

Gràfics de la simulació de l'Ebre

Cas 1: Vent del NW en altura (5-6/11/2005)

Resum en data de Maig de 2008

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Abstract

La simulació va de les 12:00 UTC del dia 05/11/2005 fins a 12:00 UTC del dia 06/11/2005 Domini centrat a (lat,lon)=(42.2,-0.51) Resolució espacial $2\text{ km} \times 2\text{ km} \times 3\text{ m}$ en les direccions x, y i z, respectivament ($360 \times 240 \times 85$ punts en cada direcció). Aprop del terra la resolució vertical és de 3 m però es va degradant fins a 700 m a dalt del domini (10 km, aproximadament).

1 Domini i situació simulada

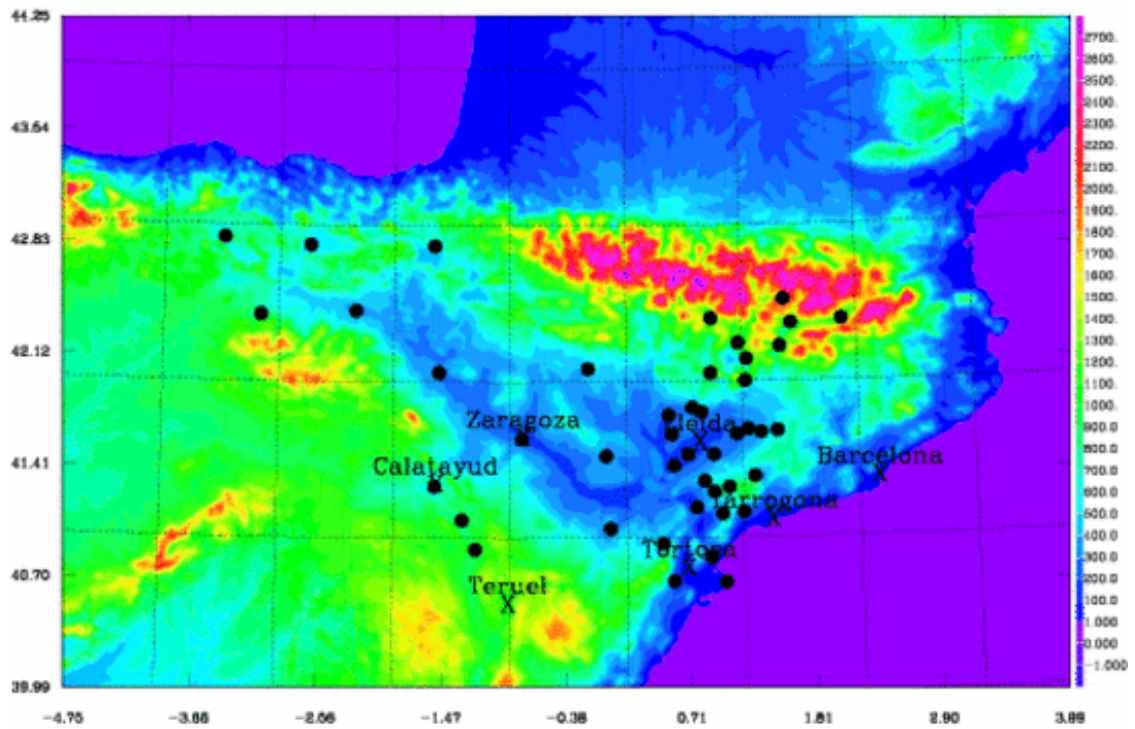


Figura 1: Domini simulat de la conca de l'Ebre. Els punts indiquen allà a on hem extret perfils temporals (cada 1 min) corresponent a les localitzacions de les estacions automàtiques

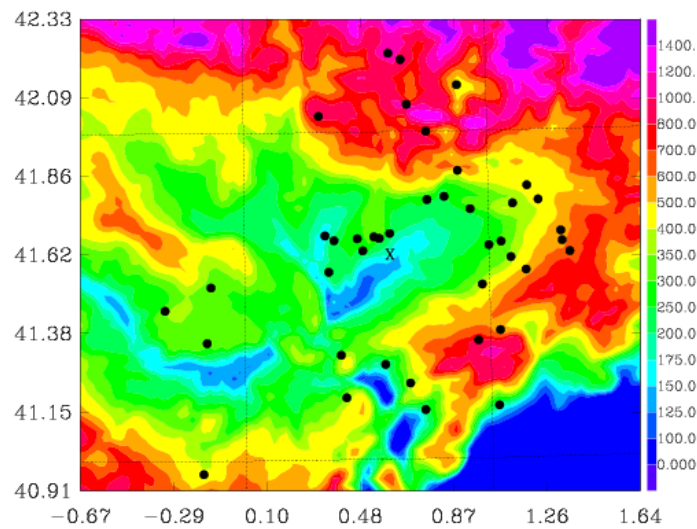


Figura 2: Zoom de la zona de Lleida amb els punts que empram per verificat

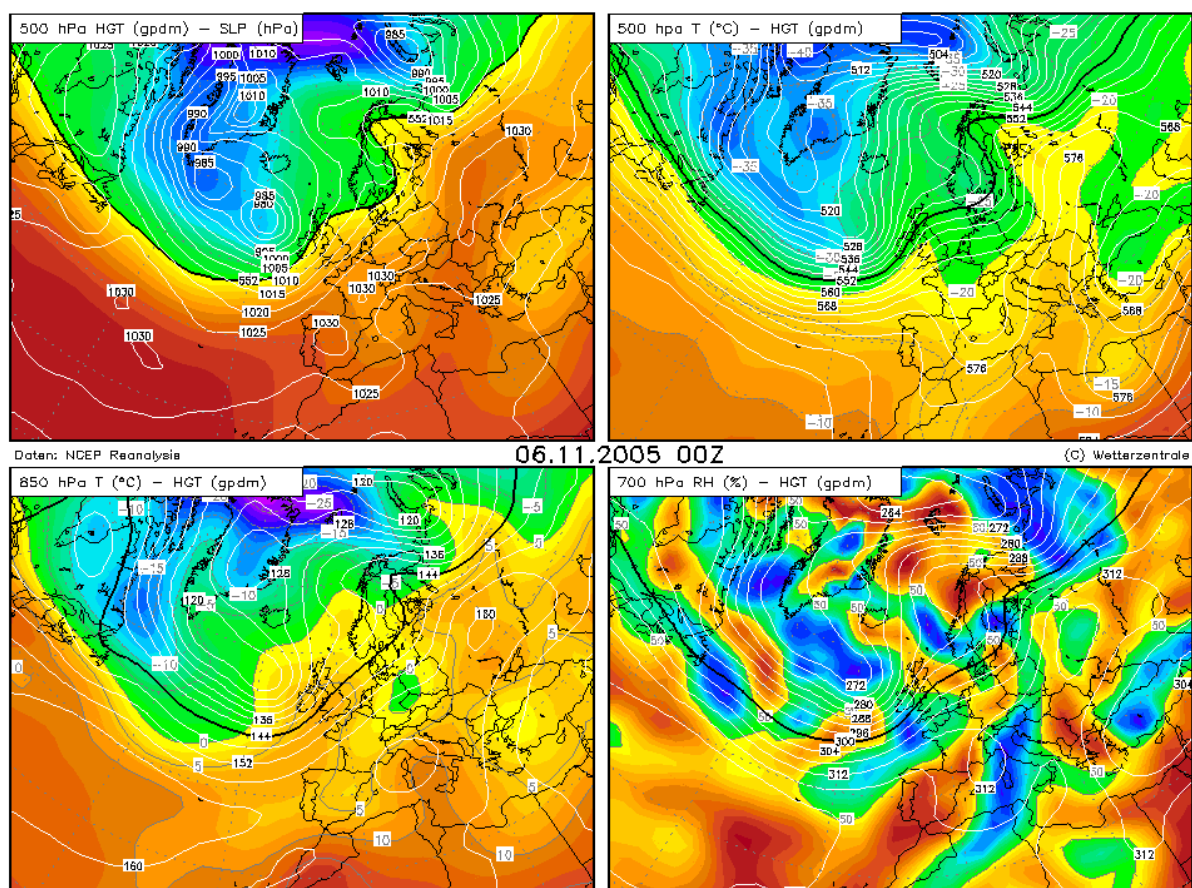


Figura 3: Reanàlisi de dia 06/11/2005 a les 00 UTC

2 Descripció de la situació

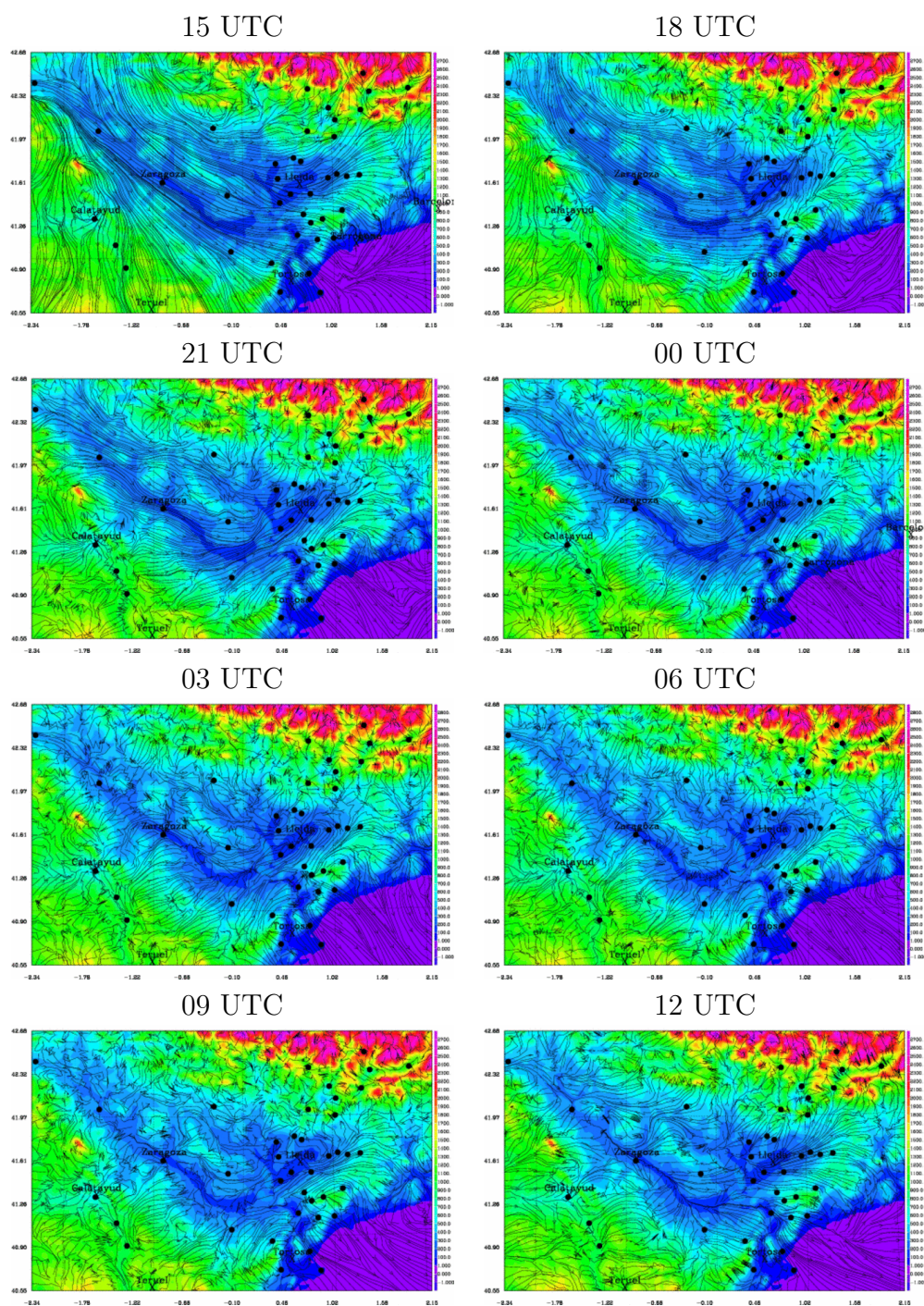


Figura 4: Evolució del vent a 10 m d'altura per diferents instants (cada 3 hores). S'ha fet un zoom a la zona d'interès

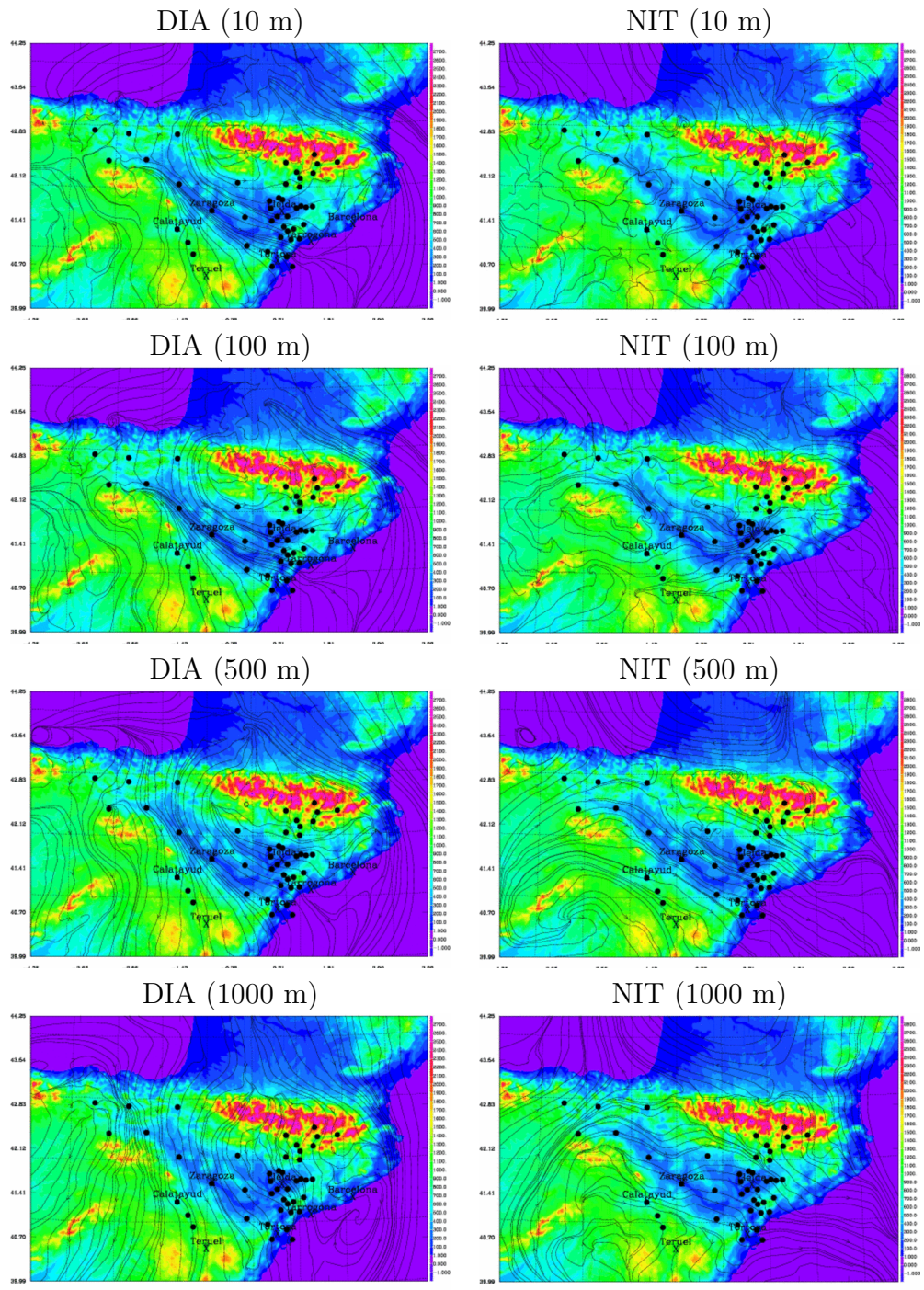


Figura 5: Evolució del vent en altura per dos instants diferents. Els camps *DIA* són a les 15 UTC i els camps *NIT* són a les 03 UTC

3 Estudi de la conca: DIA vs. NIT

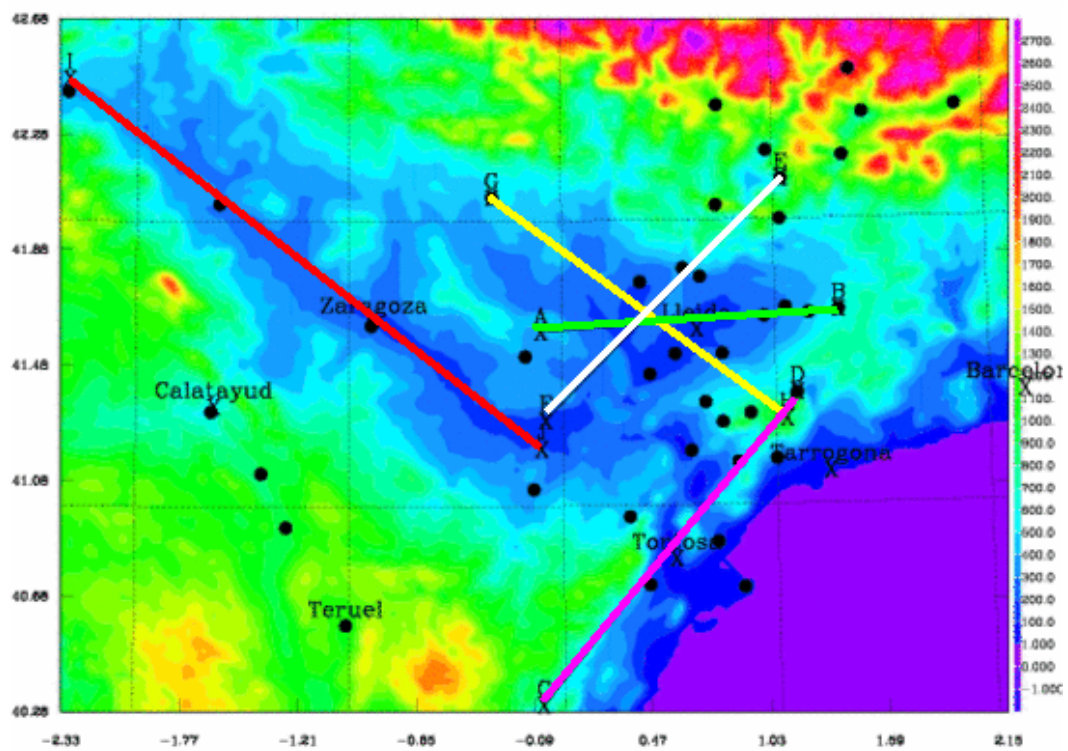


Figura 6: Talls verticals fets al llarg de la conca. VERD = AB, LILA = CD, BLANC = EF, GROC = GH, VERMELL = IJ

