

SMExRain



A Decision Support Tool for Construction of IDF Relations for Current Climate

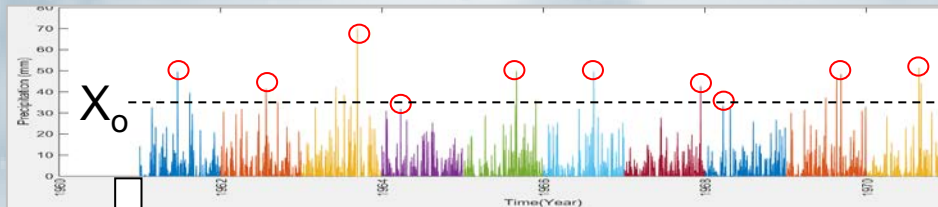


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Observed Rainfall Data – Complete Time Series

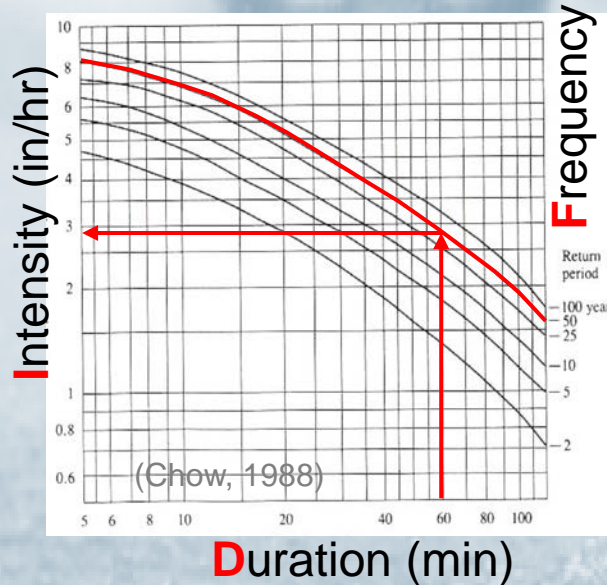


Extreme
Rainfall
Series

Rainfall
frequency
analysis

IDF
Curves

Design
Storm



Duration (min)

Intensity

I_{max}

T_p

Time

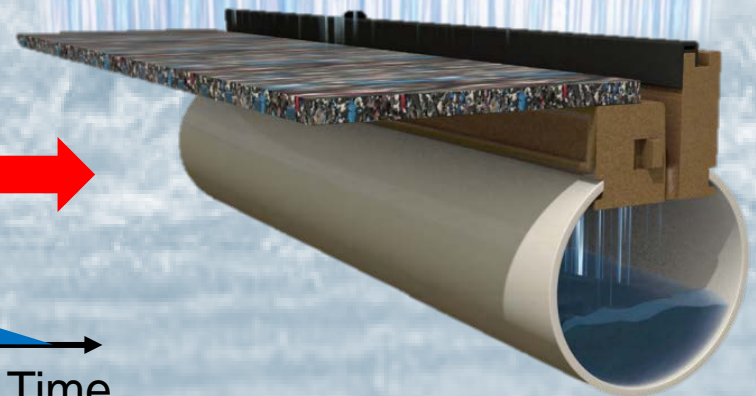
Introduction

ISSUES:

- To analyze a large amount of data for different time scales and for different stations.
- To select a suitable probability distribution.
- To develop IDF relations for a number of sites.
- To assess the climate change impacts on IDF relations.

