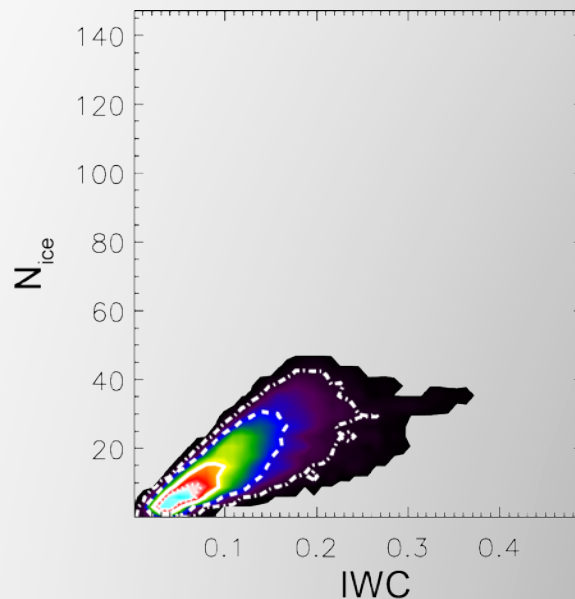


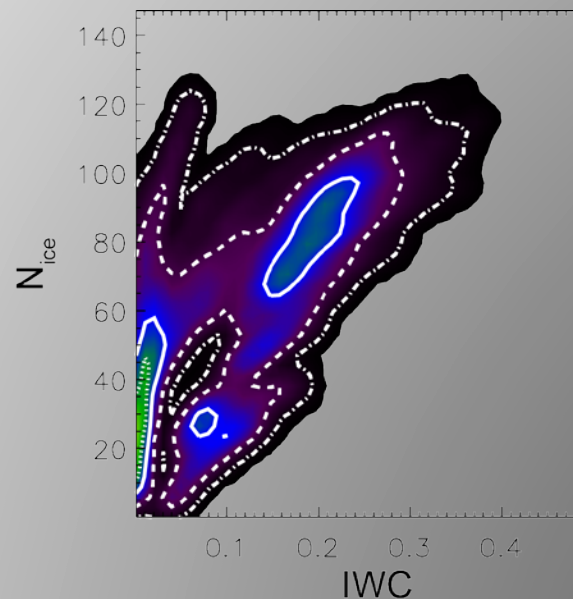
Retrievals Gone **Wild**: Freedom from Reality with Unconstrained Parameters

How is possible that published algorithms can differ by factors ranging from 2 to 10's?

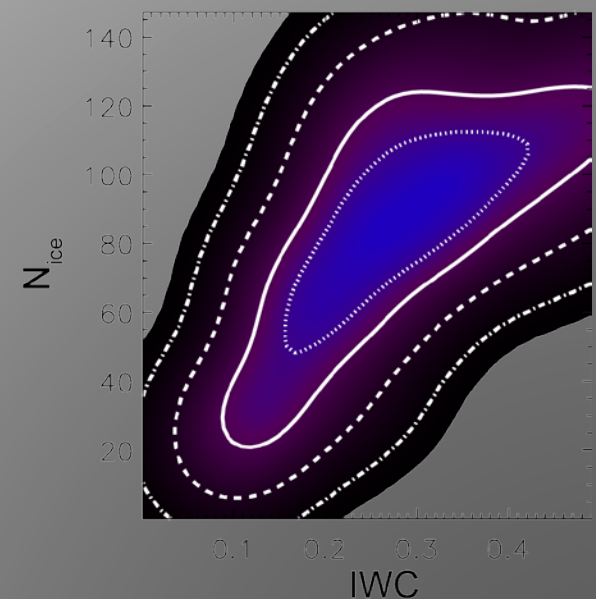
Using Markov Chain Monte Carlo (Posselt), we map the posterior solution space of Total Number and Ice Water Content of a simple mixed phase cloud retrieval that uses W-Band Radar (Z and Vd), microwave radiometer (Tb).



Fix mass-dimensional param
Vary gamma shape param



Vary mass-dimensional param
Fix gamma shape param



Vary mass-dimensional param
Vary gamma shape param

Reasonable variation in parameters that are often assumed to be fixed result in total lack constraint!