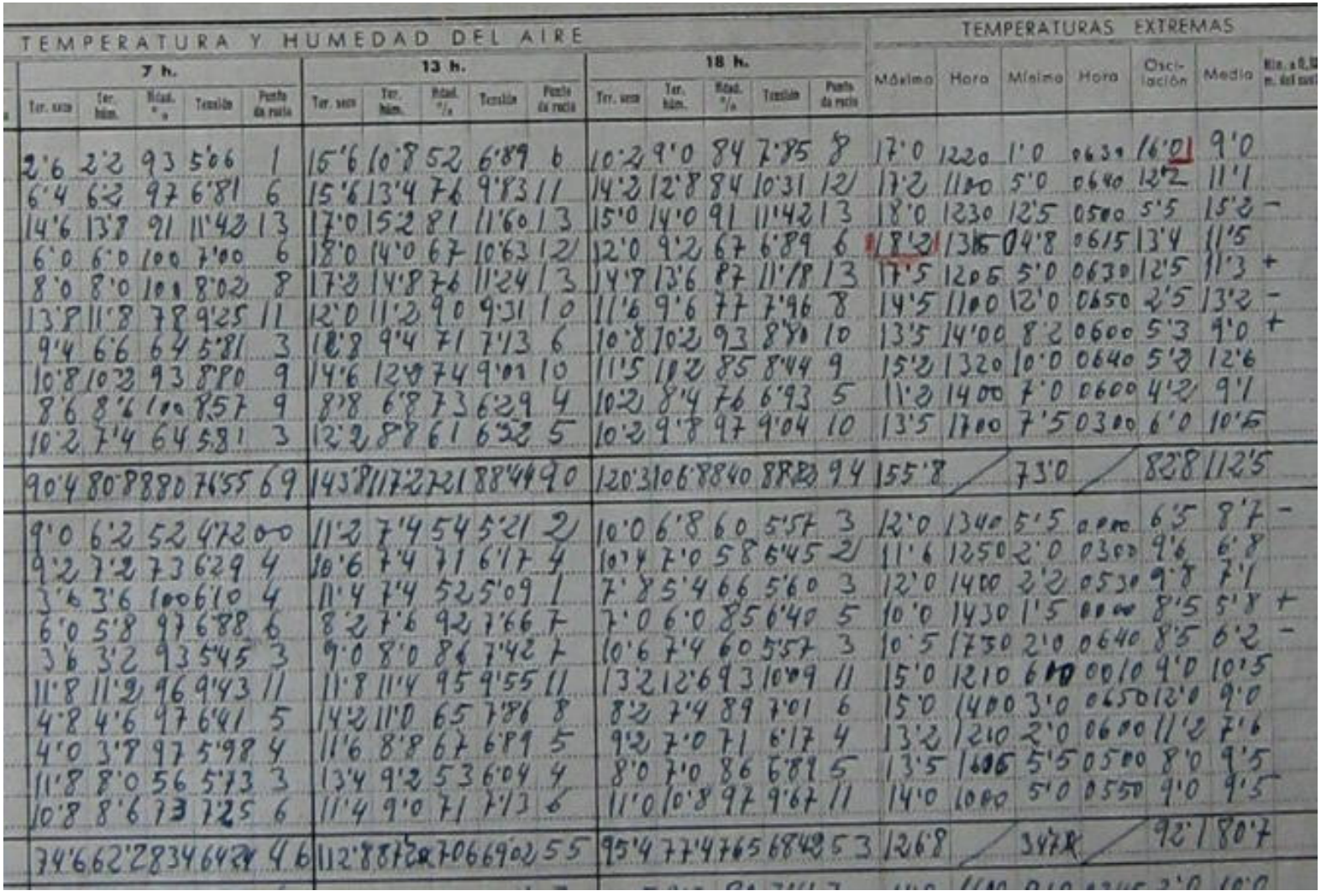
TEMPERATURAS

AÑO 1981 MES 10

ARES LONG. 0244E; LATI. 3933; ALTIT. 7; ALTIBA. ; (EDICION 22-06-90)