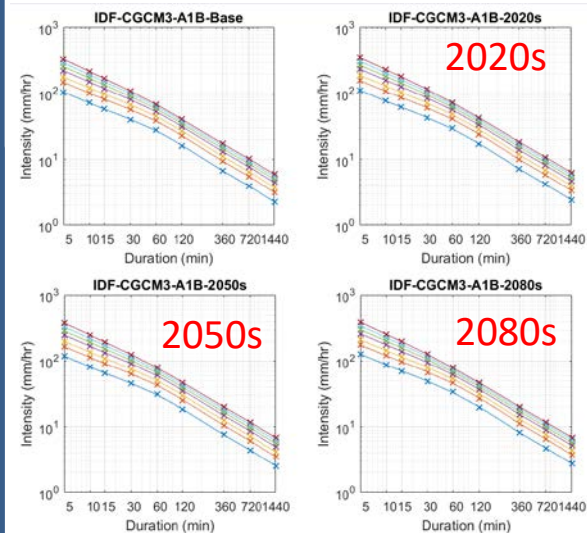
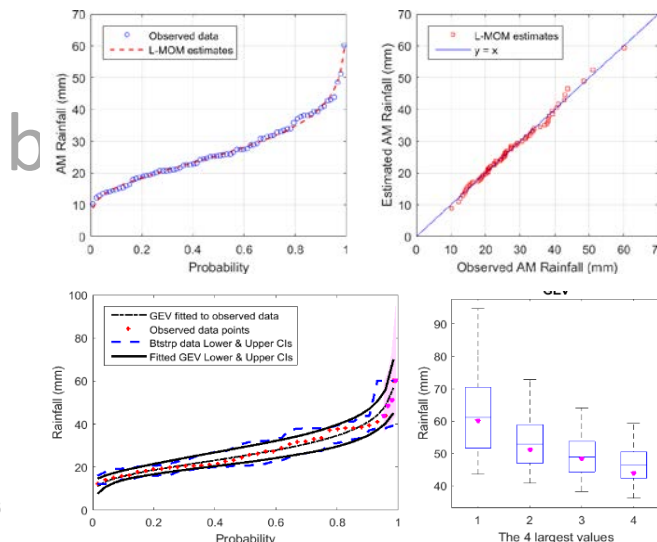
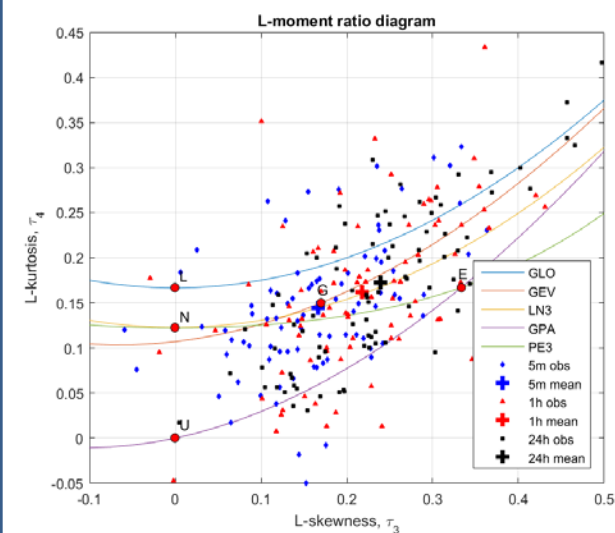
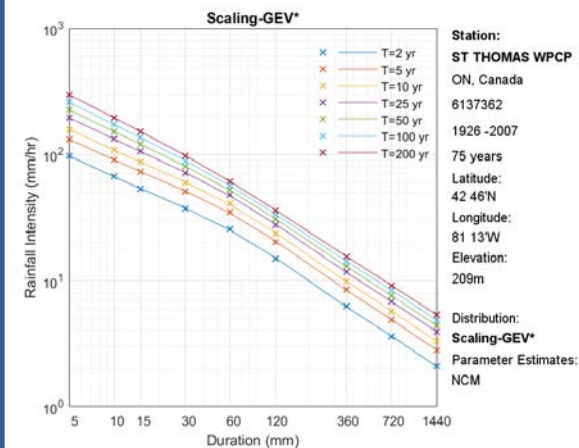
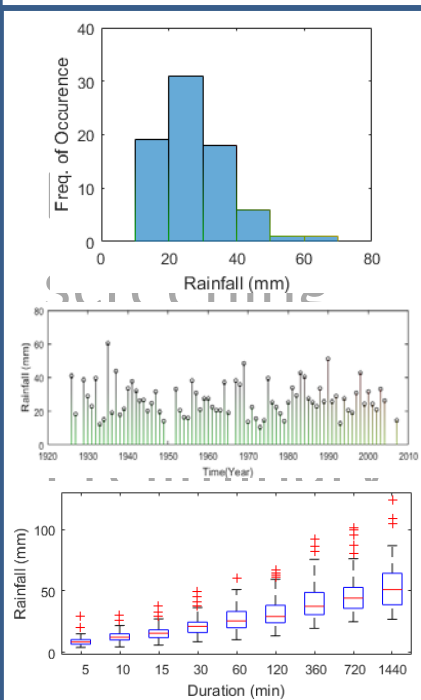
A HIGHLY TIME-CONSUMING TASK!!!

