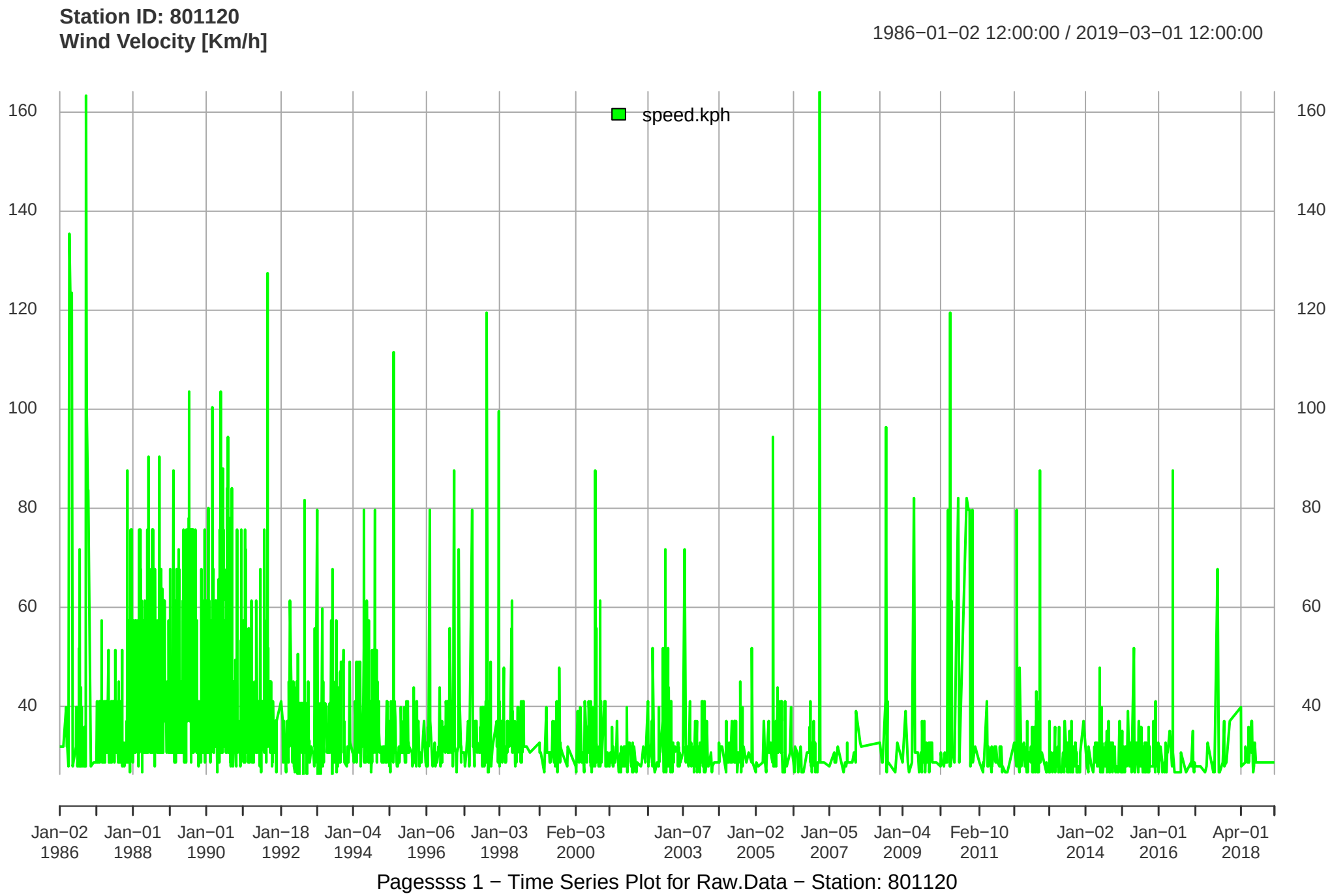
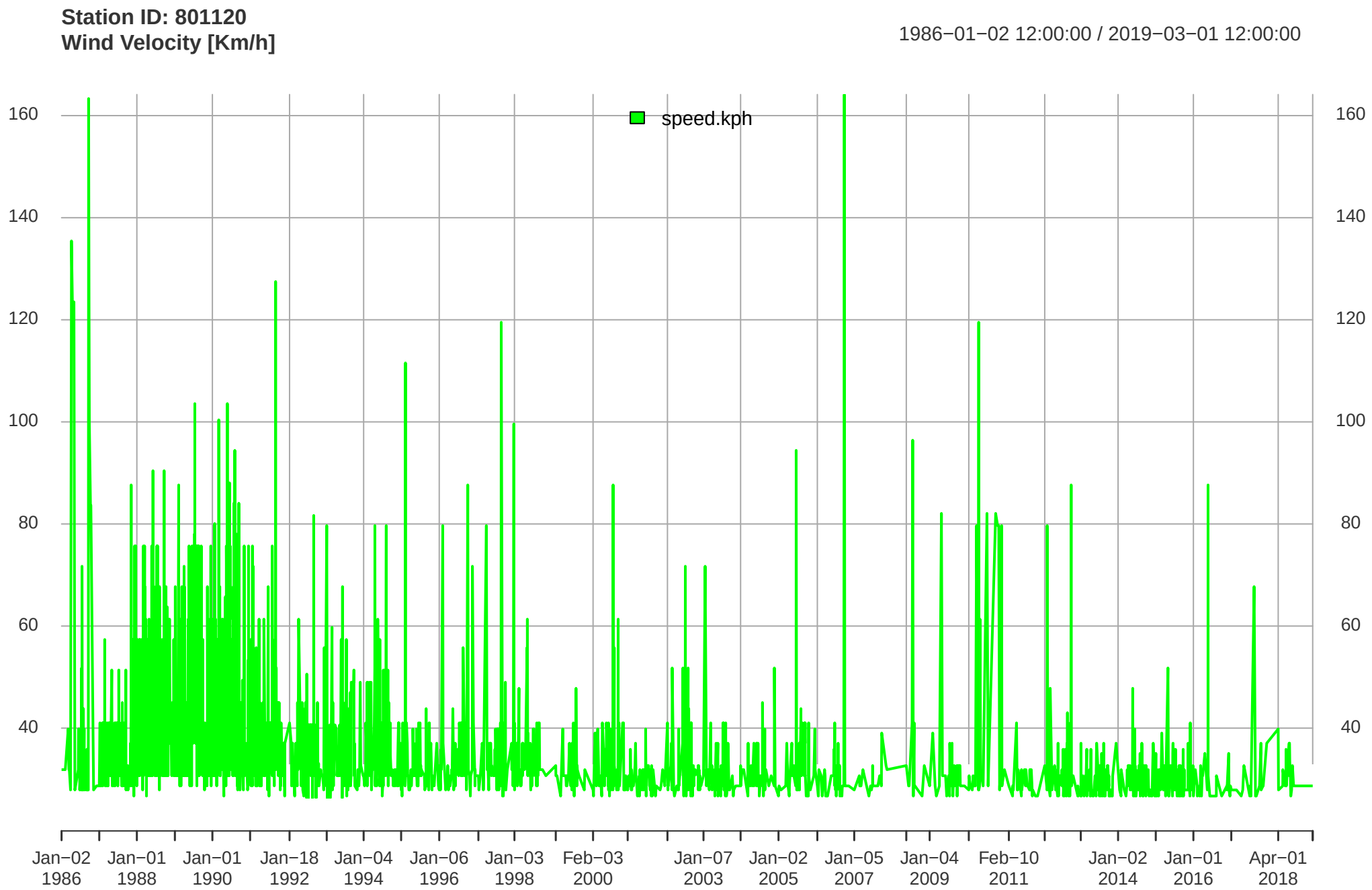
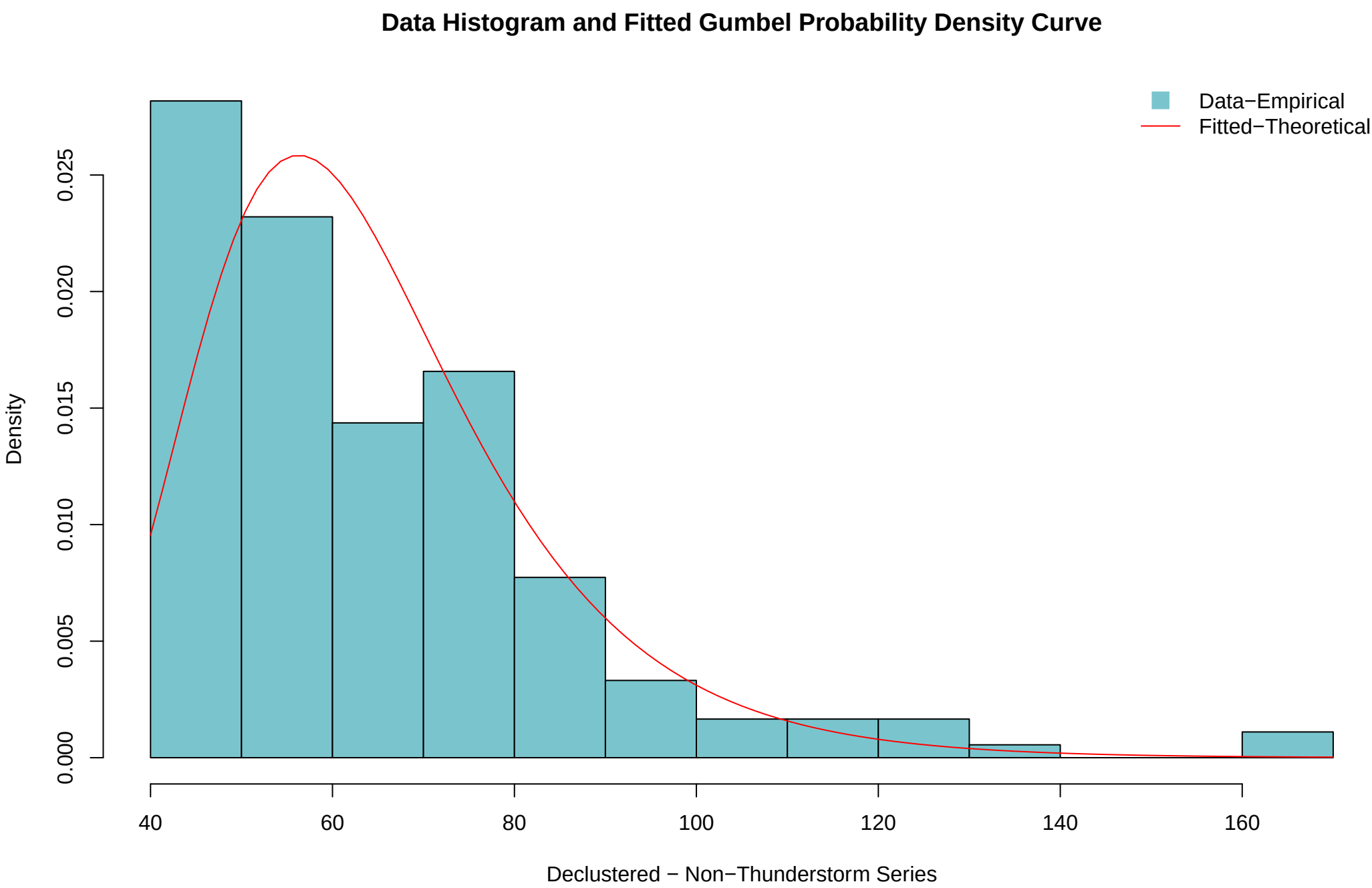
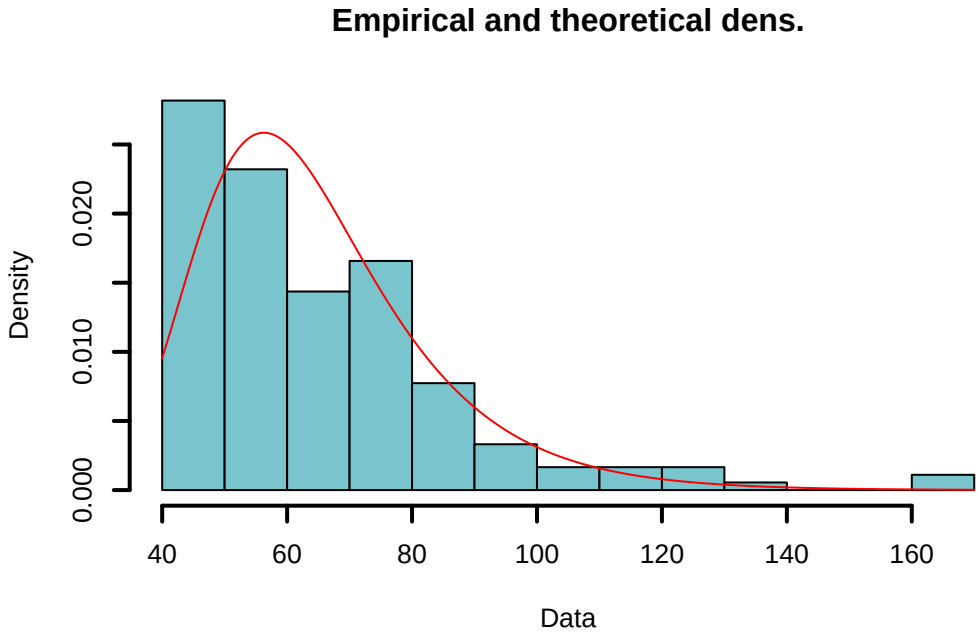