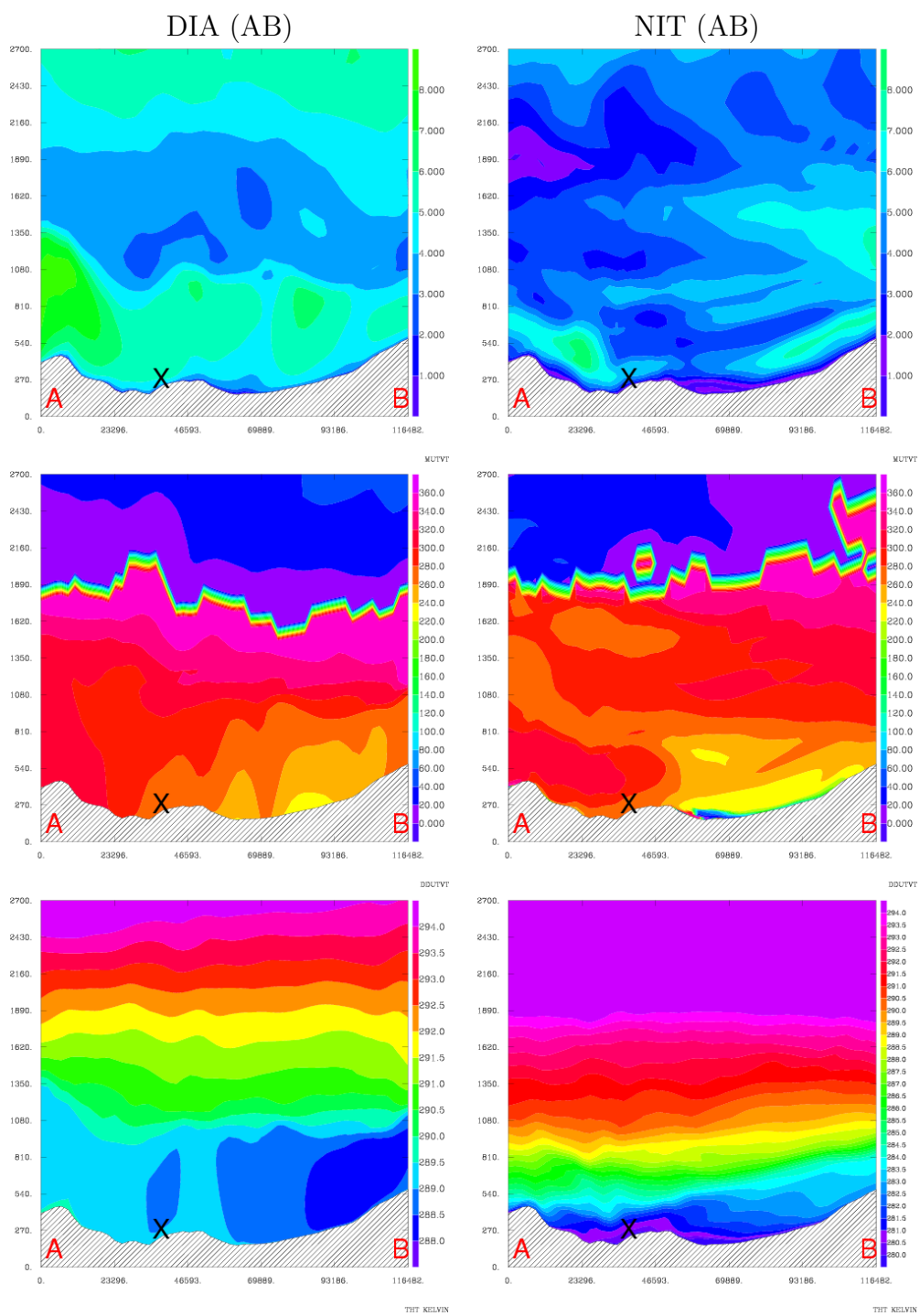


Figura 7: Tall seguint la línia AB (transversal a la ciutat de Lleida). X indica la ciutat de Lleida

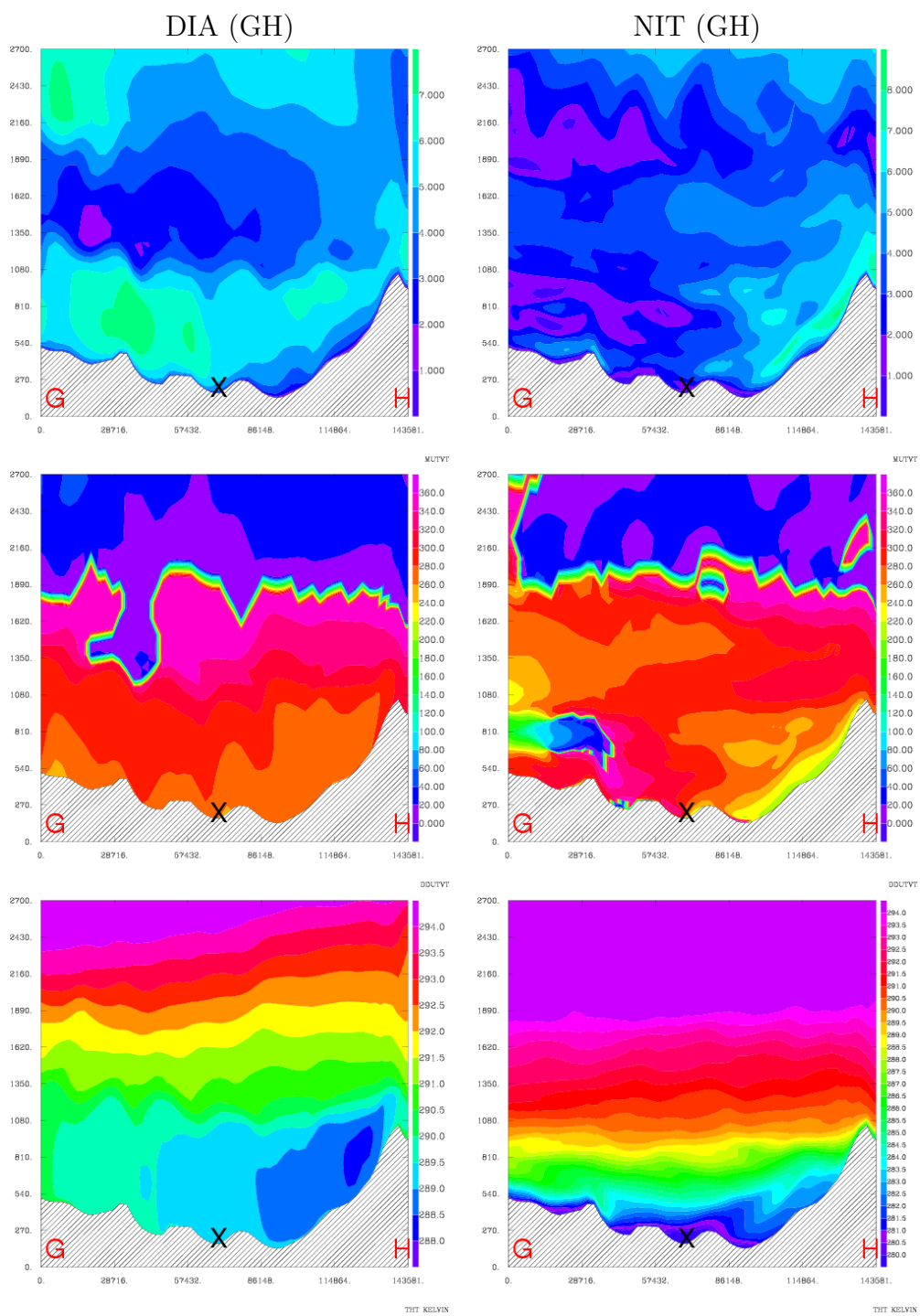


Figura 8: Tall seguint la línia GH (transversal a la ciutat de Lleida). X indica la ciutat de Lleida

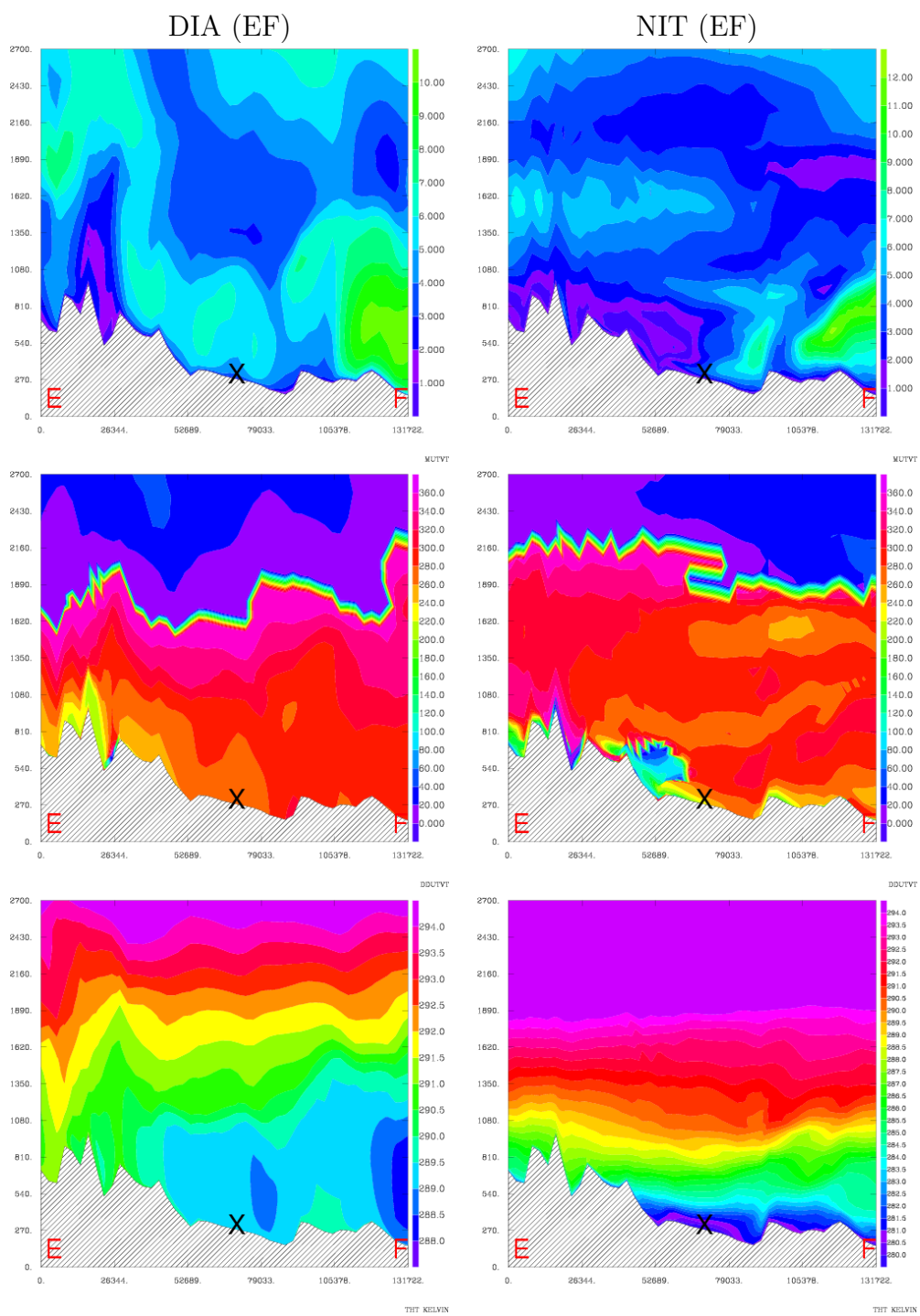


Figura 9: Tall seguint la línia EF (longitudinal a la ciutat de Lleida). X indica la ciutat de Lleida

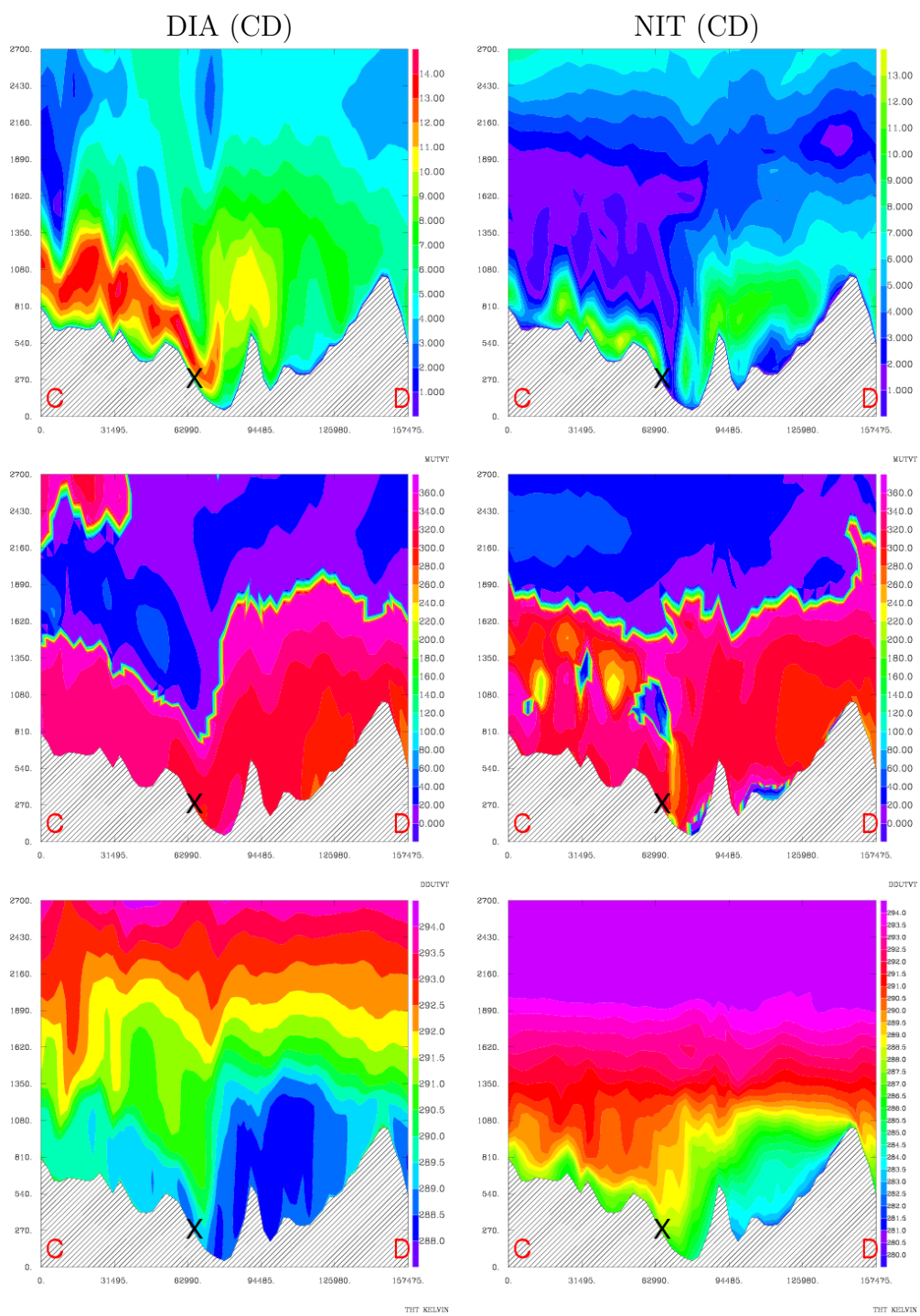


Figura 10: Tall seguint la línia CD (transversal al delta de l'Ebre). *X* indica la localització de Tortosa

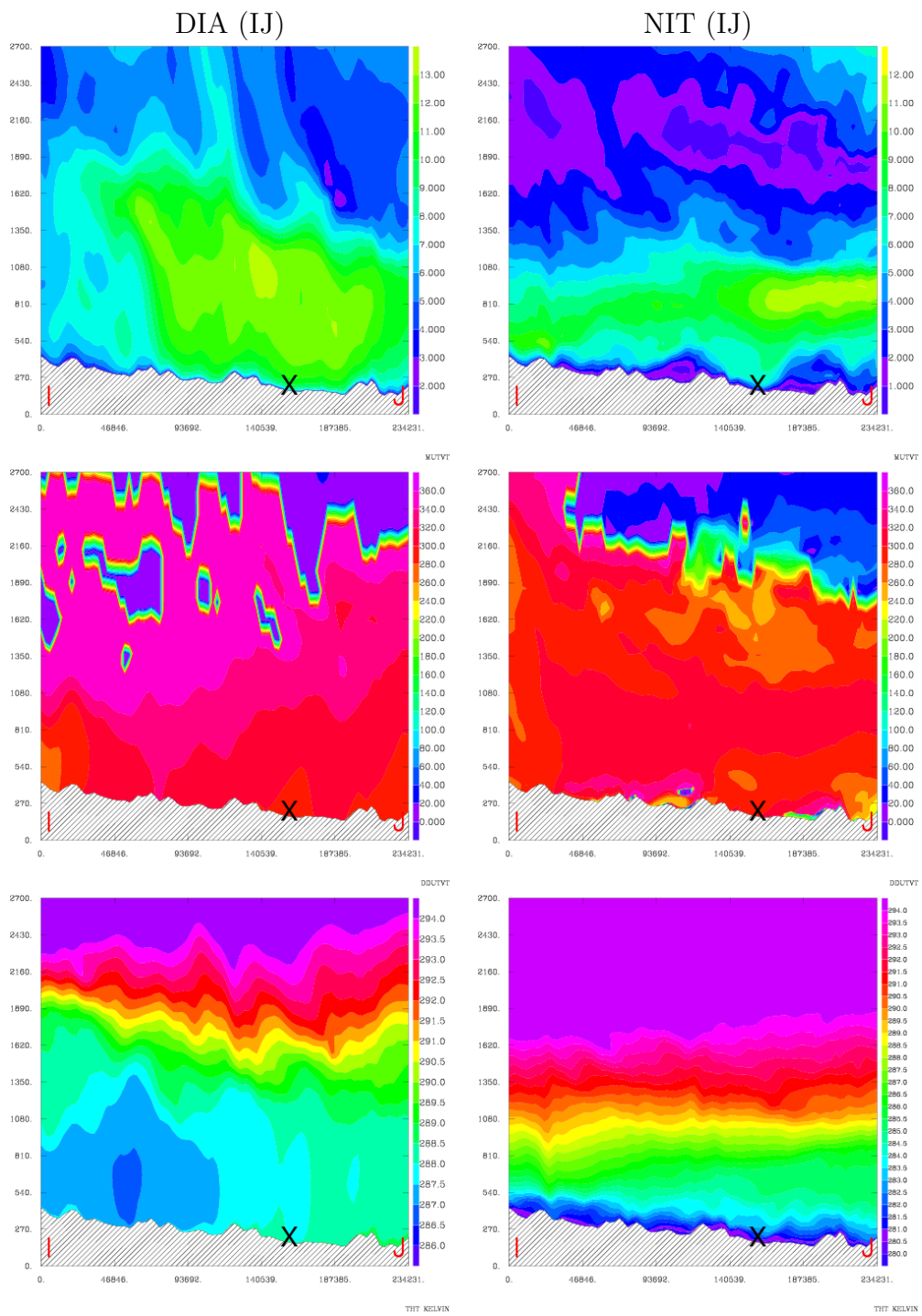


Figura 11: Tall seguint la línia IJ (longitudinal seguint el riu Ebre). *X* indica la localització de Saragossa

