

# The Radar Doppler Spectra Challenge: Can Bin Microphysical Schemes Pass Muster?

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*Radar Breakout Session*

*2013 ASR Science Team Meeting*

*March 18, 2013*

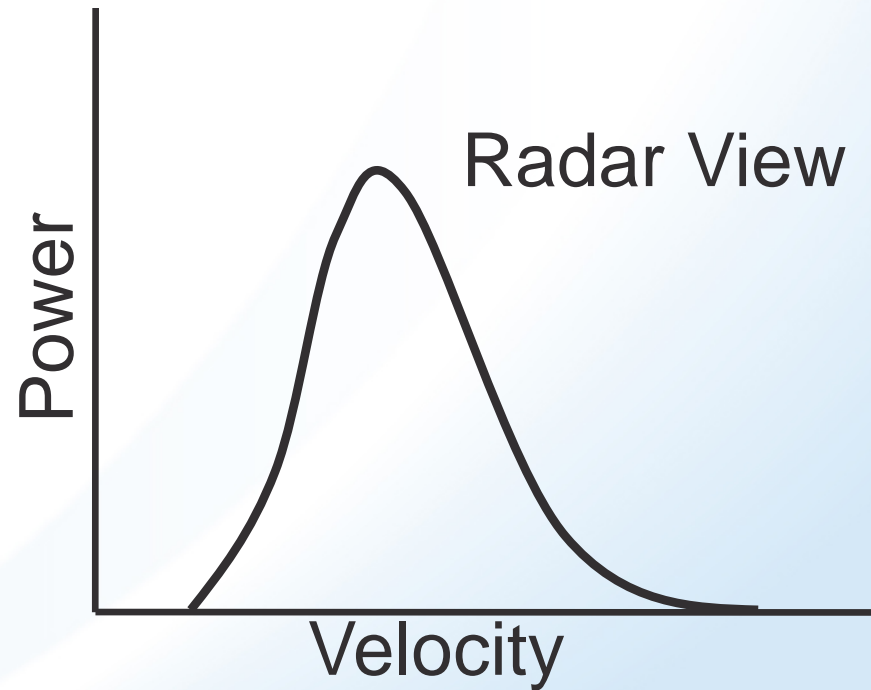
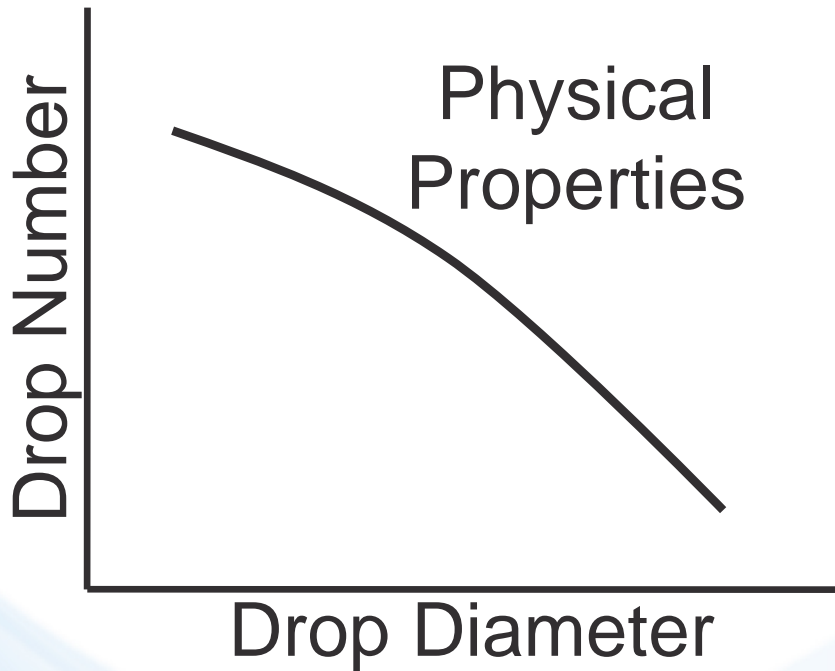
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*a passion for discovery*