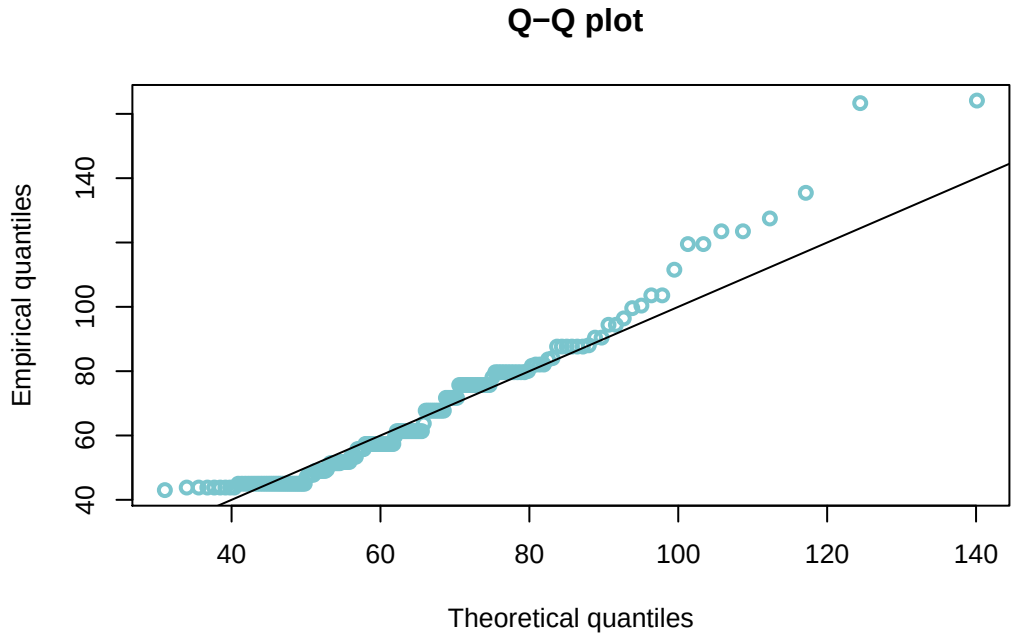
Pagessss 1 − Time Series Plot for Raw.Data − Station: 801120

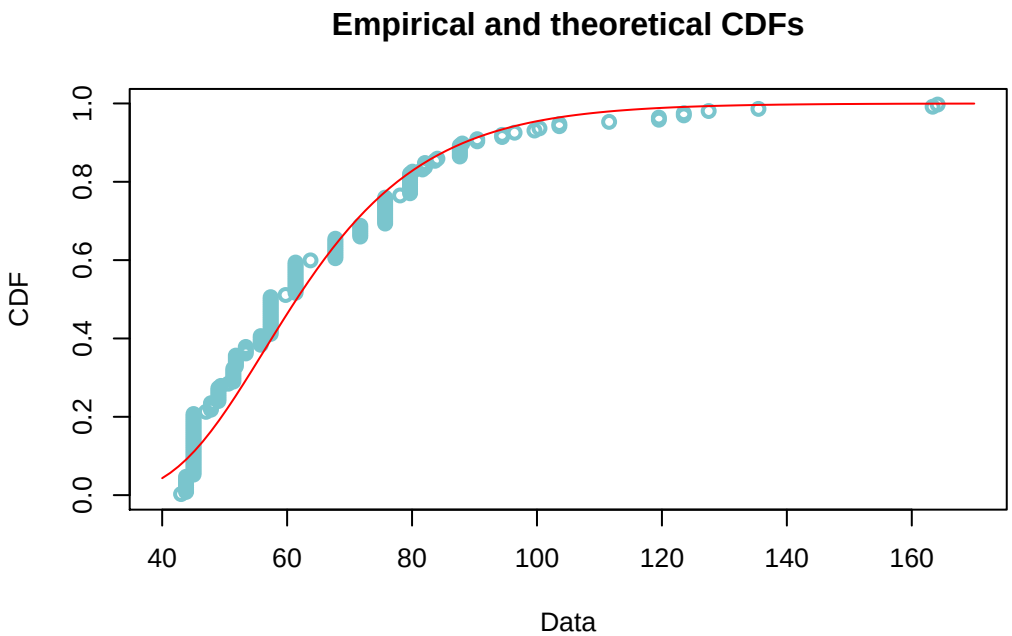

Station ID: 801120
Wind Velocity [Km/h]
1986−01−02 12:00:00 / 2019−03−01 12:00:00
speed.kph
160
140
120
100
80
60
40
Jan−02 1986
Jan−01 1988
Jan−01 1990
Jan−18 1992
Jan−04 1994
Jan−06 1996
Jan−03 1998
Feb−03 2000
Jan−07 2003
Jan−02 2005
Jan−05 2007
Jan−04 2009
Feb−10 2011
Jan−02 2014
Jan−01 2016
Apr−01 2018

