DYNAMICS OF CONVECTIVE SYSTEMS IN THE AMAZON BASIN

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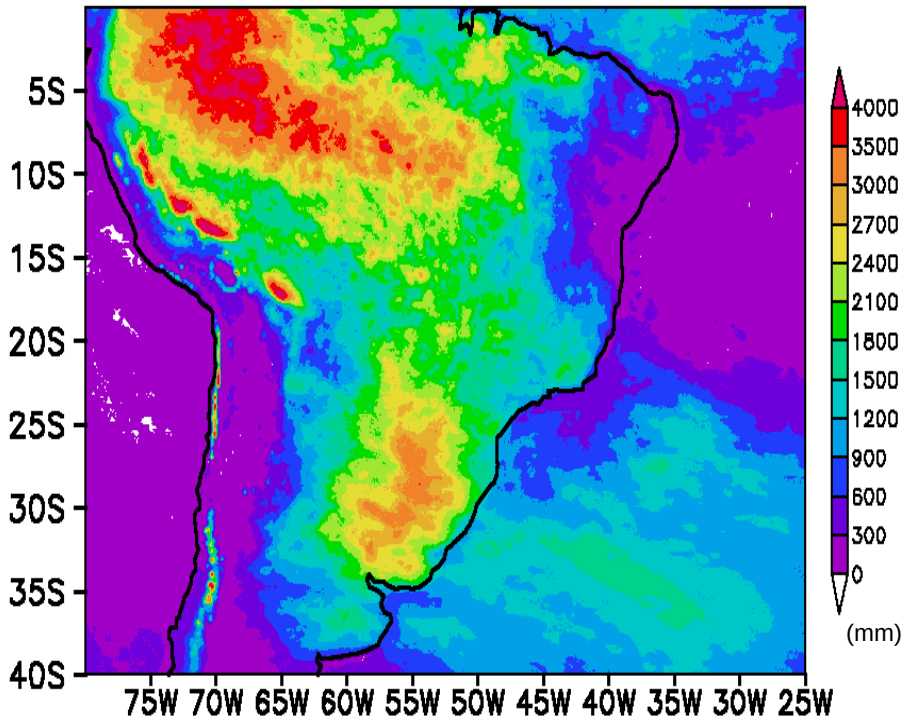
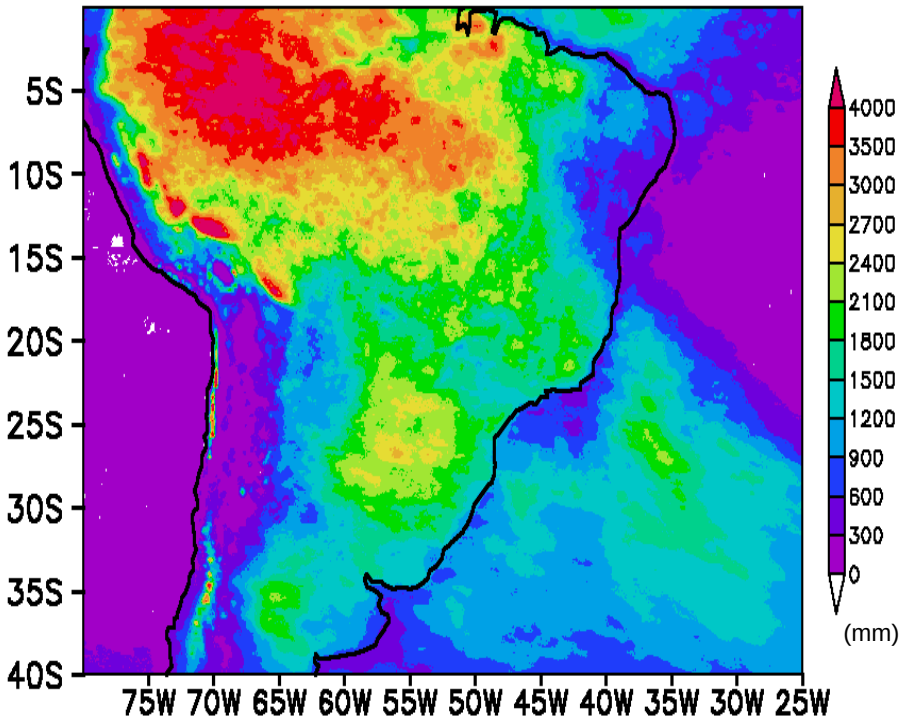
CMORPH RAINFALL ACCUMULATION

