

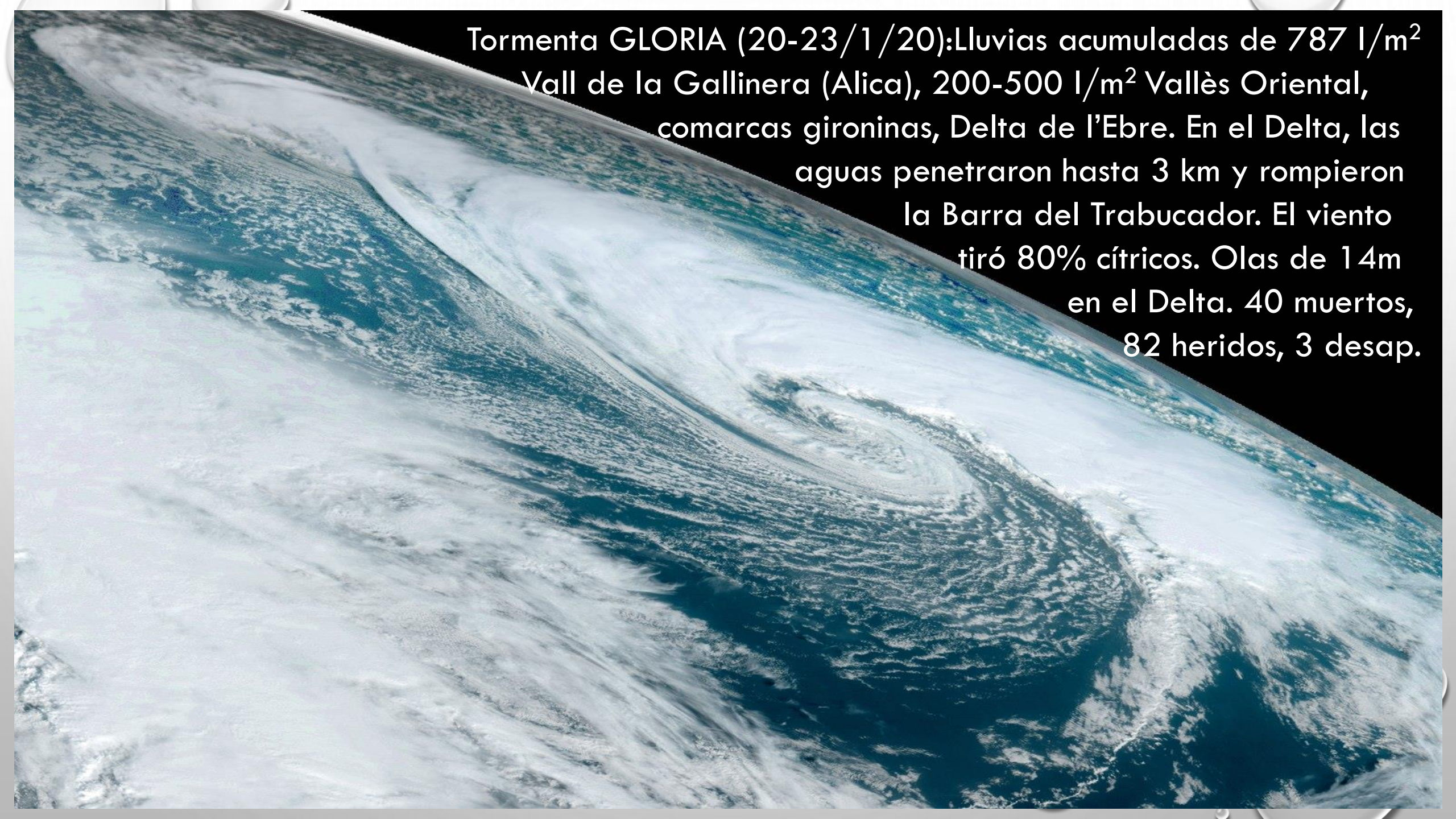
Servicios climáticos y ecosistémicos relacionados con el mar

Pedro Arnau

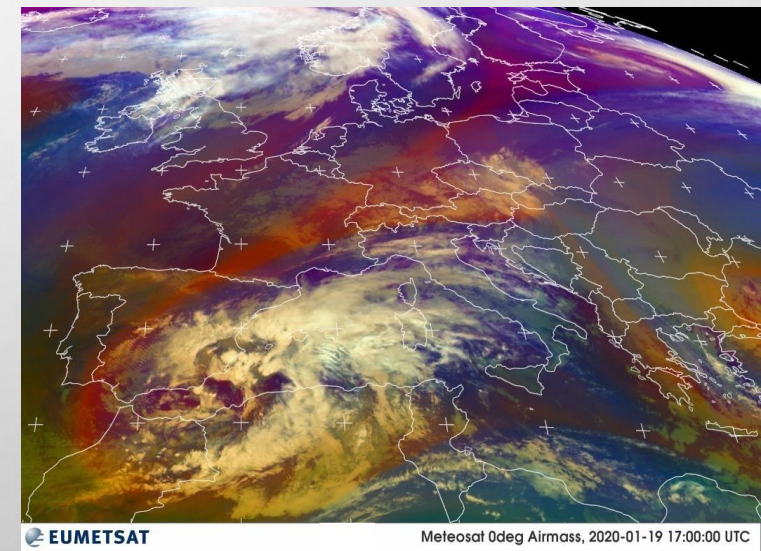
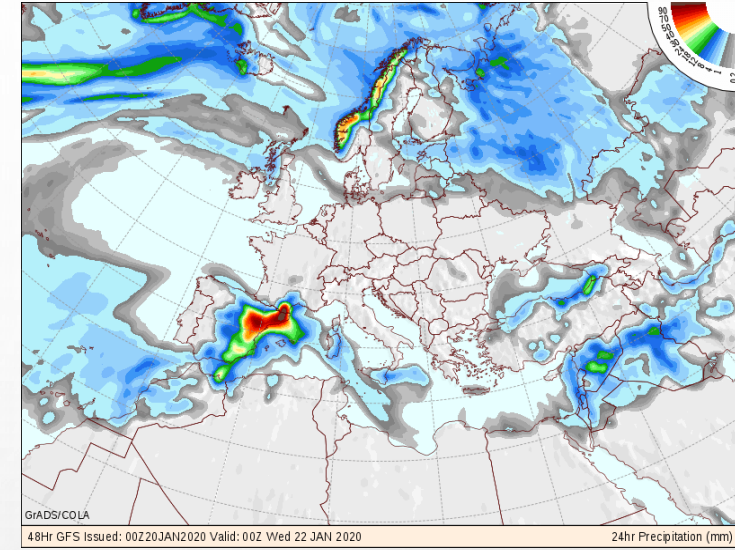
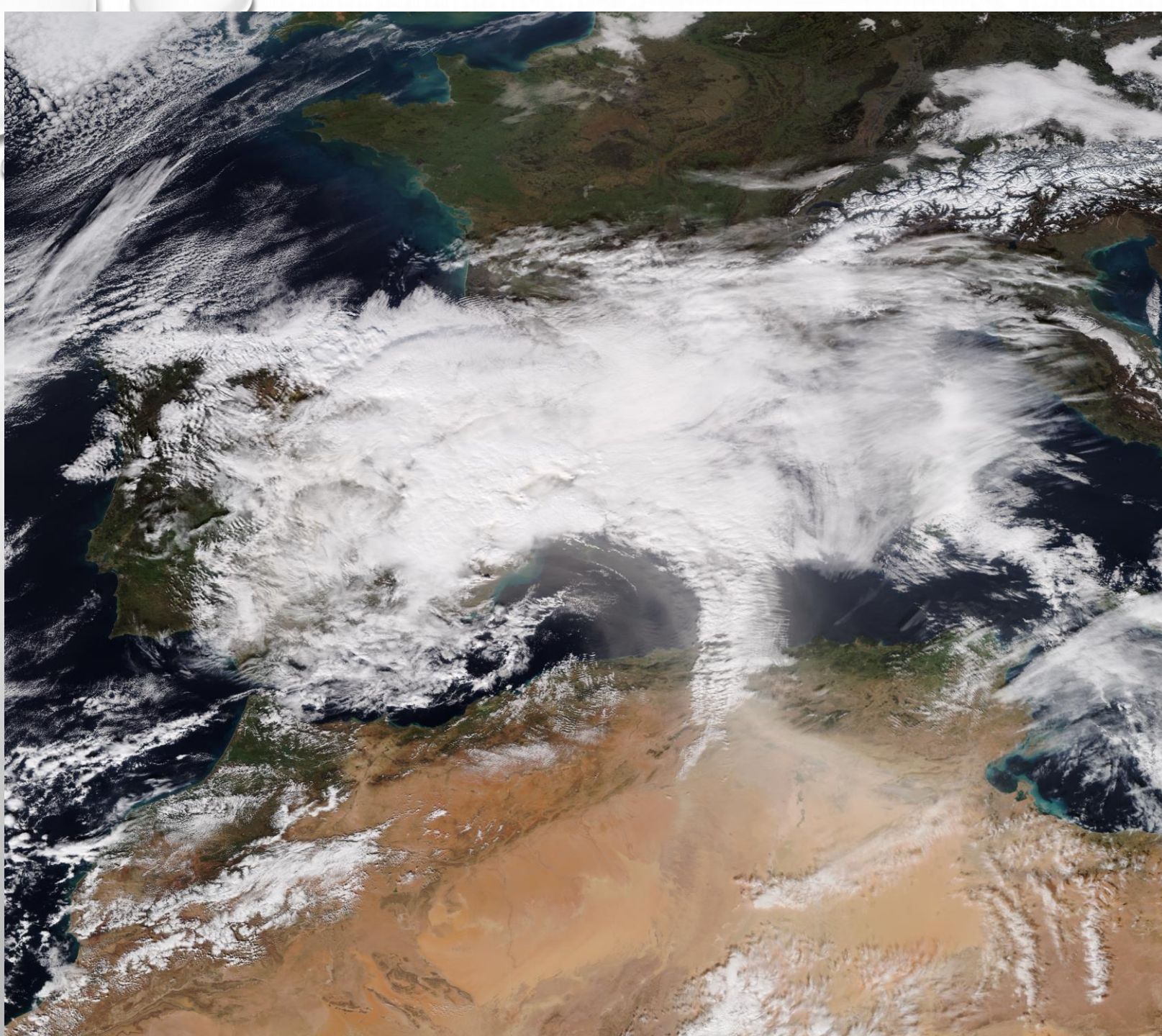
CIMNE[®]

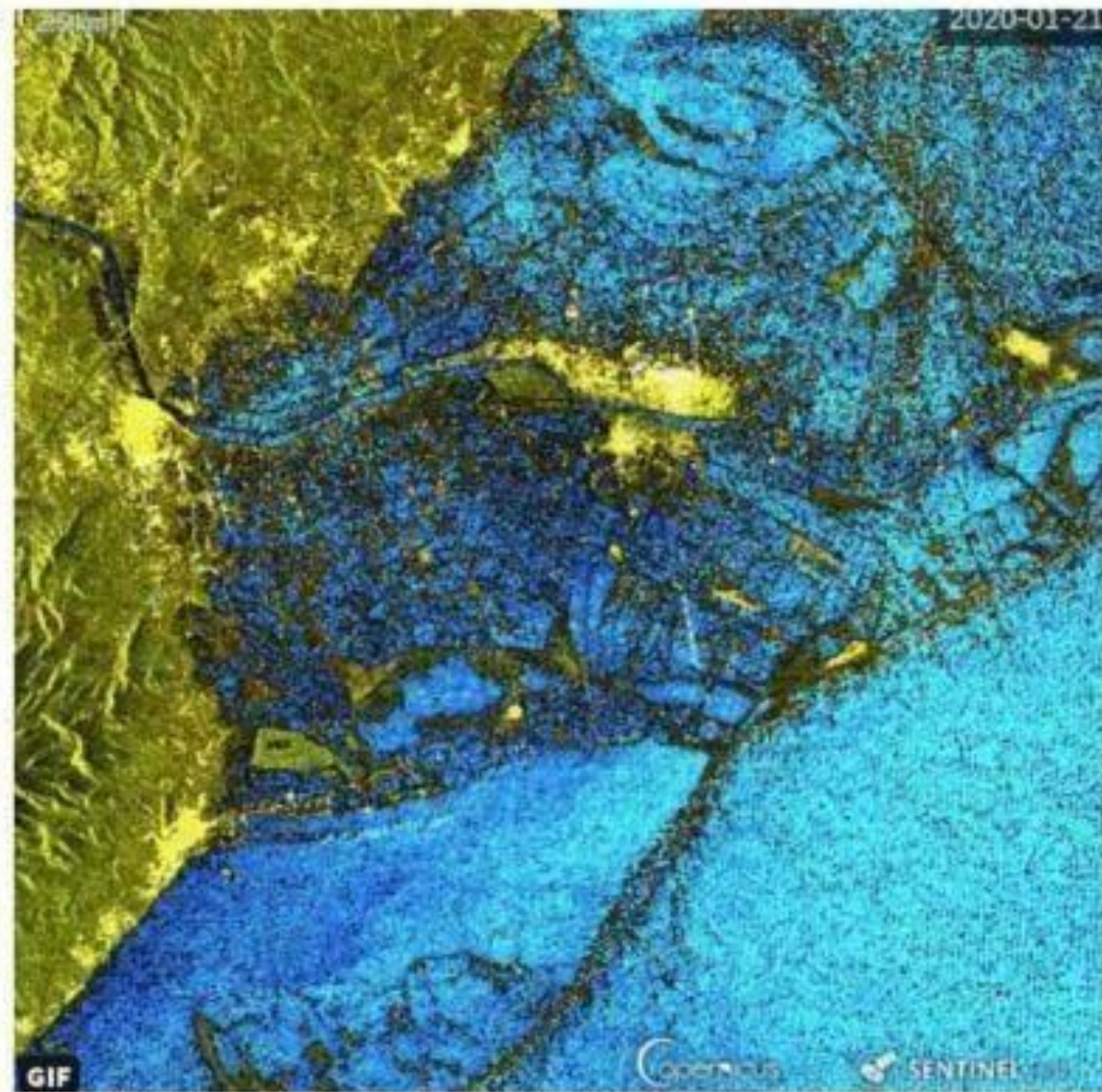
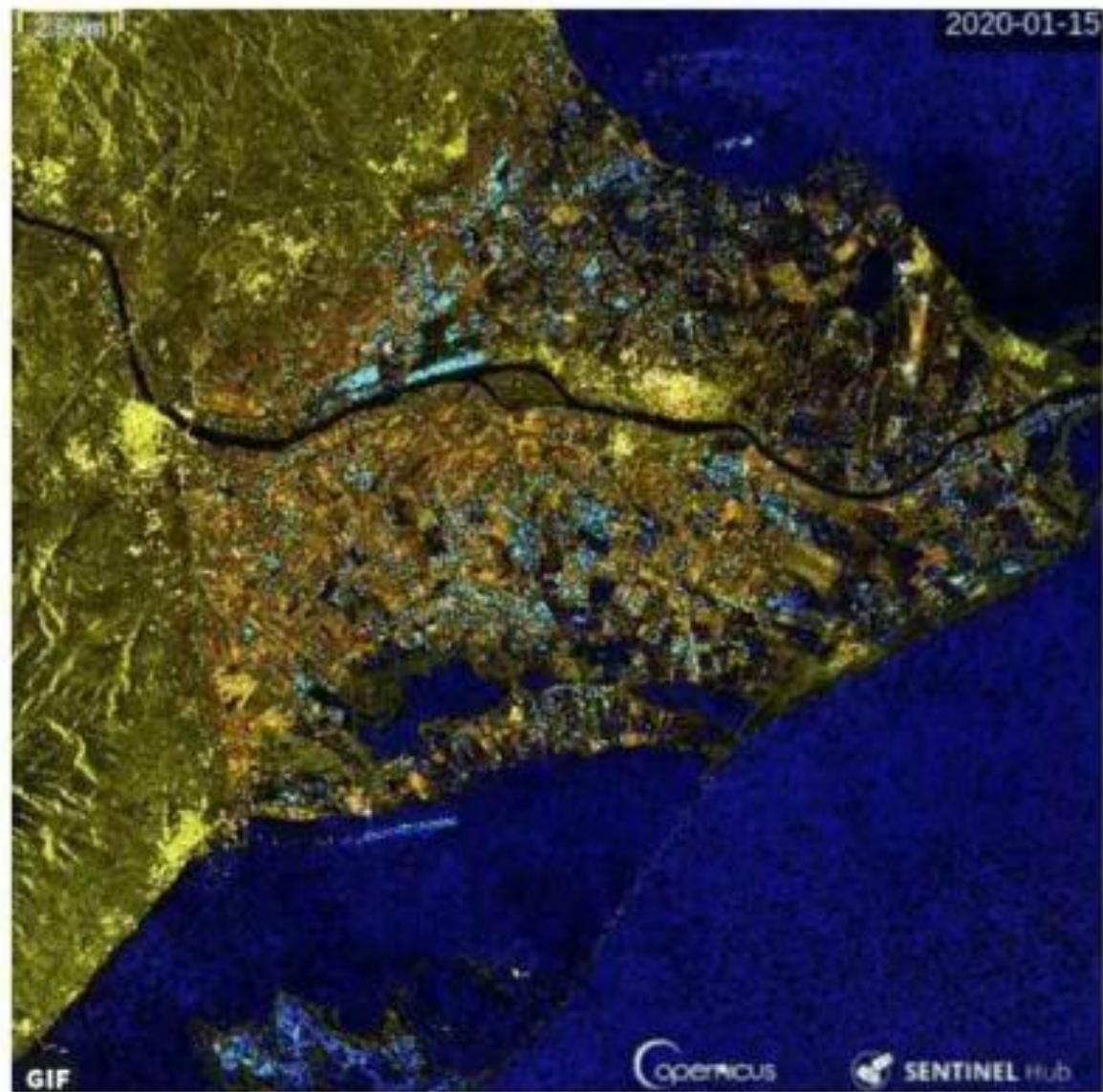
EXCELENCIA
SEVERO
OCHOA

