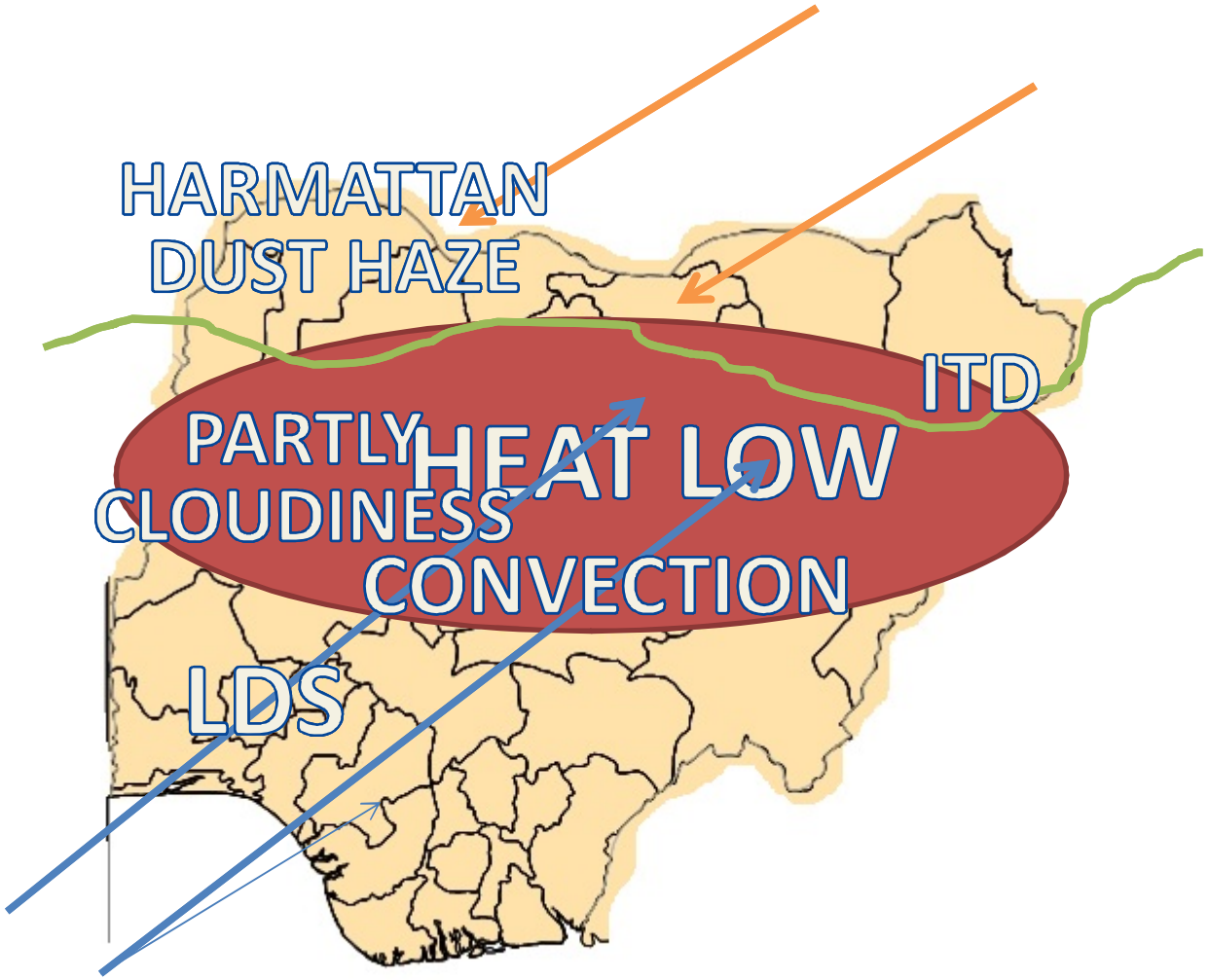
DIAGNOSING RAINFALL CHARACTERISTIC OVER NIGERIA USING HIDDEN MARKOV MODEL

GROUP NIGERIA

INTRODUCTION

