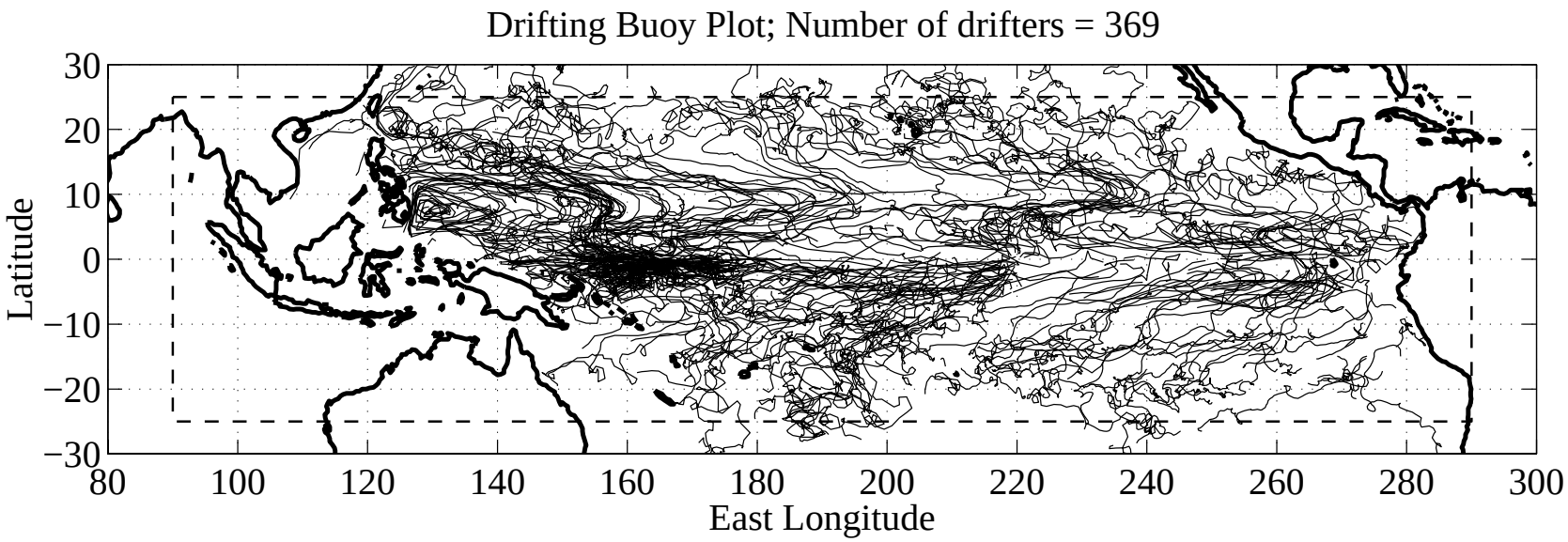

Drifting Buoy Plot; Number of drifters = 369
Latitude
East Longitude
30
20
10
0
−10
−20
−30
80
100
120
140
160
180
200
220
240
260
280
300

Figure 1:

Figure 2.

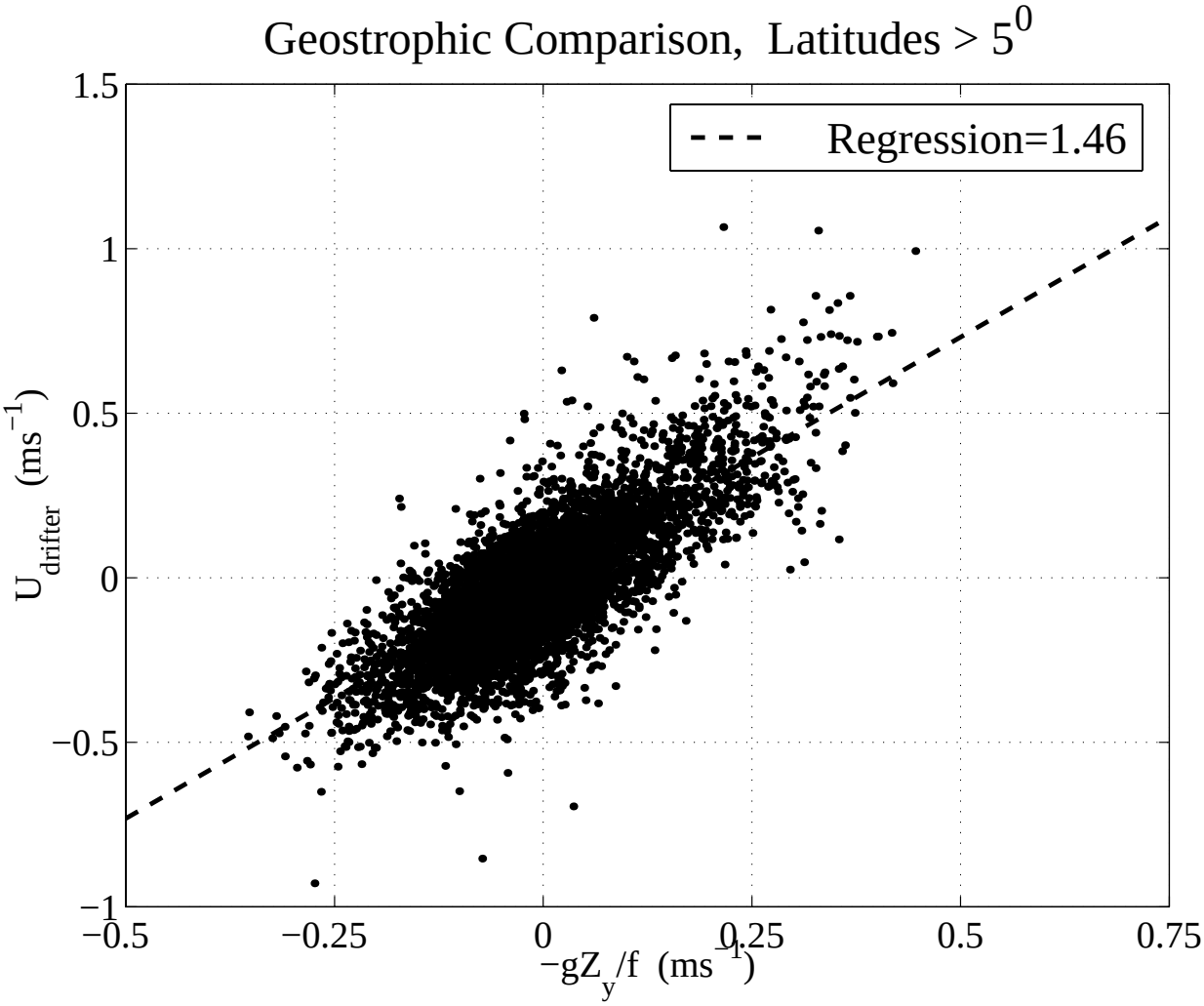

Geostrophic Comparison, Latitudes > 5^0
Regression=1.46
1.5
1
0.5
0
−0.5
−1
−0.5
−0.25
0
0.25
0.5
0.75
U_drifter (ms^−1)
−gZ_y/f (ms^−1)

