

## Appendix

Distribution of the 24-hour and 48-hour accumulated total precipitation fields for 2009070100 (Fig.2 (a,b,c,d,e))

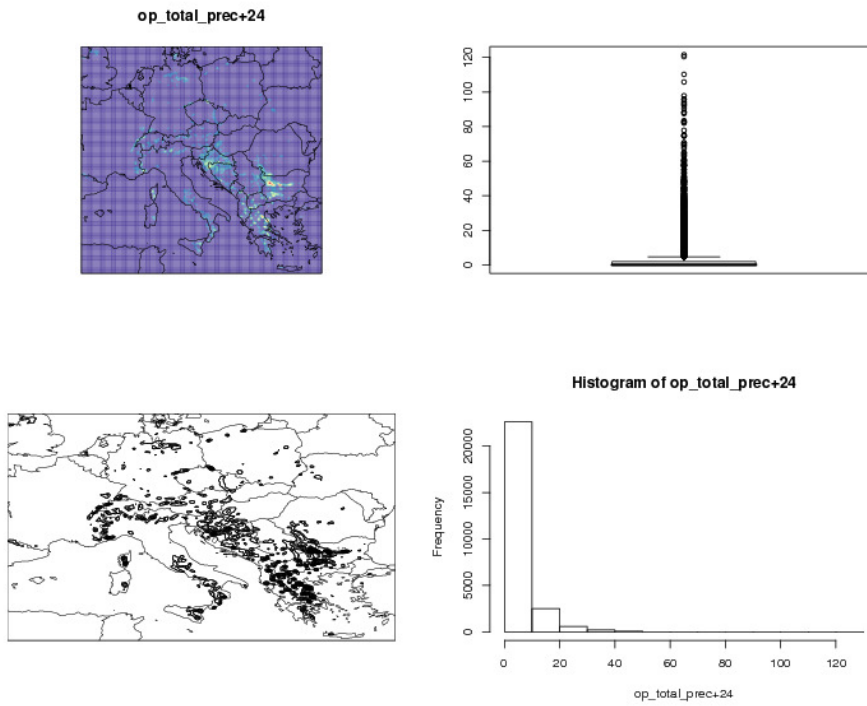


Fig.2 (a) . Same as Fig.1 (a) but for 2009070100

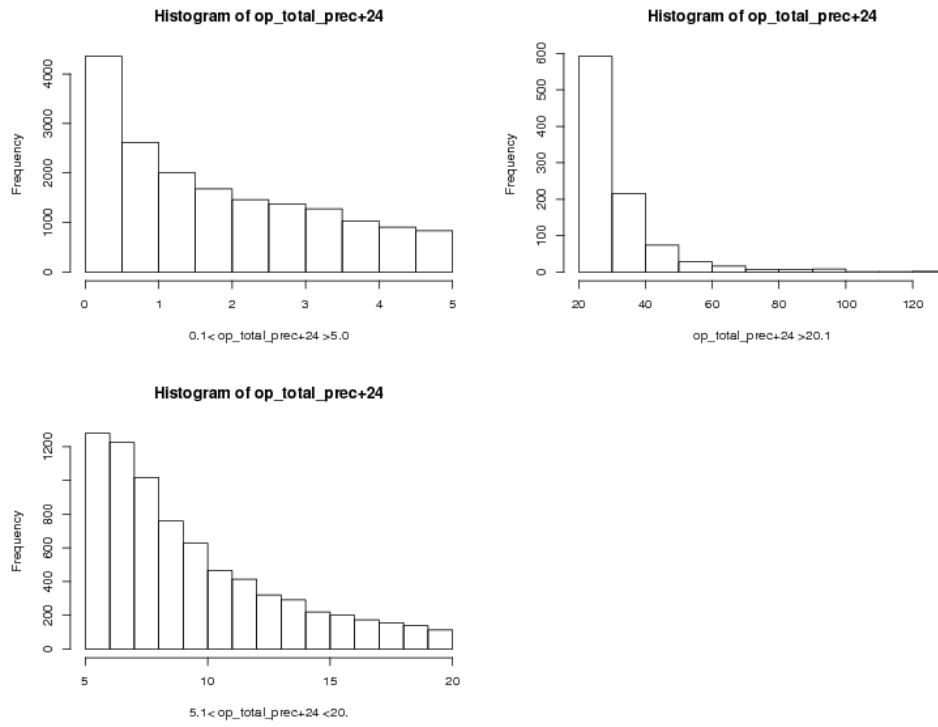


Fig.2 (b) . Same as Fig.1 (b) but for 2009070100

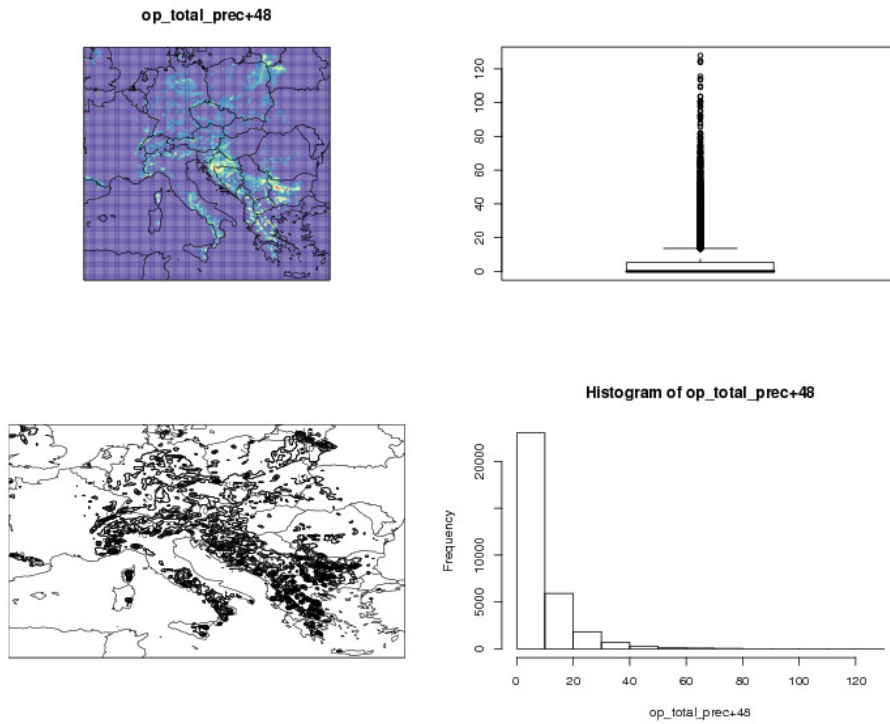