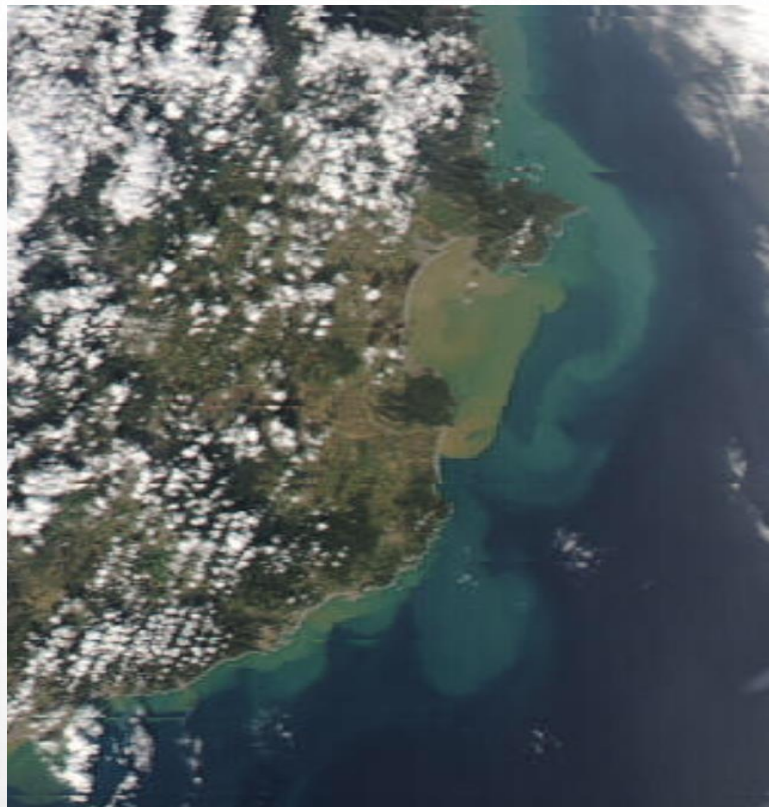


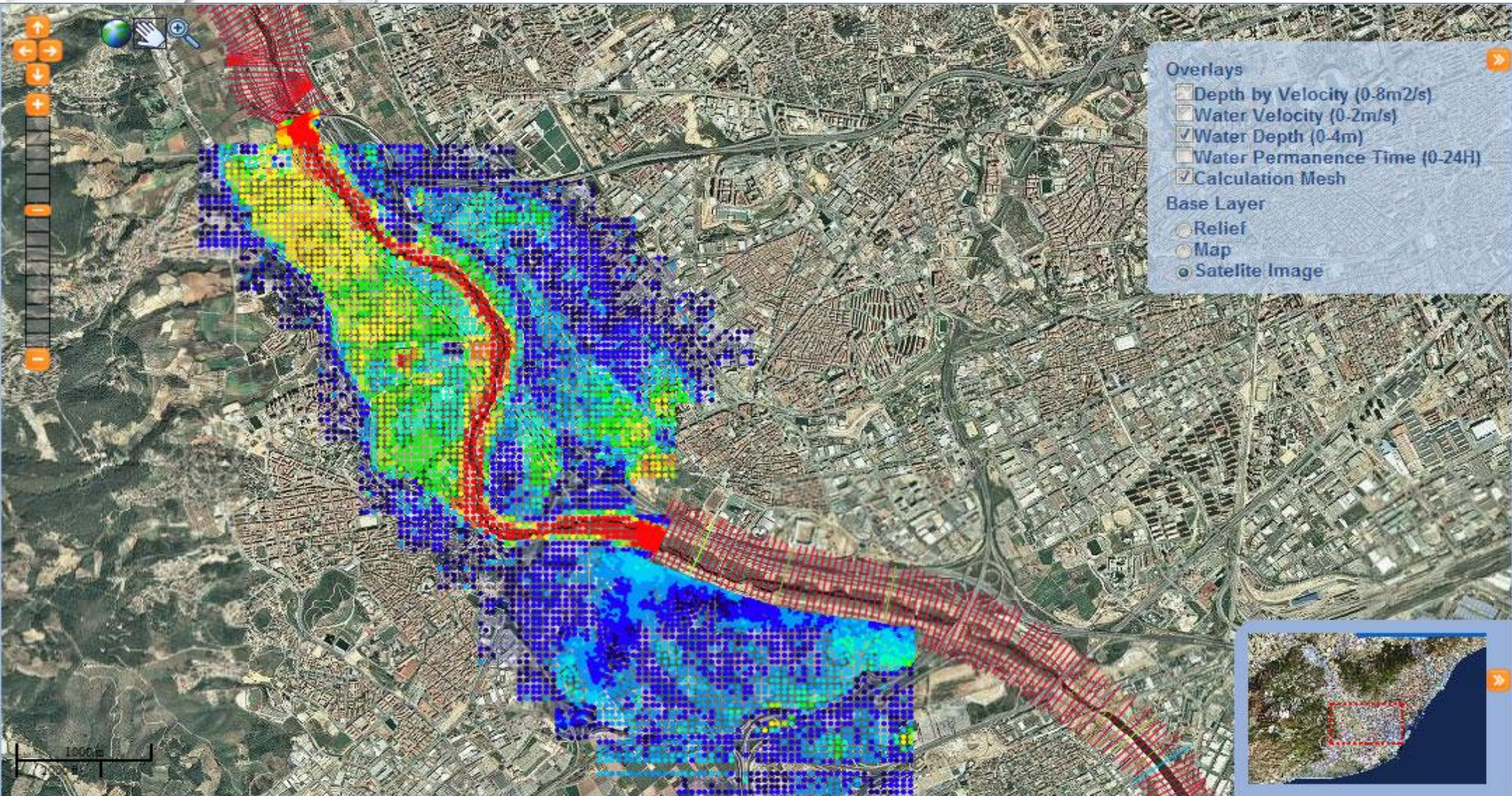
A satellite image of a tropical storm system, likely Gloria, showing a well-defined eye and spiral cloud bands over the ocean. The storm is viewed from an oblique angle, showing its curved structure. The clouds are white and dense, contrasting with the dark blue of the ocean.

Tormenta GLORIA (20-23/1/20): Lluvias acumuladas de 787 l/m²
Vall de la Gallinera (Alicia), 200-500 l/m² Vallès Oriental,
comarcas gironinas, Delta de l'Ebre. En el Delta, las
aguas penetraron hasta 3 km y rompieron
la Barra del Trabucador. El viento
tiró 80% cítricos. Olas de 14m
en el Delta. 40 muertos,
82 heridos, 3 desap.









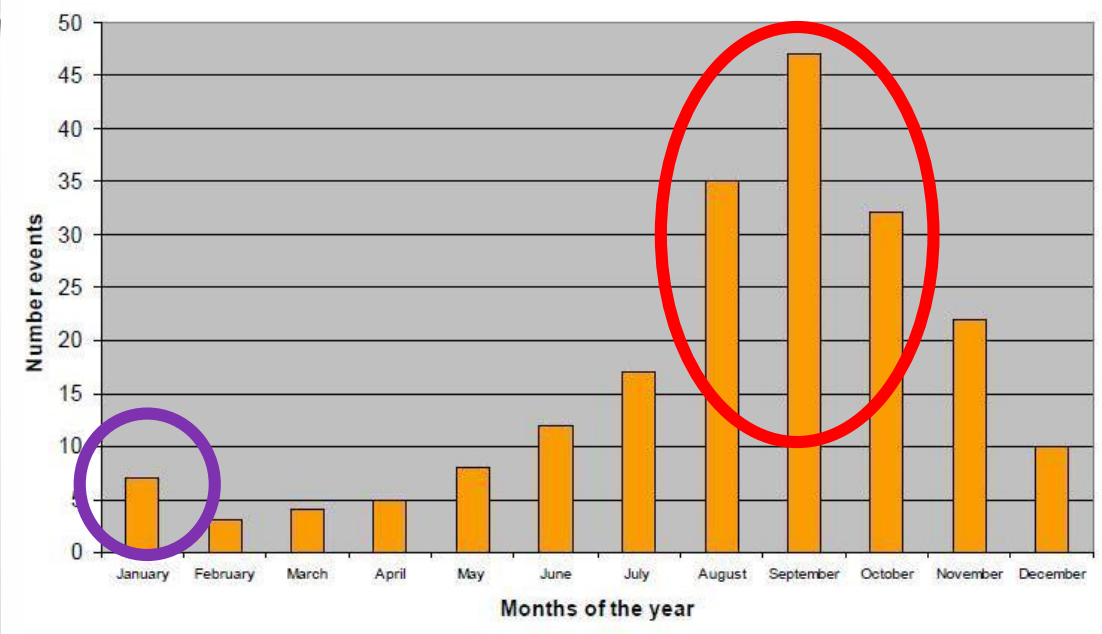
- Overlays**
- Depth by Velocity (0-8m²/s)
 - Water Velocity (0-2m/s)
 - Water Depth (0-4m)
 - Water Permanence Time (0-24H)
 - Calculation Mesh
- Base Layer**
- Relief
 - Map
 - Satellite Image

Thematic Legend

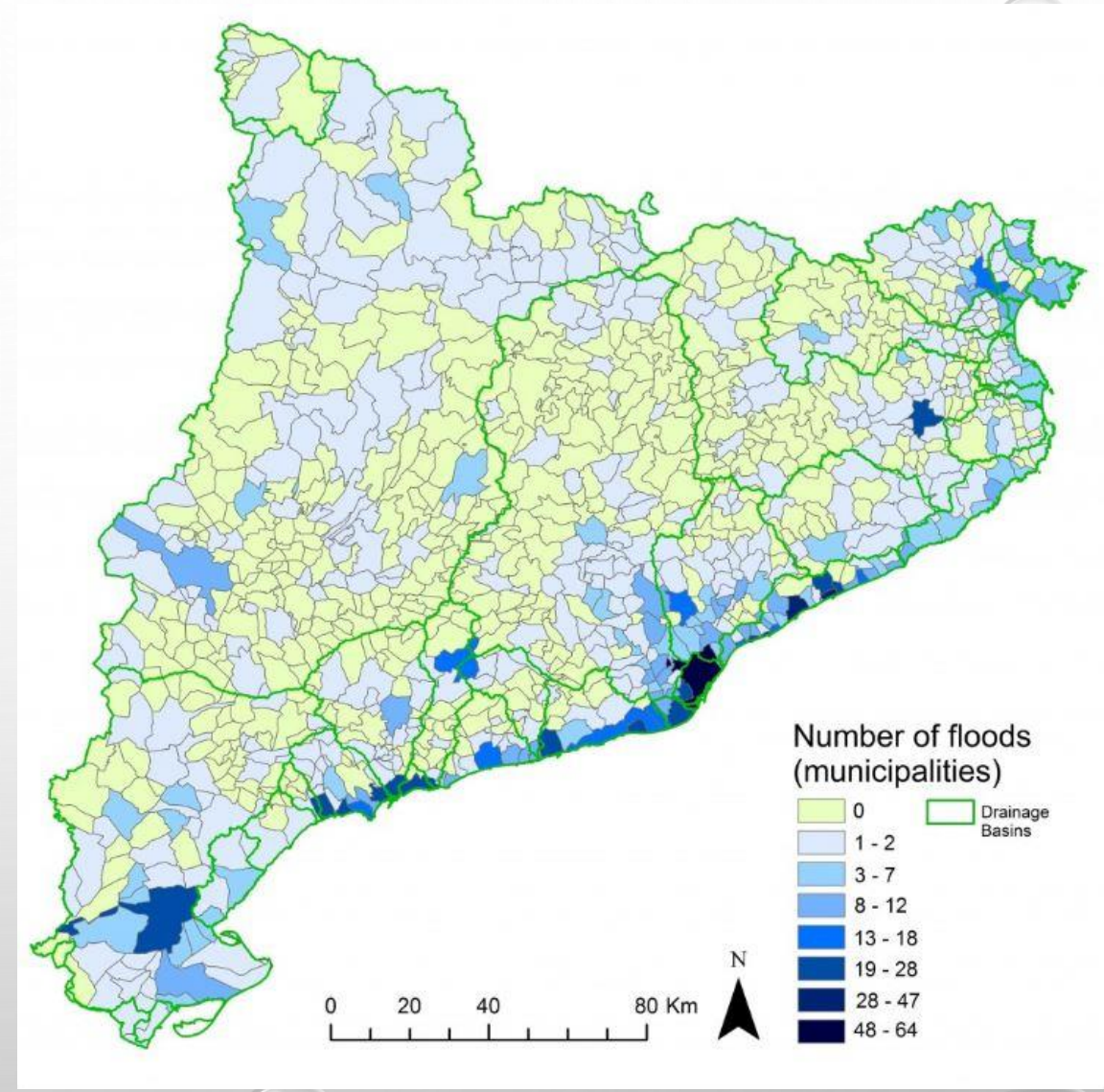
Water Depth (0-4m)

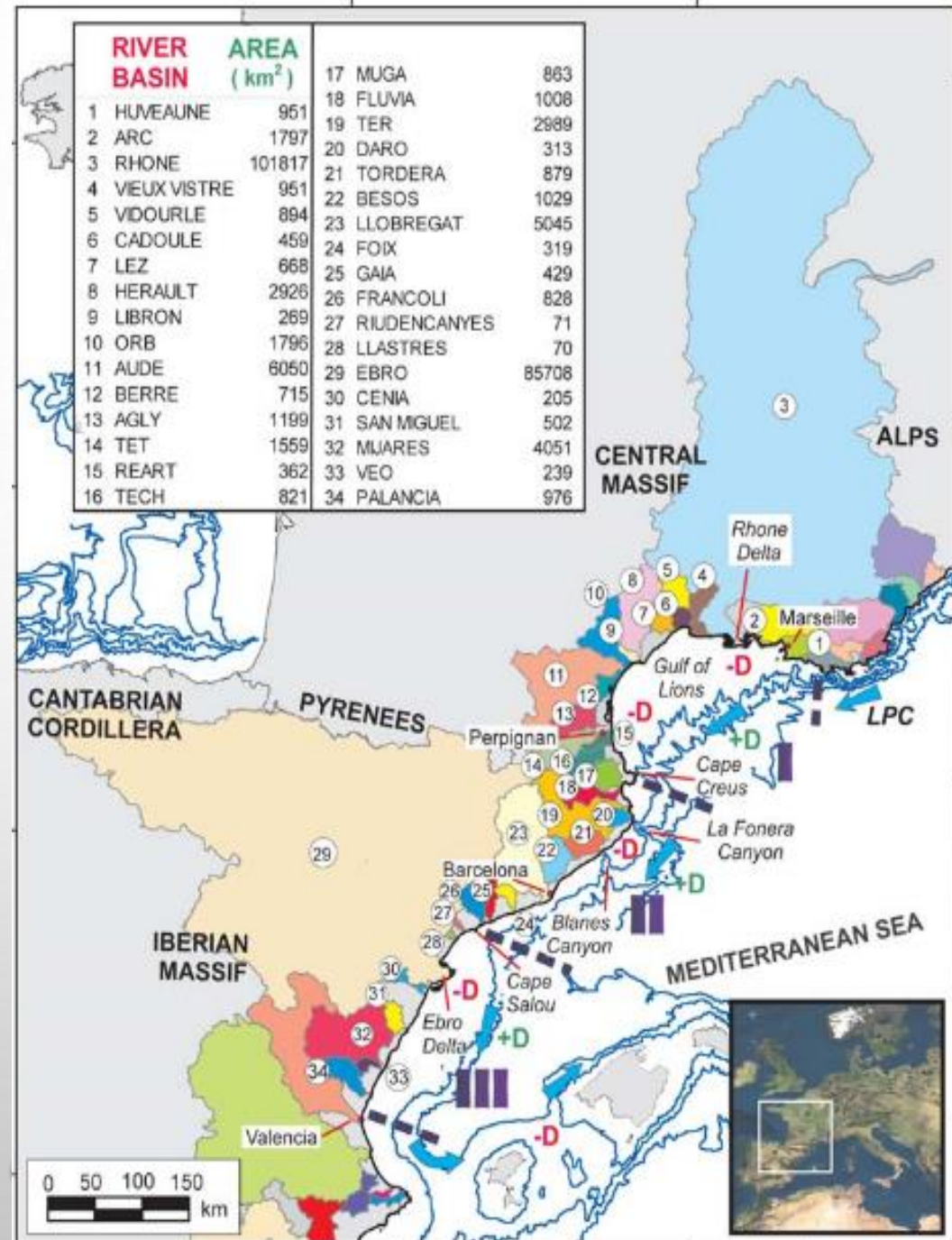
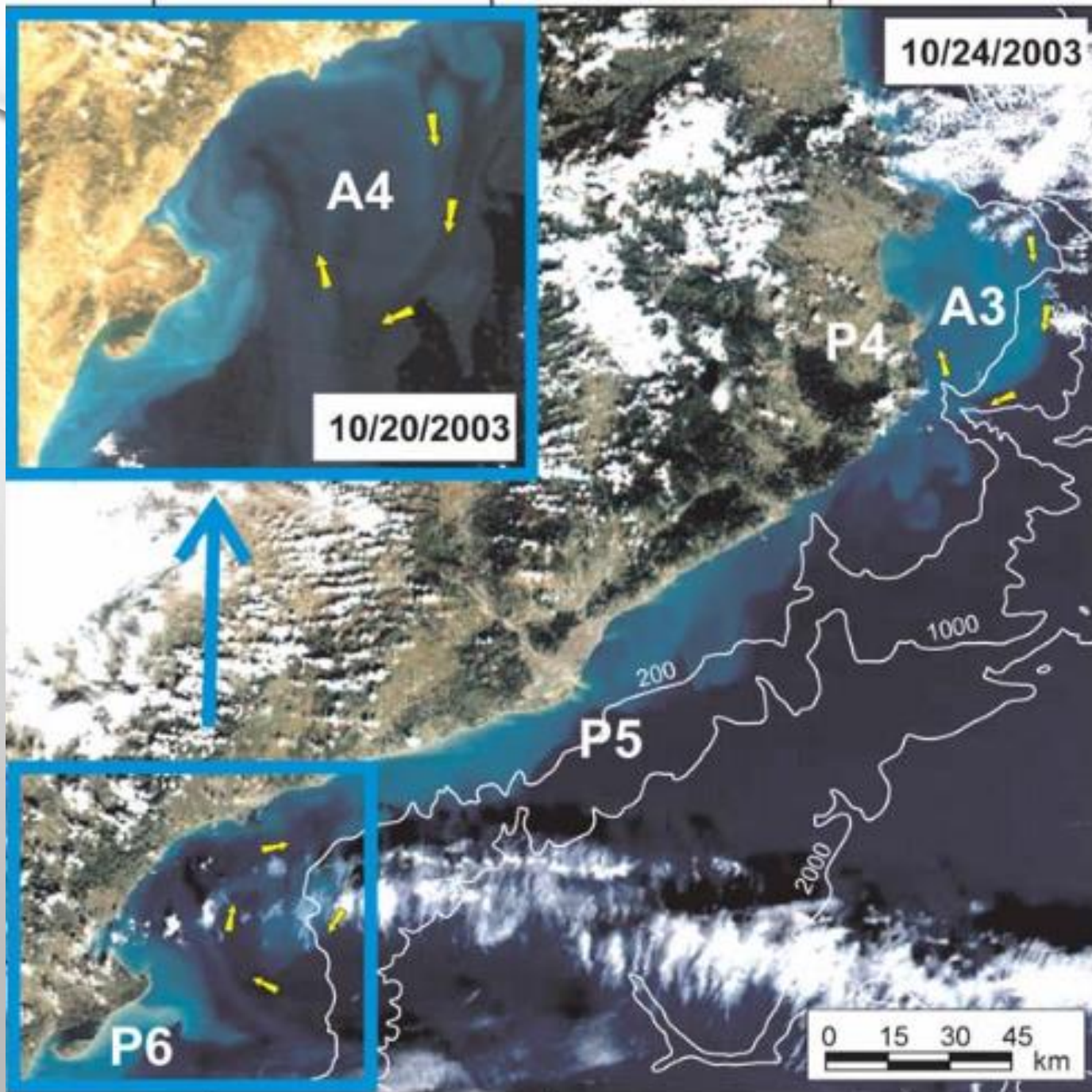
0.01 - 0.33
0.33 - 0.66
0.66 - 0.99
0.99 - 1.32
1.32 - 1.65
1.65 - 1.98
1.98 - 2.31
2.31 - 2.64
2.64 - 2.97
2.97 - 3.30
3.30 - 3.63
> 3.63