4 Series temporals a Gimenells

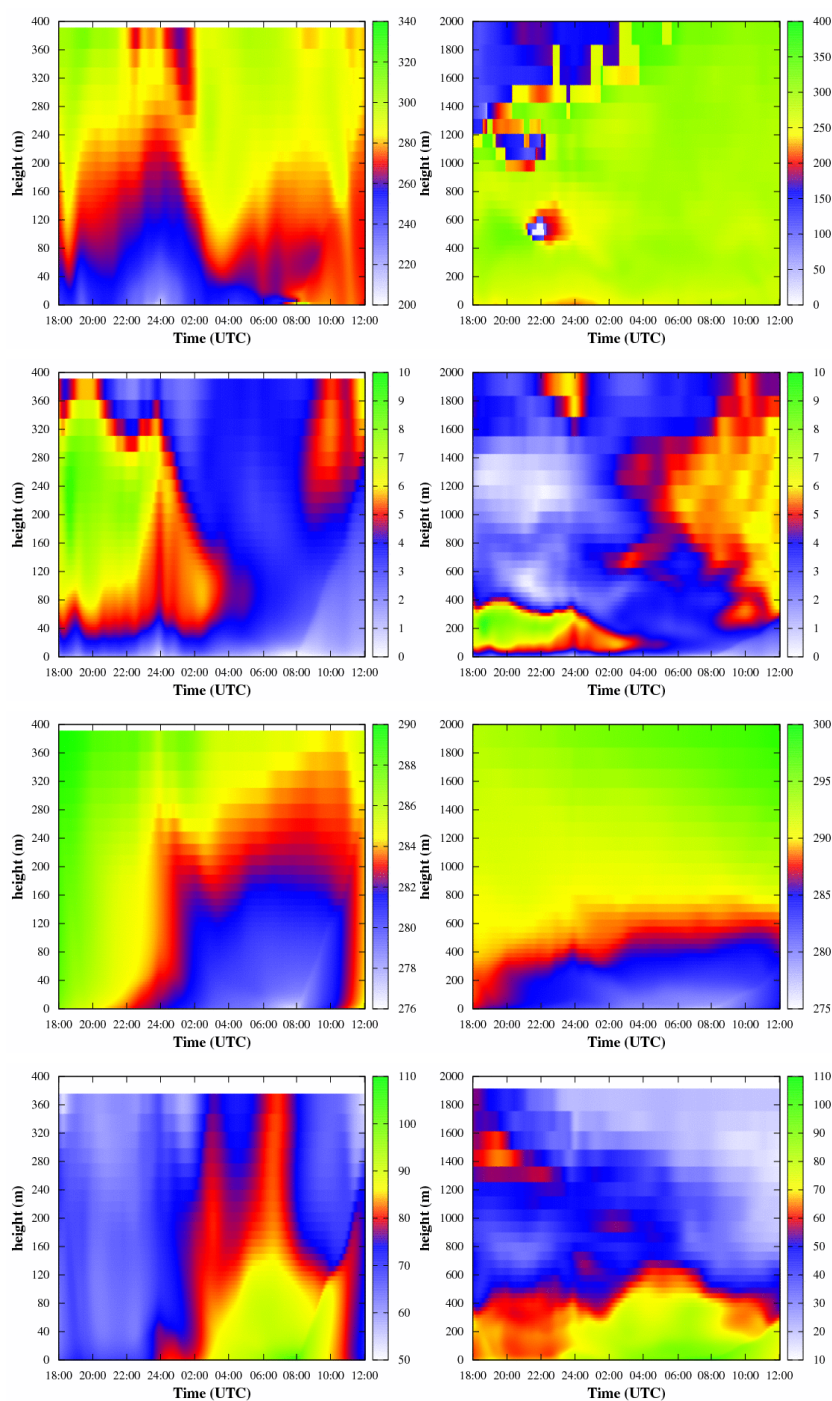


Figura 12: Sèries temporals dels perfils obtinguts a partir de Meso-NH per Gimenells

5 Verificació mitjançant imatges de satèl·lit

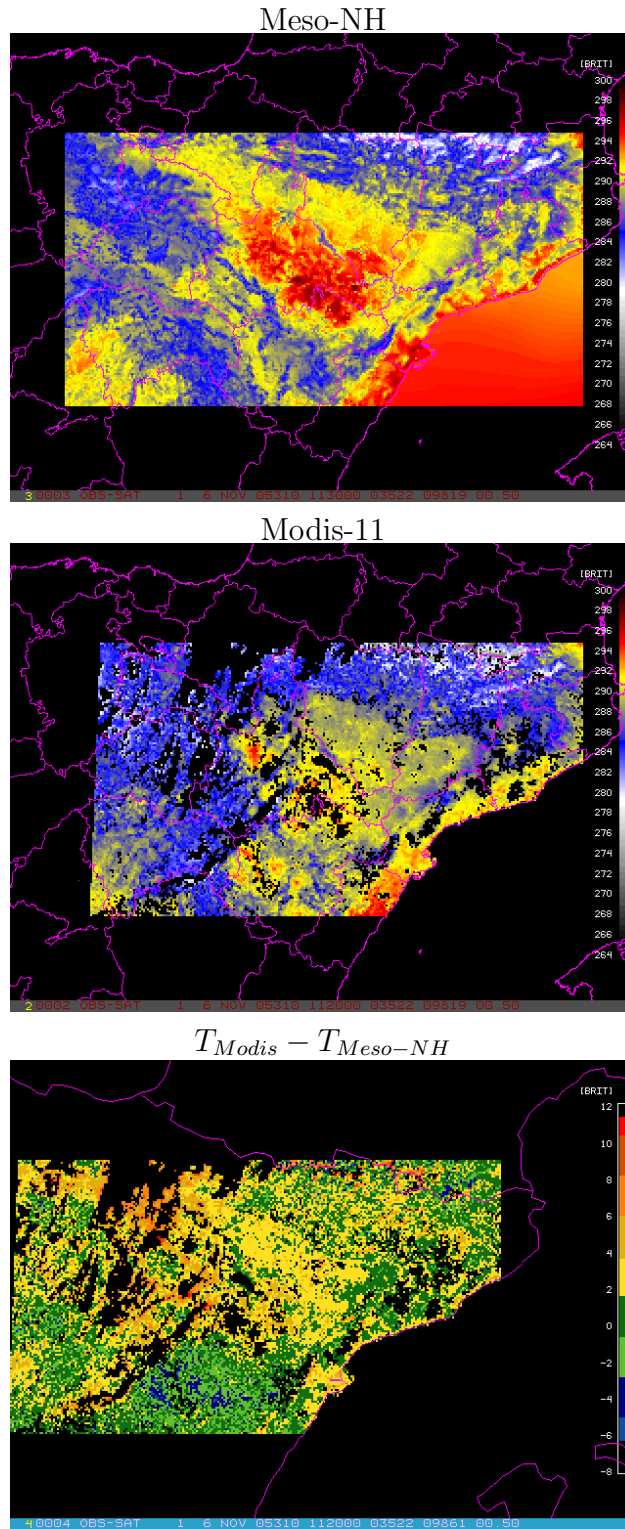


Figura 13: Comparació de la temperatura obtinguda pel model Meso-NH i la derivada a partir de les observacions del satèl·lit Modis (11:30 UTC)

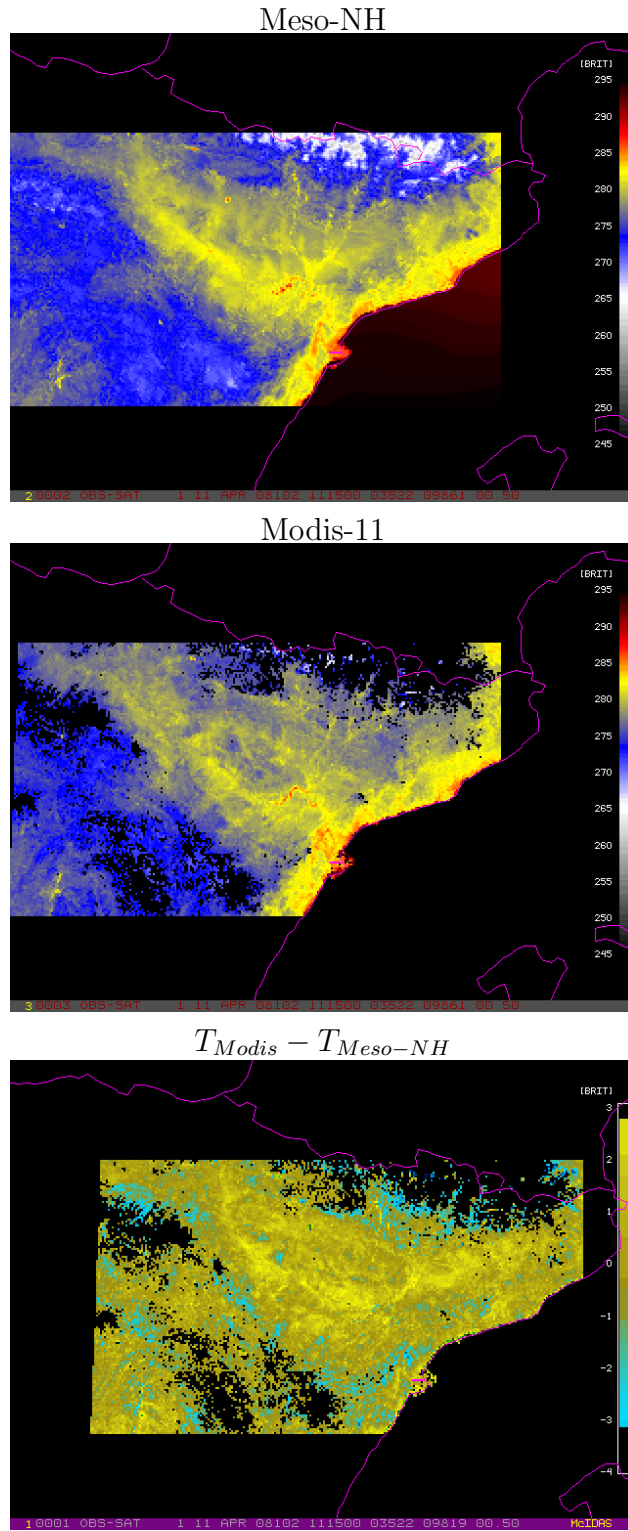


Figura 14: Comparació de la temperatura obtinguda pel model Meso-NH i la derivada a partir de les observacions del satèl·lit Modis (22:00 UTC)

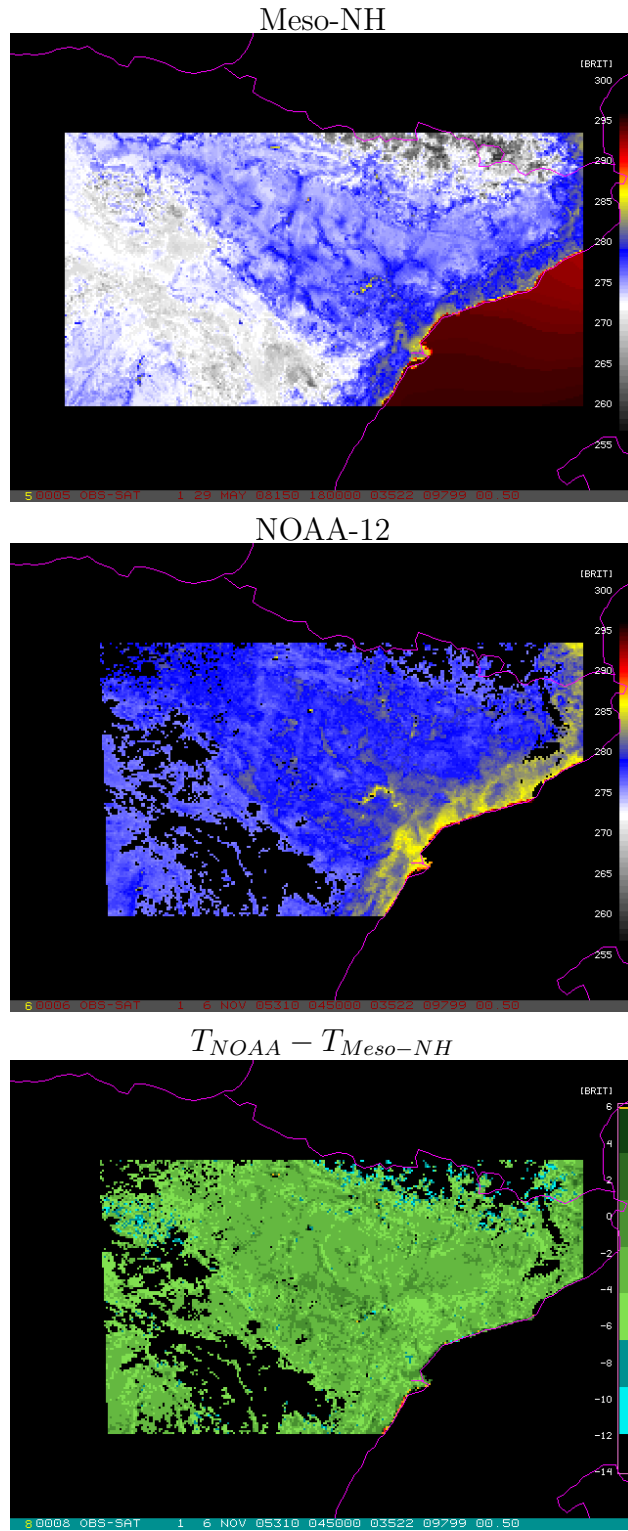


Figura 15: Comparació de la temperatura obtinguda pel model Meso-NH i la derivada a partir de les observacions del satèl·lit NOAA-12 (04:50 UTC)

