We sincerely thank the referee for the thoughtful assessment of our work and for highlighting some points which were unclear and needs to be further discussed. In the following we have tried to answer and accordingly incorporate the referee's suggestions. The referee comments are shown in black and our responses are in blue.

Comment 1: During the period winter monsoon, the precipitation-temperature scaling has a drop over the western India after removing the radiative effects of clouds (Figure C2). The results may imply that the scaling of extreme precipitation-temperature is not constrained by the radiative effects of cloud. Then, the generalizability of the conclusions revealed by this study may be questionable. Therefore, more explain or discussion about the drop scaling of P-T during the period of winter monsoon are essential.

Response 1:
Figure C2 shows the cloud radiative cooling of surface temperatures during summer (a) and winter monsoon (b). Scaling curves were presented for the two seasons in figure C3. While we see a diametric change in scaling for "all-sky" and "clear-sky" temperatures during summer monsoon, the scaling remains largely same during winter with a slight drop at high temperatures. There are two aspects to this question. 1) why the scaling does not change for "all-sky" and "clear-sky" temperatures during winter months? and 2) why we still see a slight drop in scaling during winter?
To answer (1): Winter months are associated with lower solar insolation. Unlike summers, the radiative effect of clouds on shortwave radiation does not substantially exceeds the compensating heating effect by change in longwave radiation. Over India, these months are further characterized by low rainfall and lower cloud cover. As a result, we don't see much difference between the "all-sky" and "clear-sky" conditions and their difference remains close to 1 K (figure C2) and thus the scaling for "all-sky" and "clear-sky" temperatures remains same.
To answer 2) we still see a slight drop in scaling during winter months. To our understanding this drop could be due to moisture availability limitation at high temperature (An effect which had been argued by previous studies (Hardwick et al., 2010). Other factors that can also play a role could be the spread in cloud radiative cooling which largely arises from the inconsistencies between precipitation and radiation datasets or the effect of changing rainfall type which is not explicitly considered in our study.
The discussion about it will be added in the revised version of the manuscript.

Comment 2: South of India, the cloud-driven cooling does not play a role in the extreme precipitation-temperature scaling (Figure 6 and B1). This phenomenon needs further explanation by combined other factors (e.g., the topography, distributions of sea and land).

Response 2:
Negative scaling was found over some grids in South of India for both "all-sky" and "clear-sky" temperatures. We think that "clear-sky" temperatures could not resolve this negative scaling due to the following reasons:

1) These are the grids which receives contribution from rainfall during both summer and winter monsoon, However, a relatively higher proportion of the rain happens during winter monsoon (Figure C1). The reason being that this region lies over the

leeward side of Western ghats for the incoming southwest monsoon winds during summer monsoon. Whereas during the winter monsoon, Northeast winds blow over Bay of Bengal leading to large moisture advection and more rain over this region. As a result of this seasonality effect more extreme precipitation are sampled during winter season over this region while during the summer season, moisture supply may limit these extremes to increase. This may lead to a negative scaling when a single quantile regression slope is fitted over the whole temperature range.

2) Another reason could be the development of low-pressure system in Bay of Bengal during winter months which causes cyclones over the Eastern coast of India. These cyclonic systems thus cause very high rainfall at low temperatures which causes negative scaling. More work is still needed to be done to resolve these systems in the conventional scaling approach and remains out of scope for present study.

The discussion about it will be added in the revised version of the manuscript.

Comment 3: The scaling of precipitation-temperature after removing the cloud cooling effects are not equal CC rate (~7%/°C) strictly, the effects of other factors that could influence the scaling should be discussed in Section 4.

Response 3:
We agree with the reviewer that while the spatial aggregation of all grids correspond to a CC scaling of precipitation extremes over Indian regions (Figure 5a), there still exist regional variabilities at grid scale and the scaling rates are not strictly equal to CC rates. We believe that these deviations could be due to the following reasons:

1: Present scaling approach does not explicitly consider the contribution from the large-scale dynamics and regional circulation patterns which can cause local changes in the scaling estimates.
2: Change in rainfall types - Orographic, stratiform or convective can affect the estimates of scaling rates.
3: Inconsistency between precipitation and radiation datasets can also cause uncertainties in estimating the cooling associated with rainfall event and can affect the estimates of scaling rates.

These points will be added in the revised version of the manuscript.

Comment 4: The Figure 1 given the temperature after removing the cloud effects at monthly scale. However, this study did not involve the scaling of precipitation-temperature at monthly scale, so the Figure could be replaced by daily data.

Response 4:

We thank the reviewer for highlighting out this point. The RMSE in the figure 2 was already shown for daily temperatures, However, monthly temperatures were used in timeseries comparison and regression plot which made things unclear and created confusion. We have now modified all the sub-plots in figure 2 for daily temperatures.

Modified Figure 2:

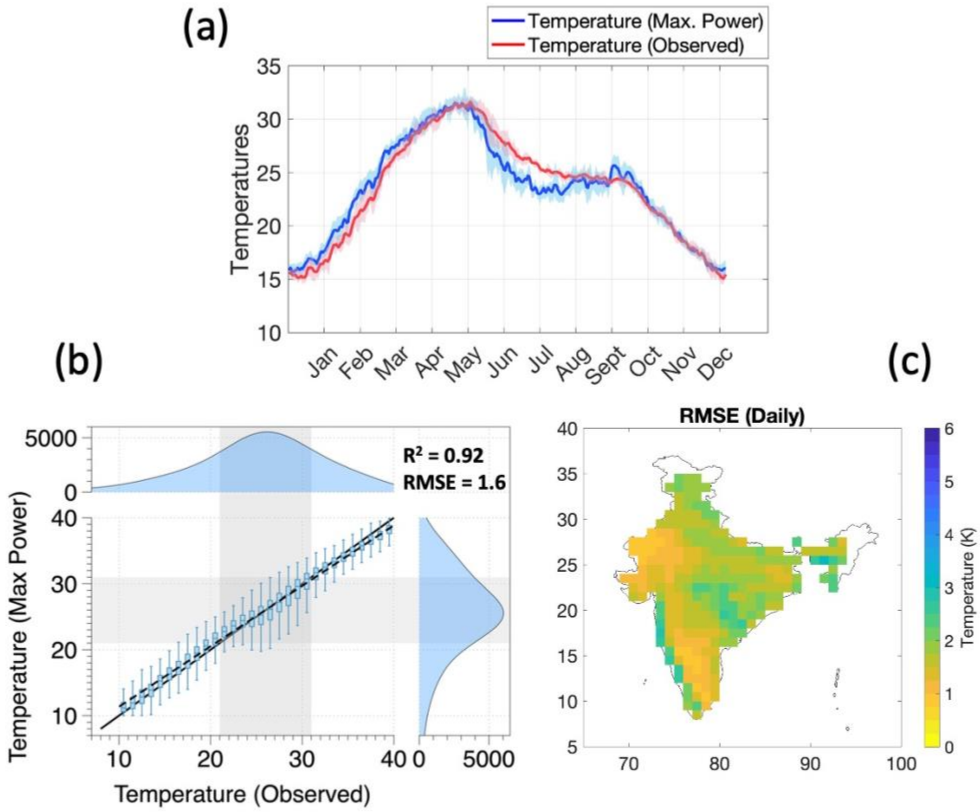

Figure 2: Comparison of daily annual cycle of temperature for observed (IMD) and estimated "all-sky" surface temperatures, averaged over all grid points. (B) Regression between the two temperatures at the grid-point scale. (C) Spatial variation of the root mean squared error (RMSE) in temperature estimates from maximum power compared to observed temperatures.