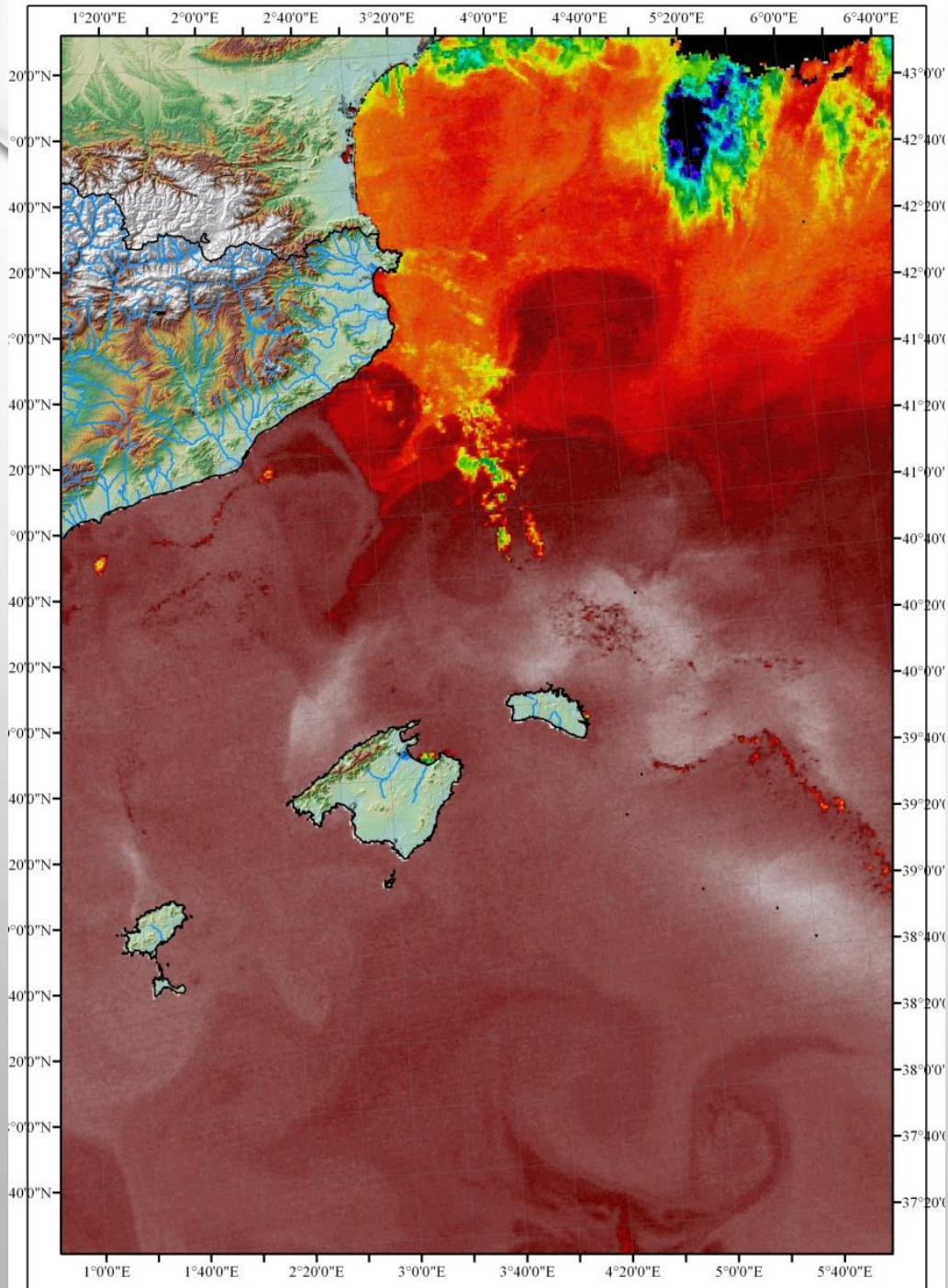




Distribución por municipios del nº de episodios de inundaciones registrados en Cataluña entre 1981 y 2010. (Fuente: Llasat et al, 2014)







primer temporal del otoño

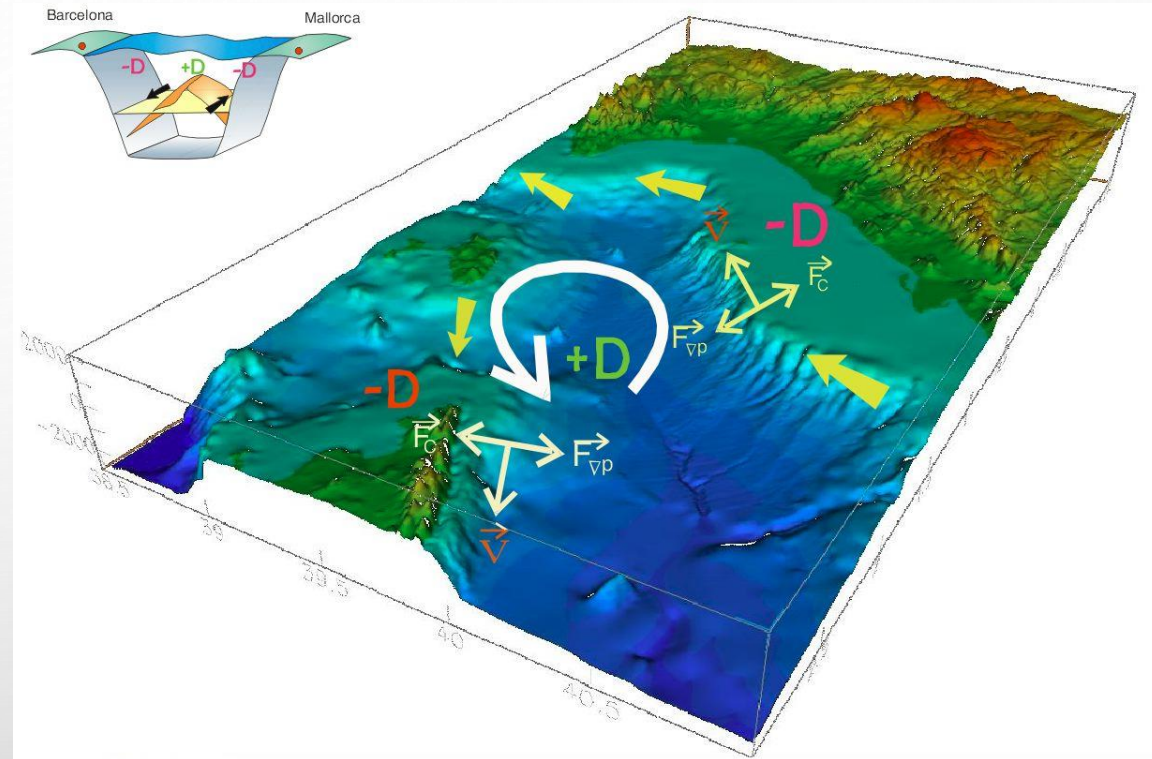
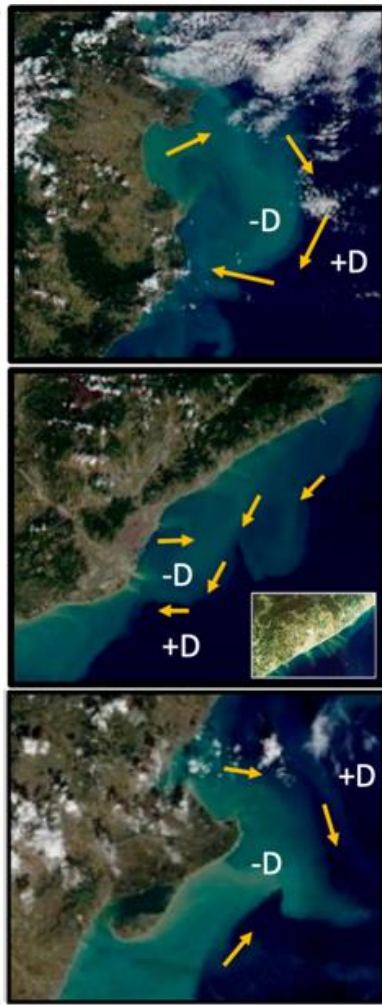
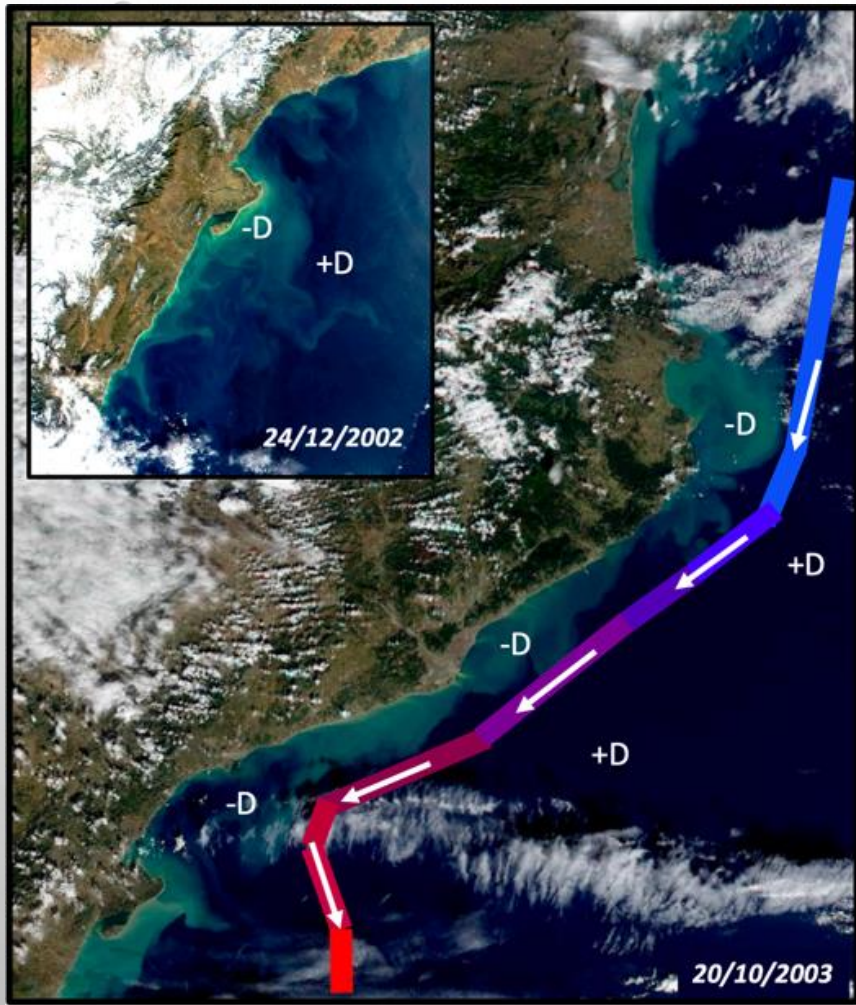
Lluvias de 320 l/m² en cuatro horas inundan Sueca

