

IWC Population Statistics

HAIC-HIWC Flight Campaign IKP2 Measurements

28 February 2020

Motivation

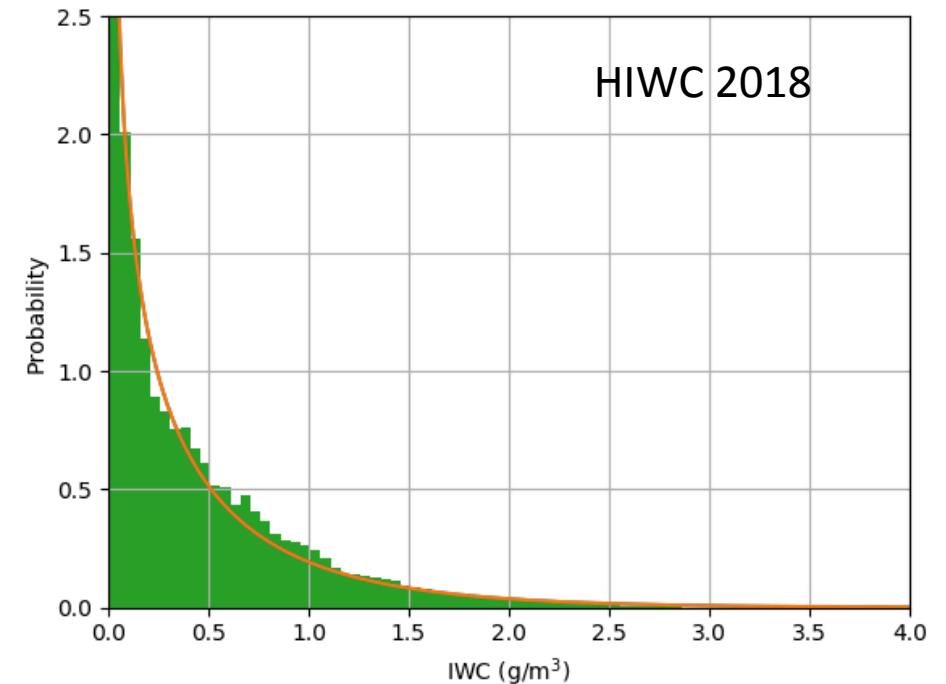
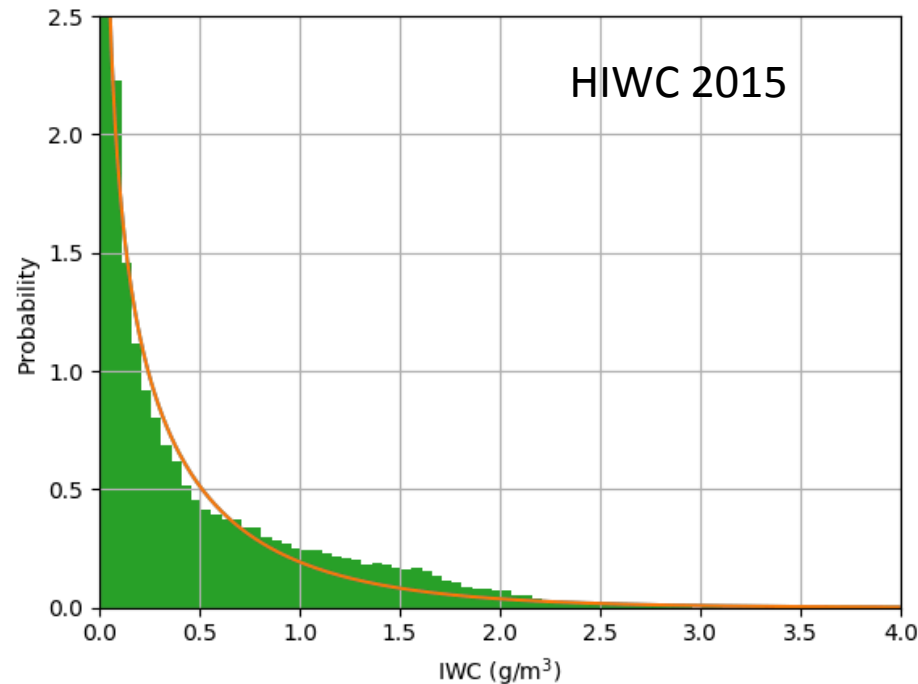
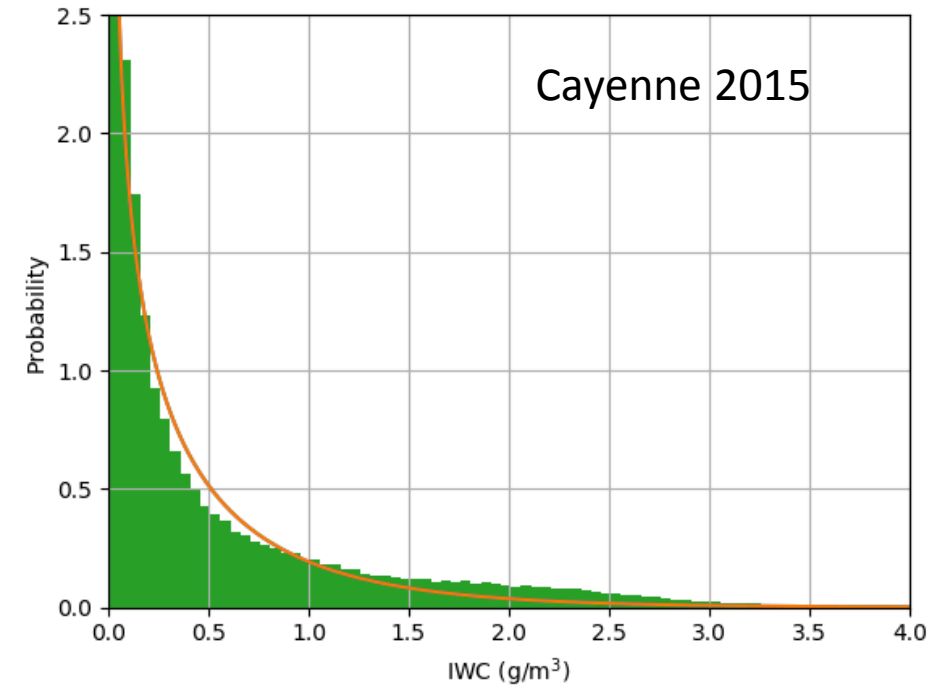
