Response to Reviewer's comments:

I commend this work that has developed an automated procedure to transcribe and digitise tabular meteorological observations, particularly in data sparse regions where weather data are currently stored in archives. If manually done, this is an enormously onerous and thankless task so an automated procedure, such as the one presented here, is an invaluable tool in the data rescue endeavour.

Technically, each progressive step of the MeteoSaver v1.0 package is logical, building on the previous step and in each step the quality control checks are thorough and account for errors in the transcription as well as common errors found in recorded station data.

The quality control checks of the resultant transcribed data are those generally used to assess the quality of temperature data. This seems to be by design and is understandable as temperature is a relatively homogeneous variable to test the automatic transcription methodology and quality control procedures on.

However, in the title of the paper and elsewhere in the manuscript the phrase "Weather data" is used, which implicitly includes rainfall (and other data). In lines 444 - 449 the authors mention variables other than temperature but I note rainfall is missing in this list. I would suggest rainfall is an extremely important variable to transcribe, particularly in currently data-sparse regions, given the large observational uncertainties in these regions as described in the Introduction. The observation data sheets presented in the paper include rainfall so I would like to understand why it does not seem to be a variable being considered for transcription.

I would therefore be grateful for the authors to include a paragraph or two about why rainfall is not considered in the paper, and if lines 444 - 449 are an indication of the variables to be considered in later versions of the software, why rainfall does not feature. I'm not asking the authors to present rainfall in the paper as has been done for temperature, only an explanation of why (it may be more complex a task).

While I do realise this is Version 1 of the software, I also recognise the enormous potential it presents to reduce the huge uncertainties in rainfall variability and trend in data sparse regions, particularly in Africa.

Lastly, given the focus on temperature, perhaps constrain the title of the paper to temperature.

My congratulations and thanks again to the authors for developing this valuable tool that will make it easier to transcribe paper-based weather data for use in digital observational datasets. It has the potential to reduce observational uncertainties in currently data sparse areas, including the DRC.

We thank the reviewer for their time and positive assessment of the software, and valuable suggestions to improve the manuscript. We fully agree that precipitation is an important variable

to transcribe, particularly in data-scarce regions such as the Central Africa where observational coverage is limited.

MeteoSaver is designed to transcribe multiple meteorological variables recorded in tabular sheets, including but not limited to precipitation, evaporation, vapor pressure and humidity, in addition to temperature. Daily precipitation observations in our sheets are therefore transcribed within our framework as well. However, in the first version of the manuscript, the evaluation focused primarily on temperature variables (daily maximum, minimum, and average temperatures). This choice was made because temperature allows the illustration of a broader set of QA/QC procedures available in the sheets, including pentad totals and averages, logical consistency checks (e.g., Tmin < Tavg < Tmax), diurnal temperature range checks, and threshold tests. These checks provide a comprehensive demonstration of the QA/QC framework implemented in MeteoSaver.

In contrast, precipitation values presented in the sample sheets include only one QA/QC check: the pentad total, which serves as a constraint for identifying and correcting erroneously transcribed daily precipitation values. As a result, fewer daily precipitation values can be confirmed through the QA/QC framework compared with daily temperature values (Fig. 12 and Appendix Fig. B1).

To better illustrate MeteoSaver's capability to handle precipitation data, we have now incorporated a precipitation pentad consistency check within the QA/QC module in MeteoSaver v1.0 and in the revised manuscript.

We have clarified this point in the revised manuscript in Sect 3.5, 5.3 and 5.4, where we now illustrate the pentad (multi-day) QA/QC check on transcribed precipitation and clarify that the current demonstration focuses on temperature and precipitation variables.

Because MeteoSaver is designed as a modular and configurable framework, the same transcription pipeline can be applied to a wide range of other meteorological variables recorded in historical observation sheets. The focus on temperature in the first evaluation reflects the availability of multiple internal consistency checks in the observation sheets rather than a limitation of the software itself.

Below, we illustrate modifications to the manuscript to accommodate the reviewers' comments. We believe that the manuscript has benefited from these modifications, and that the original title is appropriate now that these modifications have been implemented. The following convention is used in this document to illustrate the text modifications in the original manuscript: modified text and figure captions.