Figure 3

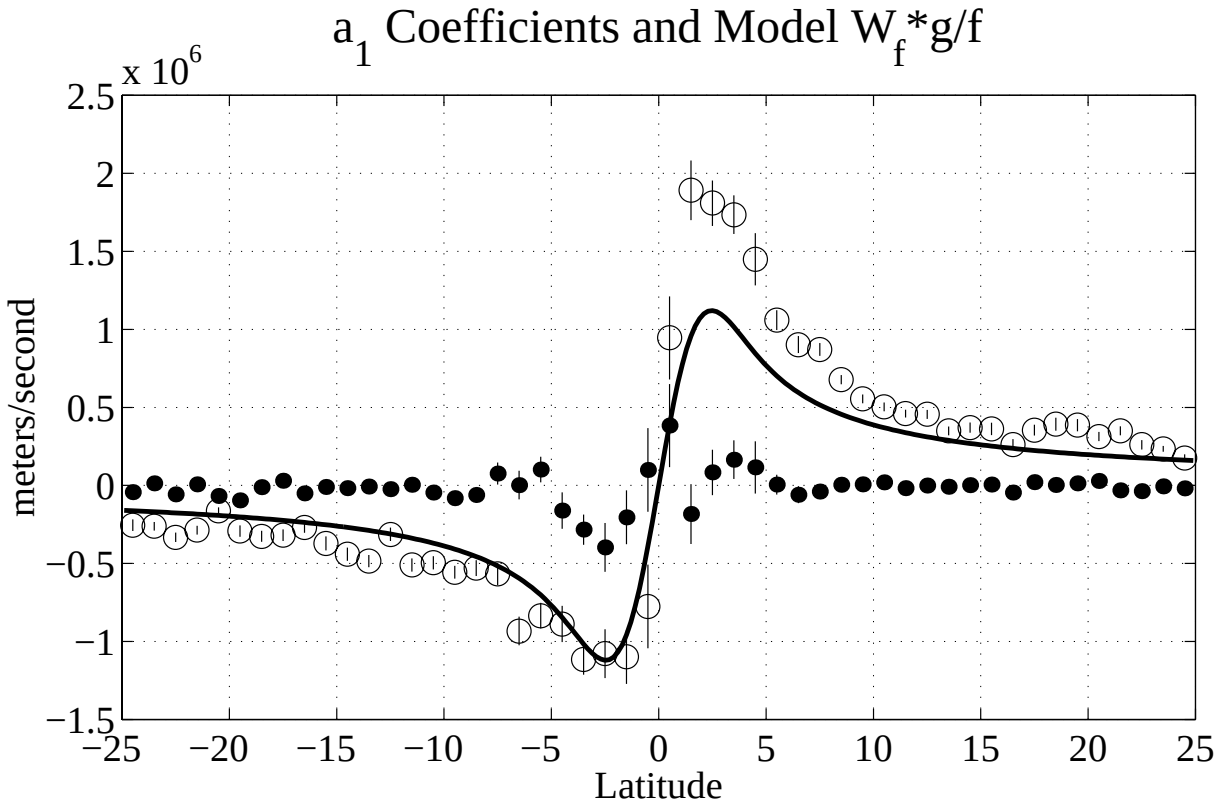

a1 Coefficients and Model Wf*g/f
x 10^6
2.5
2
1.5
1
0.5
0
−0.5
−1
−1.5
meters/second
−25
−20
−15
−10
−5
0
5
10
15
20
25
Latitude

Figure 4

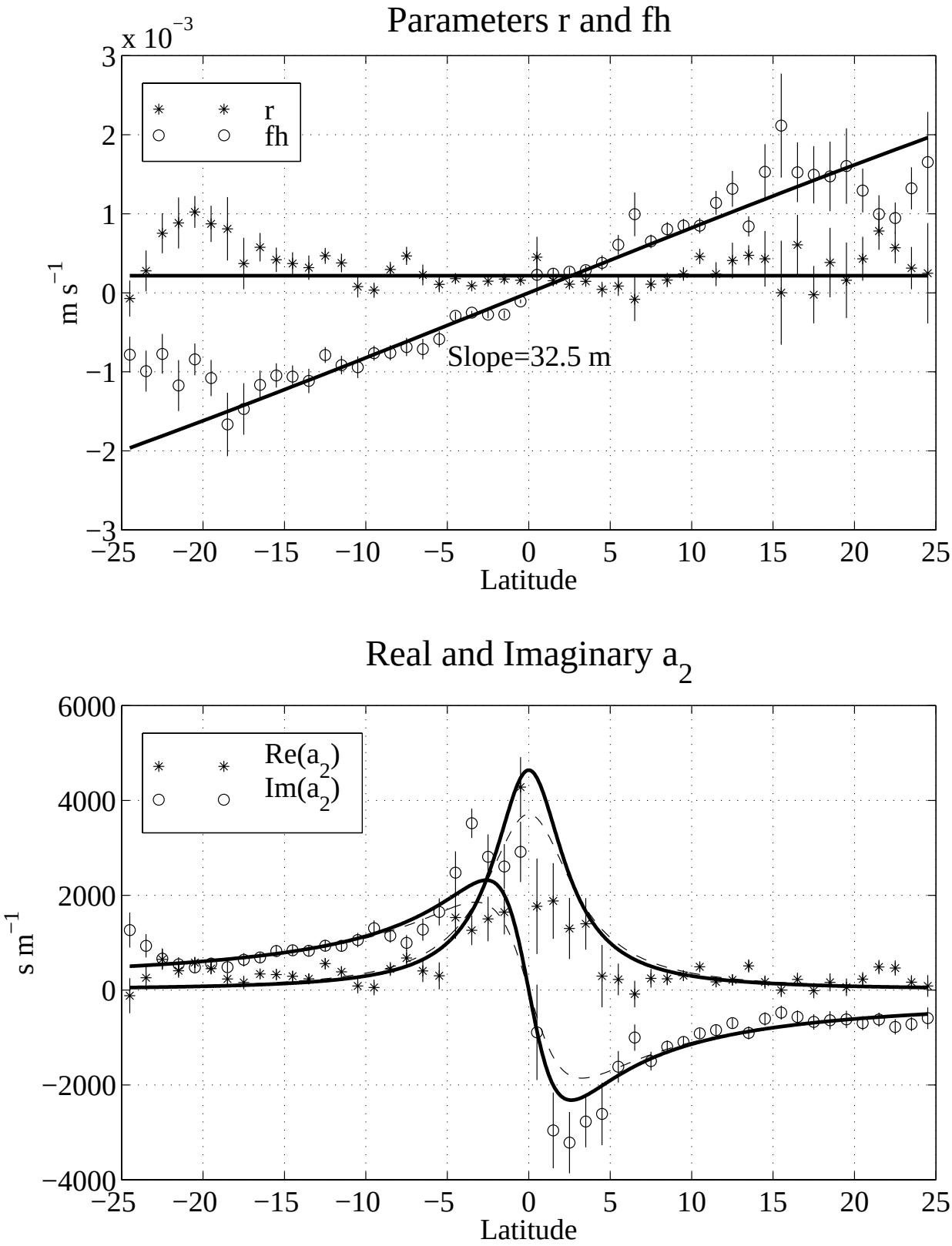

Parameters r and fh
x 10^−3
r
fh
Slope=32.5 m
m s^−1
Latitude
Real and Imaginary a_2
Re(a_2)
Im(a_2)
s m^−1
Latitude

Figure 5

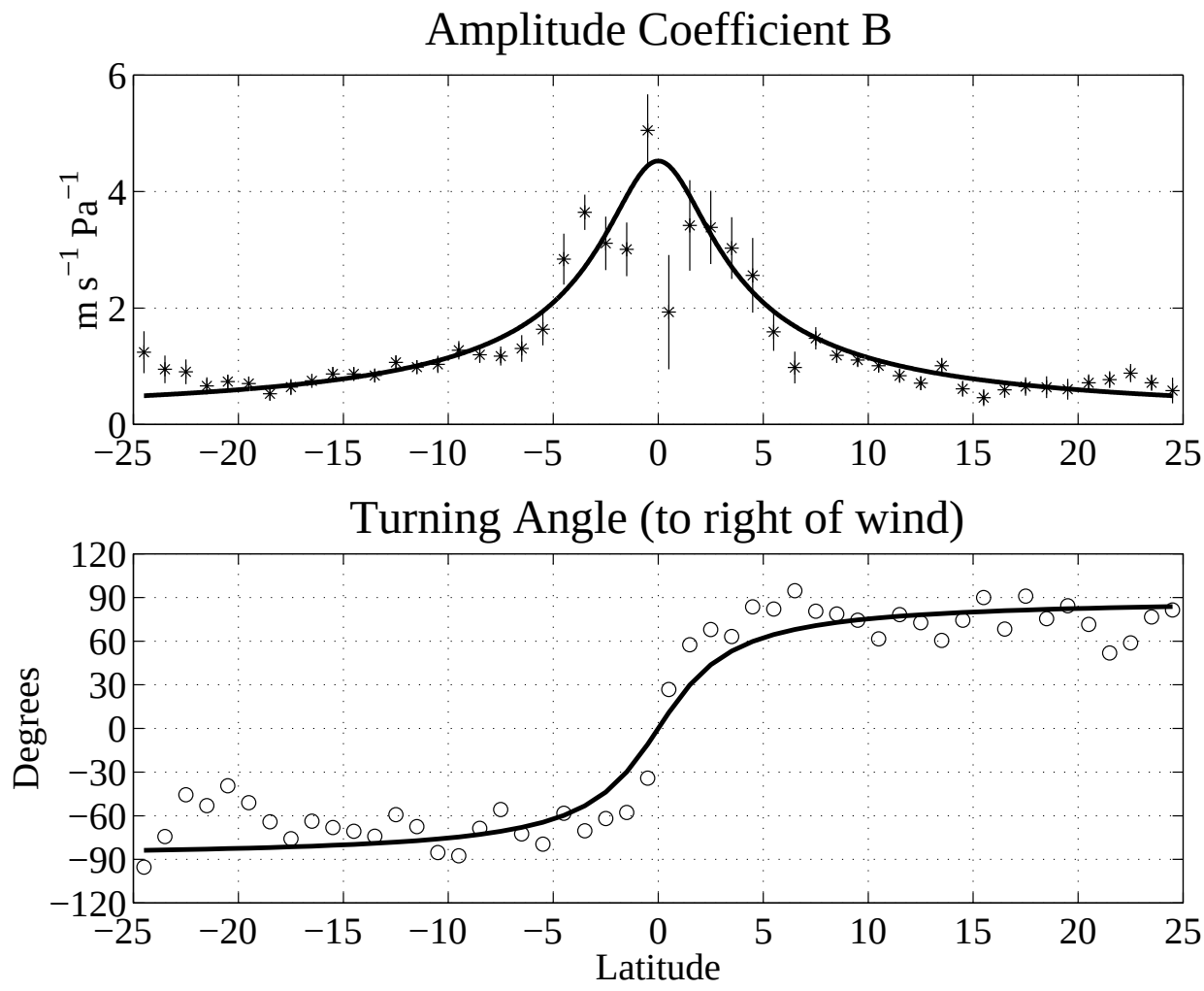

Amplitude Coefficient B
m s$^{-1}$ Pa$^{-1}$
6
4
2
0
−25 −20 −15 −10 −5 0 5 10 15 20 25
Turning Angle (to right of wind)
Degrees
120
90
60
30
0
−30
−60
−90
−120
−25 −20 −15 −10 −5 0 5 10 15 20 25
Latitude

