

| | Light, | | | Moderate, | | | Moderate, | | | Heavy | | |
|---------|------------------|------|-------|------------------|-------|-------|-----------------|------|-------|----------------|------|-------|
| | Stratiform | | | Stratiform | | | Convective | | | with Hail | | |
| | (136 of 208 min) | | | (374 of 509 min) | | | (85 of 104 min) | | | (33 of 47 min) | | |
| | Mean | Best | Worst | Mean | Best | Worst | Mean | Best | Worst | Mean | Best | Worst |
| | GOF | GOF | GOF | GOF | GOF | GOF | GOF | GOF | GOF | GOF | GOF | GOF |
| | Rank | | | Rank | | | Rank | | | Rank | | |
| | 2.16 | | | 2.27 | | | 2.22 | | | 3.33 | | |
| Beta | | 30 | | | 68 | | | 16 | | | 1 | |
| | | | 0 | | | 2 | | | 0 | | | 17 |
| | 2.10 | | | 2.12 | | | 1.89 | | | 1.97 | | |
| Gamma | | 22 | | | 60 | | | 25 | | | 3 | |
| | | | 0 | | | 0 | | | 0 | | | 0 |
| Log | 2.62 | | | 2.53 | | | 2.61 | | | 1.39 | | |
| Normal | | <51> | | | <152> | | | <30> | | | <28> | |
| | | | 51 | | | 144 | | | 32 | | | 3 |
| | 3.12 | | | 3.08 | | | 3.27 | | | 3.30 | | |
| Weibull | | 33 | | | 94 | | | 14 | | | 1 | |
| | | | 85 | | | 228 | | | 53 | | | 13 |

References

Johnson, R. W., Kliche, D. V., and Smith, P.L., 2014 (in press): Maximum likelihood estimation of gamma parameters for coarsely binned and truncated raindrop size data, Quarterly Journal of the Royal Meteorological Society, available online at http://onlinelibrary.wiley.com/doi/10.1002/qj.2209/pdf, DOI:10.1002/qj.2209.



Preliminary Findings

- not include hail.
- No clear-cut winner in GOF, but beta and Weibull fits are outperformed by gamma and lognormal.
- but for three categories had similar numbers of "worst GOF" samples.

• Plots of convective raindrop size samples (Fig 2) show a significant separation between the hail-producing events and events which did

• As shown in Table 1, the gamma fits *never* had the worst GOF. The lognormal fits always had the highest number of "best GOF" samples,





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