Response to Reviewer 1

We would like to thank Dr. Lars Gerlitz for reviewing our manuscript. These comments are really helpful for improving the manuscript. In the following, we address all comments point-by-point according to reviewers' comments. All revisions are highlighted in the context.

The presented manuscript introduces a newly established data set of elevation corrected 6-hourly near surface temperatures at a resolution of 1km for the Tianshan mountains. Temperature lapse rates are derived from free atmospheric ERA-Interim data at various pressure levels and are interpolated to high spatial resolution. The ERA-Interim internal lapse rates are subsequently used to correct the near surface temperatures under consideration of a high resolution DEM. The data set is evaluated against observations (24 meteorological stations are considered) and the general characteristics of the spatial temperature distribution over the target domain are presented. In general the target of the study is timely, since high resolution climate data represent an important input for many climate impact modelling applications. However, in my opinion the evaluation of the data set needs to be improved in order to better communicate its limitations to potential users. Further I would suggest to better investigate the major characteristics of the temperature distribution over the Tienshan mountains and to propose some potential applications.

-Answer: Thanks a lot for the comments. It is true that high resolution data set is extreme needed for the TianShan Mountains, not only temperature but also precipitation and other variables. Dr. Gerlitz pointed out a very important issue on the evaluation and further application. We tried to answer the questions and improve the manuscript. The details are presented in the following context.

In the following I will summarize my major concerns without going into detail:

1. Terminology and Language: The applied methods are presented as a downscaling technique. In the introduction the authors state that important local-scale processes, such as cold-air pooling or snow-melt related processes are not represented by reanalysis products due to their limited spatial resolution. However, the suggested elevation correction technique does not consider such processes and thus should not be termed as a downscaling technique. I suggest to use “elevation adjustment” throughout the manuscript. In general, the language of the manuscript is somehow unprecise or misleading at some points. I suggest including a native speaker.

-Answer: Thanks a lot for the comments. Yes, we corrected the ERA-Interim data using a lapse rate scheme without considering the local-scale processes. Although an elevation correction is a form of downscaling, we agree that the term “elevation correction” is more intuitive than “downscaling” for readers’ better understanding. We revised this term in the revision version. Meanwhile, we asked the Elsevier publishing group (https://webshop.elsevier.com/) for help to correct our terminology and language problems.

2. Data and methods: The introduction of the utilized data sets is very short and some of the applied techniques are not fully clarified. - Which levels are used for the elevation adjustment of a specific pixel? There is some information given on page 5, l. 15, but unfortunately I cannot follow. Maybe it would be helpful to provide a brief example. In general I suggest to describe the elevation correction technique in greater detail! - Which ERA-Interim data are used? I suppose the authors make use of the fully assimilated data set, however p.4,l22 discusses the 10 days forecast. Please clarify. - For the Evaluation 24 records are used. Are these stations independent of the reanalysis, i.e. they are not used for the assimilation? If they are part of the assimilation procedure, the skill of ERA-Interim might be overestimated.

--Answer: Thanks a lot for pointing this out. We agree that the method should be presented in more detail. We added more information on the correction method, especially an example on the internal lapse rate scheme (**P6 L2-11**).

Dr. Gerlitz also raised a very important issue that if some individual sites are assimilated by ECMWF Integrated Forecast System (IFS), the ERA-interim predictions are not fully independent from the observed data which are subsequently used for calibration and validation. We investigated the ECMWF assimilation records and found that 9 of 24 sites were possible assimilated by IFS. Table 1 shows the sites details. The long-term temperature records (1979-2011) from Nos. 6, 8, 18 and 23 were assimilated. Only short-term observations (less than 15 years) from other 5 sites were assimilated. According to the information of the ECMWF, it can be assumed that although 9 of 24 sites were possible assimilated, other 15 sites were not used by ERA-Interim and therefore represent fully independent data set. Furthermore, compared with the assimilated short-term observations, we tested much longer time series. Thus, we believe the skill of ERA-Interim is not affected (**P5 L16-24**).

Table 1 Assimilated sites in ERA-Interim.