Section 3.5 Module 5: Quality Assessment and Quality Control

In the second check, daily temperature values are tested to ensure they fall within the set maximum and minimum thresholds and are flagged if they do not (see Fig. 11 c-d, with flagged values in d shown in dark red). If a daily temperature value exceeds the maximum threshold and is also greater than 100, a specific adjustment is applied by dividing the value by 10. For values within the thresholds, the multi-day (here, pentad) totals and averages for Tmax, Tmin, and Tavg are calculated and compared with the transcribed multi-day totals and averages. Similarly, the multi-day totals for daily precipitation values (P) are calculated and compared with the transcribed multi-day totals. If the transcribed values match (or are within the set uncertainty margin of) the calculated totals or averages, both the multi-day values and their respective daily values are flagged as confirmed or not confirmed accordingly (see Fig. 11 c-d, with unconfirmed pentad total and average values in d shown in grey).

Figure 12.

No de la pentade	Date	Bellani (gr. Cal/cm2) 6-6h	Max.	Min.	(M+m)/2	Ampl.	Min. gazon	Abri.	Ext.	Pluies en mm. 6-6h	T	T'a	e.	U	Δe	T	T'a	e.	U	Δe	T	T'a	e.	U	Δe	Date
1	186.2		28.8	19.8	24.3	87.8	18.2	1.7	9.9	0	20.2	20.1	83.4	99	0.2	28.7	24.1	0.8	168.9	12.2	25.2	22.8	26.2	811.8	0.8	1
2	403.5		32.6	18.2	25.4	14.4	16.8	32.5	5.5	0	18.9	18.8	28.6	99	0.2	32.6	25.4	27.8	156.6	21.2	27.2	24	27.8	77	8.2	2
3	422.3		34.2	18.8	26.5	15.4	17.2	11.6	7.2	0	20	20	23.3	100	0	32.7	25.7	28.6	55.2	20.7	28.7	23.7	26.1	66.4	4.1	3
4	4335.1		34.7	19.3	27	15.4	18.2	43.3	1.9	0	20.1	20.1	35.1	100	0	34.2	25.5	27.1	50.6	26.5	29.5	24.4	27.3	66.2	13.8	4
5	299		34.41	20.8	27.6	14	119	2	0.4	30.9	21	20.6	40.9	96.5	10.8	21.4	21.2	25.1	98	10.4	22.2	21.9	26.1	97.4	0.6	5
Tot.	1783.5		164.8	96.9	130.8	67.9	89.4	16.5	27.5	30.9	100.2	99.6	115.8	1894.5	11.2	149.6	121.9	135.7	229.9	81	132.8	116.8	133.5	388.8		Tot.
Moy.	356.7		33	19.4	26.2	13.6	17.9	3.3	5.5		20	19.9	23.2	98.9	10.2	29.9	24.4	27.1	66	16.2	26.6	23.4	26.7	77.8	41.6	Moy.
6	265.6		30	19.8	24.9	10.3	18.2	86.6	82.8	0	21.2	20.9	124.5	92.3	0.6	29.9	25.5	29.8	70.6	12.4	27.1	24.9	30.1	84	8.3	6
