AD-A169 026 NAVY CORRECTED GEOSTROPHIC WIND SET FOR THE GULF OF MEXICO(U) JAYCOR ALEXANDRIA VA R C RHODES ET AL. MAR 85 NORDA-TN-310 N00014-85-R-0578

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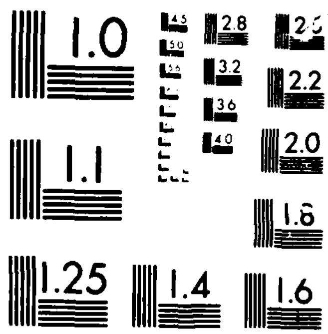
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(12)

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Naval Ocean Research and Development Activity
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Navy-Corrected Geostrophic Wind Set for the Gulf of Mexico

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ABSTRACT

The large variability of the Gulf of Mexico wind field indicates that high-resolution wind data will be required to represent the weather systems affecting ocean circulation. This report presents methods and results of the calculation of a corrected geostrophic wind data set with high temporal and spatial resolution.

Corrected geostrophic wind was calculated from surface pressure analyses compiled by the Fleet Numerical Oceanography Center. The correction factors for wind magnitude and direction were calculated using linear regressions of observed Gulf buoy winds and geostrophic winds deroved at the buoys. The regressions were done for each month to determine the seasonal variability of the correction factors. The magnitude correction was found to be nearly constant (0.675) throughout the year, but the direction correction varied as a sine function dependent on the time of the year.

The corrected geostrophic wind was calculated twice daily from 1967-1982 on a spherical grid over the Gulf, and the wind stress and wind stress curl fields were then calculated. Twelve-hourly stress and curl fields show large temporal variations of the wind field for both winter and summer months. Seasonal and monthly climatologies of the stress and corresponding curl show positive curl over the Yucatan and negative curl in the southwest Gulf, which are features not seen in any previous study of Gulf wind stress.

ACKNOWLEDGMENTS

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NAVY CORRECTED GEOSTROPHIC WIND SET FOR THE GULF OF MEXICO

INTRODUCTION

In their climatological analysis of frontal activity in the Gulf, DiMego, Bosart, and Endersen (1976) have shown that frontal frequency increases rapidly from September to October. A strong maximum exists in the winter months with the duration of frontal activity approximately 1 to 2 days. Activity decreases more gradually through the spring, and very little frontal activity occurs in the summer months. The frontal activity is associated with some of the highest wind speeds and stresses observed in the Gulf of Mexico. The large variability of the Gulf of Mexico wind field indicates that high-resolution wind data will be required both spatially and temporally to represent the weather systems affecting ocean circulation.

Previous data sets have lacked the needed resolution and, therefore, are far from ideal for use in studying the dynamics of Gulf circulation. The data sets of Franceschini (1953) and Elliott (1979) both are derived from historical ship observations. The Franceschini wind data are monthly averaged stress climatologies with 2° grid resolution, while the Elliott data are seasonally averaged stress climatologies with 1° grid resolution. The data set of Blaha and Sturges (1978), supplied by Bakun (1973), is monthly averaged values of wind stress derived from surface pressure data extending continuously over the period 1946-1975. In each case the temporal resolution is particularly poor, with highest resolution being monthly. Monthly or longer averages cannot possibly represent short-term wind variability, and it would be preferable to provide the ocean model with wind data supplied much more frequently.

DATA AND METHOD OF ANALYSIS

The most promising sources for frequent synoptic atmospheric data in the Gulf are the atmospheric forecasting centers. The approach taken here is to calculate corrected geostrophic winds from surface pressure analyses compiled by the weather services. The most desirable data set is the one used to initialize the National Weather Service's limited fine-mesh model because of its high resolution over the Gulf. Only a subset of the surface pressure analysis (that does not cover the entire Gulf) has been archived at the National Center for Atmospheric Research (NCAR). The best readily available data for use in calculating the geostrophic winds are surface pressure fields obtained from the Fleet Numerical Oceanographic Center's (FNOC) 12-hourly analysis, with approximately 280-300 km grid resolution over the Gulf. This data was obtained for all available time periods from 1967 to 1982.

The pressure was interpolated to a spherical grid over the Gulf, and the geostrophic wind was calculated at three buoys in the Gulf for direct comparison with the observed buoy wind. The buoys were located at (26.0°N, 90.0°W), (26.0°N, 93.5°W), and (26.0°N, 86.0°W), and the data were available at either 1-hourly or 3-hourly intervals from 1977 to 1982.

Ageostrophic corrections were calculated by directly comparing geostrophic wind and buoy wind by using linear regressions for both magnitude and direction. Blaha and Sturges used constant ageostrophic correction factors of 0.7 for speed and 15° for direction, but these figures were obtained from a study done by Bakun using data from the west coast of the United States. Since the correction factors depend on atmospheric stability, Bakun's correction factors are not necessarily appropriate for the Gulf. Wind stresses were calculated on a spherical grid over the Gulf from the corrected geostrophic wind using constant atmospheric density and a constant drag coefficient equal to 0.0013. This calculation is identical to that used by Blaha and Sturges. The geostrophic winds, corrected geostrophic winds, and wind stresses (all on a 1° grid covering the Gulf) will be available on separate magnetic tapes from the Gulf of Mexico Regional Office of the Minerals Management Service.