Figure 6

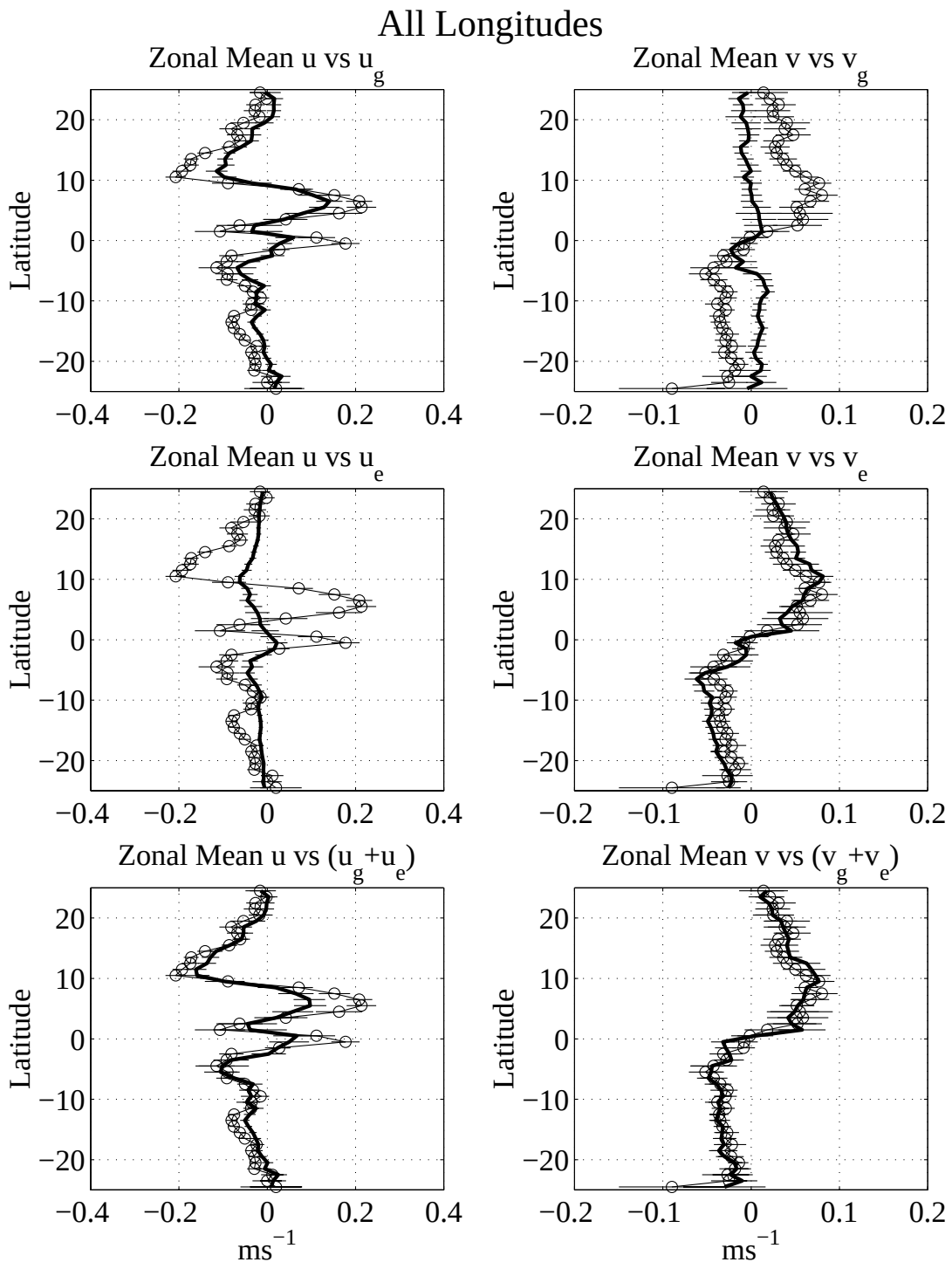

All Longitudes
Zonal Mean u vs u_g
Zonal Mean v vs v_g
Zonal Mean u vs u_e
Zonal Mean v vs v_e
Zonal Mean u vs (u_g+u_e)
Zonal Mean v vs (v_g+v_e)
Latitude
20
10
0
−10
−20
−0.4
−0.2
0
0.2
0.4
−0.2
−0.1
0
0.1
0.2
ms^−1

Figure 7

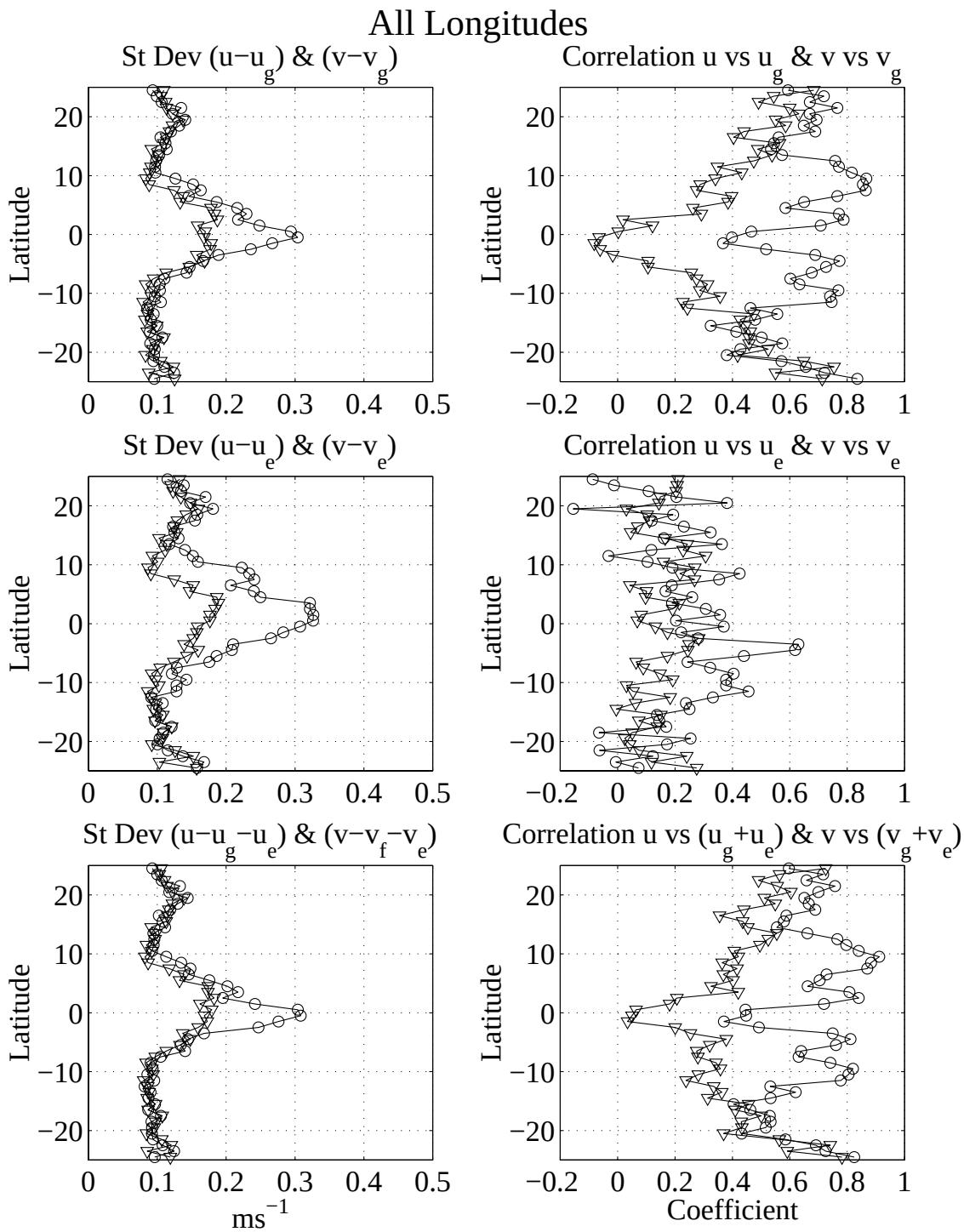

All Longitudes
St Dev (u−u_g) & (v−v_g)
Correlation u vs u_g & v vs v_g
St Dev (u−u_e) & (v−v_e)
Correlation u vs u_e & v vs v_e
St Dev (u−u_g−u_e) & (v−v_f−v_e)
Correlation u vs (u_g+u_e) & v vs (v_g+v_e)
Latitude
ms^−1
Coefficient