ID	Name	WMO id	starting date	ending date
2	Jinghe	51334	1979-06-21	1993-01-21
5	Qitai	51379	1979-06-03	1985-05-20
6	Yining	51431	1978-12-31	2011-12-31
8	Urumqi	51463	1978-12-31	2011-12-31
11	Qijiaojing	51495	1979-04-07	1993-04-24
15	Turfan	51573	1981-06-30	1984-08-08
18	Kuche	51644	1978-12-31	2011-12-31
19	Kuerle	51656	1979-01-03	1994-12-30
23	Hami	52203	1978-12-31	2011-12-31

3. Evaluation: The Evaluation of the data set is done against 24 meteorological stations. There for the modeled temperature is derived by averaging (?) the 3*3 grid cells surrounding each climate station. This approach unfortunately leads to a systematic bias of the modelled temperature data, since the station

elevation does not coincide with the mean elevation of the considered grid cell. Further, the spatial averaging generates a smoothened temperature field, i.e. the data set is actually not evaluated at a 1km resolution, but at 3km. I would highly suggest to improve the evaluation methodology. In order to completely overcome the systematic bias, the lapse rates could be used to adjust the temperature directly to the elevation of the meteorological station (without condsidering the DEM). Therefore the ERA-Interim internal lapse rate of the corresponding pixel could be employed. Most likely this will lead to a better skill. A temperature bias of 3 degree is still a lot and is probably due to the elevation induced systematic bias. - The evaluation correction is conducted for different periods (p. 6, l15). I would suggest compare the period from 1979 to 2013 only. If the quality of the data set is good enough, the data set can still be extended for the remaining years. - The data set includes 6-hourly values; however the evaluation is only conducted for aggregated measures, such as mean, max and min. It is very likely, that the quality of the data set varies in different seasons and different times of the day. E.g. cold air pooling during winter nights might lead to a strong warm bias of the data set, strong diurnal heating during the day may have opposite effects (see e.g. (Gerlitz 2014)). I suggest to test the quality of the data set for different seasons and times of the day independently, in order to communicate the limitations of such an approach to potential users. - Evaluation of lapse rates: Usually the lapse rates in high mountain regions have typical diurnal and seasonal cycles. However, the free air lapse rates might not correspond with lapse rates at the surface. I would like to see a brief evaluation of the lapse rates which are used for the elevation adjustment. Do they correspond with observations? Do they have any spatial variations? The authors e.g. state that the data set slightly improves ERA-Interim data for some locations, particularly for higher temperatures (p8, l6). Does that mean, that winter lapse rates are not well simulated by ERA-Interim? - The section on the evaluation measures of specific stations is lengthy and difficult to follow. The authors mention the number and the performance measures for each station and mention that the approach does not work well for all sites (p8,l23). Would it be possible, to interpret the differences of the model skill with regard to potential local scale processes, those are not captured by your approach? I could imagine that stations in deep valleys react differently compared with stations located at higher elevations. A comprehensive interpretation of the data quality would inform potential users about the strengths and limitations of the data set.

--Answer: Thanks a lot for the comments. Dr. Gerlitz pointed out a very important issue. It is true that the modeled temperature is averaged by the 3*3 grid cells surrounding each station. The systematic bias is negligible since the elevation differences are very tiny (smaller than 2m) among the 9 grids at 1km *1km grid resolution. When the authors evaluated the ERA-Interim temperature over the Tibetan Plateau (Gao et al., 2014), one reviewer suggested to select 3*3 grids with the station located in the center grid. He/she claimed that this way can evaluate the ability of ERA-Interim on different topographies. Thus, in this study we took this suggestion (**P7 L12-15**). This approach may lead to a systematic bias since the station elevation does not coincide with the mean elevation of the considered grid cells perfectly. However, the elevation differences between averaged 9 grids and station elevations are quite small with an average of -8 m (Table 2). Except the No. 9, the rest stations have less than 50 m elevation differences. From this point view, the systematic bias is very small. And the DEM generally matches the station elevations (**P7 L16-21**).

Table 2 Elevation of averaged 9 grids and the elevation differences with station elevation (m).

ID	averaged 9 grids elevation	elevation Difference
1	1305	50
2	306	14
3	477	2

4	467	-26
5	764	30
6	672	-9
7	1885	-34
8	893	25
9	2004	-251
10	1101	3
11	868	5
12	940	-18
13	2462	-4
14	1057	-2
15	11	24
16	1221	8
17	978	-2
18	1066	33
19	937	-5
20	1635	3
21	433	46
22	1814	-85
23	758	-21
24	1548	20
Average		**-8**

Dr. Gerlitz suggested adjusting the temperature directly to the elevation of the meteorological station. For sure, we can correct the temperature for individual sites (selected the closest grid), just like the studies we have done in the Alps and the Tibet Plateau (Gao et al., 2012, 2017). Table 3 shows the RMSEs of the original and corrected ERA-Interim temperature using 9 grids as well as directly using station elevations. The RMSE differences between two approaches are small for all most of the sites (averaged RMSE only 0.05 °C). It is true that the bias is reduced more significant such as Nos. 20 and 24 using the station elevation directly. However, our goal is to produce continuous spatial-temporal data sets based on DEM, which could be easy applied for such hydrology and regional climate models. The surface sites are only used for validate the quality of data set.

