

Hurricane surface pressure fields derived from SAR imagery

Ralph Foster

Jerome Patoux

R.A. Brown

Surface pressure fields derived from scatterometer winds have proven very useful in a variety of storms applications. However, Ku-band scatterometers have difficulty in regions of heavy rain. C-band SAR imagery is less affected by rain. The usefulness of both Ku-band and C-band geophysical model functions in very high wind conditions is the subject of much current research. Recently, the Canadian Space Agency made a library of 160 hurricane and typhoon eye images available for research purposes. We present preliminary results from our research into retrieving surface wind and pressure fields from these SAR images and our plans for using in situ surface pressure and wind observations (SFMR and drop sondes) from aircraft flights to evaluate the high wind regime in C-band model functions.