

The Nature of the Transition in the California Current Ecosystem during the 1997-1998 El Niño Event

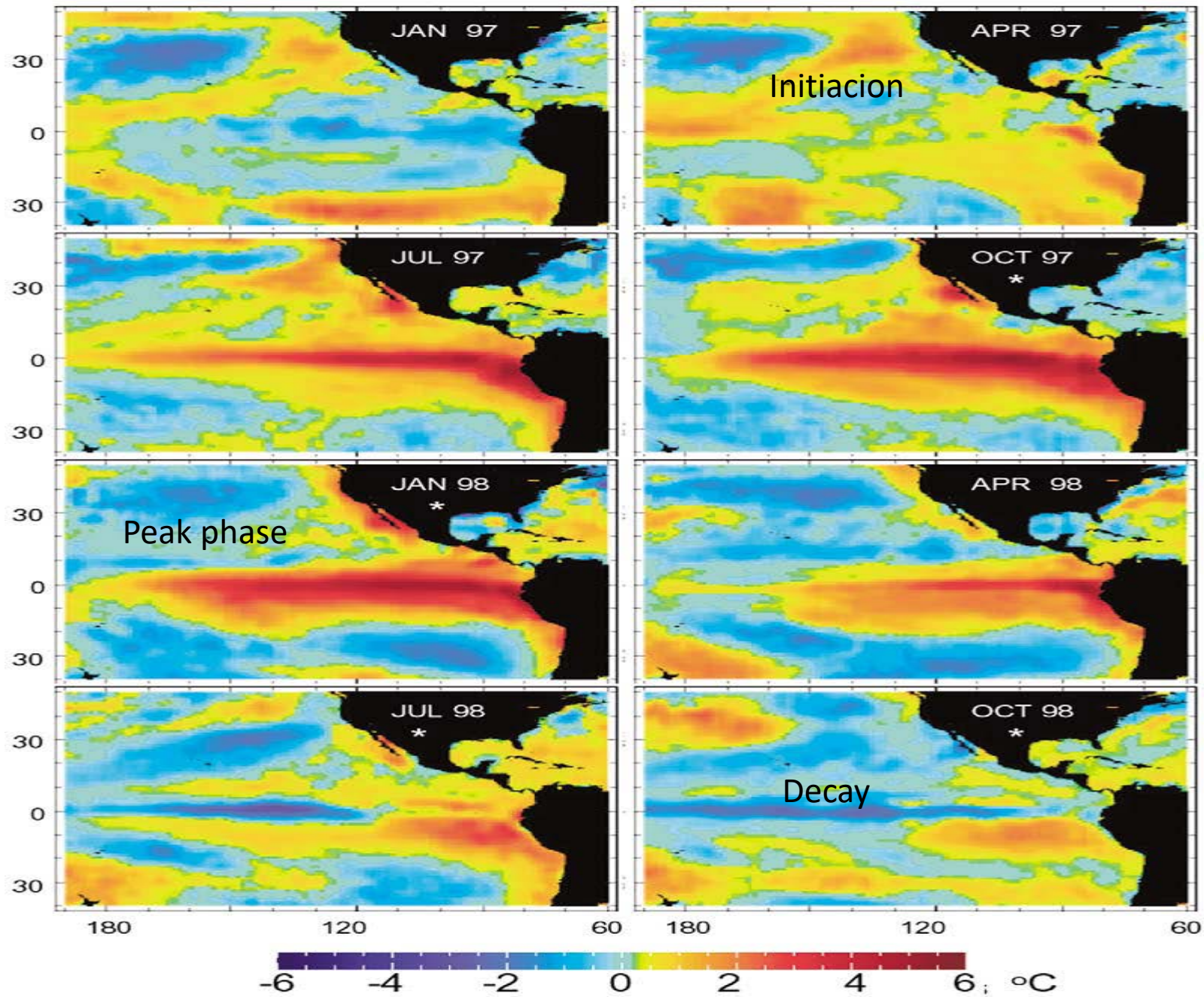
Tim Baumgartner¹ and Reginaldo Durazo²

1) Departamento de Oceanografía Biológica de CICESE, Ensenada,
Baja California México

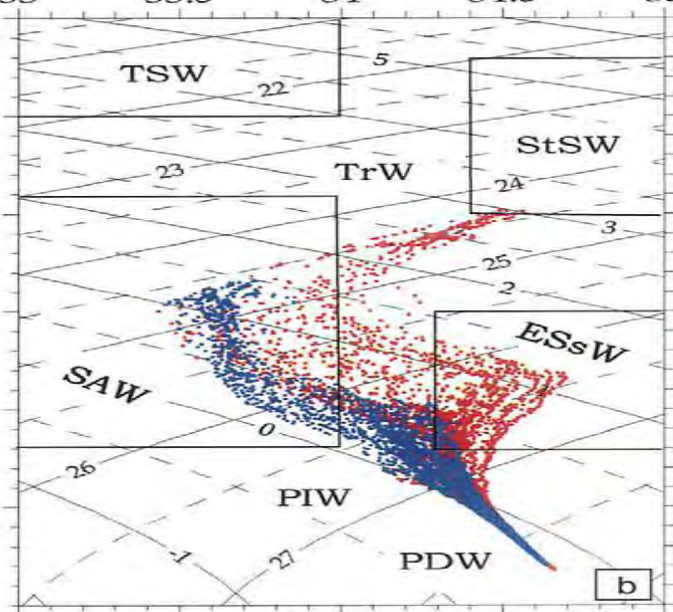
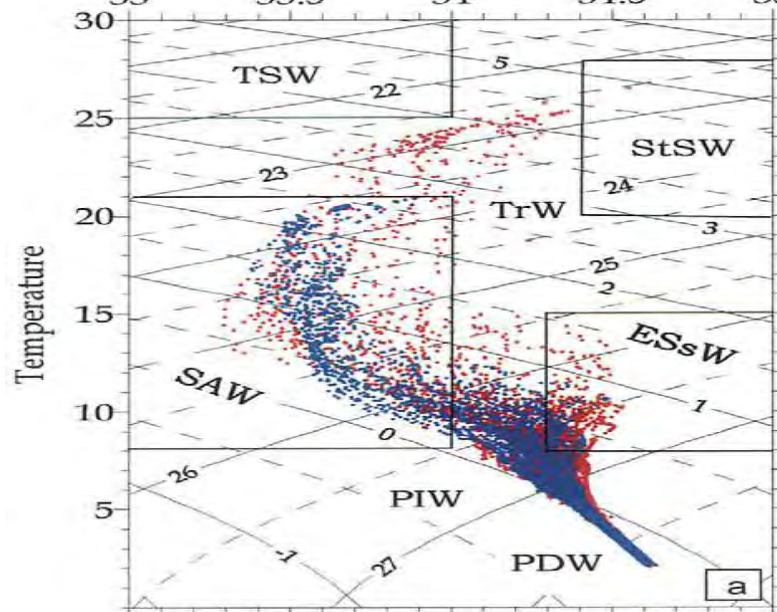
2) Facultad de Ciencias Marinas, UABC, Ensenada, Baja California México