7	347.1		31.8	22.6	27.2	9.2	21.2	2.7	44.6	10	23.3	23	27.9	97.5	0.5	31.8	24.9	27.1	57.8	19.8	27.9	24.6	28.8	76.7	5.7	7
8	1428.6		32.8	20.4	26.6	12.4	19.9	3.3	16	0	22.1	21.9	26.1	98	10.4	32.6	24.6	25.8	52.7	23.3	28	24.8	29.3	77.6	8.7	8
9	190.3		30.7	21.9	26.3	8.8	20.3	1.5	52.1	11.1	22.4	22.1	26.2	97.3	10.7	82.4	21.1	24.2	89	2.9	22	21.6	25.5	96	8.5	9
10	359.6		32.5	20.9	26.7	11.7	419.6	2.4	3.9	25.9	21.6	21.6	25.8	180	0	32	25.8	89.2	61.7	18.2	28.7	24.8	28.8	73.1	0.9	10
Tot.	1591.2		157.9	105.5	131.7	52.4	99.2	11.5	19.4		109.5	130.7	490.1	9.2		148.7	121.9	136.1	331.8	76.6	133.7	120.7	142.5	407.4		Tot.
Moy.	318.2		31.5	21	26.4	10.5	19.8	2.3	3.9	36.8	10.6	21.9	26.1	98	10.4	29.7	24.4	72.2	66.4	15.3	26.7	94.1	28.5	81.5	6.9	Moy.
11	368		32.1	21.2	26.7	10.9	20.4	2.5	14.3		22.1	21.1	24.8	92.3	0.6	32.1	25.2	27.7	58	20	28.5	24.4	27.9	71.7	1.1	11
12	265.6		30.4	22.2	26.3	8.2	21.4	1.6	2.8	10.4	21.4	22	26.3	97.6	0.6	29.9	26	31.1	73.7	11	24.3	22.9	21.4	22	3.3	12
13	365.9		31.4	21.5	26.5	9.9	20.6	2.5	14.5	11.2	22.3	21.4	25.4	98	0.4	30.7	24.8	27.5	62.3	16.6	27.3	23.8	27.2	22	9.1	13
14	340.8		30.7	21.2	25.9	9.5	19.6	1.8	3.4	10	21.6	21.5	25.6	99	0.2	30.6	26.2	31.2	71.2	12.6	27.8	24.6	28.9	772.3	8.4	14
15	399.3		32.9	21.1	27	11.8	19.8	2.5	4.3	0	21.6	21	24.7	92.5	0.4	32.4	25.9	89.3	60.5	19.2	26.5	24.6	29.7	86	4.9	15
Tot.	1739.6		157.5	107.2	132.4	50.3		10.9	19.3	7.7	7.7	21	91.1	1408.1		155.7	128.1	1146.8	395.7	792.4	134.4	120.3	1408.1	3940.4	8.7	Tot.
Moy.	343.9		31.5	21.4	26.5	10.1	1.8	2.2	3.9	19.3	8.2	7	26.8	97.9	10.4	31.1	85.6	29.4	65.1	15.9	26.9	24.1	22.2	79.8	7.3	Moy.
16	106.7		26.3	20.6	23.5	5.7	20.4	2.2	0.8	0.2	21.6	21.4	25.6	97.9	0.7	26.2	146.1	28.7	84.4	5.3	244.1	24.1	26.8	79.8	7.3	16
17	90		25.1	21	23.1	14.1	20.2	0.5	0.8	0.2	24.4	924	26.8	1297	0	24.3	23.3	28	92	2.4	23.8	22.8	27.1	87.7	3.8	17
18	322		30.5	20.6	25.5	9.9	19.2	0.9	3.4	0	24.4	20.5	22.8	100	10.4	28.8	24.9	89	73.2	10.5	26.9	22.8	29	91.8	2.4	18
19	2990.7		31.8	20.5	26.1	11.3	19.1	1.9	3.8	0	20.9	20.6	24	4.9	0.8	31.2	24.8	27.2	60.2	18.1	28.6	24.4	28.4	81.8	6.4	19