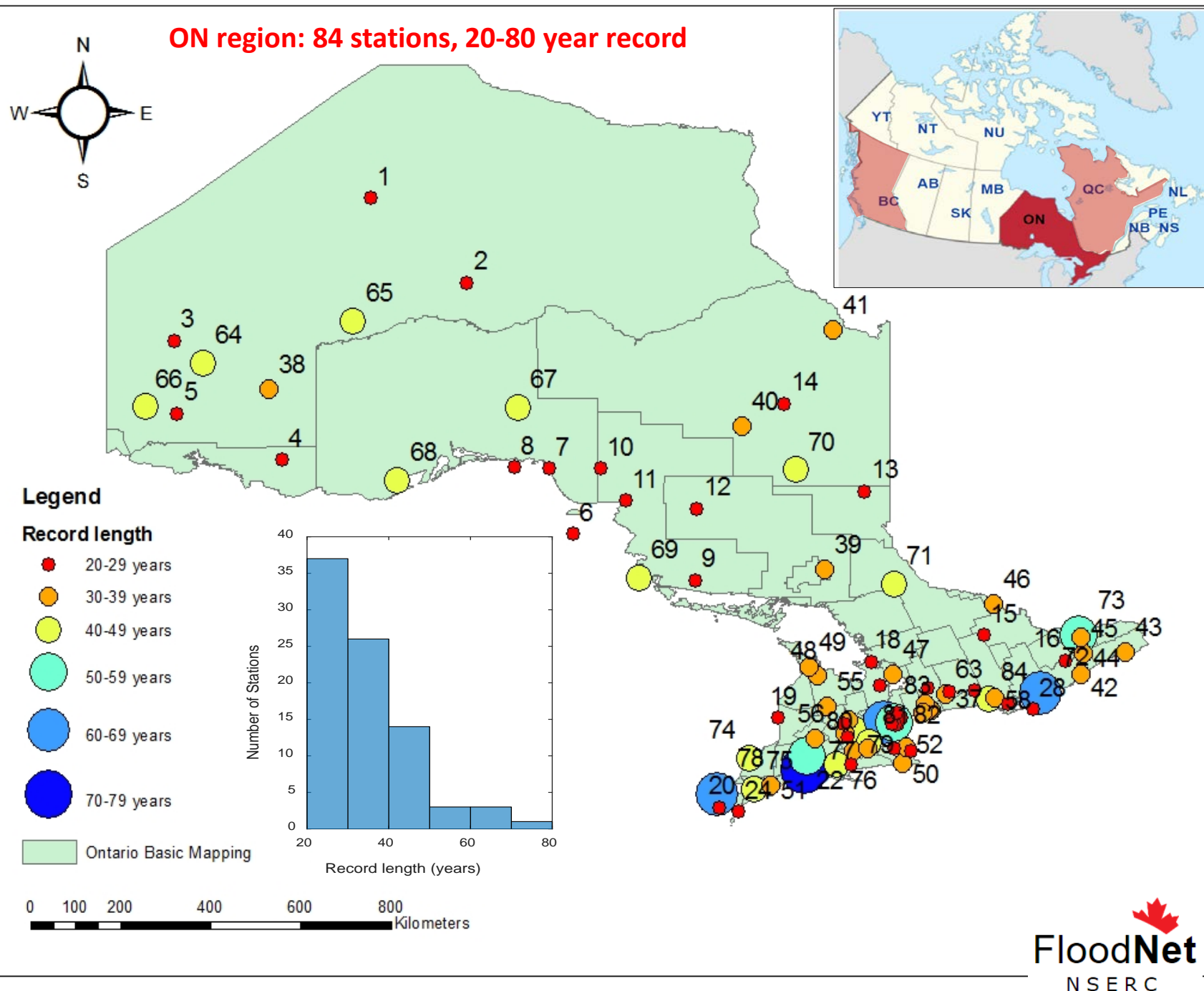
Probability of extreme rainfall occurrence & amount ???