Figure 8a

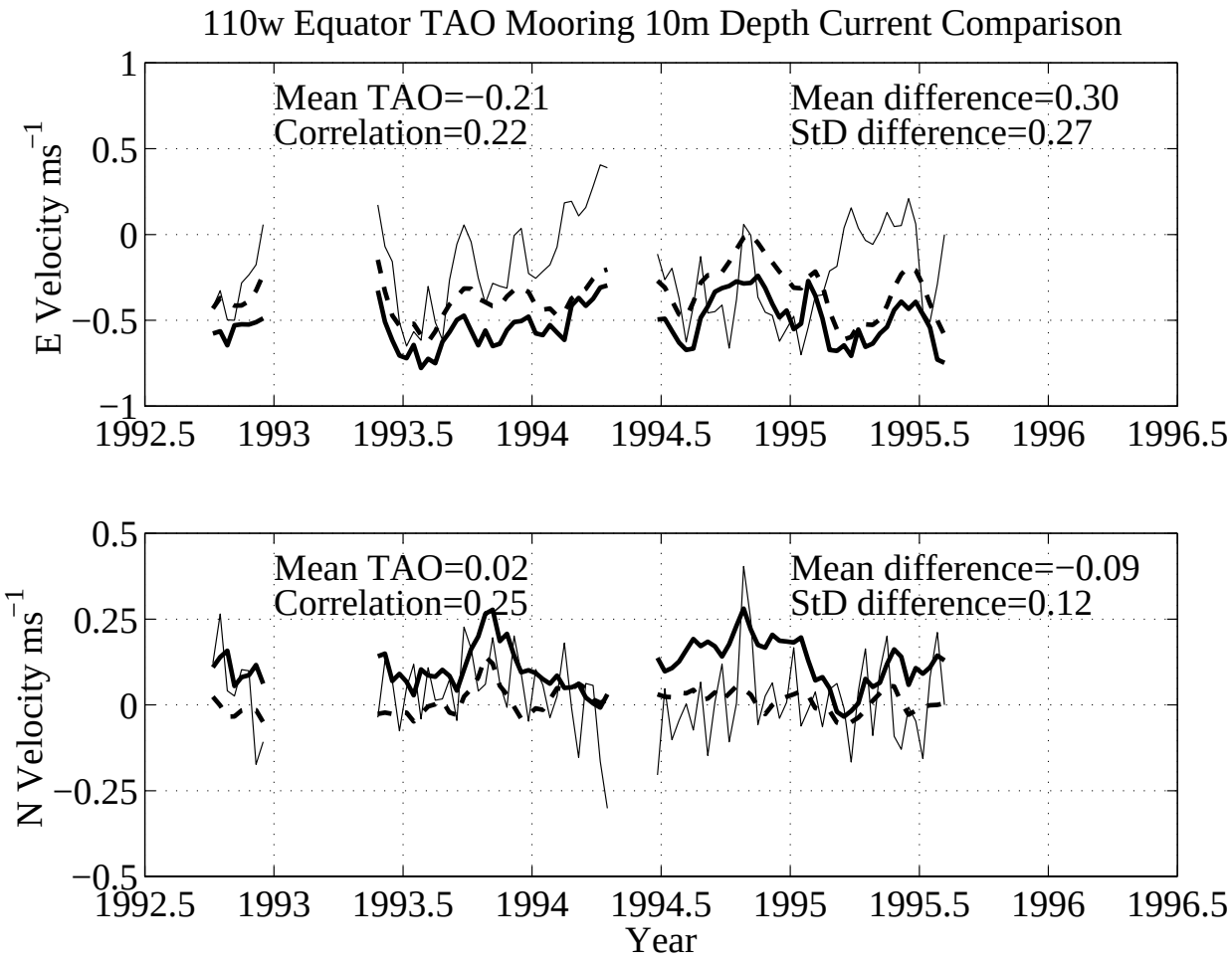

110w Equator TAO Mooring 10m Depth Current Comparison
Mean TAO=−0.21
Correlation=0.22
Mean difference=0.30
StD difference=0.27
E Velocity ms−1
1
0.5
0
−0.5
−1
1992.5
1993
1993.5
1994
1994.5
1995
1995.5
1996
1996.5
Mean TAO=0.02
Correlation=0.25
Mean difference=−0.09
StD difference=0.12
N Velocity ms−1
0.5
0.25
0
−0.25
−0.5
Year

Figure 8b

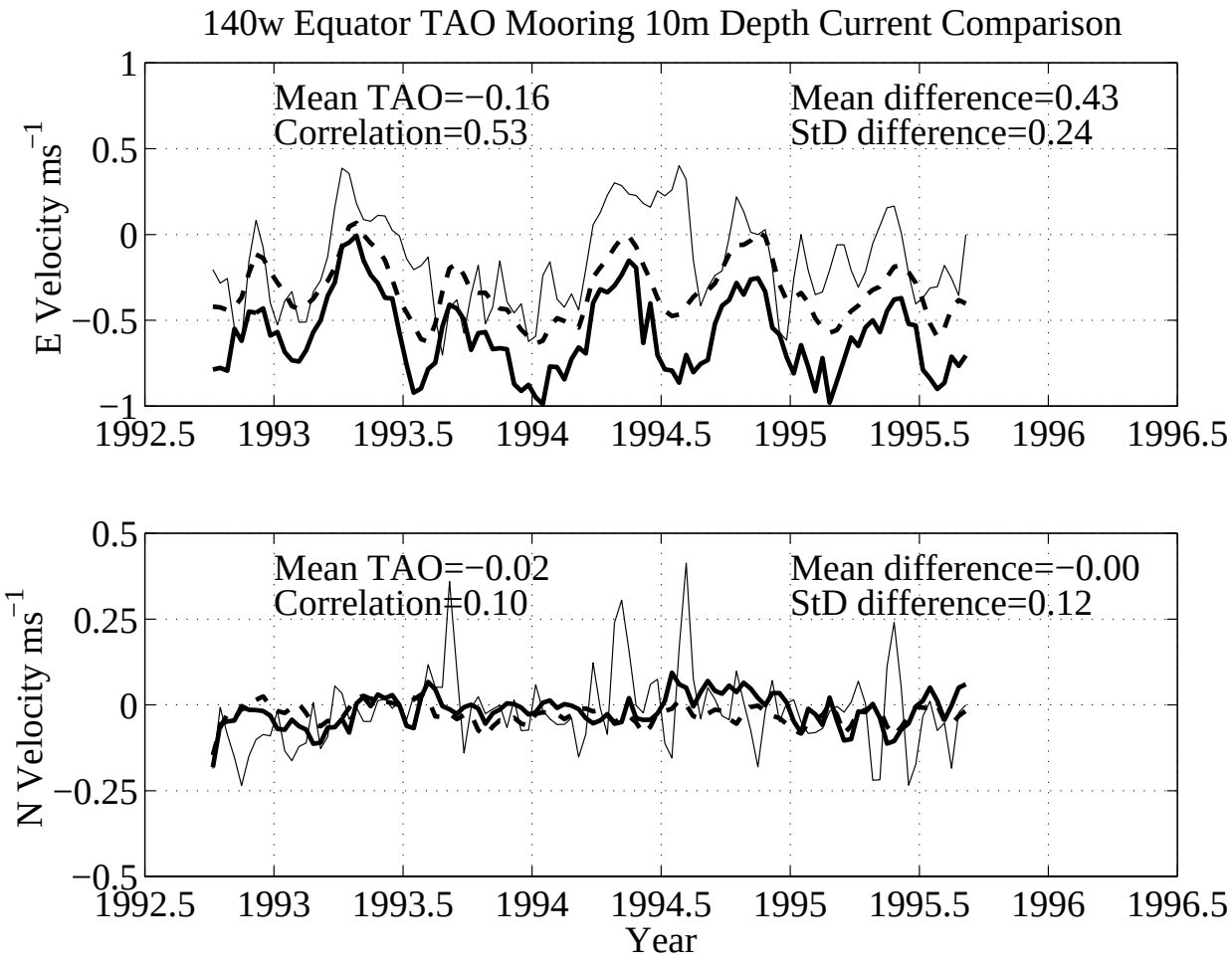

140w Equator TAO Mooring 10m Depth Current Comparison
Mean TAO=−0.16
Correlation=0.53
Mean difference=0.43
StD difference=0.24
E Velocity ms−1
1
0.5
0
−0.5
−1
1992.5
1993
1993.5
1994
1994.5
1995
1995.5
1996
1996.5
Mean TAO=−0.02
Correlation=0.10
Mean difference=−0.00
StD difference=0.12
N Velocity ms−1
0.5
0.25
0
−0.25
−0.5
Year

