The data from radiosondes have cover almost five decades. Nevertheless, they are concentrated in the continental regions of the Northern Hemisphere. The requirement from other instrument or technique for assisting the understanding of weather and climate is needed in the Southern Hemisphere. The Global Positioning System (GPS) radio occultation (RO) is a space-based technique of sounding the Earth's atmosphere. The GPS RO technique use GPS receivers onboard Low Earth Orbit (LEO) satellites to measure the received radio signals from GPS satellites to retrieve atmospheric profiles of temperature, pressure and water vapour. This technique has great potential to improve numerical weather prediction and climate monitoring. The aim of this study is to analyze the difference between RO results from the RO techniques in the Radio Occultation Processing Package (ROPP) and the COSMIC Data Analysis and Archive Center (CDAAC) using FORMOSAT-3/COSMIC data over the Australian region (110 to 160 degree E and 10 to 50 degree S). The period of the investigation is from January 1 to 3, 2010. The dry temperature profiles retrieved from ROPP and CDAAC software package get the good consistency at the altitude between 10km and 25km and the data points of the pressure profile are almost less 3hPa for all evens in this study period. The average of the difference between ROPP and CDAAC for pressure profiles is from 0.12 to 1.54hPa. The dry temperature is from 0 to 3.5 degrees.