We thank the reviewers for their minute scrutiny of the manuscript. We believe that their valuable comments and suggestions will be helpful for further improvements of the quality and credibility of the paper. We have revised the manuscript considering their suggestions. Answers are given below in red. Changes in the revised version of the paper are in bold black font.

Reviewer #2:

The manuscript describes lightning detection data from an Earth Networks TLDWS station during two "Nor'wester"-type thunderstorms affecting the Kolkata region in April 2018. An additional component of the manuscript describes Monsoon onset and departure monitoring using the wet component of atmospheric refractivity index.

Lightning section comments: Data produced by Earth Networks from the two storm case studies are presented and discussed by the authors. Presentation and summary are adequate. Whilst new data are presented, they do not provide insight which has not already been provided by other researchers on the subject of lighting flash rate and characteristics during the active phase of severe thunderstorms. Whilst it is accepted that the paper addresses preliminary results and more data are needed for firm conclusions, the confidence of any causal relationship between lightning and the onset of damaging wind based on two storms must be rather low and therefore should still be considered as inconclusive, albeit consistent with current research on this topic. Despite this, it is valuable to have observational data on "Nor'wester" severe storms which are relatively underrepresented in thunderstorm research literature, so the continued collection of information on these would become valuable once a longer dataset capable of producing more statistically robust characteristics on these storms could be assessed.

Refractivity section comments: Although previous researchers have used refractivity wet component to investigate thunderstorm activity in the region, it is unclear why the authors decided to use this complex derived parameter, given their instrumentation measured the fundamental atmospheric properties of temperature, pressure and humidity and microwave propagation was not declared to be of interest for this work. If the variability of near-surface moisture content was considered to be useful for the monitoring of the monsoon, why not simply use dew-point temperature? Both dew-point and refractivity are a function of vapour pressure and variability of air pressure could be examined independently if it was considered to be of merit. The finding that refractivity (e.g. humidity) reduces after the monsoon is a somewhat expected outcome which could be adequately explained using more fundamental considerations.

To summarise, whilst the manuscript does not currently provide sufficiently robust or original insight, the objective of gathering more data on Nor'wester-type thunderstorms is valuable and its continued collection, analysis and eventual publication should be greatly encouraged.

Ans: We agree with the reviewer that collection of total lightning data corresponding to more Nor'wester type thunderstorms and analysis are very necessary to understand the lightning-thunderstorm dynamics, as the frequency of violent thunderstorms is increasing now-a-days causing a lot of damages to properties, agriculture and economy.
In the revised manuscript, we have added, as an example, the electric field waveform data from Kolkata station to show the raw measurements of the lightning sensor and identified the four types of discharge (+IC, -IC, +CG, -CG) which somehow helps to understand the measurements of the lightning sensor. We have also added the lightning location maps corresponding to the events of 7th April and 17thApril over the study region which includes all the lightning data that were used to

plot the flash rate graphs. As per suggestion of one of the reviewer, we have included previous research reports, as available in the literature, on lightning and thunderstorms over the area under investigation. We have substantially revised the manuscript and also changed the title as following: "A preliminary study on thunderstorms and monsoon using total lightning and weather data over Gangetic West Bengal".

About refractivity section:
We agree with the reviewer in this point and therefore added the more fundamental parameters like surface temperature, relative humidity and water vapor pressure in our analysis. Both vapor pressure and wet component of refractivity index are functions of temperature and humidity. It is seen that variability in the vapor pressure during the monsoon is comparatively lower than that of relativity humidity and both the parameters can be used to study further about monsoon onset and withdrawal processes.

Spelling/grammar and minor comments:
p.1 line 8: events that occurred >> corrected
p.3 line 29: replace censor with sensor >> corrected
p.3 line 31: replace sends with sent >> corrected
p.3 line 32: replace networks with network >> corrected
p.4 line 11: replace died with killed >> corrected
p.6 line 10: Please provide a reference to support multiplicity as an important factor in lightning damage. >> We have added the following references in the revised manuscript.

> **Gibbs, Alexander R., "Periodicities of Peak Current and Flash Multiplicity in Cloud to Ground Lightning" (2012). Dissertations & Theses in Earth and Atmospheric Sciences. 24.** http://digitalcommons.unl.edu/geoscidiss/24
>
> **Miyazaki, T., S. Okabe, 2008: A Detailed Field Study of Lightning Stroke Effects on Distrubtion. IEEE Transactions on Power Delivery, 24, 352-359.**

p.6 line 11: replace consist with consists >> corrected
p.8 line 11: replace potentially with potential >> corrected
p.8 line 11: replace tool with tools >> corrected
p.10 line 27: Surely CCN availability cannot be considered a limiting factor for monsoon rainfall generation? evidence to support this idea would be needed to maintain this suggestion. >> We claim that the presence of water vapour is not only a criterion of onset of monsoon, but presence of cloud condensation nuclei (CCN) and dew point temperature play a significant role to start rainfall. The following references are included in the revised manuscript.

> Midya S. K., Ghosh S., Ganda S.C., and Das, G.K.: Role of Biogenic Hydrocarbon on the Variability of Total Rainfall Amount over Sundarban, Kaziranga and Gir Forests, J. Ind. Geo. Union, 19, 454--459, 2015.
>
> Ganda, S.C., and Midya, S.K.: Comparison of long term rainfall trends on urban and non-urban regions of Indian land mass and its probable impliction, J. Ind. Geo. Union, 16(2), 37--40, 2012.