RESULTS

Ageostrophic Corrections

The data from all available years and for the three buoys were combined by month, and linear regressions performed to determine seasonal variability. The results showed that the magnitude correction factor had little variability throughout the year, but the direction correction was a function of the month and was shown to have a large sinusoidal component. The angle correction was larger in the winter than in the summer. Therefore, one magnitude correction (0.675) was used for the entire year, while the direction correction varied according to:

$$C = 17.5 + 9 \sin 2\pi i/N \qquad i = 1, N \tag{1}$$

where C is the correction factor in degrees, N = 730, the number of observations per year, and i = 0 on October 1st of each year. For simplicity, exactly the same formula is used in leap years, since the variation in C over 1 day is negligible.

Wind Stress and Wind Stress Curl

Appendix A shows wind stress and wind stress curl for two 9-day periods, January 11-19 and July 11-19, 1976, with two observations per day. There is a large temporal variability of the wind stress and wind stress curls during this period, indicating why the modeling of Gulf circulation requires wind data on short temporal scales.

Appendix B shows seasonal climatologies averaged over the period 1967-1982, and Appendix C shows monthly climatologies over the same period. The wind stress and wind stress curls are much stronger in the winter than the summer as would be expected. There are persistent areas of positive curl over the Yucatan and negative curl in the southwest Gulf for both seasonal and monthly climatologies, which are not seen in any previous study of Gulf wind stresses. Appendix D shows the monthly averaged wind stresses and wind stress curls for each year from 1967 to 1982.

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Bakun, A. (1973). Coastal Upwelling Indices, West Coast of North America, 1948-1971. Technical Report, NMFS SSRF 671, NOAA, Seattle.

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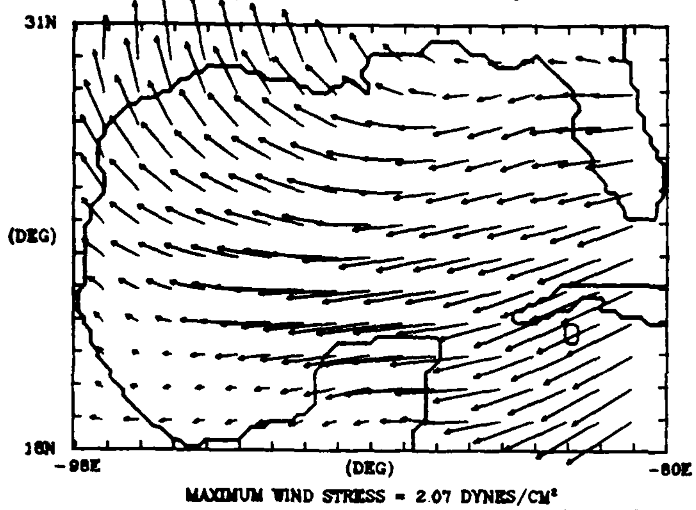
Elliott, B. A. (1979). Anticyclonic Rings and the Energetics of the Gulf of Mexico. Ph. D. Dissertation, Texas A & M University, 188 pp.

Franceschini, G. A. (1953). The Distribution of the Mean Monthly Wind Stress Over the Gulf of Mexico. Texas A & M Research Foundation, College Station, Texas, 18 pp.

APPENDIX A: WIND STRESS AND WIND STRESS CURL FOR JANUARY 11-19 (days 011-019) AND JULY 11-19 (days 193-201), 1976

WIND STRESS

011/1976 AT 0 GMT



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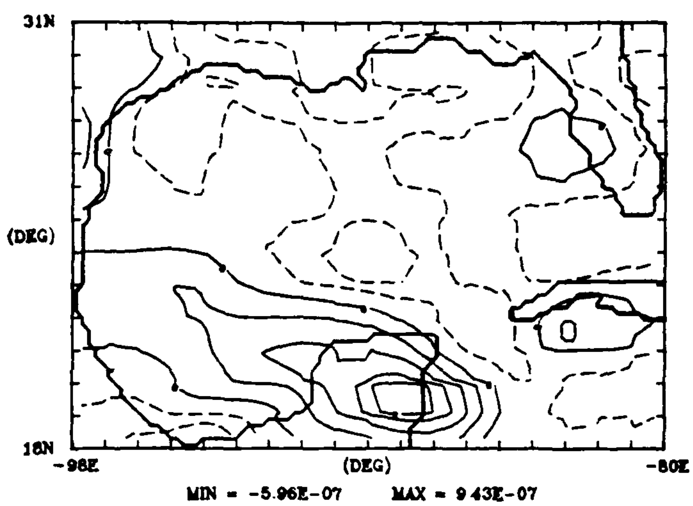
NORDA 323 13-DEC-84