Figure 8c

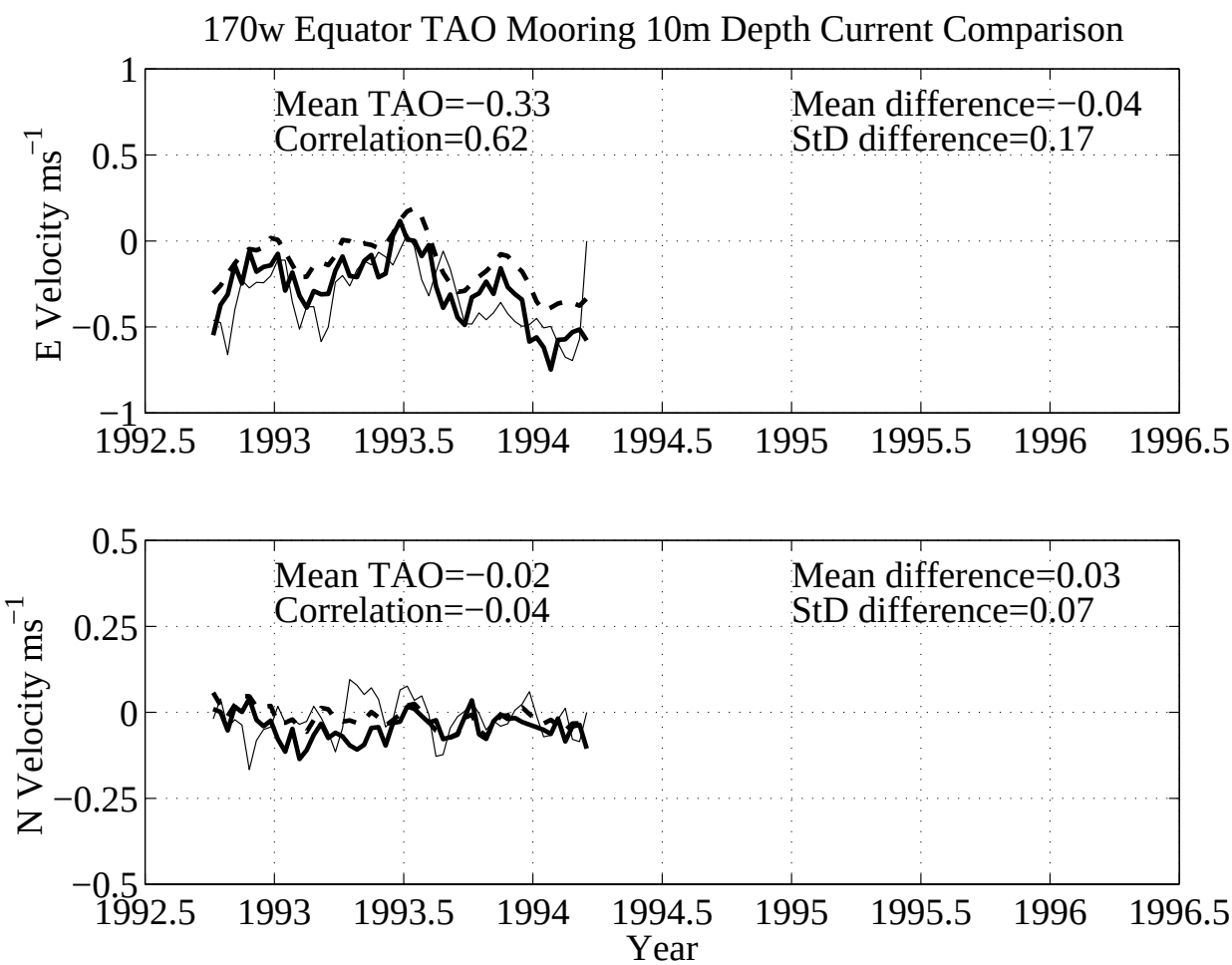

170w Equator TAO Mooring 10m Depth Current Comparison
Mean TAO=−0.33
Correlation=0.62
Mean difference=−0.04
StD difference=0.17
E Velocity ms−1
1
0.5
0
−0.5
−1
1992.5
1993
1993.5
1994
1994.5
1995
1995.5
1996
1996.5
Mean TAO=−0.02
Correlation=−0.04
Mean difference=0.03
StD difference=0.07
N Velocity ms−1
0.5
0.25
0
−0.25
−0.5
Year