PICES Symposium

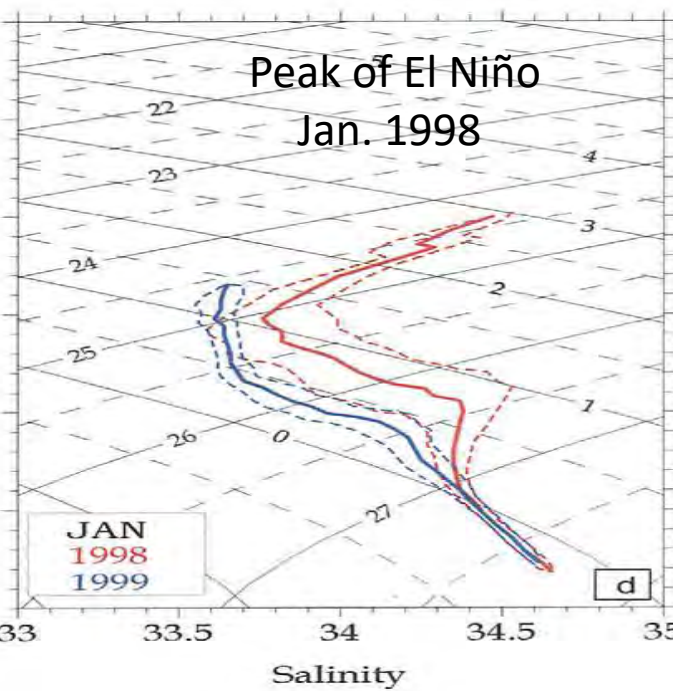
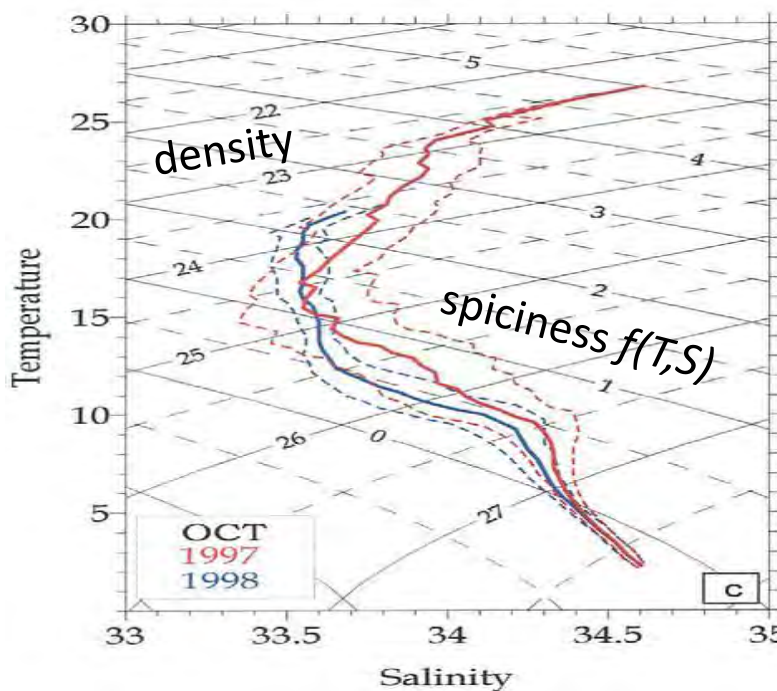
April 24, 2018



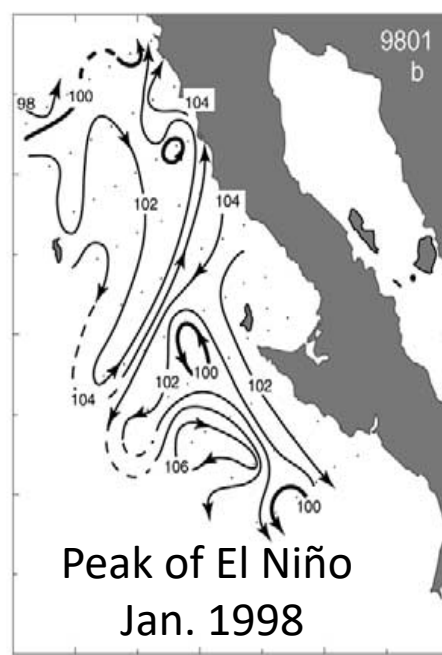
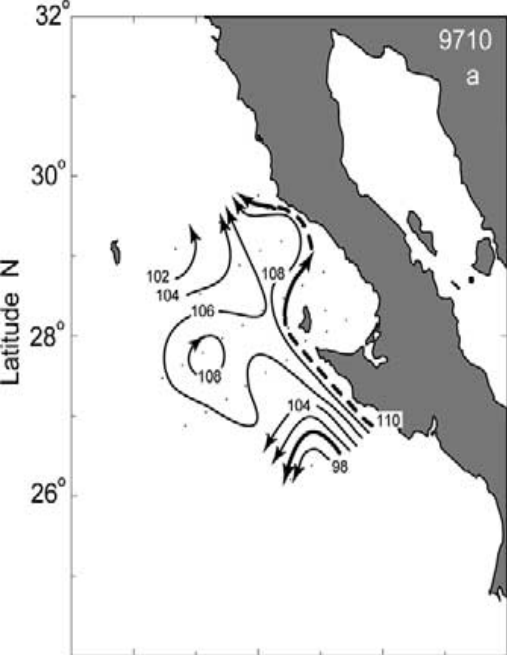
Evolution of the 1997-98 El Niño (Monthly SST anomalies)



- TSW**: Tropical Surface Water
- StSW**: Subtropical Surface Water
- TrW**: Transitional Water
- SAW**: Subarctic Water (CC)
- ESsW**: Equatorial Subsurface Water (CU)
- PIW**: Pacific Intermediate Water
- PDW**: Pacific Deep Water

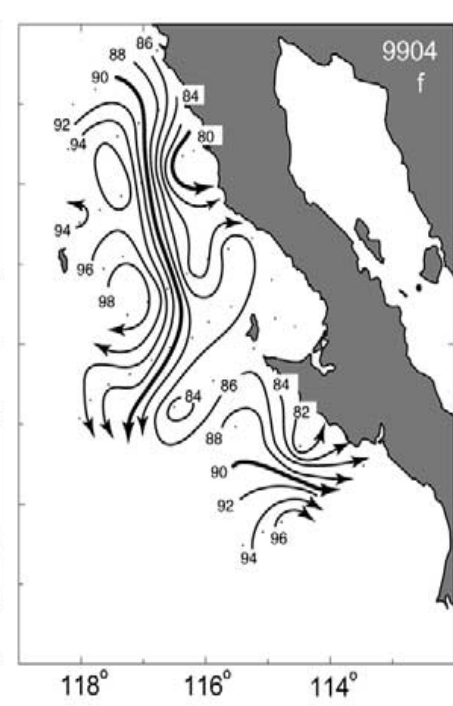
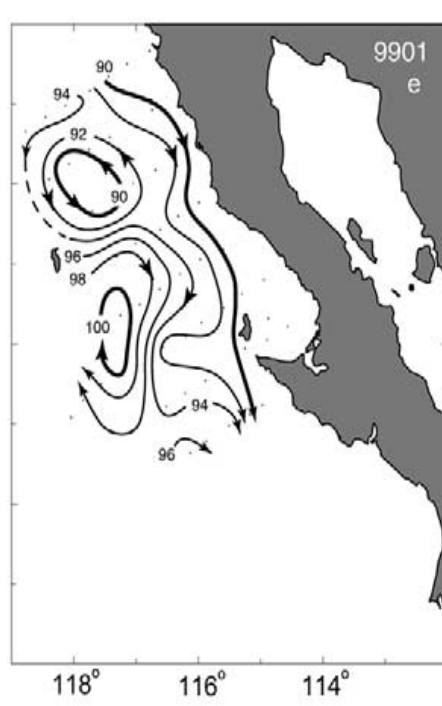
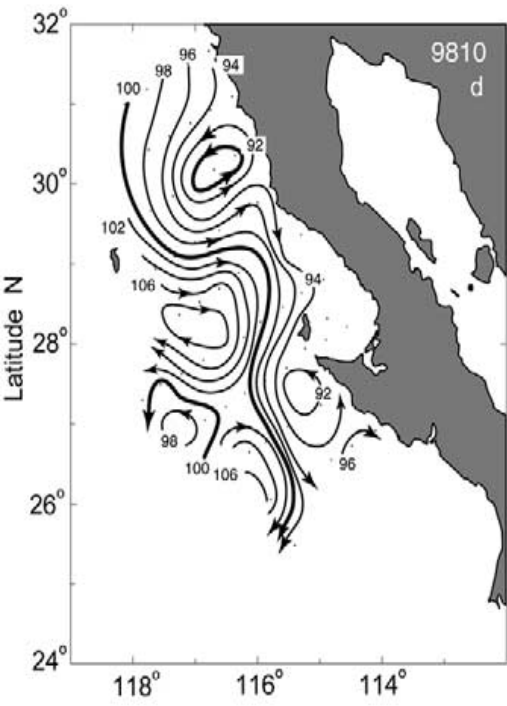
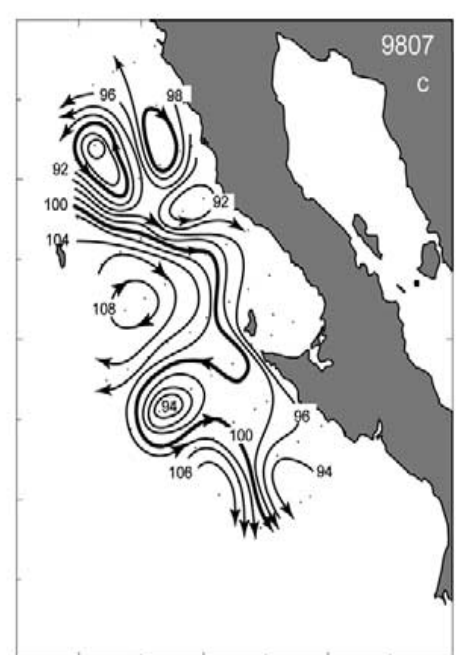