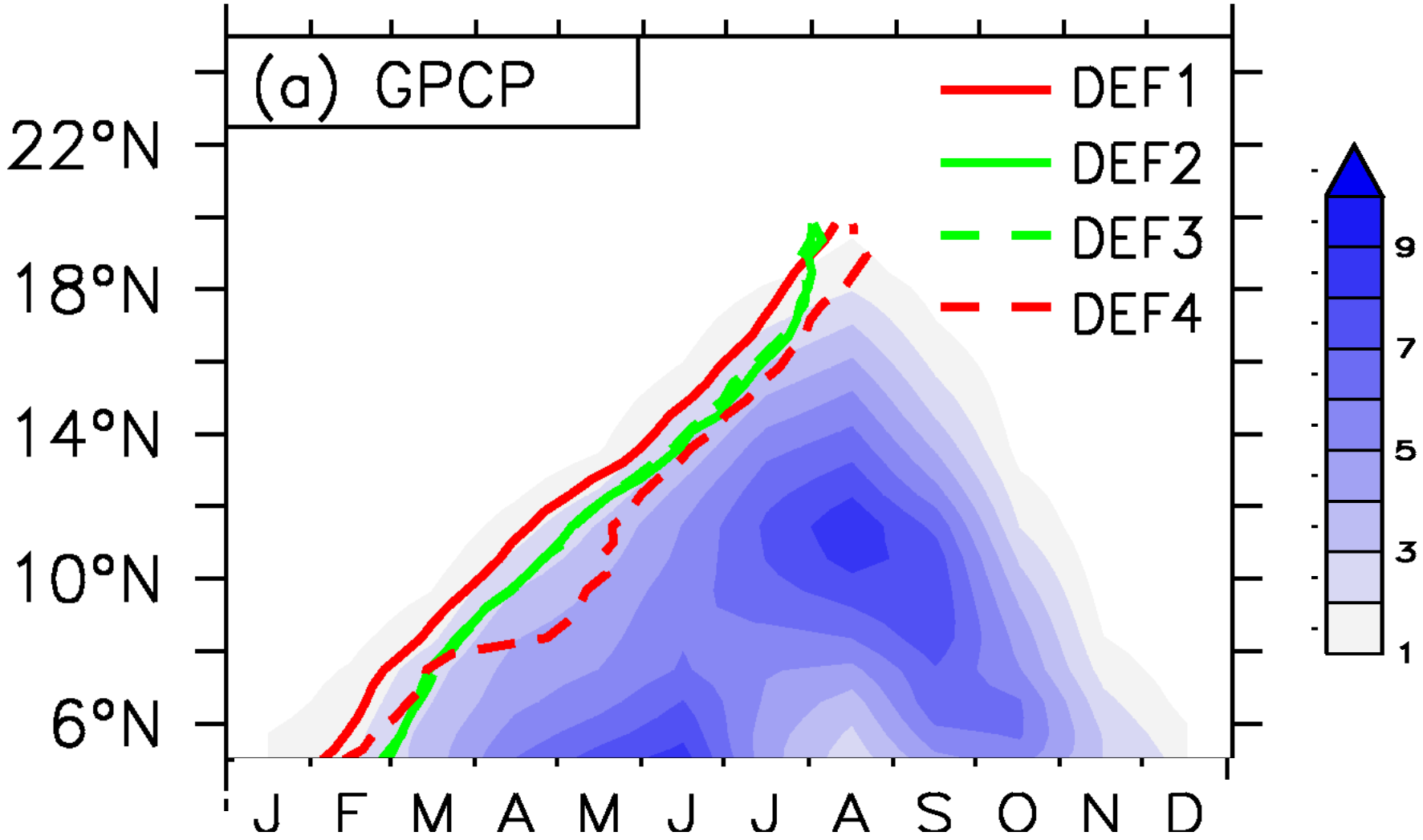


METHODOLOGY

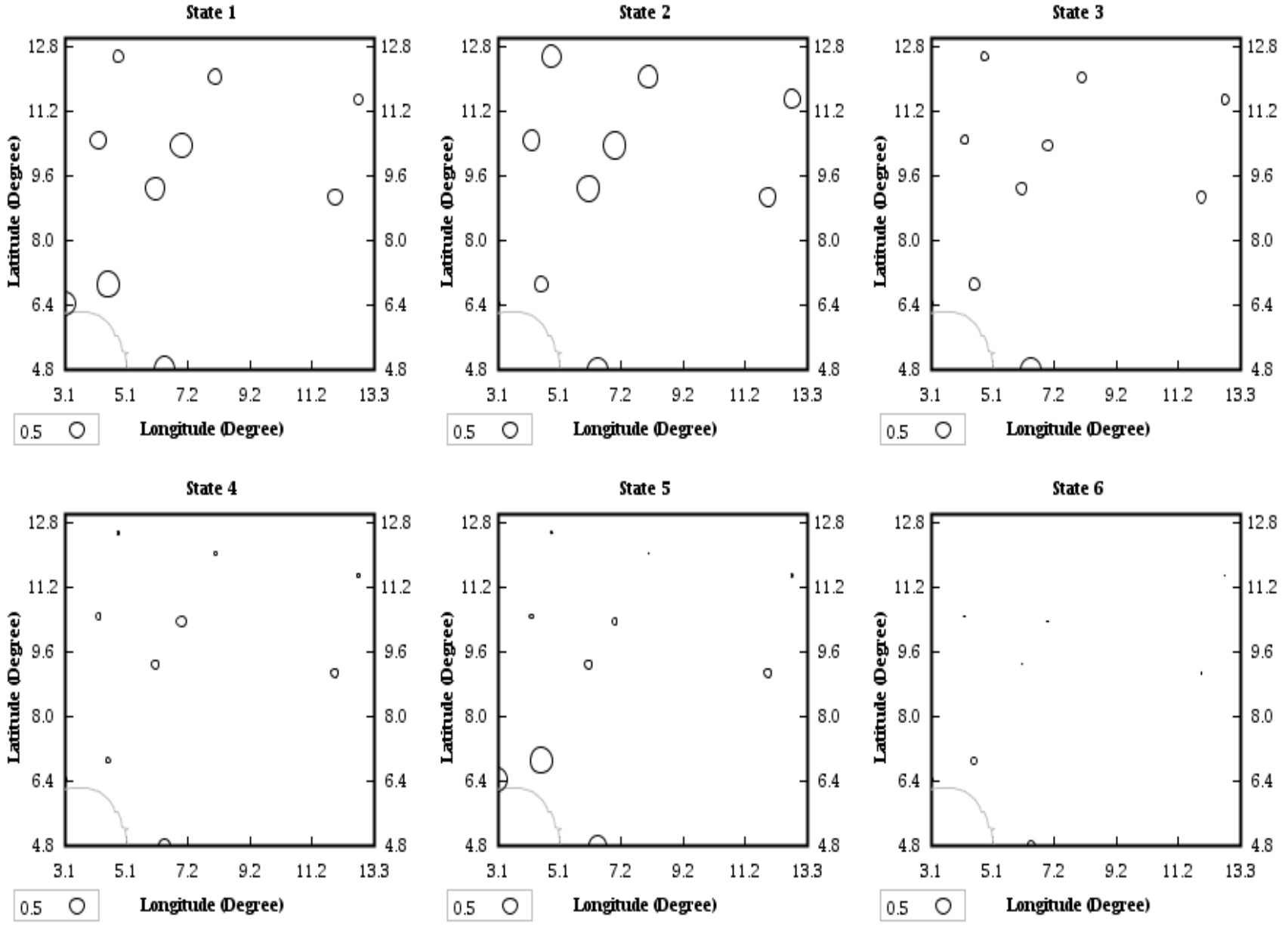
Daily Rainfall from 10 Station in Nigeria