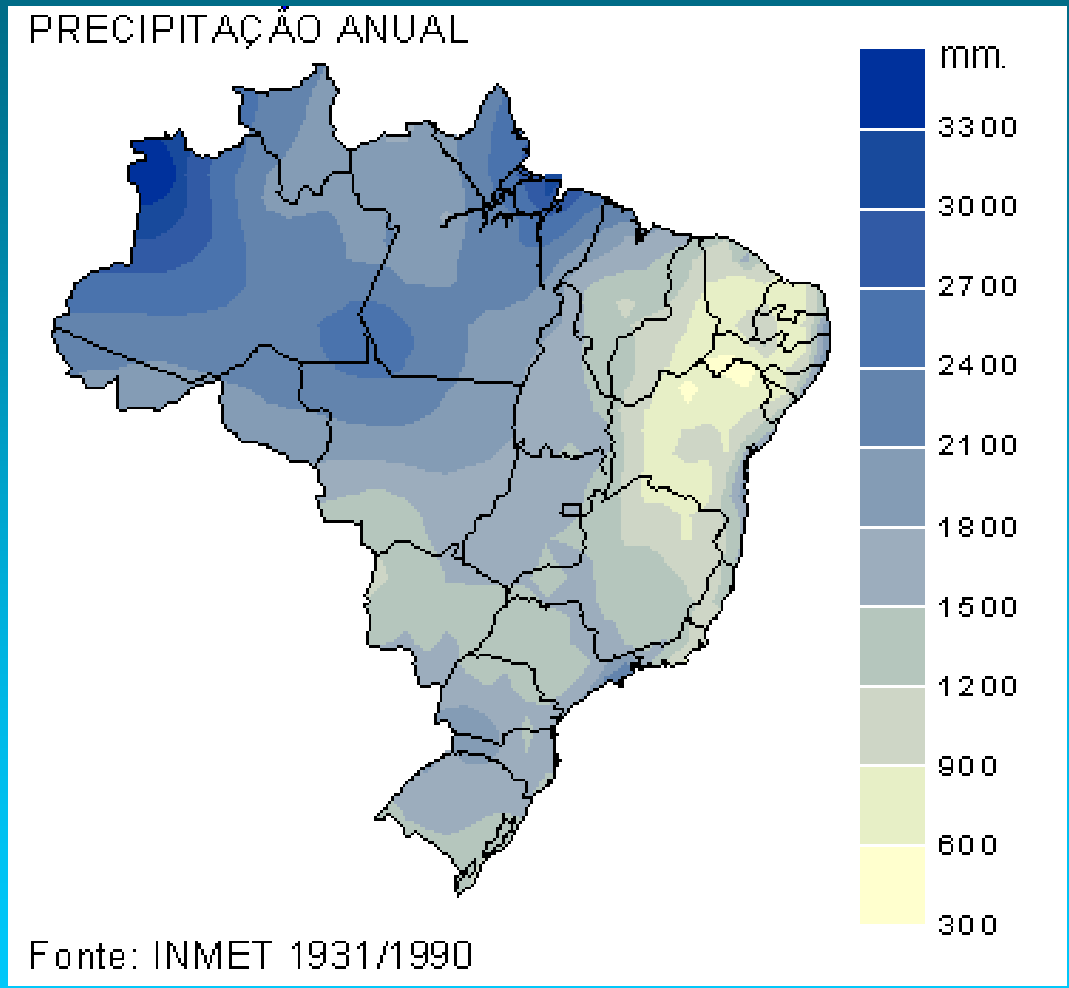
2003



2004



GAUGE RAINFALL ACCUMULATION



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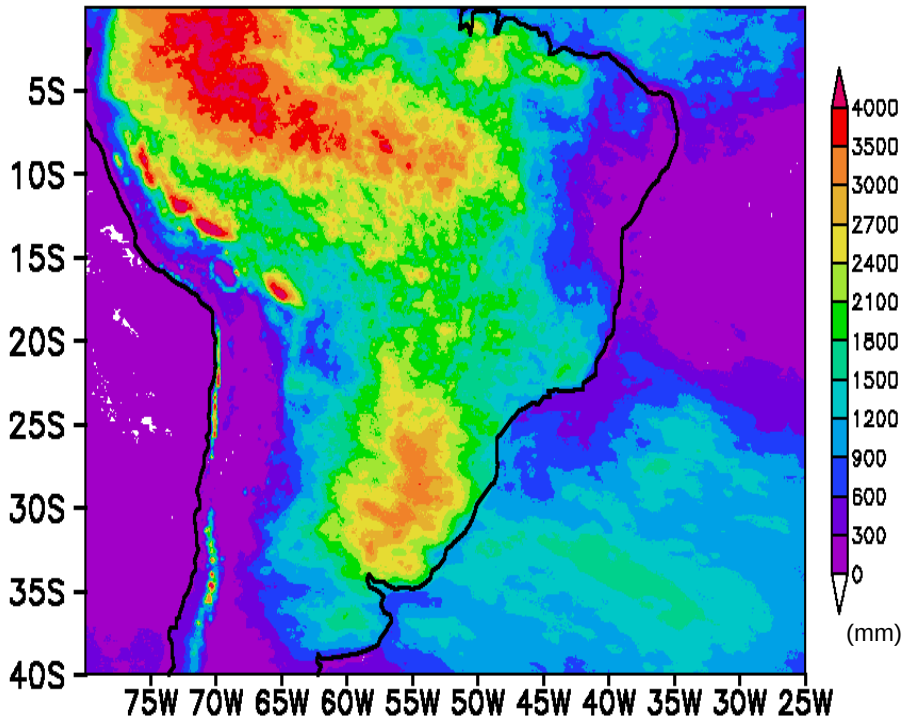
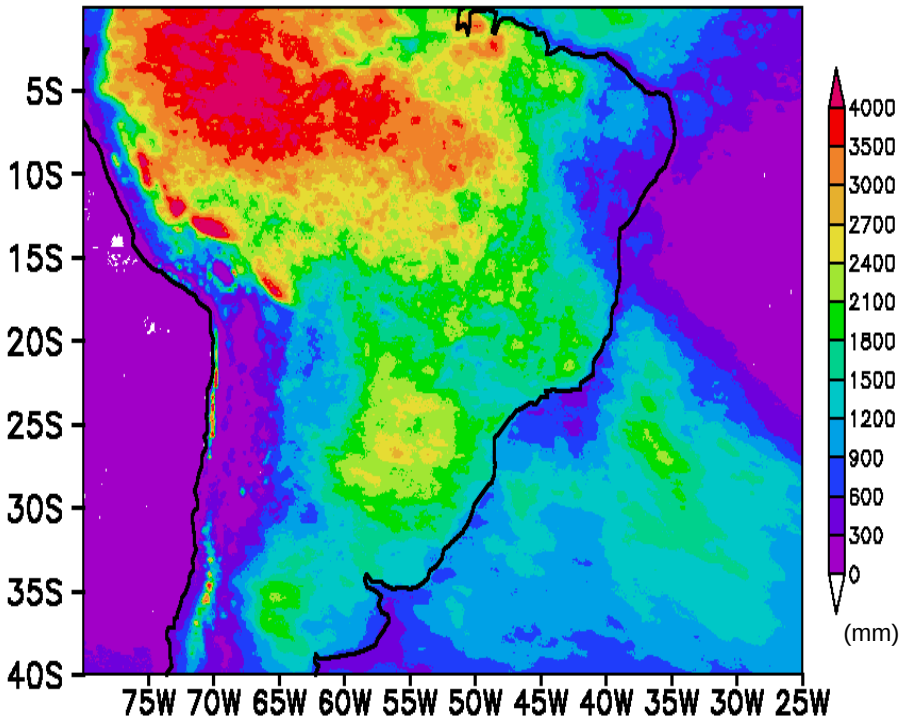
2003