Fig.2 (c) as Fig.1 (c) but for 2009070100

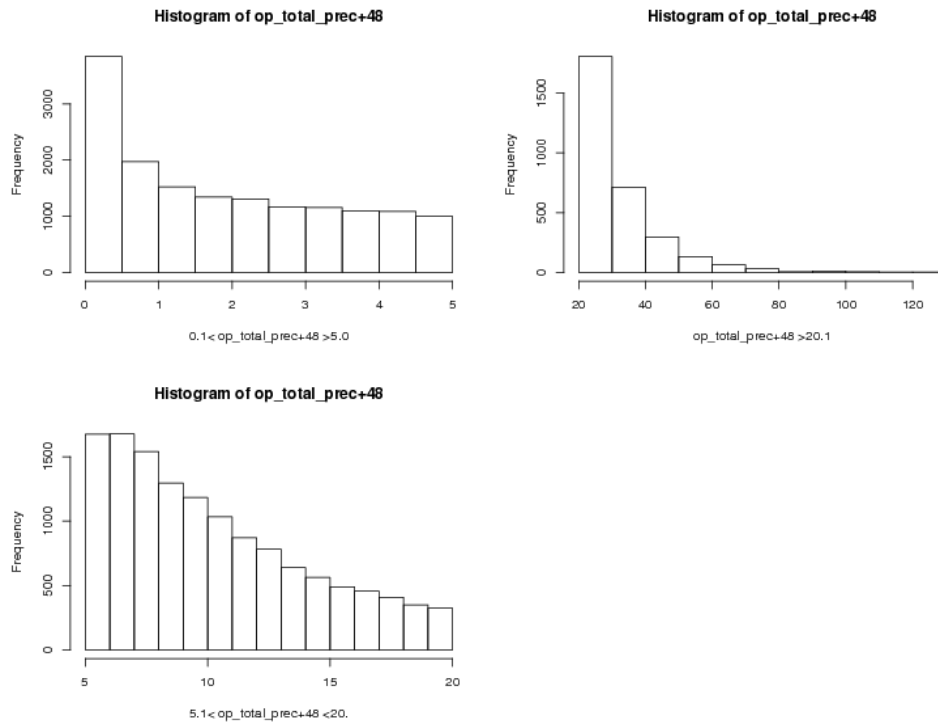


Fig.2 (d) . Same as Fig.1 (d) but for 2009070100

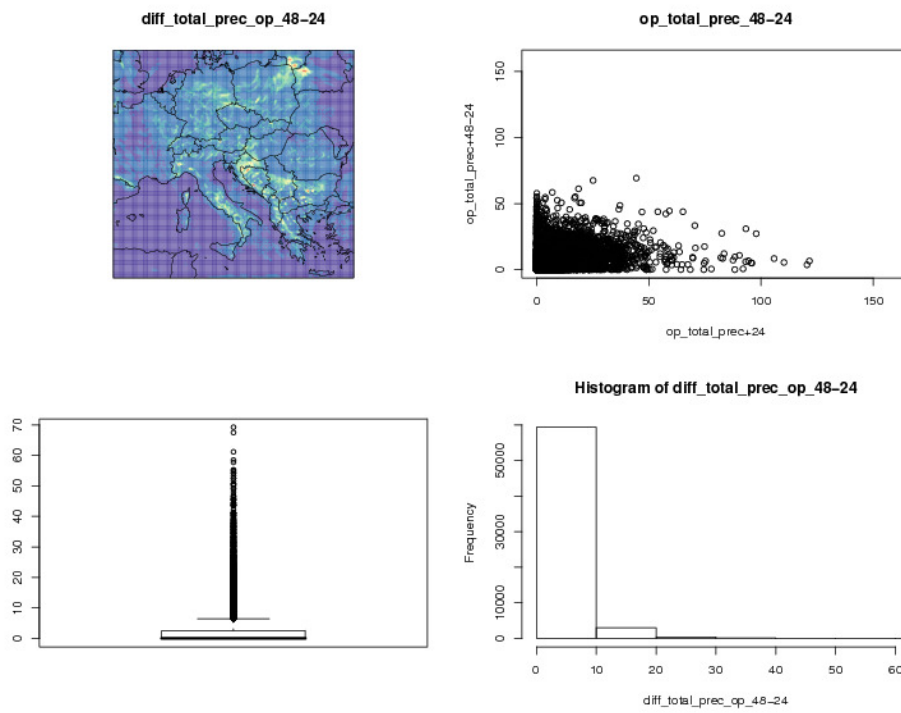


Fig.2 (e) . Same as Fig.1 (e) but for 2009070100

Distribution of the 3-hour and 6-hour accumulated total precipitation fields for 2009070100 (Fig.5 (a,b,c,d,e))

