We have investigated the effect of precipitating particles on middle atmospheric ozone during a moderate geomagnetic storm in July 2009. It is expected that the number of precipitating particles increases with increasing geomagnetic activity, and subsequently enhance the production of nitrosonium (NO\(^{+}\)) and odd hydrogen (HO\(_{x}\)) in the upper atmosphere. The lifetime of HO\(_{x}\) and its associated ozone (O\(_{3}\)) destruction is short, whilst NO\(^{+}\) can form long-lived nitric oxide NO during times of high geomagnetic activity, which can affect ozone over a longer time span, and hence a wider spatial range due to transport. We use POES satellite data to identify and analyze the particles that precipitated over Antarctica during the moderate geomagnetic storm in July. To analyze the subsequent NO enhancement and O\(_{3}\) depletion we use a microwave radiometer stationed at Troll, Antarctica (72S, 2.5E, L=4.76). This microwave radiometer operating at 250 GHz gives high temporal and vertical resolution of the NO and O\(_{3}\) column. During the moderate July 2009 storm, we observe radiation-belt particle precipitation over Troll, an NO increase spatially and temporally overlapping with an O\(_{3}\) depletion of 30\% between 60 and 80 km altitude. This O\(_{3}\) depletion lasted for 9 days, and descended to 55 km altitude at a vertical velocity of 1-3 m/s. This work shows that moderate storms, which are common-place and occur even during solar minimum, can cause a significant and direct effect in the middle atmospheric ozone distribution.