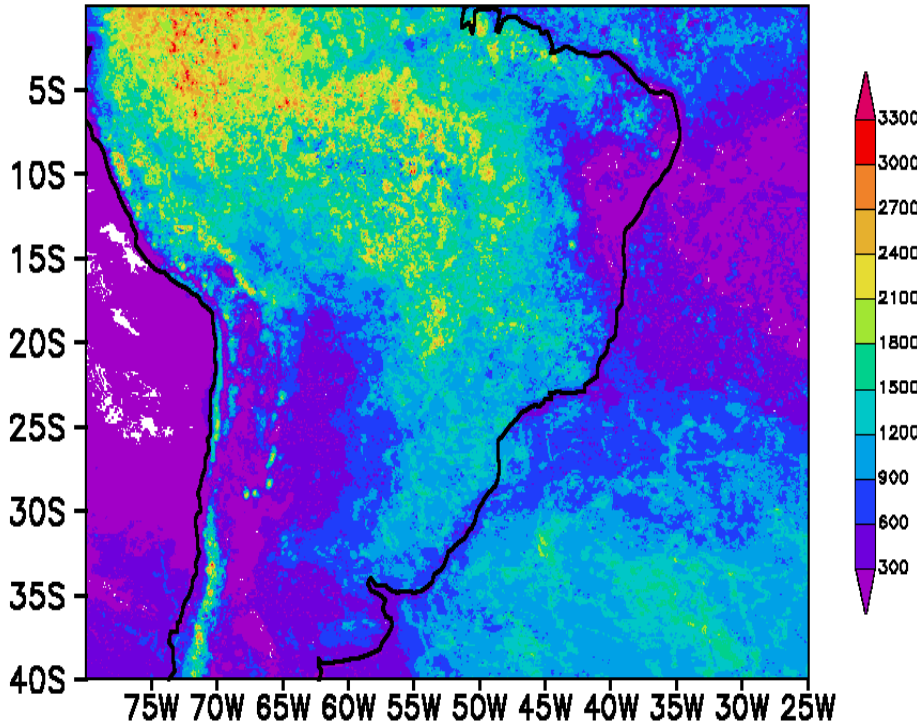


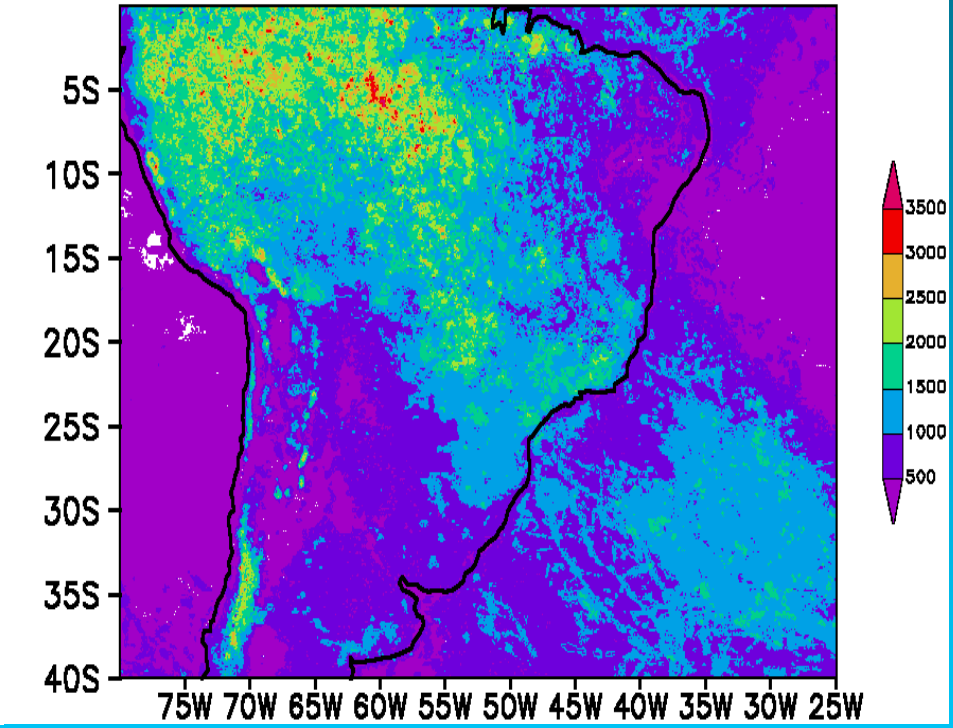
2004

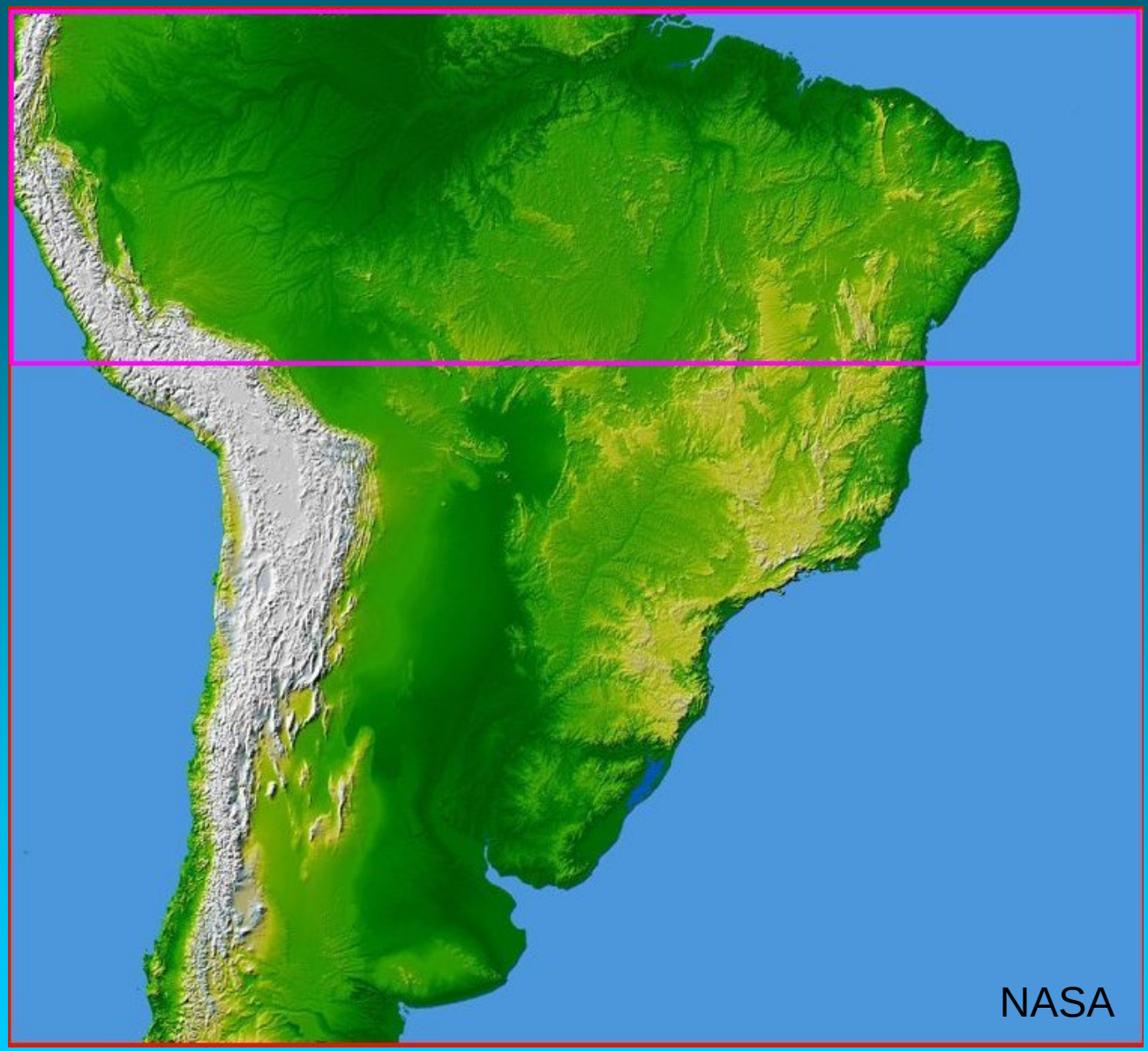


