

Memorandum

TO: Mr. Terrance J. Clark, Director, Radar Operations Center

FROM: NEXRAD Technical Advisory Committee (TAC)

DATE: February 16, 2017

SUBJECT: Recommendation of R(A) Technique for QPE

Mr. Clark,

The NEXRAD TAC has reviewed the National Severe Storms Laboratory (NSSL)'s presentation on the rainfall accumulation method using specific attenuation, known as R(A). The TAC found the scientific work to be sound and worthwhile for future incorporation into the NEXRAD baseline. The committee determined the technique performs well in the region below the melting layer in conditions of rain or rain mixed with hail and is effective in dealing with partial beam blockage, provided the radar signal is not totally lost behind the obstacle. R(A) was also found to be immune to miscalibration of Z and ZDR. Given the increasing challenges with partial beam blockage, from trees and man-made obstructions, as well as mitigating QPE errors due to Z/ZDR calibration issues, this method will greatly improve precipitation estimates below the melting layer. As a result, the TAC provides its unanimous recommendation of R(A) to the NEXRAD program.

Sincerely,

Dr. John Snow,
NEXRAD TAC Chairperson