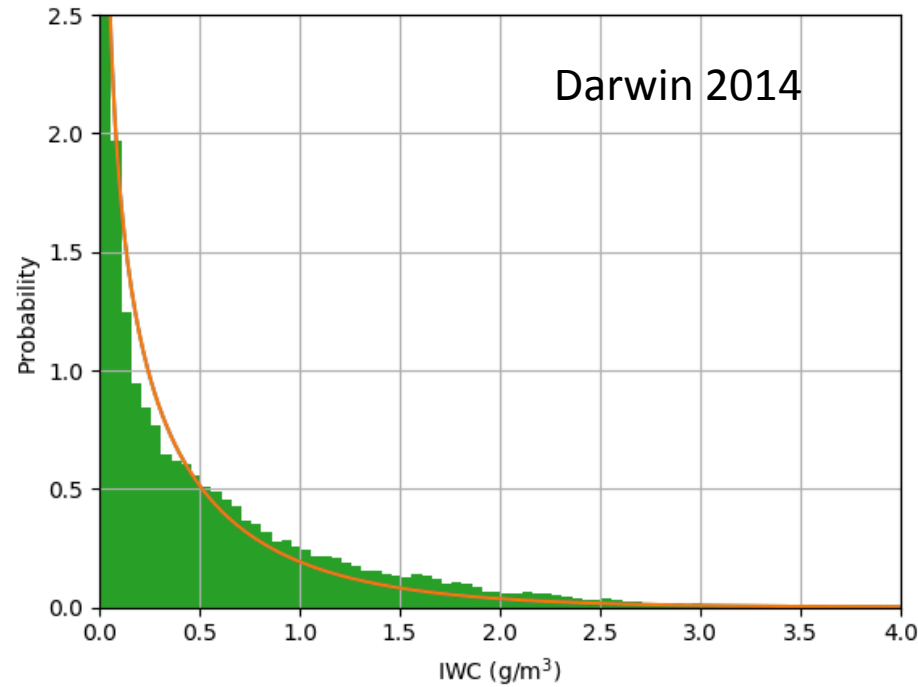
- Jan Lukáš brief at January Plenary
- Environment – probability of IWC level occurrence
 - Gamma distribution fitted to collected reference IWC data
 - Shape = 0.5619, scale = 0.7363

