



The Payerne Meteolabor Radiosonde

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Temperature:

Humidity:

Altitude/Pressure:

Wind Speed/Dir.:

Thermocouple

Rotronic HC2 capacitive

GPS (Hypsometer)

GPS

**Rotronic HC2
capacitive sensor**

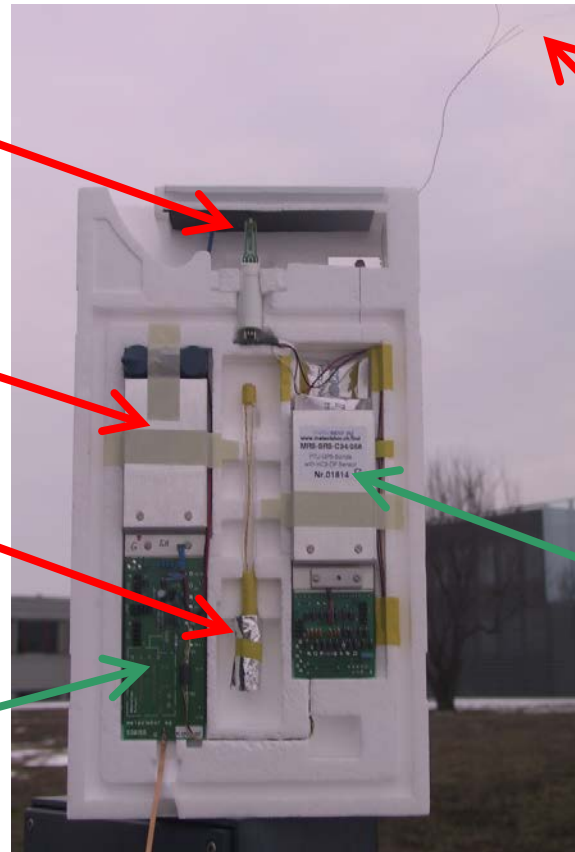
GPS

**Water
Hypsometer**

**Transmitter
400 Mhz**

**Thermocouple
(Copper - Constantan)
(wire ø 0.05 mm)**

**Electronique
Interface
Telemetry**





- The new Meteolabor radiosonde SRS-C50 will be smaller and lighter
- SRS-C50 will be compatible with the SRS-C34 ground station
- SRS-C50 will use the present Meteolabor software
- SRS-C50 will use the same sensors except for the humidity sensor
- SRS-C50 will be compatible with ECC-Ozone, SnowWhite, COBALD
- SRS-C50 will also be used for radiation profiles through the atmosphere



Steps towards GRUAN certification:

- **Develop a GRUAN product data file for the SRS Radiosonde in collaboration with Lead Center, Sep 2014**
- **GRUAN certification on Vaisala RS92 soundings, Feb 2015**
- **Weekly GRUAN multi-soundings with SRS-C34 + RS92 + RS41**
- **New Meteolabor SRS-C50 radiosonde in operation in 2016**
- **GRUAN certification on Meteolabor sonde product end of 2016**



Biweekly Daytime **UT 12:00 (Tuesday or Thursday)**

Multi-sounding:

- Meteolabor SRS-C34 (operational) submitted to GRUAN
- Vaisala RS92 (DigiCORA MW31) submitted to GRUAN
- Vaisala RS41

Biweekly Nighttime **UT 00:00 (Tuesday or Wednesday or Thursday)**

Multi-sounding:

- Meteolabor SRS-C34 (operational) submitted to GRUAN
- Vaisala RS92 (DigiCORA MW31) submitted to GRUAN
- Vaisala RS41
- Meteolabor SnowWhite dew/frost point hygrometer

Daily Operational SRS-C34 at UTC 00:00 and 12:00



Payerne GRUAN Product Data File

SRS-C34

PAY_GRUAN_001_20150213.12.csv

Station Name	Payerne
Station Longitude(°)	6.94368
Station Latitude(°)	46.813018
Station Altitude(m)	491
Sonde Start Date/Time	2015-02-13T11:00:19Z
Sonde Type	SRS_C34
Sonde Number	4231
Sonde Identifier	56
Sonde Transmission Freq (MHz)	403.5
Software Version	X-ASMS Brass V1.7.2
Software Config	SRS-C34-56, 14.08.2013
Software Product Version	1
Surface Pressure (hPa)	962
Surface Temperature (°C)	0.3
Surface Humidity (%)	90.9
Surface Dewpoint (°C)	-1
Surface Wind Vel (m/s)	0.9
Surface Wind Dir (°)	322
Surface Ozone (nbar)	11
Surface Cloud Observation	20936
Ground Check T Ref (°C)	24.44
Ground Check T Sonde (°C)	24.06
Ground Check RH Ref (%)	24.91
Ground Check RH Sonde (%)	23.93
SW Ice on Mirror (°C)	-99.99
ECC Serial Number	7808
ECC Background Current ib1 (uA)	0.01
ECC Background Current ib2 (uA)	0.03
ECC Pump Performance (s/100ml)	26.9
IWV (mm)	10.657
Isotherm Zero Degree (m)	1793
Tropopause Height (m)	10702.23
Tropopause Temperature (°C)	-61.71
Tropopause Pressure (hPa)	231.01
Remark	
Modified Date/Time	2015-02-16T19:31:58Z
Sounding Data	