WIND STRESS CURL

011/1976 AT 0 GMT DC = 2.0E-07 M



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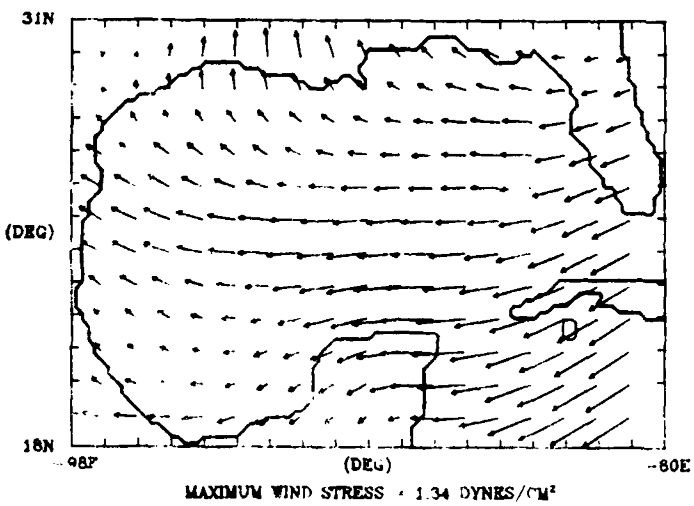
WIND STRESS

011/1976 AT 12 GMT



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NORDA 323 13-DEC-84

WIND STRESS CURL

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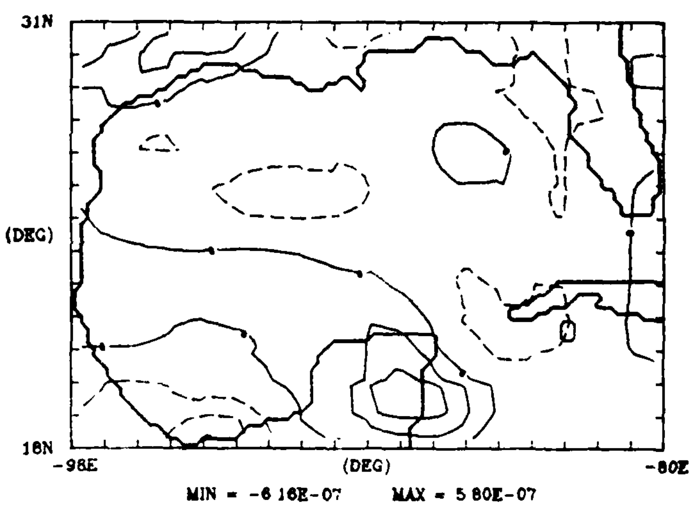

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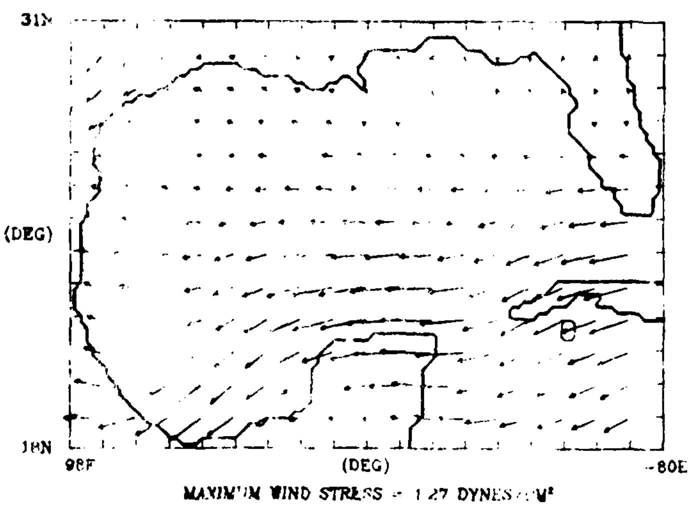
NORDA 323 13-DEC-84

WIND STRESS

012/1976 AT 0 GMT



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WIND STRESS CURL

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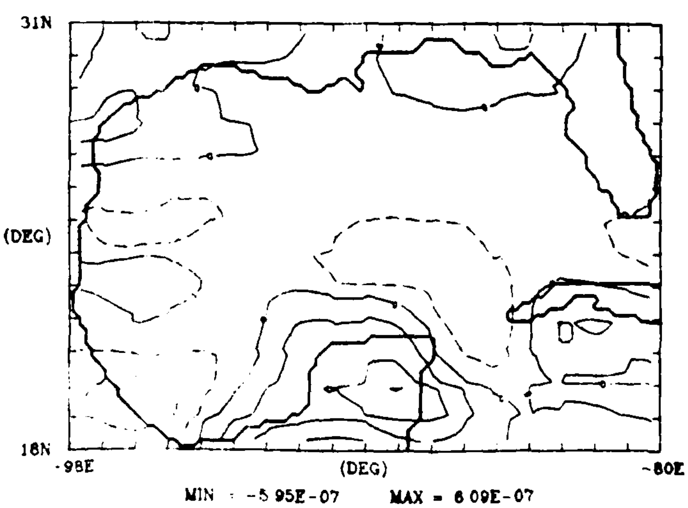