# DSD vs Doppler Spectrum

Forward Model

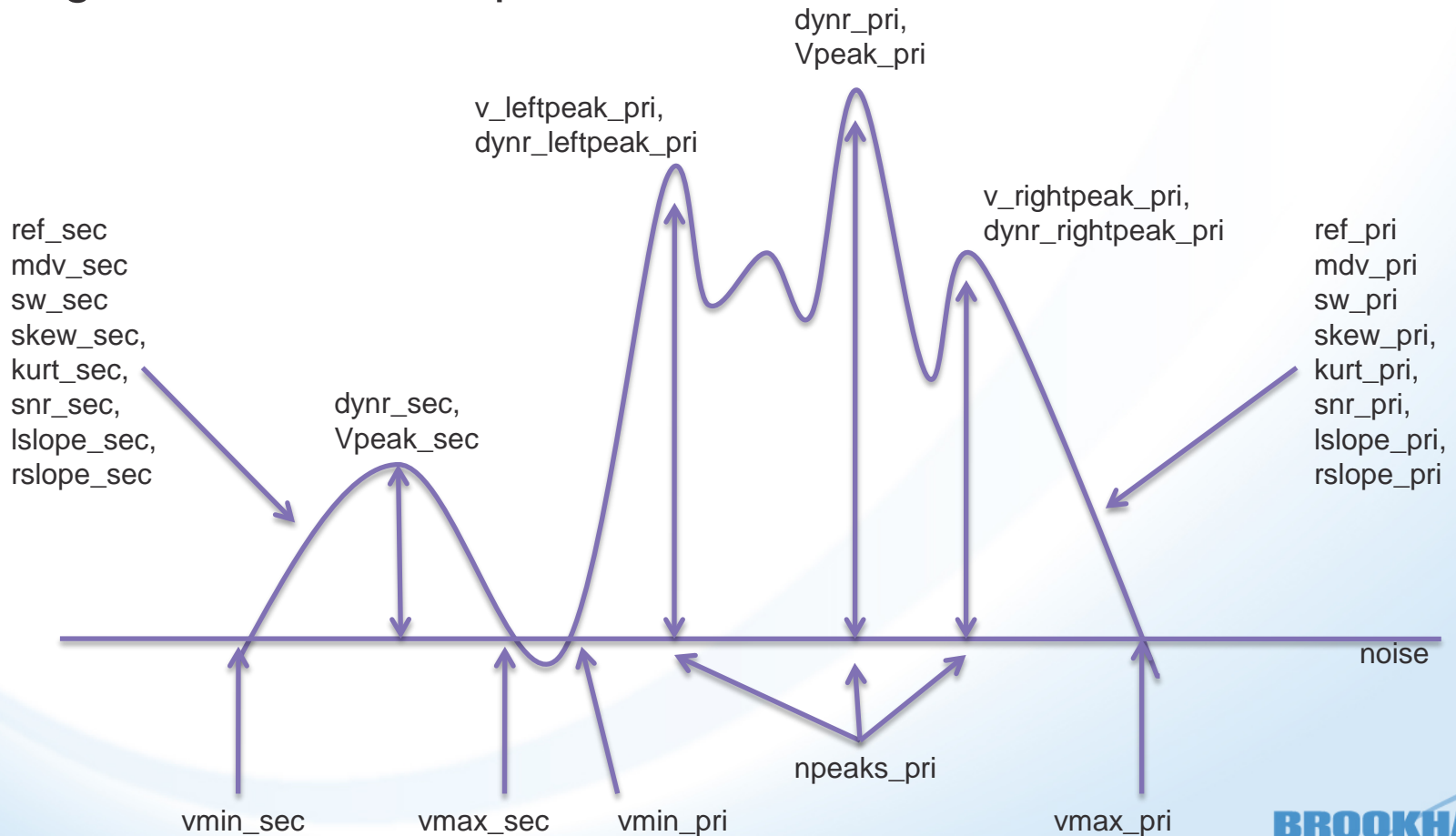


Retrieval



# MicroARSCL

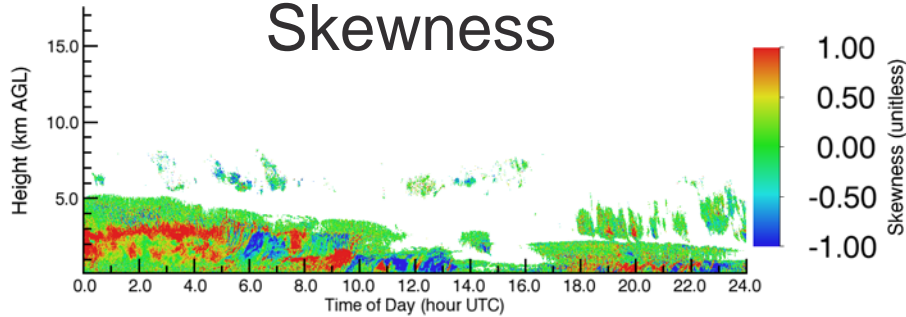
MicroARSCL distills radar Doppler spectra into an extended set of **objective** measurements particularly sensitive to microphysics, offering a framework for process studies and model evaluation.