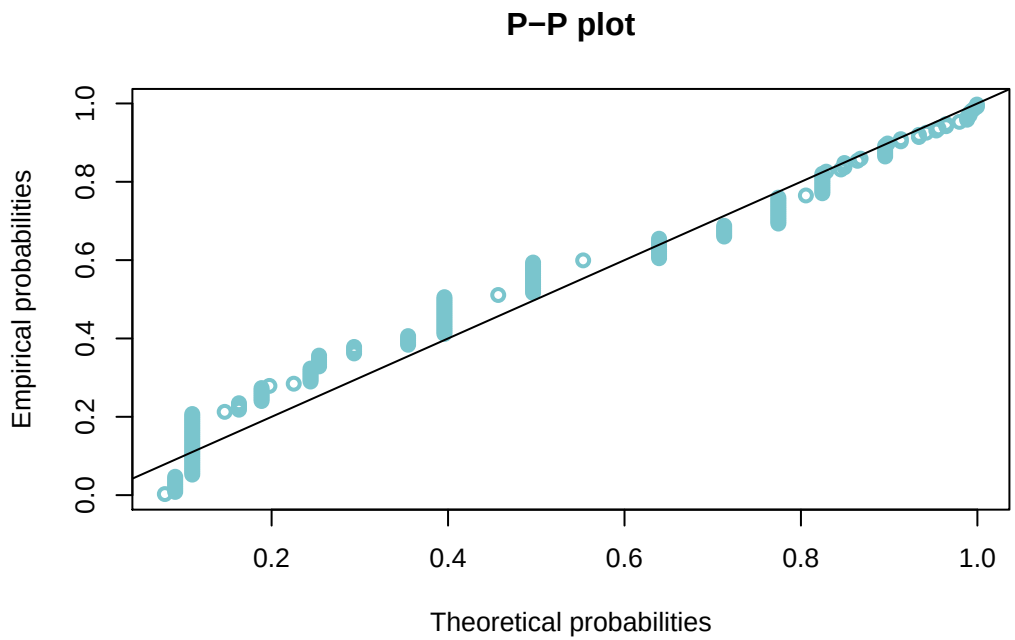


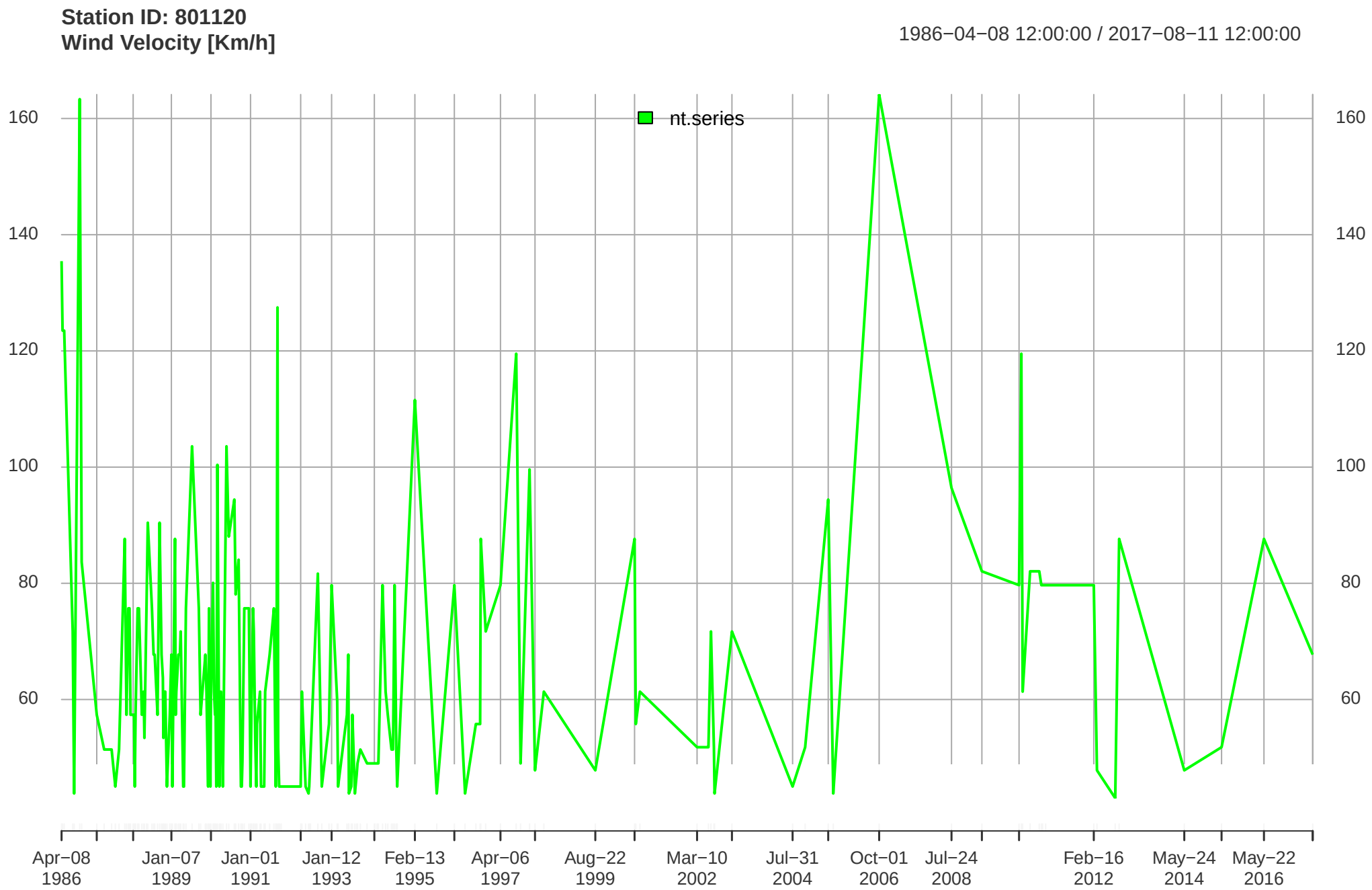
Page 3 − Log−Likelihood(Gumbel) − Optim (nll−optim). Location: 56.28. Scale: 14.23

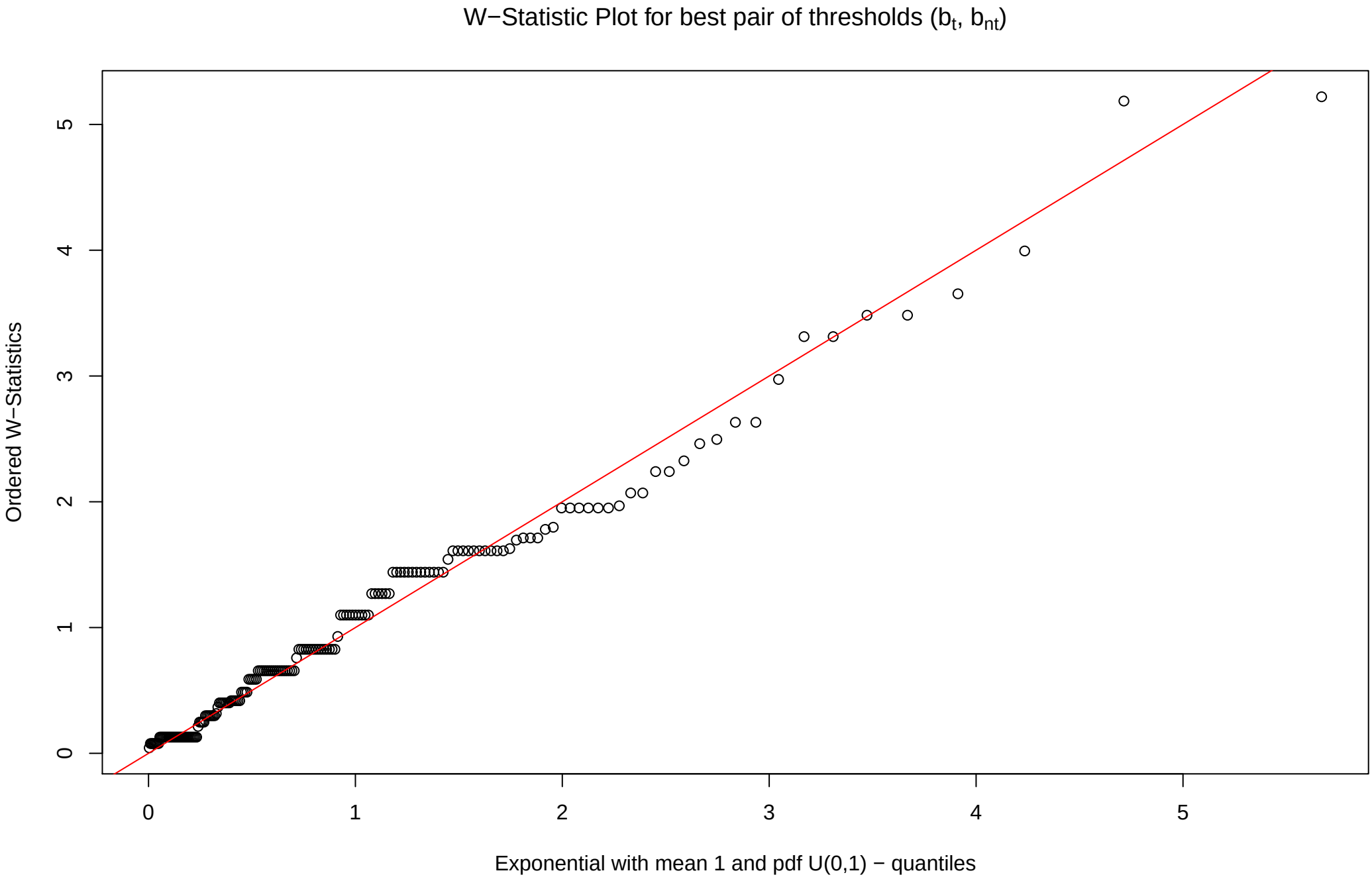

Empirical and theoretical dens.
Density
0.000
0.010
0.020
40
60
80
100
120
140
160
Data