13 HORAS					18 HORAS					EXTREMAS					
TS	TH	HU	TV	PR	TS	TH	HU	TV	PR	MAX.	HORA	MIN.	HORA	MEDIA	EVP.
24.2	20.2	68	20.5	17.9	22.0	20.0	83	21.8	18.9	25.0	11.00	12.2	04.00	18.6	1.6
24.8	17.0	42	13.1	11.1	21.2	17.0	64	16.0	14.1	25.4	14.45	15.0	23.00	20.2	3.2
25.0	20.6	66	20.7	18.1	22.4	20.6	84	22.8	19.6	25.6	12.40	14.4	03.00	20.0	1.6
25.6	21.2	66	21.6	18.8	22.4	20.8	86	23.3	20.0	26.6	12.15	15.0	05.30	20.8	0.8
28.2	21.6	54	20.5	17.9	23.6	21.4	82	23.7	20.3	30.0	12.00	13.2	05.25	21.6	2.3
26.0	22.0	69	23.2	19.9	23.0	20.0	75	21.0	18.3	26.6	13.40	15.8	24.00	21.2	2.8
26.6	22.0	65	22.7	19.6	23.0	21.0	83	23.3	20.0	29.6	12.00	13.2	07.00	21.4	2.0
28.0	21.0	51	19.3	17.0	22.0	18.2	68	17.8	15.8	29.0	15.00	16.6	24.00	22.8	3.2
27.8	22.4	61	22.8	19.6	23.0	20.4	78	21.9	19.0	29.6	13.20	15.2	24.00	22.4	2.4
24.6	21.4	74	22.9	19.7	21.8	20.4	88	22.8	19.7	26.8	11.15	13.2	05.00	20.0	2.3
26.1	20.9	62	20.7	18.0	22.4	20.0	79	21.4	18.6	27.4		14.4		20.9	2.2
26.6	22.2	67	23.2	19.9	24.4	18.6	55	16.8	14.8	28.4	14.30	14.0	07.00	21.2	2.1
26.6	22.4	68	23.7	20.3	23.6	21.2	80	23.2	19.9	27.6	12.30	14.6	04.45	21.1	2.6
27.2	22.0	62	22.3	19.3	21.2	19.2	82	20.6	18.0	28.4	13.30	16.8	01.30	22.6	1.5
25.4	22.8	79	25.7	21.5	23.0	21.0	83	23.3	20.0	26.0	13.15	13.8	05.30	19.9	1.2
26.0	22.8	75	25.2	21.2	23.2	21.6	86	24.5	20.8	27.0	14.50	14.4	24.00	20.7	1.2
27.2	23.0	69	24.7	20.9	21.6	20.6	91	23.5	20.1	29.4	11.45	13.2	04.00	21.3	2.1
29.0	23.3	60	24.0	20.5	22.2	21.0	90	23.9	20.4	29.8	13.15	12.4	07.00	21.1	1.8
26.8	22.0	64	22.6	19.5	22.4	20.8	86	23.3	20.0	27.6	13.30	14.0	06.15	20.8	1.3
25.4	21.0	66	21.3	18.6	25.0	21.0	69	21.7	18.8	26.0	14.00	17.0	04.00	21.5	1.4
21.8	18.8	74	19.3	17.0	20.2	18.4	84	19.7	17.3	24.0	15.40	13.6	24.00	18.8	0.6

Image of digitized data (!!!???)



Color photograph of a data sheet

Ongoing Data Rescue tasks

- Imaging old radiosonde output (before 1970)
- Imaging of some analog recordings (paper strips)
- Digitization of *discovered* data forms