Flight Campaigns

- HAIC Darwin 2014
 - 22 flights
- HAIC Cayenne 2015
 - 17 flights
- HIWC Ft. Lauderdale 2015
 - 10 flights
- HIWC Ft. Lauderdale/Palmdale/Kona 2018
 - 7 flights

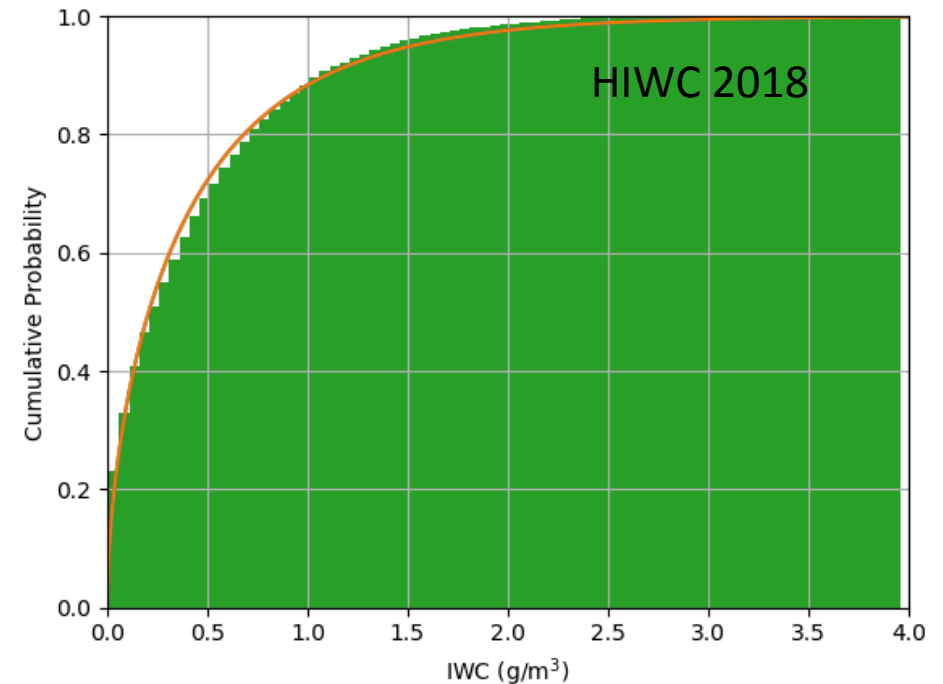
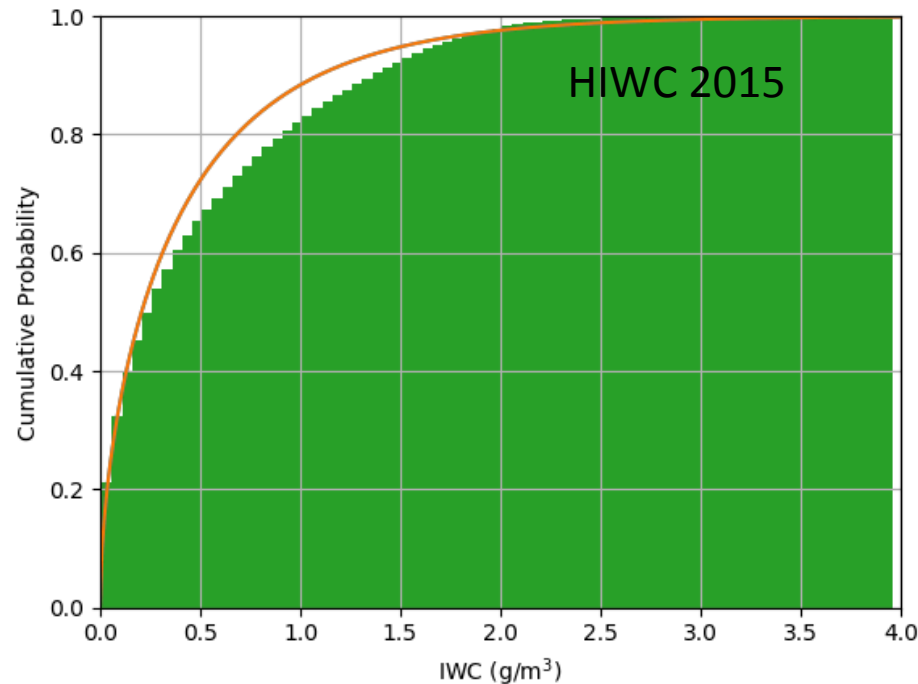
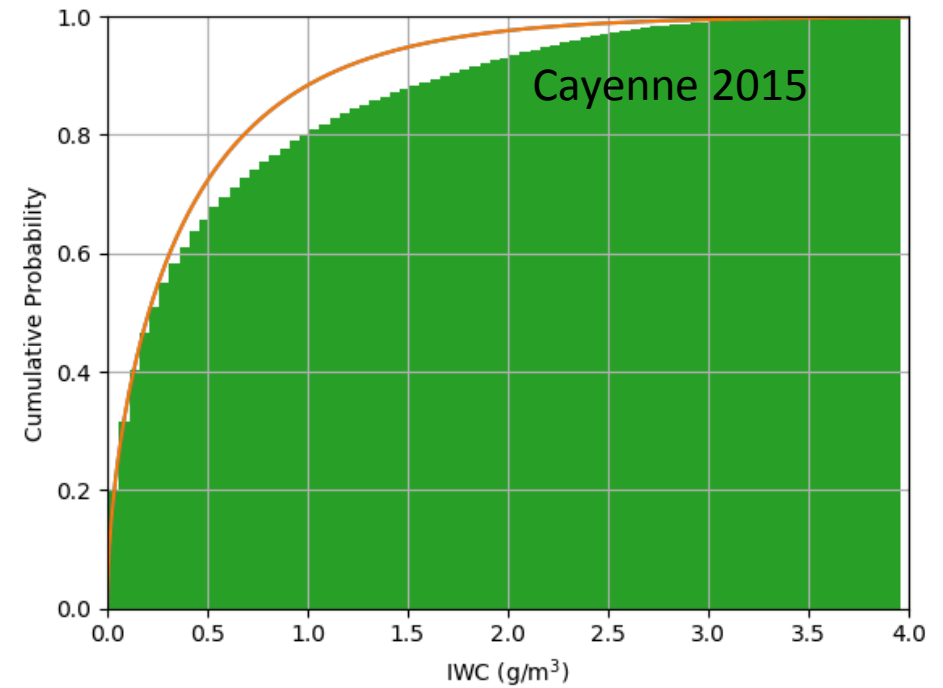
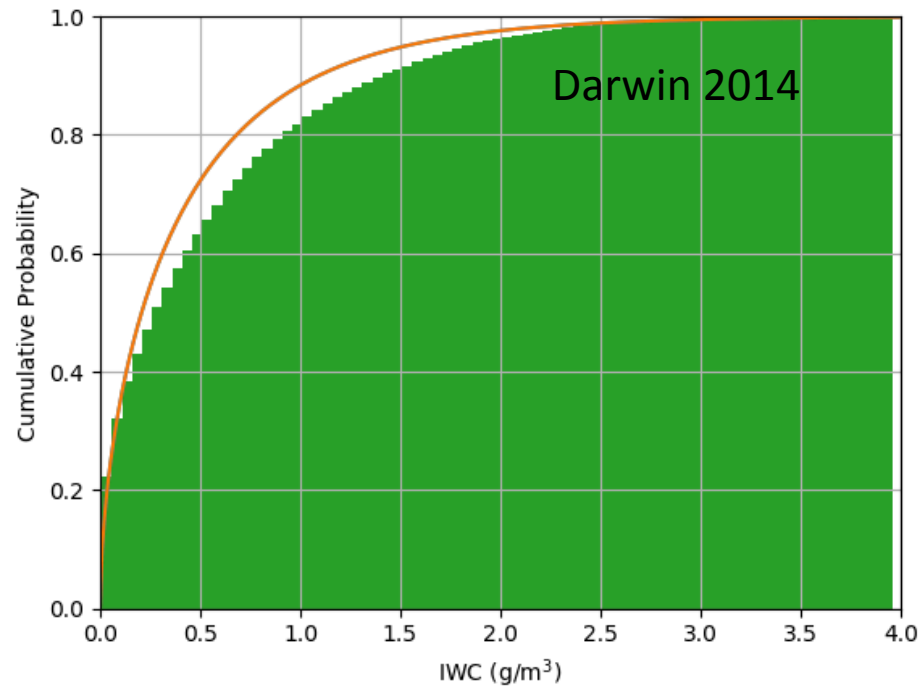
IWC Probability Distribution