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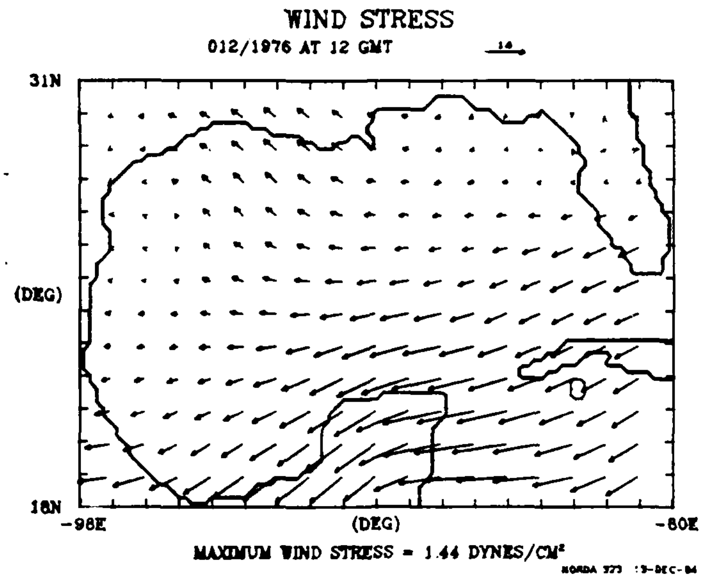
NORDA 323 13-DEC-84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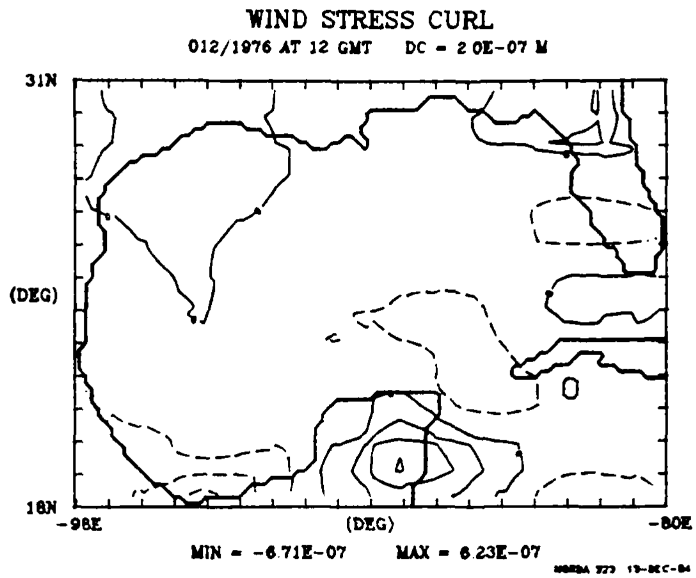
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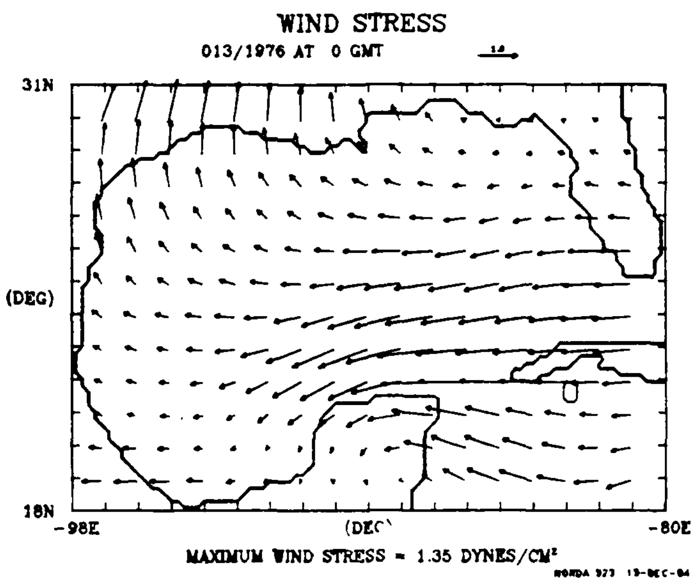
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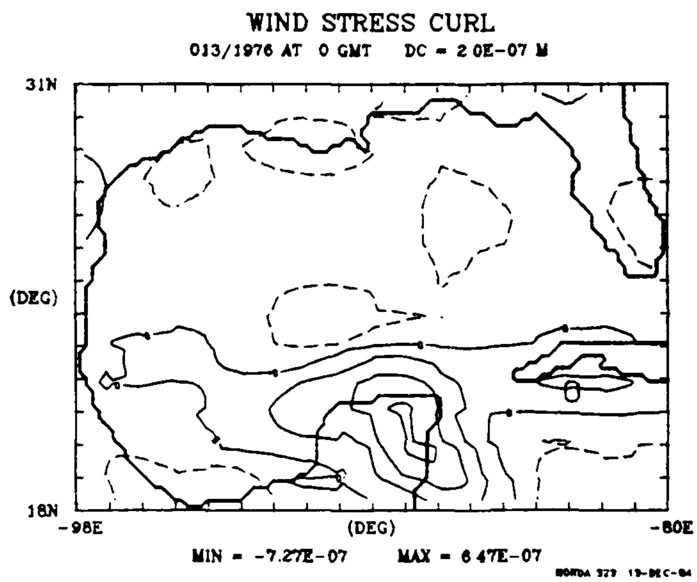