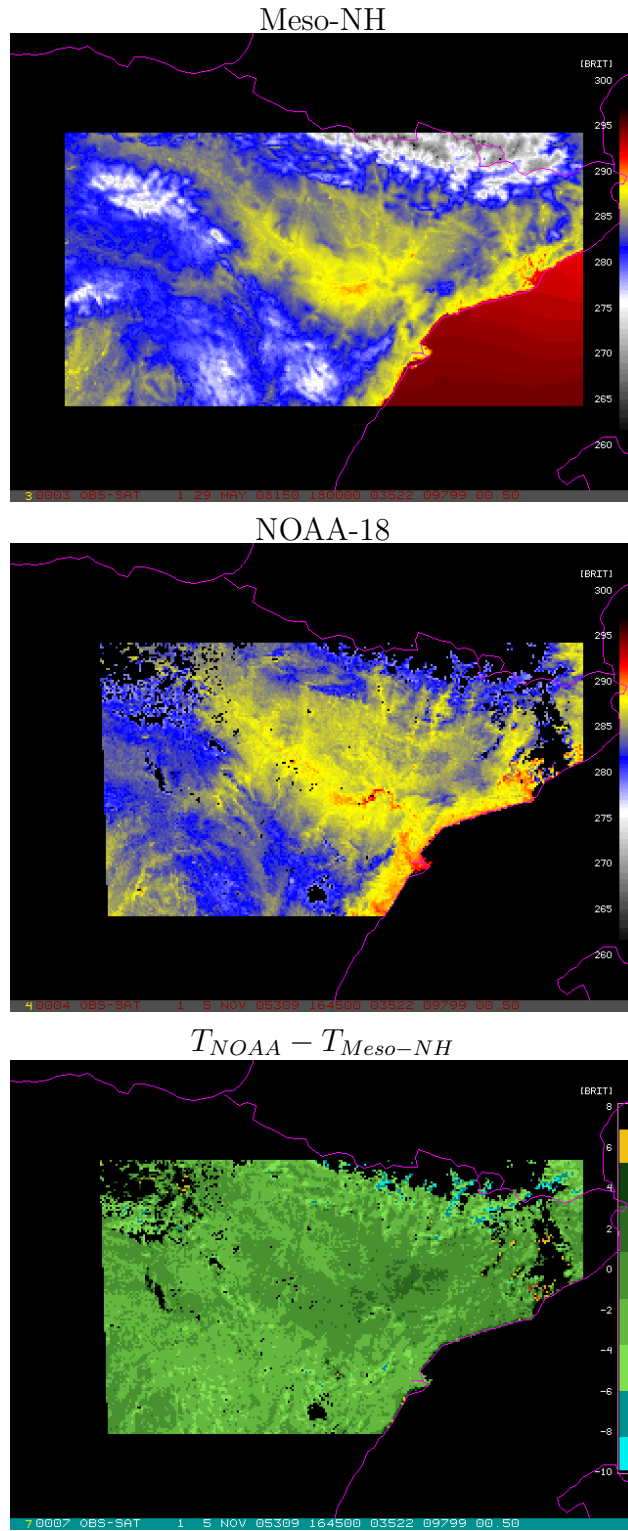
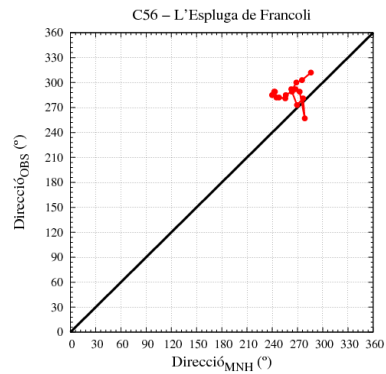
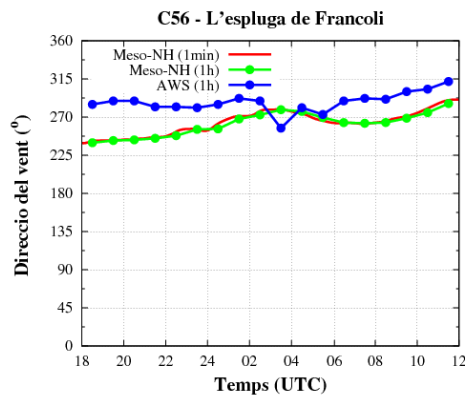
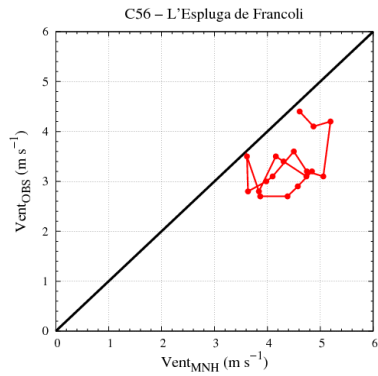
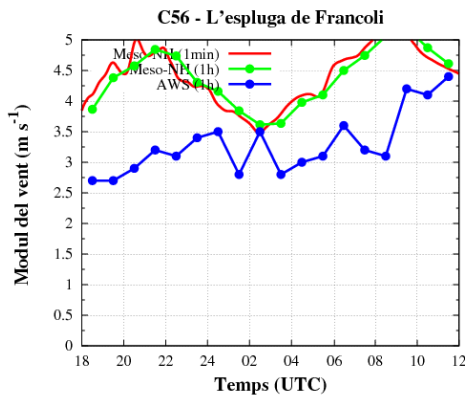
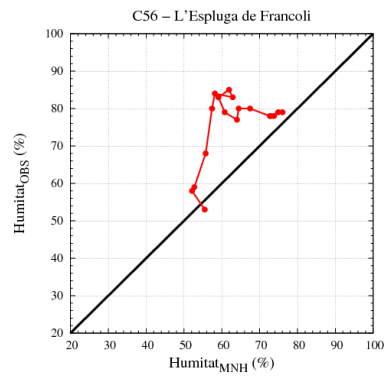
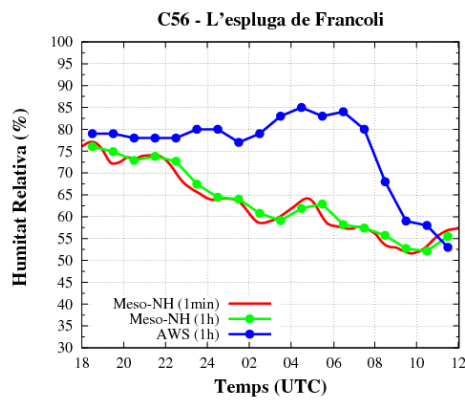
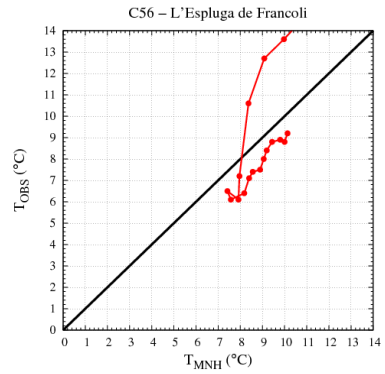
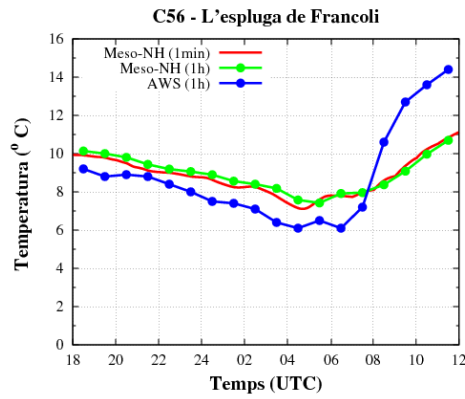
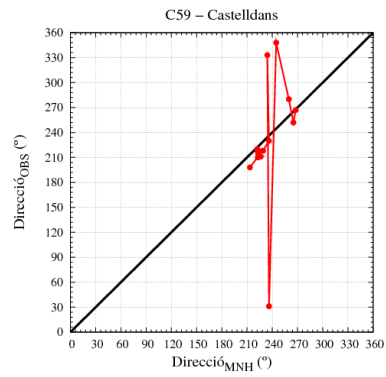
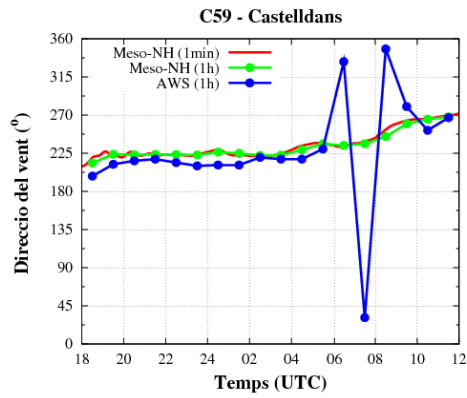
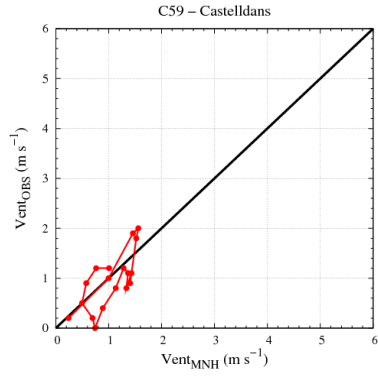
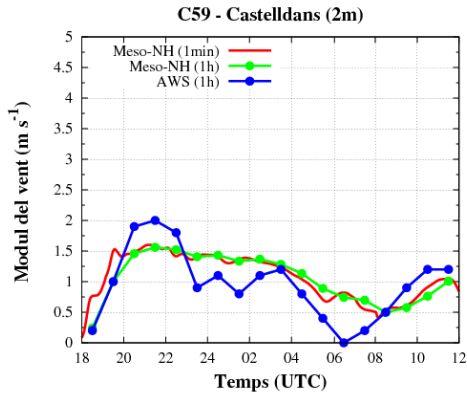
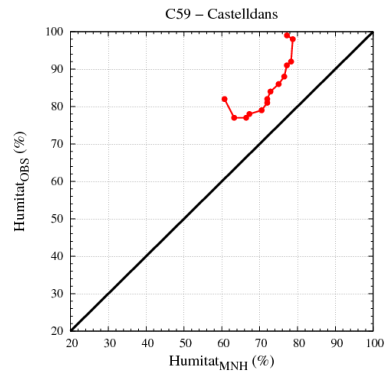
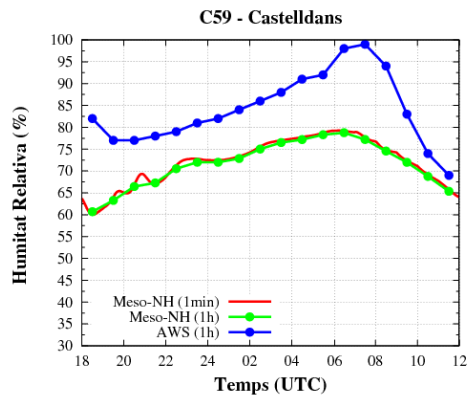
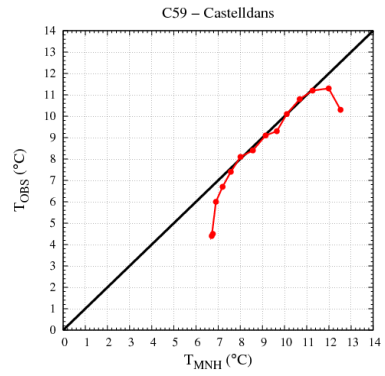
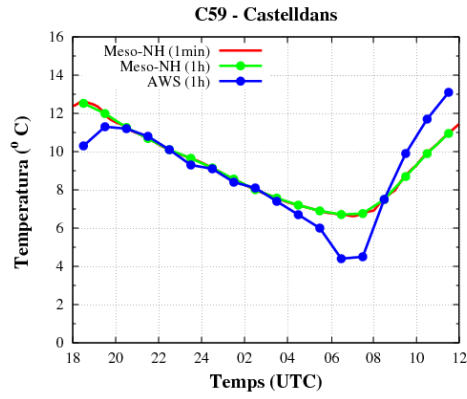
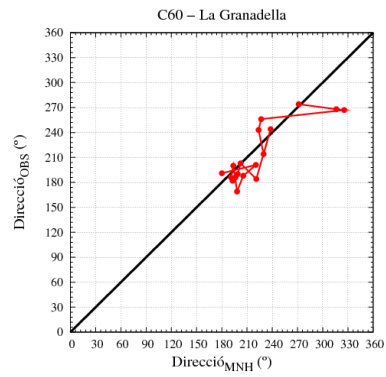
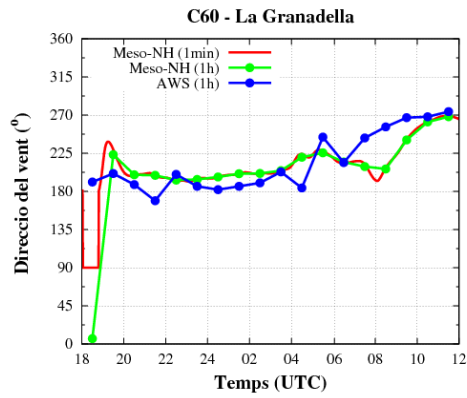
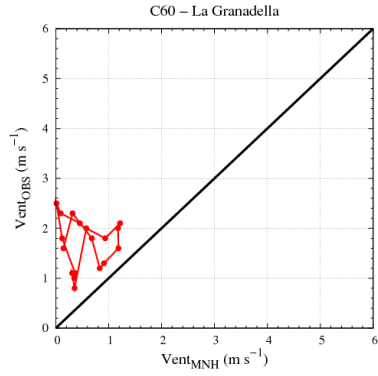
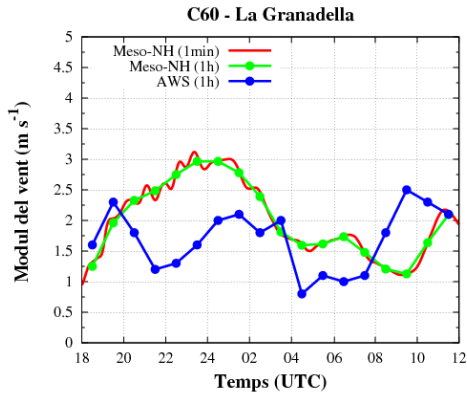
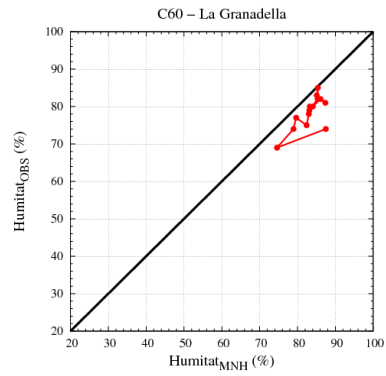
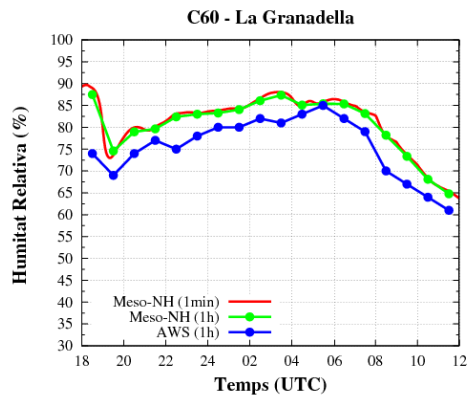
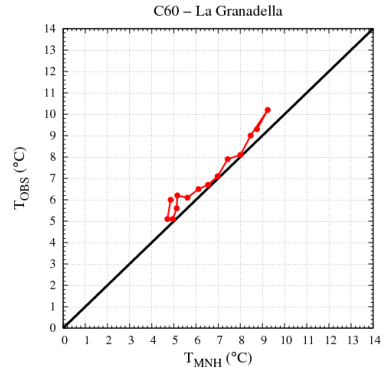
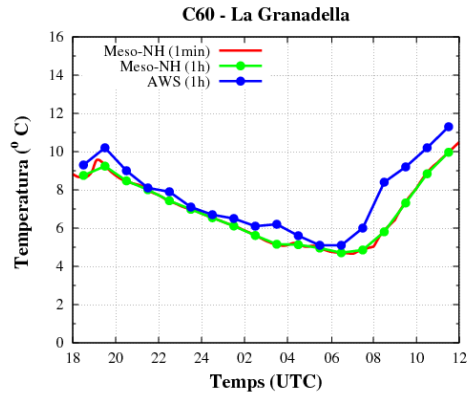


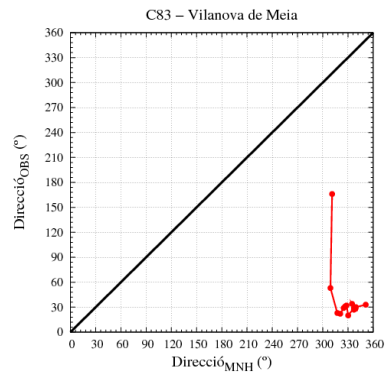
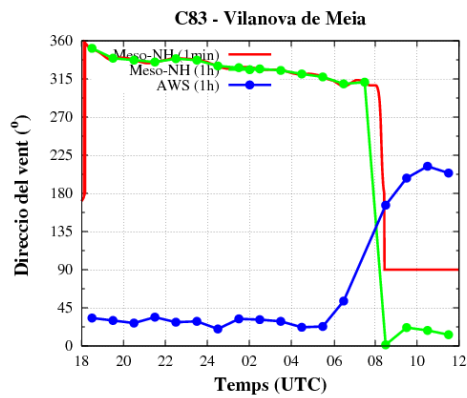
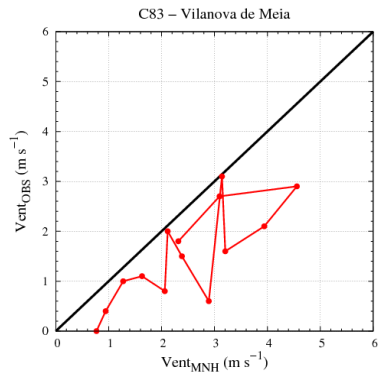
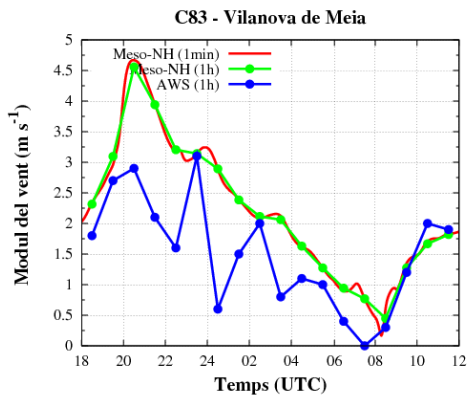
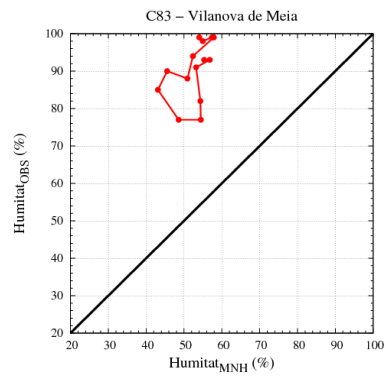
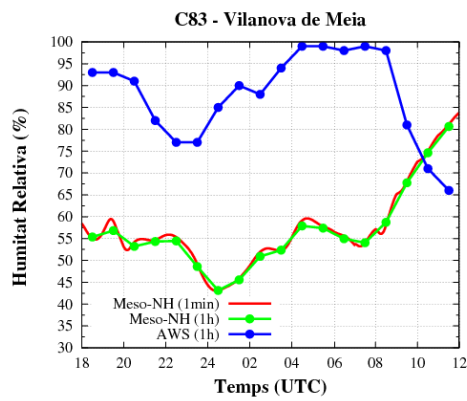
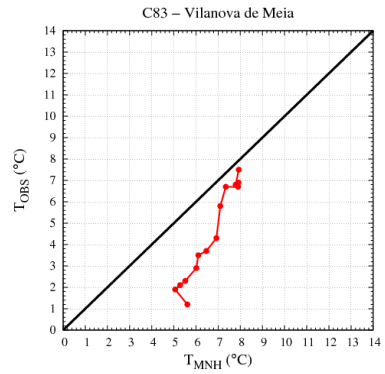
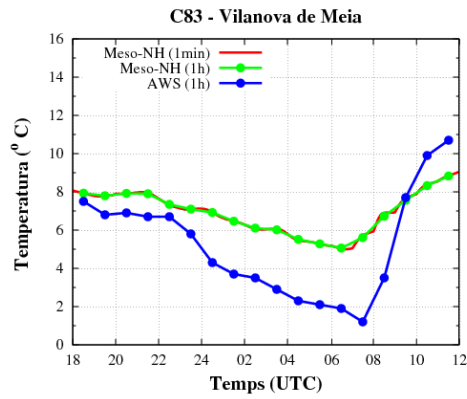
Figura 16: Comparació de la temperatura obtinguda pel model Meso-NH i la derivada a partir de les observacions del satèl·lit NOAA-18 (16:45 UTC)

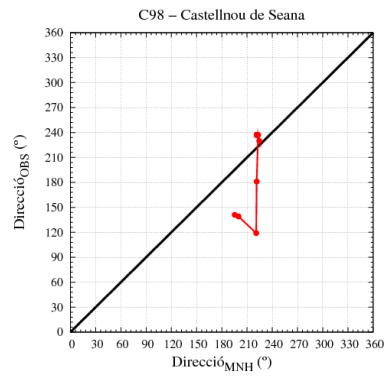
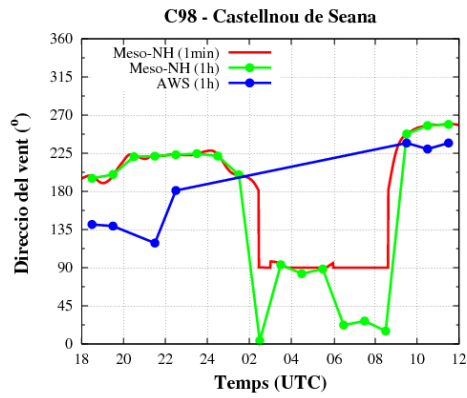
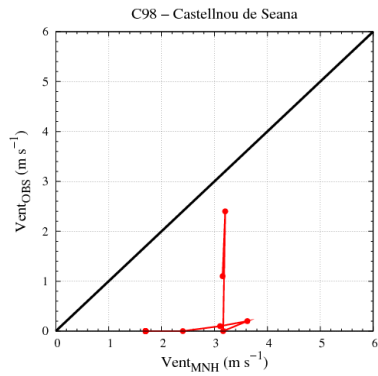
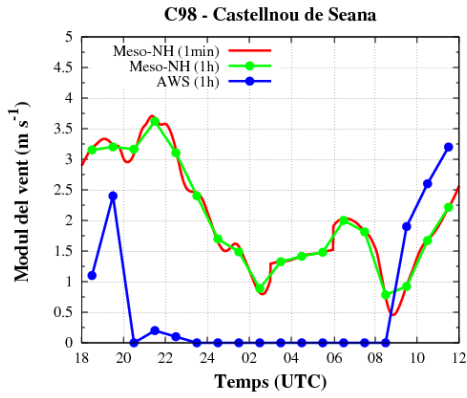
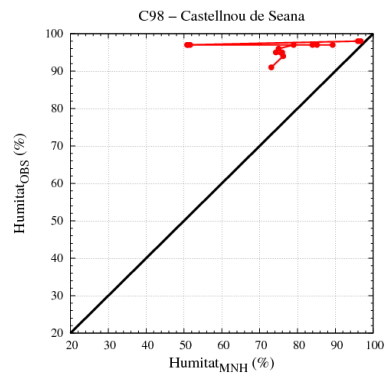
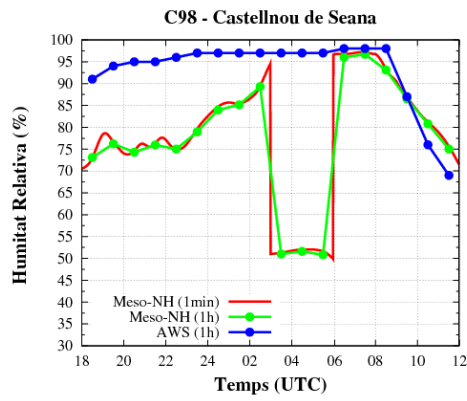
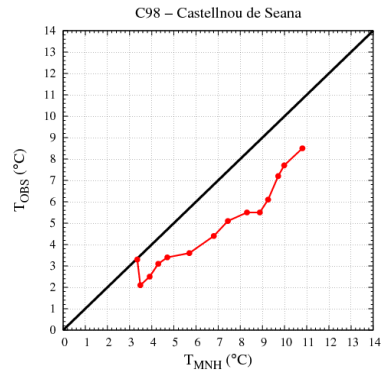
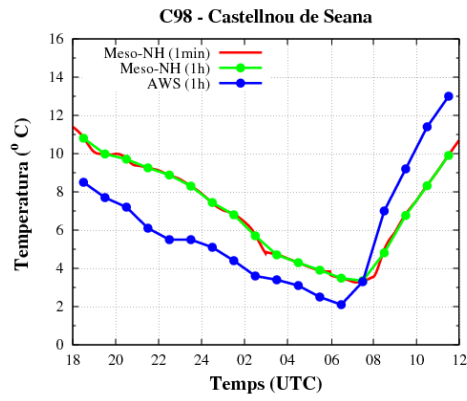
6 Verificació mitjançant dades de les estacions automàtiques