Conditions from mature El Niño (Oct. 1997) through development of La Niña (Jan. 1999)



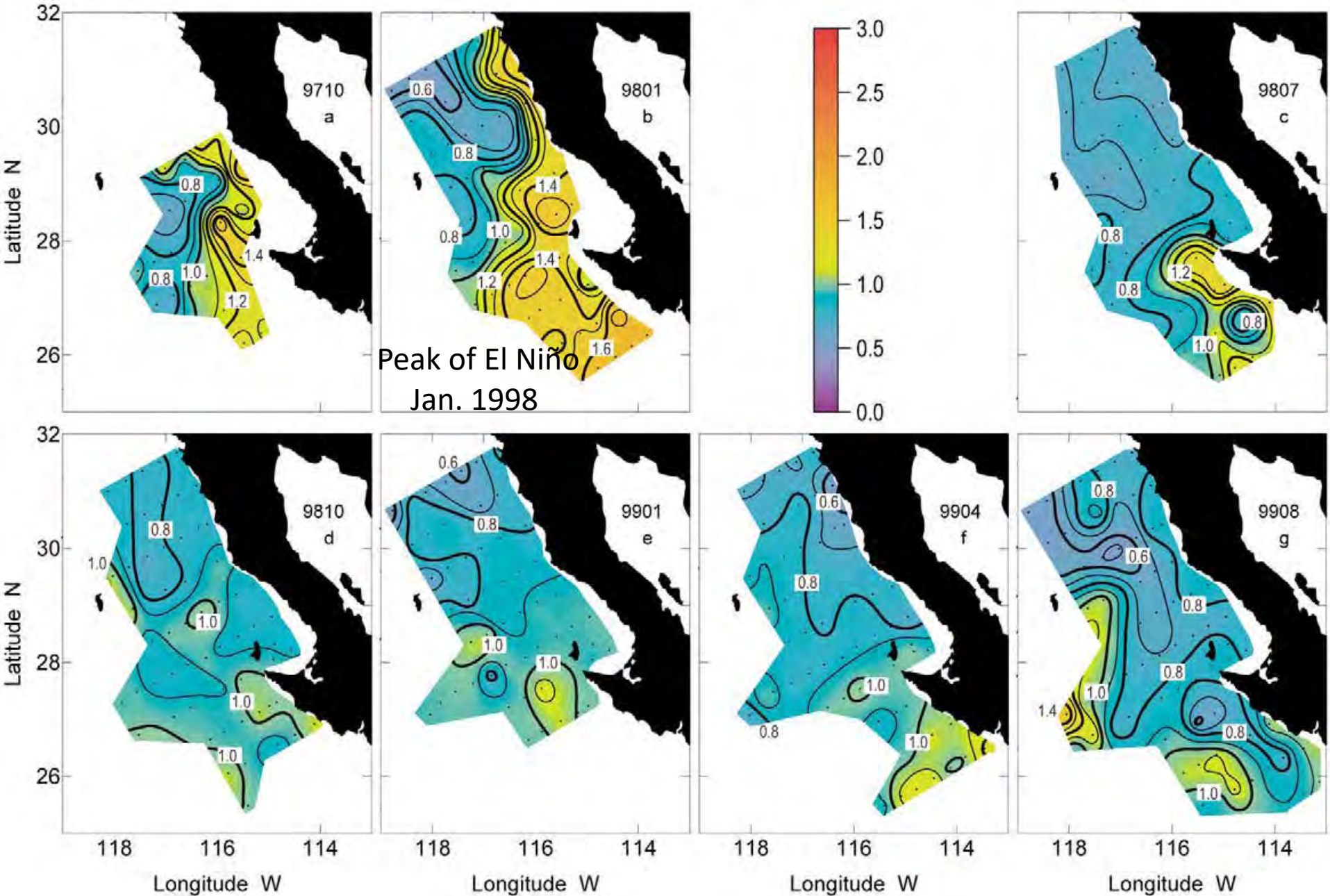
Direction of near-surface flow (0/500db) shown by dynamic heights