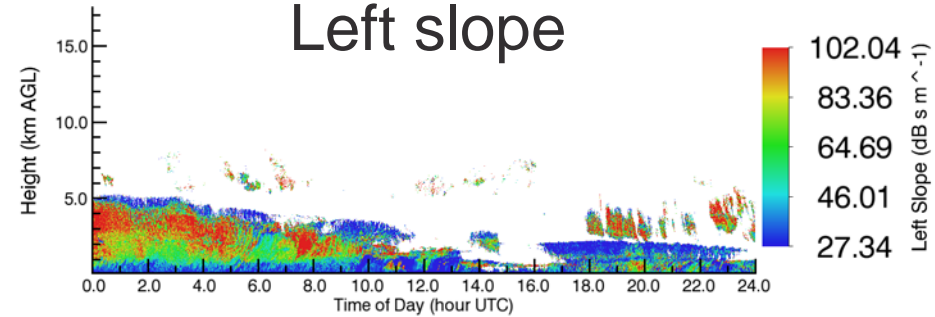
# Example MicroARSCl Parameters

NSA 20111017

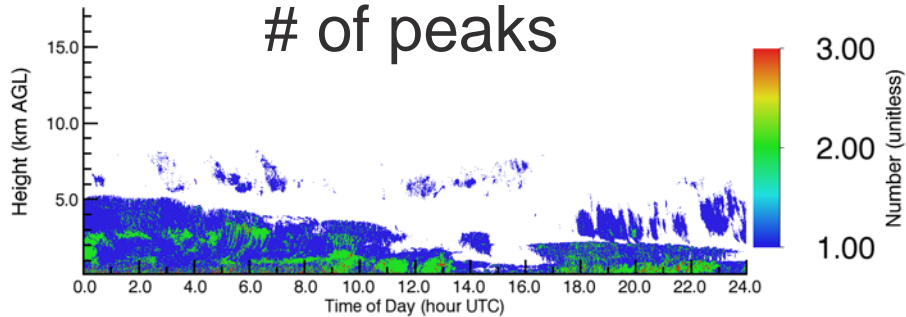
## Skewness



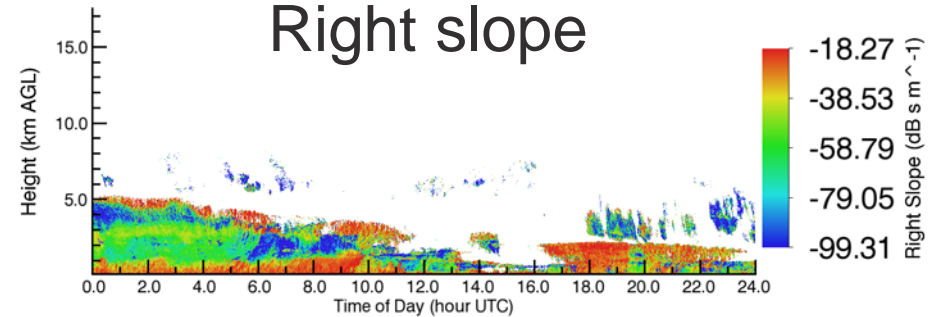
## Left slope



## # of peaks

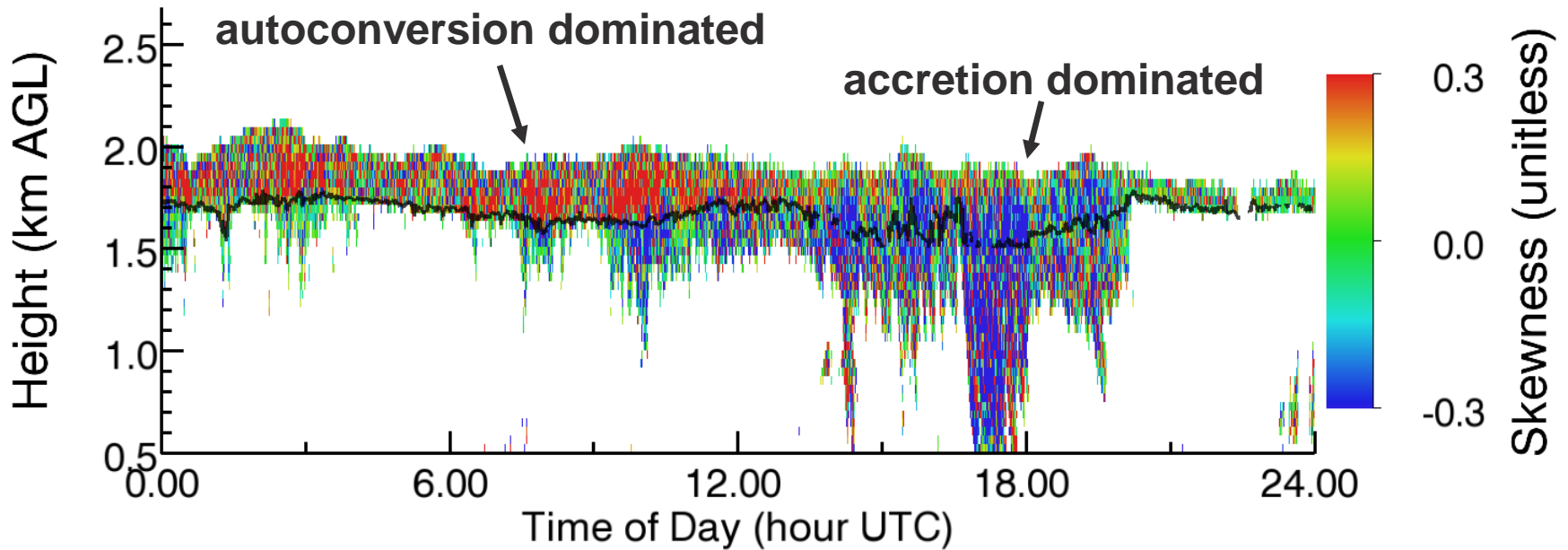