Figure 8d

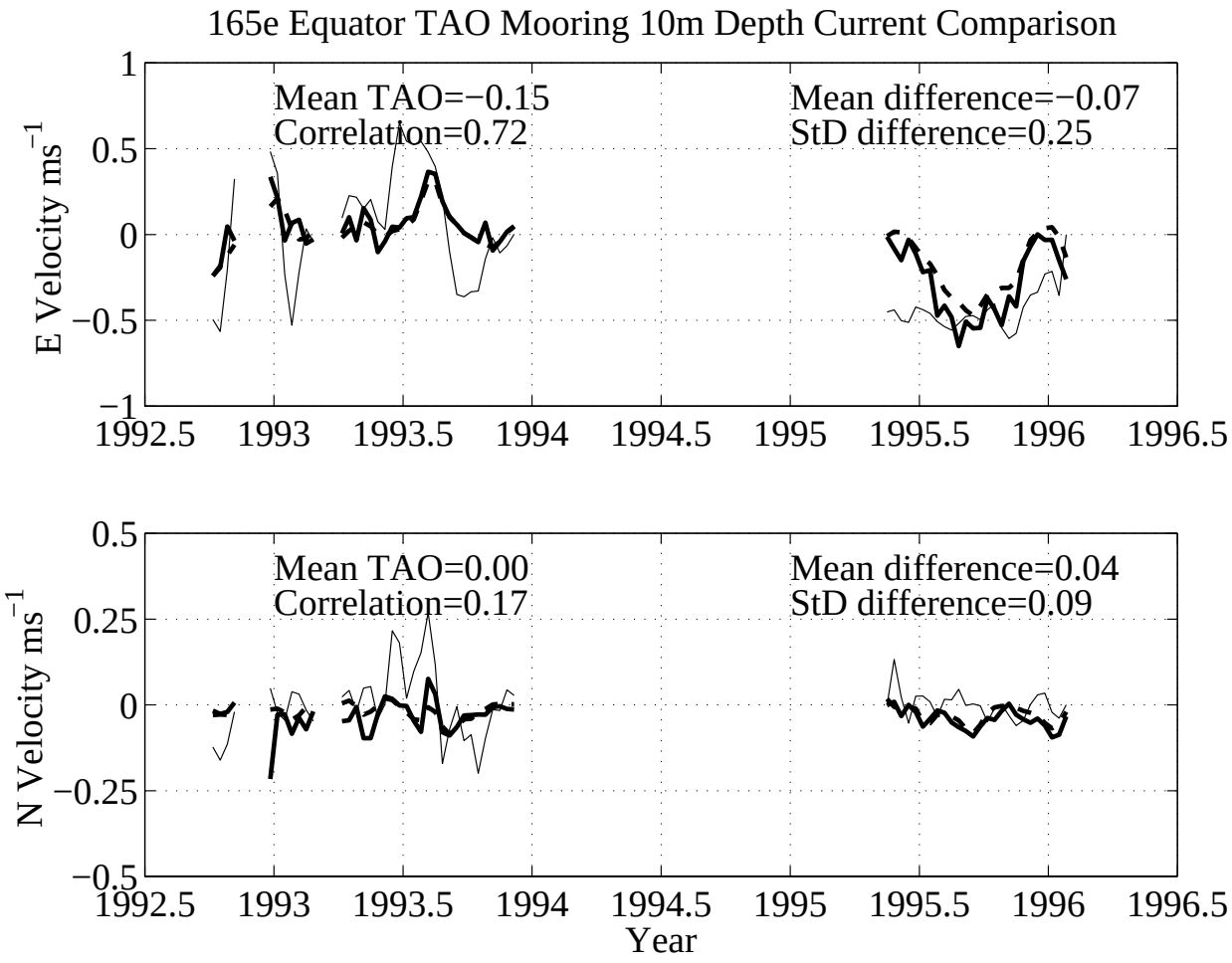
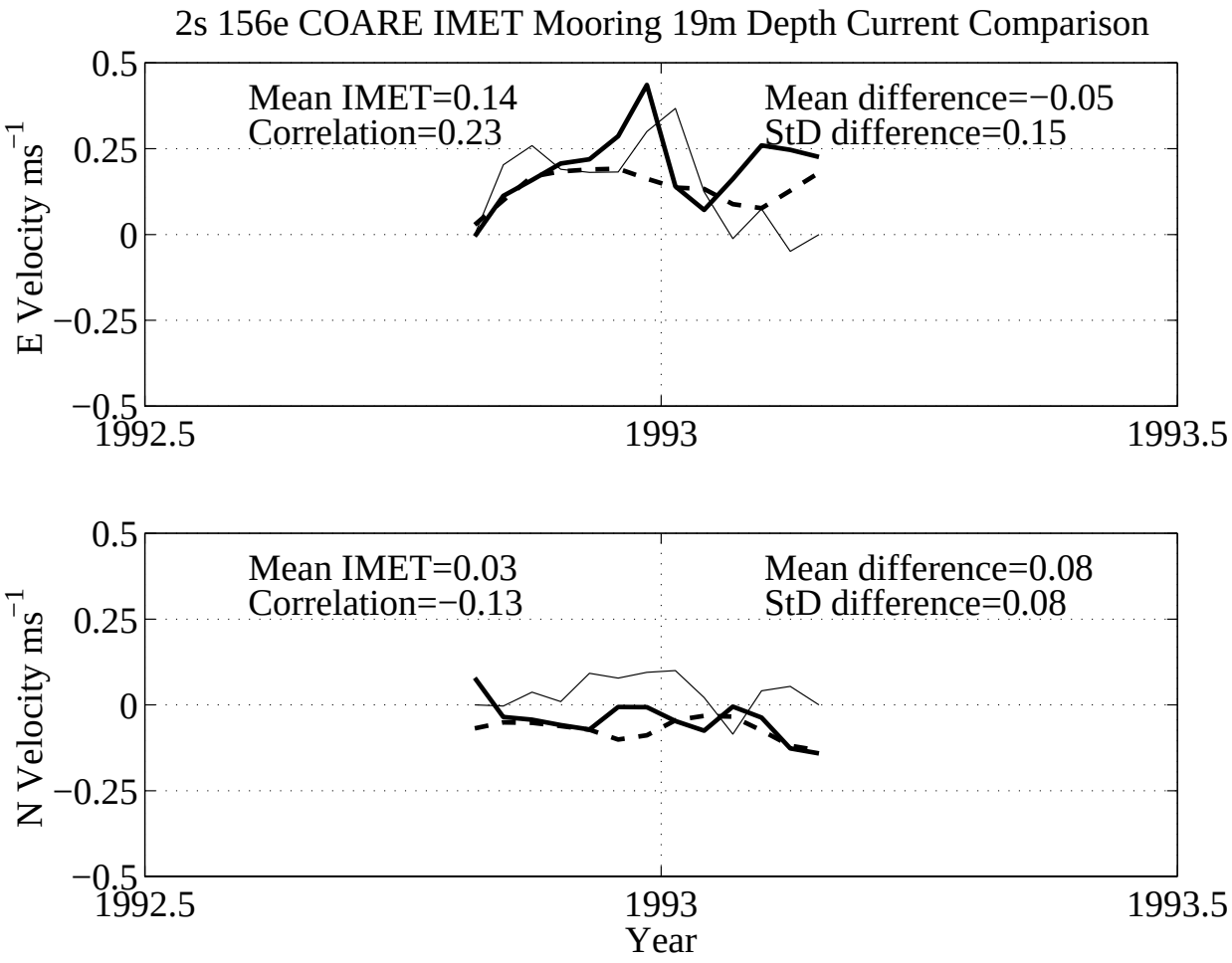

165e Equator TAO Mooring 10m Depth Current Comparison
Mean TAO=−0.15
Correlation=0.72
Mean difference=−0.07
StD difference=0.25
E Velocity ms−1
1
0.5
0
−0.5
−1
1992.5
1993
1993.5
1994
1994.5
1995
1995.5
1996
1996.5
Mean TAO=0.00
Correlation=0.17
Mean difference=0.04
StD difference=0.09
N Velocity ms−1
0.5
0.25
0
−0.25
−0.5
Year

Figure 8e


2s 156e COARE IMET Mooring 19m Depth Current Comparison
Mean IMET=0.14
Correlation=0.23
Mean difference=−0.05
StD difference=0.15
E Velocity ms−1
0.5
0.25
0
−0.25
−0.5
1992.5
1993
1993.5
Mean IMET=0.03
Correlation=−0.13
Mean difference=0.08
StD difference=0.08
N Velocity ms−1
0.5
0.25
0
−0.25
−0.5
1992.5
1993
1993.5
Year

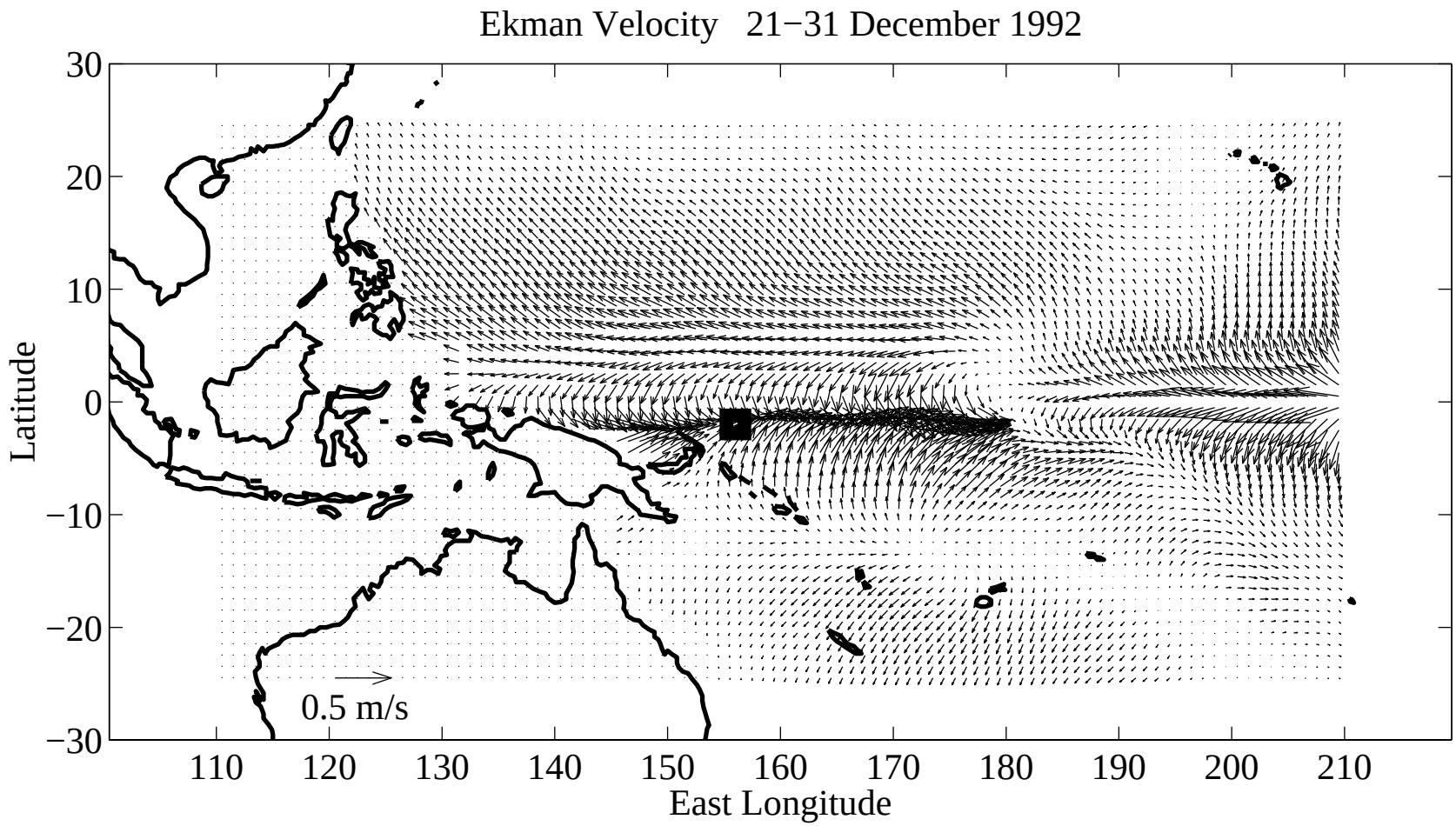

Ekman Velocity 21−31 December 1992
30
20
10
0
−10
−20
−30
Latitude
110
120
130
140
150
160
170
180
190
200
210
East Longitude
0.5 m/s