Model Description

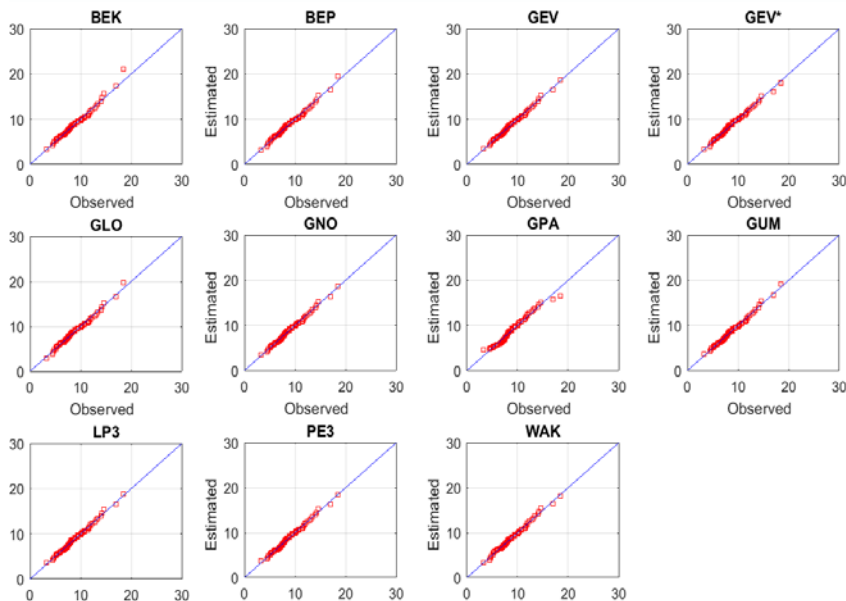
IDF Relations





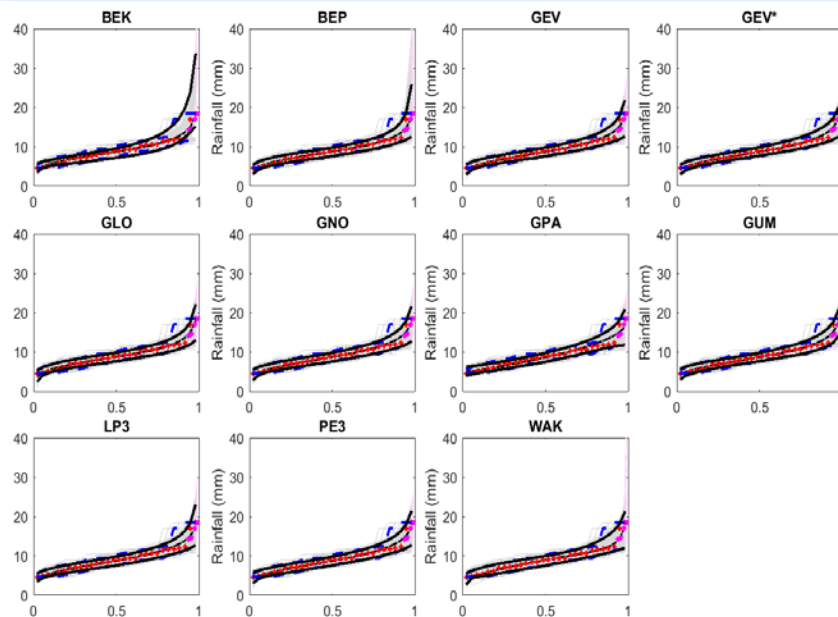
Selection of a 'best' distribution

Estimated Rainfall (mm)