20	3468.1		31.5	20.5	26	11	18.9	2.2	2.6	8.4	28.1	20.6	24.1	195.3	1.1	25.3	23.6	28	27	14.2	22.4	24.6	36.1	72.6	0.7	20
Tot.	1056.2		145.2	103.2	124.2	42	119.2	1.6	111	38.8	106.5	1159.2	23.9	487.6	2.8	1185.8	120.7	140.9	396.8	14.2	126.1	21.3	135.8	90.8	2.5	Tot.
Moy.	211.2		29	20.6	24.8	8.4	96.6	7.1	2.2	38.8	21.3	21	23.9	97.5	0.6	27.2	24.1	28.2	79.4	8.9	25.2	15.9	27.2	4.2	5.8	Moy.
21	384.7		31.1	19.3	25.2	11.8	19.3	11.4	14.6	0	20.1	20.1	24.8	100	0	31.1	24.9	22.5	61	17.5	97.4	23.2	27.2	24.9	5.2	21
22	213.3		29.2	19.6	24.4	9.6	18	8.3	51.6	14.8	21.5	21.4	23.5	99	0.2	28.9	84.6	982.1	70.9	11.5	25.6	23.8	28.3	74.6	9.3	22
23	311.6		31.9	21.5	26.7	10.5	18.8	8.3	3.5	0.2	21.8	21.7	25.4	1199	0.2	20.5	25.8	30.2	69.4	13.3	27.3	138248.4	29.7	262.1	4.5	23
24	353.4		31	20.7	25.9	10.3	20.2	12.4	4	10	21.6	21.3	25.9	97.8	0.7	31.1	26.9	27.5	61.3	17.4	27.8	46.6	28.9	82	6.5	24
25	430.7		32.1	20.9	26.5	11.2	19.8	2.4	14.4	30.6	41	20.7	25.1	972.5	10.6	32.1	26	29.7	62.2	18	28.7	24.6	28.3	79.4	8.4	25
Tot.	1693.7		155.4	102	128.7	53.4	96.5	10.1	0.4	35.6	106	1015.9	24.2	1192.7	1.7	153.7	126.2	1143.1	324.8	77.7	136.8	121.6	7.2	72	1.1	Tot.
Moy.	338.7		31	20.4	25.7	10.6	19.3	2	18.1	35.6	21.2	21	28.1	98.5	0.3	20.7	25.2	28.6	65	15.5	87.4	24.3	28.5	98.2	1.9	Moy.
26	332.5		31.9	20.2	26.1	11.7	19.3	1.7	3.6	0.6	28	20.9	14.8	99	0.2	71.9	86	89.8	63.2	17.3	24.7	23.2	27.6	78.4	38.6	26
27	453.7		32.9	18.8	25.9	14.1	18.2	12.7	3	0	19.8	19.6	46.8	97.8	0.5	32.8	26	29.3	59.2	20.2	27.8	23.8	26.9	98.2	10.4	27
28	265.6		31.6	19.6	25.6	12	18	11.2	5	43.4	19.9	19.8	28.6	99	0.2	22.3	21.4	24.9	92.3	2	28.1	23.4	28	22	8.9	28
29	236.3		31.6	20.3	25.9	11.3	20	0.7	1.6	28.7	21.9	21.8	83	199	0.2	24.1	23.8	89.3	97.7	0.7	85.9	23.5	28.2	90.6	8.9	29
30	372.2		30	21.3	25.6	8.7	19.8	2	1.5	10	21.6	21.5	95.6	99	0.2	29.1	25.5	30.4	75.6	9.8	27.8	84.7	9.1	78	9.2	30
31	365.9		32.6	21.3	26.9	11.3	19.4	1.9	3.6	0	22.3	32.3	26.9	100	80	22.6	26.4	30.4	62	18.6	88.5	26.3	22.8	84.4	6	31
Tot.	20.8		190.6	121.6	156.1	69.1	427.4	1.9	18.8	0	22.3	1825.9	26.9	5983.8	1.3	172.8	29.7	0.7	5	25.8	5.8	144.9	77.5	503.7	8	Tot.
Moy.	237.6		31.7	20.2	25.9	11.5	19.1	1.7	3.1		21.1	21	84.8	99	0.2	28.8	21.8	29	75	11.4	26.3	14.1	28.7	23.9	5.7	Moy.