Peak of El Niño
Jan. 1998

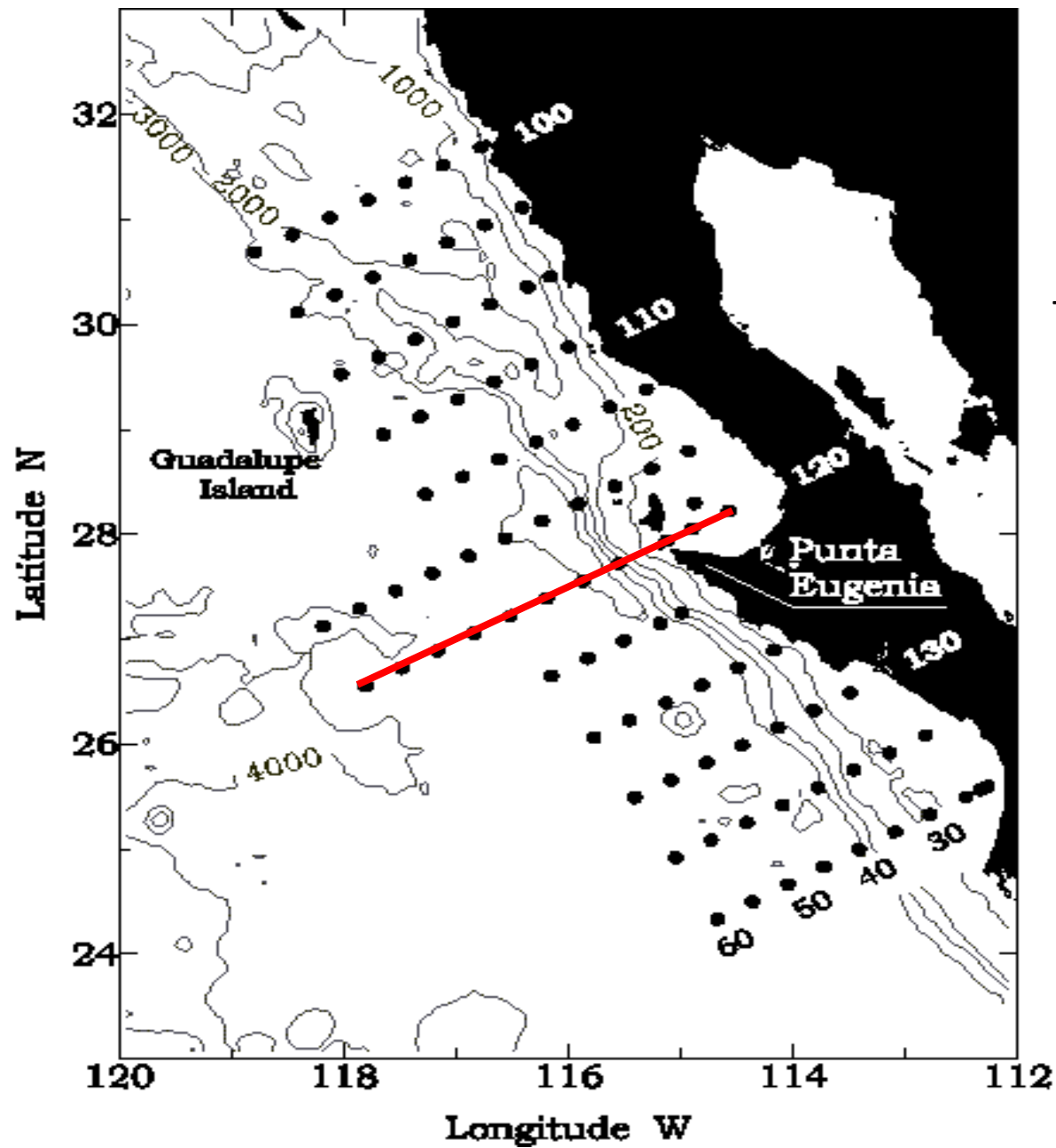


Beginning of La Niña
Aug. 1999

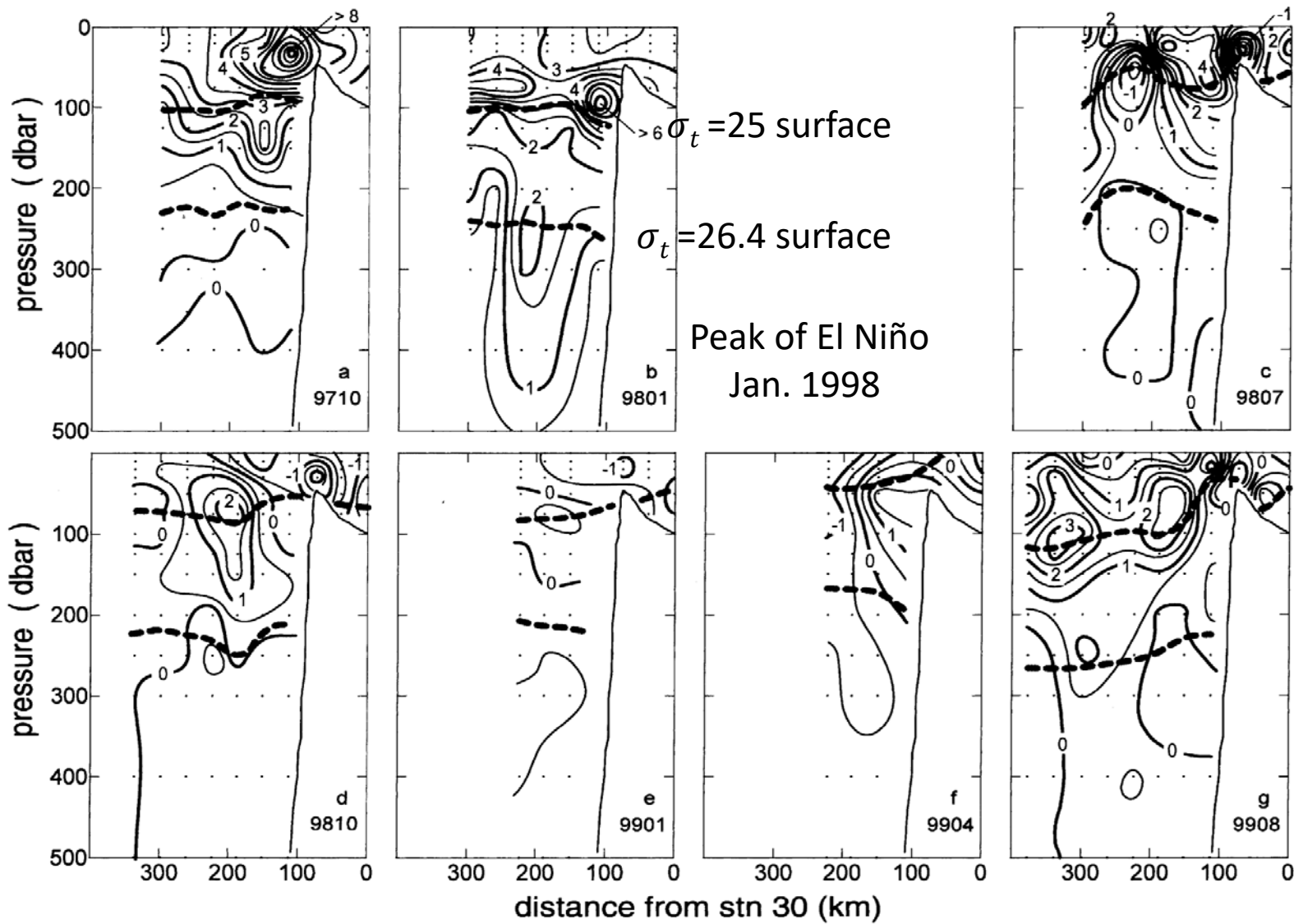
Longitude W



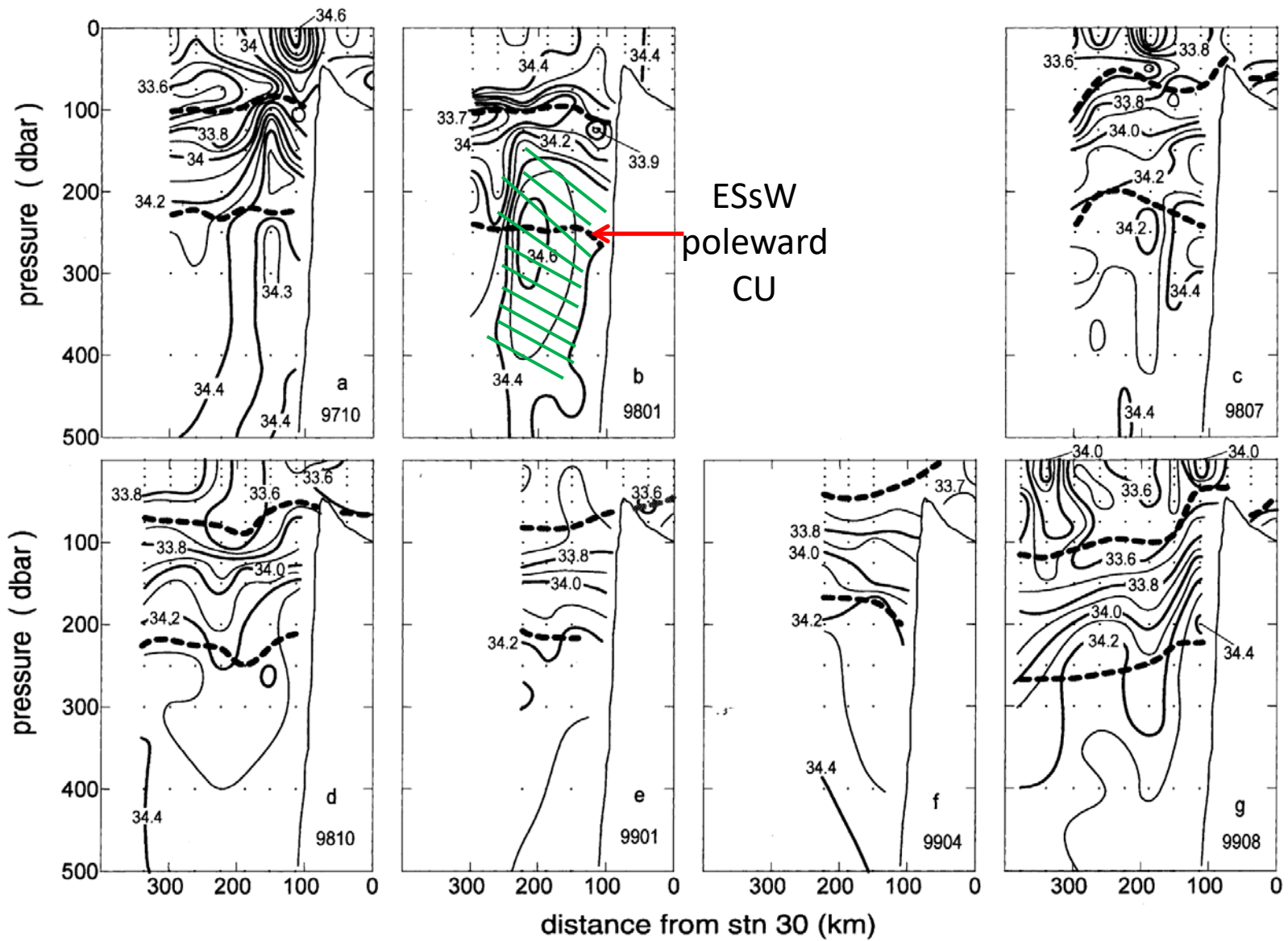
Distribution of spiciness along the $\sigma_t = 25$ surface ($\leq 100\text{m}$)