Table 3 RMSEs of the original and corrected ERA-Interim temperature using 9 grids as well as directly with station elevations.

ID	original ERA-Interim	corrected based on 9 DEM grids	corrected directly based on station elevations
1	3.61	3.07	2.99
2	3.89	4.32	4.27
3	3.47	2.95	2.94
4	4.23	4.75	4.83
5	2.81	3.01	2.91
6	3.86	2.25	2.27
7	2.58	2.32	2.25
8	4.57	2.61	2.53
9	7.76	4.47	3.30
10	2.35	1.83	1.83
11	3.68	2.82	2.25
12	3.33	2.32	2.32
13	6.65	7.80	7.81
14	3.39	2.27	2.28
15	7.69	3.45	3.45
16	2.61	3.14	3.10
17	2.53	1.53	1.54
18	3.17	1.63	1.66
19	3.39	1.78	1.81
20	3.19	2.32	3.98
21	4.19	2.02	1.99
22	2.49	2.03	1.95
23	2.56	2.00	2.08
24	2.05	1.60	3.16
Average	3.75	2.85	2.90

About the valuation period, we are sorry for the unclear expression. The NSE, RMSE and PDF-based skill score are calculated from the same period 1979 to 2013. Because we want to test how well is the new data set for entire CTM rather than individual sites. Thus we used quantile function which is allowed to test the data in different periods and different time scales. The mean, maximum and minimum values are the basic indicants. In order to investigate the temperature range, different quantiles are used to represent the distribution. We revised this part in a more clear expression (**P7 L9-11**).

We agree that the temperature varies significant in different seasons and different times of the day due to the complex topography. For example, in the winter night, the lapse rate is possible reverse (local inversion) from the bottom of valley to the high mountain due to the ‘cold lake’ (Gerlitz 2014). We added more discussion on this aspect (**Section 4.5 in the revision**). Unfortunately, we did not have sub-day observations to validate. We have used the best we have. In order to identify the limitations for end-users, we tested the seasonal bias using the 24 sites. Table 4 shows the RMSE of seasonal mean temperatures between original ERA-Interim and corrected temperatures for all sites. The RMSE for spring ranges from 0.26 to 4.22 °C with an average of 1.24 °C. The performance for summer and autumn is similar with around 1.4 °C RMSE. Winter has the largest average RMSE (2.96 °C) over the year. Different stations show significant different performances. For example, station No. 13 shows the largest RMSE for winter while smallest RMSE for summer over all sites. Station No. 9 show the opposite performances that summer has the largest RMSE (5.47 °C) while winter has the smallest RMSE (2.32 °C). This further illustrates that the complex terrain of the CTM leads to the complexity and diversity of the climate. The Supplement 1 shows the RMSE between original ERA-Interim and corrected temperatures at 24 sites for 12 months, which could help the potential users check the bias of the data set. However, in general, the warmer season (May to September) is much better than colder months (**P10 L5-15**).

Table 4 RMSEs between the seasonal ERA-Interim and corrected temperatures for the 24 sites.

ID	Spring	Summer	Autumn	Winter
1	1.33	0.67	1.61	3.70
2	1.99	2.63	3.18	5.32
3	0.57	0.66	1.17	4.24
4	1.56	0.89	2.47	7.69
5	1.38	1.79	1.49	4.02
6	0.47	1.63	0.96	1.16

7	0.89	1.42	1.78	0.64
8	0.40	1.88	0.60	3.14
9	4.22	5.47	3.65	2.32
10	0.84	1.62	0.85	0.91
11	1.78	1.28	2.07	3.61
12	1.02	0.78	0.52	1.84
13	3.22	0.42	3.23	12.80
14	0.54	1.00	0.69	2.84
15	2.04	0.95	0.95	2.67
16	0.83	2.76	2.38	3.32
17	0.51	1.20	0.74	0.71
18	1.03	0.85	0.49	0.72
19	1.36	0.71	1.02	0.61
20	1.11	1.65	1.05	1.77
21	0.26	0.58	0.58	1.57
22	0.63	0.62	0.89	2.63
23	0.48	1.70	1.54	1.25
24	1.24	0.71	0.72	1.59
Average	1.24	1.41	1.44	2.96