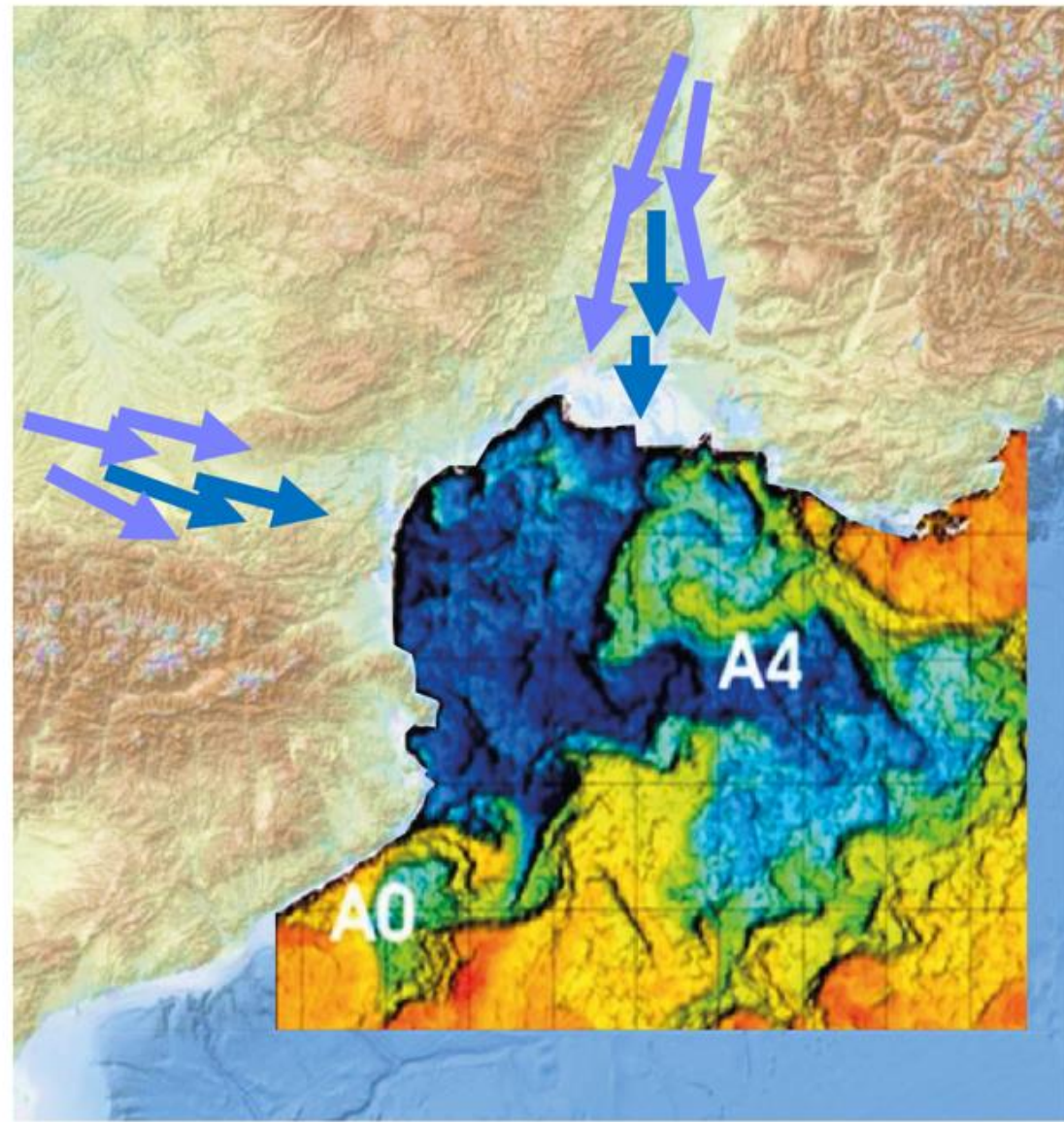
Efe | 23.09.2008 | 23:17

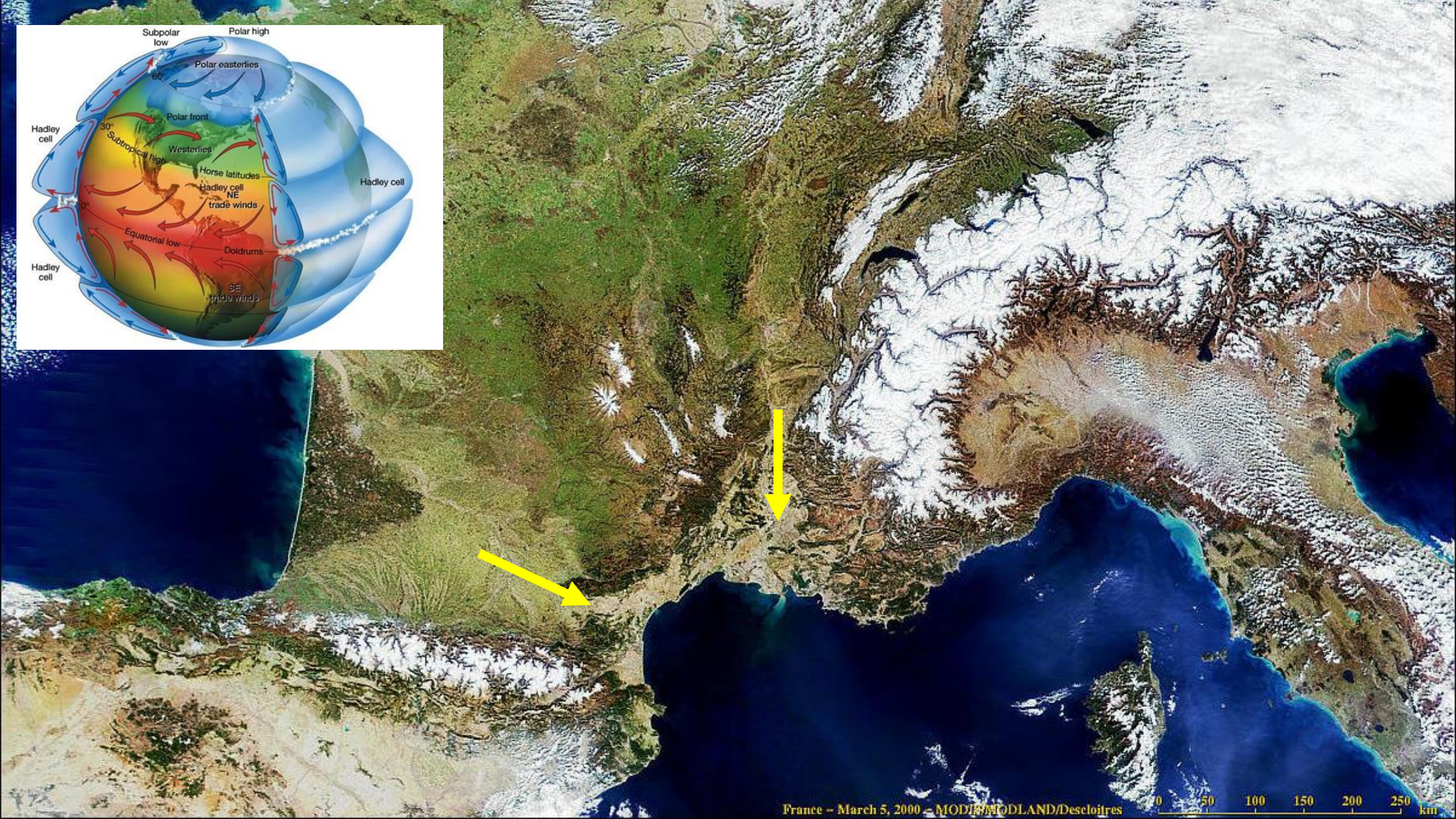
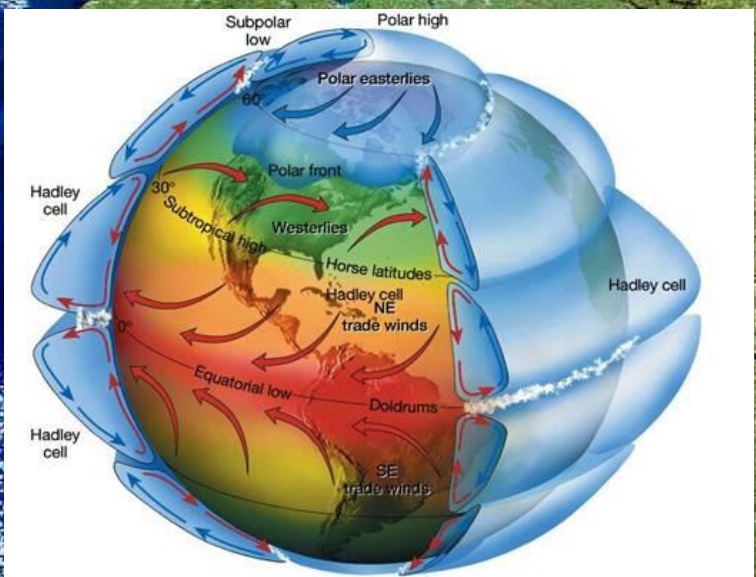
Numerosas calles, plantas bajas y sótanos se han inundado. También la lluvia ha provocado que los vehículos que se encontraban en las carreteras de acceso a Sueca se hayan visto obligados a separarse hacia los arcenes o incluso a pararse ya que la visibilidad también era escasa.

Las lluvias que han alcanzado los 320 litros por metro cuadrado en la localidad valenciana de Sueca durante las últimas cuatro horas han causado inundaciones en esta población y han

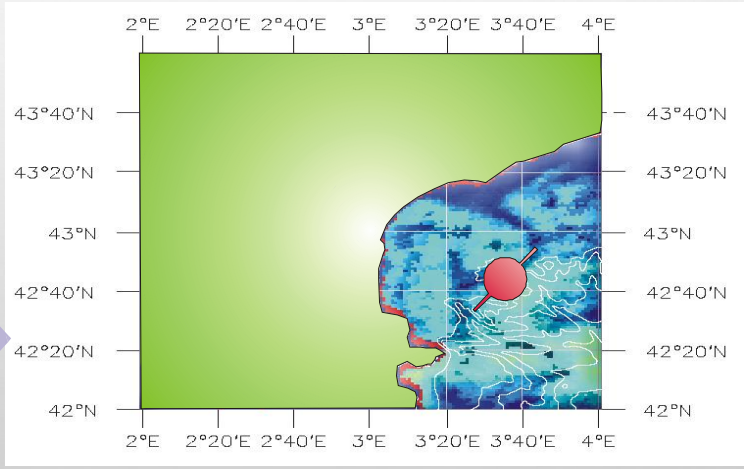
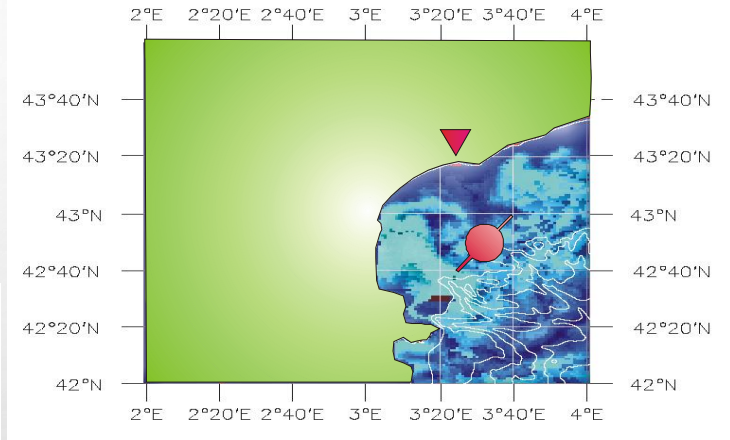
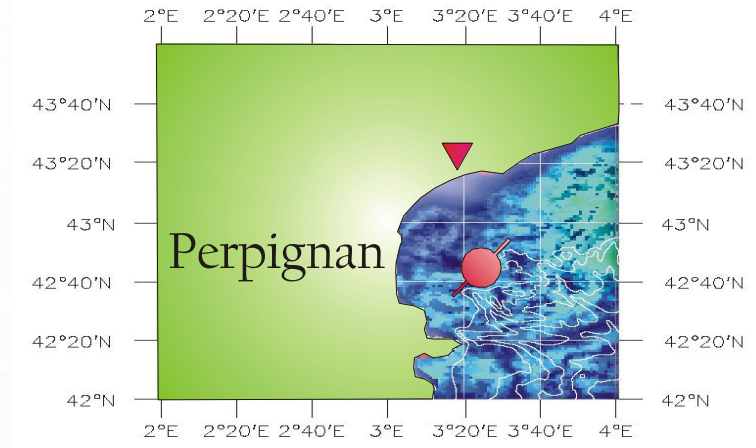
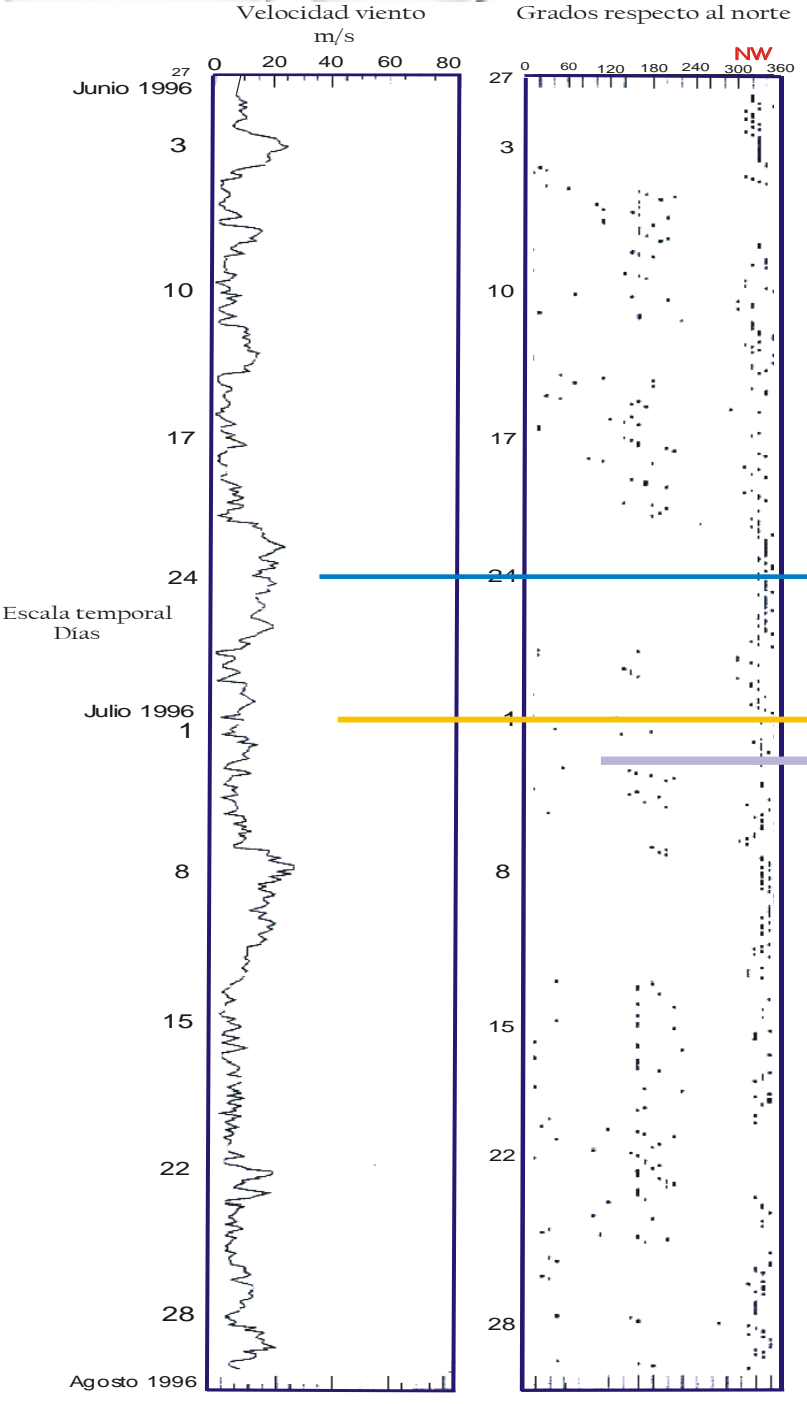






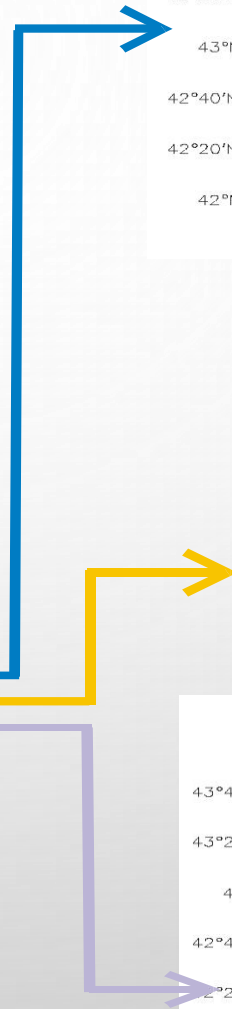
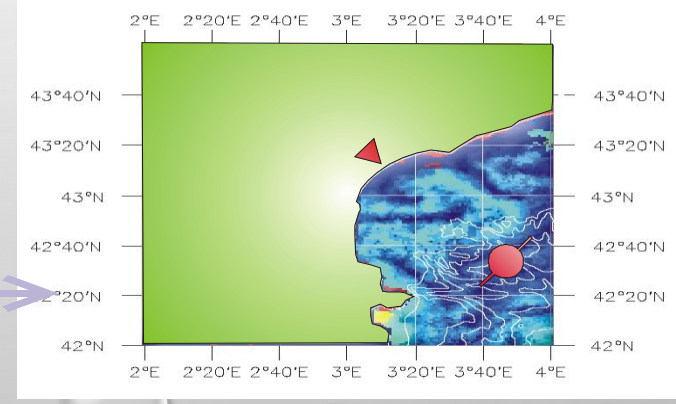
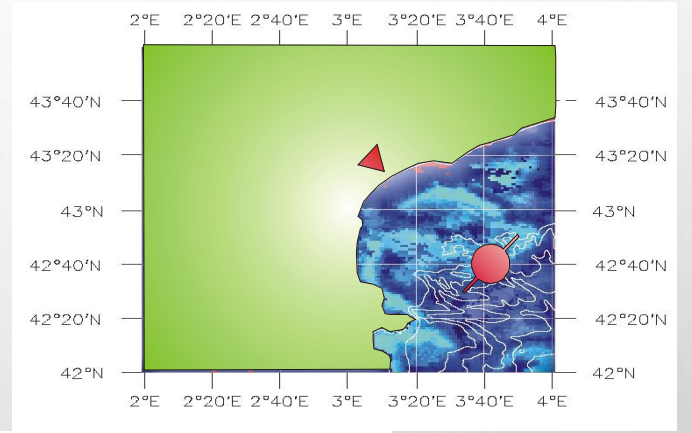
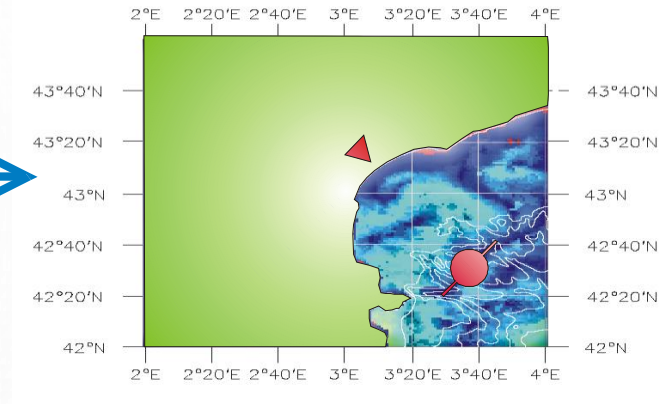
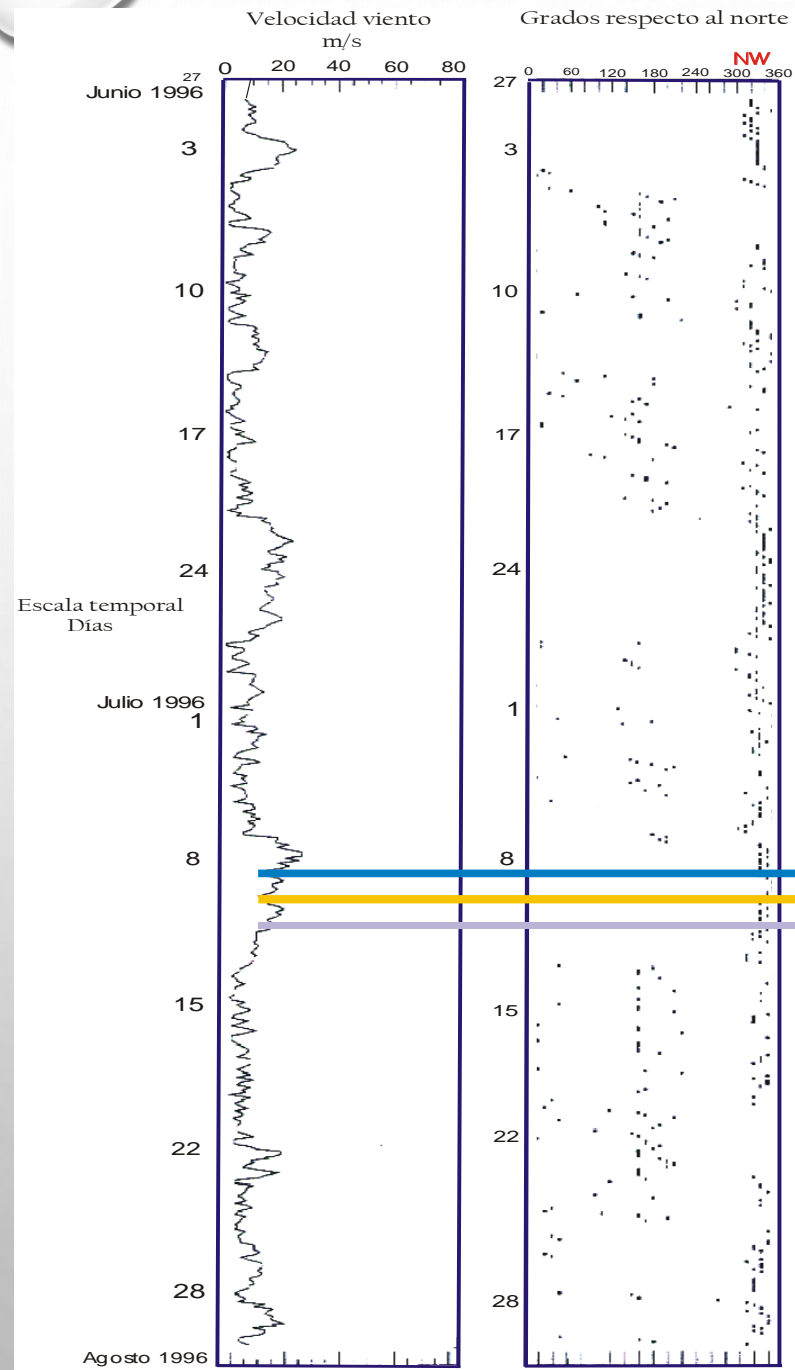