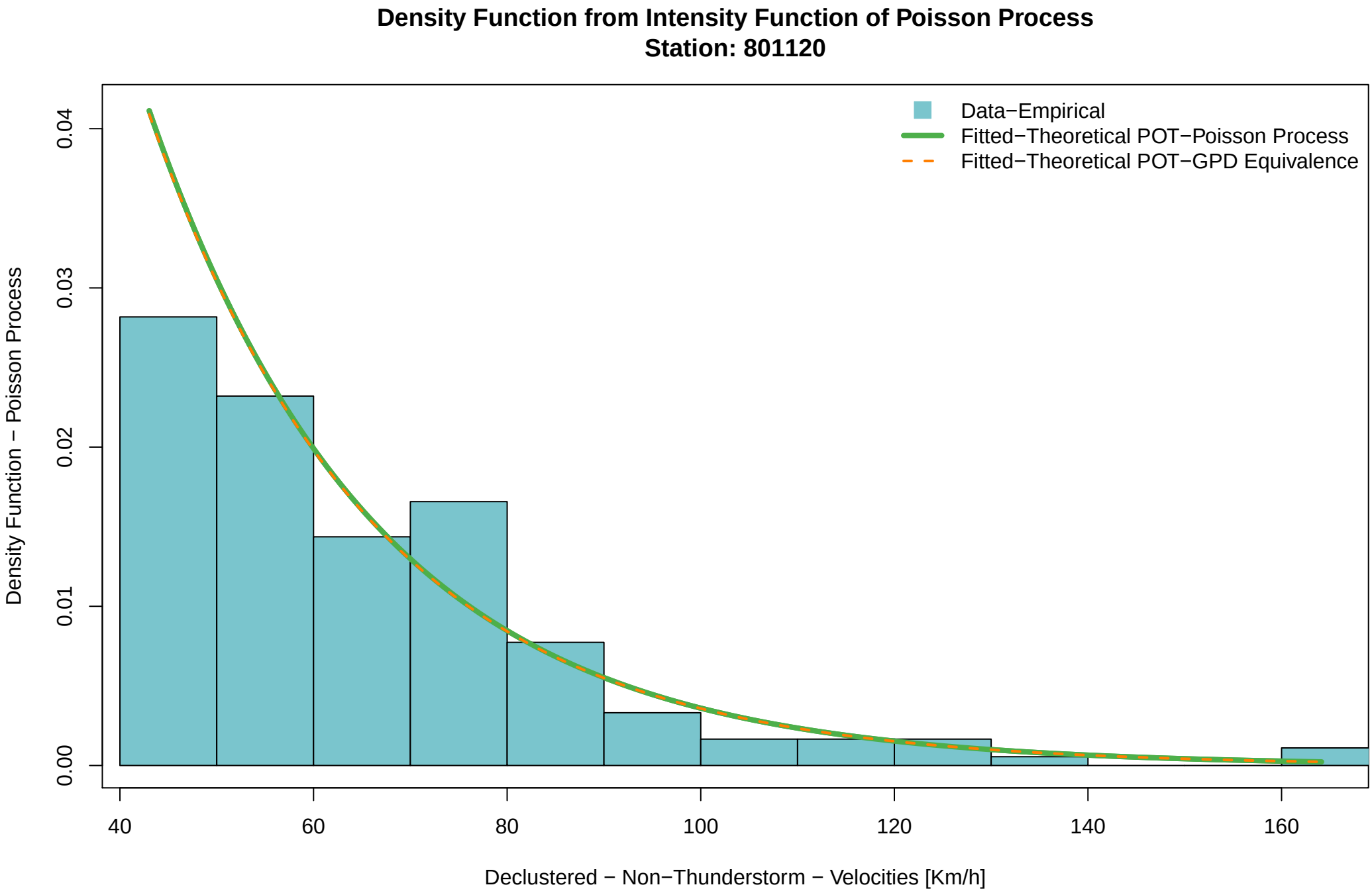

Q−Q plot
Empirical quantiles
40
60
80
100
140
40
60
80
100
120
140
Theoretical quantiles

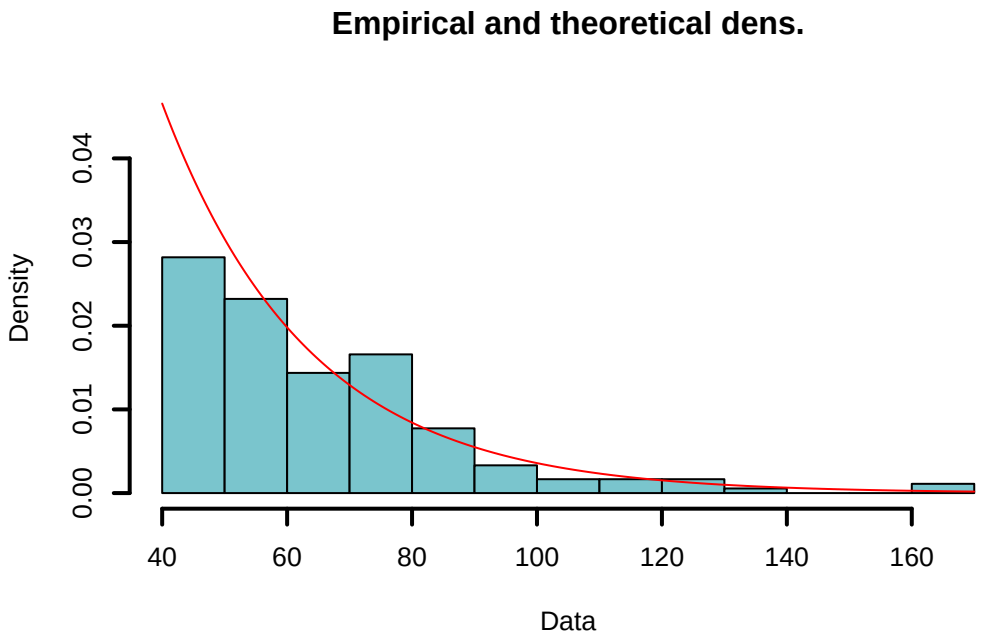

Empirical and theoretical CDFs
CDF
0.0
0.2
0.4
0.6
0.8
1.0
40
60
80
100
120
140
160
Data

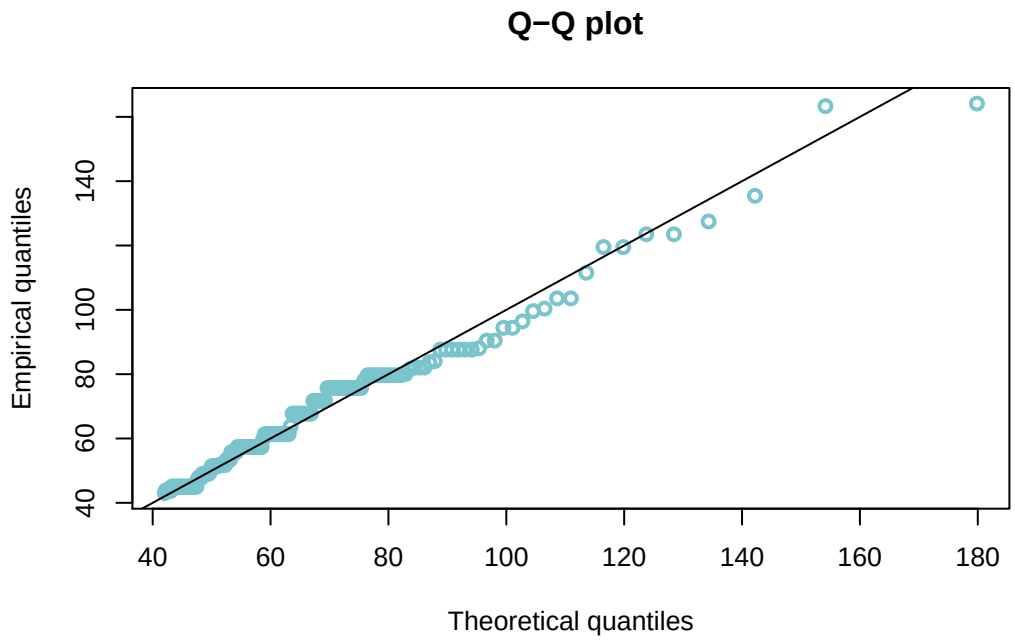

P−P plot
Empirical probabilities
0.0
0.2
0.4
0.6
0.8
1.0
0.2
0.4
0.6
0.8
1.0
Theoretical probabilities

