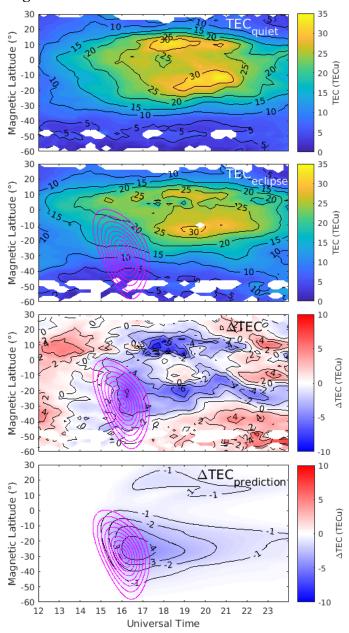
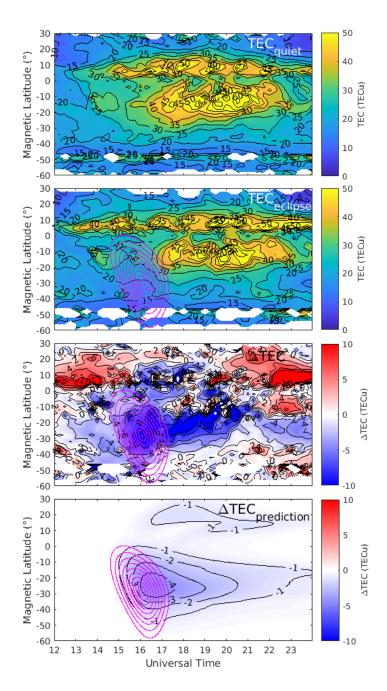


## Supplementary Material

## 1 Supplementary Figures



**Supplementary Figure 1.** Total electron content response time evolution obtained with the Seemala technique for reference day (top), the December 14, 2020, solar eclipse (middle), and eclipse-modified differences of TEC ( $\Delta$ TEC, third row) along the magnetic meridian of Chillán (36.6°S, 72.0°W) and the SUPIM-INPE predicted differences ( $\Delta$ N<sub>prediction</sub>, bottom). Evolution of the eclipse obscuration mask at 300 km height each 10% obscuration (magenta lines).



**Supplementary Figure 2.** Total electron content response time evolution obtained with the Ciraolo technique for reference day (top), the December 14, 2020, solar eclipse (middle), and eclipse-modified differences of TEC ( $\Delta$ TEC, third row) along the magnetic meridian of Chillán (36.6°S, 72.0°W) and the SUPIM-INPE predicted differences ( $\Delta$ N<sub>prediction</sub>, bottom). Evolution of the eclipse obscuration mask at 300 km height each 10% obscuration (magenta lines).