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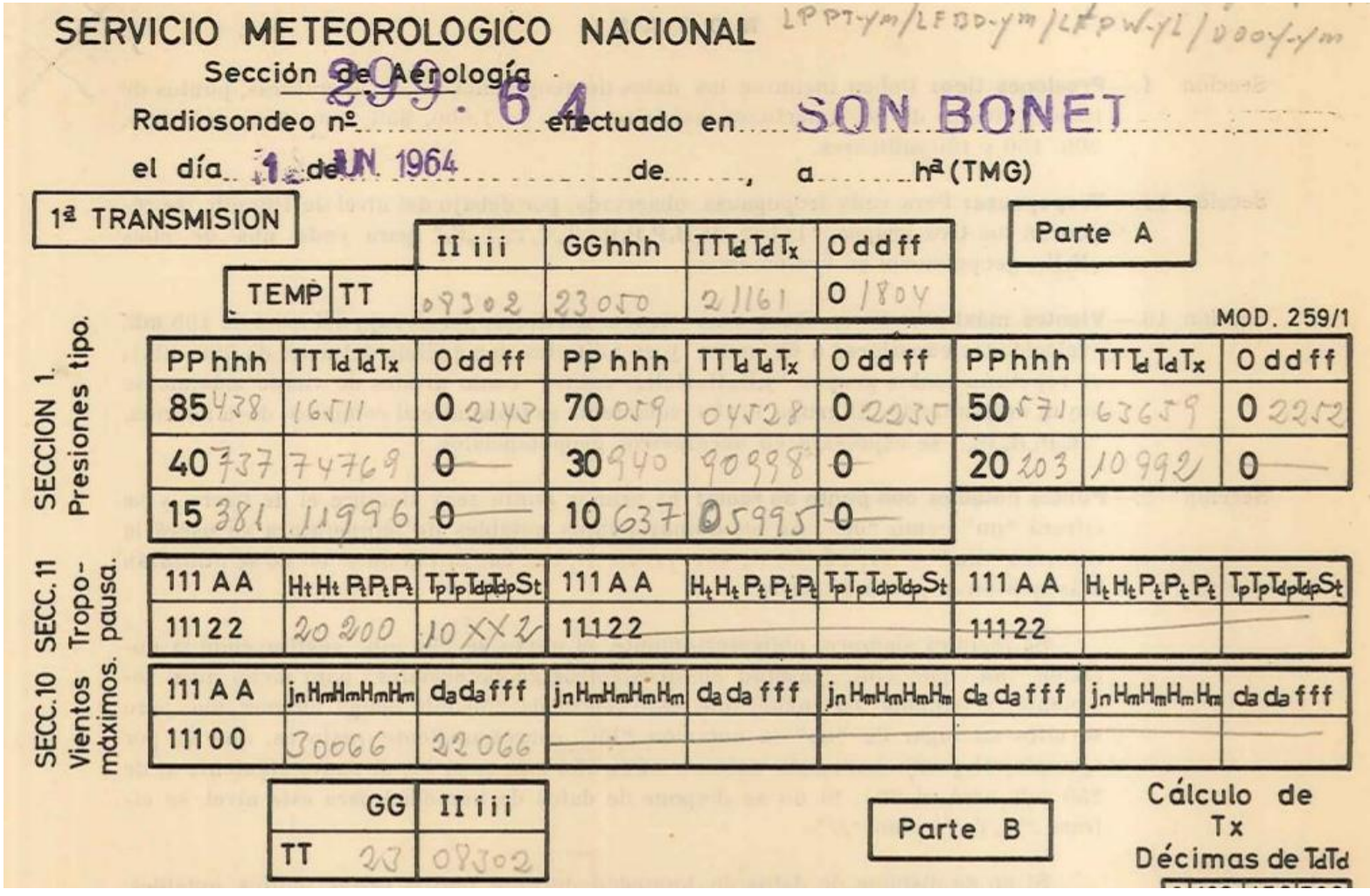

SERVICIO METEOROLOGICO NACIONAL

Sección de Aerología

Radiosondeo nº 299. 64 efectuado en SON BONET

el día 1 de JN 1964 de , a hª (TMG)

1ª TRANSMISION

Parte A

		II iii	GGhhh	TTTdTdTx	Oddff
TEMP	TT	09302	23050	21161	0 1804

MOD. 259/1

SECCION 1. Presiones tipo.

PPhhh	TTTdTdTx	Oddff	PPhhh	TTTdTdTx	Oddff	PPhhh	TTTdTdTx	Oddff
85 428	16511	0 2142	70 059	04528	0 2235	50 571	63659	0 2252
40 737	74769	0	30 940	90998	0	20 203	10992	0
15 381	11996	0	10 637	05995	0			

SECC.11 Tropopausa.

111 AA	HtHtPtPtPt	TpTpTdpTdpSt	111 AA	HtHtPtPtPt	TpTpTdpTdpSt	111 AA	HtHtPtPtPt	TpTpTdpTdpSt
11122	20200	10XX2	11122			11122		

SECC.10 Vientos máximos.