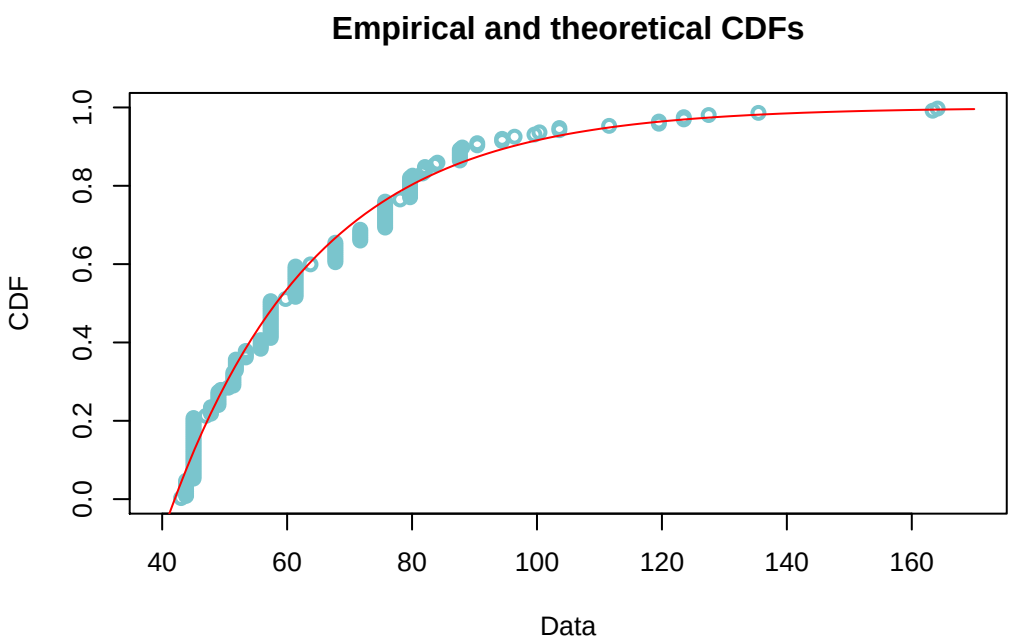

Station ID: 801120
Wind Velocity [Km/h]
1986−04−08 12:00:00 / 2017−08−11 12:00:00
nt.series
160
140
120
100
80
60
Apr−08
1986
Jan−07
1989
Jan−01
1991
Jan−12
1993
Feb−13
1995
Apr−06
1997
Aug−22
1999
Mar−10
2002
Jul−31
2004
Oct−01
2006
Jul−24
2008
Feb−16
2012
May−24
2014
May−22
2016

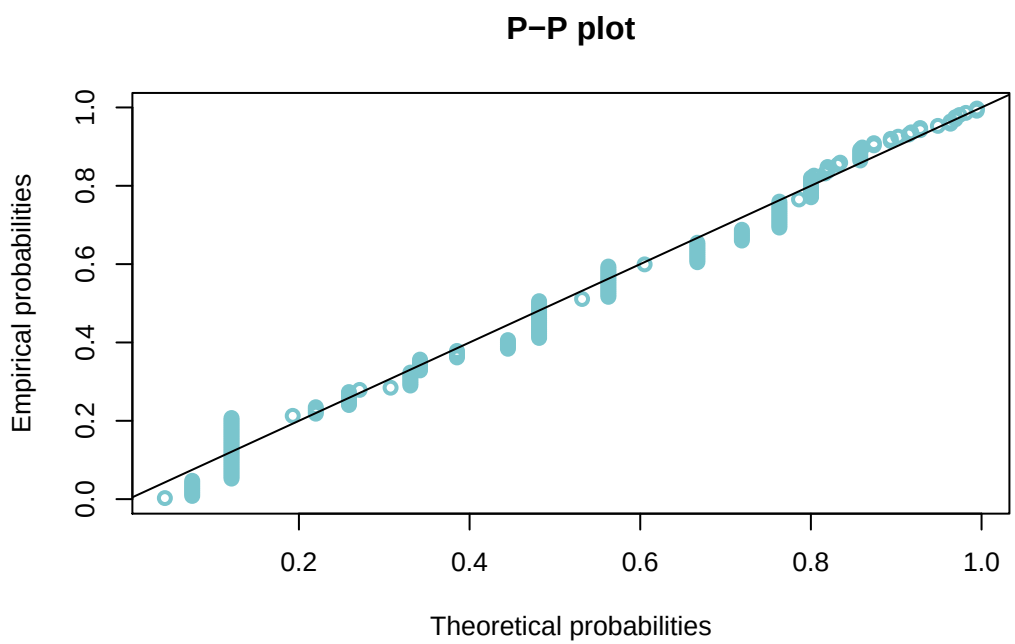

W−Statistic Plot for best pair of thresholds (b_t, b_{nt})
Ordered W−Statistics
0
1
2
3
4
5
Exponential with mean 1 and pdf U(0,1) − quantiles

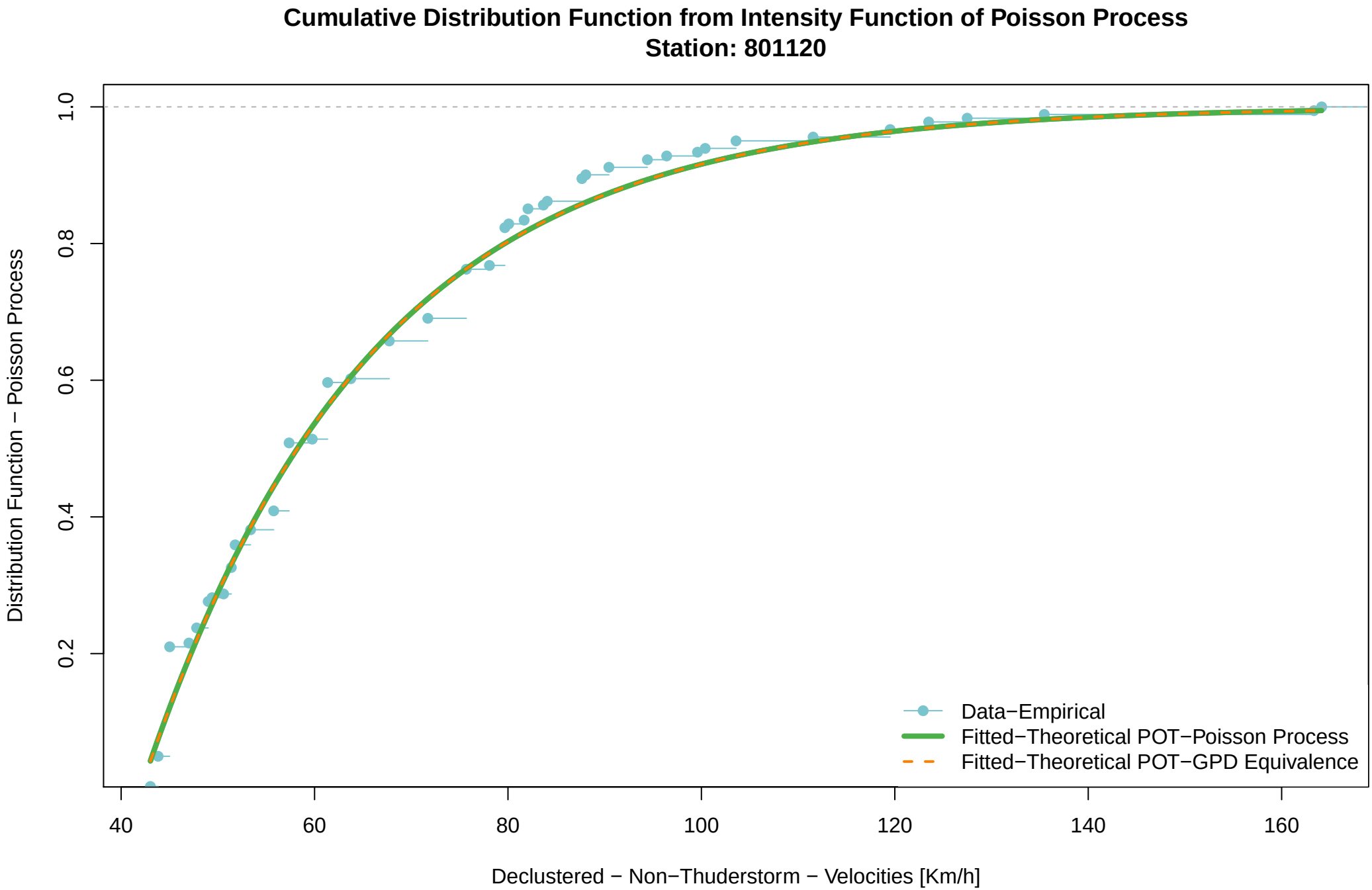

Density Function from Intensity Function of Poisson Process
Station: 801120
Data−Empirical
Fitted−Theoretical POT−Poisson Process
Fitted−Theoretical POT−GPD Equivalence
Density Function − Poisson Process
0.00
0.01
0.02
0.03
0.04
40
60
80
100
120
140
160
Declustered − Non−Thunderstorm − Velocities [Km/h]