HMTools was used to organise weather regimes in six states

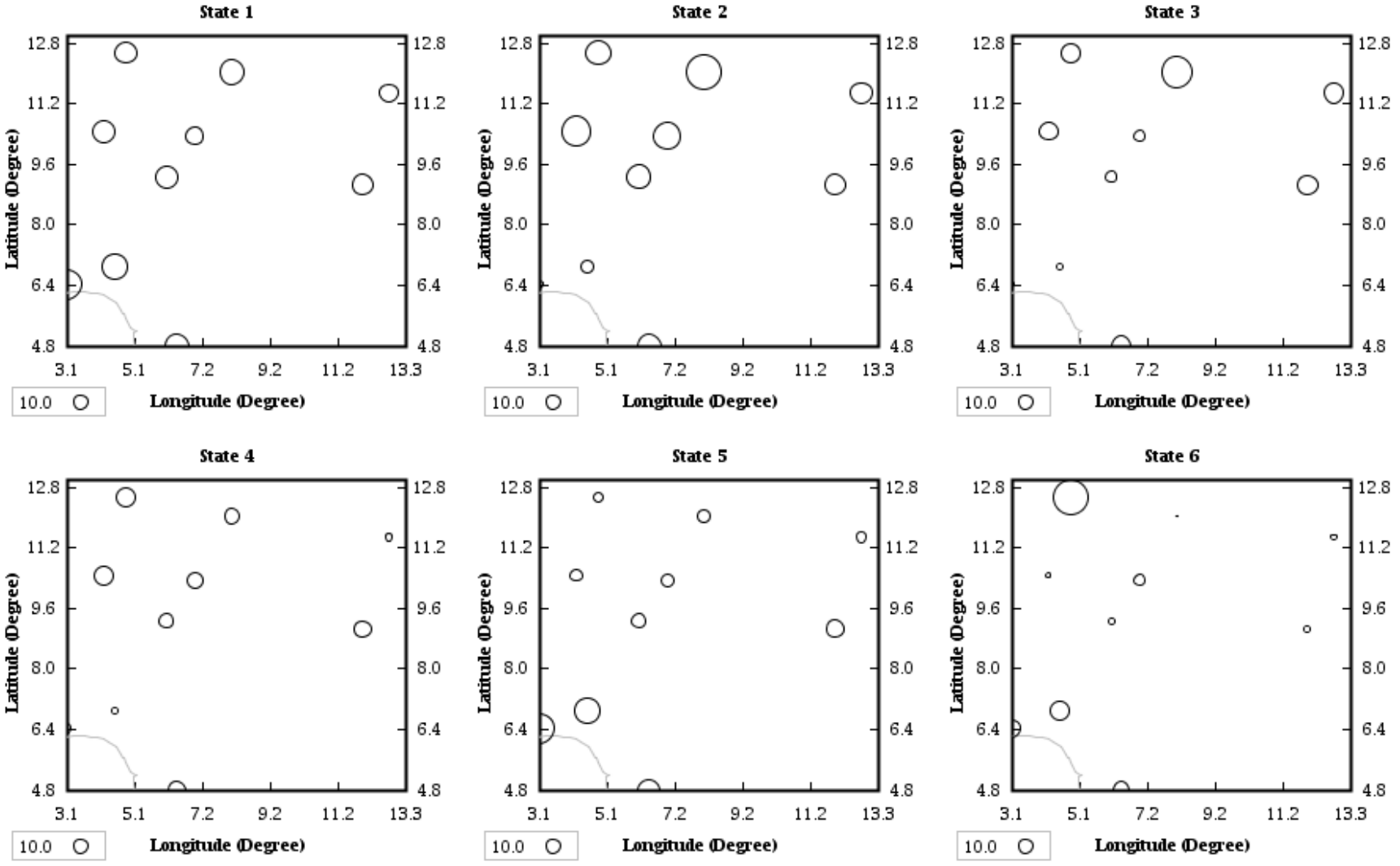
The regime was simulated using NCEP/NCAR Re-analysis of GHT at 500 hpa