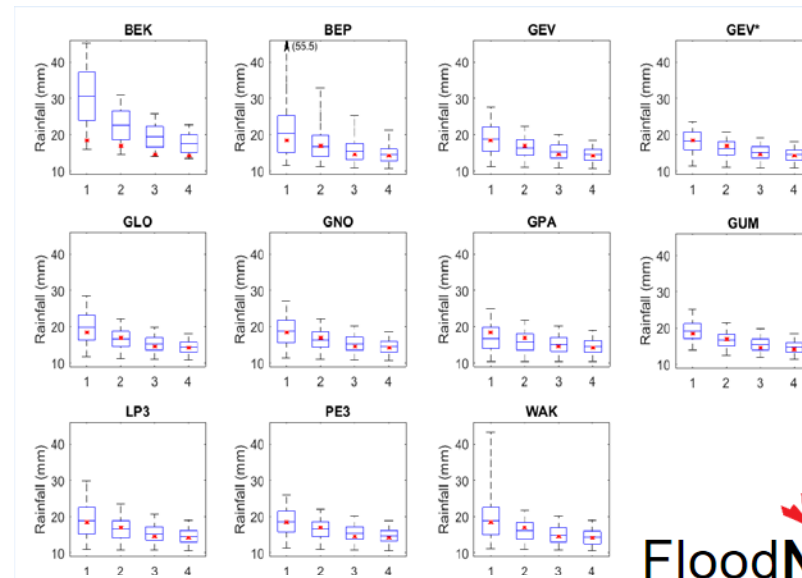
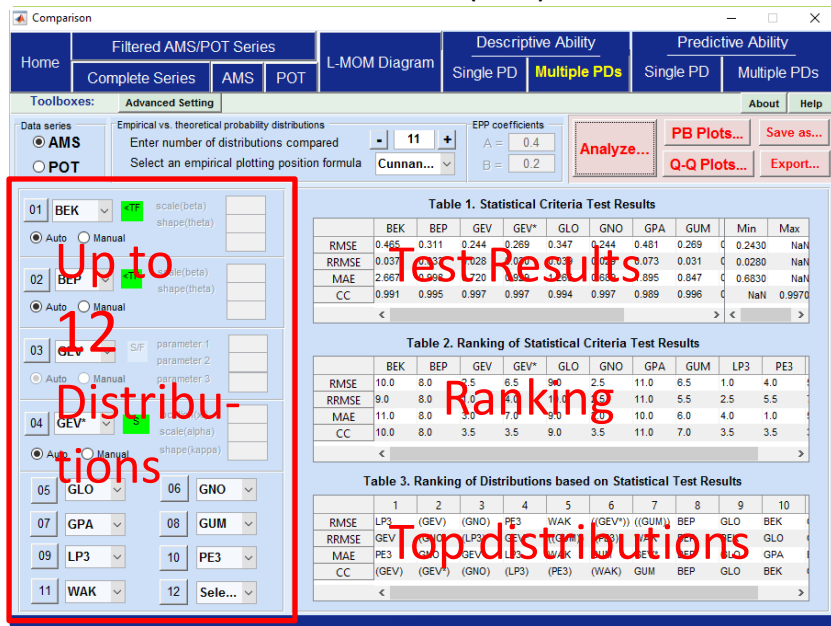


Observed Rainfall (mm)

Observed & Estimated Rainfall (mm)

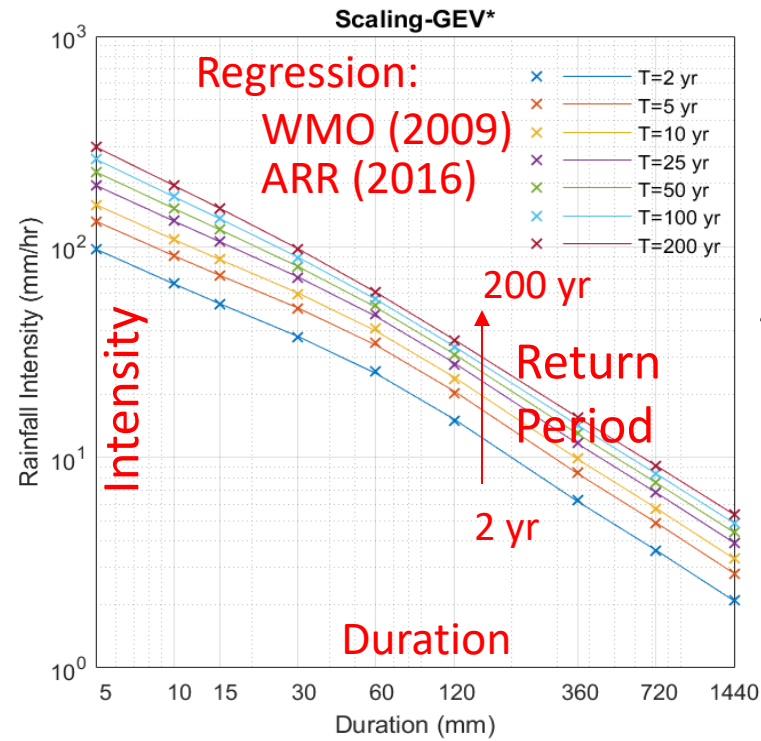
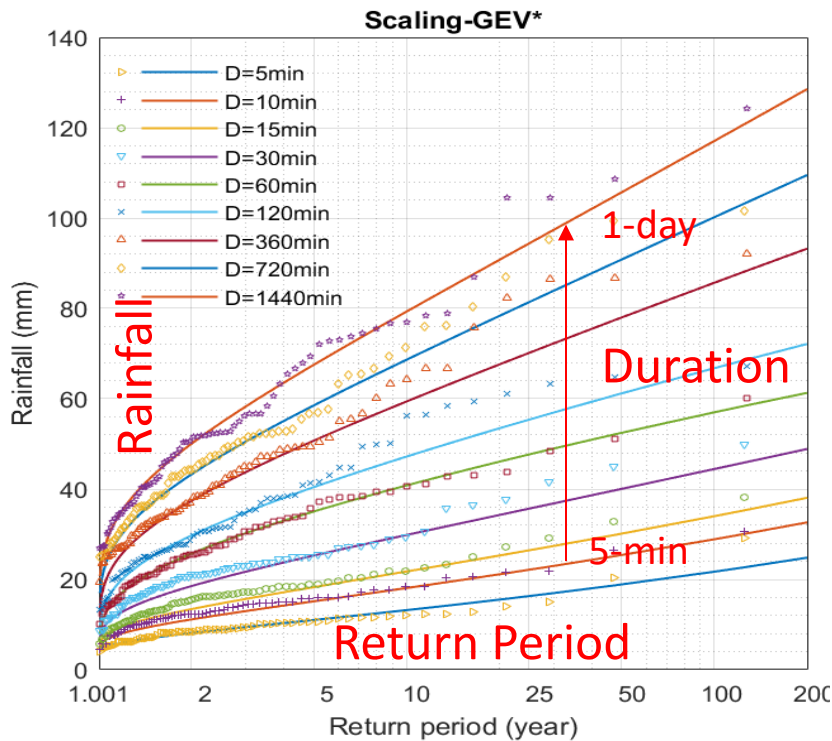