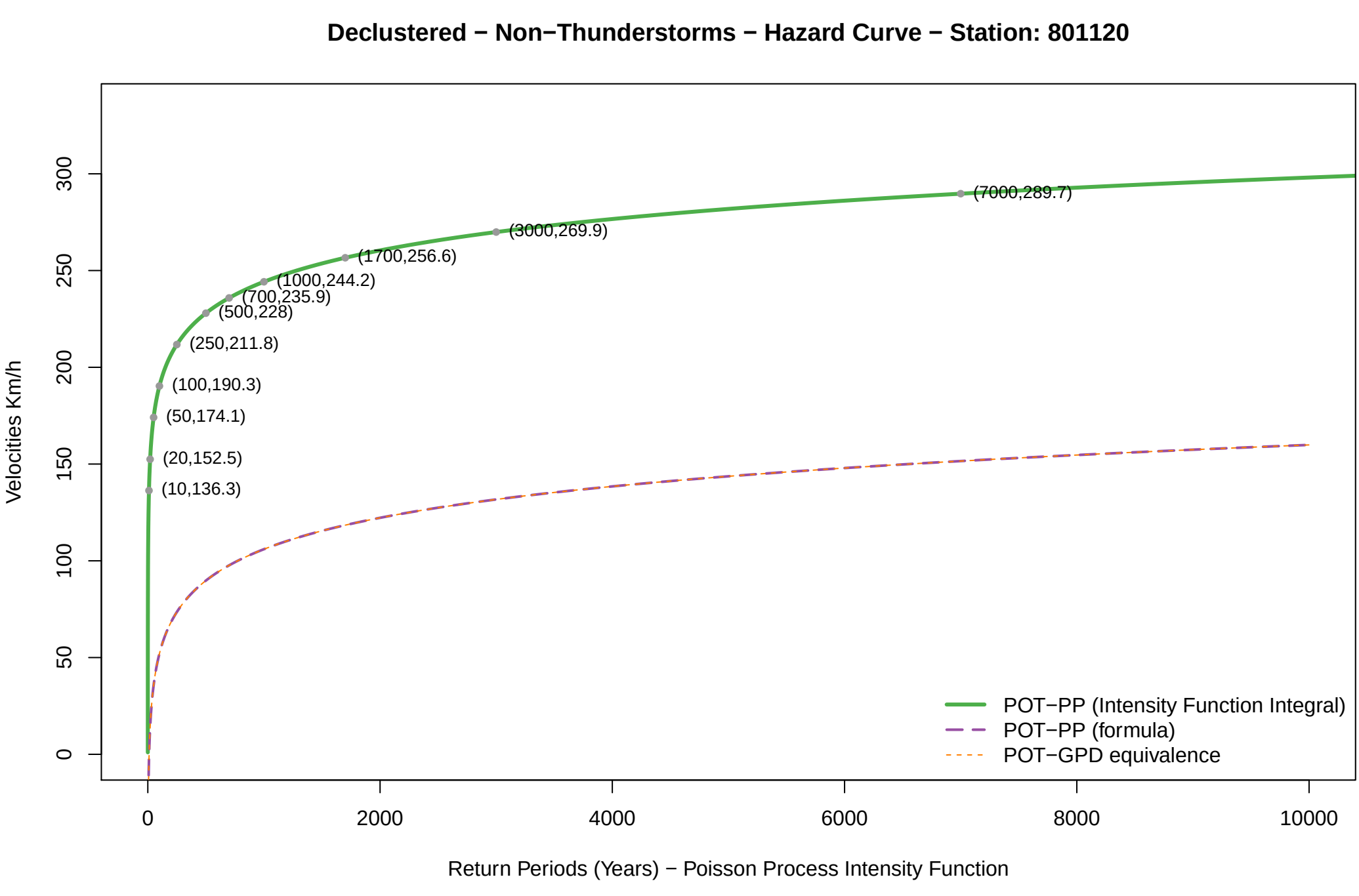

Empirical and theoretical dens.
Density
0.00
0.01
0.02
0.03
0.04
40
60
80
100
120
140
160
Data

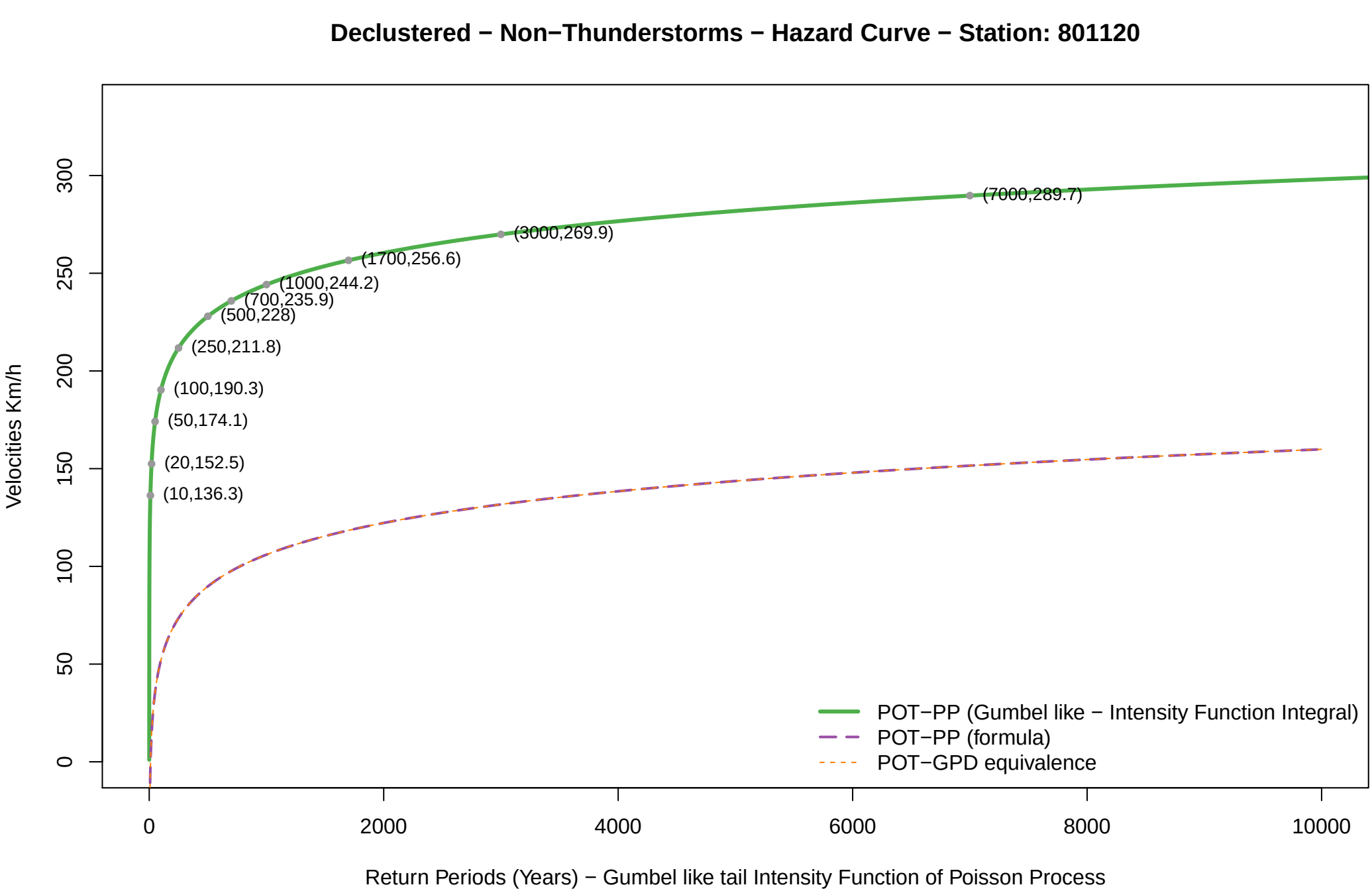

Q−Q plot
Empirical quantiles
40
60
80
100
120
140
40
60
80
100
120
140
160
180
Theoretical quantiles