Figure 9a

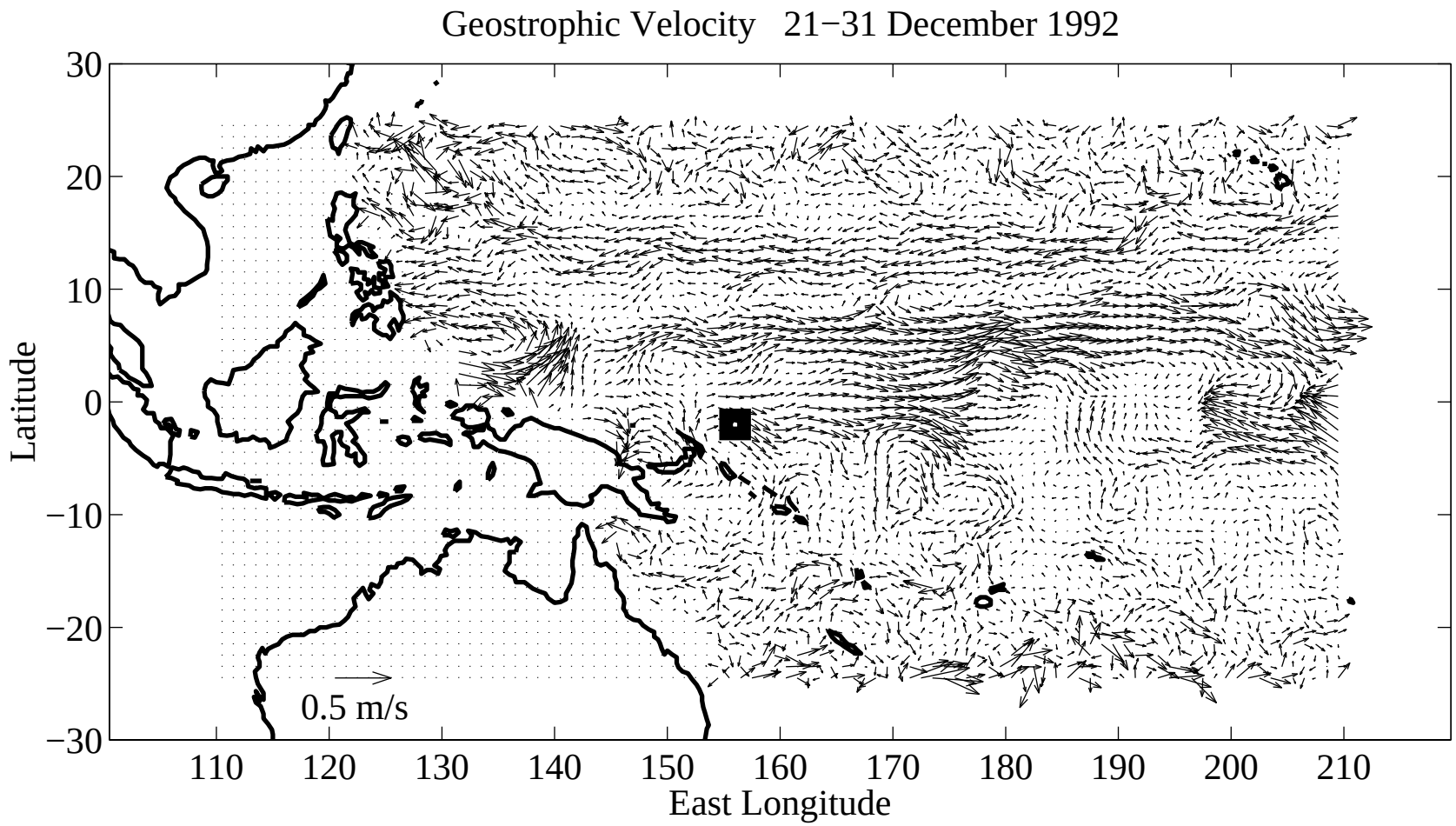

Geostrophic Velocity 21−31 December 1992
30
20
10
0
−10
−20
−30
Latitude
110
120
130
140
150
160
170
180
190
200
210
East Longitude
0.5 m/s

Figure 9b

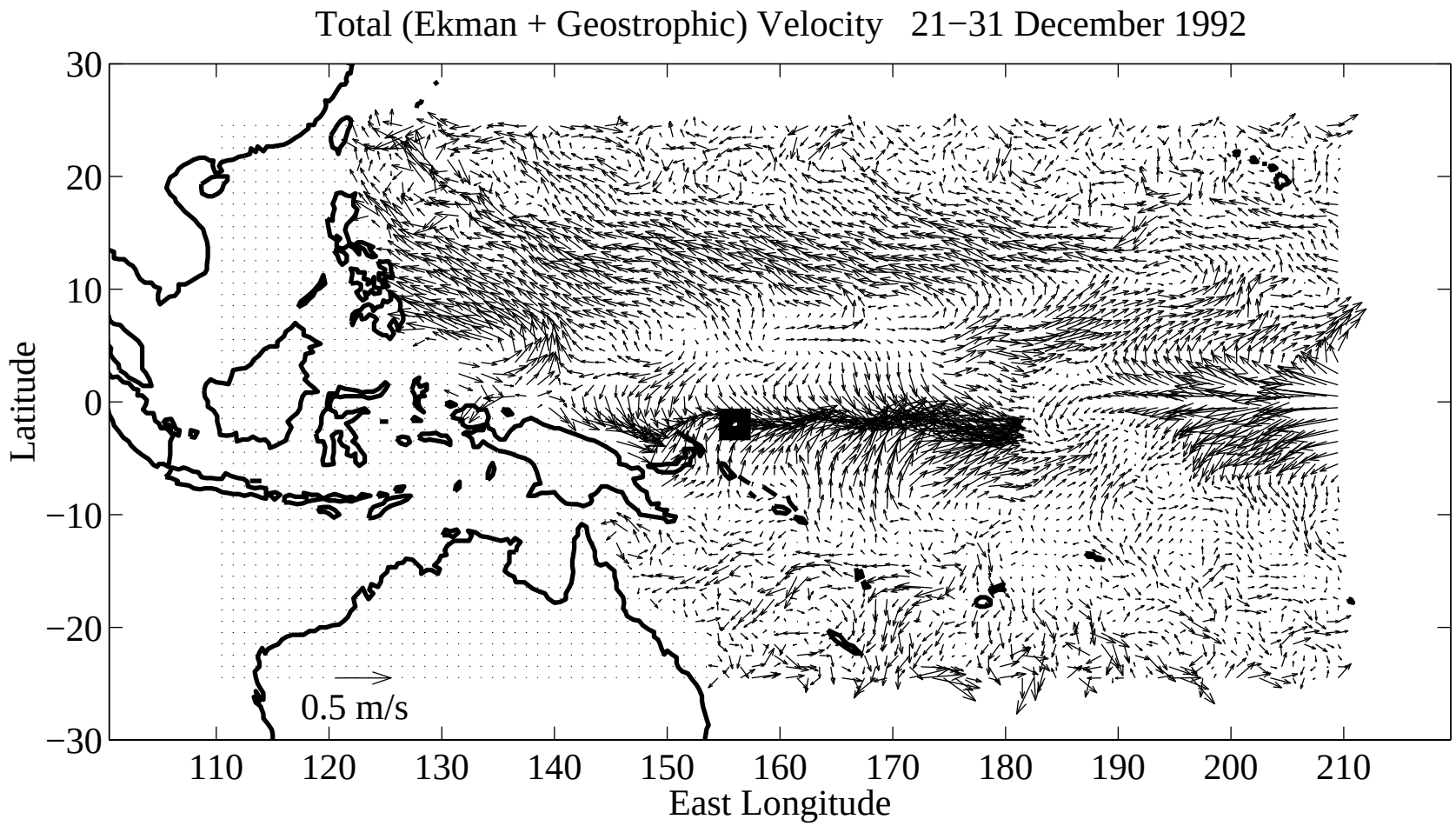

Total (Ekman + Geostrophic) Velocity 21−31 December 1992
30
20
10
0
−10
−20
−30
Latitude
110
120
130
140
150
160
170
180
190
200
210
East Longitude
0.5 m/s

