

Retrieving Raindrop Size Distribution Parameters and Vertical Air Motion from Micro Rain Radar (MRR) Observations



Christopher R. Williams
University of Colorado Boulder

Shoichi Shige
Kyoto University

Hiroyuki Hashiguchi
Kyoto University

Taro Shinoda
Nagoya University

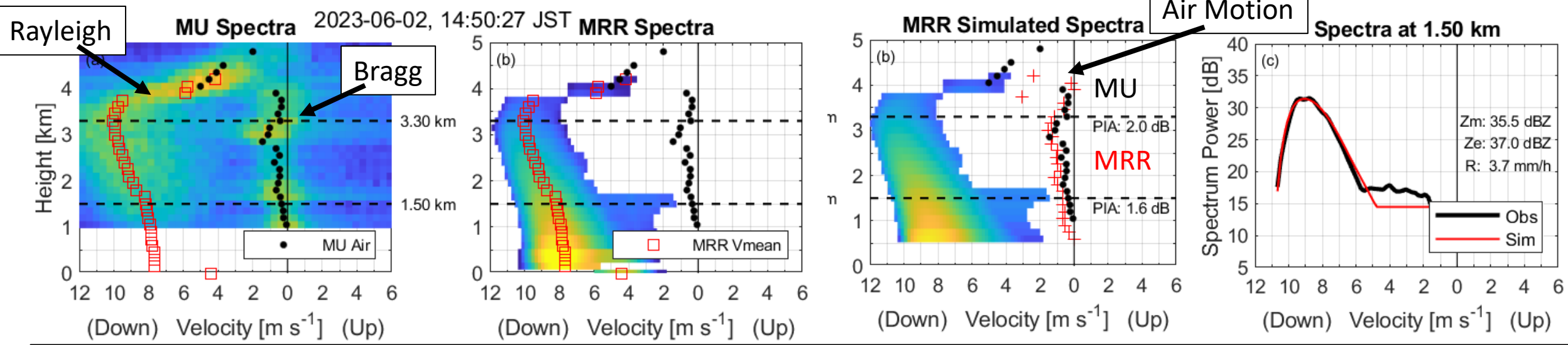
Acknowledgments: NASA Precipitation Measurement Mission (PMM) Grant Number 80NSSC22K0605 and the Japan Society for the Promotion of Science (JSPS) International Fellowships for Research in Japan.

The MRR is a robust radar, but:

14.10

- (1) the real-time Metek moments do not correct for Doppler velocity folding,**
- (2) Metek DSD retrieval algorithms assume zero air motion.

A MRR was deployed at the Middle and Upper atmosphere (MU) radar (46 MHz) site in Shigaraki, Japan. *This study uses MRR and MU data to evaluate & improve a MRR DSD and air motion retrieval algorithm.*



** MRR2 & MRRpro spectra cleaning and reprocessing code is available (in Python): Christopher.Williams@colorado.edu