France - March 5, 2000 - MODIS/MODLAND/Descloitres 0 50 100 150 200 250 km



Escala temporal Días

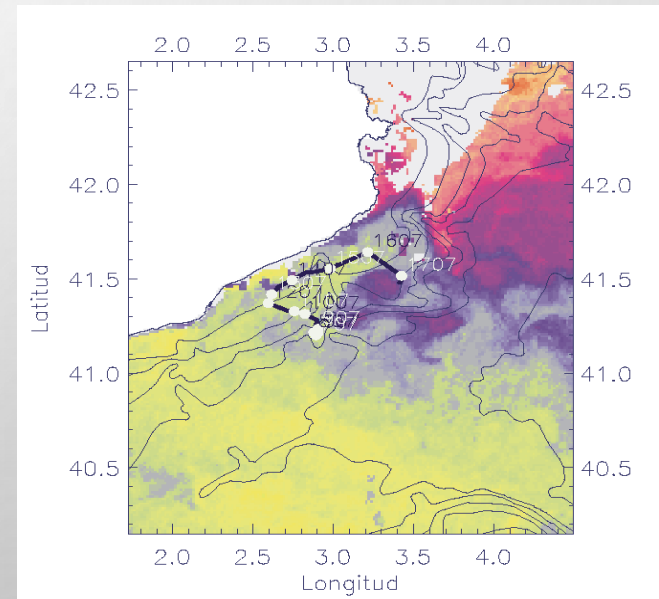
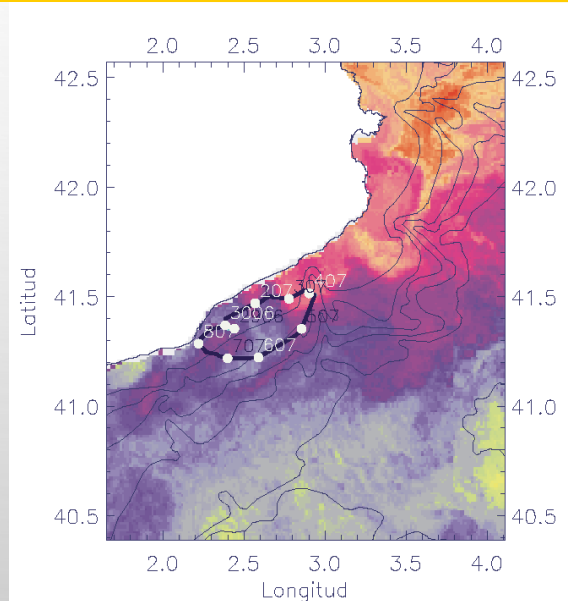
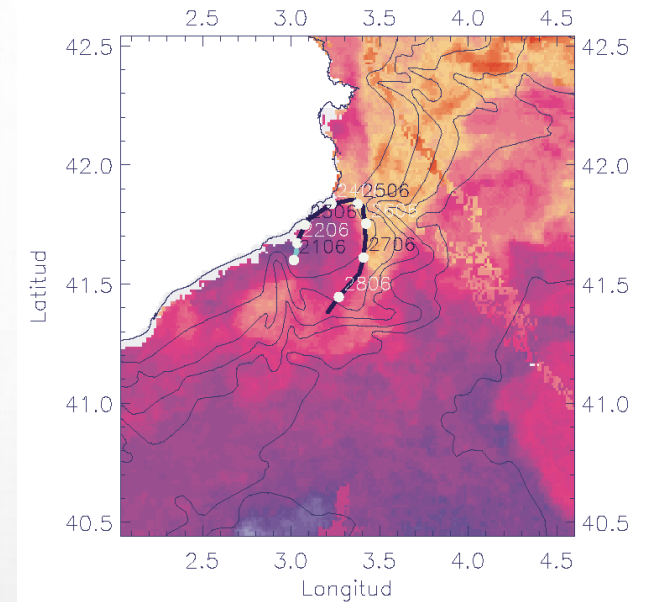
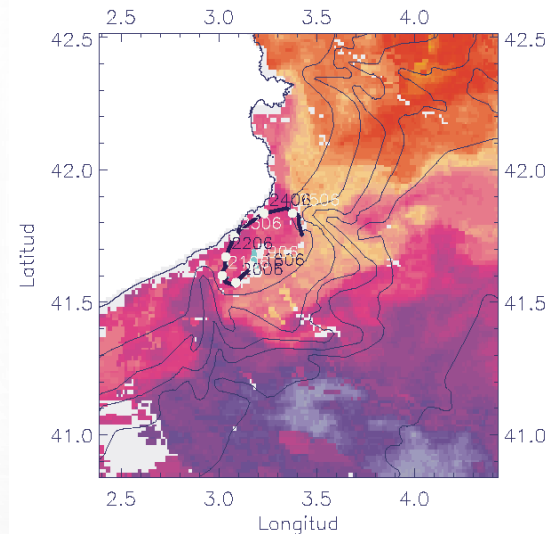
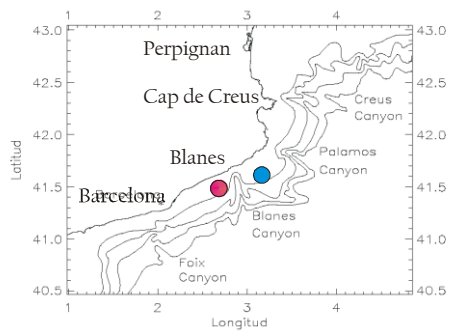
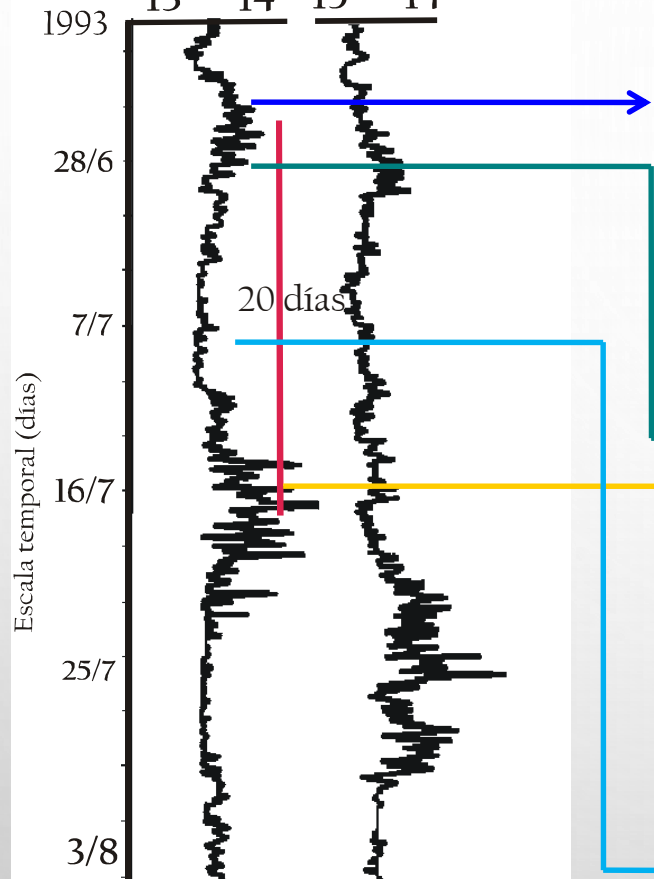
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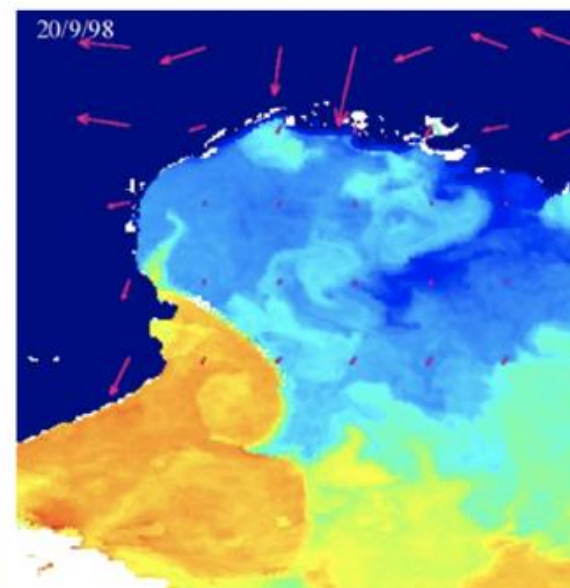
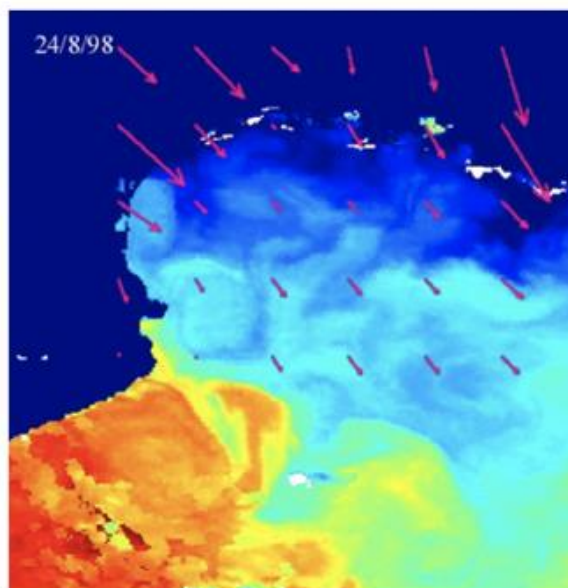
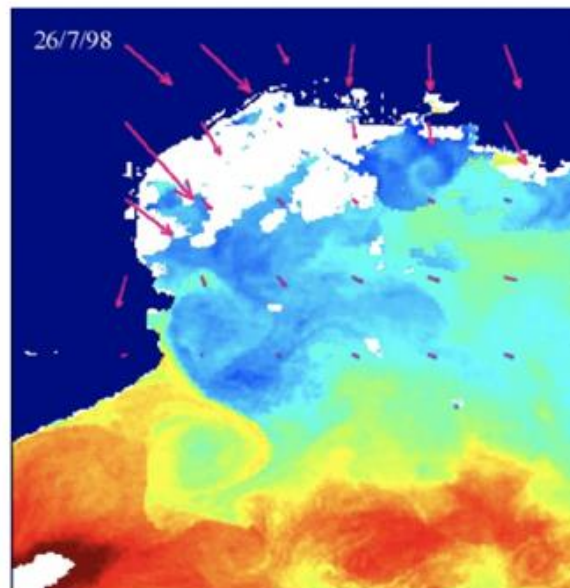
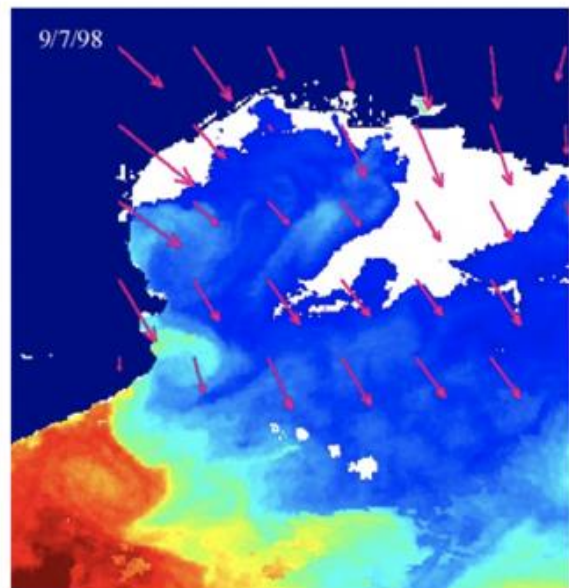
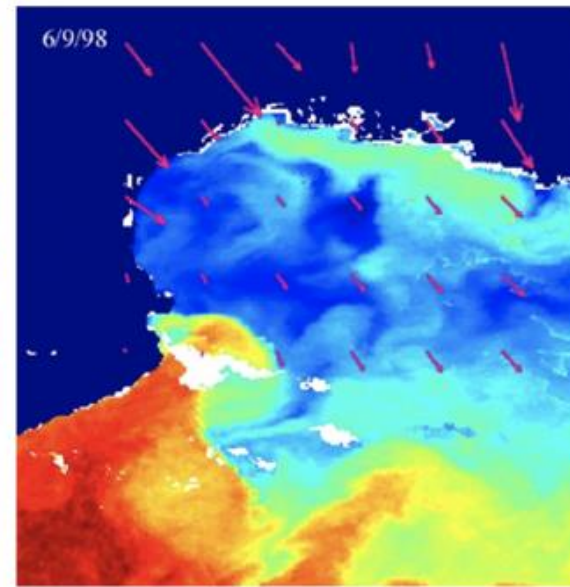
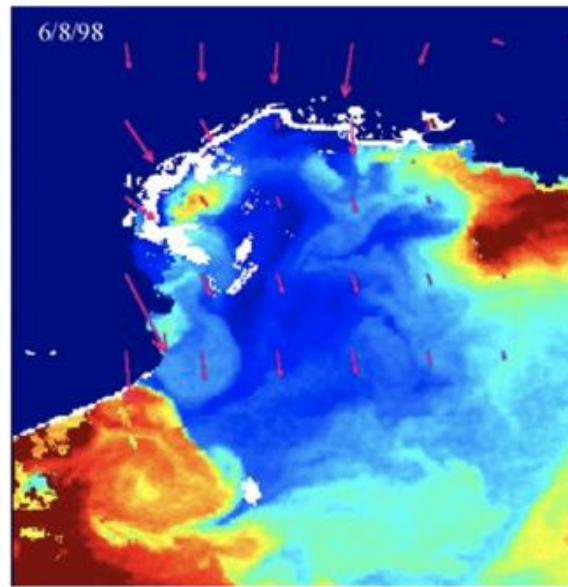
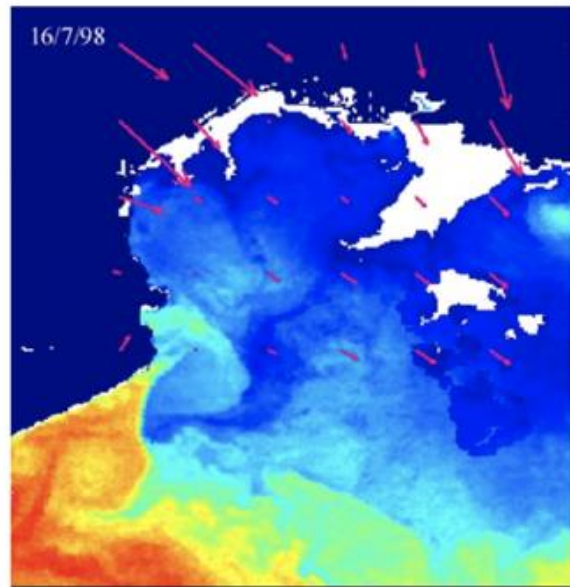
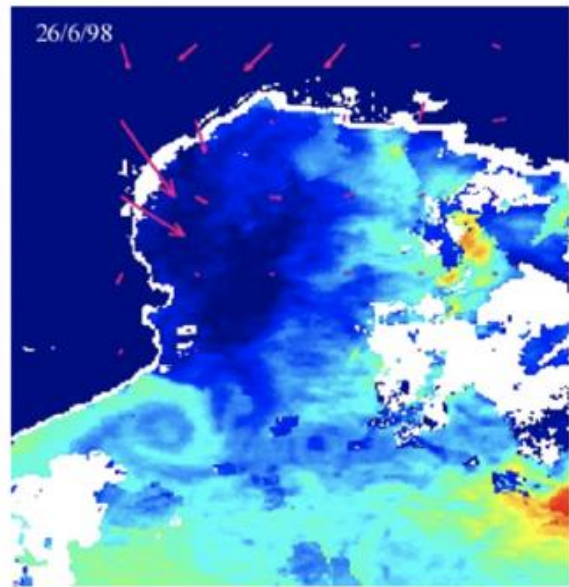


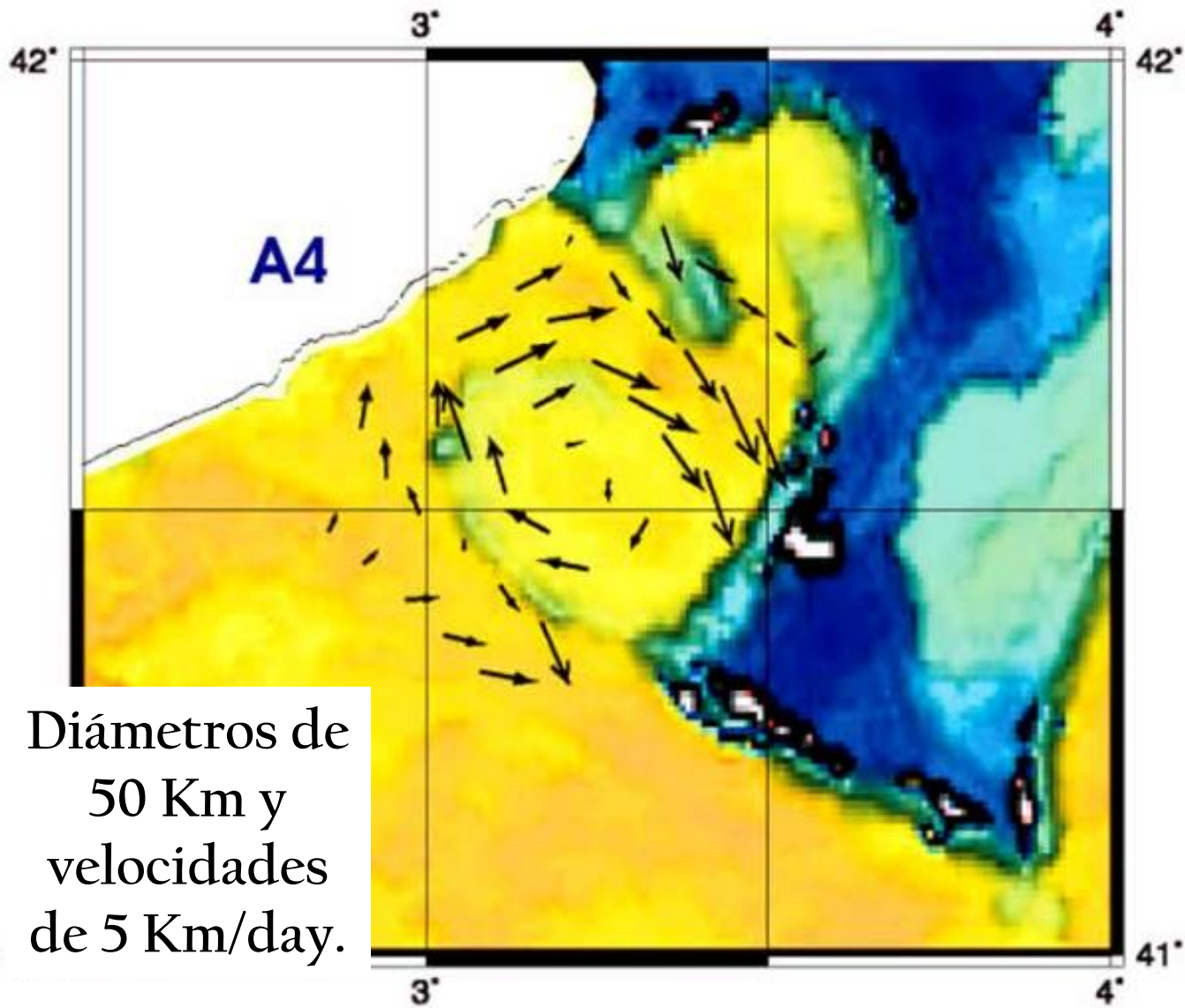
Serie de temperatura de 2 correntímetros situados al norte y sur del cañón de Blanes a 73 m de profundidad (°C).

