Dear Editor,
We are thankful to the anonymous referees for reviewing and helping us to improve this paper. The manuscript has been improved according to their suggestions. In the revised manuscript, the modifications are in the bold letters.
Best regards,

Nadia Imtiaz.

Reply to Referee #1:-

1. Line 15 on the first page, replace "useful" with "used".
Response: In the revised manuscript on Line 15, "useful" has been replaced with "used".

2. The last two equations on Page 4. Clearly, the index i and j are different to those in the first equation on the same page. So I suggest the author to use difference indexes to avoid confusion.
Response: In the revised manuscript on Page 4, the indices i and j in the first equation have been replaced with l and m.

3. There is no equation number throughout the paper. Please add.
Response: In the revised manuscript, the equation numbers have been added.

4. On page 6, the author mentions the solar F10.7 plot. However, there is not much follow up discussion to relate the main subjects with the solar flux variation. So, either remove the plot or provide more related discussion, if it can strengthen your argument.
Response: In the revised manuscript on P. 7, the following modification has been done:
Some authors have analyzed the behavior of the global electron content (GEC) with the variations of the 10.7-cm solar radio emission; i.e., F10.7 index Nava et al. (2016).
From 4 to 8 September, the F10.7 index is higher than 100 sfu as shown in Figure 1. During this period, we observed the higher value of ΔGEC which decreases significantly after 9 September as shown in Figure 2. According to Afraimovich et al. (2007, 2008) and Nava et al. (2016), there is a correlation between the GEC and the F 10.7 index. Therefore, it can be inferred that the variation of the GEC from 4 to 8 September can also be affected by the higher solar flux; i.e., F 10.7 > 100 sfu.

Reply to the Referee #2:-

P.6 L.6-8 Looking at Figure 1, the following statements are incorrect and must be modified correspondingly:
“The SYM-H index also follows the pattern of the Bz component.
”From 1 : 08 UT until 11 : 00 UT the Bz is northward; i.e., it increases to the positive value.”
“Following the Bz, the SYM-H also increases from −146 nT to the value of −38 nT.”
SYM-H is not following the Bz behavior, as it changes the direction and does not stay always negative from 1:08 to 11 UT.
Response: Thank You for the careful reading and pointing out the errors in numerical values which have been corrected in the revised manuscript on P.6 L. 6-8 as following:
In order to analyze the geomagnetic activity behavior, the SYM-H index is also presented in Figure 1. During the main phase of the storm, the SYM-H index decreases and reaches the negative value of ≃ −146 nT thus producing the first minima of the SYM-H index at 1 : 08 UT. During the partial recovery phase from 1:08 UT to 11:00 UT, the SYM-H also increases from −146 nT to the value of −38 nT. Thereafter, the SYM-H index decreases again and it reaches the second minimum value of ≃ −115 nT. This is the end of the main phase of the storm which lasted for ~ 15 hours.

P.10 l.11-12 “Overall, the largest disturbance of the H component of the magnetic field with amplitude −180nT is observed at GUA as compared to −150 nT at MBO and −140 nT at KOU.” By looking at Fig 5, one can easily see that H drops down below -150 nT at MBO.
Response: In the revised manuscript, on P.10 L. 11-12 following modification is done: It can be seen that the first dip (around 1:08 on 8 September) is strongly negative for both GUA (-142 nT) and KOU (-142.5 nT) as compared to MBO (-102 nT). However, the second dip (around 13:56 on 8 September) is strongly negative for MBO (-164 nT) as compared to GUA (-133 nT) and KOU(-112 nT).

P.6. L.21 “Figure 2 shows the _REC (top), the _GEC (middle) and the SYM-H index (bottom) during the period 4-14 September 2017” must be “Figure 2 shows the _GEC (top), the _REC (middle) and the SYM-H index (bottom) during the period 4-14 September 2017”.
Response: In the revised manuscript, on P.6 L.21 has been modified as “Figure 2 shows the ΔGEC (top), the ΔREC (middle) and the SYM-H index (bottom) during the period 4-14 September 2017.”

P.10 L.14 “It can be noted that during the first southward excursion of the magnetic field...”
should be
“It can be noted that during the first southward excursion of the IMF” or clarify what “southward excursion” of the magnetic field you are referring to.
Response: In the revised version, on P.10 Line 18 has been modified as: “It can be noted that during the first southward excursion of the IMF.”

P.3 L. 17-18 Change “a number of space weather events observed” to “a number of space weather events were observed”
Response: In the revised version, on P.3 L. 17-18 has been modified as “a number of space weather events were observed between 4-14 September 2017.”

P.10 L.25 “the latitudinal extent of the TEC increases” replace with “the latitudinal extent of the bulk of the TEC increases”
Response: In the revised manuscript, on P.10, L.31 has been modified as “the latitudinal extent of the bulk of the TEC increases”.