In the present work we summarize the results of a study about the ionospheric sporadic E-layers (Es) at São Luís, Brazil (2°31’ S, 44°16’ W), an equatorial region, during the occurrence of intense magnetic storms on the maximum and minimum phases of solar cycle 23. We analyzed the time evolution of the top frequency ($f_t$Es) and blanketing frequency ($f_b$Es) of the Es layer, on the days before, during and subsequent to the magnetic storms. A study about the occurrence of the various types of Es-layer besides Es_q was conducted to examine the gradual changes in the dominant competing mechanisms for the Es layers formation. The results lead to a climatological study and revealed interesting features.