Fondeo Norte Fondeo Sur

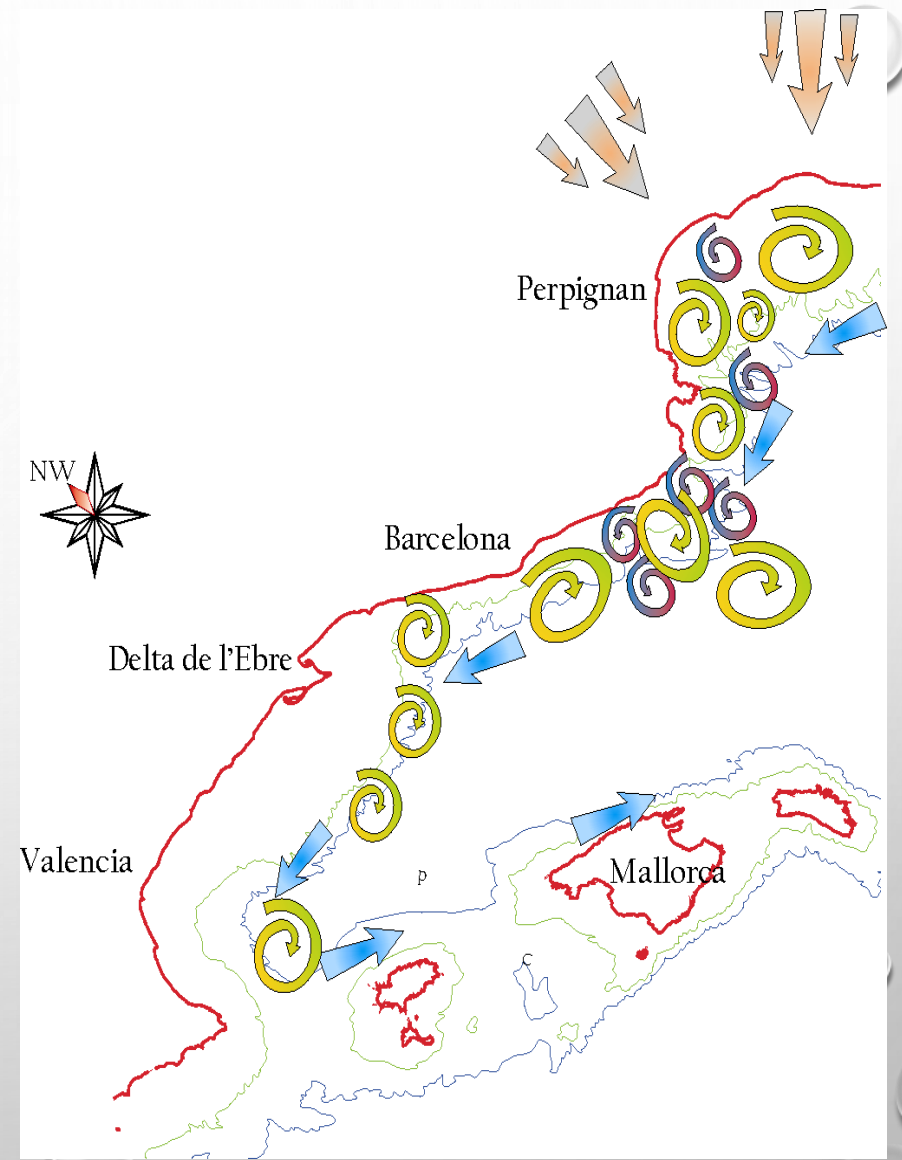
13 14 13 14

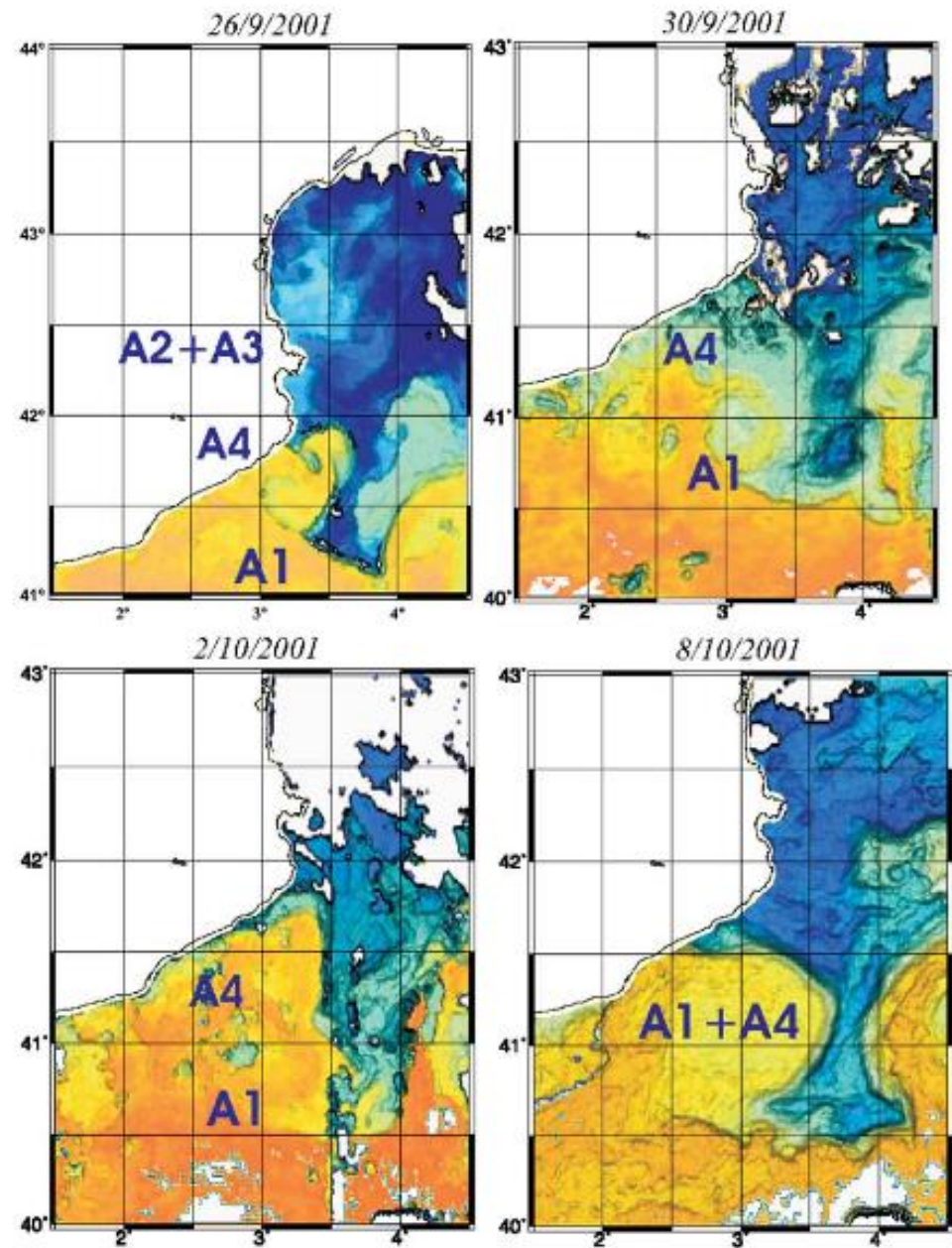
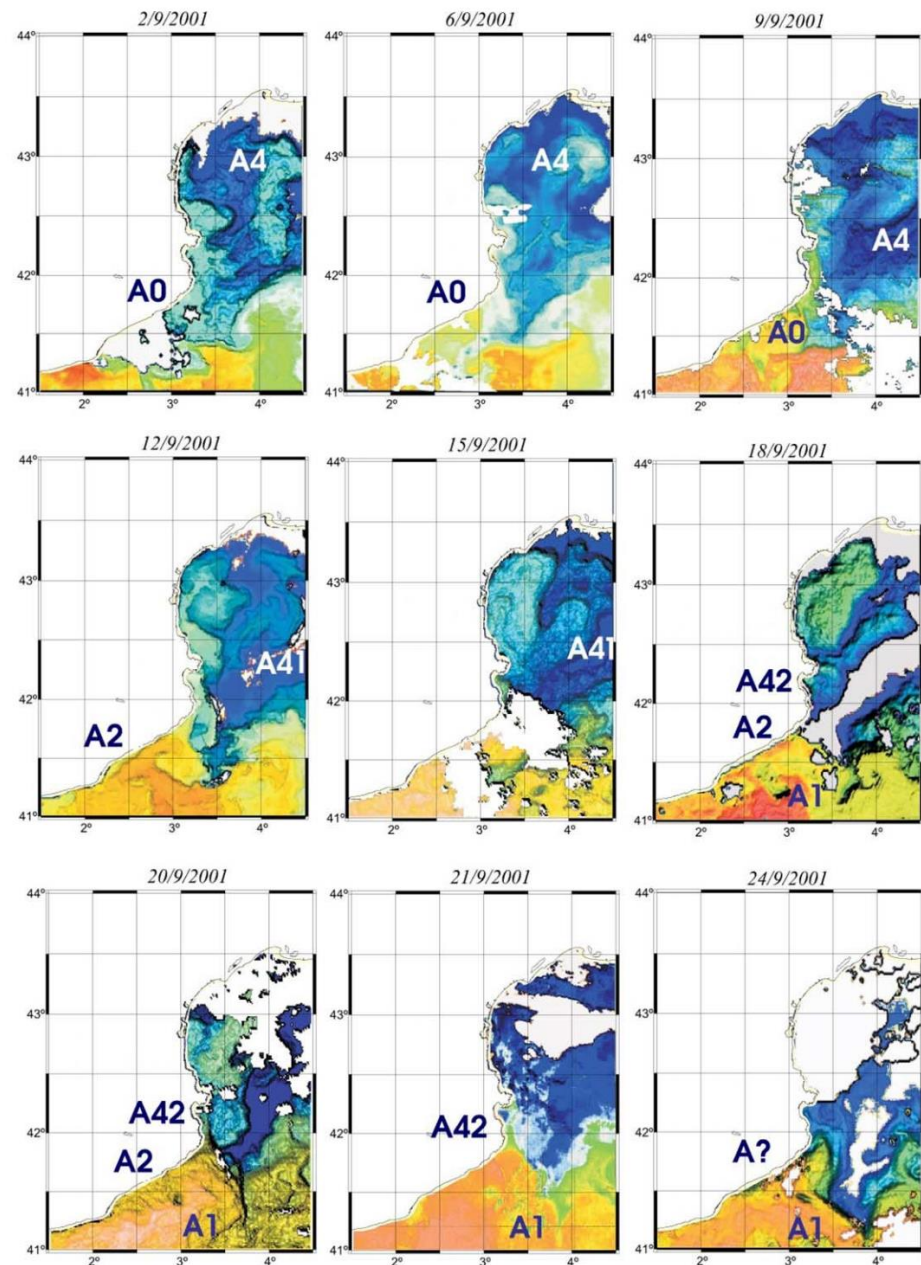


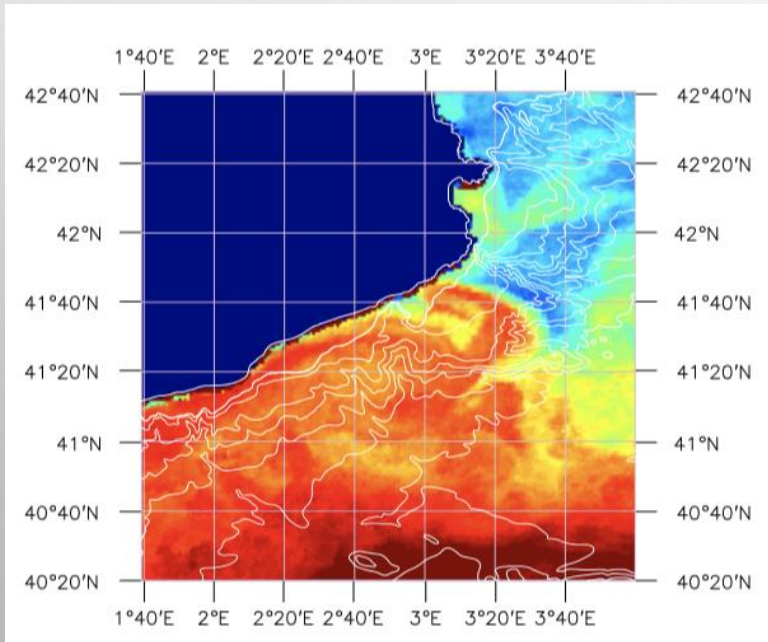
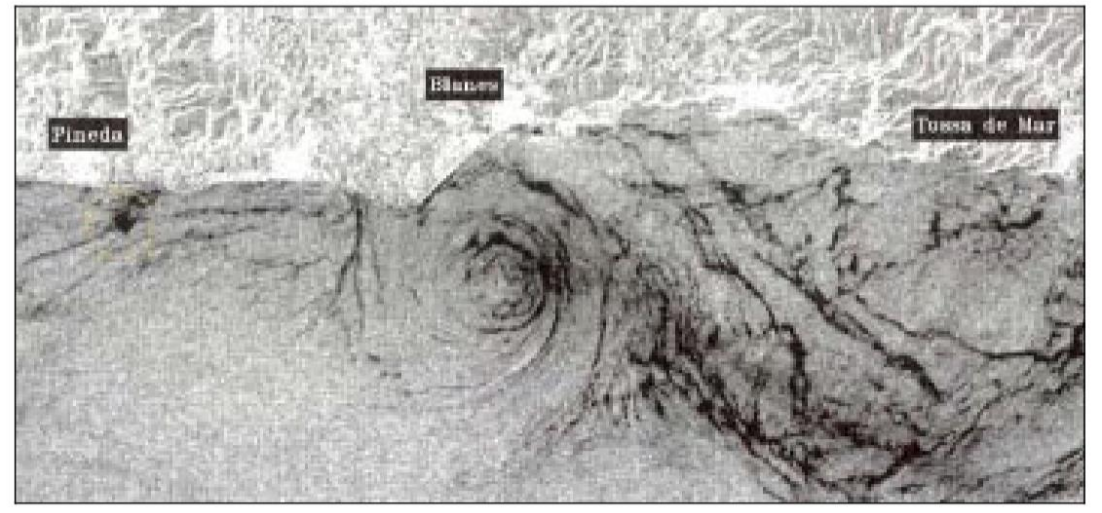
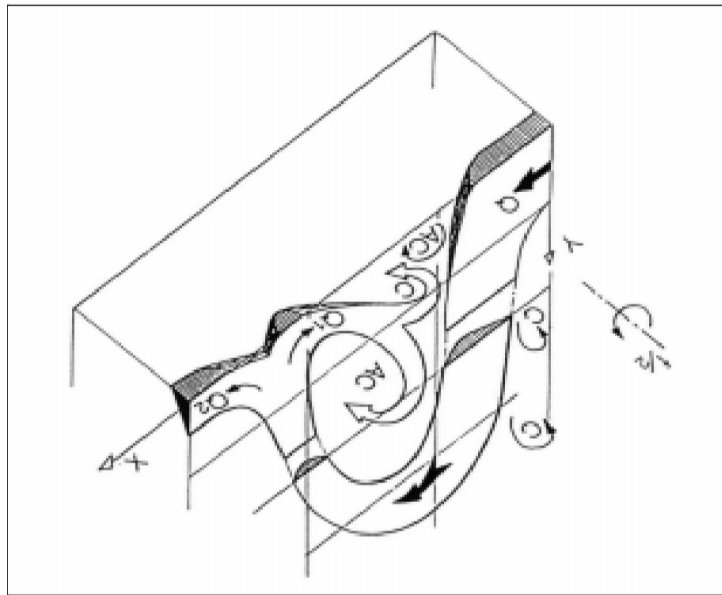