It is true that the lapse rates are used firstly at month scale. The environmental lapse rate is quite different in the free-air atmosphere. The authors have tested the daily and 3-hourly lapse rates in the German and Swiss Alps. The results showed that in general the ERA-Interim internal lapse rates could capture the variability of observed lapse rates, although the performances were different for different grid cell. According to reviewer’s suggestion, we added the evaluation of the lapse rates between ERA-Interim and observations (Figure 1). In previous studies (Gao et al., 2012, 2017), the observed lapse rate was calculated from 2 or 3 sites within a same ERA-Interim grid. And then, the observed lapse rate was compared with ERA-Interim internal lapse rate. Unfortunately, the sparse stations cannot support to do this calculation. Thus, we investigate the lapse rate based on the temperature and elevation information from all 24 sites using the linear regression approach for 1979 to 2013. Because the sites elevation ranges from 35 to 2458 m, thus for convenience, the ERA-Interim lapse rate was calculated using the temperature and geopotential height at 925 hPa and 700 hPa levels. The geopotential height at these two pressure levels range from around 150 m to 3000 m, which is close to the sites' elevation. Thus, the monthly lapse rate for observation and ERA-Interim from 1979 to 2013 was calculated, respectively. Figure 1 shows the temporal variation of monthly lapse rates. In general, the ERA-Interim has a higher temperature gradient than observation for the whole year. However, ERA-Interim captures the variability of observed lapse rate very well, especially in the warmer months (May to August). The inter-monthly variability of observed lapse rate is much higher than ERA-Interim, especially from September to January. The temperature gradient decreases significant from September, which represents the transition month from warm to cold climate regime. The temperature gradient increases significant from March, which represents the climate regime transfers from cold to warm conditions. Table 5 shows the monthly lapse rates over all sites in 1979-2013. The lapse rate differences are small (less than 0.5 °C km^{-1}) from May to August, while the differences are larger than 1 °C km^{-1} from September to December as well as January (**Section 4.2, P8 L29-31, P9 L1-20**).

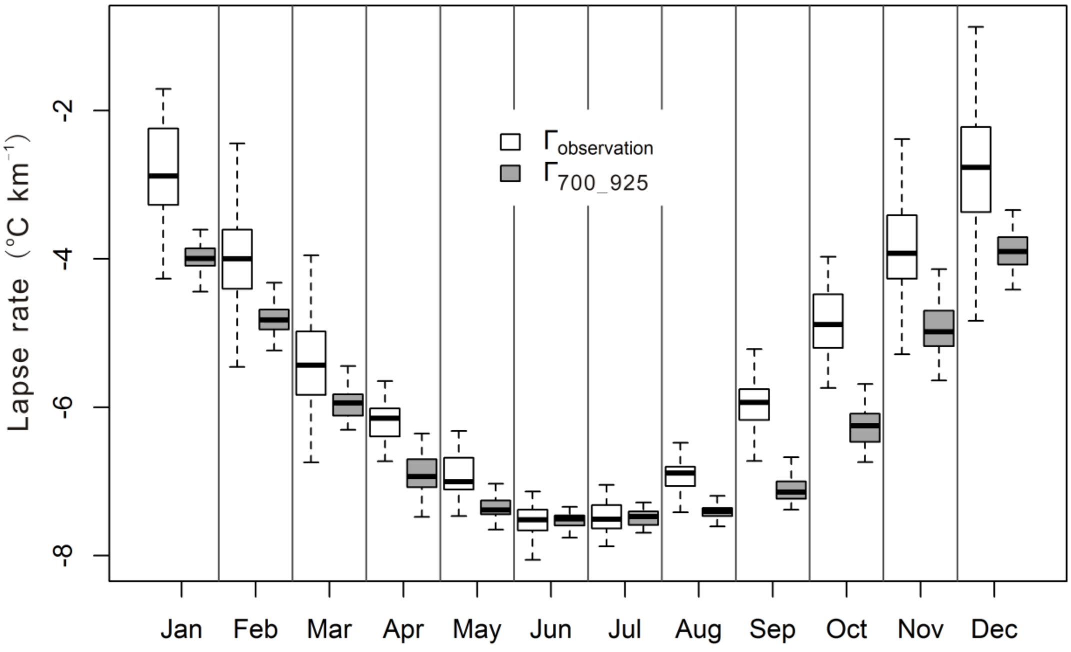

Figure 1 Boxplots of monthly lapse rates for observation and ERA-Interim

(Γ_{700_925}). Thick horizontal linesin boxes show the median values. Boxes indicate the inner-quantile range (25% to 75 %) and the whiskers show the full range of the values.