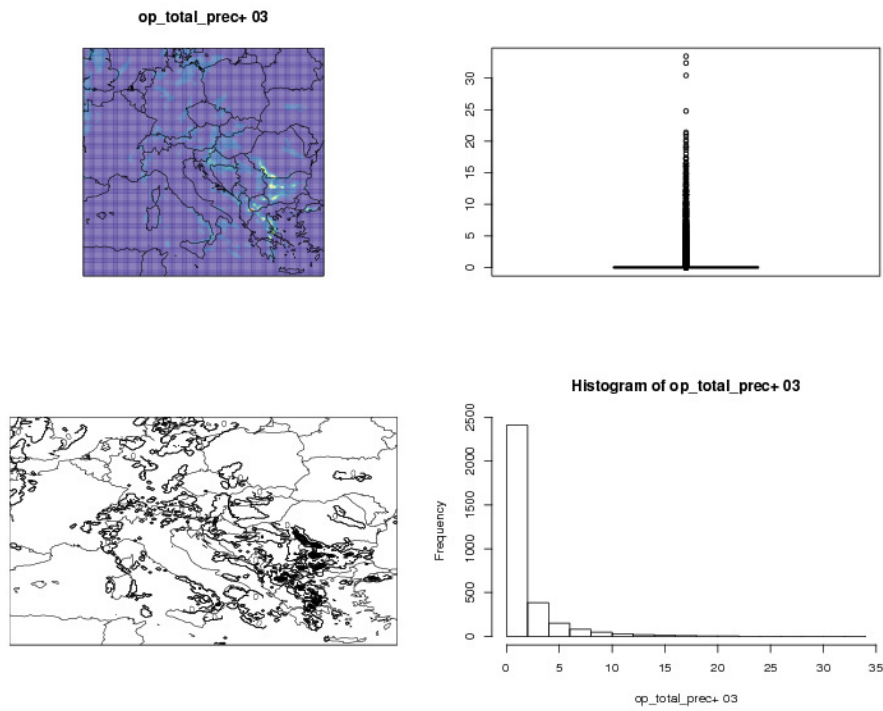


Fig. 5 (a) Same as Fig.4 (a) but for 2009070100

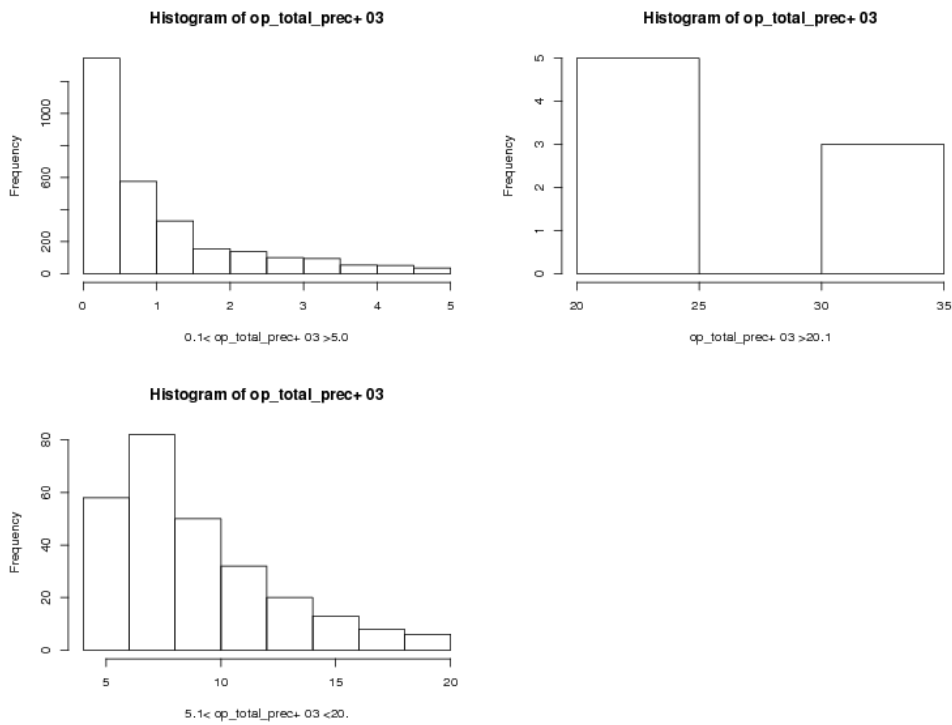


Fig.5 (b) Same as Fig.4 (b) but for 2009070100

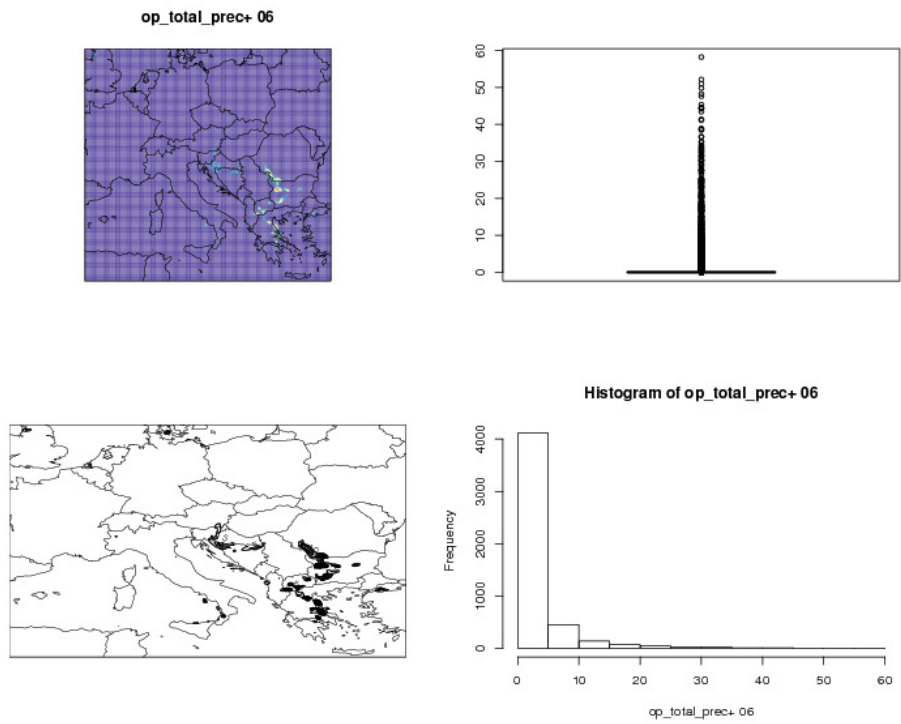


Fig. 5 (c) Same as Fig.4 (c) but for 2009070100