111 AA	jnHmHmHmHm	dadafff	jnHmHmHmHm	dadafff	jnHmHmHmHm	dadafff	jnHmHmHmHm	dadafff
11100	30066	22066						

	GG	II iii
TT	23	09302

Parte B

Cálculo de Tx
Décimas de TdTd

Scan of a radiosonde TEMP report

Data Rescue pending tasks

- Cataloging all data documents
- Imaging of all written data documents
- Imaging of all analog recordings
- Digitization of all imaged data

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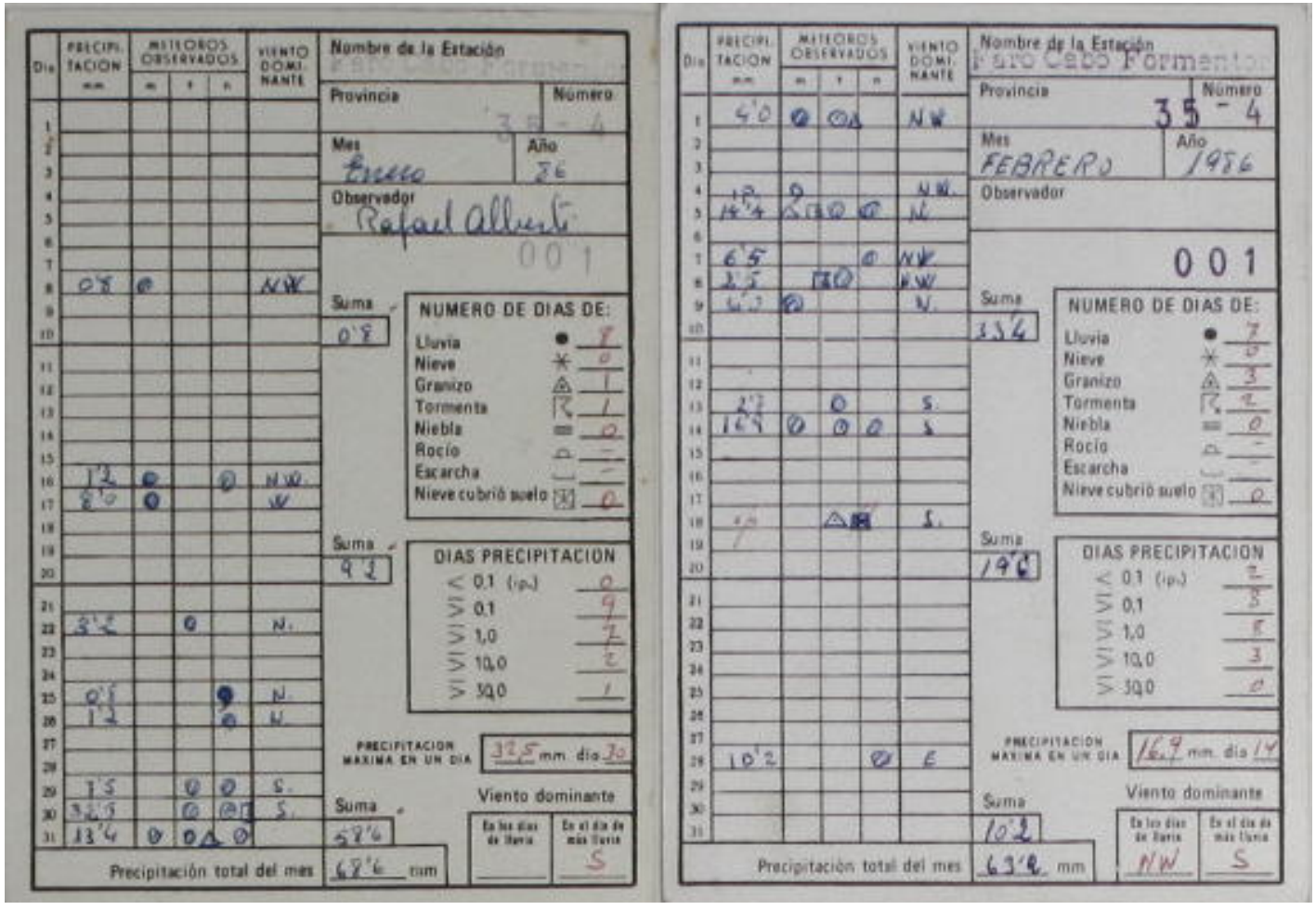