Table 5 Monthly lapse rate (°C km^{-1}) over the 24 sites in 1979-2013.

Month	observation	Γ_{700_925}
January	-2.79	-4.00
February	-4.01	-4.81
March	-5.42	-5.96
April	-6.14	-6.90
May	-6.92	-7.35
June	-7.55	-7.52
July	-7.48	-7.49
August	-6.95	-7.40
September	-5.93	-7.10
October	-4.86	-6.27
November	-3.94	-4.95
December	-2.88	-3.88

It is true that for a couple of few sites, the data set only show a little bit better or even worse than the original ERA-Interim. The reason is complicated. For example, it is possible that the winter or summer lapse rates are not well simulated by ERA-Interim, especially in the deep valley. We tried to revise this part to make it clearer to follow. Meanwhile, we clarify the strengths and limitations of the data set for the potential users (**Section 4.2, P8 L29-31, P9 L1-20**).

4. Application of the data set The authors show very general characteristics of the dataset, such as mean, minimum and maximum temperatures, in section 4.3. Most applications, which are mentioned in the introduction, however require both, high resolution temperature and precipitation data. I feel that the potential of such a data set should be better illustrated by showing its unique features. Does the high resolution data set e.g. reproduces elevation depending warming in the Tienshan mountains? (see e.g. (Gerlitz et al. 2014)). Are spatial and seasonal variations of the dirurnal temperature range well

captured (Sun et al. 2018; Shekhar et al. 2018)? Such potential applications could be included without much effort and will certainly illustrate the potential of the data set, which stands out due to its spatial AND temporal resolution.

--Answer: Thanks a lot for the comments. The reviewer raised a very important issue on the ability of new data set on the warming trends. We compared the warming trends of observation against the original ERA-Interim and the correction temperatures over the 24 sites in 1979-2013 (Figure 2). Furthermore, we added more analysis on the maximum temperature (Tmax), minimum temperature (Tmin) and diurnal temperature range (DTR) in the revision according to the comments (**Section 4.5 P12, P13 L1-18**). The original ERA-Interim underestimated significant (around 2°C) the observations. However, the corrections overestimated around 1 °C. The annual warming trend with an increase rate of 0.420 °C $10a^{-1}$ for observation. Generally, the original ERA-Interim and correction temperatures captures the warming trend very well with the rate of 0.378 and 0.349 °C $10a^{-1}$, respectively. Table 6 shows the trends for seasonal temperatures over 24 sites in 1979-2013. Spring has the largest positive trend with the rate of 0.664 °C $10a^{-1}$. The original ERA-Interim and correction temperatures captured the warming trends for spring quite well with the rate of 0.659 and 0.638 °C $10a^{-1}$, respectively. The correction temperatures have the better performance than the original ERA-Interim for summer trend. However, the ERA-Interim and corrections both underestimate the trend with almost the same rate for autumn trend. Unfortunately, the slight positive warming trend for winter is not captured by the original ERA-Interim and correction temperatures. These two data show the similar negative trends.