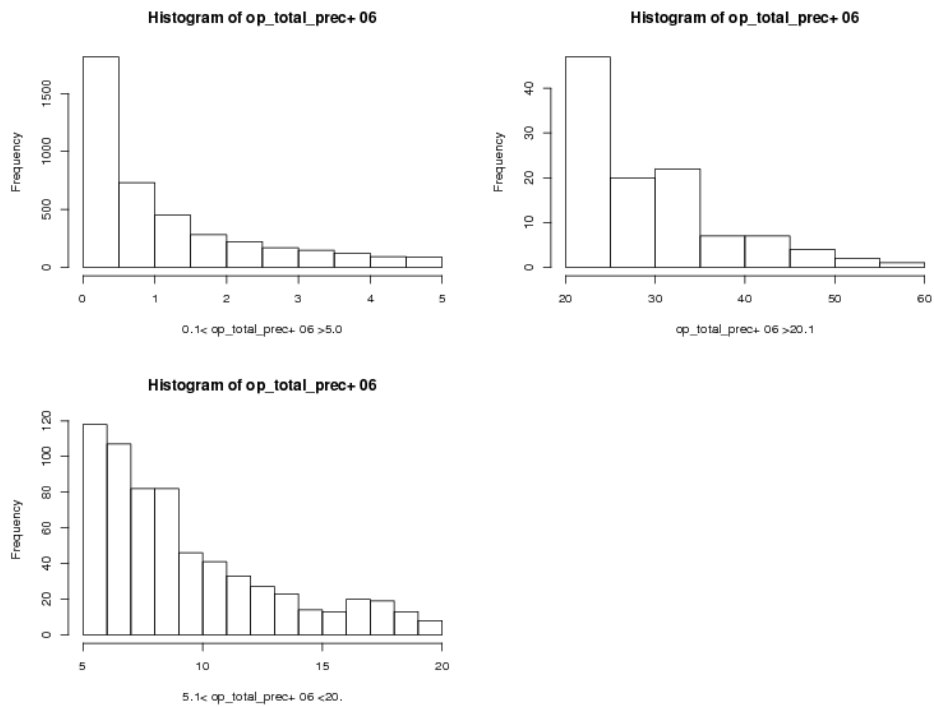


Fig. 5 (d) Same as Fig.4 (d) but for 2009070100

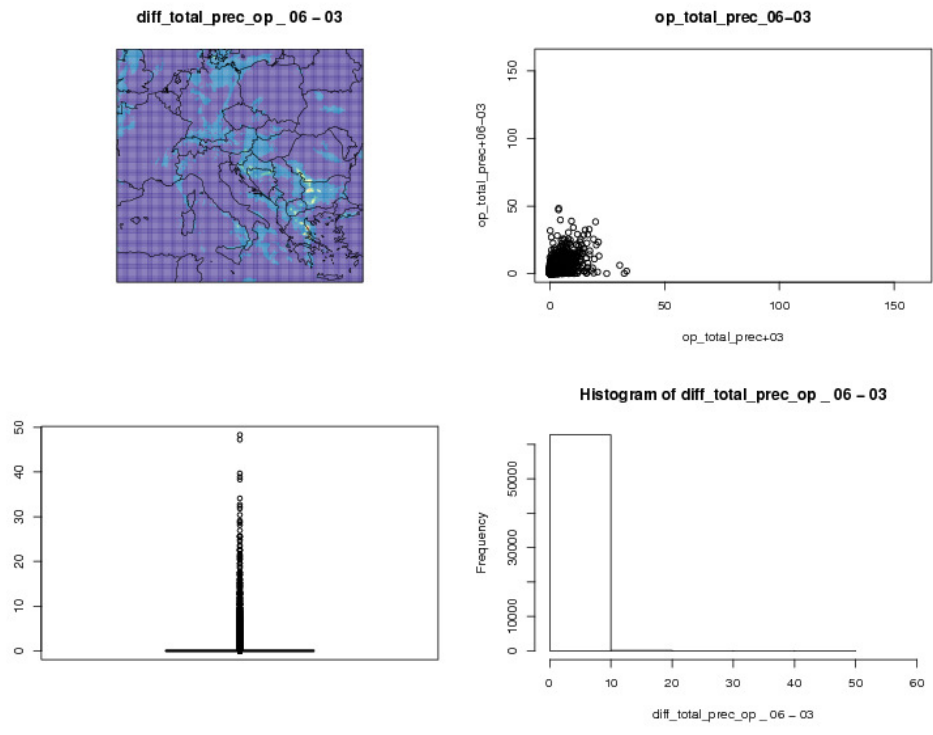
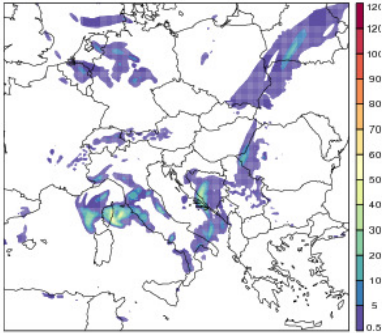


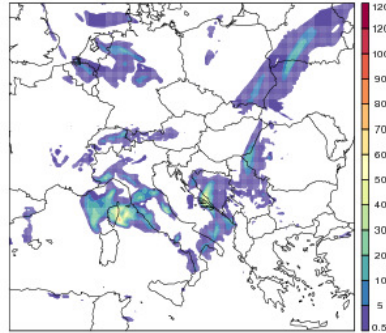
Fig. 5 (e) Same as Fig.4 (e) but for 2009070100