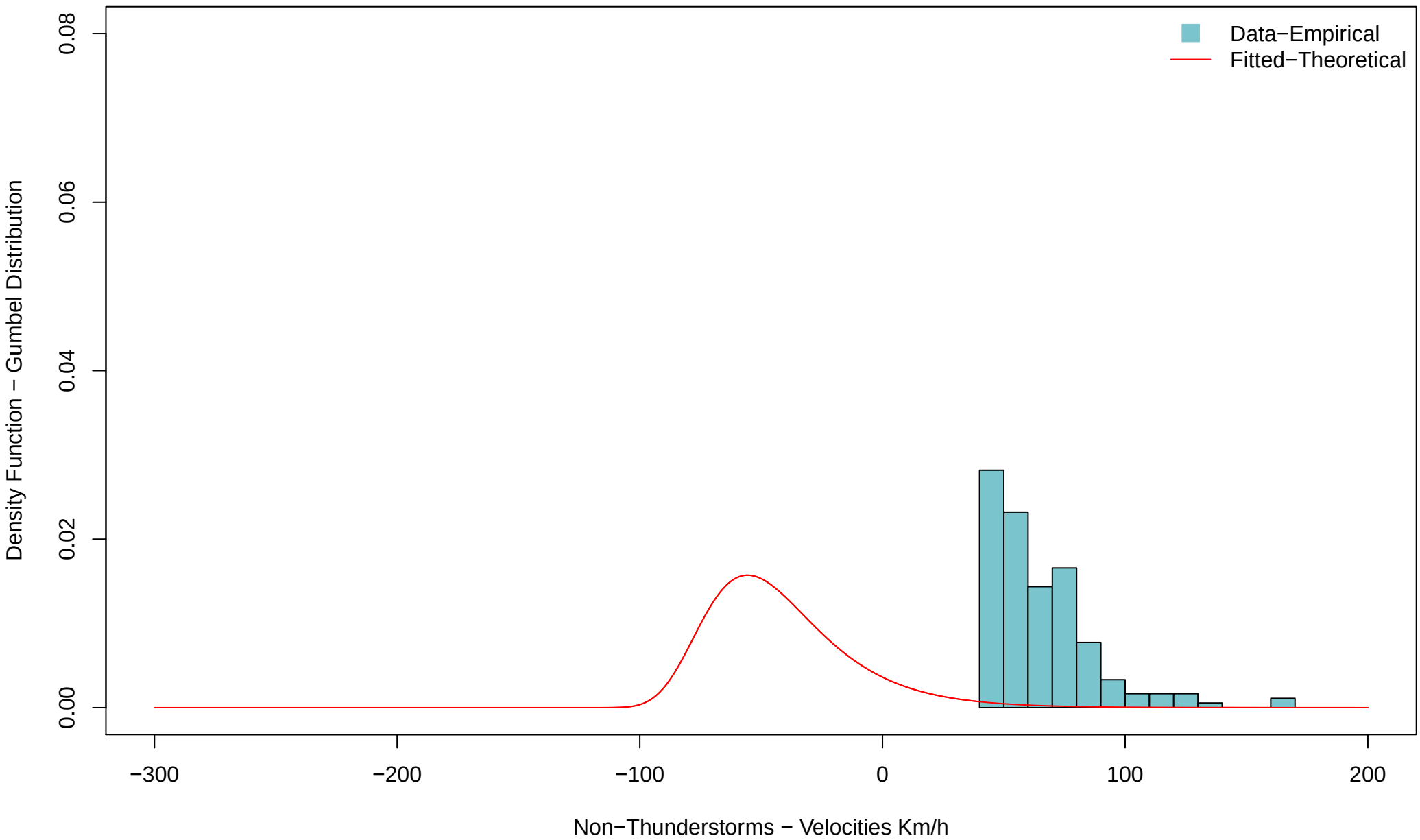

Empirical and theoretical CDFs
CDF
0.0
0.2
0.4
0.6
0.8
1.0
40
60
80
100
120
140
160
Data

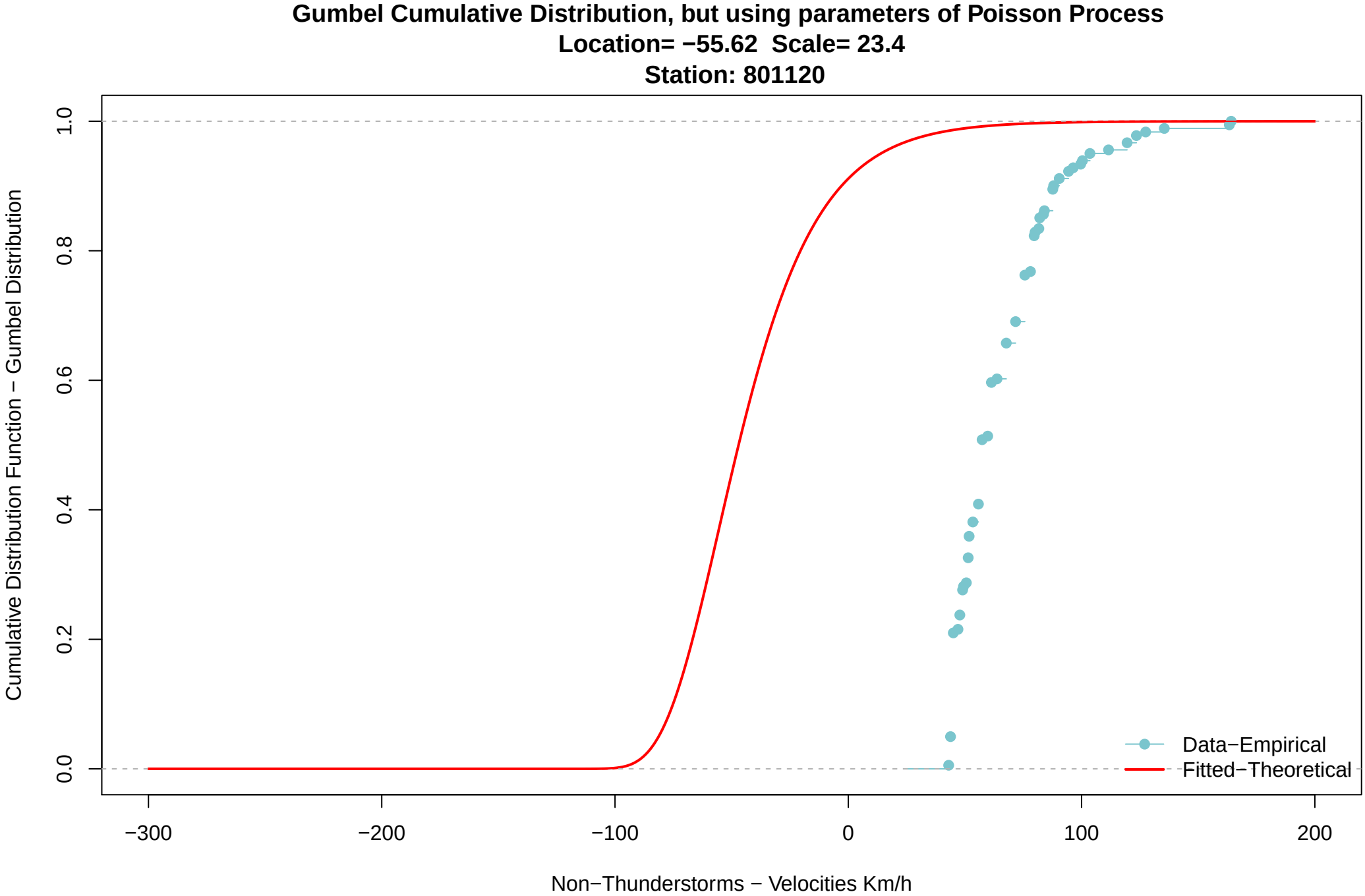

P−P plot
Empirical probabilities
0.0
0.2
0.4
0.6
0.8
1.0
0.2
0.4
0.6
0.8
1.0
Theoretical probabilities