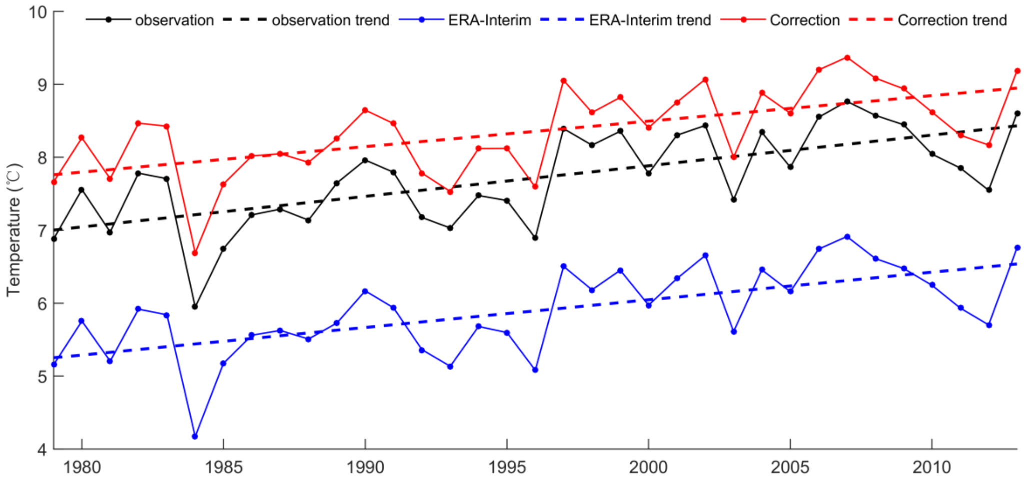

Figure 2 Temporal variations of annual temperatures for observation, original ERA-Interim and the correction temperatures over the 24 sites in 1979-2013.

Table 6 Trends (°C $10a^{-1}$) of annual and seasonal temperatures over the 24 sites in 1979-2013.

	Annual	Spring	Summer	Autumn	Winter
observation	0.420	0.664	0.432	0.532	0.018
ERA-Interim	0.378	0.659	0.530	0.448	-0.153
Correction	0.349	0.638	0.478	0.443	-0.195

Figure 3 shows the temporal variations of Tmax over the 24 sites in 1979-2013. The bias of ERA-Interim is around 4 °C compared to observations. The corrections have bias less than 2 °C. The variations are in consistent with the similar warming trend. Table 7 shows the trends for seasonal Tmax over the 24 sites in 1979-2013. In general, the original ERA-Interim and corrections capture the warming trend quite well (~0.370 °C $10a^{-1}$). Observation has the largest positive trend in spring with the rate of 0.693 °C $10a^{-1}$ followed by the autumn (0.528 °C $10a^{-1}$). The warming trends are slight overestimated by ERA-Interim and corrections for summer. The original ERA-Interim and corrections capture the negative trend for winter, but with a higher magnitude than observation.

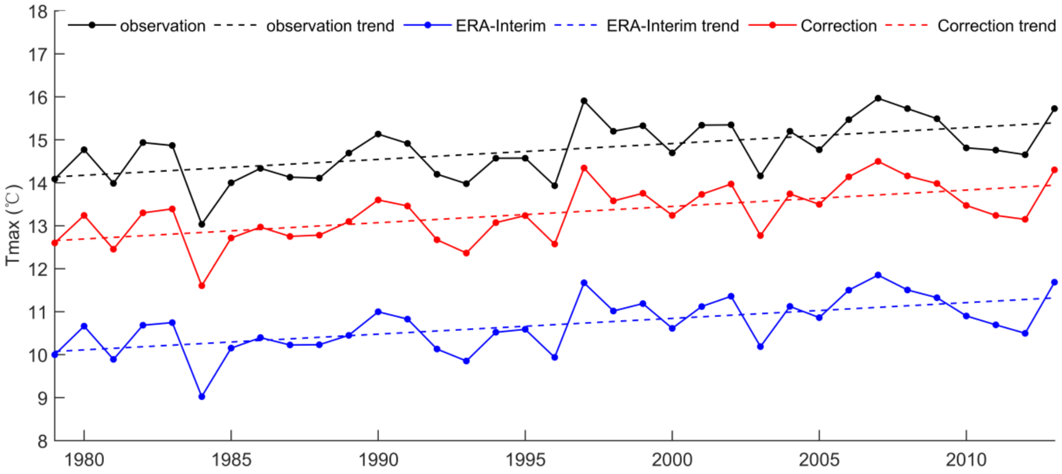

Figure 3 Temporal variations of Tmax from observation, original ERA-Interim and correction temperatures over the 24 sites in 1979-2013.

Table 7 Trends (°C $10a^{-1}$) of annual and seasonal Tmax over the 24 sites in 1979-2013.

	Annual	Spring	Summer	Autumn	Winter
Observation	0.370	0.693	0.397	0.528	-0.176
ERA-Interim	0.367	0.741	0.468	0.478	-0.262
Correction	0.379	0.767	0.461	0.507	-0.261

Figure 4 demonstrates the temporal variations of Tmin over the 24 sites in 1979-2013. The original ERA-Interim agrees with observations very well with less than 1 °C. The corrections have bias around 2 °C compared to observations. The original ERA-Interim and corrections underestimate the observed warming trend. Table 8 shows the specific values on the trends for seasonal Tmin over 24 sites in 1979-2013. In general, the original ERA-Interim and corrections capture the warming trends for spring, summer and autumn in lower rates, especially for spring and autumn (Table 8). Observation has the largest positive trend in spring with the rate of 0.700 °C $10a^{-1}$ followed by the autumn (0.661 °C $10a^{-1}$). The observed warming trend for winter is positive with the rate of 0.209 °C $10a^{-1}$. However, the ERA-Interim and corrections did not capture the positive trend.