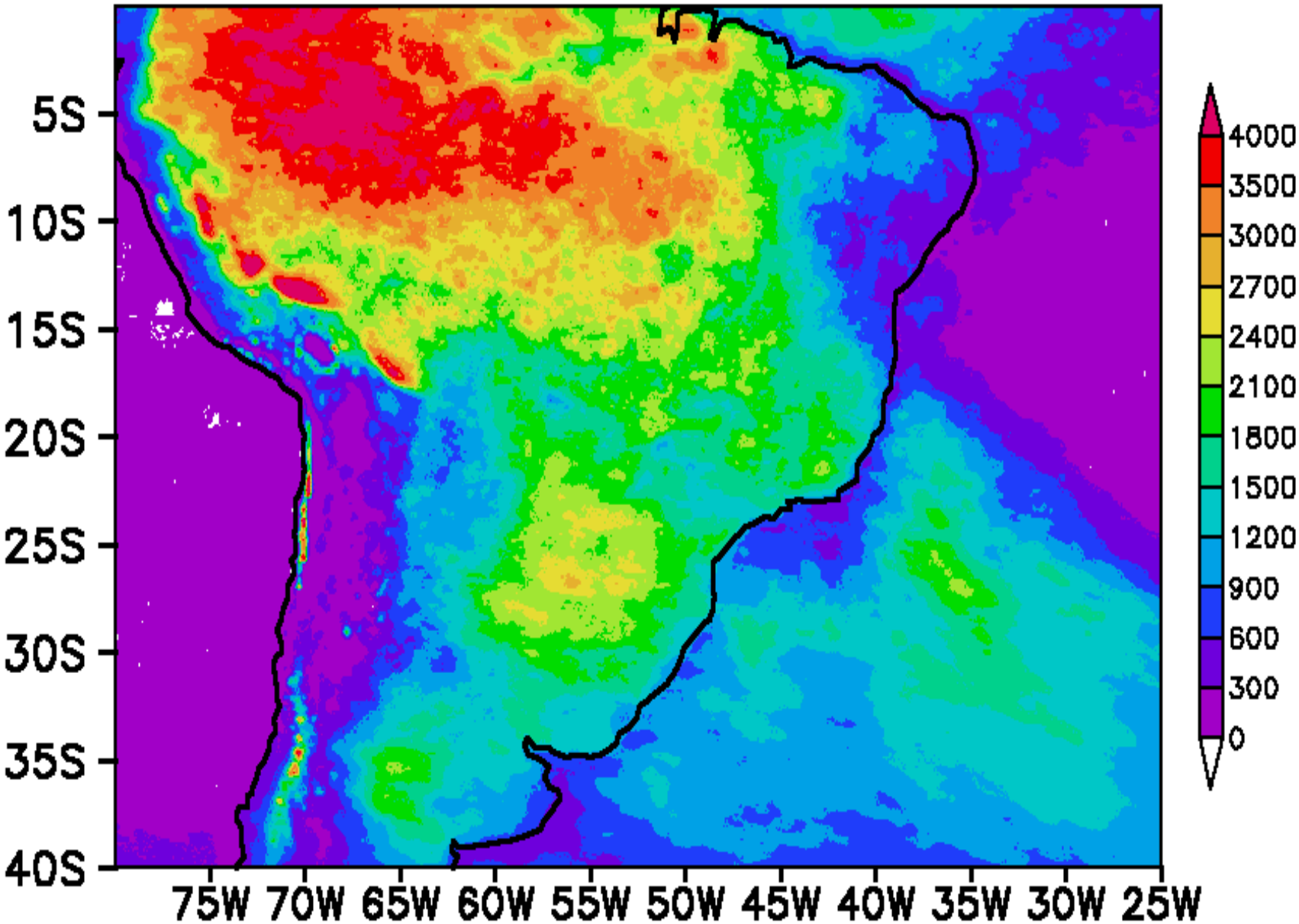
CMORPH RAINFALL FREQUENCY

2003 **2004**

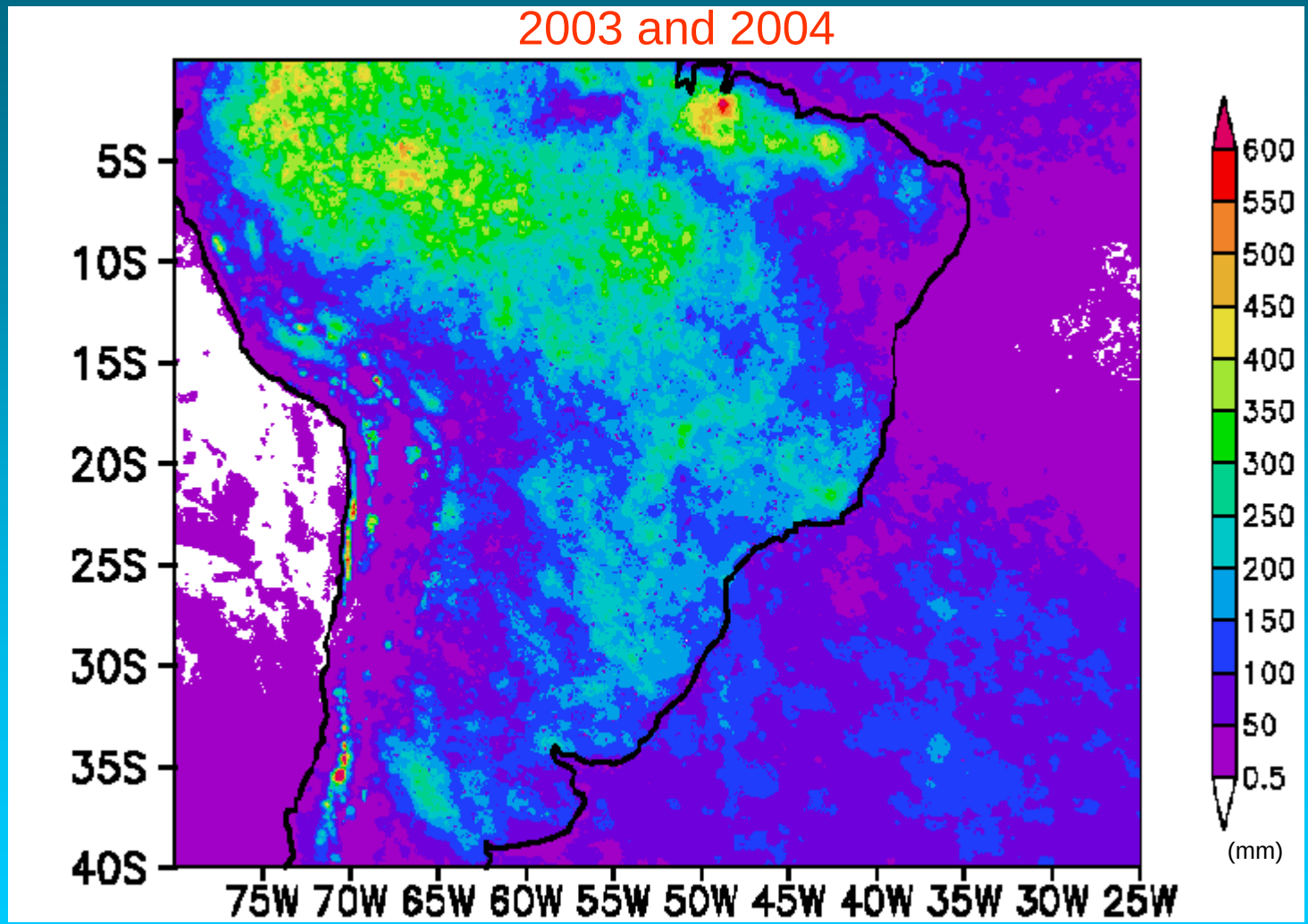





NASA

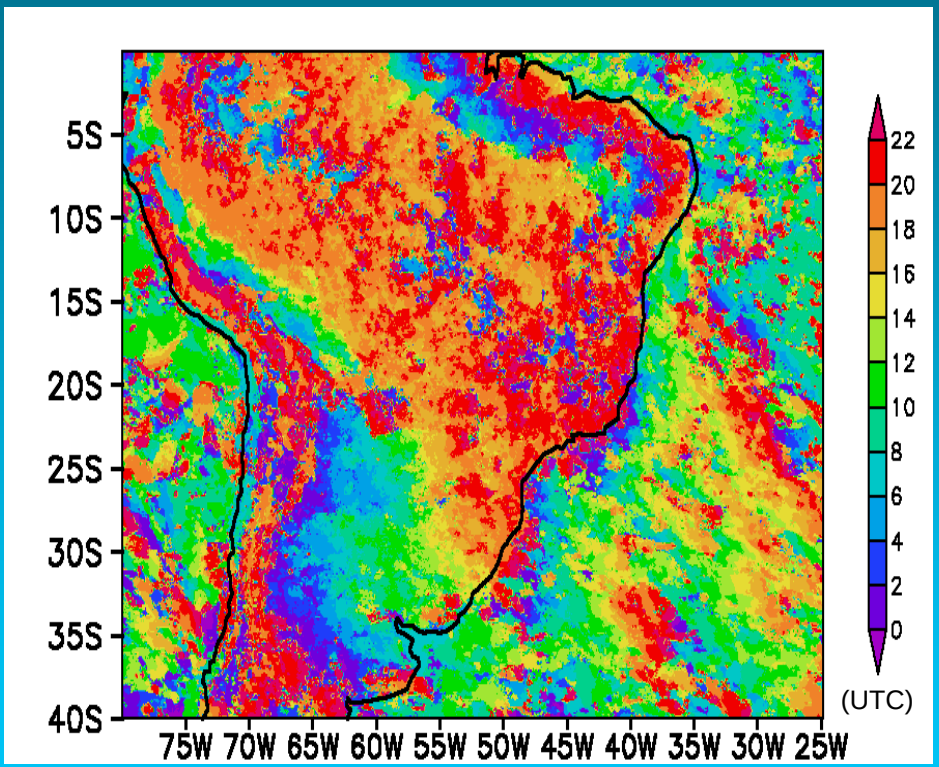

5S
10S
15S
20S
25S
30S
35S
40S
75W 70W 65W 60W 55W 50W 45W 40W 35W 30W 25W
4000
3500
3000
2700
2400
2100
1800
1500
1200
900
600
300
0