# Distribution of every 3-hour accumulated total precipitation fields for 2009062100 (Fig.7)

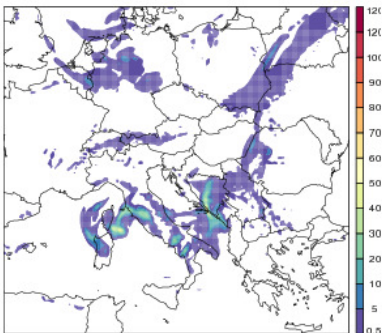
total precip 3h 2009/6/21 z0:0 +6h



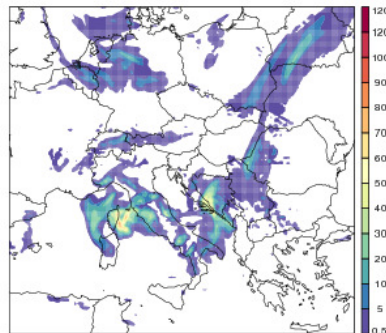
total precip  
2009/6/21 z0:0 +6h



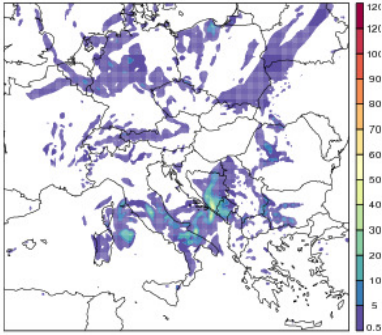
total precip 3h 2009/6/21 z0:0 +9h



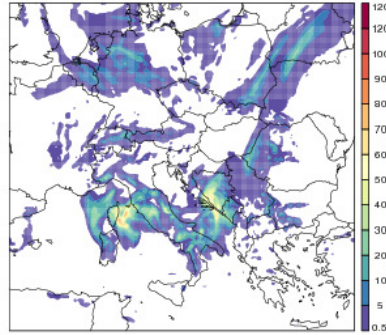
total precip  
2009/6/21 z0:0 +9h



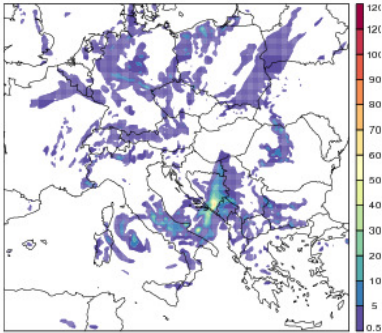
total precip 3h 2009/6/21 z0:0 +12h



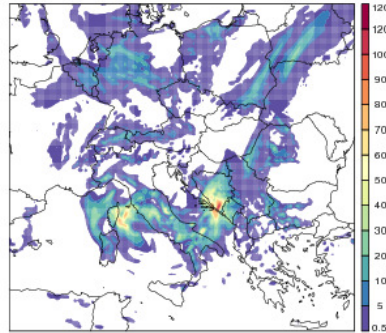
total precip  
2009/6/21 z0:0 +12h



total precip 3h 2009/6/21 z0:0 +15h

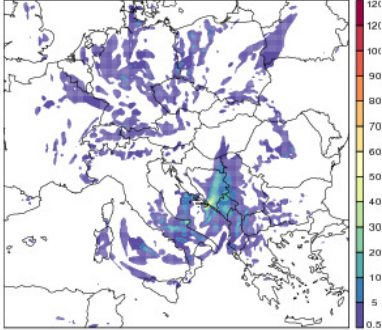


total precip  
2009/6/21 z0:0 +15h

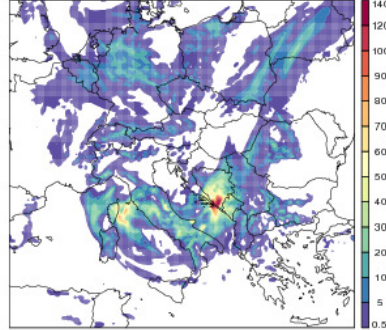




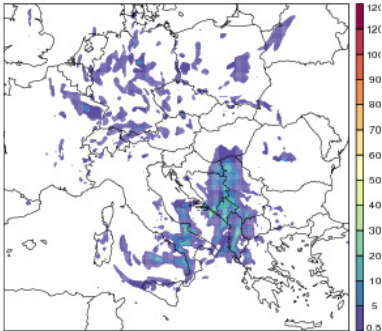
total precip 3h 2009/6/21 z0:0 +18h



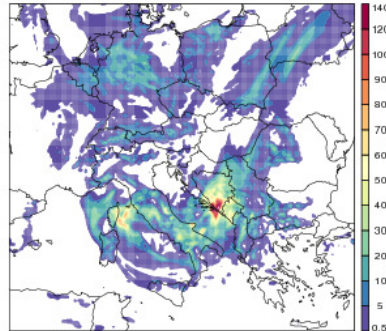
total precip  
2009/6/21 z0:0 +18h



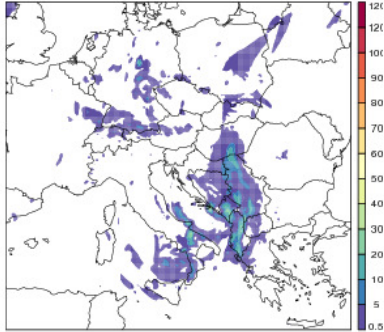
total precip 3h 2009/6/21 z0:0 +21h



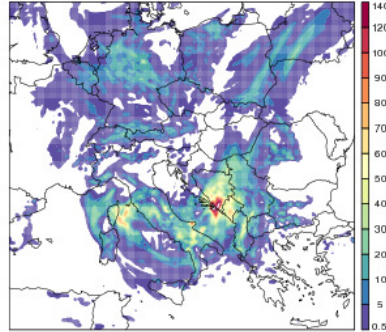
total precip  
2009/6/21 z0:0 +21h



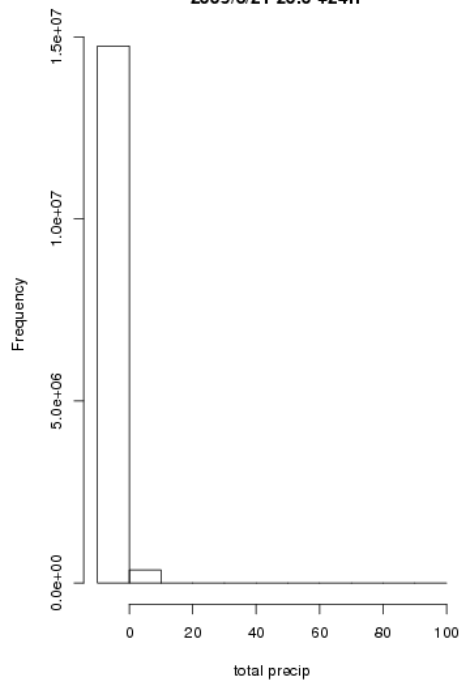
total precip 3h 2009/6/21 z0:0 +24h



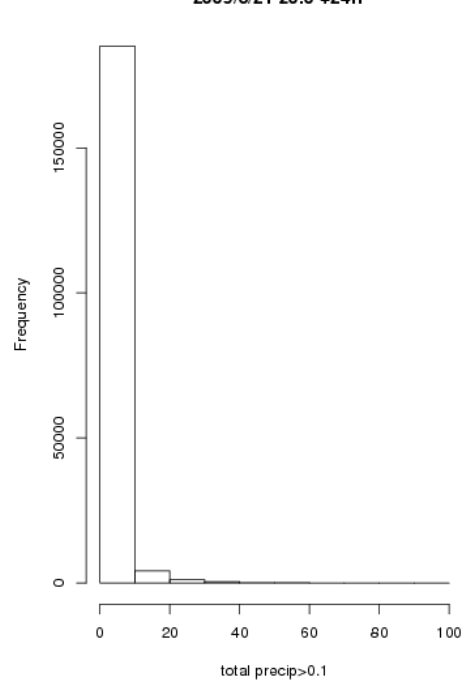
total precip  
2009/6/21 z0:0 +24h



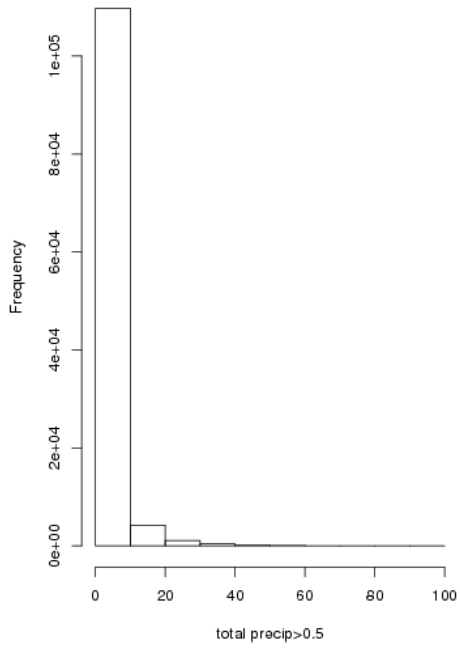
Histogram of total precip  
2009/6/21 z0:0 +24h