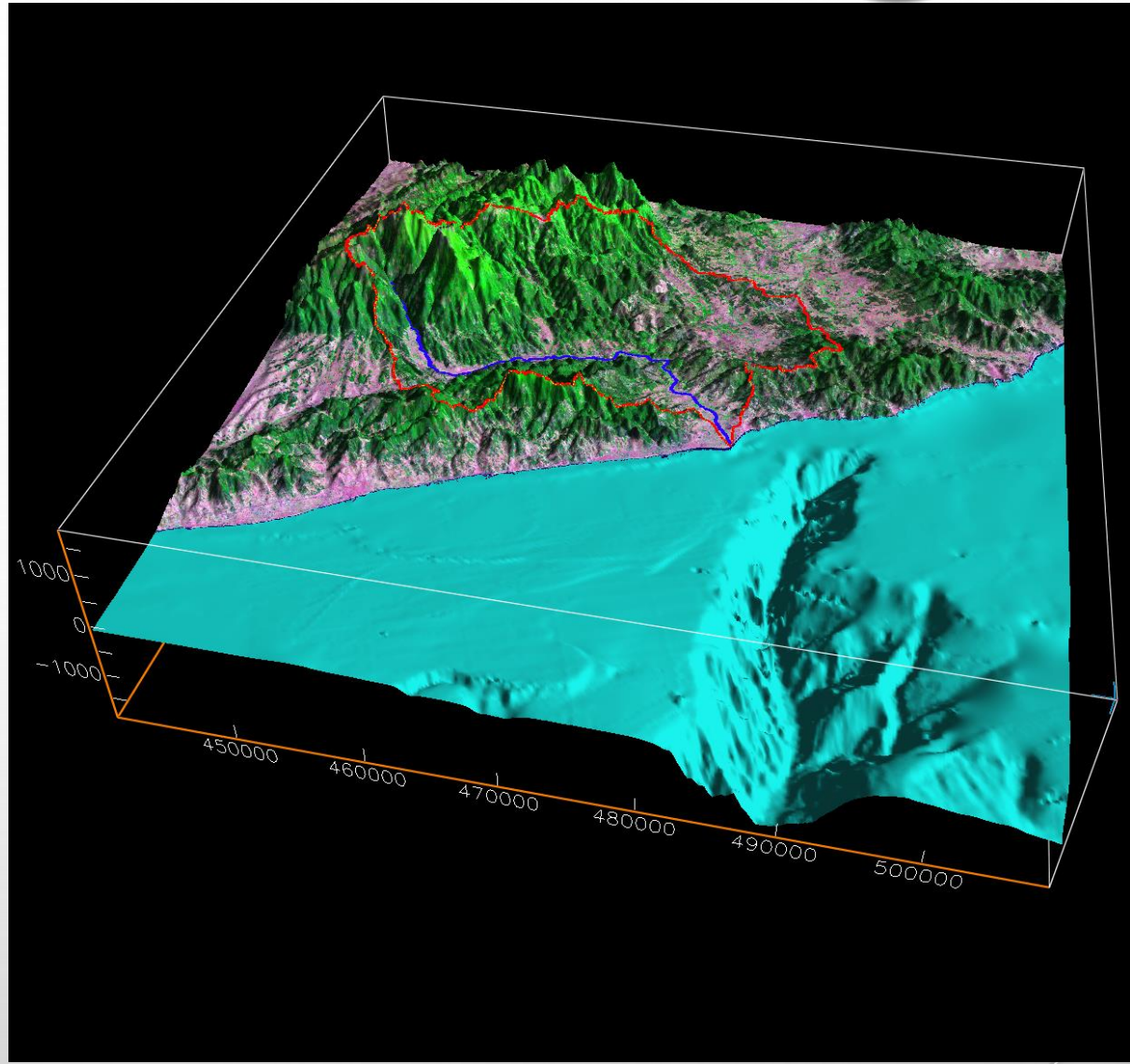
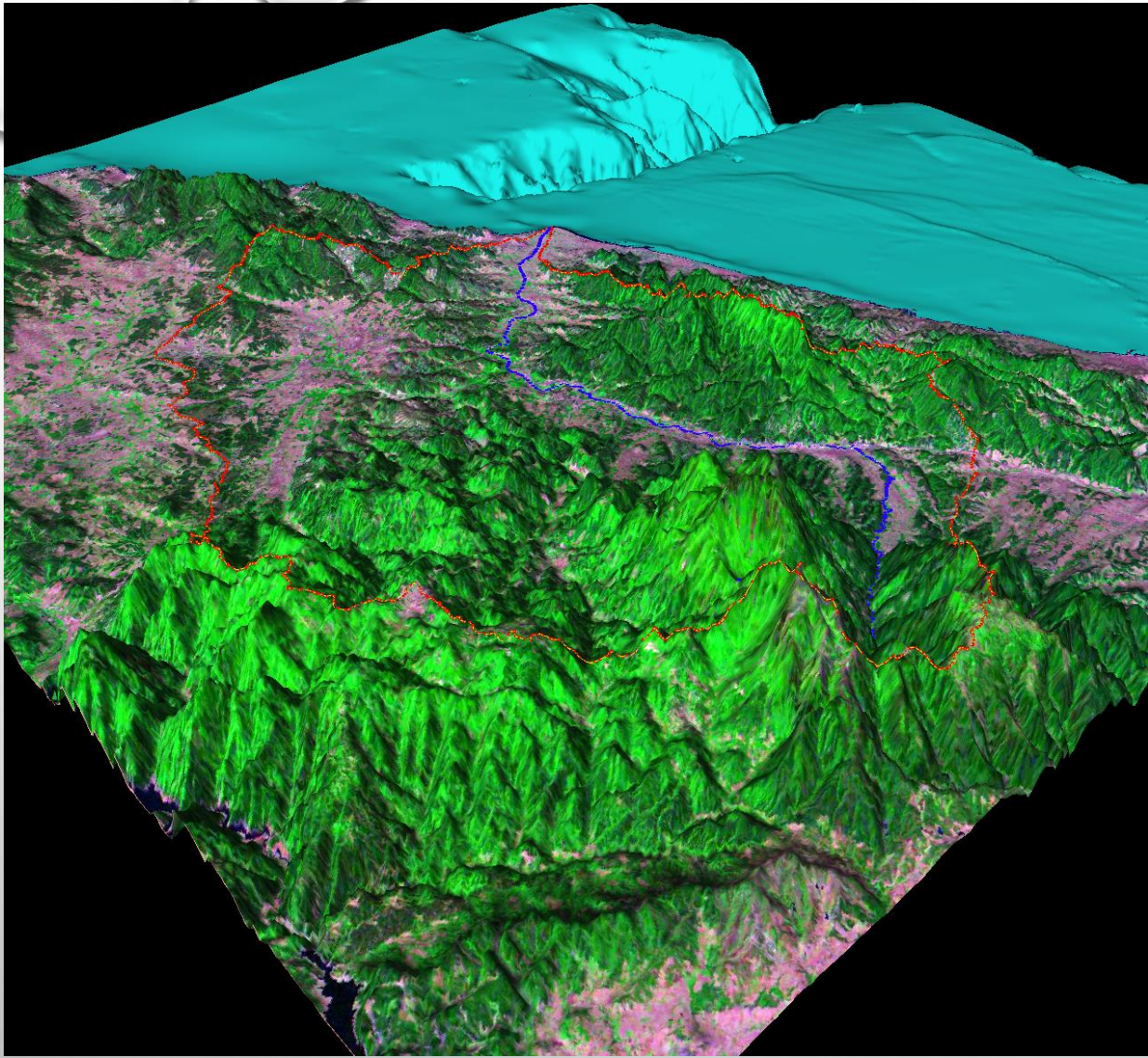


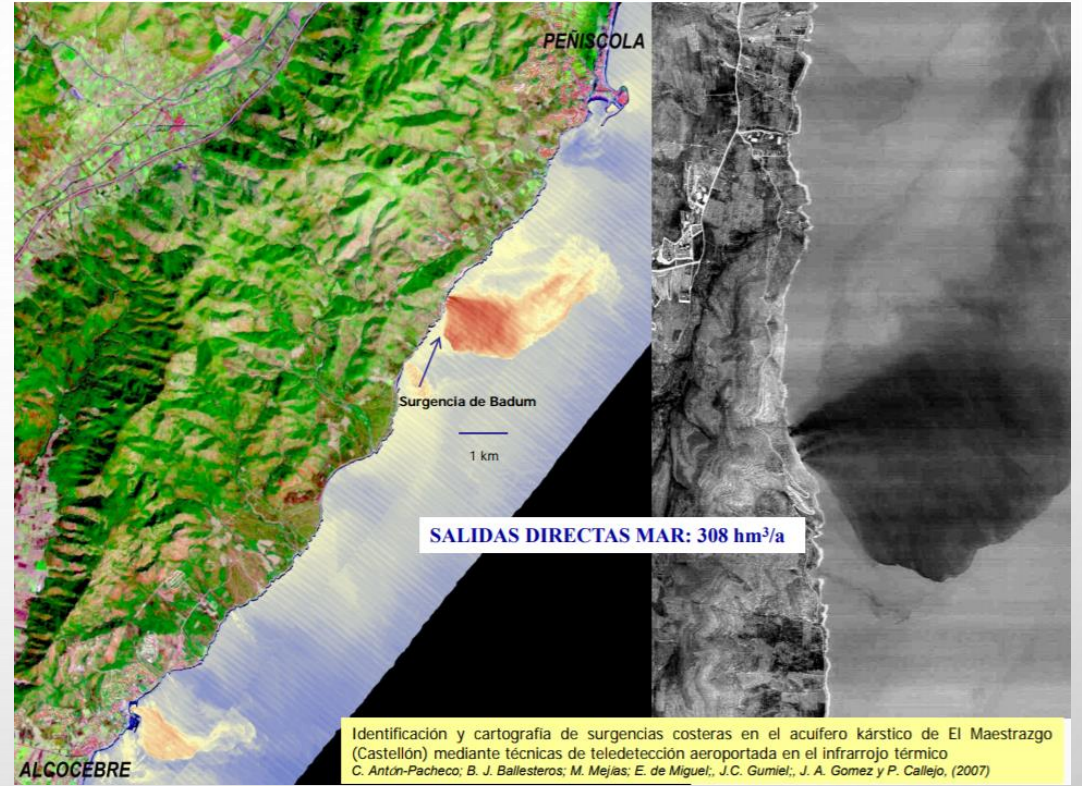
Diámetros de
50 Km y
velocidades
de 5 Km/day.













Masas de Agua Subterránea (PHJ 2015-2021)

Más datos...

Superficie total cuenca: 42.832 km²

Superficie acuíferos: 40.520 km²



- Un gran volumen de recursos subterráneos
- Intensa relación río-acuífero



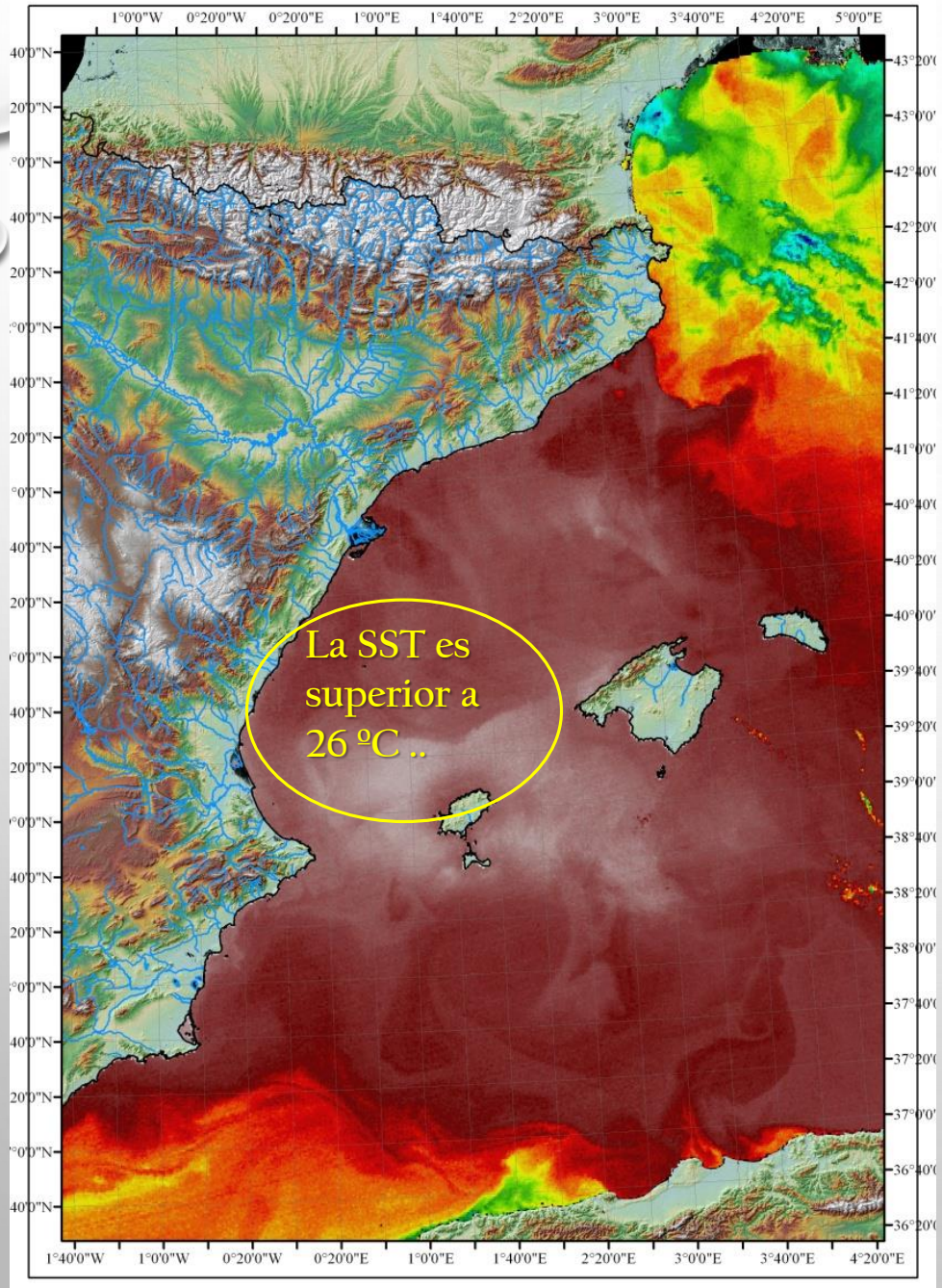
Recursos renovables: 3.432 hm³/a

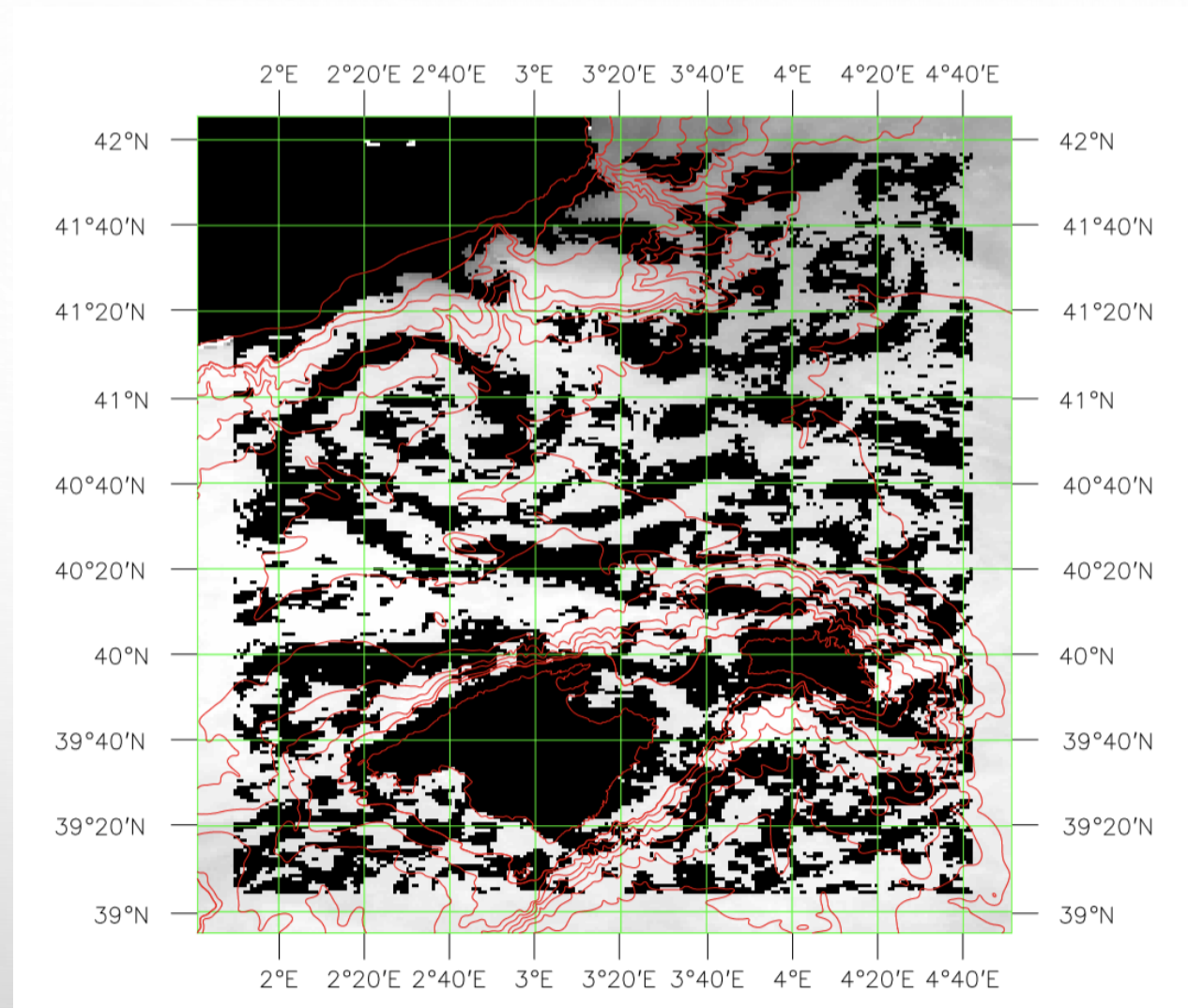
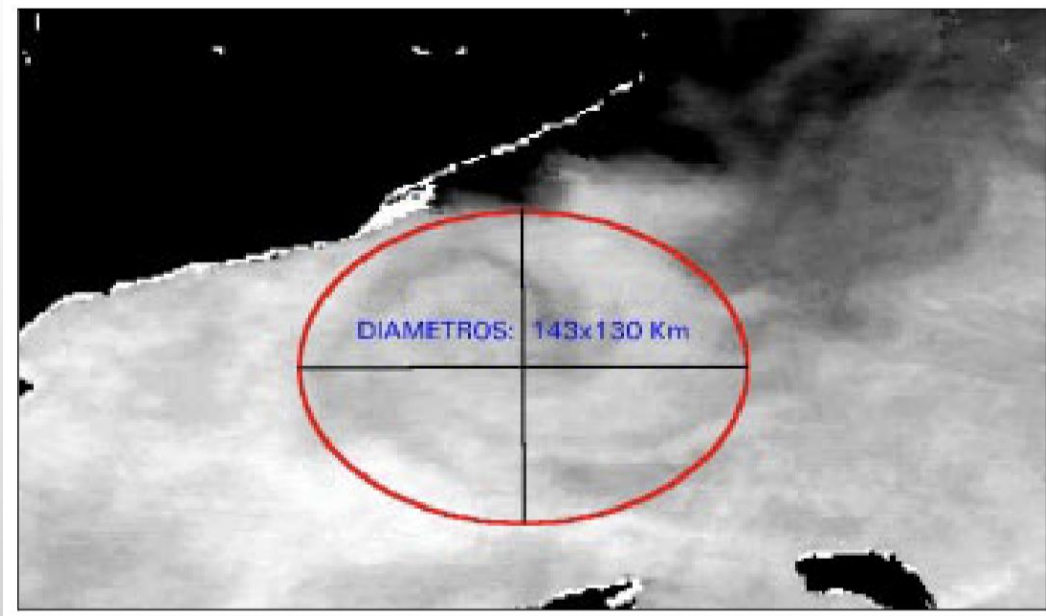
- 71 % aguas subterráneas: 2.437 hm³/a
- 29 % agua superficiales: 995 hm³/a

Recursos naturales actuales DHJ (1980/81-1911/12): 3.432 hm³/a

Recursos naturales en 2033 DHJ (-12 % cambio climático) : 3.020 hm³/a

Demandas actuales en la DHJ: 3.157 hm³/a (Déficit: 137 hm³/a en 2033)





