Referee report on the paper “Emergence of a localized total electron content enhancement during the G4 geomagnetic storm of September 8, ” byCarlos Sotomayor-Beltran

The paper is devoted to the study of the ionospheric storm, using total electron content data occurred on 7-9 September 2017. In particular the author put in evidence what he calls a localized total electron content enhancements, and increase of TEC respect a background, at Southern mid latitude hemisphere.

General Comments
The principal comments have not been clarified.

The reply of the author that the same effect has been found in another paper is not an answer.

1) The storms studied are different
2) In the paper of Edemskiy et al.2018 they analysed TEC but also foF2 data .
3) The background that they used is not calculated considering 8 days

At first the author should change the background, secondly he has to analyze ionosonde data.
This spot with increased TEC covers Australia and it is possible to check this increase using Australian ionosonde stations.
02UT was a daytime in the Australian sector and the NmF2 increase due TAD moving equatorward is a standard situation in the beginning of a strong geomagnetic disturbance. This should be seen Checking ionosonde data.

Only after this it is possible to state that that was a localized enhancement.

.So an additional analysis may be recommended (major revision) using Australian ionosonde observations.