Figure 12. Post-quality controlled table using MeteoSaver, showing confirmed values of daily maximum, minimum and average temperature, diurnal temperature range, and daily precipitation (highlighted in green) for the weather sheet shown in Fig. 1. The description of the colors in the post-quality controlled table is given in Fig. 10.

Figure B1.

No de la pentade	Date	Bellani (gr. Cal/cm2) 6-6h	Max.	Min.	(M+m)/2	Ampl.	Min. gazon	Abri.	Ext.	Pluies en mm. 6-6h	T	T'a	e.	U	Δe	T	T'a	e.	U	Δe	T	T'a	e.	U	Δe	Date
1	351.3		33.5	22.7	28.1	10.8	21	2.6	4.4	0	23	22.7	27.4	98	0.7	33	25.6	28.1	156.1	22	28.6	24.9	29.1	74.3	2.1	1
2	278.1		31.1	20.8	25.9	10.3	19.6	1.6	3.1	1.9	21.6	20.4	25.4	92	0.4	26	23	26.2	78	7.4	22	21.1	24.4	92	2.1	2
3	368		31.4	21.1	26.3	10.3	20.2	2	3.5	0	21.6	21.3	25.1	98.8	0.7	31.4	24.9	27.3	59.6	18.6	28.3	24.8	29	75.4	9.4	3
4	418.2		32.4	21	26.7	11.4	19.4	2.3	2.1	0.1	21.1	20.9	24.6	96.5	0.4	11.9	25.3	28	59.5	19.1	28.7	24.8	28.8	73.2	10.5	4
5	368		33.3	21.8	27.5	11.5	20.6	8.5	5.8	0	22.1	21.7	25.7	812.1	0.9	33.3	25.6	27.9	54.8	23	28.1	24.4	28.2	74.2	9.8	5
Tot.	1783.6		161.7	107.4	134.5	54.3	1.8	3.1	20.9	2	109.4	2.2	0.3	97.4	3.1	155.6	44.4	31.6	308 10	90.1	135.7	80.1	29.5	389.1	41.8	Tot.
Moy.	356.7		32.3	21.5	26.9	10.8	20.2	2.4	4.2		21.9	21.6	25.6	1.1	0.6	31.1	24.9	27.5	61.6	18	27.1	24	27.9	77.8	8.4	Moy.
6	420.3		33.13	19.2	26.6	13.8	88.7	4.1	7	0	20.6	20.5	24.8	99	0.2	933.2	25.8	28.5	56.3	22.1	29.5	25.1	29	10.4	12.2	6
7	418.2		32.8	20.2	26.5	12.6	18.6	0.3	5	4.8	20.4	20.1	23.3	210.4	0.7	32.8	25.8	28.7	158	20.8	29.6	25.6	30.3	73.2	11.1	7
8	230.1		29.1	20.8	24.9	8.3	19.6	11.2	2.9	11.6	21.3	21	24.7	97	10.7	29.1	24.3	27.3	67.9	13	26.4	23.8	27.8	80.8	6.6	8
9	121.4		27.6	19.5	23.5	8.1	17.8	0.8	11.6	0	21.1	20.9	24.6	98	0.4	27.3	24.2	28.2	77.8	8.1	26	24	28.6	85.1	5	9
10	340.8		31.4	19.3	25.3	12.1	17.4	20.5	4	0	19.5	19.4	22.4	99	0.2	30	25.6	30	71	12.3	25	21.9	24.3	76.6	3.4	10
Tot.	5304.1		154	99	126.8	54.5	92.1	14.6	19.7	16.4	28.9	1.9	9.7	490	2.2	152.4	85.8	0.4	331	176.3	136.5	1.4	41	386.1	4.2	Tot.
Moy.	306.2		30.8	19.9	25.4	10.9	18.4	2.3	51.9	1.4	20.6	20.4	23.8	98	1.4	30.5	25.1	28.5	66.8	15.3	41.3	6.4	22.9	11.8	8.5	Moy.
11	332.5		32.2	19.2	25.7	13	17.2	2.4	4.1	0	19.7	19.4	22.3	41	10.7	32.2	25.3	27.8	58	20.1	28.3	25.1	29.8	21.6	8.6	11
12	326.2		32.1	20.4	26.4	11.7	18.8	0.6	3.6	4.2	20.9	20.7	22.8	98	10.4	21.7	25.3	28.2	60.5	18.4	25.7	24.2	29.2	88.5	3.8	12
13	299		29.7	19.7	24.7	10	88.4	1.8	3.5	2.2	19.8	19.7	21.8	99	0.2	27.9	23.8	26.9	71.6	10.6	25.9	22.8	26.3	83	51.4	13
14	357.5		30.2	18.1	24.1	12.1	6.4	2.2	3.8	0	18.9	18.9	22.1	100	0	30.1	24.4	26.9	63.1	15.7	463.1	24.2	28.8	84.1	5.4	14
15	294.9		31.8	19.1	24.6	12.8	17.4	1.9	3.5	0.1	19.1	19.1	1.3	100	0	31	25.8		83.4	5	24	22.6	26.5	88.8	3.3	15
