In communication involving links between satellites and ground stations the most serious effects on transionospheric radio signals is scintillation. By using satellite Navigation Systems such as Global Position System (GPS) receivers, we can probe the structure of electron density in the ionosphere and thus monitor scintillation of trans-ionospheric signals along the line of signal path in real time. In this study we show that for alone positioned navigation system such as the SCINDA system in Nairobi, multipath errors arising from satellites tracked at lower elevation angles can contribute significantly to radio scintillation rather than the ionospheric conditions along the signal path. Multipath errors inflate the scintillation values and falsely indicate ionospheric scintillation activity. For a quiet ionosphere, scintillation is proportional to the signal path and elevation angle of the satellite being tracked. By using data for the entire solar quiet period of 2009 (January-September), we created a fitting of the data to calibrate the multipath effects as outliers in the data at lower elevation. A separate plot for these outliers was then generated for every satellite track against elevation angles between 10 and 20 degrees. Key words: Scintillation, Super-imposed multipath, quiet ionosphere, lower elevation.