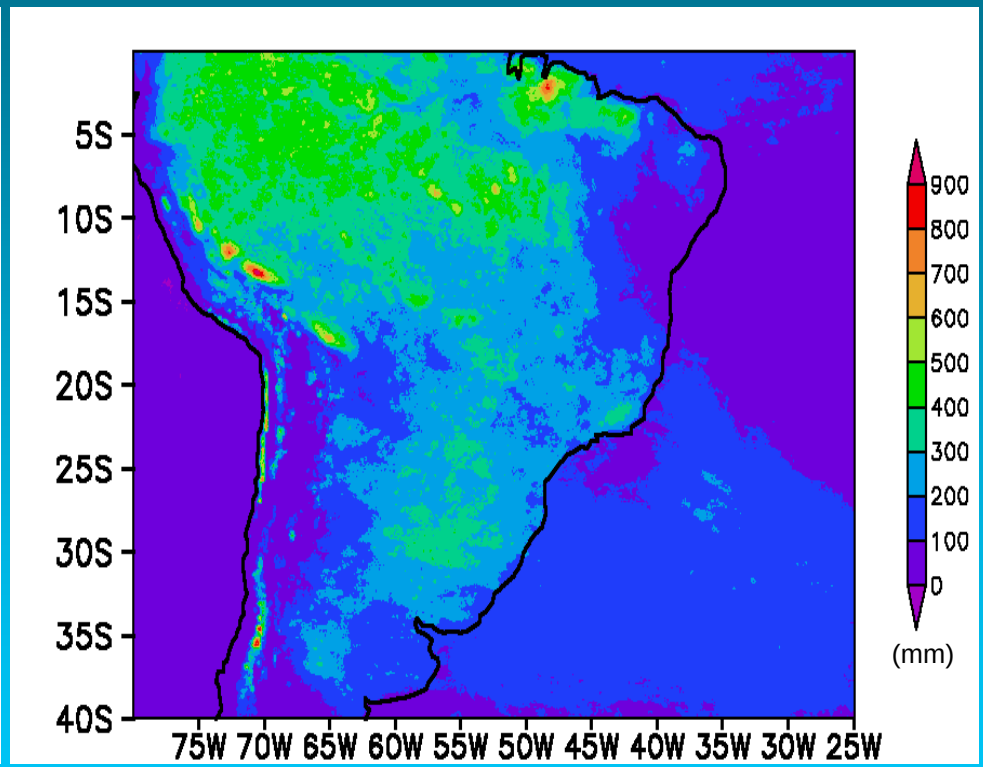
HOURLY ACCUMULATION



TIME OF MAXIMUM RAINFALL

2003 and 2004





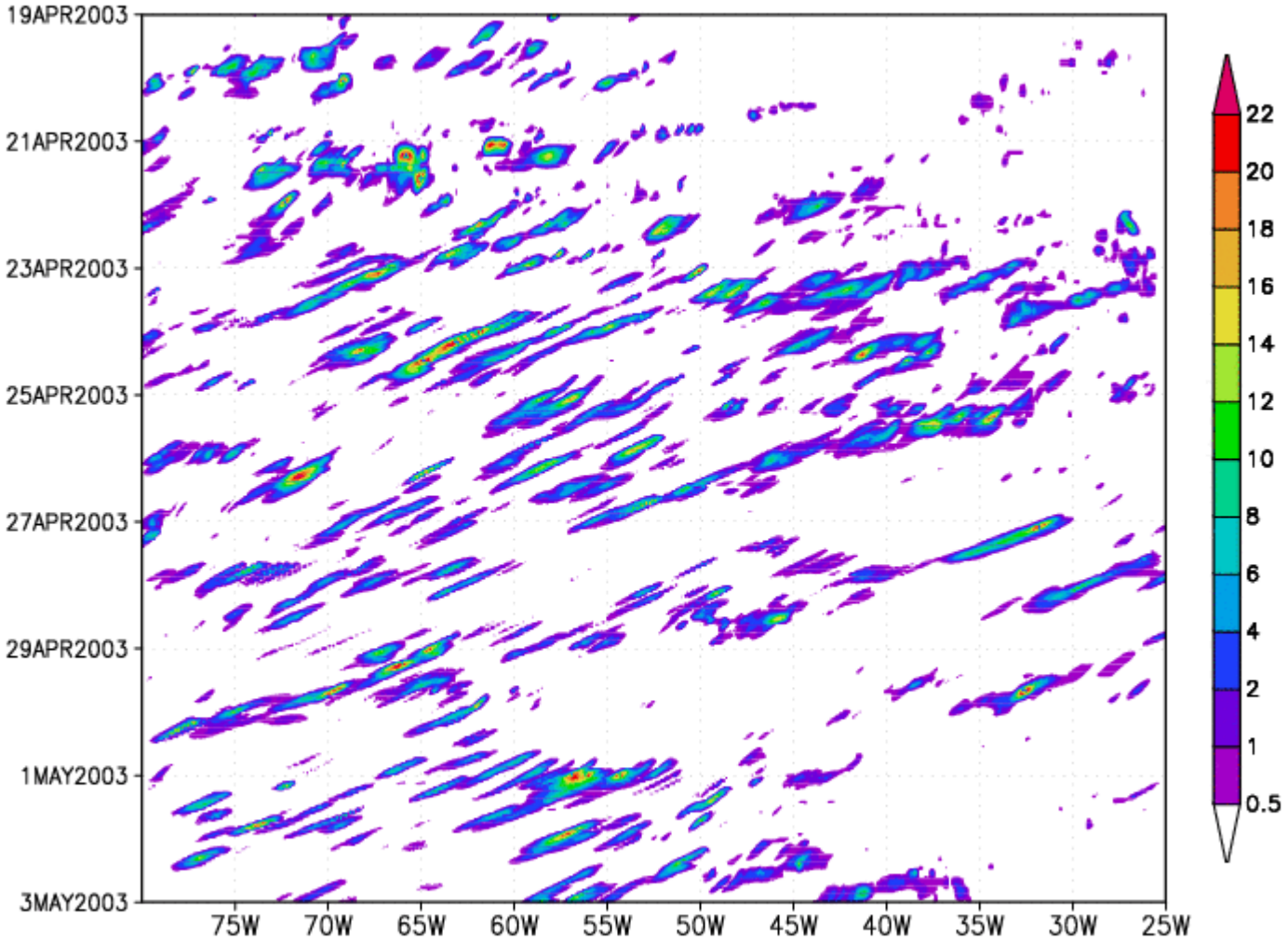
HOVMÖLLER DIAGRAM

a) Convection tends to be more organized and last longer between March and June;