Location of
T, S sections and their
anomalies
along IMECOAL
line 120



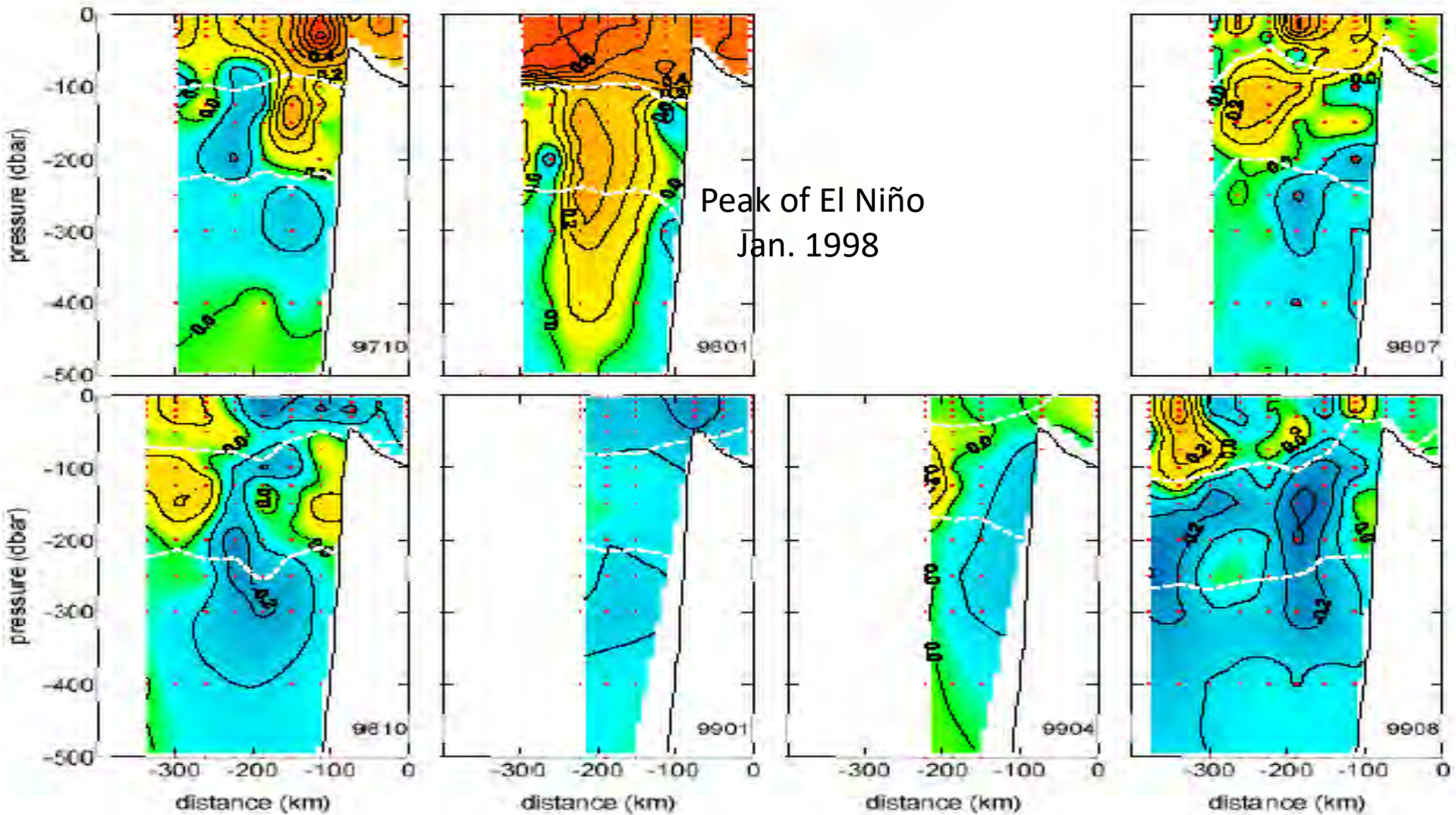
Temperature anomalies computed for the section along line 120
 Contour interval is 0.5 °C. Anomalies were calculated using mean temperatures for the
 period 1951–1979