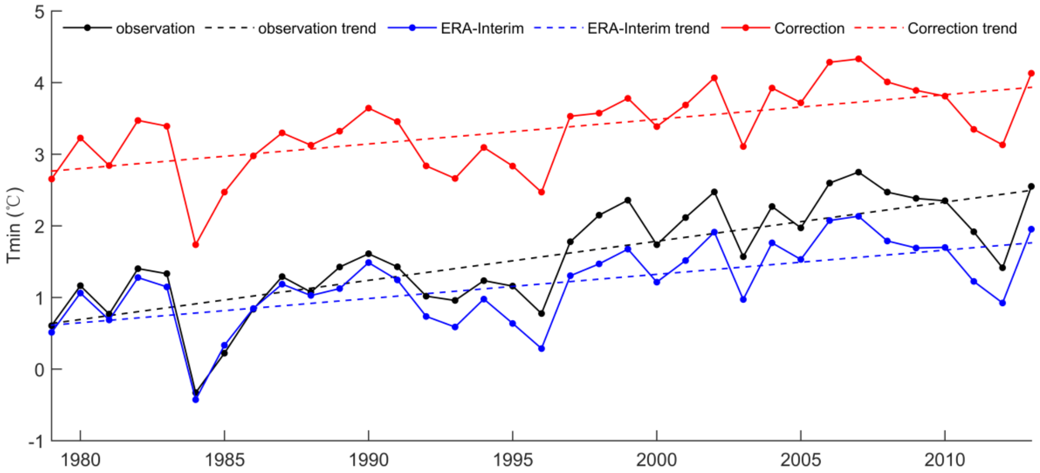

Figure 4 Temporal variations of Tmin from observation, original ERA-Interim and correction temperatures over the 24 sites in 1979-2013.

Table 8 Trends (°C $10a^{-1}$) of annual and seasonal Tmin over the 24 sites in 1979-2013.

	Annual	Spring	Summer	Autumn	Winter
observation	0.547	0.700	0.578	0.661	0.209
ERA-Interim	0.338	0.479	0.519	0.409	-0.084
Correction	0.344	0.493	0.505	0.439	-0.093

Figure 5 demonstrates the temporal variations of DTR over the 24 sites in 1979-2013. The original ERA-Interim has a more than 3 °C DTR bias compared to observations. The corrections reduce the DTR bias insignificant. The original ERA-Interim and corrections did not capture the significant decreasing trend of DTR. Table 9 shows the specific values on the trends for seasonal DTR over the 24 sites in 1979-2013. The decreasing trends are observed for annual and four seasonal DTR. Winter has the largest decreasing rate with the value of -0.384 °C $10a^{-1}$. Spring has the insignificant decreasing trend (-0.001 °C $10a^{-1}$), which may result from the significant increasing rate of Tmax. The original ERA-Interim and corrections capture the decreasing trends for summer and winter with smaller rates. However, they capture the opposite trends for spring and autumn, especially for spring (Table 9). The main reason is that the increasing rates for spring for Tmin are significant underestimated by the original ERA-Interim and corrections (Table 8).