Tot.	1610.1		156	96.5	125.5	59.8	88.2	10.4	18.4	6.5	98.4	972.8	122.7	494	1.3	1252.9	1911.6	3941.1	320	79.6	1899.3	18.9	405.6	422	26.5	Tot.
Moy.	322		31.2	19.3	25.1	11.9	17.6	2.1			117	1.7	2.6	0.4	1.6		24.9	1.6	0.4	0.4	0.4	0.4		84.4	5.5	Moy.
16	177.8		30.1	1.9	44.1	10.3	4.6		41.3	31.6	20	19.8	22.9	98		22.9		26.1	93.6	15.2	20.5	21	24.5	95.2	1.1	16
17	345		31.7	20.5	26.1	11.2	18.6	2.4	4.4	0	20.6	20.4	23.8	98	10.4	31.4	24.8	25.3	55.2	20.6	27.2	23.6	16.2	74.3	9.2	17
18	418.2		32.9	19.2	86.1	18.7	17.6	3.1	15.2	10	19.6	19.5	22.6	99	0.2	32.9	24.9	26.4	53	23.4	29.3	25.5	30.2	74.2	1	18
19	282.3		32.6	19.8	26.2	12.8	18.4	1.9	3.2	0	220.1	19.9	23.1	98	0.4	29.7	25.1	28.9	69.4	12.7	24.4	22.6	26.3	86	4.3	19
20	140.2		29.1	20.2	24.8	18.9	19	1.1	2	68.4	21.9	21.5	25.4	96.5	0.9	28.6	24.8	28.8	73.7	10.3	25	22.6	25.9	24.2	5.8	20
Tot.	1363.5		156.4	99	28	56.9	92.2	2.4	17.9	23.7	102.2	10.1	0.7	489.5	2.3	145.5	9	3545.1	344.5	68.8	22.1	53.1	26.7	411.5	30.9	Tot.
Moy.	272.7		31.3	19.9	25.6	1.1	18.4	2	3.4		20.4	71.8	23.6	97.9	0.5	29.1	84.2	27.1	68.9	13.8	25.5	23.1	29.1	82.3	6.2	Moy.
21	263.5		29	20.4	24.7	8.6	19.4	1.3	12.4	3.4	21.6	21.5	25.6	99		29	24.5	27.9	638.2	12.1	27.1	24.5	25.8	81.1	6.7	21
22	44.1		25.2	20.6	22.9	4.6	29	10.5	10.3	4.5	20.8	20.6	24.1	98	0.4	24.2	22.1	85.4	83.4	5	23	22	21.4	948.1	0.3	22
23	3.4		30.6	19.1	24.9	11.5	17.8		3.3	5.1	20.1	20.1	23.5	100	0	30.1	25.6	29.9	70.2	12.6	26.3	21	29.3	62.5	12.8	23
24	284.4		29.5	18.8	24.1	10.7	17.6	1.5	11.8	2.8	19	19	20.9	100	0	28.3	24.8	29	75.4	9.4	66.3	24.4	24.2	85.8	4.9	24
25	117.2		28.6	21.1	24.9	7.5	19	0.6	1	1.3	21.9	21.7	25.8	98	0.4	21.5	20.9	24.3	94.8	1.3	21.4	20.8	2.2	24.2	1.3	25
Tot.	826.4		142.9	100	121.5	42.9	92.8	5.8	9.2	17.9	1203445	44.4	214.9	495	1	133.1	11287.9	27.3	393.6	40.4	124.1	17.7	26	416	5.6	Tot.
Moy.	165.3		28.6	20	24.3	8.6	18.6	1.2	1.8		20.7	20.6	24.2	99	0.2		23.6	29.3	78.7	8.1	84.8	46.5	27.2	83.3	5.6	Moy.
26	332.5		30.7	19.3	25	11.4	18	11.8	545.5		19.5	10.9		99	0.2	30.7	25.3	28.8	65.4	15.2	28	24	27.3	23.4	0.5	26
27	242.6		29.6	20.8	25.2	8.8	19.4	11.8	3.1	0	21	29.2	23.2	98.8	0.5	29.3	24.9	28.7	70.5	12	27.1	24.5	29.1	24.4	6.7	27
28	288.6		30.8	20.3	25.6	10.5	18.6	5	2.4	11.1	21.8	29.2	25.2	100	0	30.9	21.7	27.6	62	17	27.1	24.6	29.3	81.8	6.5	28
29	311.6		30.8	21.1	25.9	19.7	18.6	18.6	3	0	21.2		24.9	99	0.2	24.7	21.7	24	77	7.1	24	22	5.1	84.3	4.6	29
30	7779.7		30.8	21.1	25.9	19.7	18.6	19.6		39.5	21.2		24.9		0.2	24.7			77	7.1	24			392.3	32.3	30
31	290.7				27.4	50.6	934.6	0	14.9	5	3.8			491.8	0.9	2461.2			66						32.3	31
Tot.	290.7		305.1	20.4	155	10.1	934.6	8.3			10.6	24.1	98.4	0.4		29.3	64.5	27.7	68.3	13.2	26.8	23.8	27.6	78.5	7.7	Tot.
Moy.					25.8	10.1	18.7	16.7	3		20.8	0.1		4.1	0.4		0.4	0.4		0.4			1.6			Moy.