Header with basic information

Location + Time

Radiosonde + Software

Weather Conditions

Ground Check

Ozone Sensor

Tropopause Information

Final calculated values

Uncertainties

Raw data

Rel_Time	ALT_geop (m)	P (hPa)	T (°C)	RH (%)	W Dir (°)	W Vel (m/s)	O3 (nbar)	RH SW (%)	U ALT (m)	U P (hPa)	U T (°C)	U RH (%)	U W Dir (°)	U W Vel (m/s)	U O3 (nbar)	U RH SW (%)	DP (°C)	DP_SW (°C)	Level_flag	LAT (°)	LON (°)	ALT_gps (m)	CR (m/s)
0	491.02	962	0.3	90.9	322	0.9	11		5.156	0.53	0.415	5.376	6.705	0.216	2.655		-1		1	46.81343	6.943978	497	2.51
1	500.22	961	-0.72	100	9.99	0.67	3.53		4.121	0.408	0.269	4.603	6.219	0.204	1.308		-0.71		0	46.81342	6.943978	500.2	3.06
2	503.82	960.57	-0.75	100	355.69	0.68	3.44		4.01	0.397	0.205	4.315	3.031	0.2	0.087		-0.75		0	46.81341	6.943977	503.8	3.6
3	509.02	959.94	-0.79	100	338.26	0.76	3.27		4	0.395	0.205	4.318	3.012	0.201	0.122		-0.79		0	46.8134	6.943972	509	4.1
4	514.42	959.29	-0.82	100	323.5	0.93	3.61		4	0.395	0.205	4.322	3.003	0.2	0.09		-0.82		0	46.81339	6.943965	514.4	4.5
5	519.92	958.63	-0.87	99.63	313.84	1.17	3.96		4	0.395	0.205	4.477	3	0.2	0.21		-0.92		6	46.81338	6.94396	519.9	4.72
6	525.52	957.96	-0.92	92.71	307.92	1.43	3.26		4	0.395	0.205	4.328	3	0.2	0.082		-1.98		0	46.81337	6.943958	525.5	4.78
7	530.82	957.33	-0.97	85.78	304	1.69	2.57		4	0.395	0.205	4.379	3.001	0.2	0.387		-3.04		0	46.81337	6.943968	530.8	4.92
8	535.92	956.71	-1.03	82.47	300.93	1.93	4.04		4.001	0.395	0.205	4.335	3.002	0.2	0.282		-3.64		0	46.81336	6.94399	535.9	4.85
9	540.42	956.18	-1.09	79.16	298.16	2.14	4.02		4.002	0.395	0.205	4.366	3.004	0.2	0.101		-4.23		0	46.81336	6.944023	540.4	4.76
10	544.22	955.72	-1.14	78.64	295.46	2.29	4.01		4	0.395	0.205	4.357	3.002	0.2	0.146		-4.36		2	46.81336	6.944067	544.2	4.61
11	548.02	955.26	-1.19	80.3	292.77	2.38	4.6		4.006	0.396	0.206	4.343	3.003	0.201	0.115		-4.09		0	46.81335	6.944115	548	4.5
12	553.02	954.67	-1.15	81.96	290.07	2.38	5.2		4.001	0.395	0.205	4.352	3.002	0.201	0.388		-3.83		0	46.81333	6.944162	553	4.43
13	557.52	954.13	-1.12	84.95	287.25	2.28	3.73		4	0.395	0.206	4.348	3	0.2	0.372		-3.38		0	46.81331	6.944203	557.5	4.43
14	562.02	953.59	-1.2	87.95	284.07	2.11	4.3		4.001	0.395	0.205	4.351	3	0.2	0.108		-2.93		0	46.81329	6.944242	562	4.5
15	566.02	953.11	-1.28	90.72	280.01	1.88	4.86		4.001	0.395	0.205	4.357	3	0.2	0.188		-2.6		0	46.81328	6.944277	566	4.68
16	570.52	952.57	-1.37	92.5	274.28	1.63	4.61		4	0.395	0.206	4.357	3	0.2	0.115		-2.39		4	46.81327	6.944308	570.5	4.88
17	575.12	952.02	-1.39	94.28	265.81	1.4	4.35		4.001	0.395	0.205	4.369	3	0.2	0.109		-2.18		0	46.81326	6.944338	575.1	4.92
18	580.21	951.42	-1.4	94.46	253.86	1.23	4.09		4	0.395	0.206	4.363	3	0.201	0.102		-2.18		0	46.81327	6.944362	580.2	4.99
19	585.41	950.8	-1.44	94.65	239.44	1.17	3.82		4.001	0.395	0.205	4.371	3.001	0.201	0.11		-2.18		0	46.81328	6.944373	585.4	5.04
20	591.01	950.13	-1.48	93.65	225.62	1.22	3.86		4	0.394	0.206	4.374	3.005	0.201	0.097		-2.37		2	46.8133	6.944372	591	5.09



- **The GRUAN Product Data File for SRS-C34 was developed with the help of the GRUAN Lead Center (Michael Sommer)**
- **All GRUAN product data values and all uncertainties are calculated by MeteoSwiss**
- **GRUAN Data files and all metadata are submitted with the GRUAN RsLaunchClient to the Lead Center since Sep 2014**
- **Future corrections that need to be made to the Payerne GRUAN product data values will be made by MeteoSwiss**



- Daily operational SRS-C34 soundings at UTC 00:00 and 12:00 are submitted in NRT to the GTS and weekly as GRUAN products
- Weekly multi-soundings with SRS-C34, RS92 and RS41 sondes are made during 2015 and submitted to the Lead Center
- The Payerne GRUAN station was certified in February 2015 on the basis of the weekly Vaisala RS92 soundings
- A new Meteolabor SRS radiosonde will be operational in 2016 and submitted in NRT and weekly as improved GRUAN product
- Change management between the old and the new Meteolabor sonde will be made during the weekly multi-soundings
- End of 2016 Payerne should become GRUAN certified for their new Meteolabor GRUAN sonde data product.

Thank you for your attention !