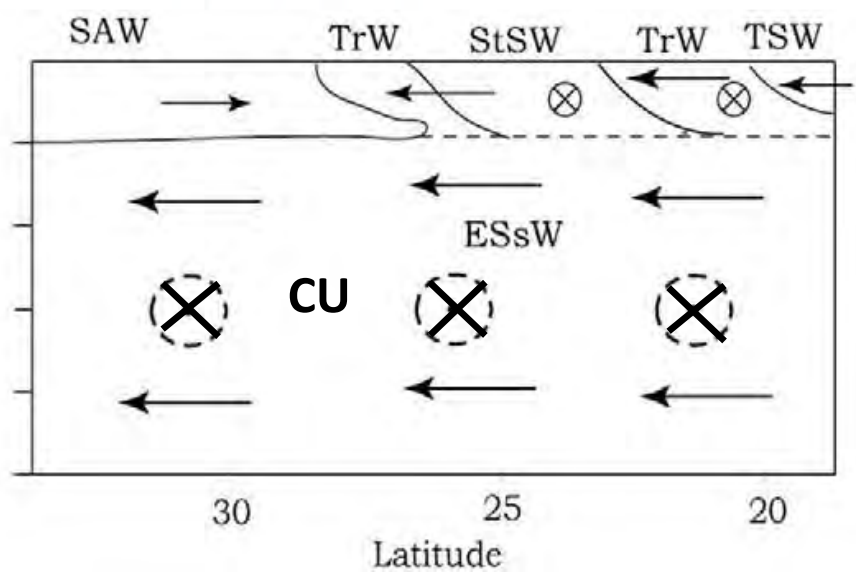
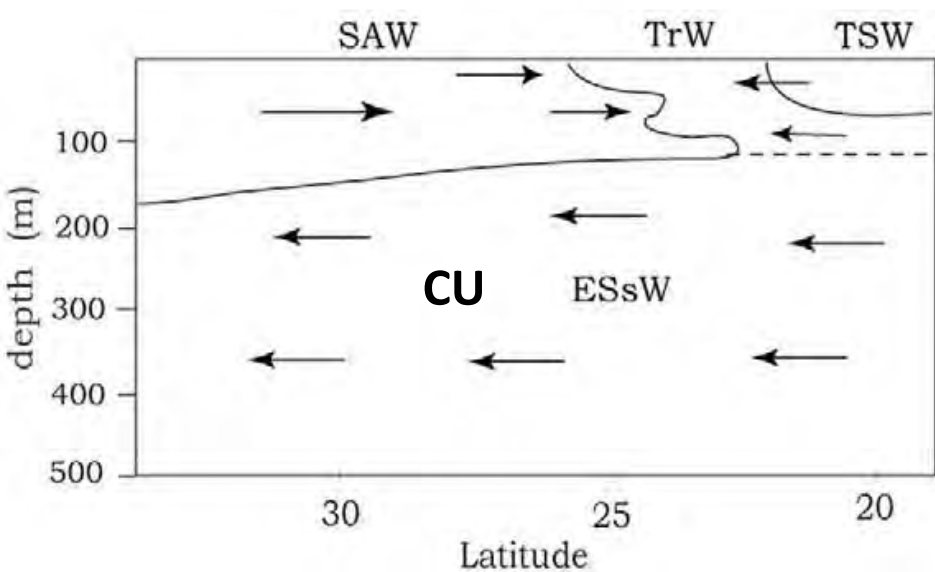
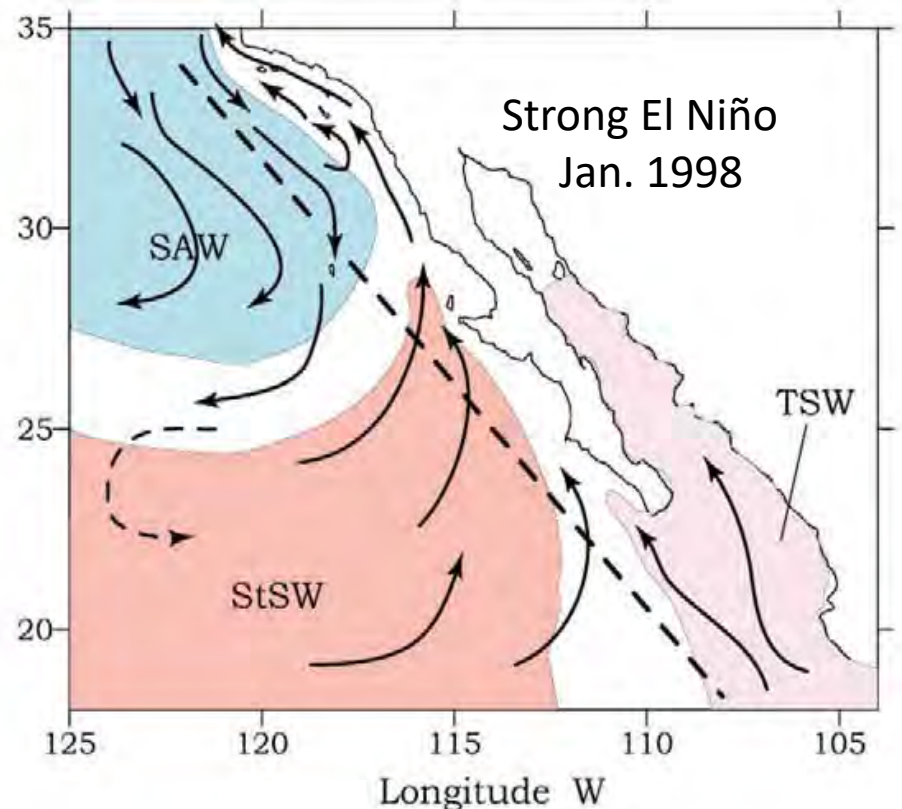
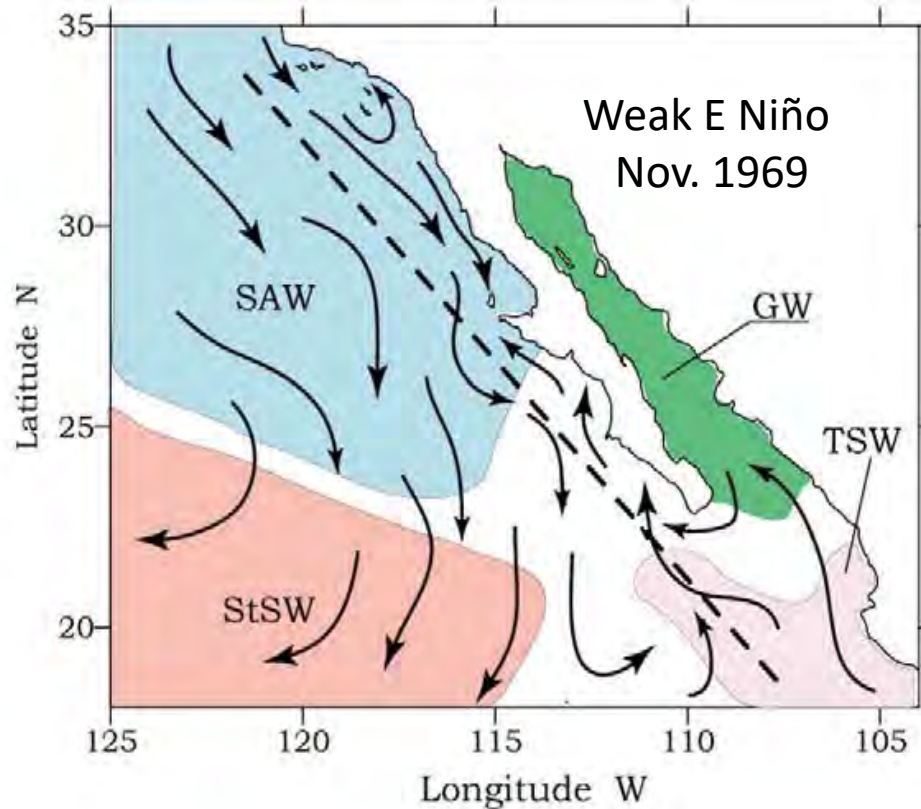


Salinity section along line 120

Contour interval is 0.1.

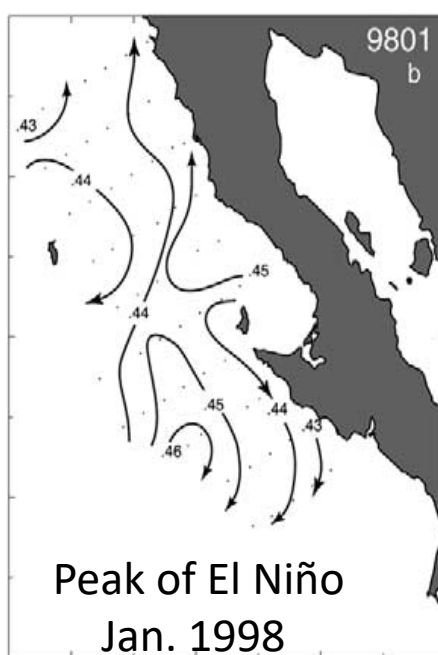
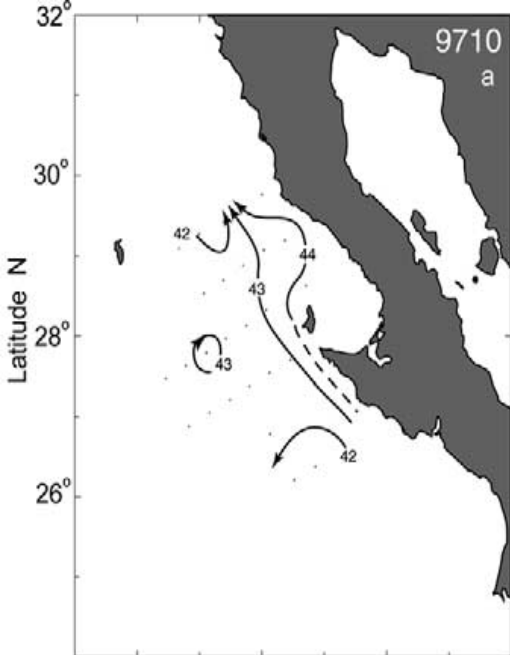
Evolution of the salinity anomalies in October 1997 – August 1999: Expansion-Contraction of the California Undercurrent