- Histogram of IKP2 IWC Measurements
 - Green bars
 - Normalized
 - $\text{IWC} \geq 0.01 \text{ g/m}^3$
 - 0.05 g/m^3 bins
- Gamma distribution
 - Orange line



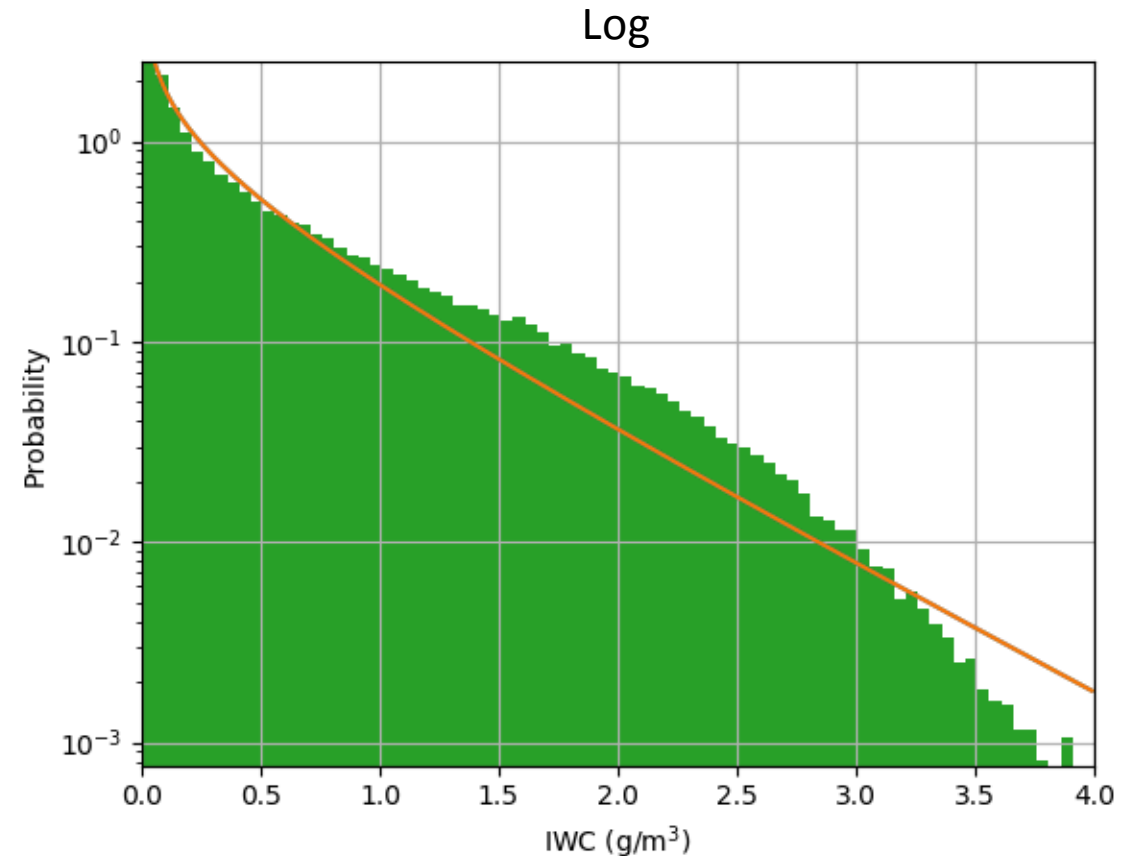
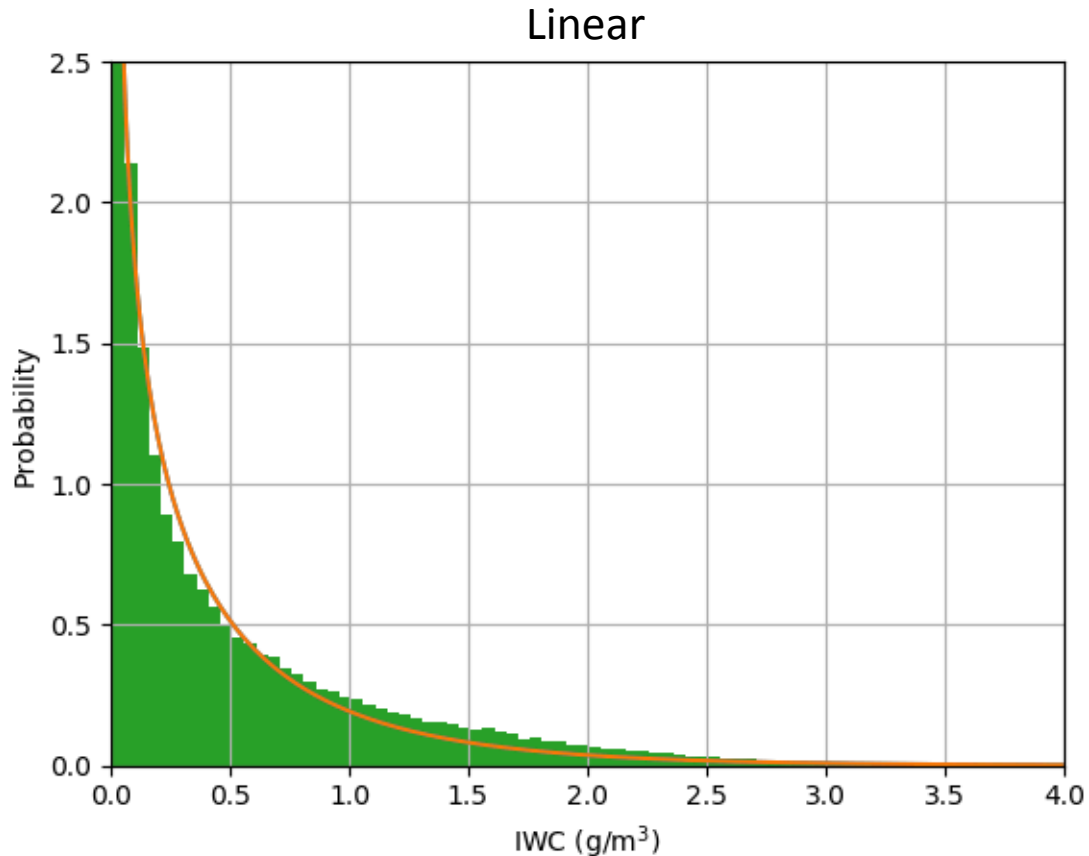
IWC Cumulative Probability