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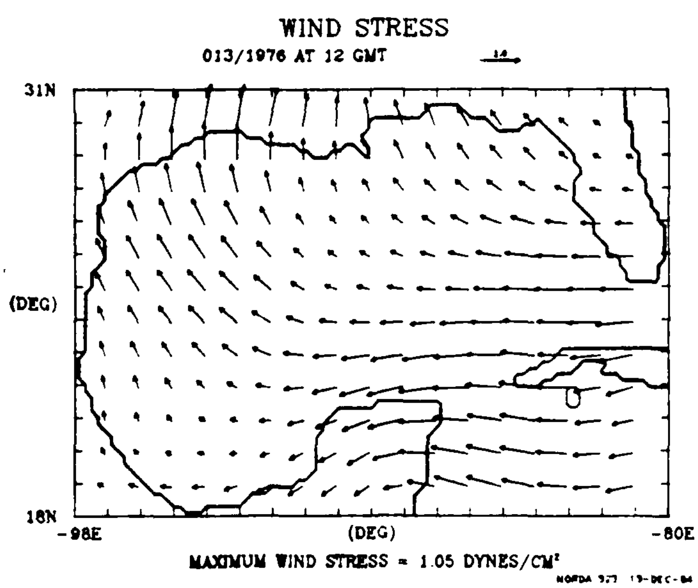
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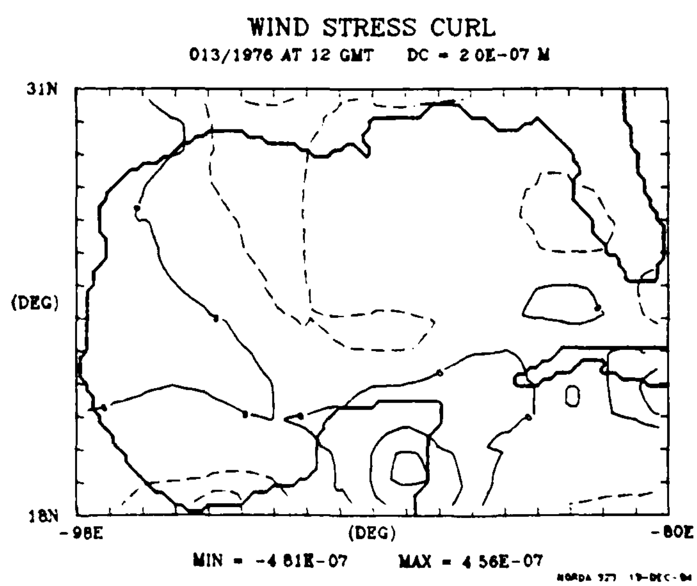
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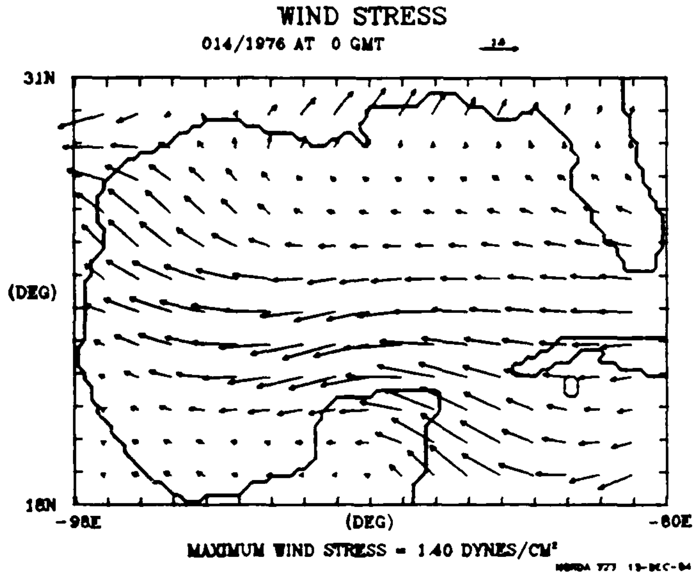
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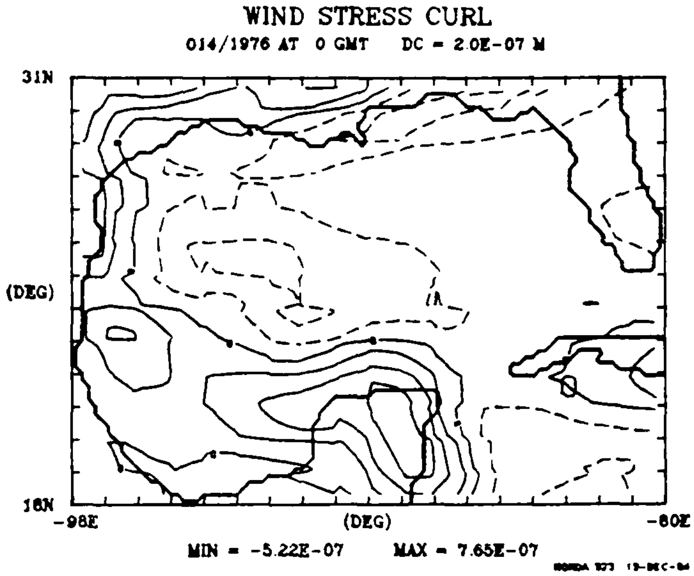