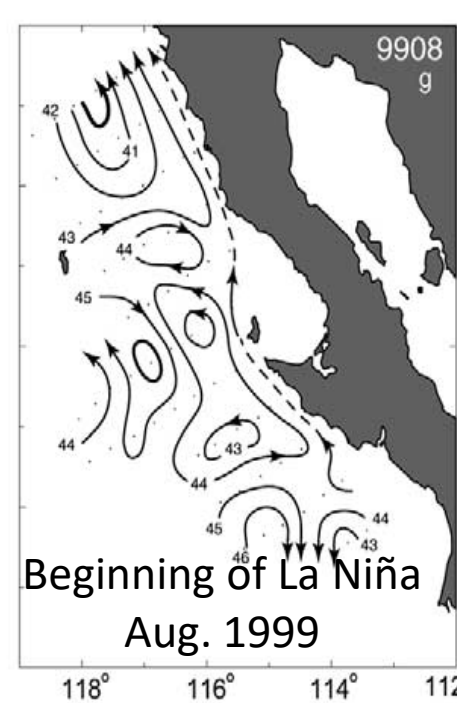
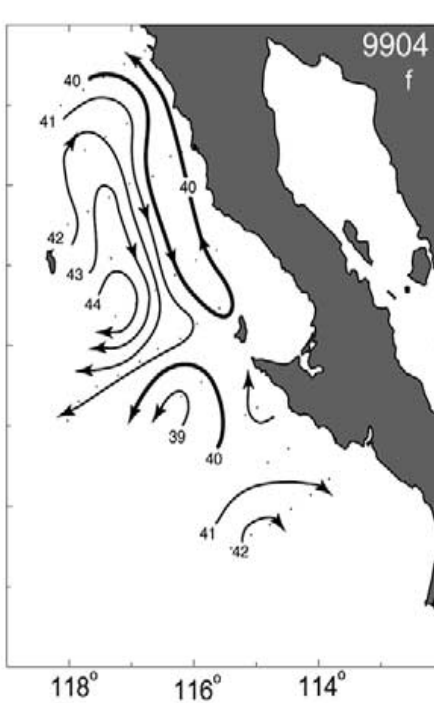
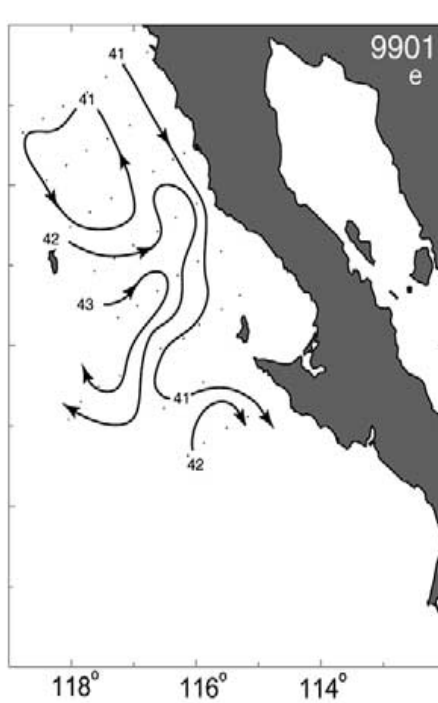
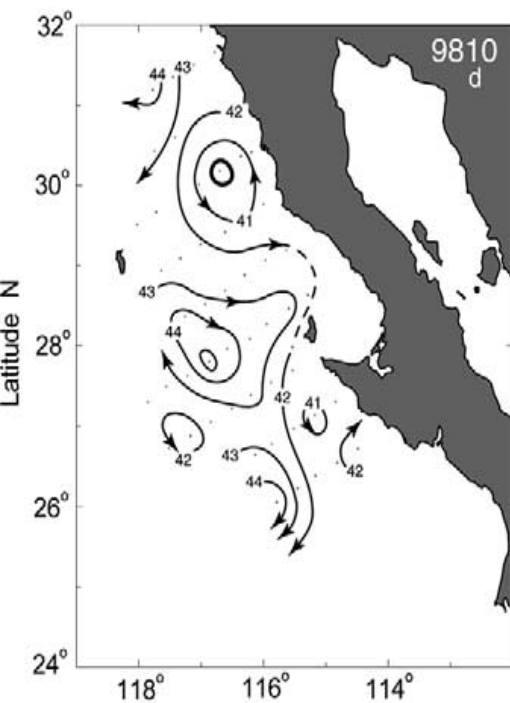
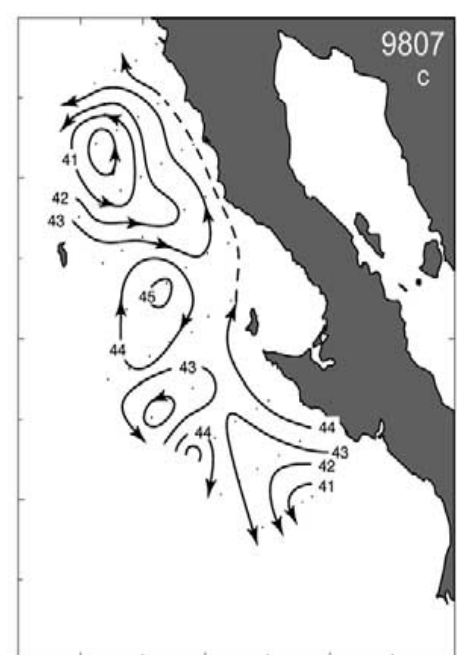
Evolution of oceanographic conditions off Baja California: 1997-1999
R. Durazo and T. R. Baumgartner, Progress in Oceanography 54 (2002) 7-31.