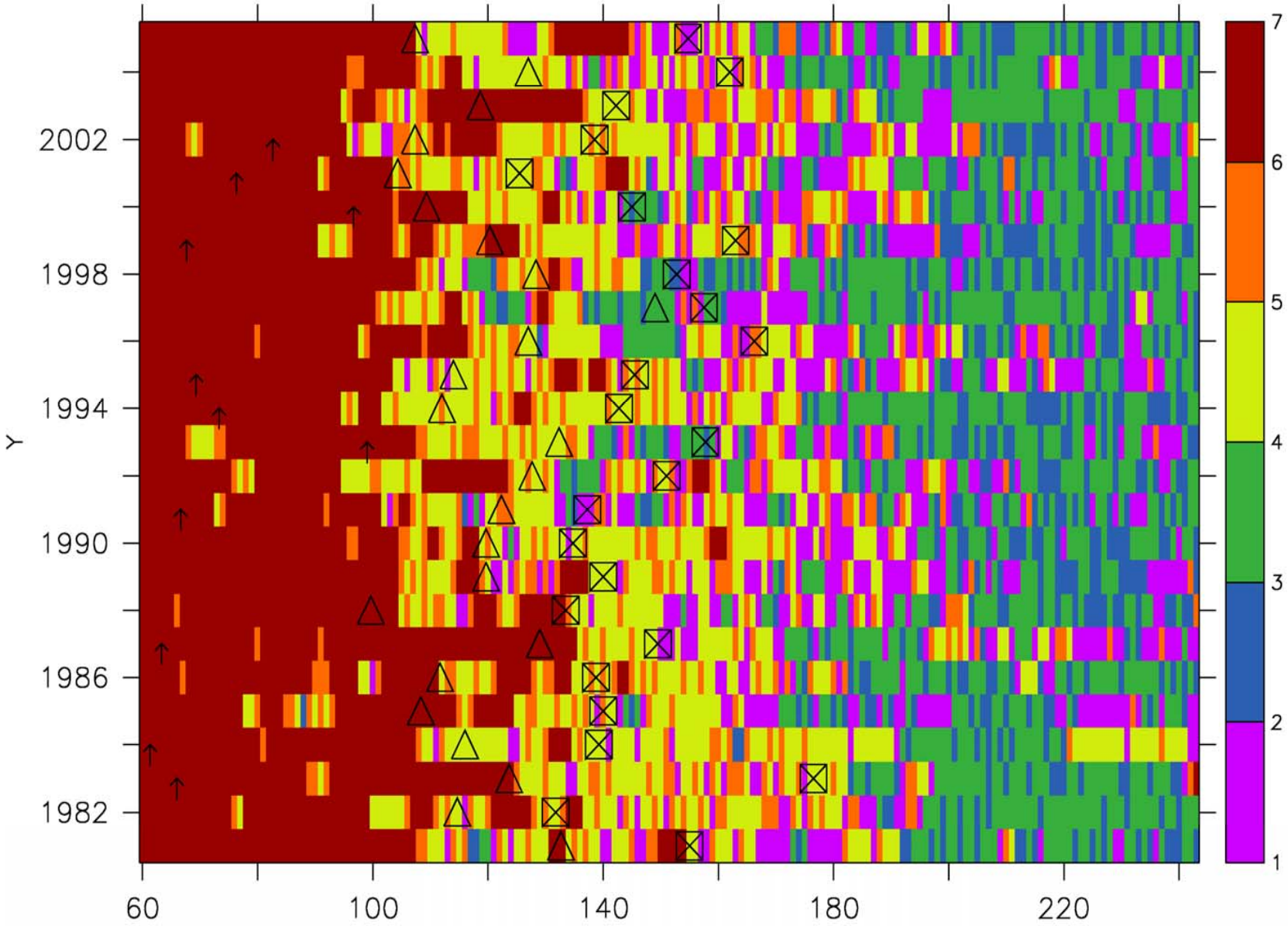

(a) GPCP
DEF1
DEF2
DEF3
DEF4
22°N
18°N
14°N
10°N
6°N
J F M A M J J A S O N D