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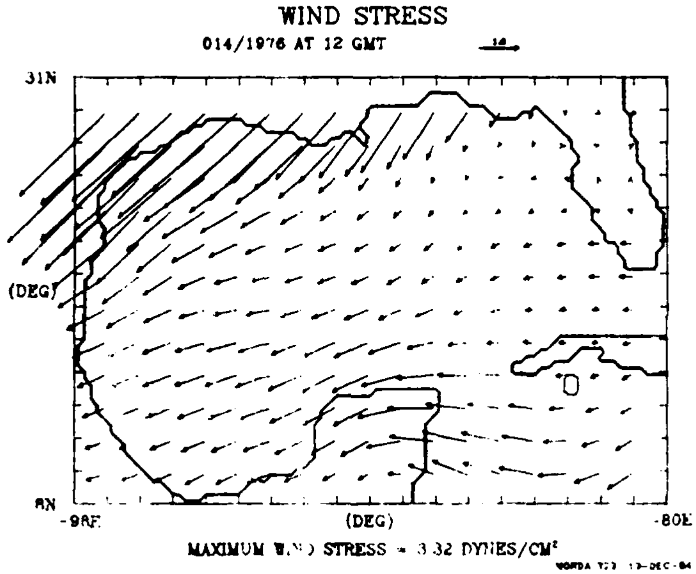
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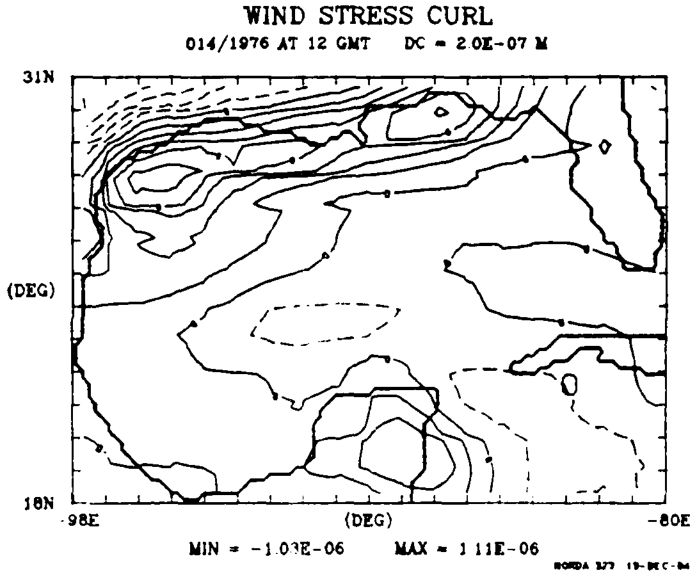
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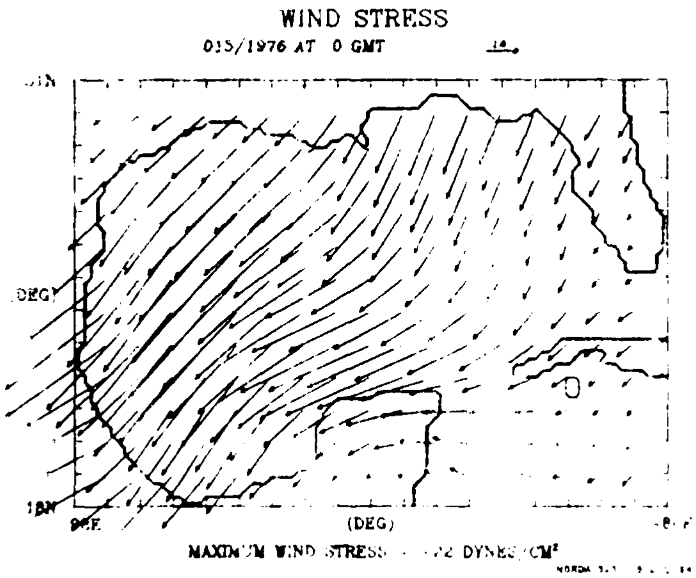
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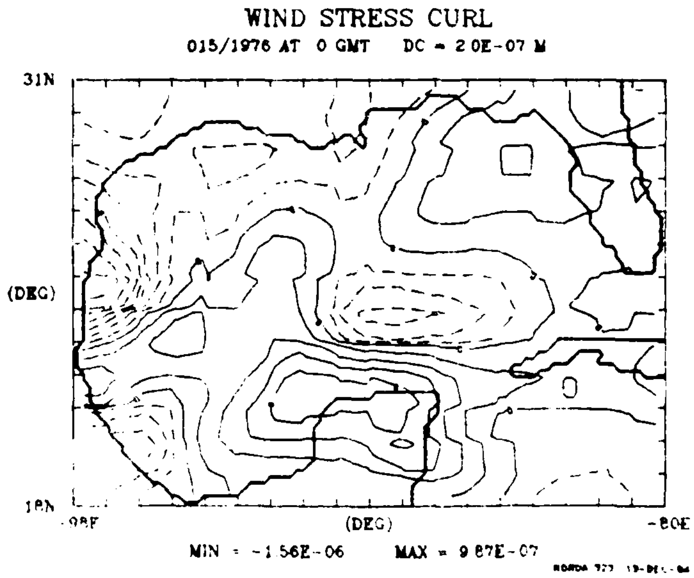