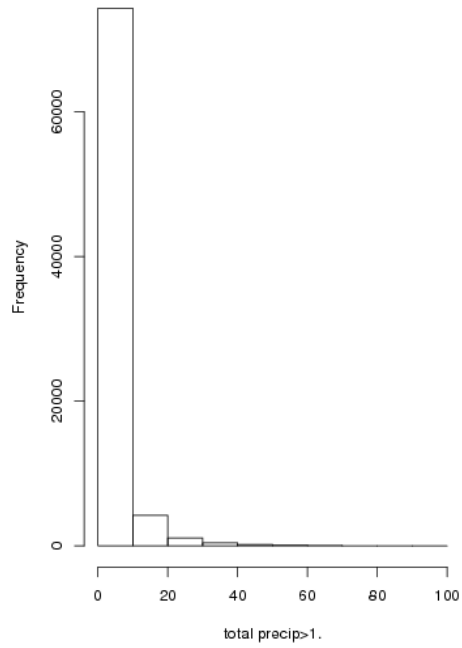
Histogram of total precip  
2009/6/21 z0:0 +24h



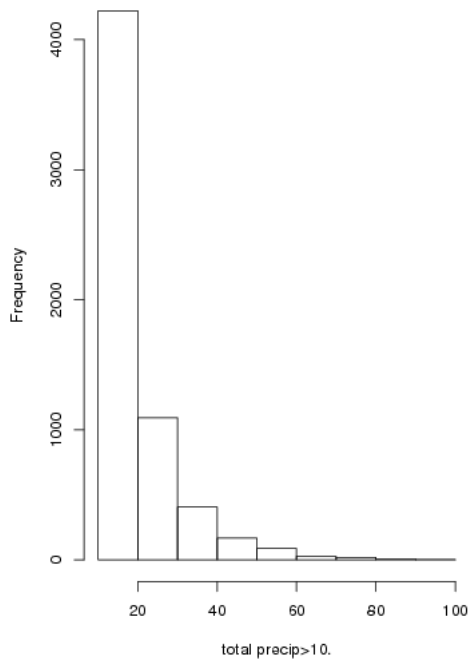
**Histogram of total precip  
2009/6/21 z0:0 +24h**



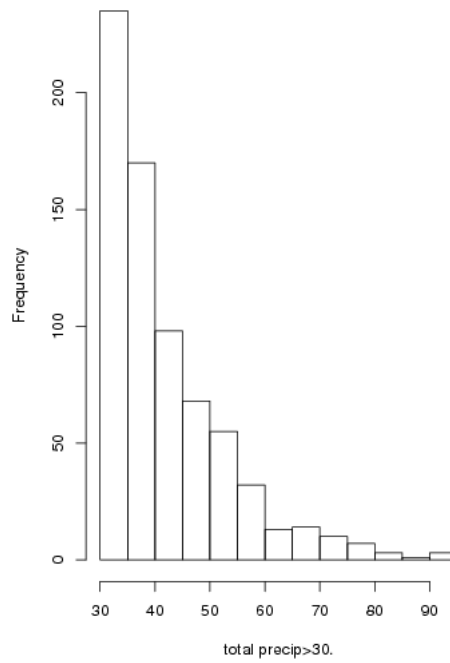
**Histogram of total precip  
2009/6/21 z0:0 +24h**



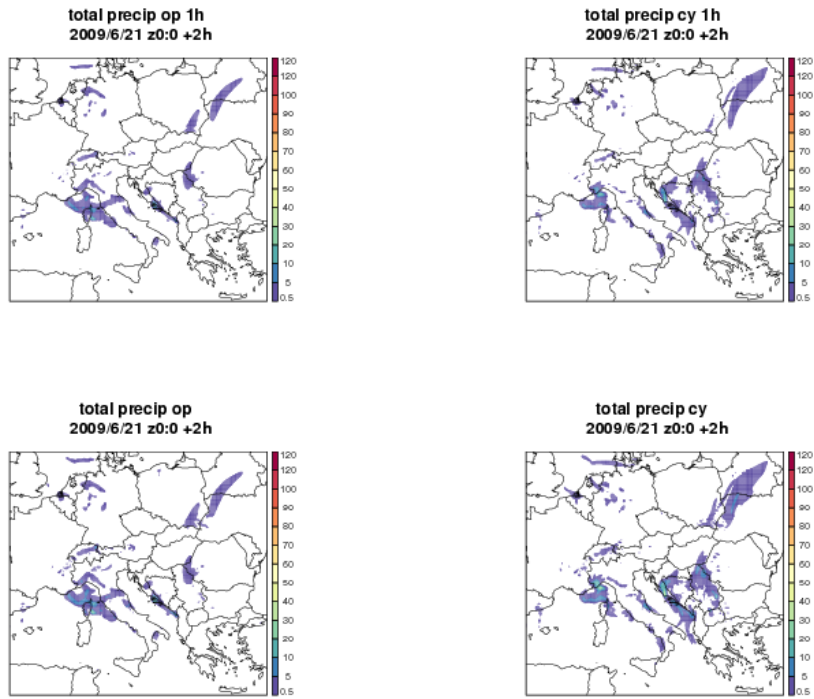
**Histogram of total precip  
2009/6/21 z0:0 +24h**



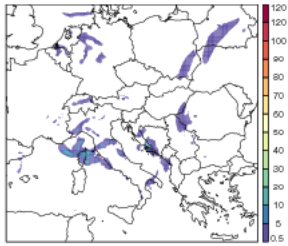
**Histogram of total precip  
2009/6/21 z0:0 +24h**



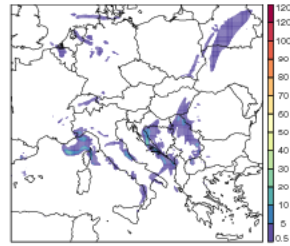
Differences between the 1hour accumulated total precipitations for the first 6 hour forecasts obtained from the operational and cycling model runs for 2009062100 (Fig.10a)



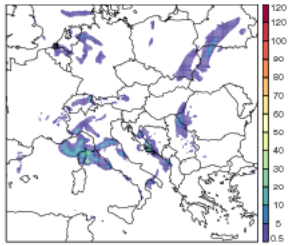
**total precip op 1h**  
**2009/6/21 z0:0 +3h**