9
7
5
3
1

Rainfall Probabilities

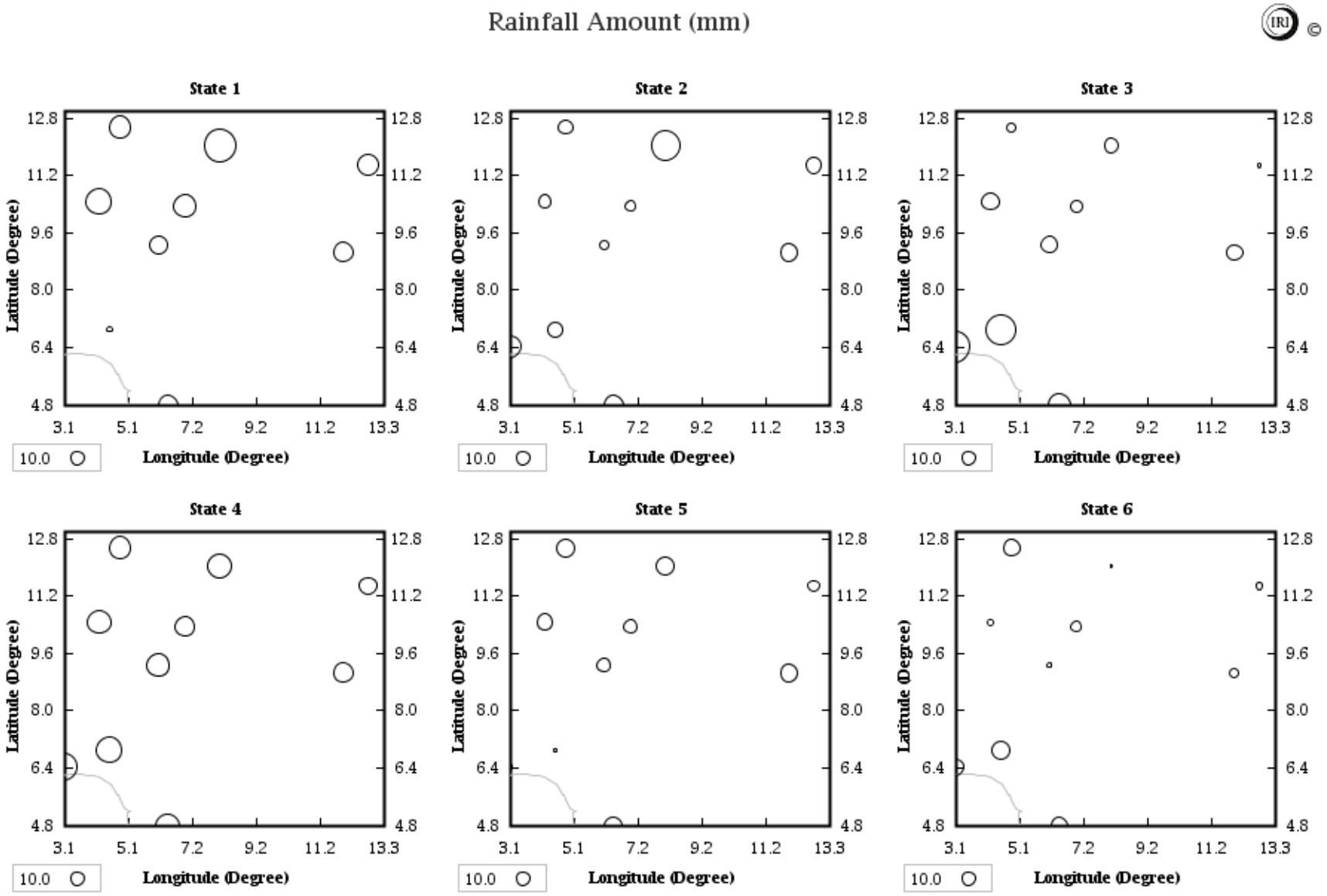


Rainfall Amount (mm)

