The Equatorial Spread F (ESF) irregularities continue to be a subject of intensive investigations because the ionospheric turbulence created has a strong, deleterious influence on trans-ionospheric radio wave communication. ESF is characterized by the presence of a wide spectrum of field aligned irregularities extending over nearly seven orders of magnitude generated due to a hierarchy of plasma instability processes. Since the scintillations caused by these irregularities result in outages of the communication and navigation systems understanding the variability of this phenomenon is of considerable importance. The ionospheric scintillation occurs due to the movement of the ionospheric irregularities across the trans-ionospheric ray path of the satellite signal. Ionospheric scintillations have been studied from the measurements of the amplitudes of VHF and L-band signals radiated by different satellites in the equatorial and low latitude regions. In this paper an attempt has been made to study the Equatorial Spread F irregularities using the L – band scintillation and VHF radar. The Indian MST radar and GPS receiver both are operated at Gadanki(13.48° N 79.18° E), India for ten days during equinoctial months since 2005 to till date. The GPS TEC data collected with a chain of GPS receiver located under GAGAN project in India are also used to see the latitudinal extent of the ESF irregularities. The GAGAN GPS stations location are like this, starting from the equatorial station Trivandrum (8.47° N), Bangalore (12.95° N), Hyderabad (17.44° N), Delhi (28.58° N), and Bhopal(31.09° N) under equatorial anomaly crest. During our campaign we have observed that during spread-F TEC shows depletion accompanying with high scintillation index value. In most of the cases, scintillation was observed for the pre midnight event. In some events we were clearly able to the generation of ESF irregularities over the equator as shown in the scintillation index derived from the GPS receiver and moving towards the low latitudes. After some times the same irregularities moves towards the low latitude station as measured by the VHF radar located at the low latitude station Gadanki. We have observed that during current extreme low solar activity period also spread-f irregularities are seen for three continuous days out of ten days. Large variability in their occurrence and intensity on short period and day to day basis. The further results and discussion will be presented in conference in the conference.