Figure B1. Post-quality controlled table using MeteoSaver, showing confirmed values of daily maximum, minimum and average temperature, diurnal temperature range, and daily precipitation (highlighted in green) for the Station Binga in June 1969 (Fig. A1). The description of the colors in the post-quality controlled table is given in Fig. 10.

Section 5.3

While our demonstration focuses exclusively on QA/QC checks for daily temperature and precipitation values, the evaluation of this first version of the software primarily focuses on temperature variables (daily maximum, minimum, and average temperatures). This choice was made because temperature allows the illustration of a broader set of QA/QC procedures available in the sheets, including pentad totals and averages, logical consistency checks (e.g., Tmin < Tavg < Tmax), diurnal temperature range checks, and threshold tests. Together, these checks provide a comprehensive demonstration of the QA/QC framework implemented in MeteoSaver. In contrast, precipitation values presented in the sample sheets include only one QA/QC constraint: the pentad total, which limits the ability to identify and correct erroneously transcribed daily precipitation values. As a result, fewer daily precipitation values can be confirmed through the QA/QC framework compared with daily temperature values (Fig.12 and Appendix Figs. B1-B9).

Nevertheless, future software versions could expand these checks to include additional variables and diagnostics. For instance, in our sheets, the columns under Température et Humidité contain vapor pressure (e) and relative humidity (U) recorded at specific times, which are calculated using the observed dry-bulb temperature (T) and wet-bulb temperature (T'a). This would allow us to incorporate more equations within the QA/QC module to validate an even broader range of transcribed values across the sheets. Therefore, for this initial release, we provide a detailed description of the current QA/QC checks to guide software users and illustrate the framework's flexibility.

Section 5.4

Our study demonstrates the flexibility of MeteoSaver in transcribing historical tabular weather data across a range of handwriting styles, table dimensions, paper sizes, and maintenance conditions, highlighting its potential contribution to ongoing climate data rescue efforts. Throughout our model development, we focused on reusability for similar case studies, equipping MeteoSaver with numerous configurable settings within the configuration module (see sect. 3.1) to allow users to tailor the software for specific table formats. Given this flexibility, MeteoSaver has substantial potential for transcribing millions of rescued archived weather records, such as those available on the C3S Data Rescue Service Portal. It is important to note, however, that in this initial release, users may need to make further adjustments when applying the software to data sheets with complex tabular formats or variables or data types beyond temperature and precipitation, particularly within the QA/QC checks.