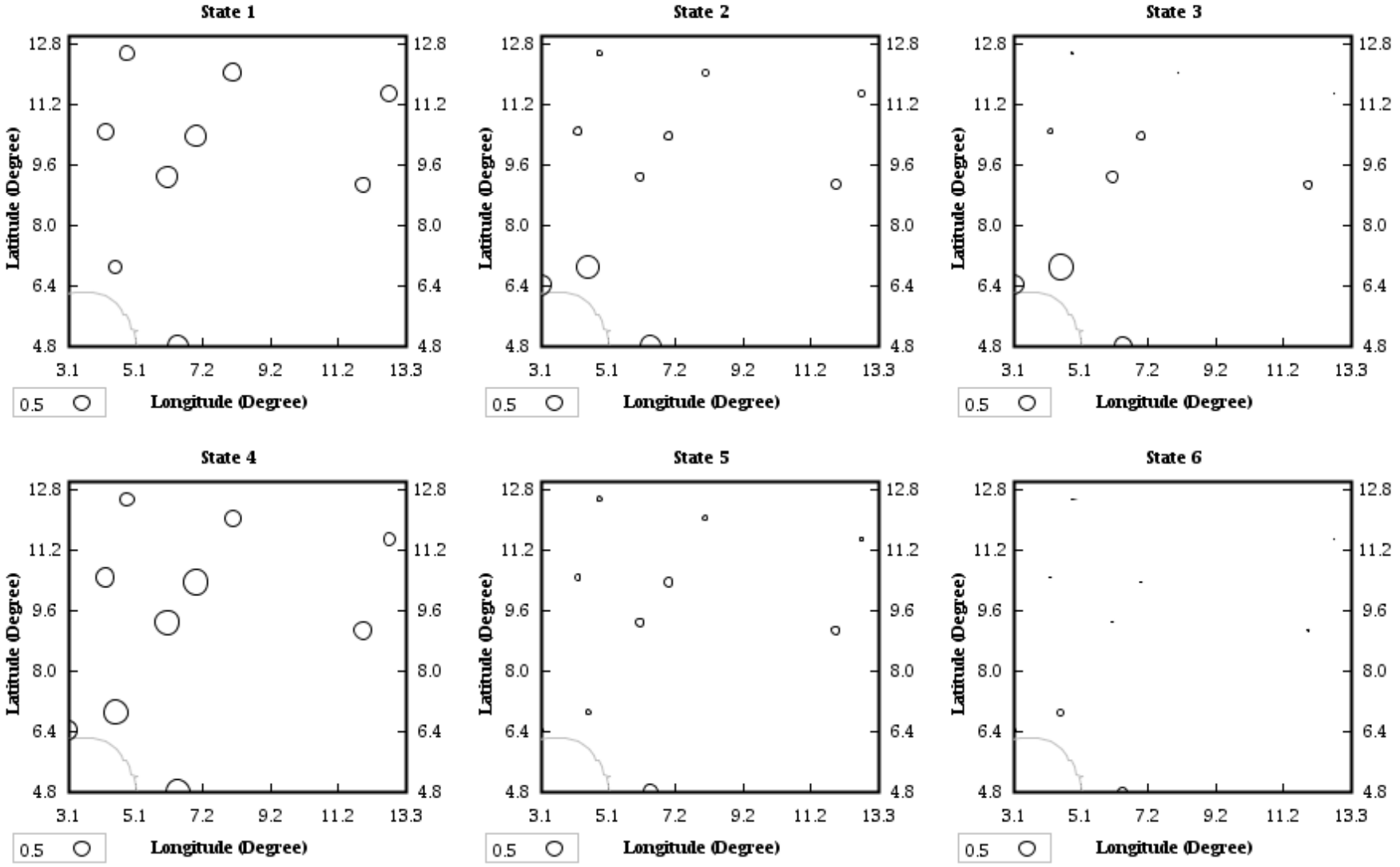


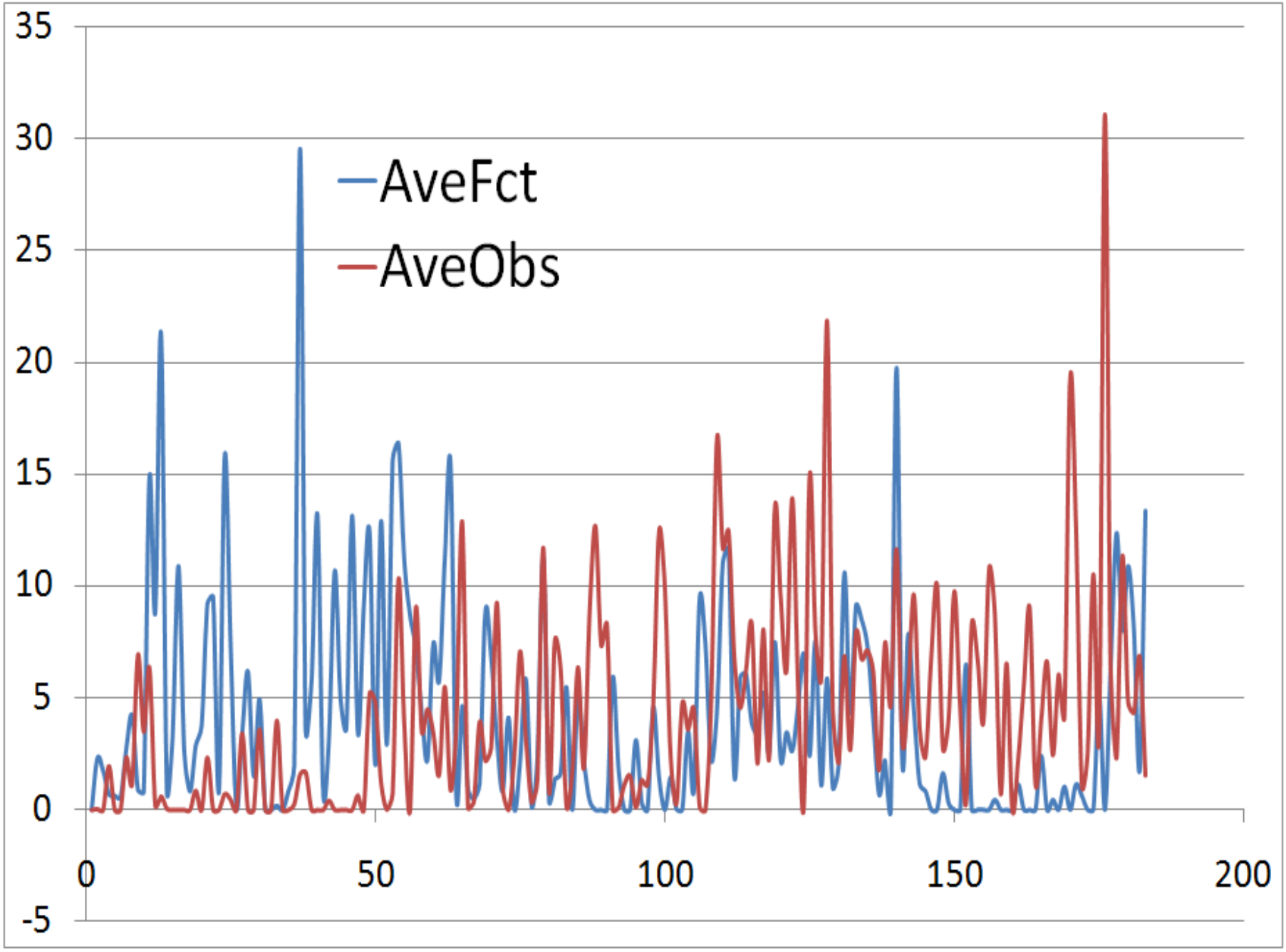

Y
2002
1998
1994
1990
1986
1982
60
100
140
180
220
7