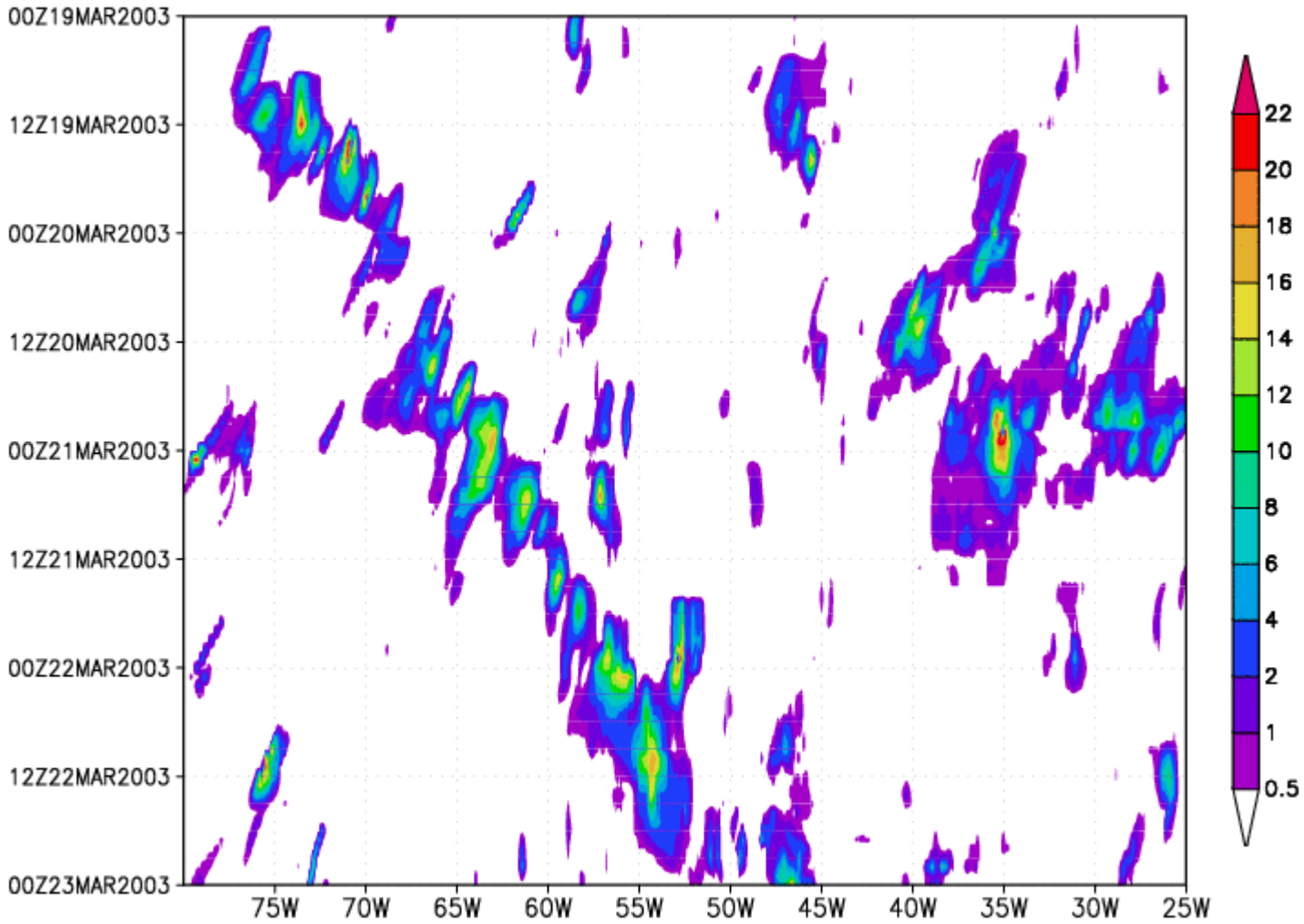
b) Convection is short leave and limited to the west part of the Amazon basin between July and September.

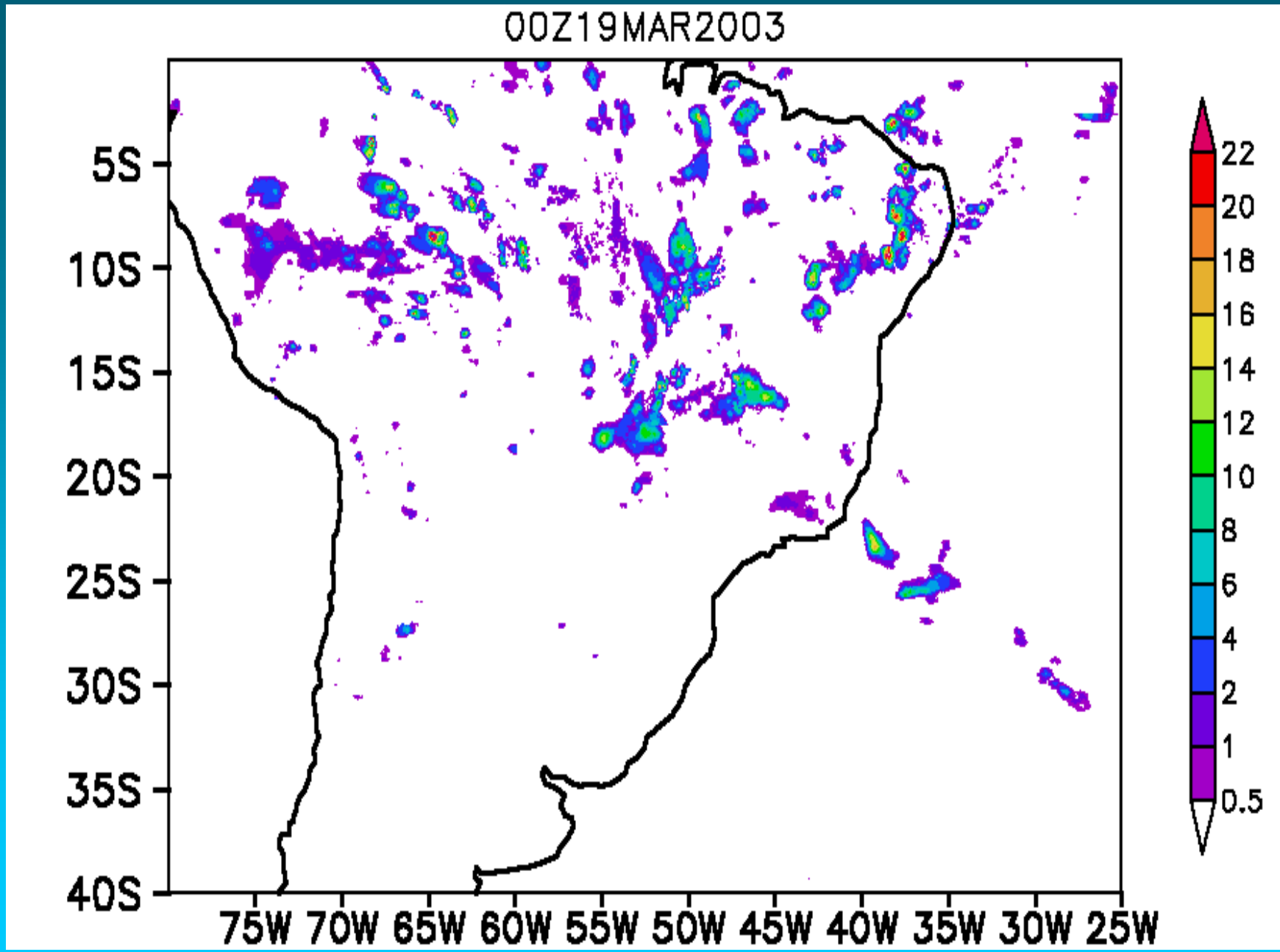
c) Convective systems tend to be stationary or short lived between October and February;