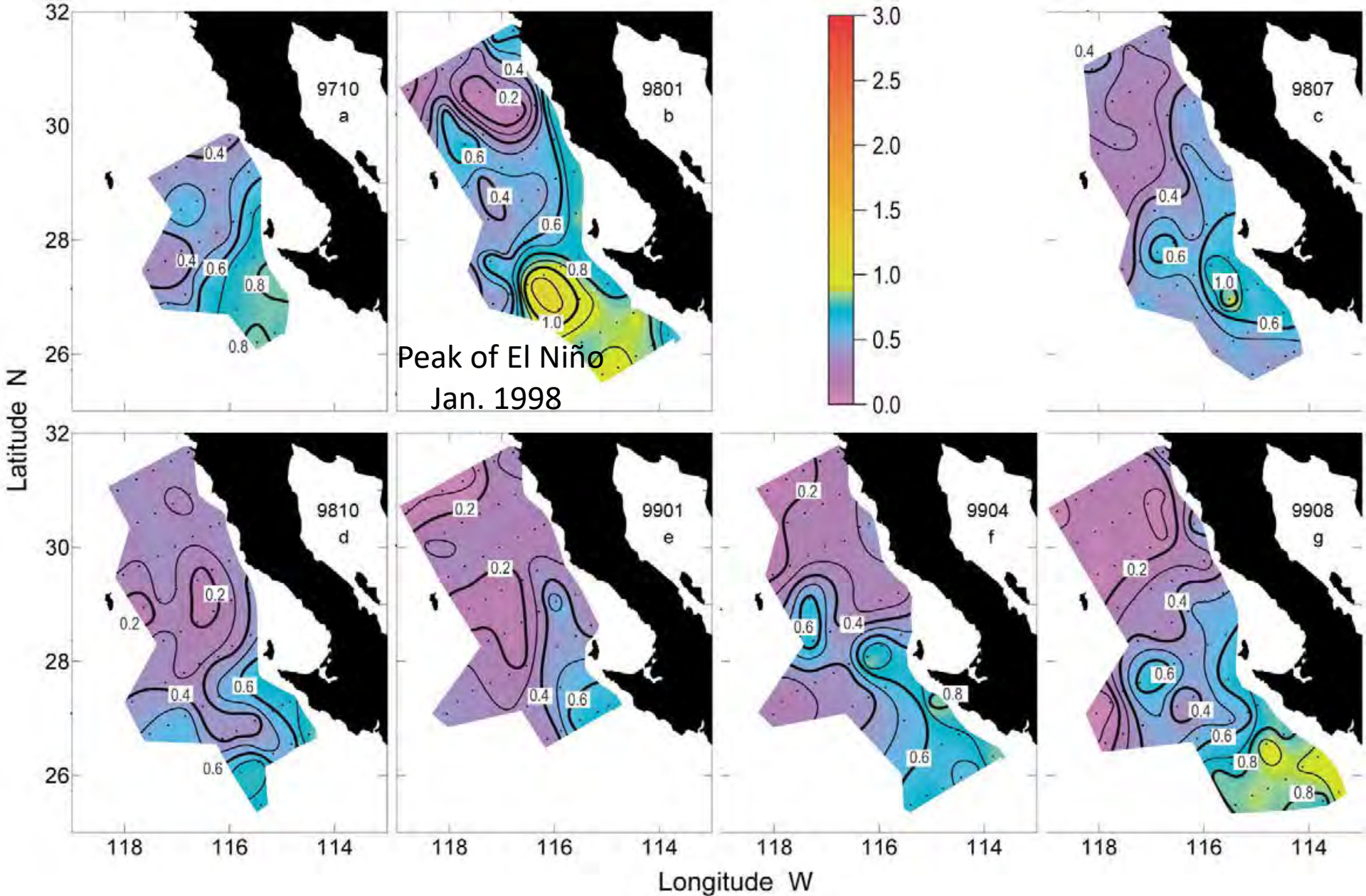
Peak of El Niño
Jan. 1998

Direction of flow
at 200 m (200/500db)
shown by dynamic
heights

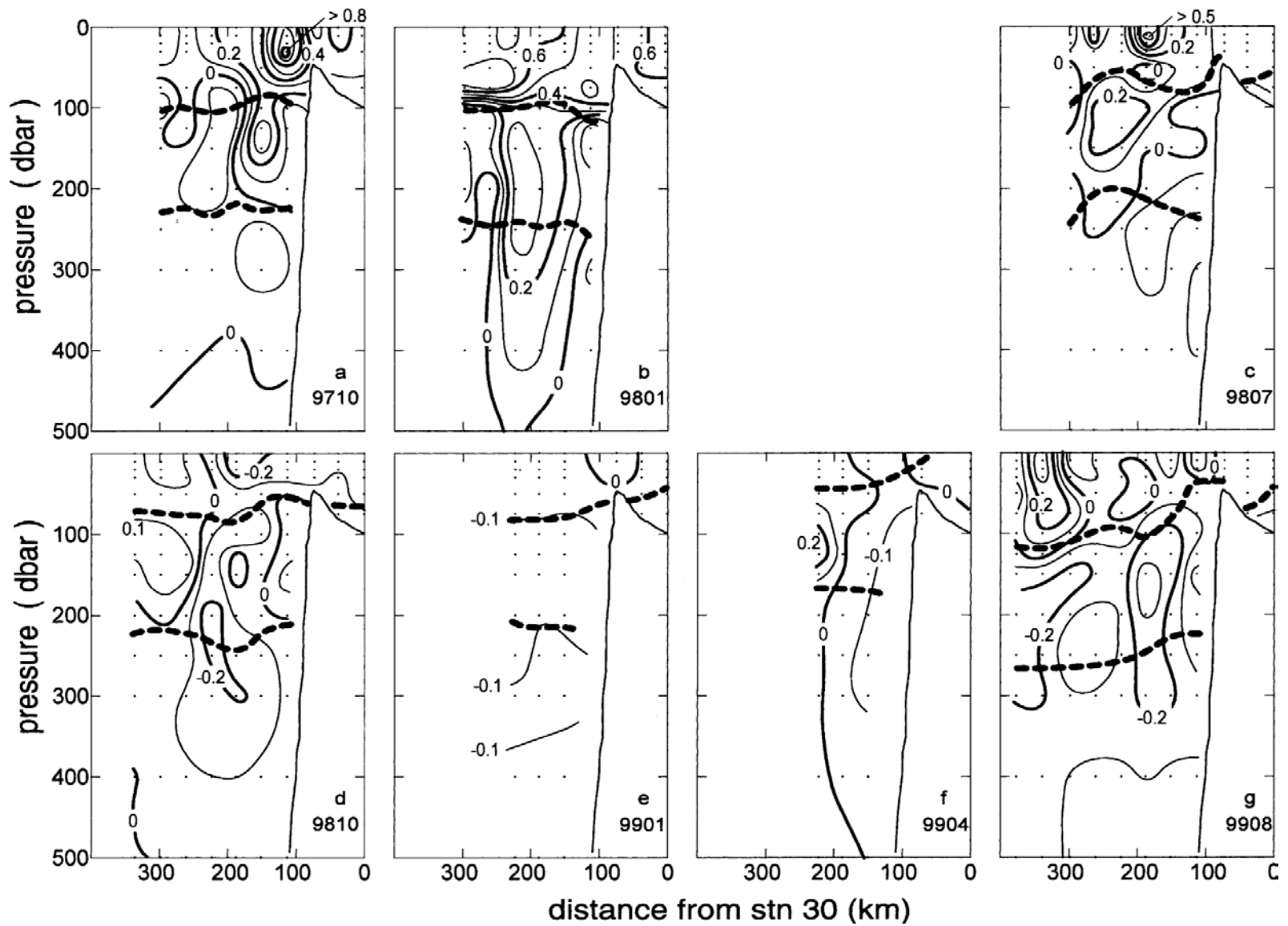


Beginning of La Niña
Aug. 1999

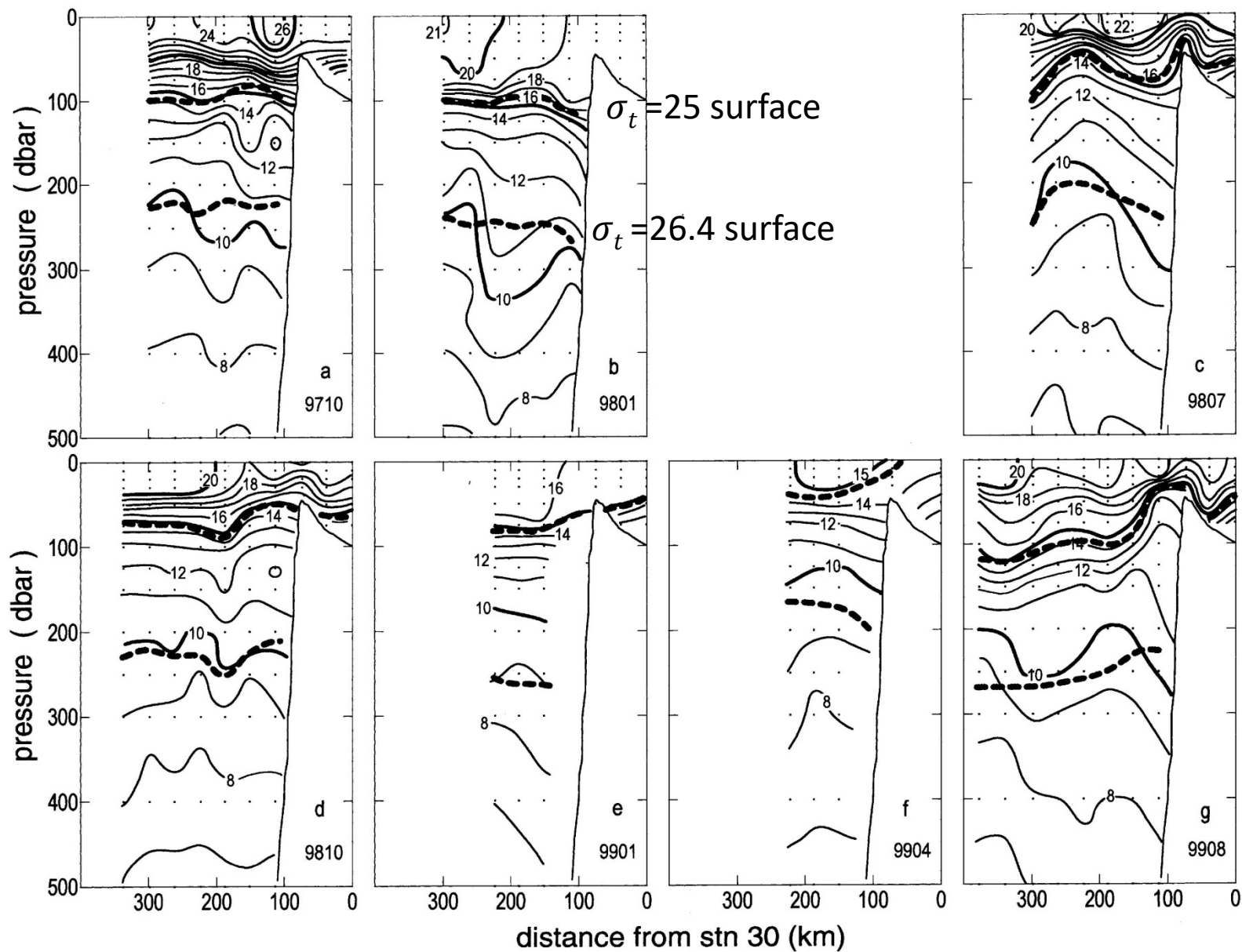
Longitude W



Flow along the $\sigma_t = 26.4$ surface (~ 250 m)



Salinity anomalies computed for the section along line 120
 Contour interval is 0.1



Temperature section along line 120

Contour interval is 1 °C

Normal Years