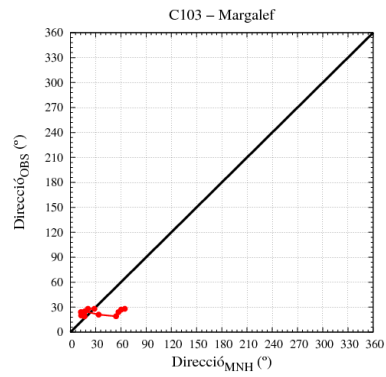
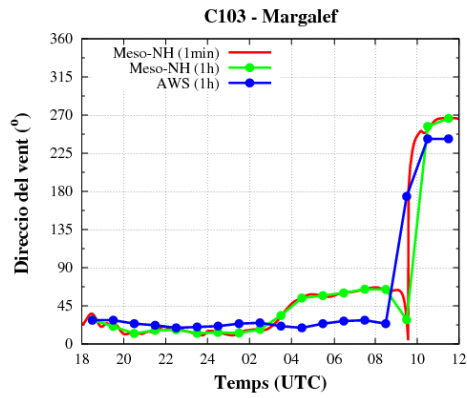
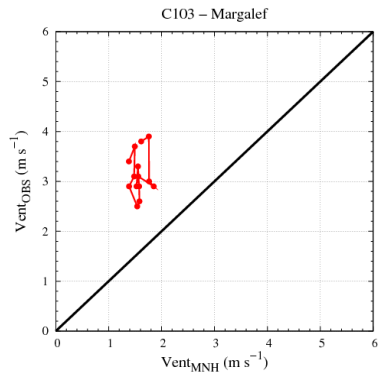
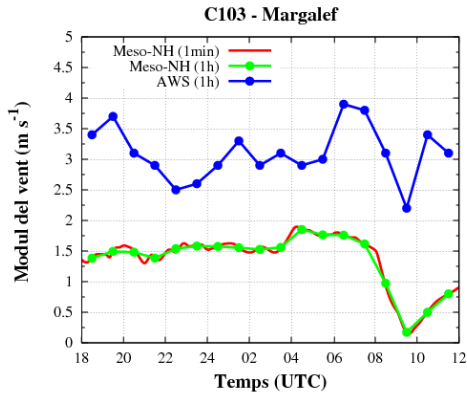
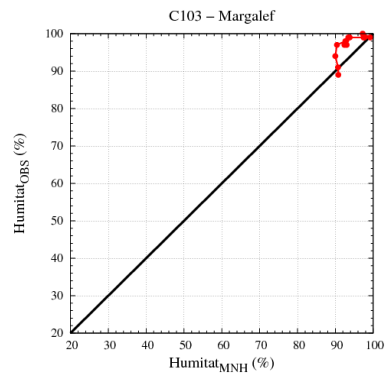
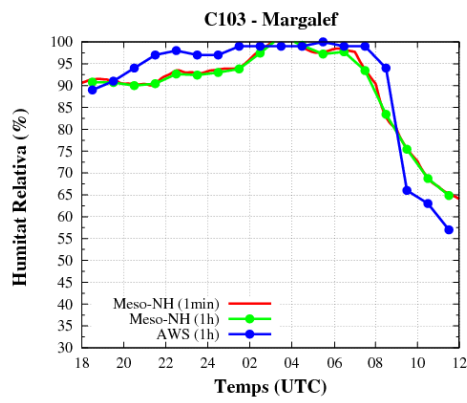
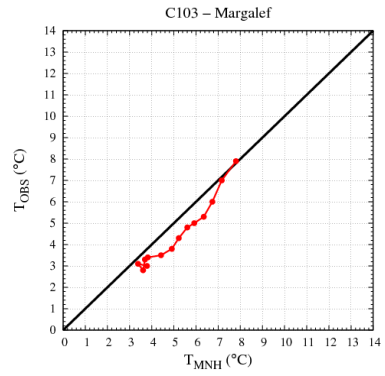
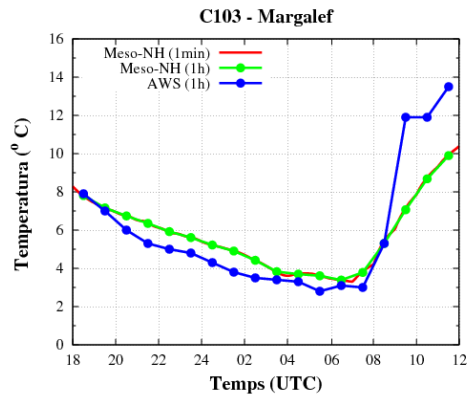


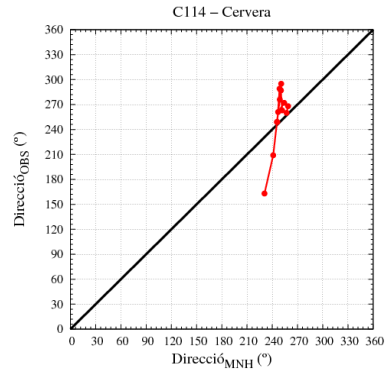
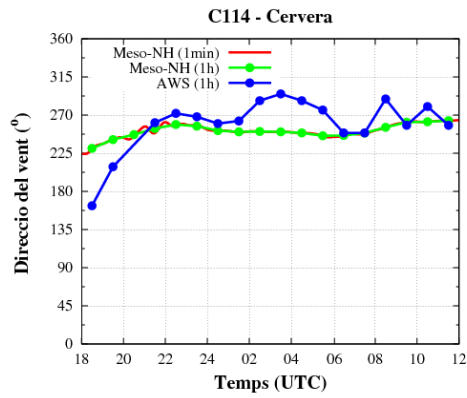
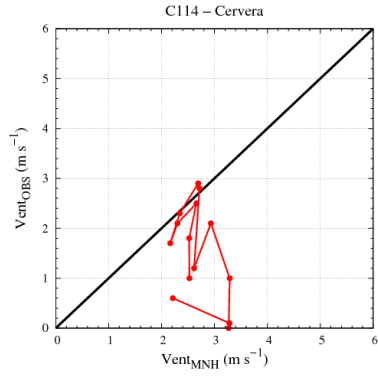
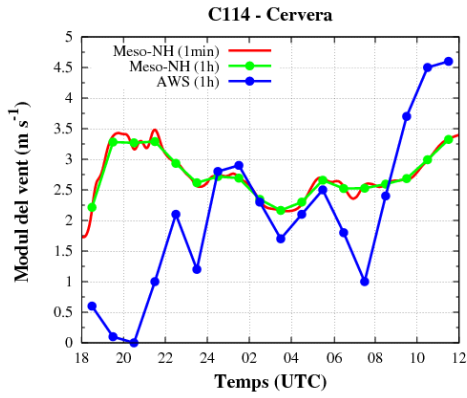
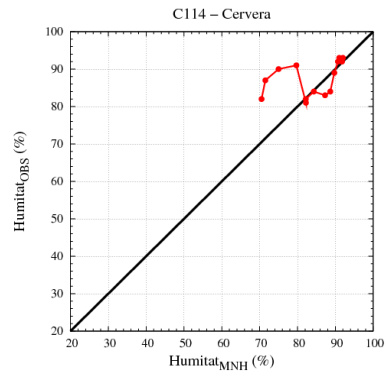
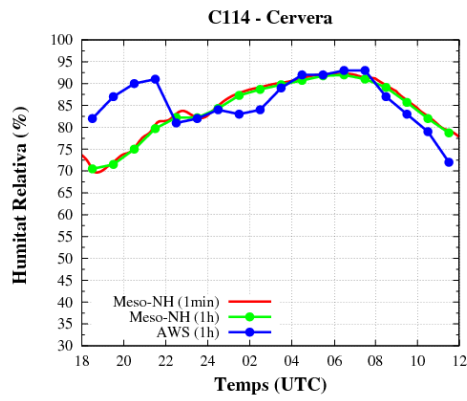
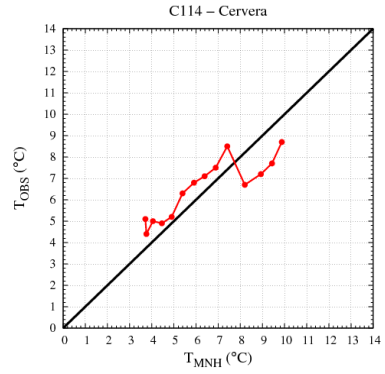
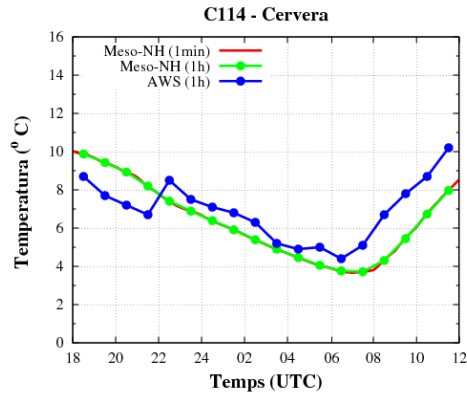


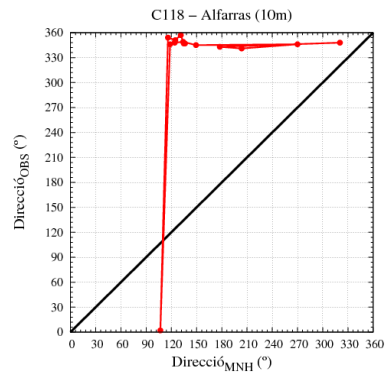
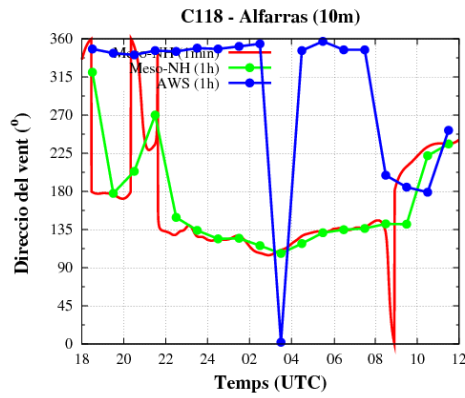
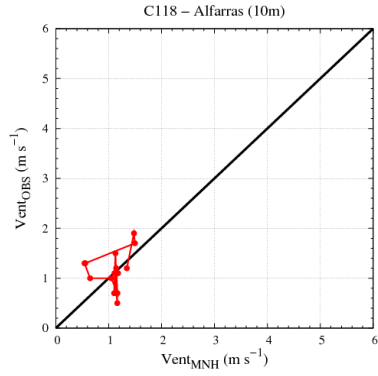
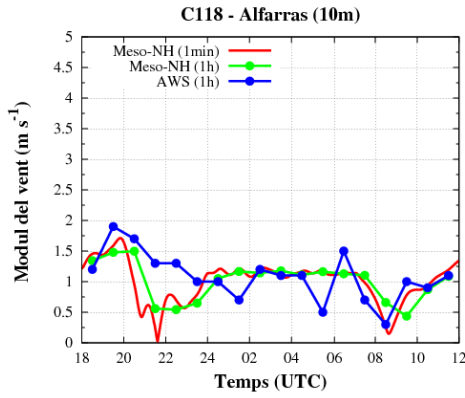
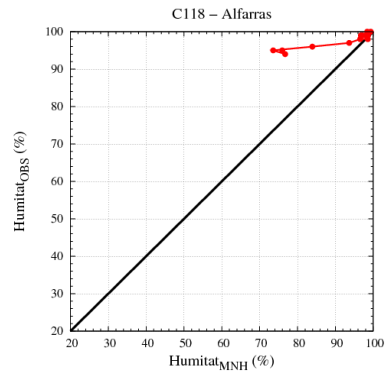
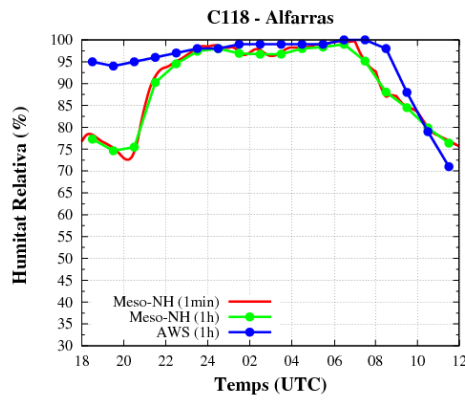
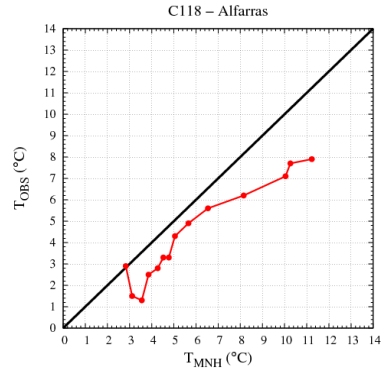
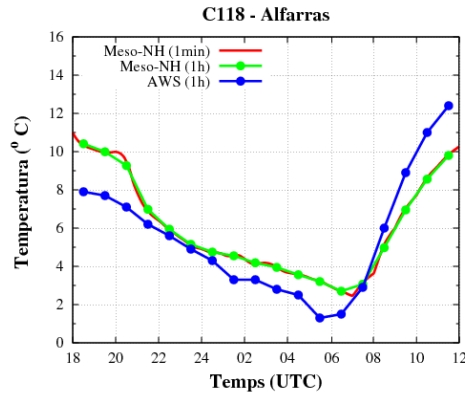


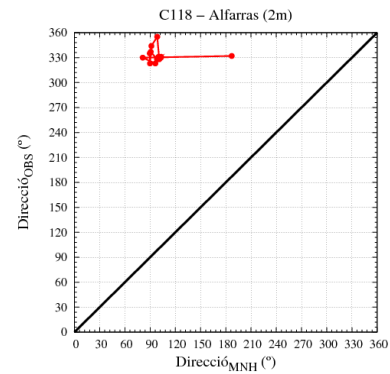
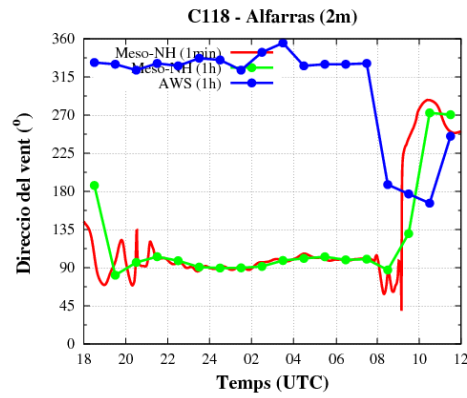
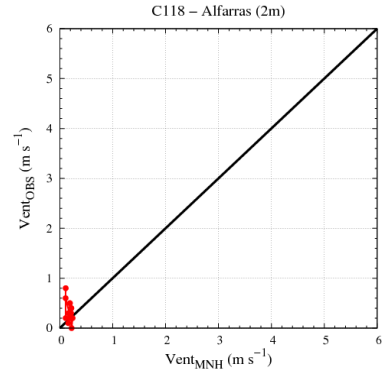
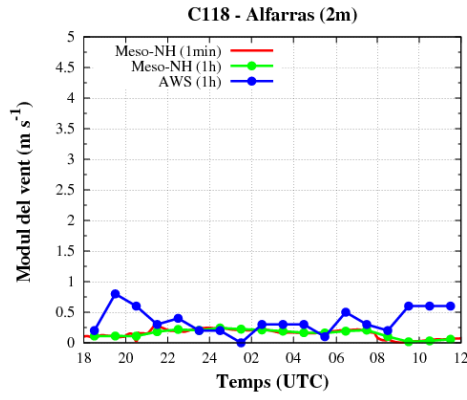
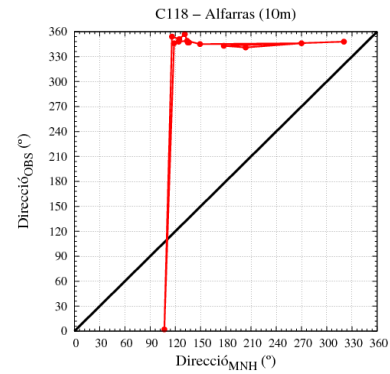
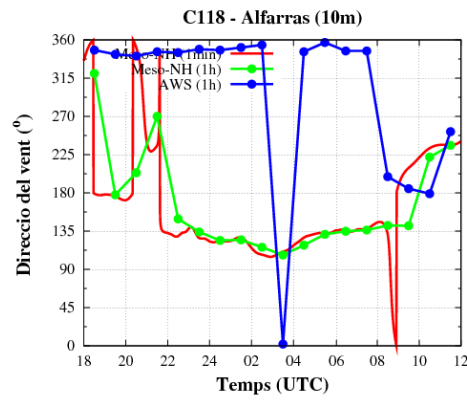
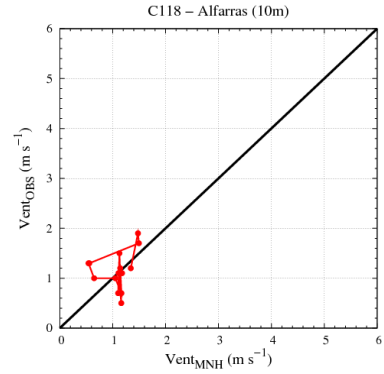
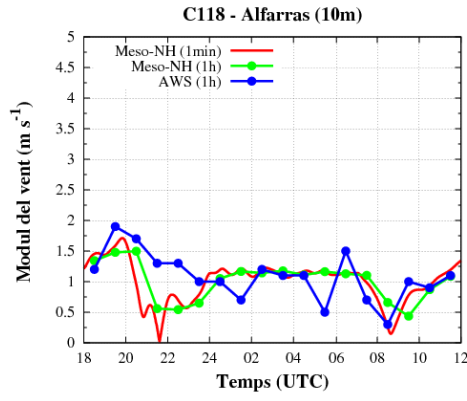


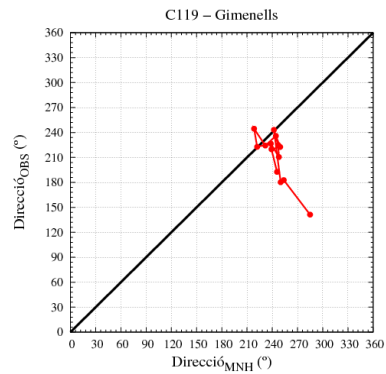
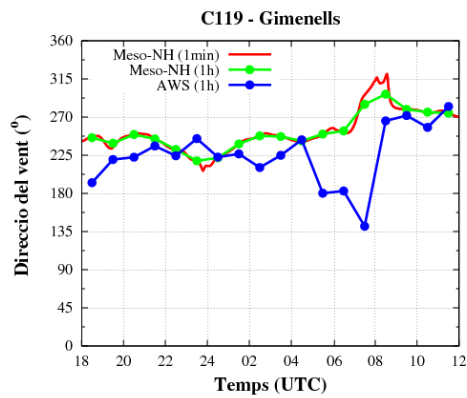
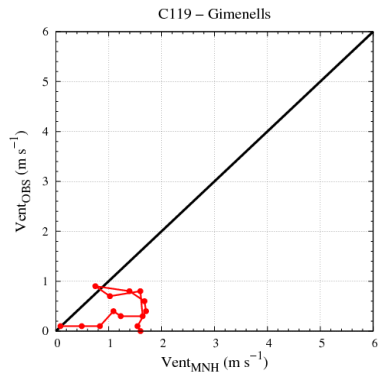
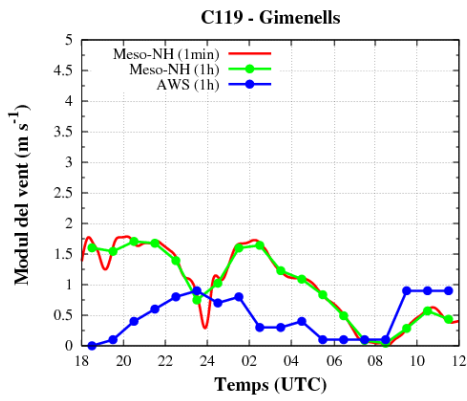
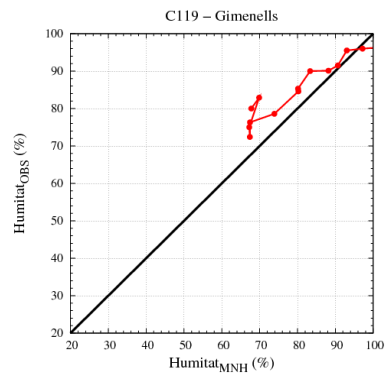
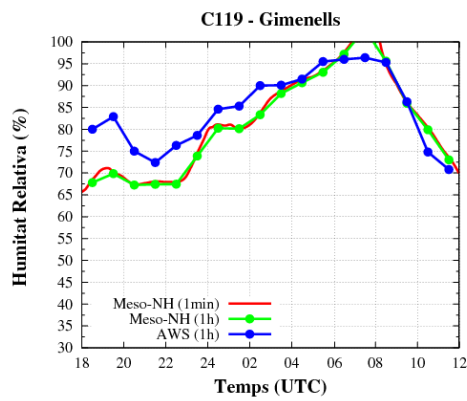
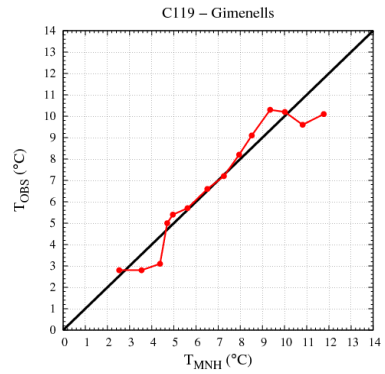
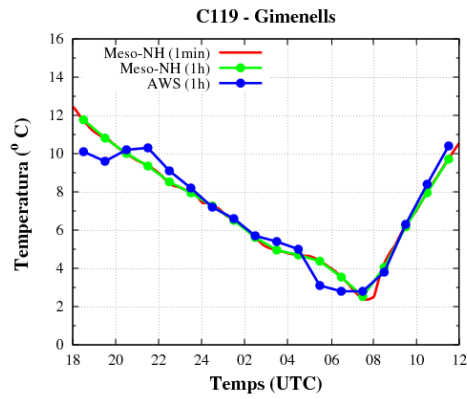