HOVMÖLLER DIAGRAM

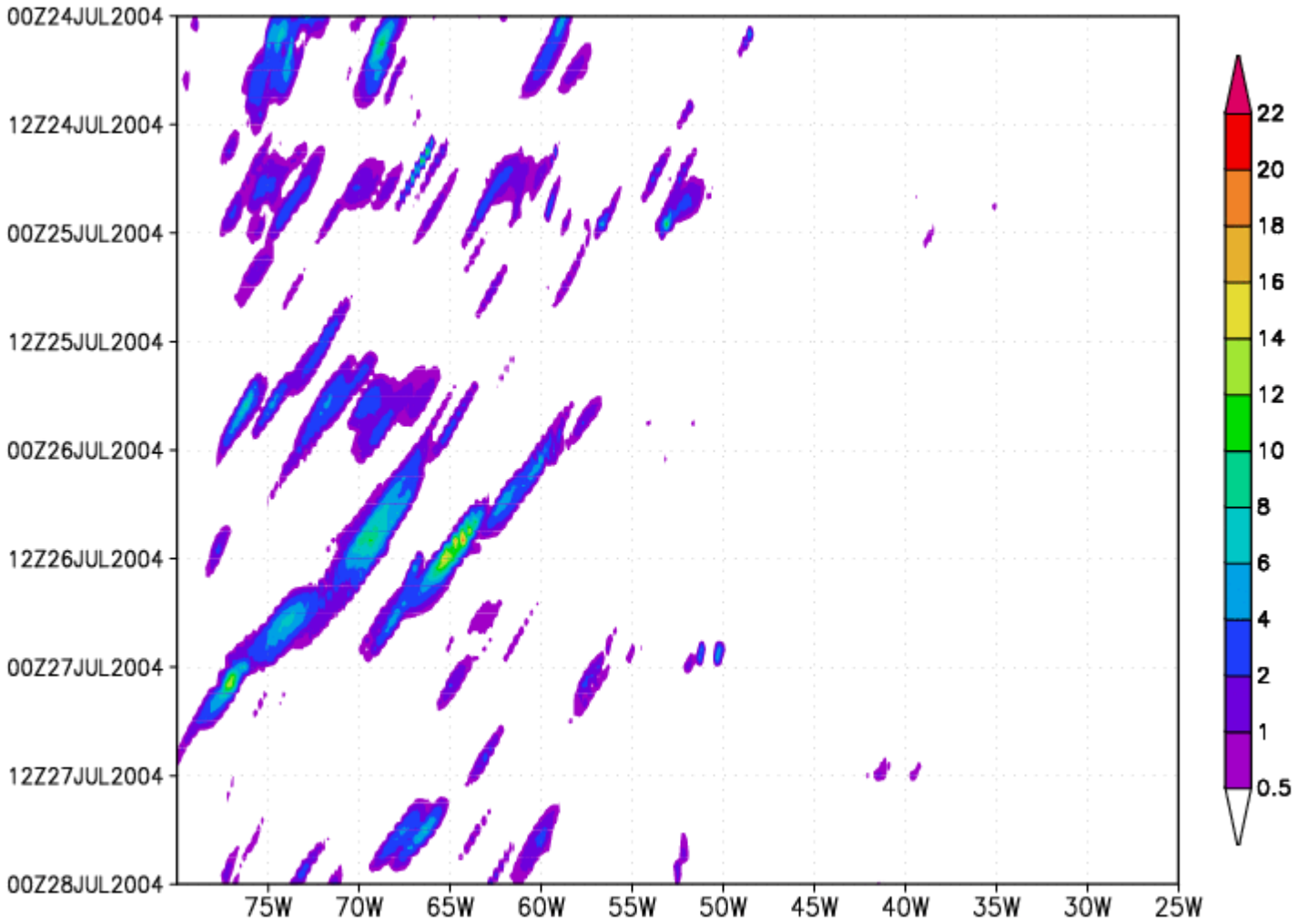


HOVMÖLLER DIAGRAM




00Z19MAR2003
5S
10S
15S
20S
25S
30S
35S
40S
75W 70W 65W 60W 55W 50W 45W 40W 35W 30W 25W
22
20
18
16
14
12
10
8
6
4
2
1
0.5

HOVMÖLLER DIAGRAM



CONCLUSION

- Well define diurnal cycle 0º – 15º S;
- Thermal and topographic circulation northern coast;
- 2.5 time wave across the Amazon Basin;
- Convective systems move preferably westward;
- Longer than expected propagating systems;
- Few eastward waves with westward propagation;
- Hope for improving weather forecast – stats + NWP;
- Gravity waves, cold pools, and steering levels;
- Moving cold fronts tend to organized convection over Amazon;

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THE END