6
5
4
3
2
1

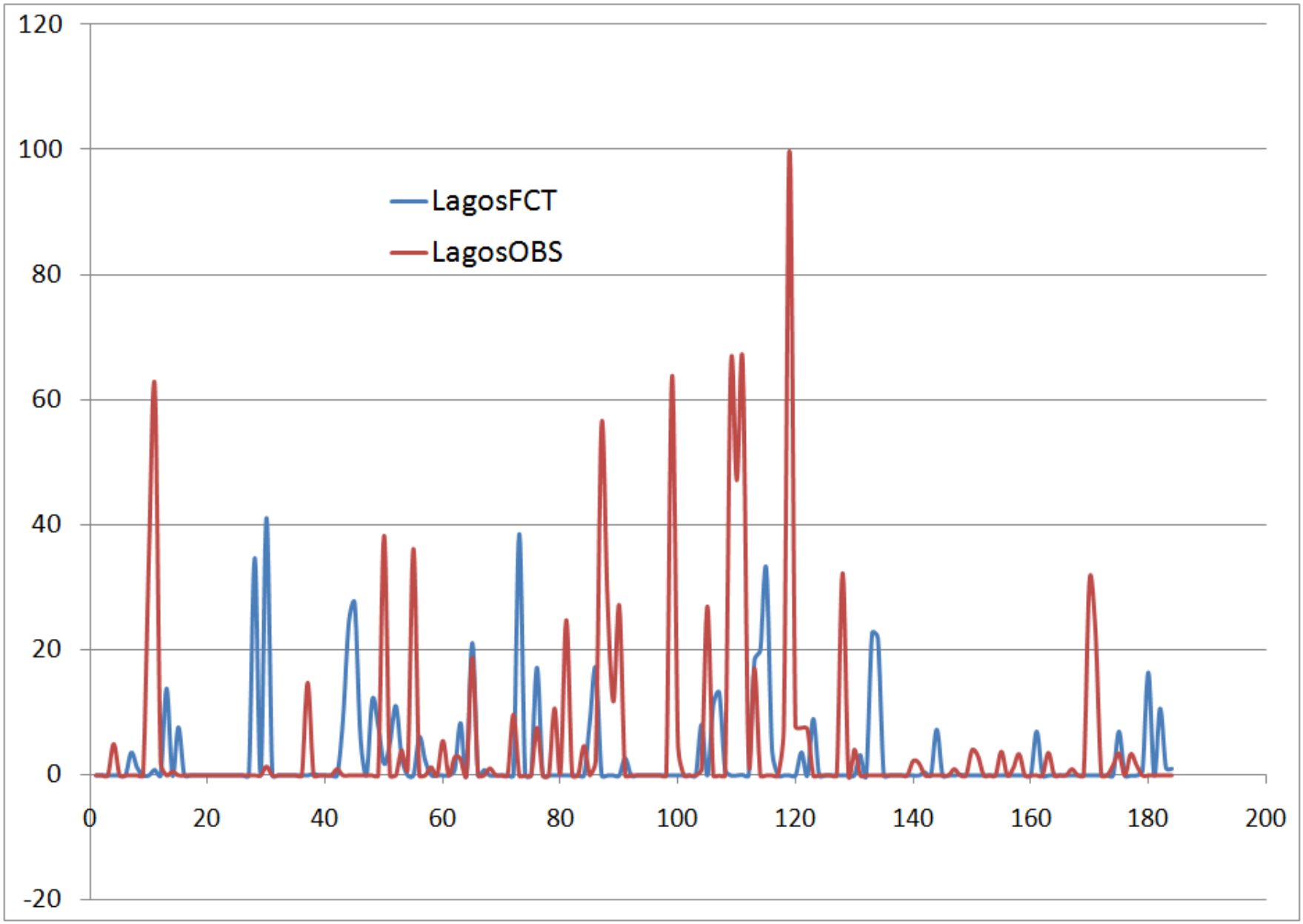
nhmm learn independent delta-exponential



Rainfall Probabilities




35
30
25
20
15
10
5
0
-5
0
50
100
150
200
AveFct
AveObs


120
100
80
60
40
20
0
-20
0
20
40
60
80
100
120
140
160
180
200
LagosFCT
LagosOBS

Thank You