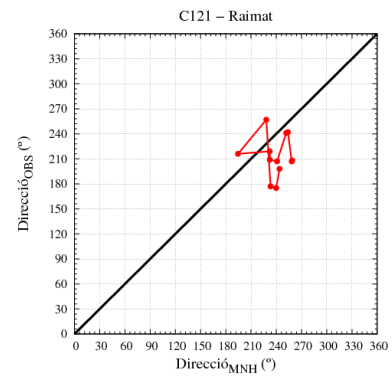
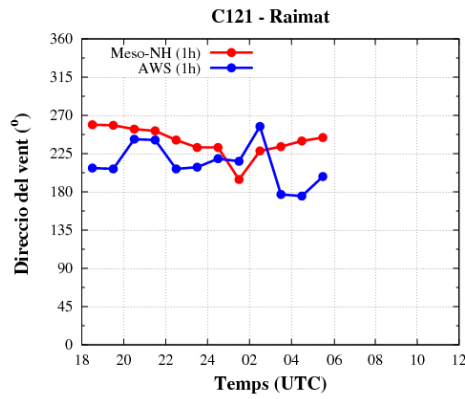
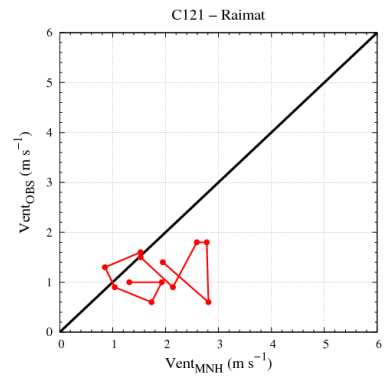
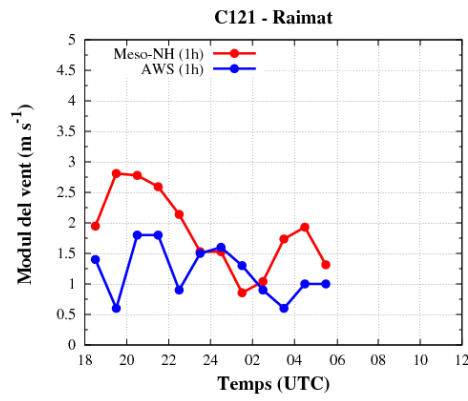
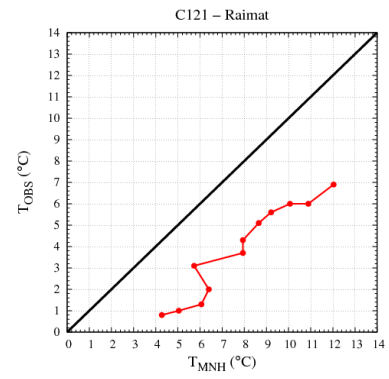
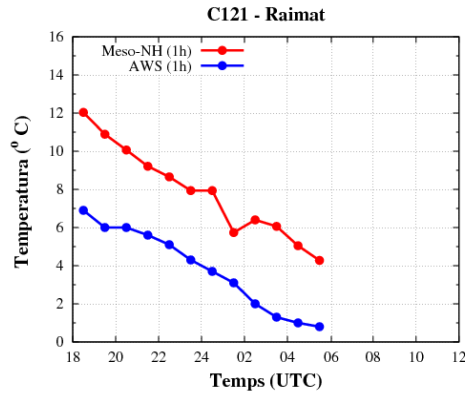


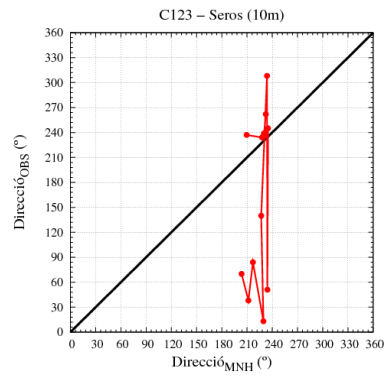
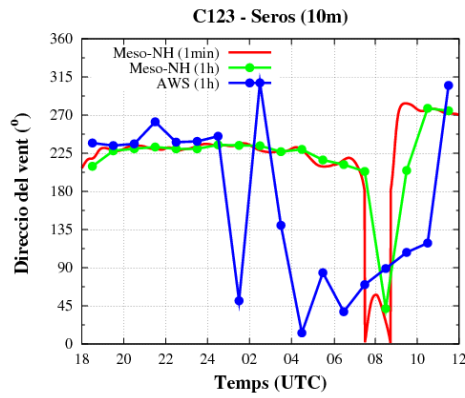
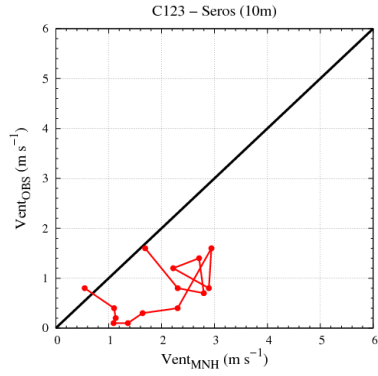
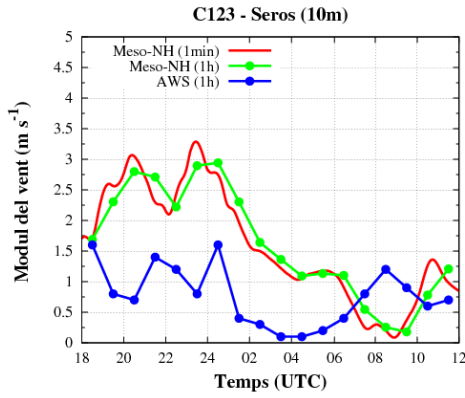
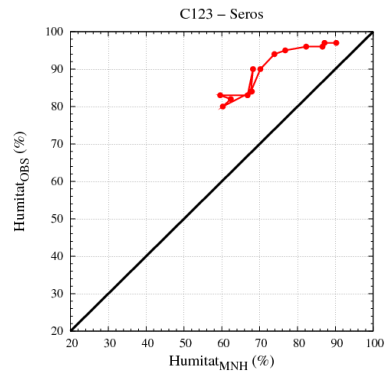
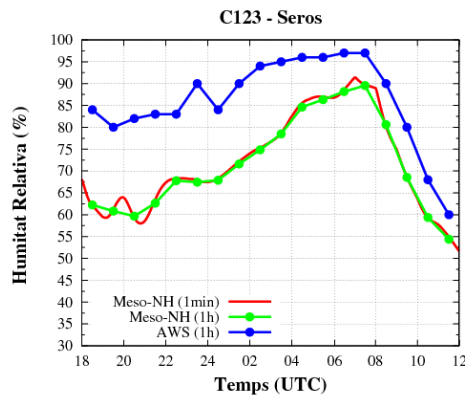
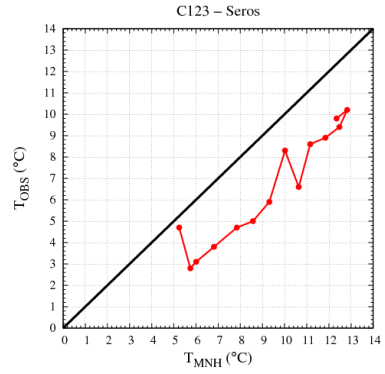
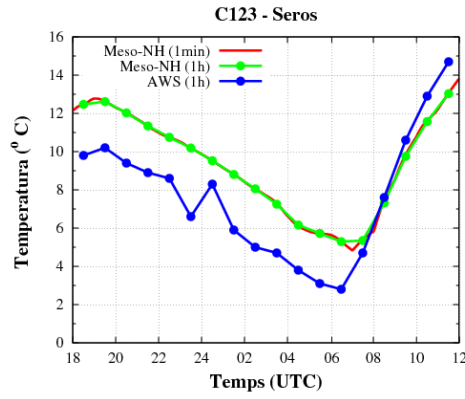


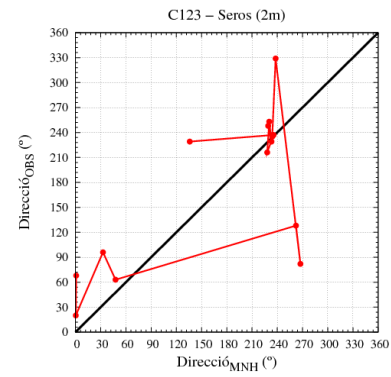
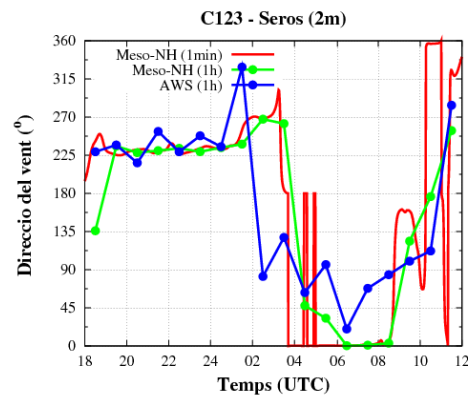
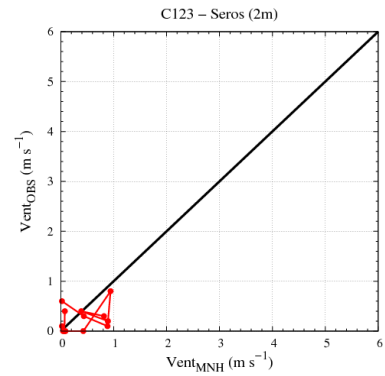
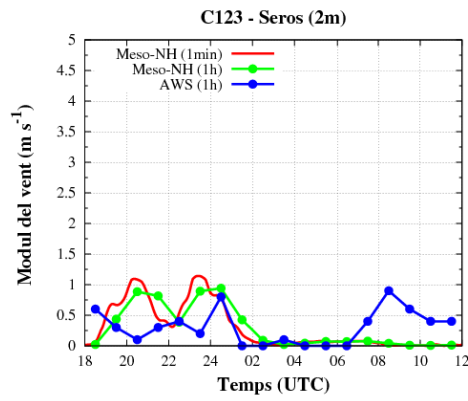
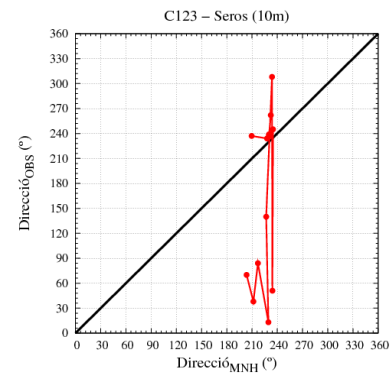
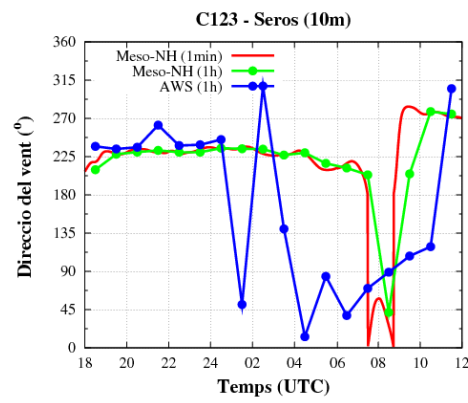
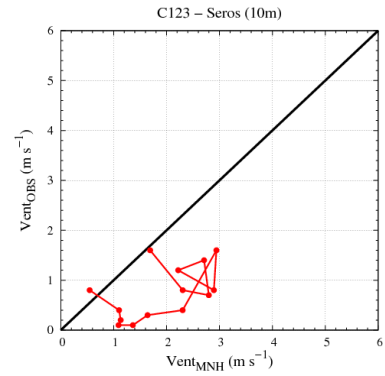
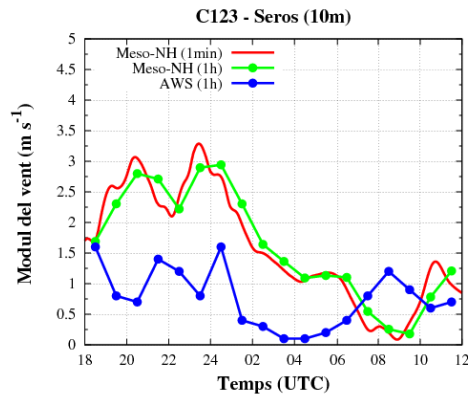


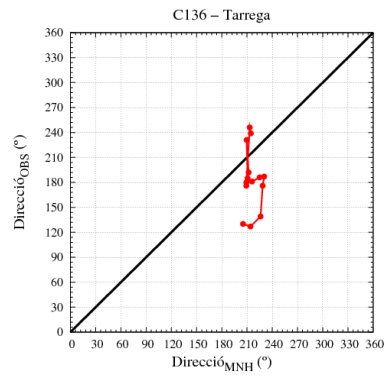
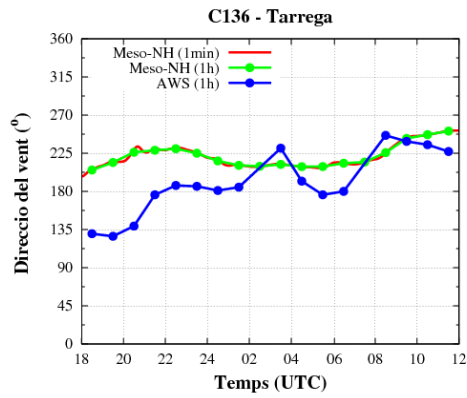
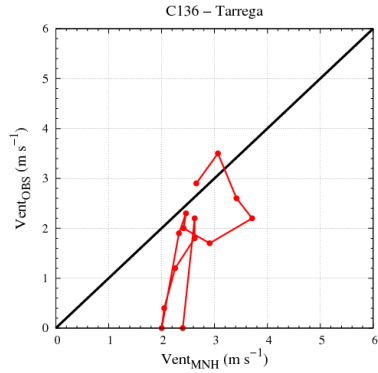
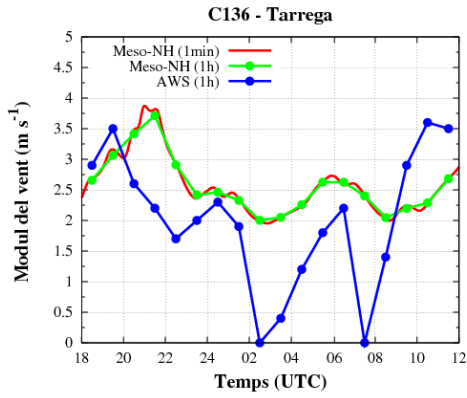
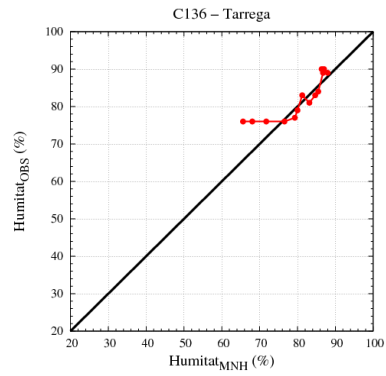
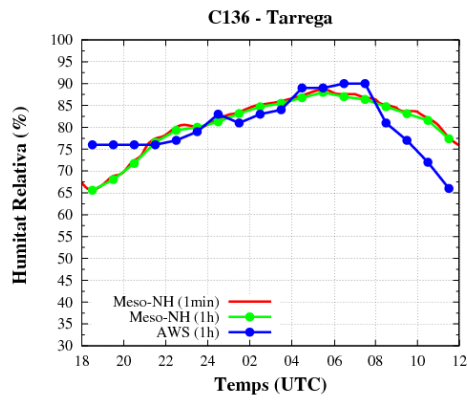
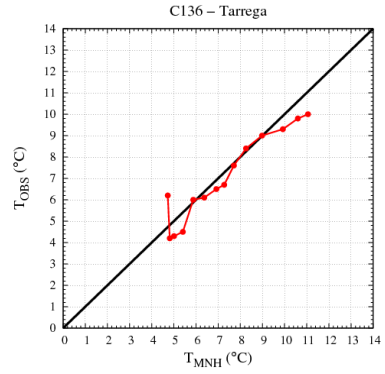
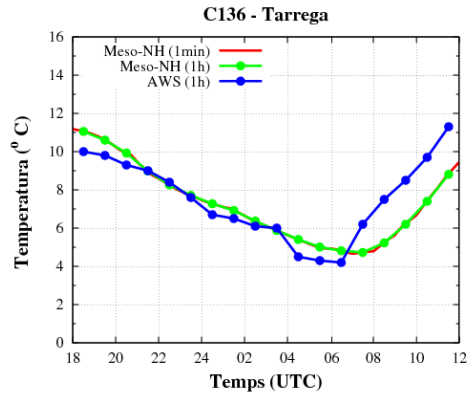


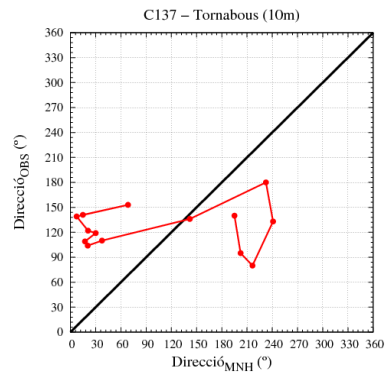
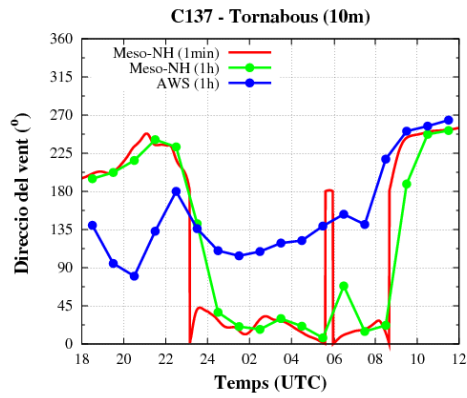
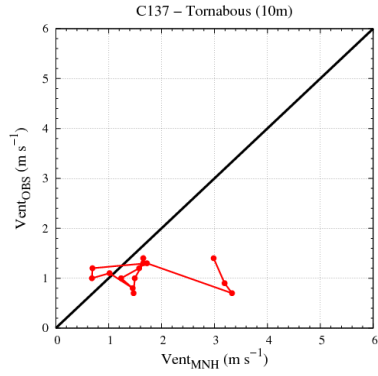
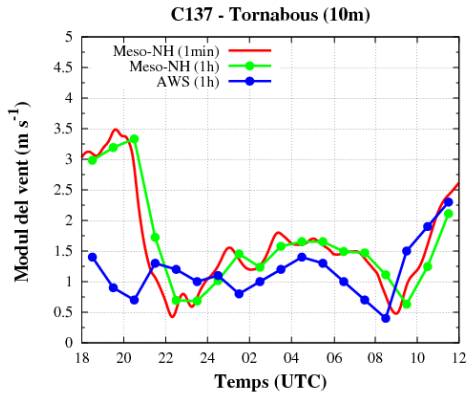
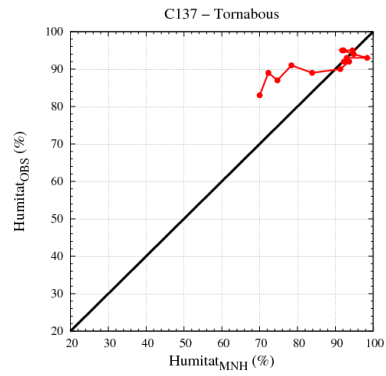
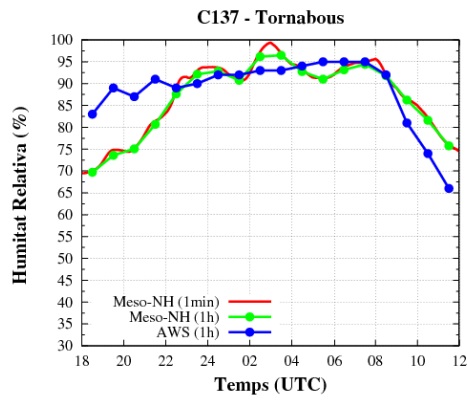
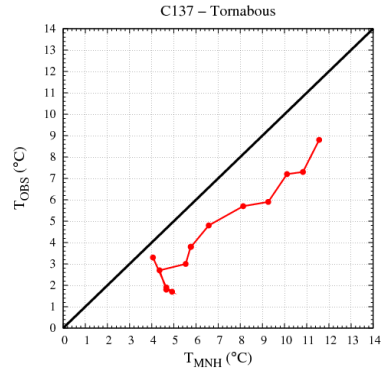
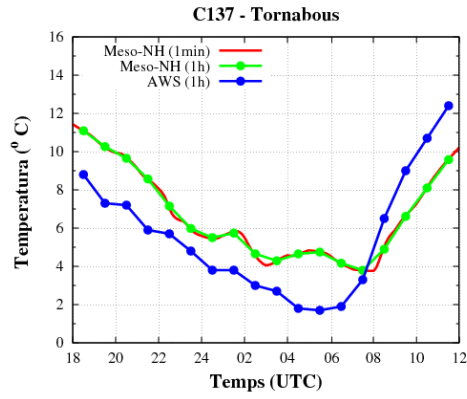