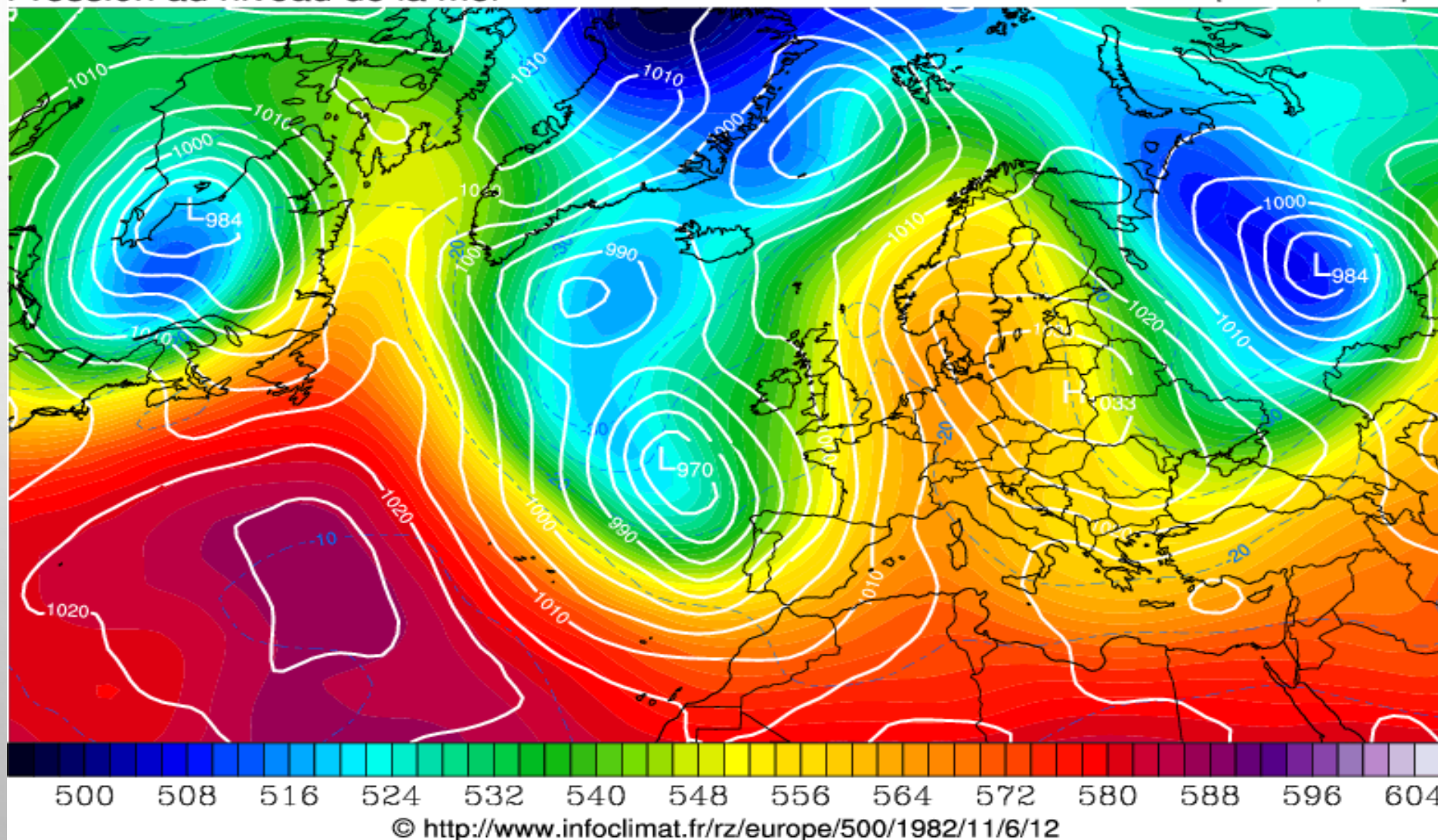


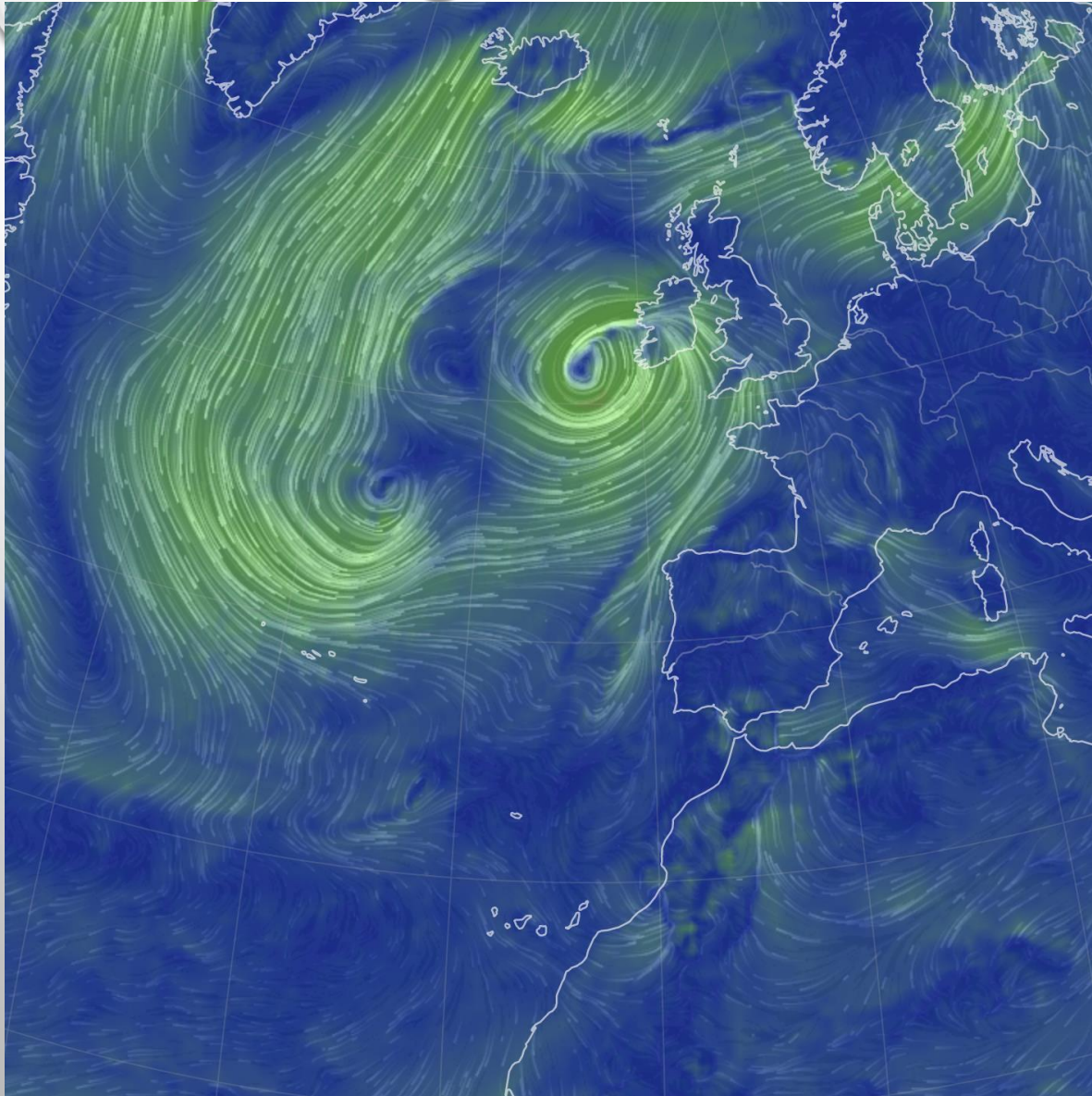
Géopotential à 500hPa
Température à 500hPa
Pression au niveau de la mer

gpdam

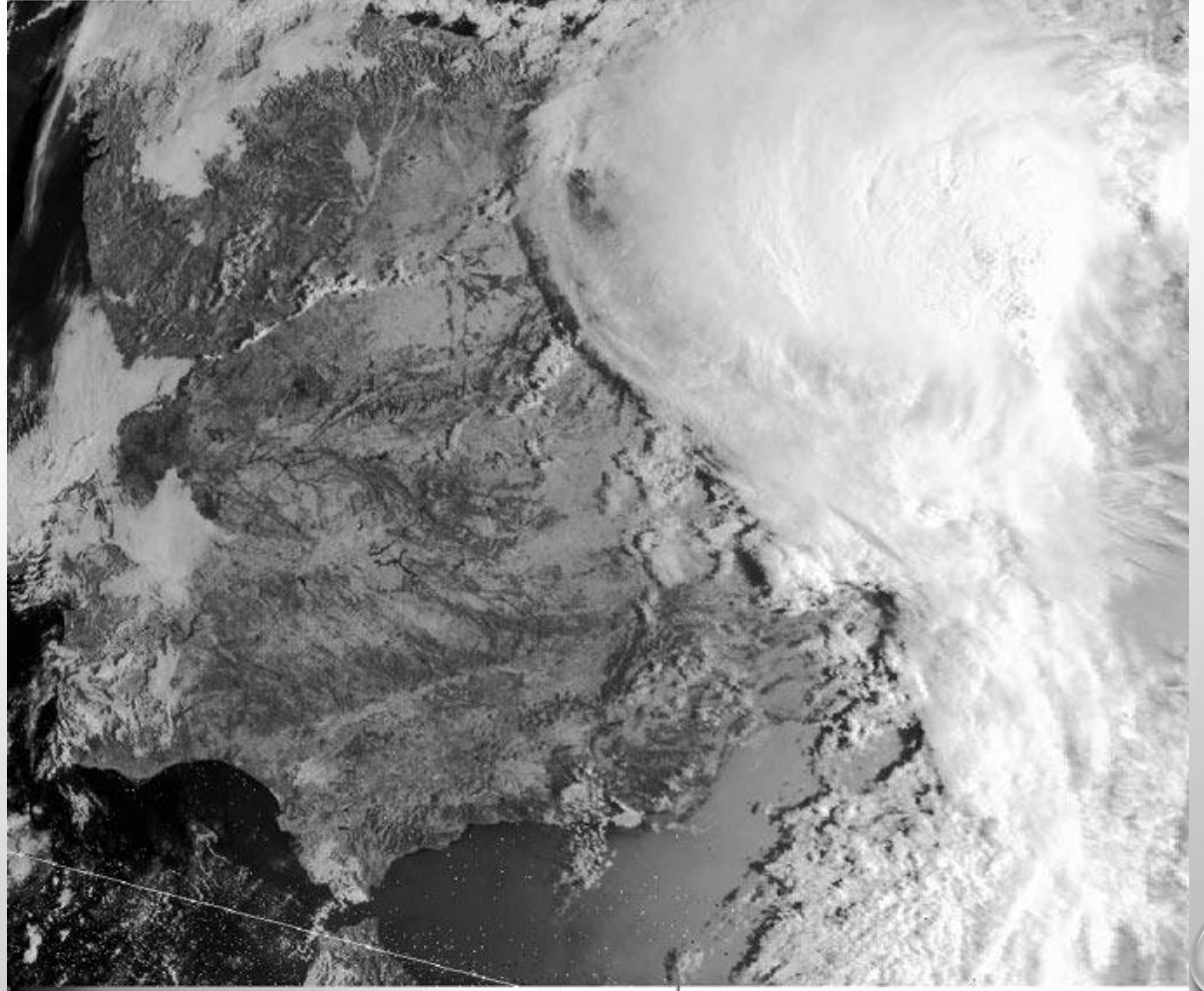
°C

[Max 1032.9 | Min 986.0] hPa



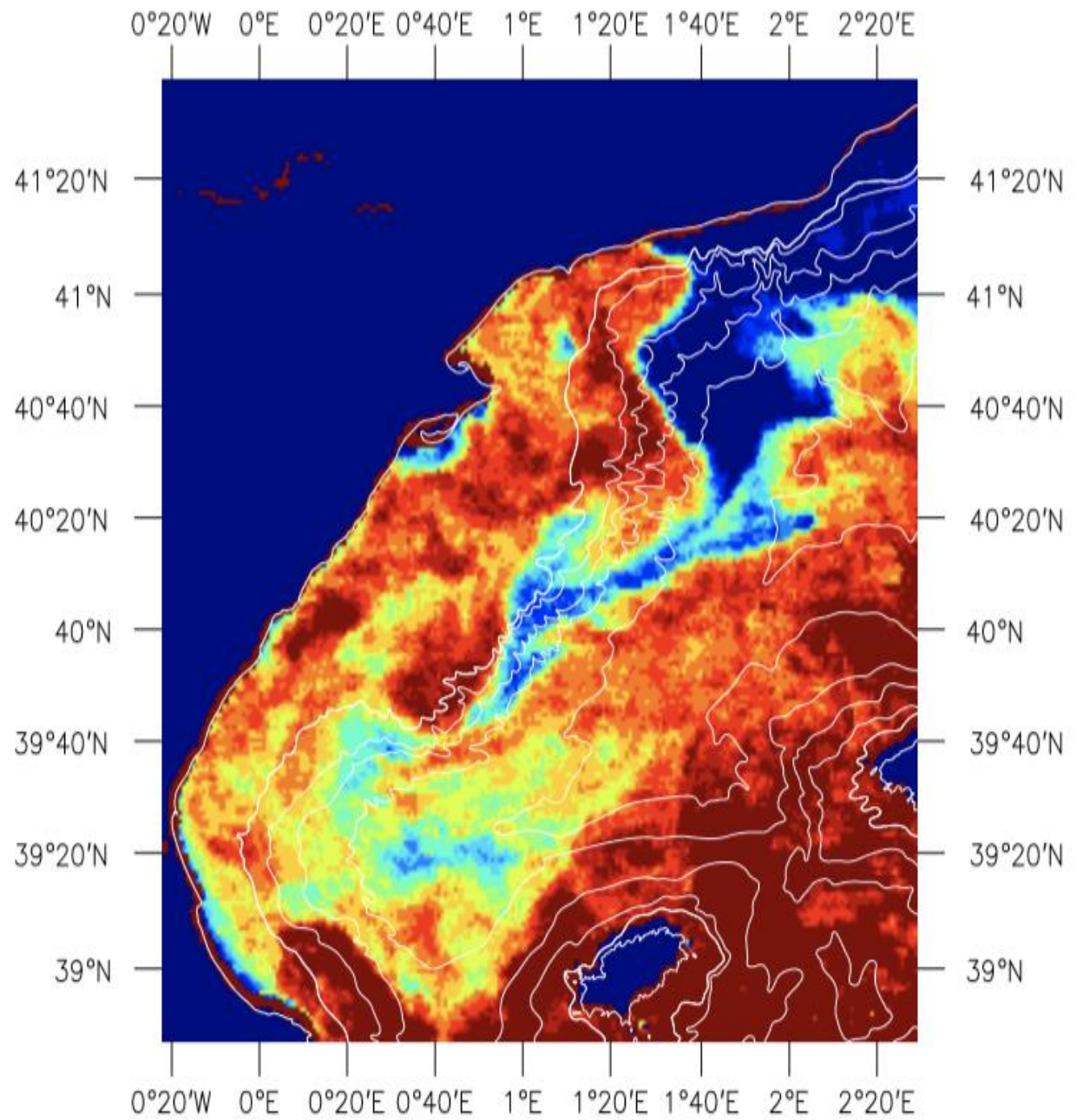
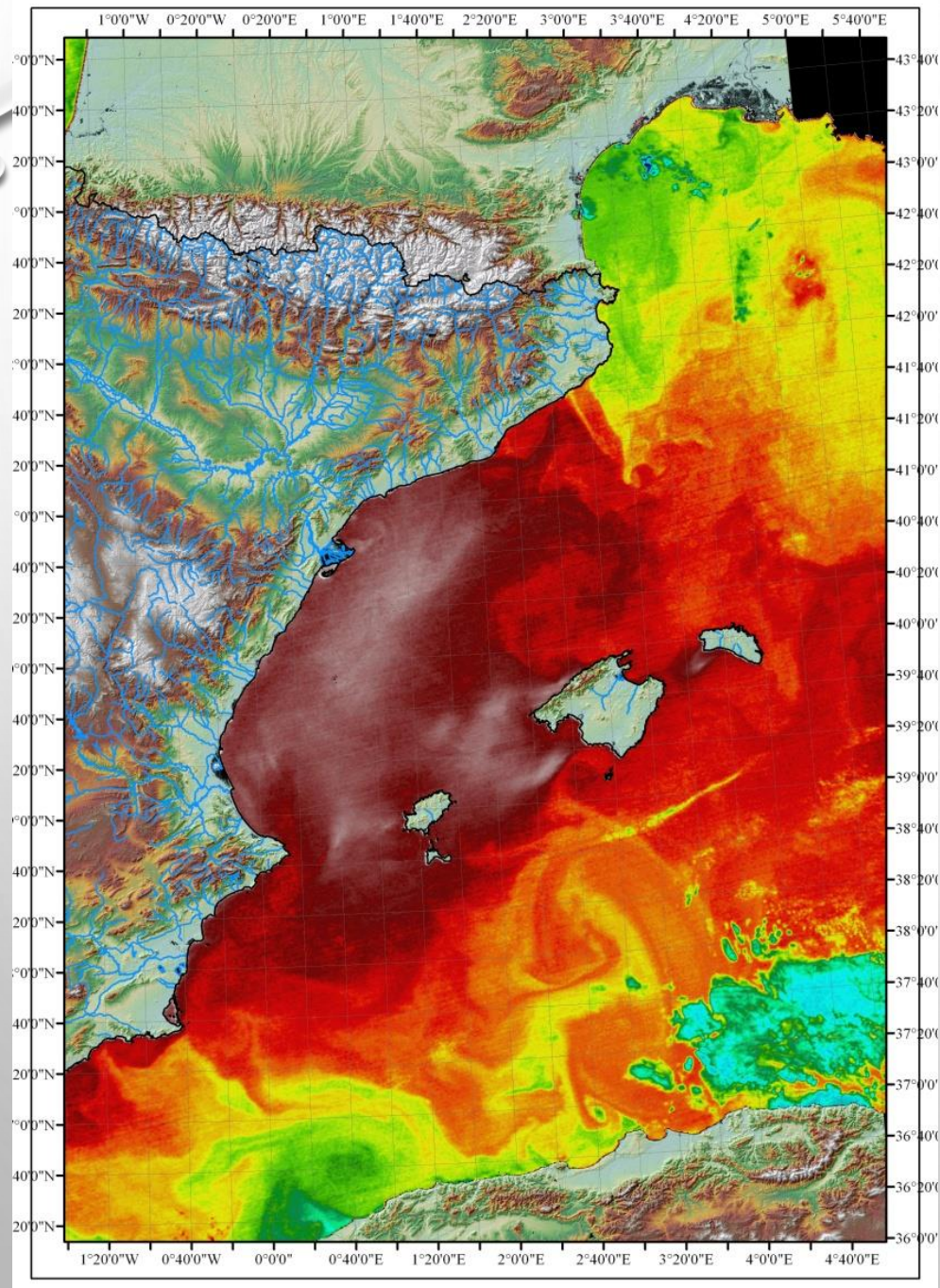


NOAA-15
orb:27339
030817
07:40:50
Channel:2
SunAzEl:94.45 27.42




Amin:00

Amax:58





Muchas gracias por su atención



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parnau@cimne.upc.edu

CIMNE^B
EXCELENCIA
SEVERO
OCHOA