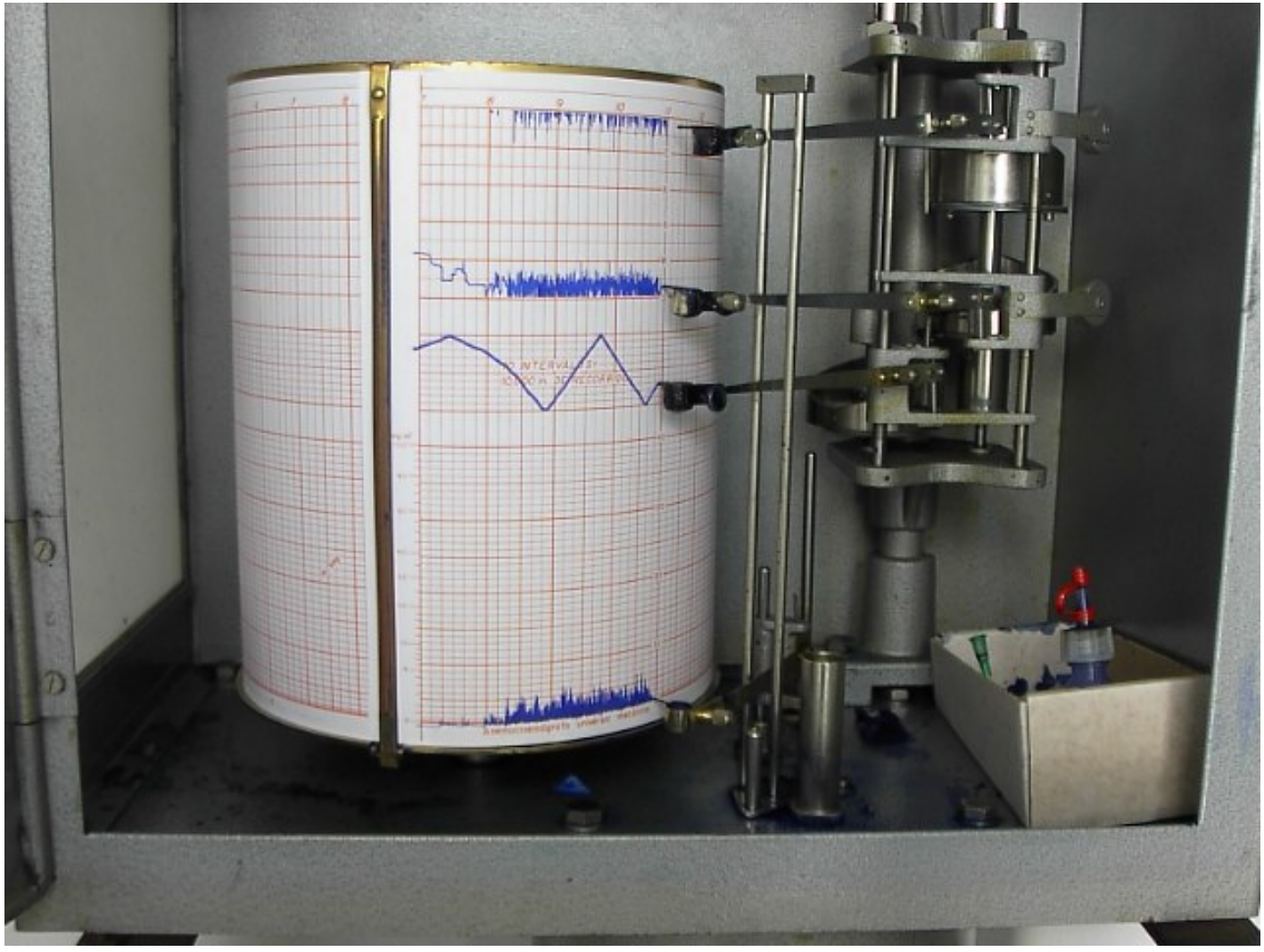


Color photograph of a precipitation postcard

Chickpea size hailstone report on a precipitation postcard



FUESS anemo-cinemograph

Problems and prospects

- Lack of human resources (chronic in climatology area)
- Little appreciation of Data Rescue importance
- $\Rightarrow$ Advocating for it!
- WFCS providing a favorable background
- Agreements with Geography Faculties, etc, can be an invaluable help

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