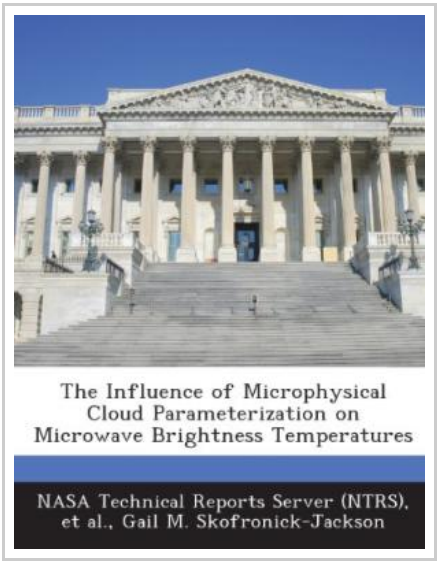




# The Influence of Microphysical Cloud Parameterization on Microwave Brightness Temperatures

By Gail M. Skofronick-Jackson

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 32 pages. Dimensions: 9.7in. x 7.4in. x 0.1in.The microphysical parameterization of clouds and rain-cells plays a central role in atmospheric forward radiative transfer models used in calculating passive microwave brightness temperatures. The absorption and scattering properties of a hydrometeor-laden atmosphere are governed by particle phase, size distribution, aggregate density. , shape, and dielectric constant. This study identifies the sensitivity of brightness temperatures with respect to the microphysical cloud parameterization. Cloud parameterizations for wideband (6-410 GHz observations of baseline brightness temperatures were studied for four evolutionary stages of an oceanic convective storm using a five-phase hydrometeor model in a planar-stratified scattering-based radiative transfer model. Five other microphysical cloud parameterizations were compared to the baseline calculations to evaluate brightness temperature sensitivity to gross changes in the hydrometeor size distributions and the ice-air-water ratios in the frozen or partly frozen phase. The comparison shows that, enlarging the rain drop size or adding water to the partly Frozen hydrometeor mix warms brightness temperatures by up to . 55 K at 6 GHz. The cooling signature caused by ice scattering intensifies with increasing ice concentrations and at higher frequencies. An additional comparison to...

### *Reviews*

*Most of these publication is the perfect ebook accessible. It is amongst the most awesome publication i have got read through. You wont truly feel monotony at whenever you want of the time (that's what catalogs are for regarding in the event you request me).*

-- ***Prof. Edgar Kshlerin***

*It is easy in study safer to comprehend. It can be writter in basic phrases and never confusing. It is extremely difficult to leave it before concluding, once you begin to read the book.*

-- ***Emmitt Harber***