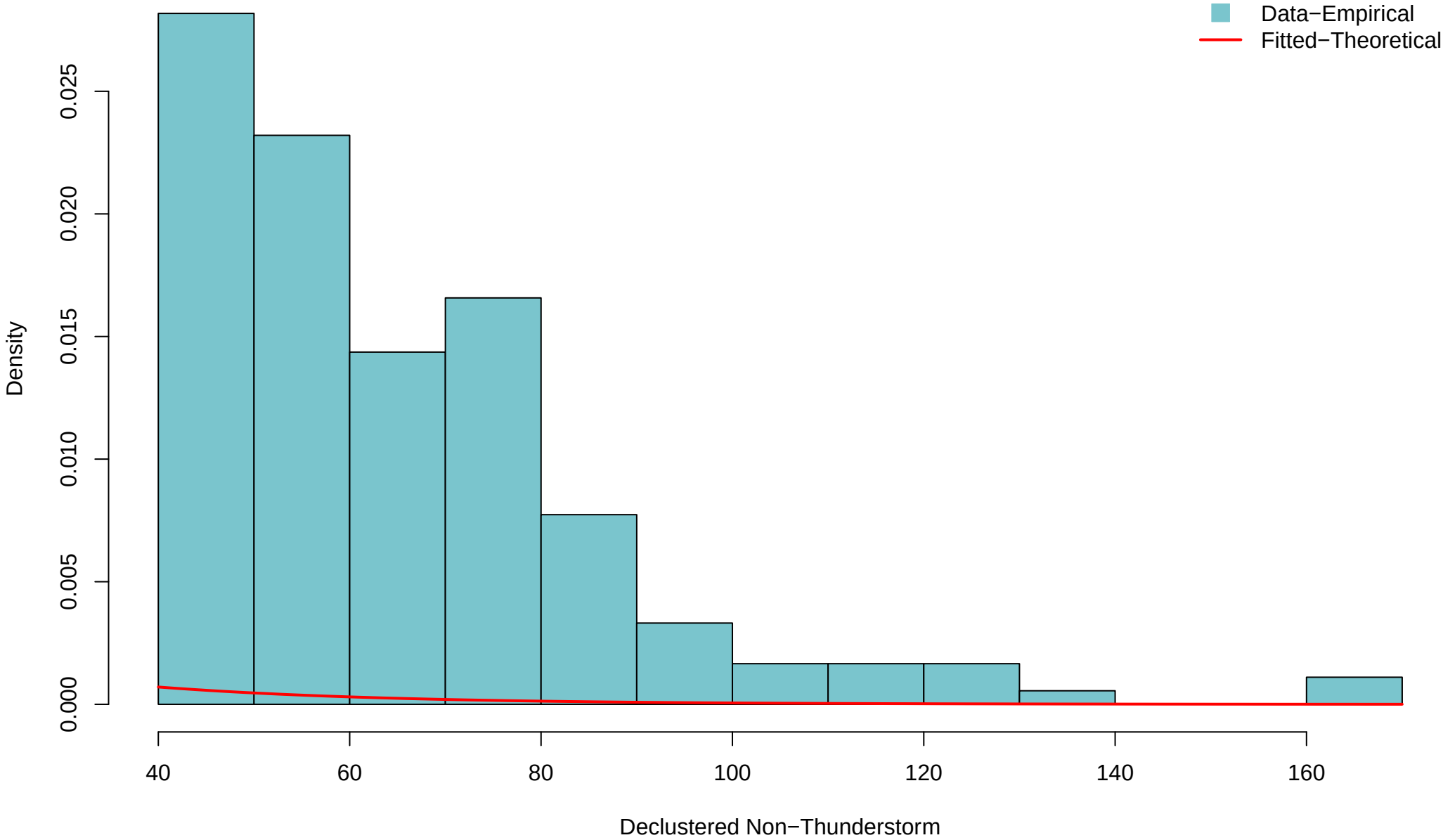

Cumulative Distribution Function from Intensity Function of Poisson Process
Station: 801120
Distribution Function − Poisson Process
1.0
0.8
0.6
0.4
0.2
40
60
80
100
120
140
160
Declustered − Non−Thuderstorm − Velocities [Km/h]
Data−Empirical
Fitted−Theoretical POT−Poisson Process
Fitted−Theoretical POT−GPD Equivalence

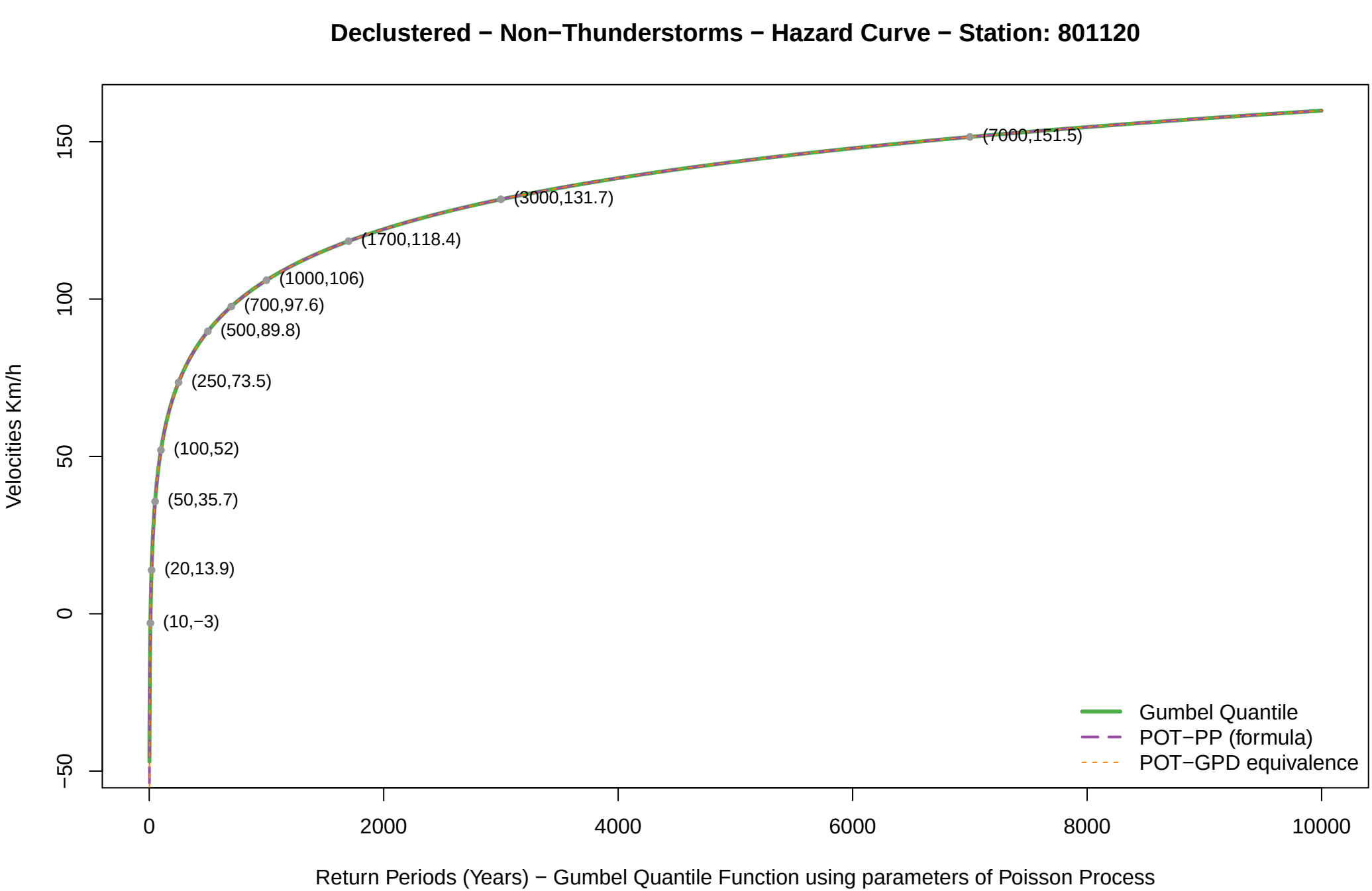

Declustered − Non−Thunderstorms − Hazard Curve − Station: 801120
Velocities Km/h
0
50
100
150
200
250
300
0
2000
4000
6000
8000
10000
Return Periods (Years) − Poisson Process Intensity Function
(10,136.3)
(20,152.5)
(50,174.1)
(100,190.3)
(250,211.8)
(500,228)
(700,235.9)
(1000,244.2)
(1700,256.6)
(3000,269.9)
(7000,289.7)
POT−PP (Intensity Function Integral)
POT−PP (formula)
POT−GPD equivalence


Declustered − Non−Thunderstorms − Hazard Curve − Station: 801120
Velocities Km/h
0
50
100
150
200
250
300
0
2000
4000
6000
8000
10000
Return Periods (Years) − Gumbel like tail Intensity Function of Poisson Process
(10,136.3)
(20,152.5)
(50,174.1)
(100,190.3)
(250,211.8)
(500,228)
(700,235.9)
(1000,244.2)
(1700,256.6)
(3000,269.9)
(7000,289.7)
POT−PP (Gumbel like − Intensity Function Integral)
POT−PP (formula)
POT−GPD equivalence


Gumbel Density Function, but using parameters of Poisson Process
Location= −55.62 Scale= 23.4
Station: 801120
Data−Empirical
Fitted−Theoretical
Density Function − Gumbel Distribution
0.00
0.02
0.04
0.06
0.08
−300
−200
−100
0
100
200
Non−Thunderstorms − Velocities Km/h


Gumbel Cumulative Distribution, but using parameters of Poisson Process
Location= −55.62 Scale= 23.4
Station: 801120
Cumulative Distribution Function − Gumbel Distribution
0.0
0.2
0.4
0.6
0.8
1.0
−300
−200
−100
0
100
200
Non−Thunderstorms − Velocities Km/h
Data−Empirical
Fitted−Theoretical


Fitted Gumbel density function using parameters of Poisson Process
Location= −55.62 Scale= 23.4
Station: 801120
Data−Empirical
Fitted−Theoretical
Density
0.000
0.005
0.010
0.015
0.020
0.025
40
60
80
100
120
140
160
Declustered Non−Thunderstorm


Declustered − Non−Thunderstorms − Hazard Curve − Station: 801120
Velocities Km/h
−50
0
50
100
150
0
2000
4000
6000
8000
10000
(7000,151.5)
(3000,131.7)
(1700,118.4)
(1000,106)
(700,97.6)
(500,89.8)
(250,73.5)
(100,52)
(50,35.7)
(20,13.9)
(10,−3)
Gumbel Quantile
POT−PP (formula)
POT−GPD equivalence
Return Periods (Years) − Gumbel Quantile Function using parameters of Poisson Process