## Right slope



# Spectrum Skewness in Marine StCu

Can your bin microphysical scheme predict this?

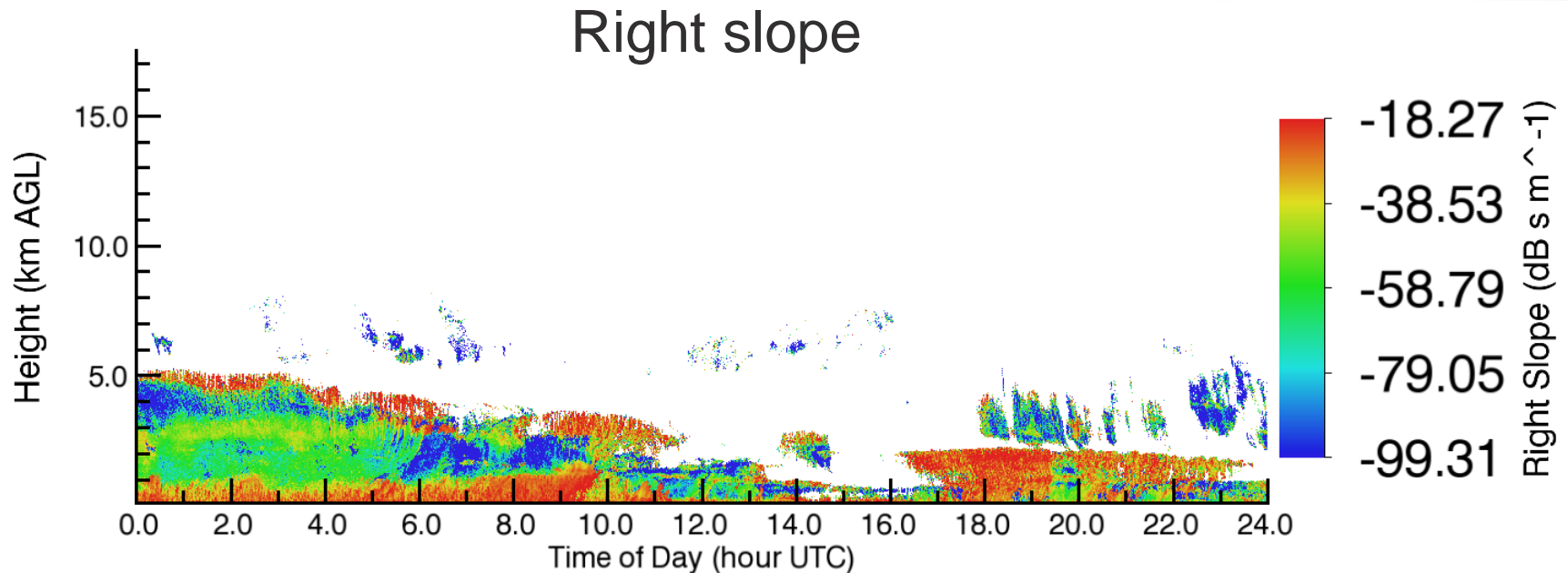


GRW

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# Spectrum Right Slope at NSA

Can your bin microphysical scheme predict this?



NSA 20111017