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Three New Ionospheric Indices[1] CESAR NOGUERA, JAN SOJKA, Utah State University — In the present work three new ionospheric indices have been proposed as an exploratory way to quantitatively evaluate the ionosphere state. These indices have been determined from a statistical analysis of ionosphere GPS total electron content (TEC) measurements that were assimilated into the USU global assimilation of ionospheric measurements (GAIM) model. Comparisons of the indices from 8 locations demonstrate both local and regional value of these indices. A correlation study has been performed between the new indices and others such as kp, Dst and F10.7 which shows that the ionosphere's variability can not be specified by these solar and geomagnetic indices. Hence we put forward the concept that a GPS TEC index is the appropriate means of describing regional ionospheric variability.

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