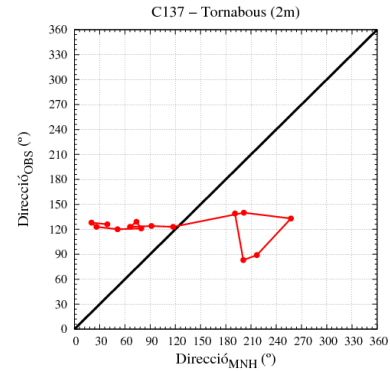
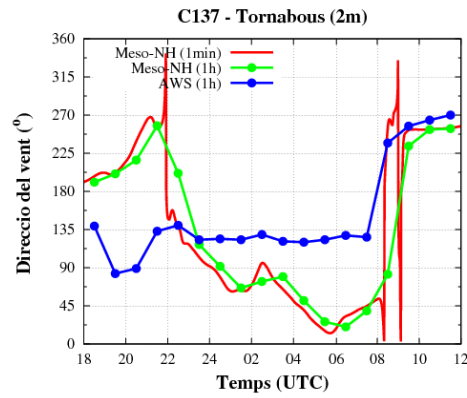
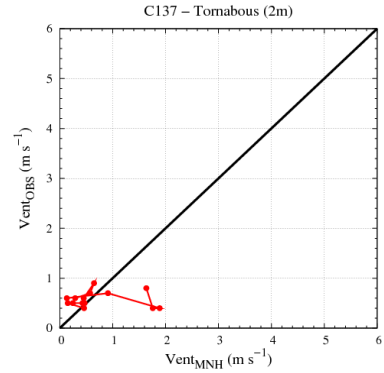
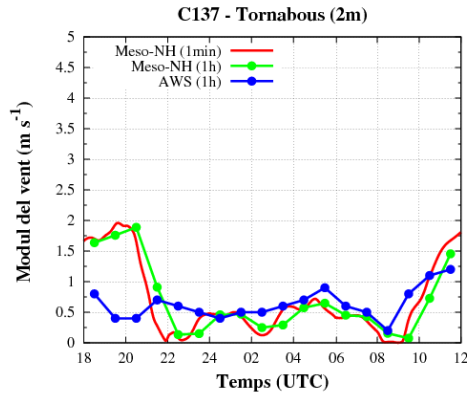
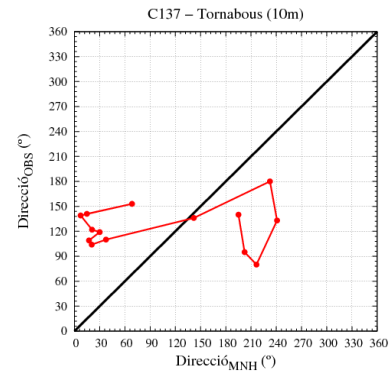
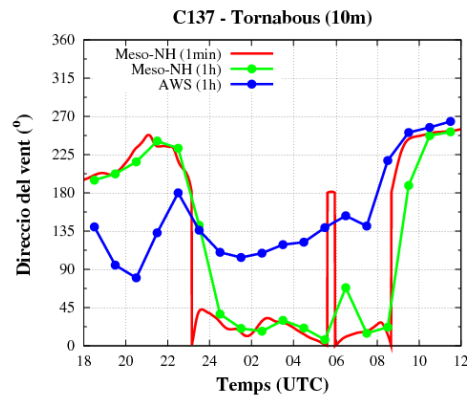
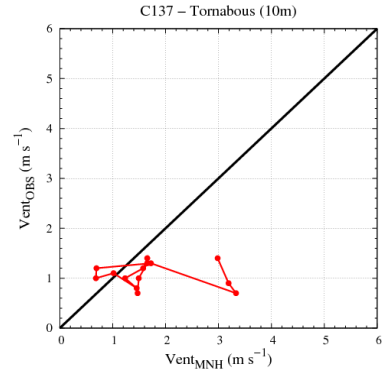
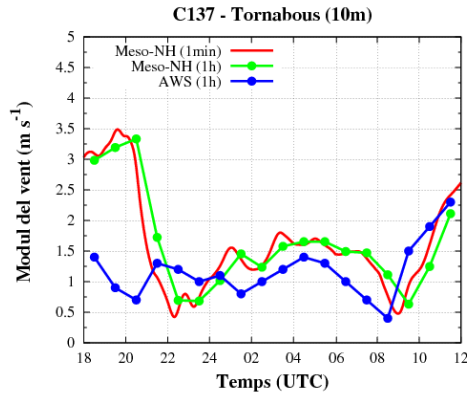




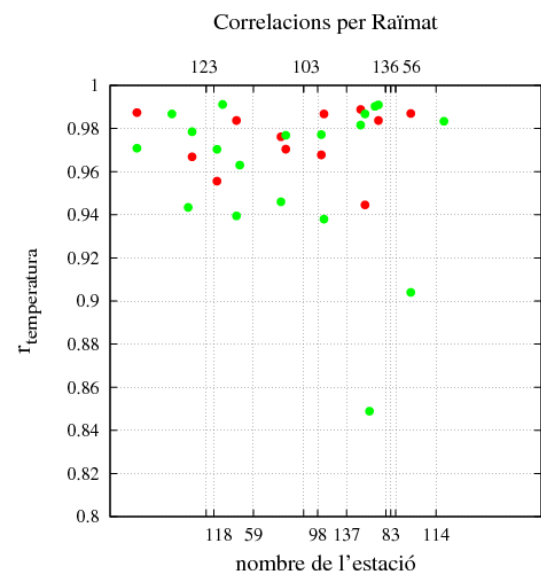
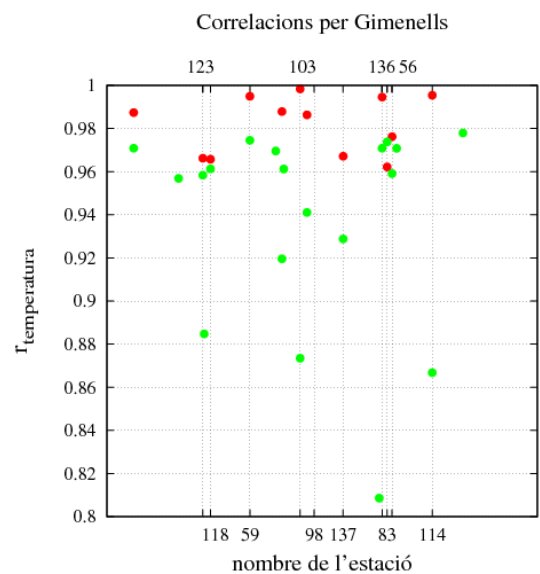
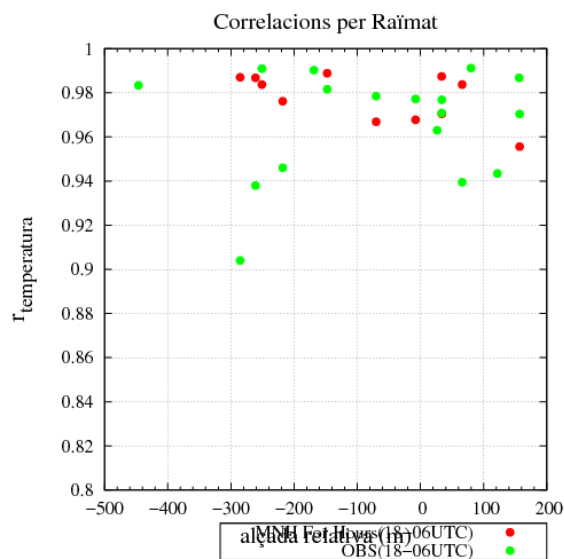
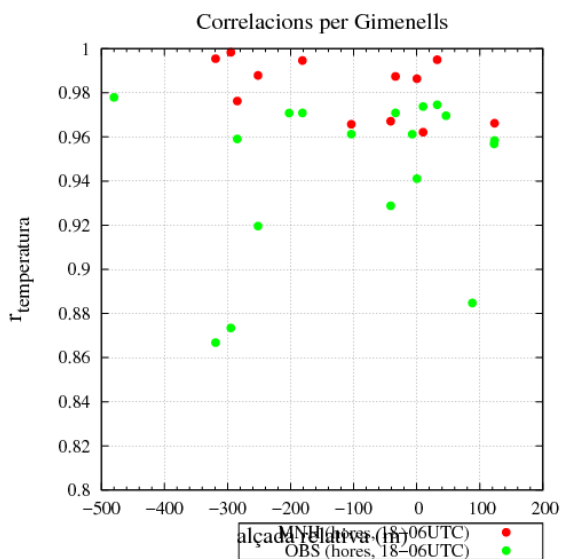
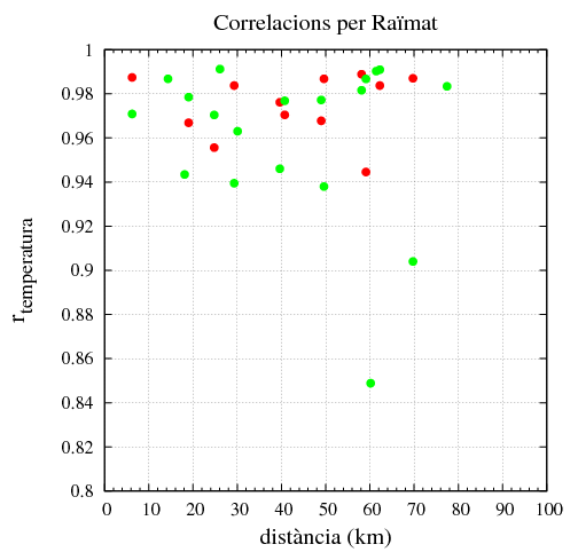
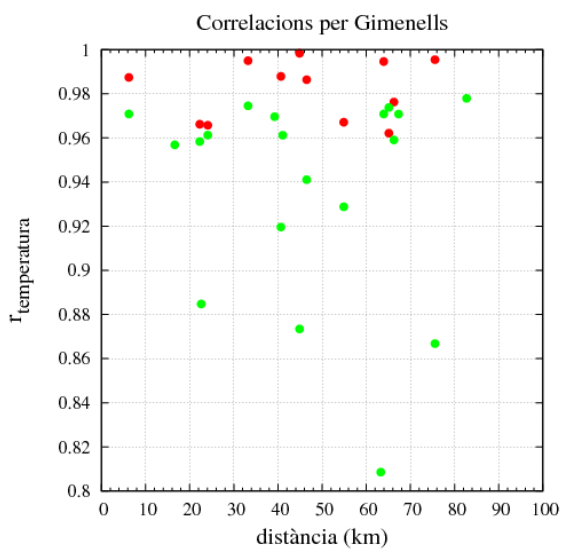


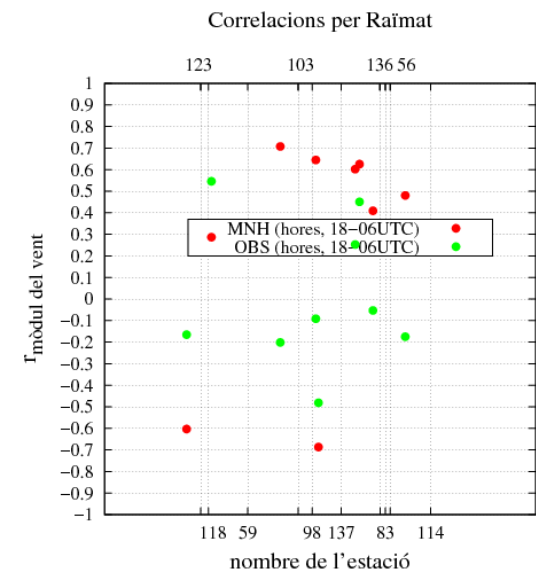
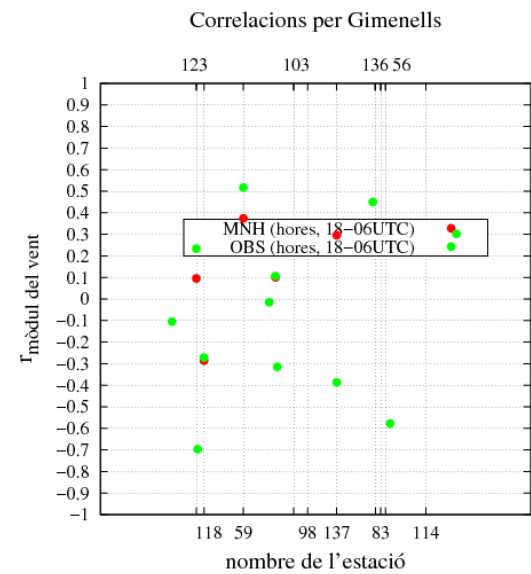
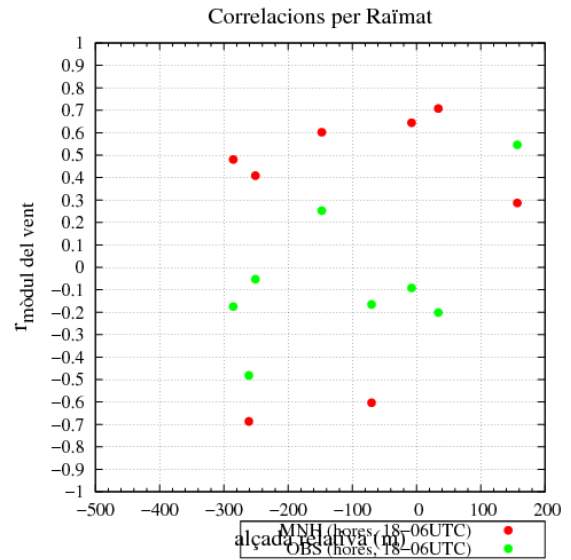
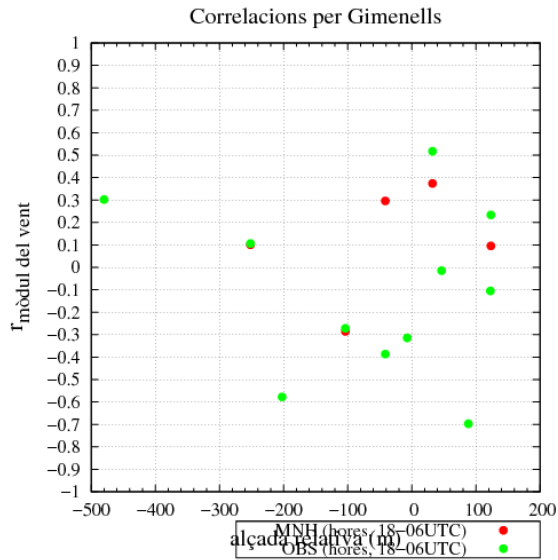
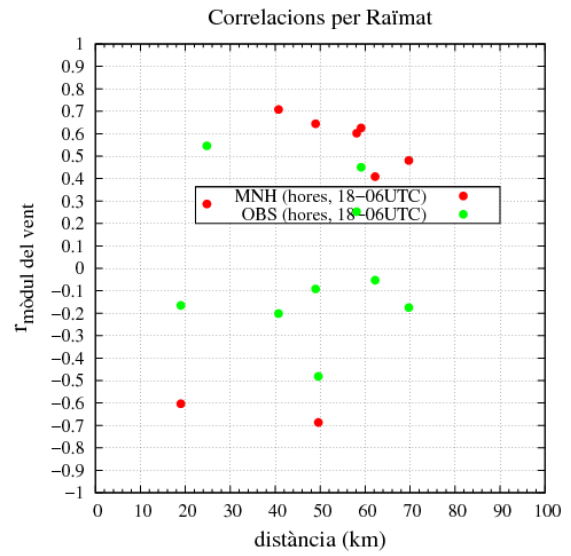
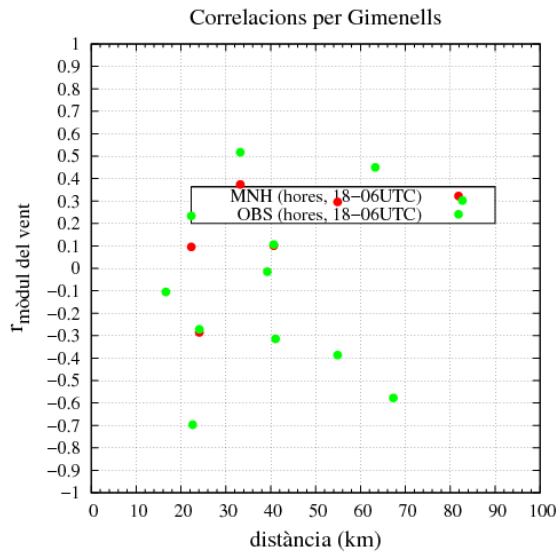