Probability

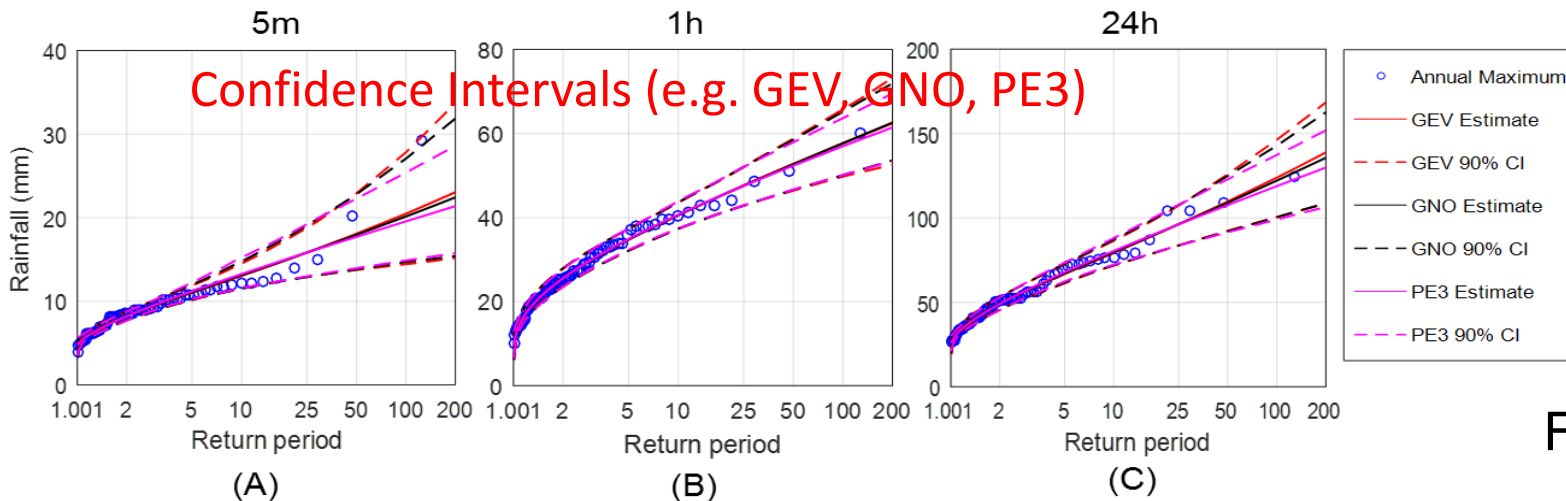


Largest values

IDF . Current Climate



Station:
ST THOMAS WPCP
 ON, Canada
 6137362
 1926 -2007
 75 years
 Latitude:
 42 46'N
 Longitude:
 81 13'W
 Elevation:
 209m
 Distribution:
Scaling-GEV*
 Parameter Estimates:
 NCM





THANK YOU!



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