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DYNAMICS OF EQUATORIAL PLASMA BUBBLES OVER THE BRAZILIAN SECTOR OBSERVED USING DISTURBANCE IONOSPHERE INDEX (DIX) MAPS

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In this work, we use Disturbance Ionosphere indeX (DIX) maps to evaluate the dynamic characteristics of Equatorial Plasma Bubbles (EPBs) over the Brazilian sector. In this context, we analyze the latitudinal and longitudinal temporal evolution of EPBs by selecting cases within

a time series of DIX maps and comparing them to All-Sky Imager (ASI) OI 630 nm airglow data. From that analysis, we estimate some physical characteristics of those events, such as latitudinal extension. Our results show that the bubbles observed as disturbances on the DIX maps are in agreement with the EPB signatures observed on the ASI images. Finally, we also found that the magnitude of those disturbances followed most of the trend of solar activity, meaning that the EPB-related plasma variations tend to be higher (lower) in high (low) solar activity.