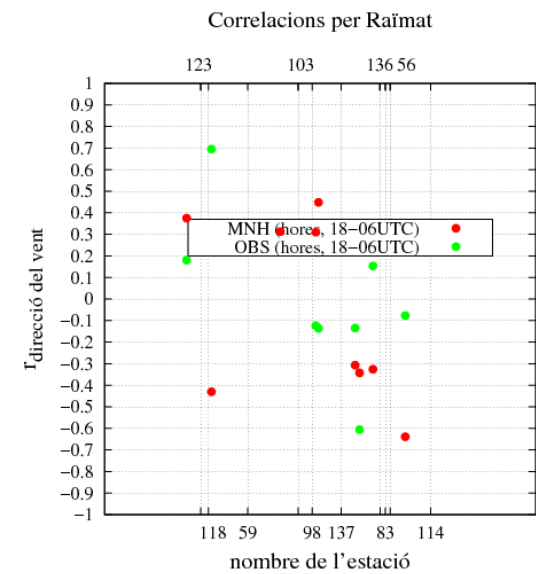
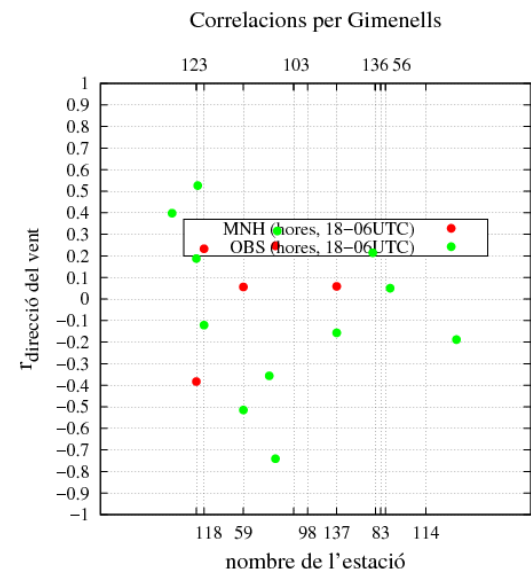
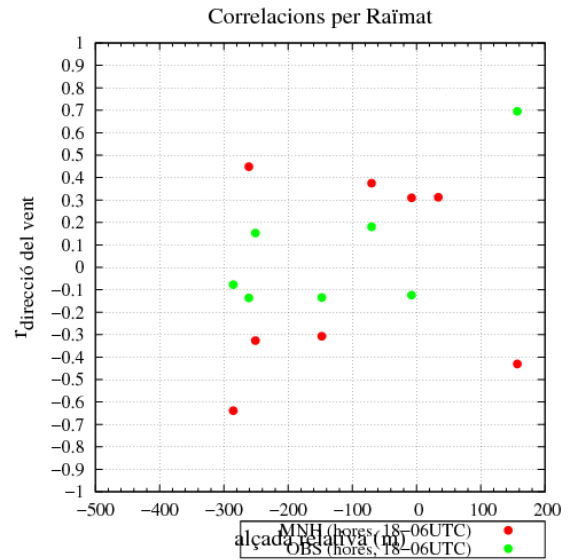
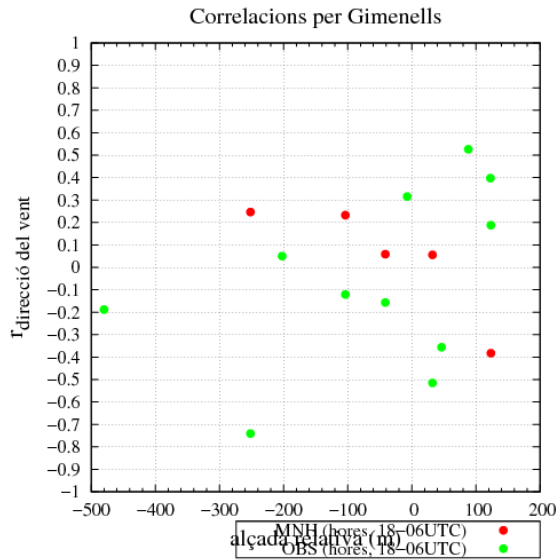
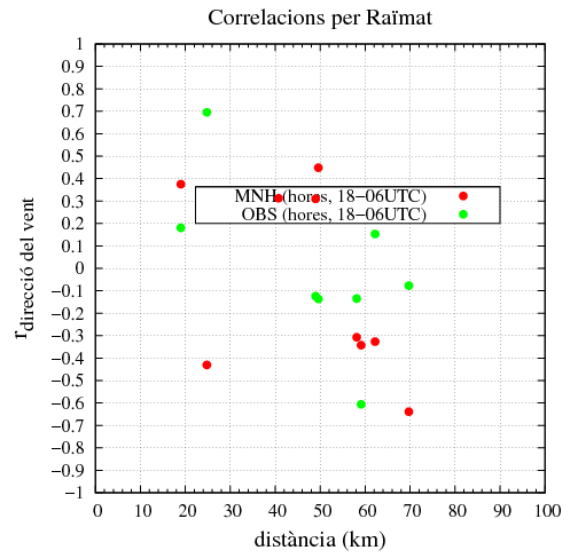
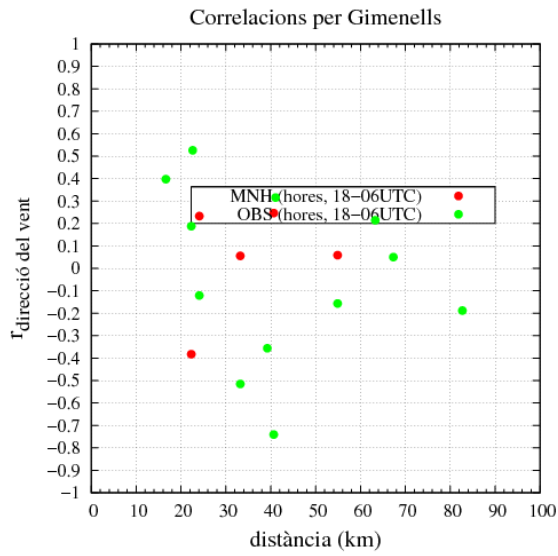


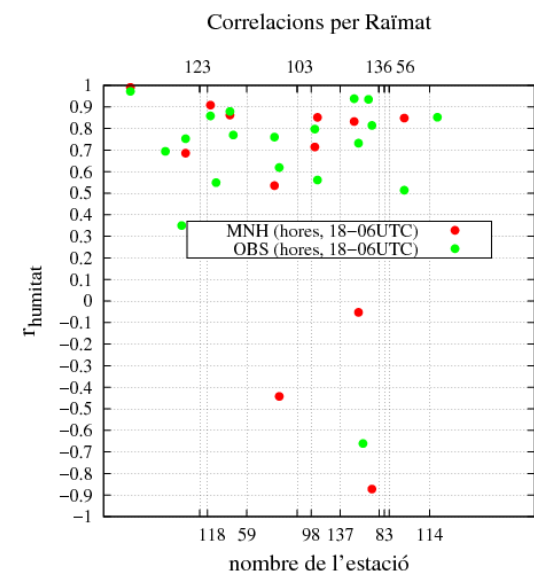
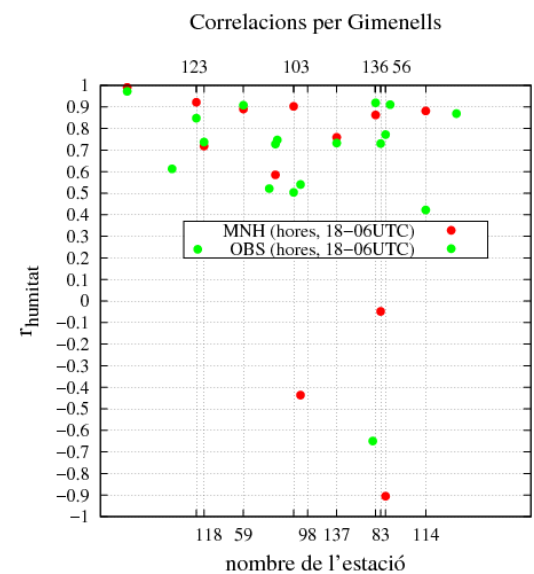
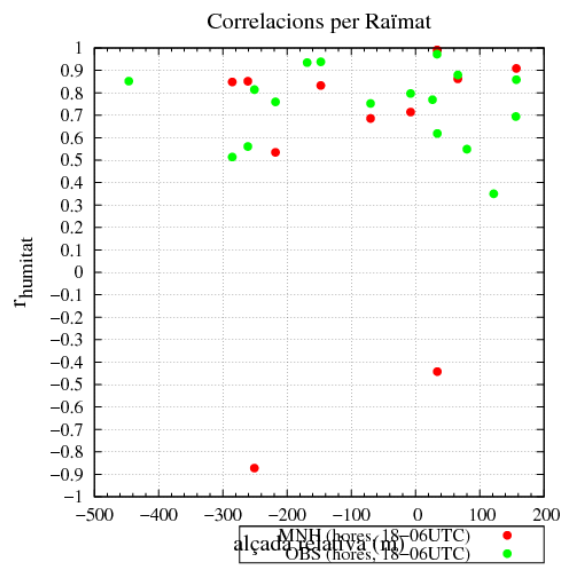
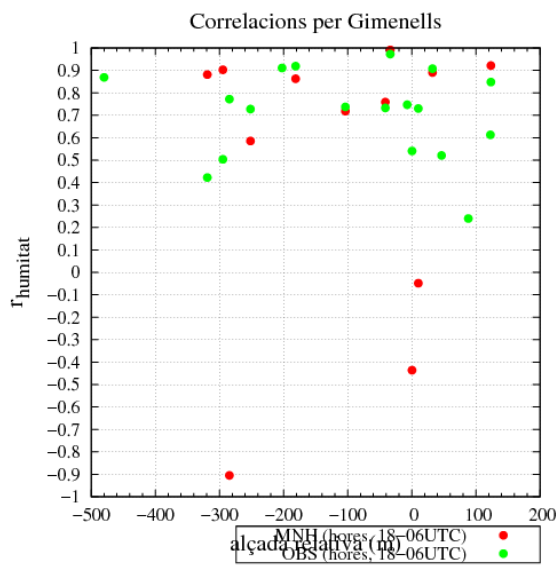
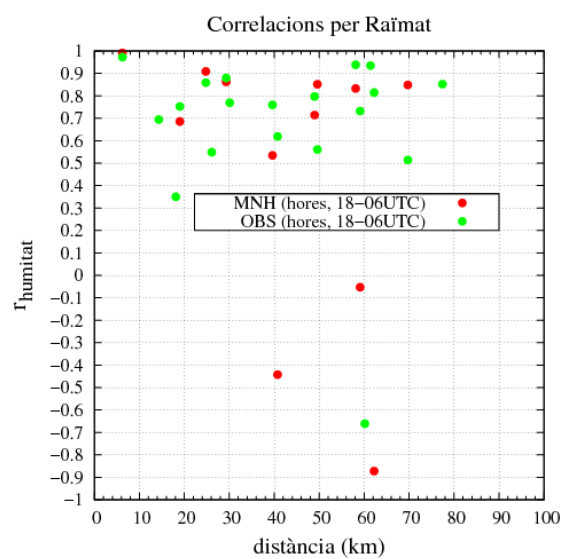
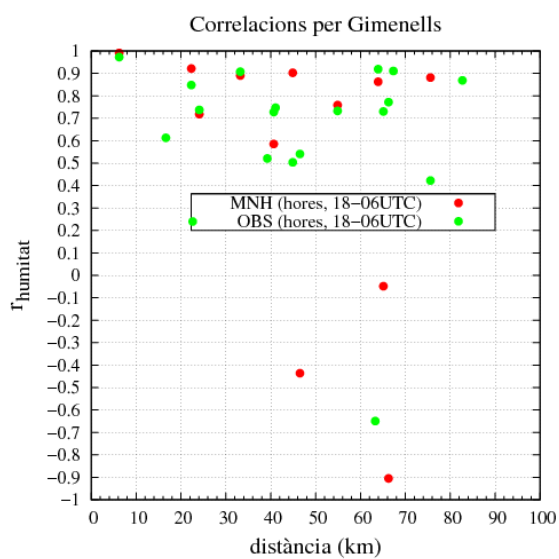


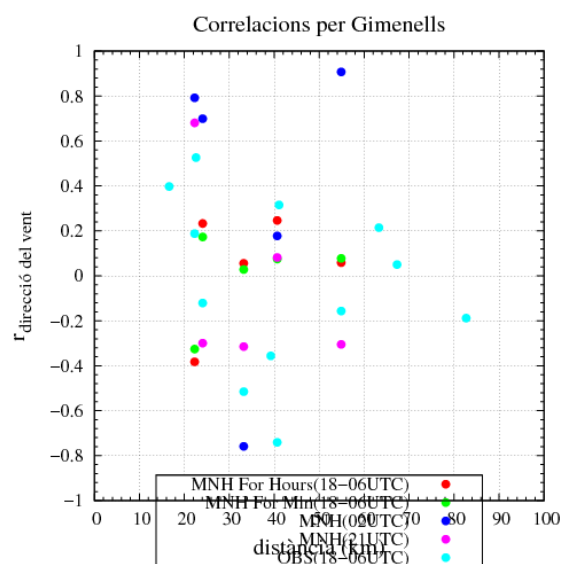
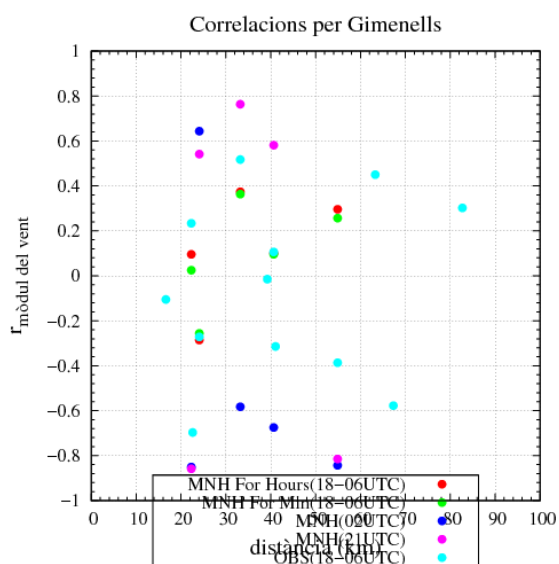
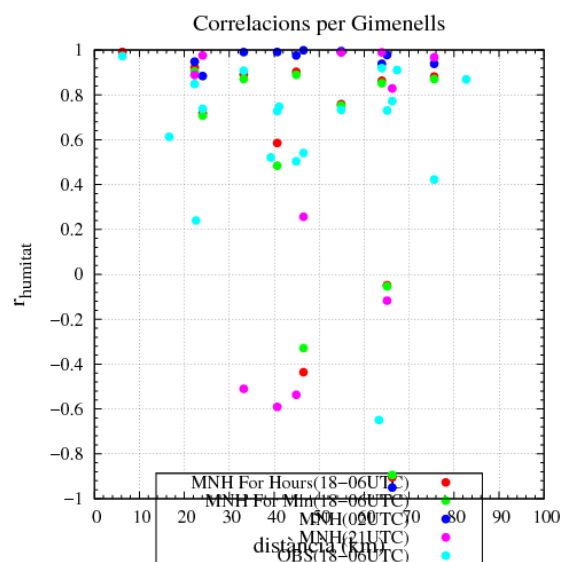
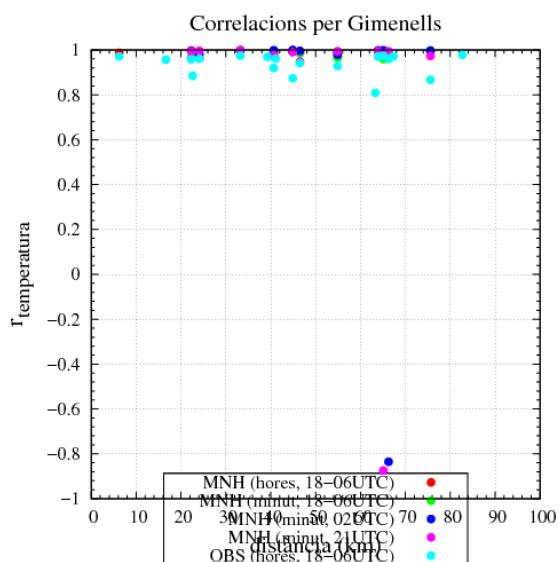
7 Correlacions dades - model











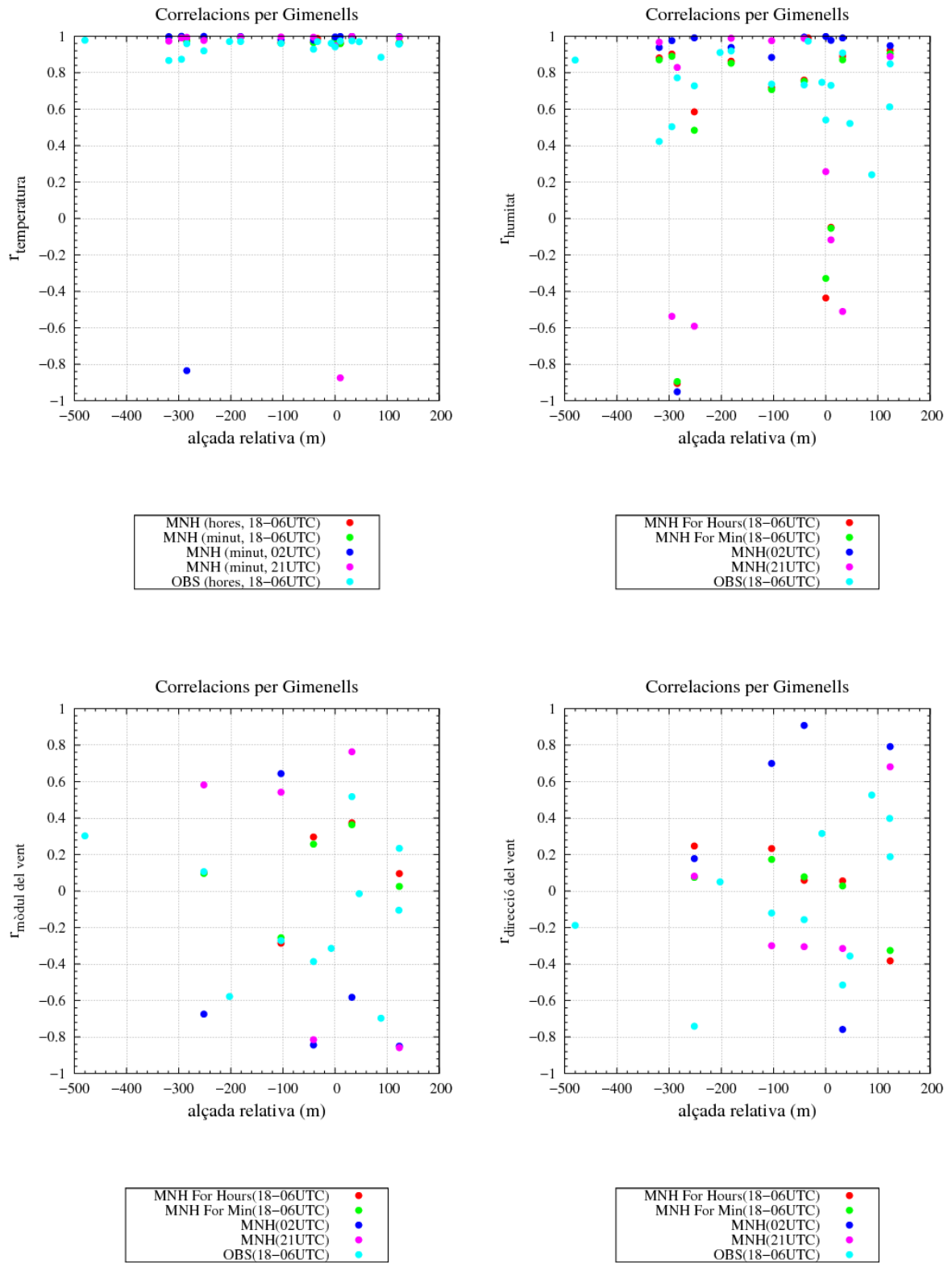


Figura 17: Correlacions per la temperatura i el vent a Gimenells tenint en compte la sèrie temporal del model cada minut i durant 1h a diferents instants

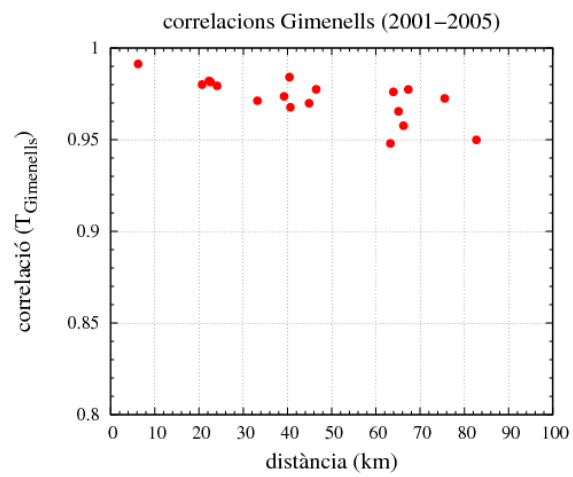


Figura 18: Correlacions calculades a partir dels vespres estables (d'acord amb el filtre nou de T, H i M) durant el període 2001-2005 per Gimenells