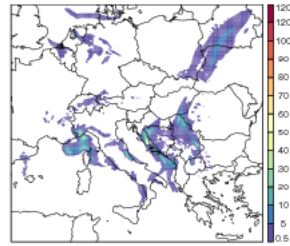
**total precip cy 1h**  
**2009/6/21 z0:0 +3h**



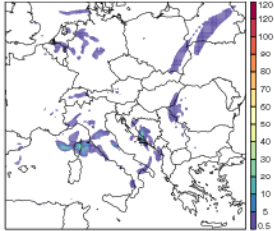
**total precip op**  
**2009/6/21 z0:0 +3h**



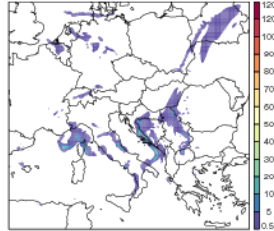
**total precip cy**  
**2009/6/21 z0:0 +3h**



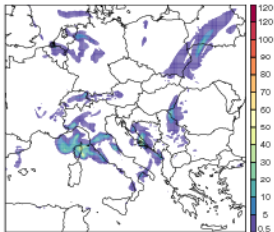
**total precip op 1h**  
**2009/6/21 z0:0 +4h**



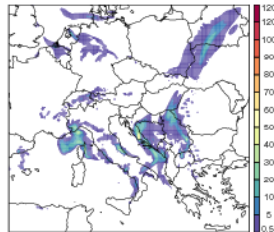
**total precip cy 1h**  
**2009/6/21 z0:0 +4h**



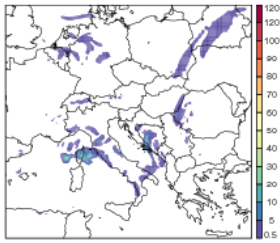
**total precip op**  
**2009/6/21 z0:0 +4h**



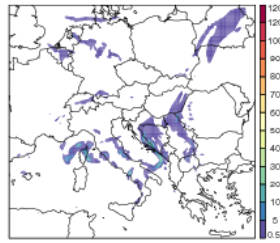
**total precip cy**  
**2009/6/21 z0:0 +4h**



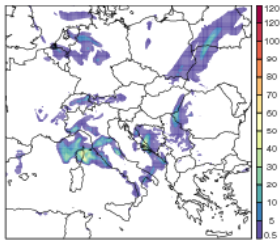
**total precip op 1h**  
2009/6/21 z0:0 +5h



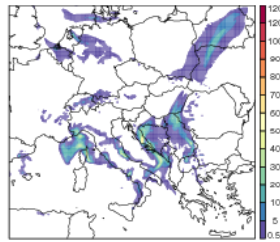
**total precip cy 1h**  
2009/6/21 z0:0 +5h



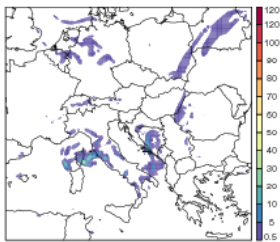
**total precip op**  
2009/6/21 z0:0 +5h



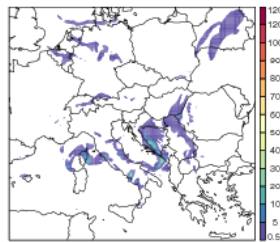
**total precip cy**  
2009/6/21 z0:0 +5h



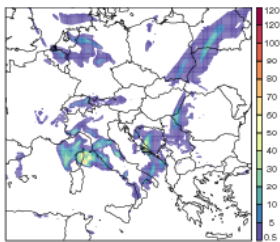
**total precip op 1h**  
2009/6/21 z0:0 +6h



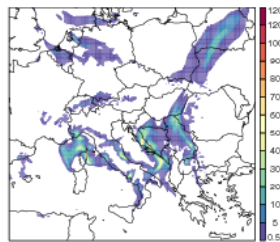
**total precip cy 1h**  
2009/6/21 z0:0 +6h

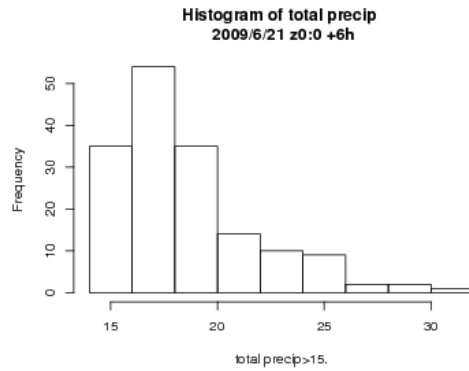
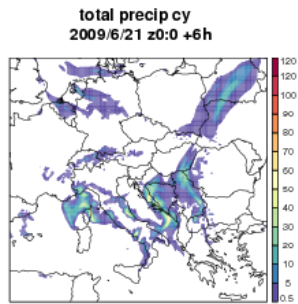
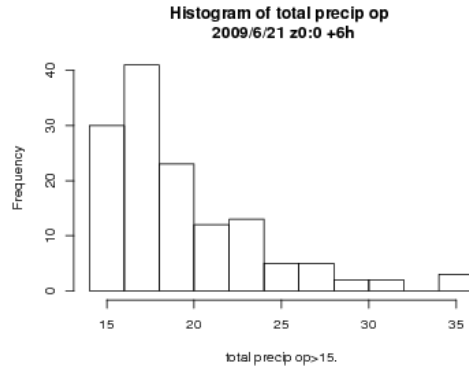
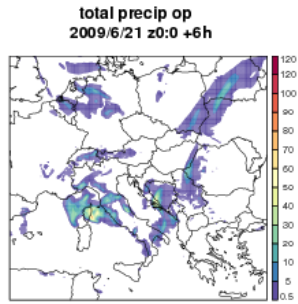


**total precip op**  
2009/6/21 z0:0 +6h

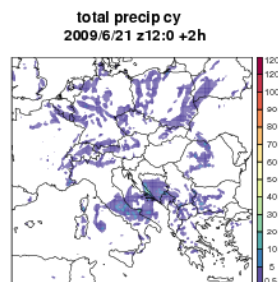
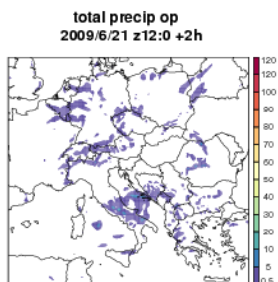
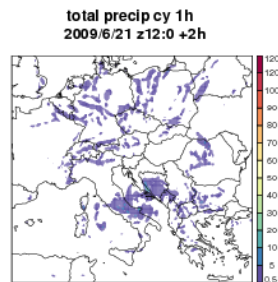
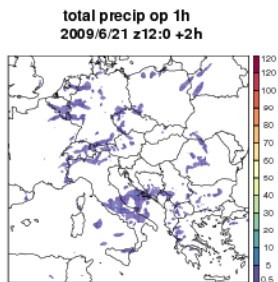