Figure 9c

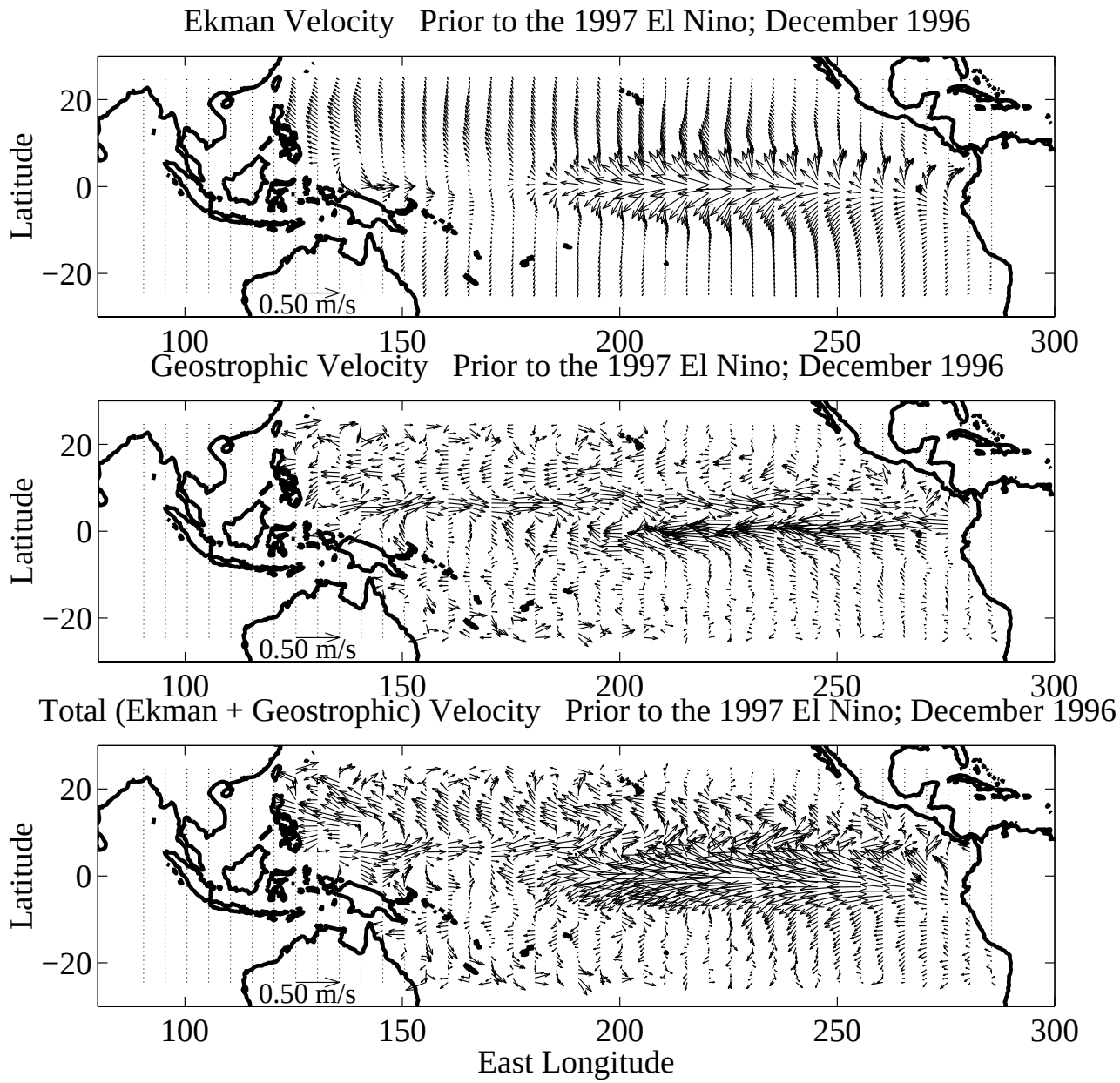

Ekman Velocity Prior to the 1997 El Nino; December 1996
Geostrophic Velocity Prior to the 1997 El Nino; December 1996
Total (Ekman + Geostrophic) Velocity Prior to the 1997 El Nino; December 1996
Latitude
20
0
−20
0.50 m/s
100
150
200
250
300
East Longitude

Figure 10a

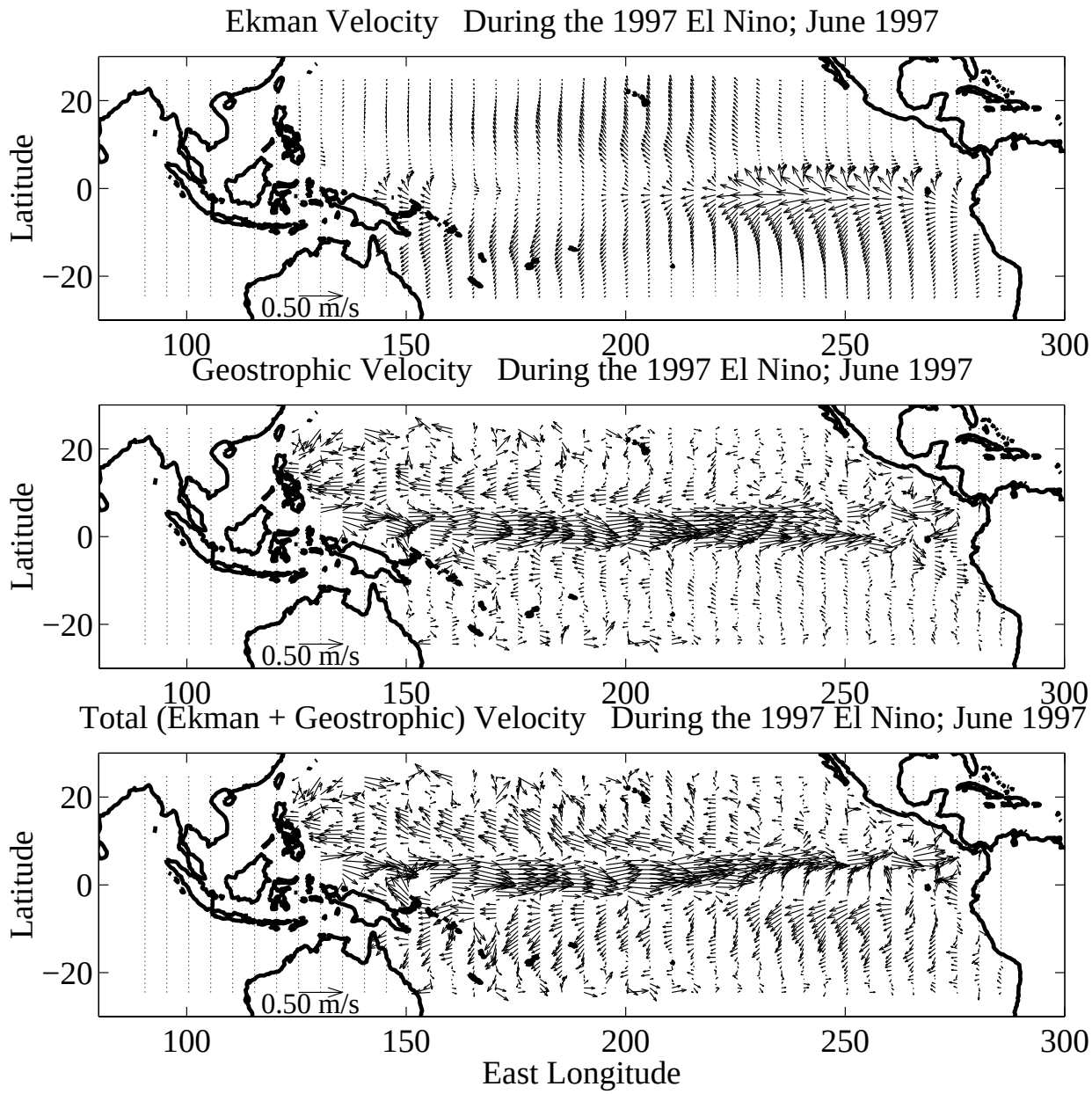

Ekman Velocity During the 1997 El Nino; June 1997
Latitude
20
0
−20
0.50 m/s
100
150
200
250
300
Geostrophic Velocity During the 1997 El Nino; June 1997
Latitude
20
0
−20
0.50 m/s
100
150
200
250
300
Total (Ekman + Geostrophic) Velocity During the 1997 El Nino; June 1997
Latitude
20
0
−20
0.50 m/s
100
150
200
250
300
East Longitude

Figure 10b