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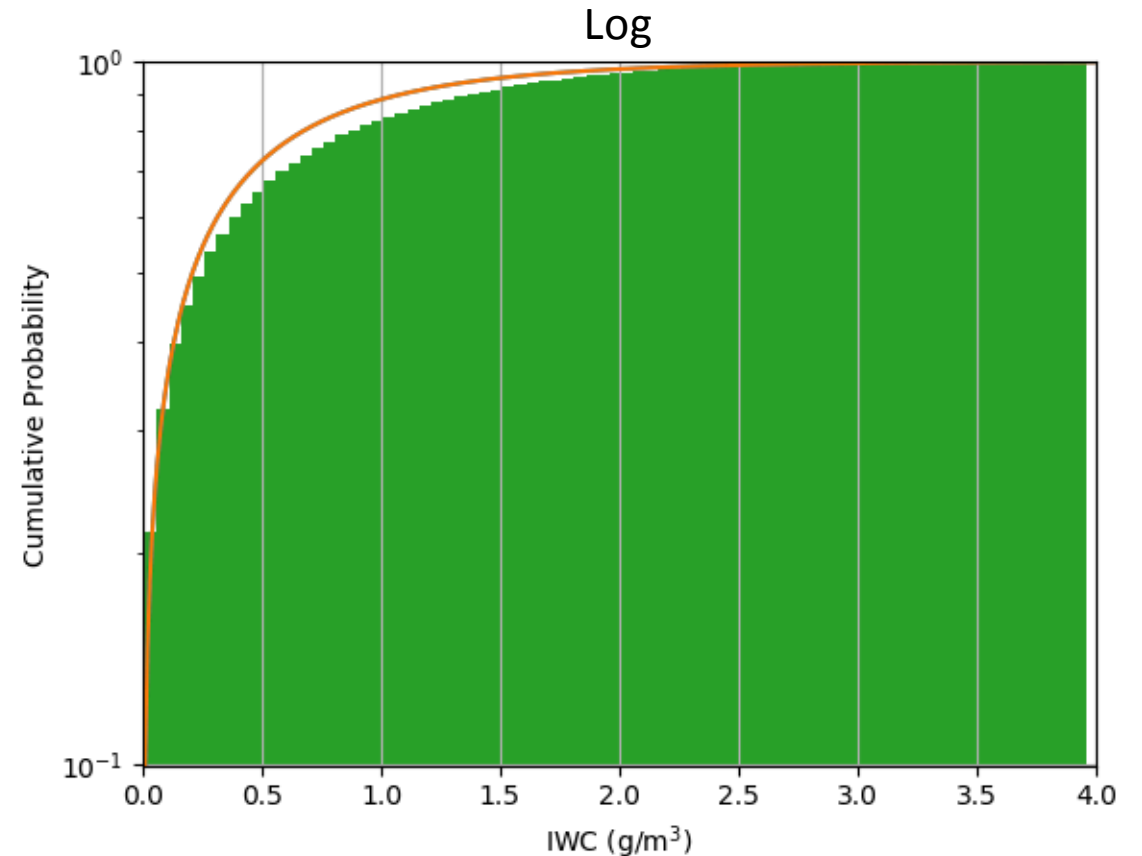
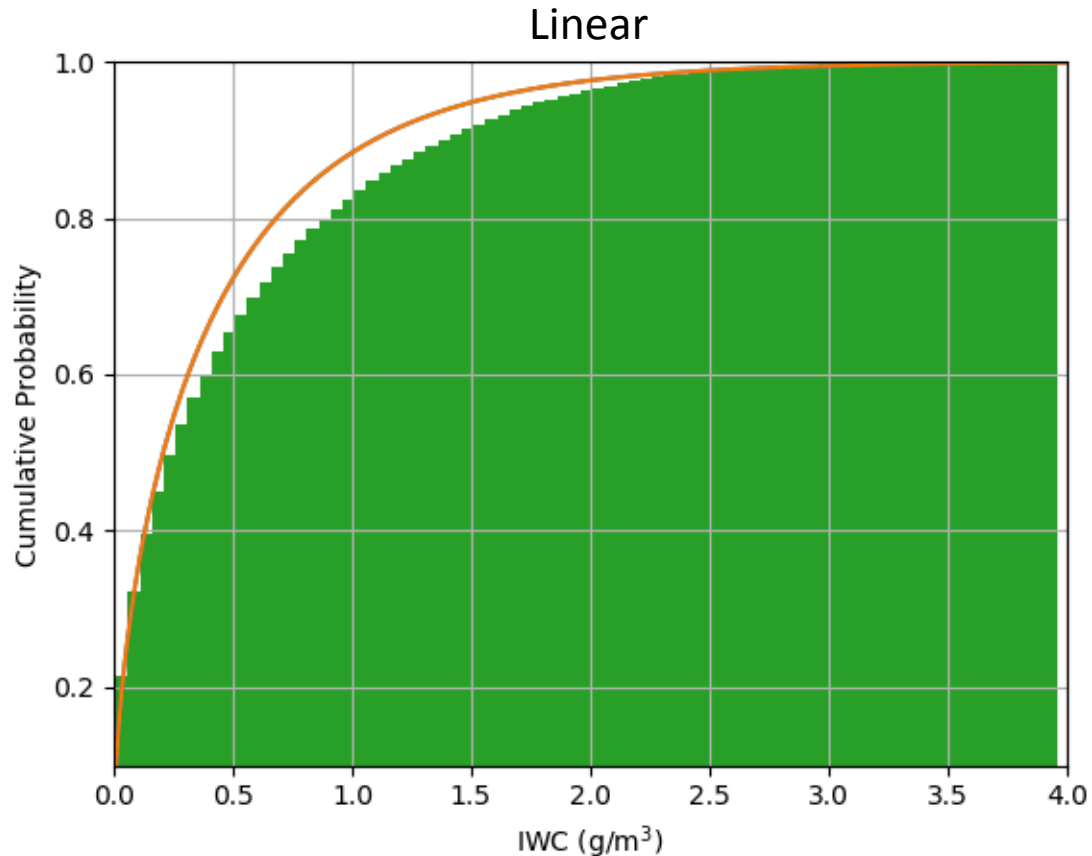
IWC Population Distribution