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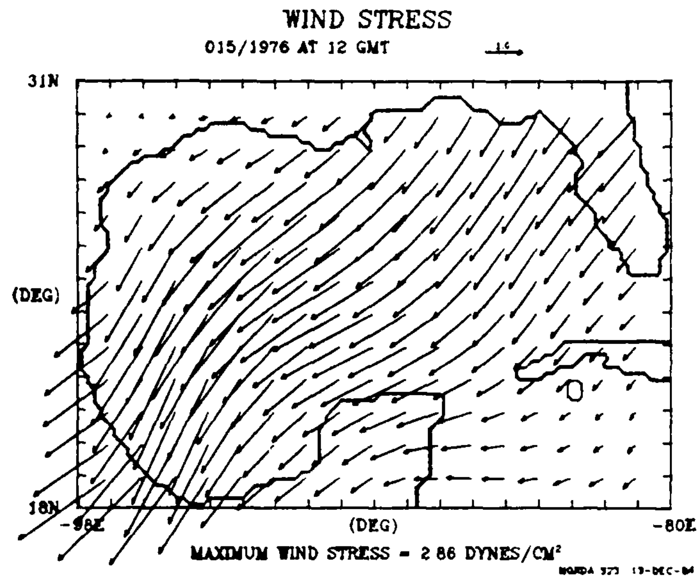
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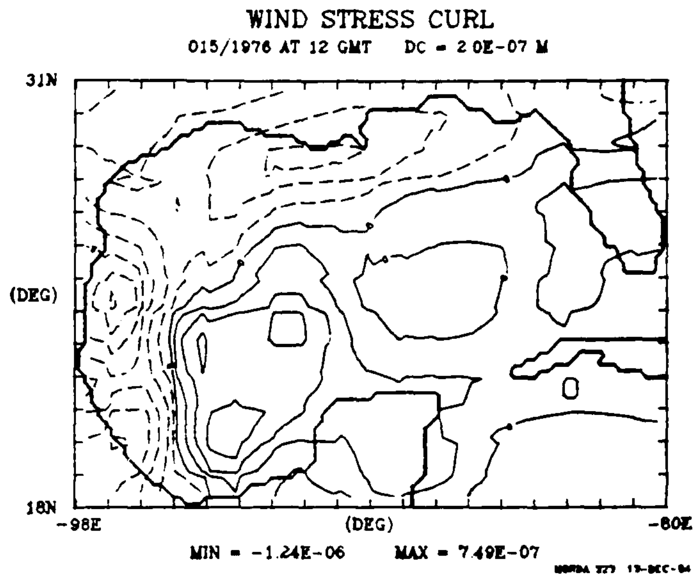
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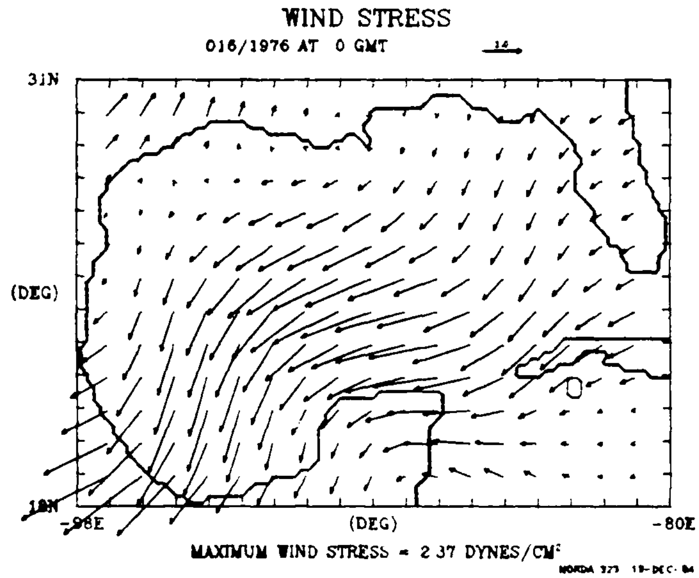
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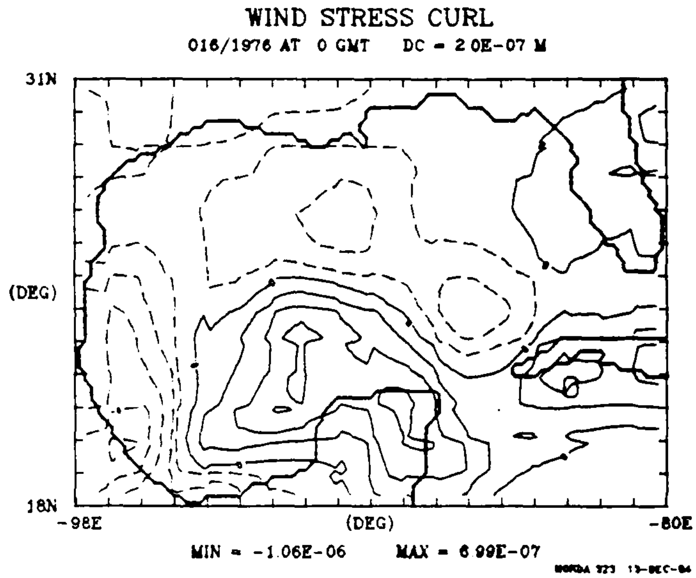