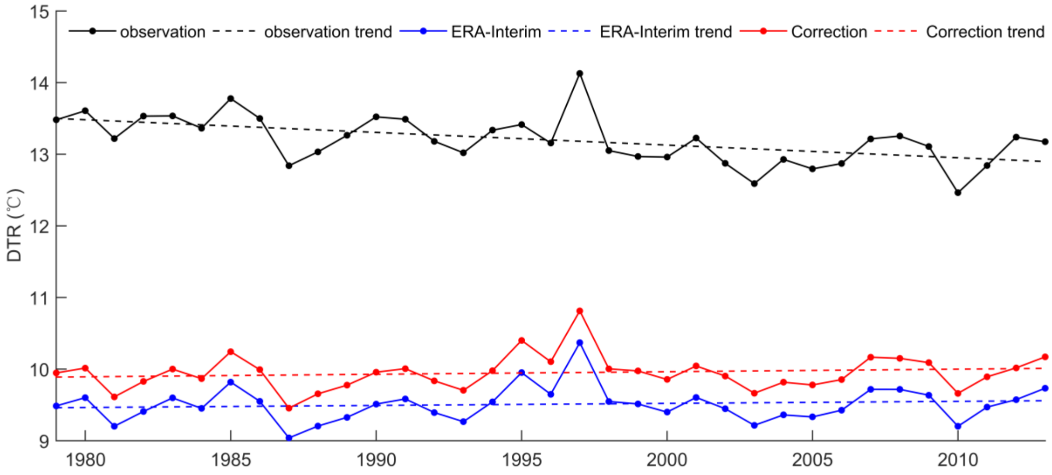

Figure 5 Temporal variations of DTR from observation, original ERA-Interim and correction temperatures over the 24 sites in 1979-2013.

Table 9 Trends (°C $10a^{-1}$) of annual and seasonal DTR over the 24 sites in 1979-2013.

	Annual	Spring	Summer	Autumn	Winter
observation	-0.177	-0.001	-0.181	-0.132	-0.384
ERA-Interim	0.029	0.262	-0.052	0.069	-0.178
Correction	0.036	0.274	-0.044	0.068	-0.168

We would like to emphasize that we did not compare the whole CTM DTR with the 24 observations. The analysis on the Tmax, Tmin and DTR show that the corrections can capture the annual trend generally, although it is not well on the seasonal scale. But it is ture that we need more observations to validate the performance of new data set on DTR and spatial variations at local scales. Meanwhile, we are collecting local observations at special basins (for example Kaidu river basin) where are more interesting for researchers to validate the new data set (**Section 4.5 P12, P13 L1-18**).

5. Data Availability The structure of the data set seems to be a bit unintuitive to me. Wouldn’t it be an option to provide the NCDF files for each year and for the entire domain? This would simplify the usaga of the data set, particularly for

users who download the data set via batch scripts.

--Answer: Thanks a lot for the comments. Yes, the data set is not unintuitive to users. Because of the large data, we have to divide it into small parts with a limited points and short time series. We tried to put all points together for a single year in a signal NetCDF file, but it was more than 5 GB. It cannot be open by a computer with limited memory. I tried many ways, but it takes so much time to wait for opening the file. The software like Matlab cannot process and analyze the data because it always says out of memory. Thus, we prefer to provide the small part and the potential users can download the data according to the coordinates of study area, rather than download the whole data points. But for sure, we are working on the version 2.0, which is friendlier for users. The accessibility of data set also will be improved in the version 2.0 (**P15 L12-18**).

Gerlitz, L., 2014: Using fuzzified regression trees for statistical downscaling and regionalization of near surface temperatures in complex terrain. Theor Appl Climatol, 122, 337–352, doi:10.1007/s00704-014-1285-x.

Gerlitz, L, O. Conrad, A. Thomas, and J. Böhner, 2014: Warming patterns over the Tibetan Plateau and adjacent lowlands derived from elevation- and bias-corrected ERA-Interim data. Climate Research, 58, 235–246, doi:10.3354/cr01193.

Shekhar, M. S., U. Devi, S. K. Dash, G. P. Singh, and A. Singh, 2018: Variability of Diurnal Temperature Range During Winter Over Western Himalaya: Range- and Altitude-Wise Study. Pure Appl. Geophys., 1–13, doi:10.1007/s00024-018-1845-6.

Sun, X., and Coauthors, 2018: Global diurnal to in-temperature range (DTR) changes since 1901. Clim Dyn, 1–14, doi:10.1007/s00382-018-4329-6.

References:

Gao, L., Hao, L., and Chen, X. W.: Evaluation of ERA-Interim monthly temperature data over the Tibetan Plateau, J. Mount. Sci., 11(5), 1154-1168, doi : 10.1007/s11629-014-3013-5, 2014.

Gao, L., Bernhardt, M., Schulz, K., and Chen, X. W.: Elevation correction of ERA-Interim temperature data in the Tibetan Plateau, Int. J. Climatol., 37, 3540–3552, doi: 10.1002/joc.4935, 2017.

Gerlitz, L., 2014: Using fuzzified regression trees for statistical downscaling and regionalization of near surface temperatures in complex terrain. Theor Appl Climatol, 122, 337–352, doi:10.1007/s00704-014-1285-x.

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