- All flights
- $\text{IWC} \geq 0.01 \text{ g/m}^3$ 0.05 g/m^3 bins



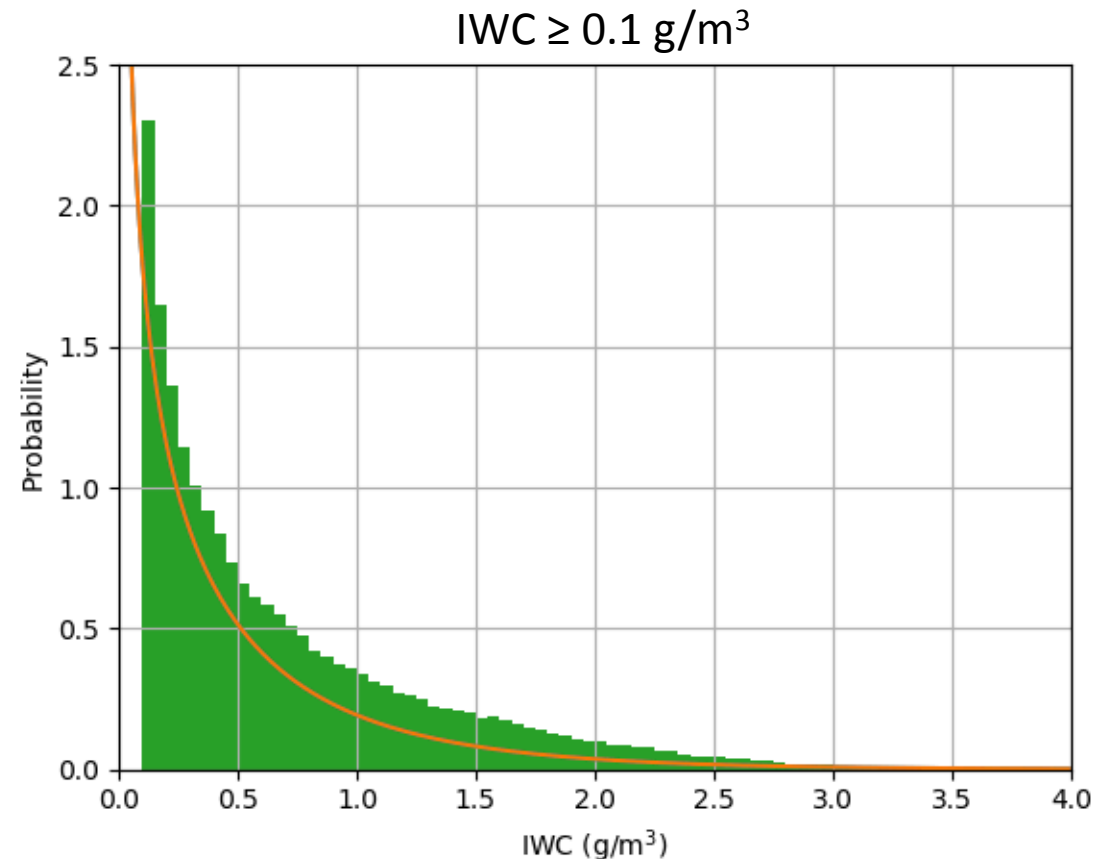
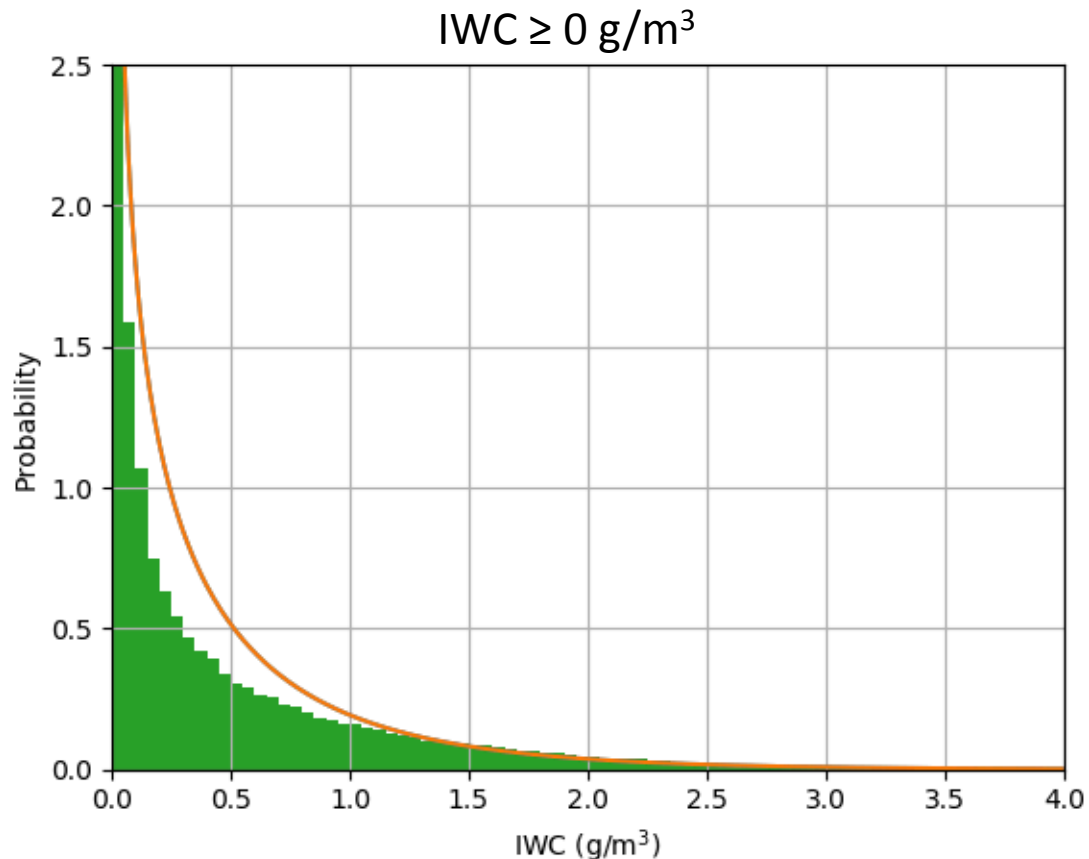
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IWC Distribution Sensitivity to Null Filter

- All flights



IWC Cumulative Distribution Sensitivity to Null Filter

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