**total precip cy**  
2009/6/21 z0:0 +6h

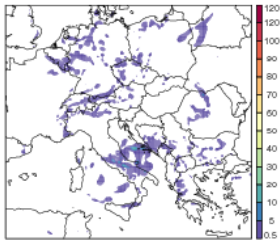




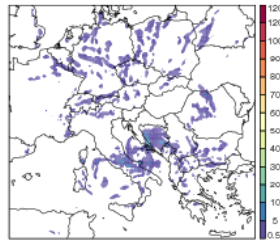
Differences between the 1hour accumulated total precipitations for the first 6 hour forecasts obtained from the operational and cycling model runs for 2009062112 (Fig.11a)



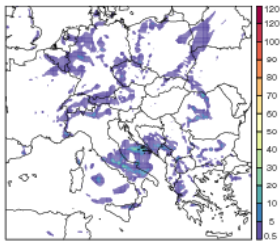
**total precip op 1h**  
2009/6/21 z12:0 +3h



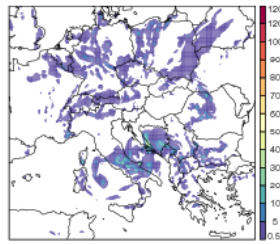
**total precip cy 1h**  
2009/6/21 z12:0 +3h



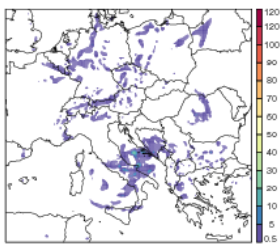
**total precip op**  
2009/6/21 z12:0 +3h



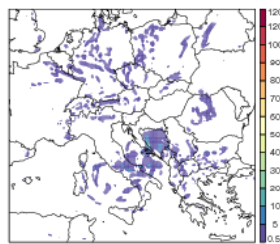
**total precip cy**  
2009/6/21 z12:0 +3h



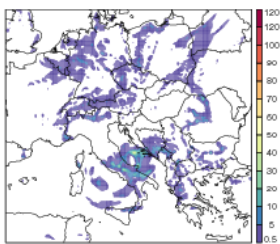
**total precip op 1h**  
2009/6/21 z12:0 +4h



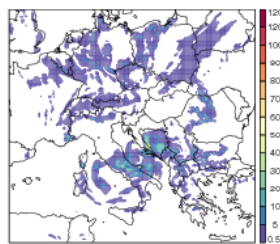
**total precip cy 1h**  
2009/6/21 z12:0 +4h



**total precip op**  
2009/6/21 z12:0 +4h

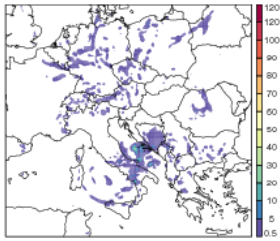


**total precip cy**  
2009/6/21 z12:0 +4h

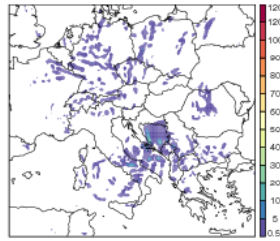




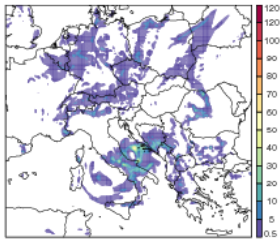
**total precip op 1h**  
2009/6/21 z12:0 +5h



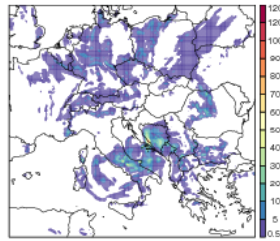
**total precip cy 1h**  
2009/6/21 z12:0 +5h



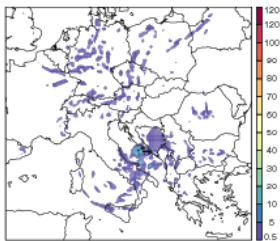
**total precip op**  
2009/6/21 z12:0 +5h



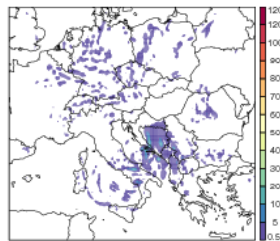
**total precip cy**  
2009/6/21 z12:0 +5h



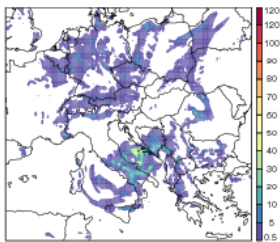
**total precip op 1h**  
2009/6/21 z12:0 +6h



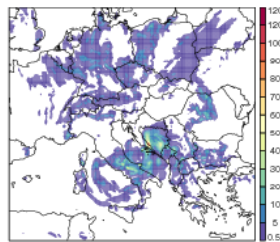
**total precip cy 1h**  
2009/6/21 z12:0 +6h



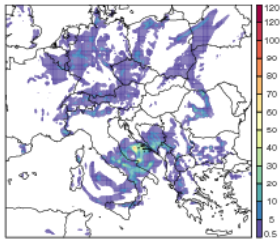
**total precip op**  
2009/6/21 z12:0 +6h



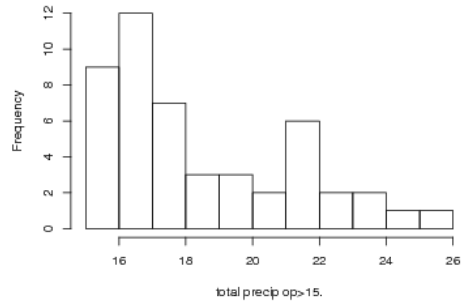
**total precip cy**  
2009/6/21 z12:0 +6h



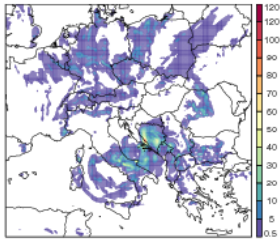
**total precip op**  
2009/6/21 z12:0 +6h



**Histogram of total precip op**  
2009/6/21 z12:0 +6h



**total precip cy**  
2009/6/21 z12:0 +6h



**Histogram of total precip**  
2009/6/21 z12:0 +6h