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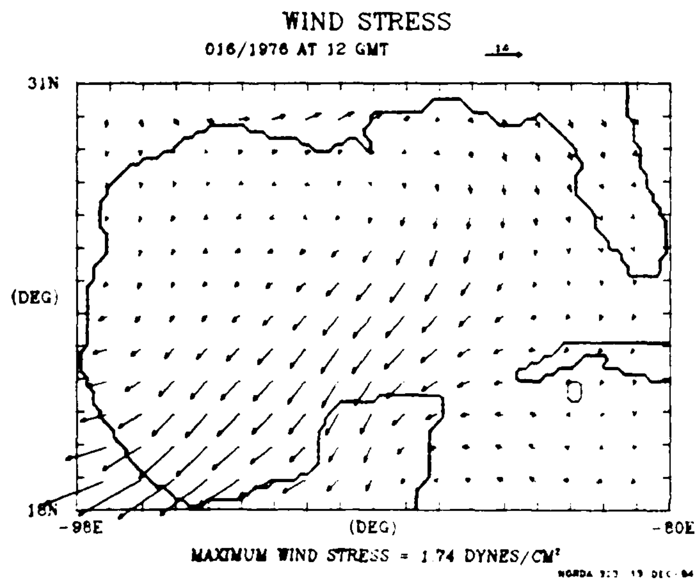
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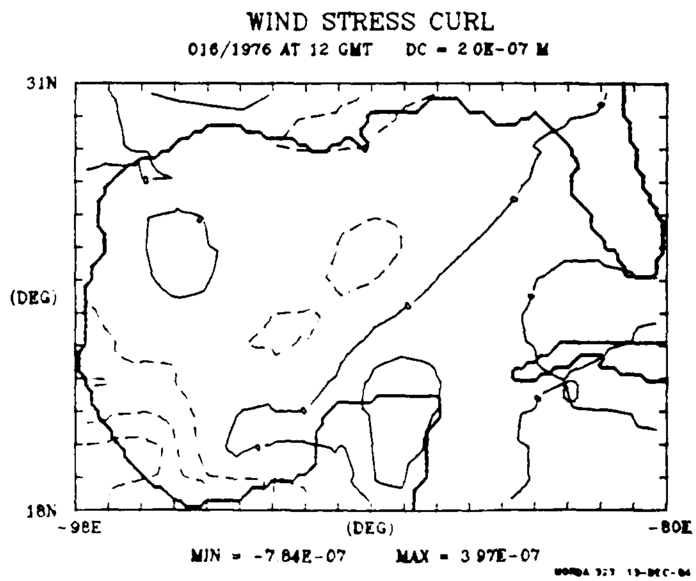
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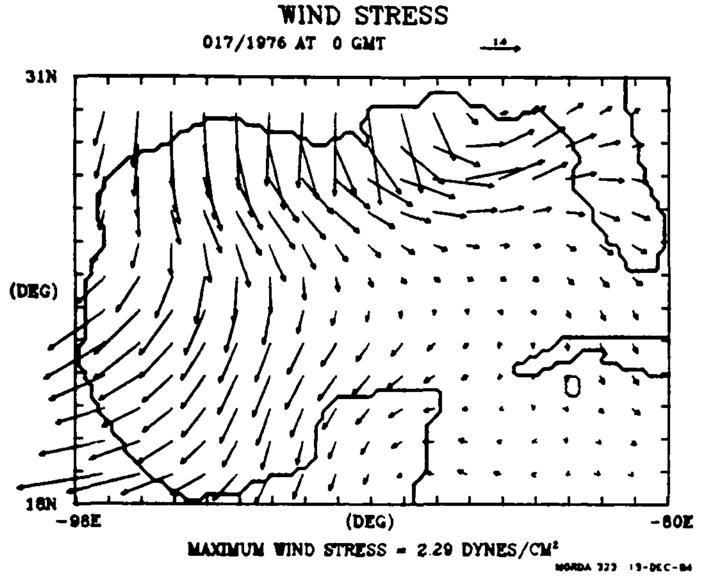
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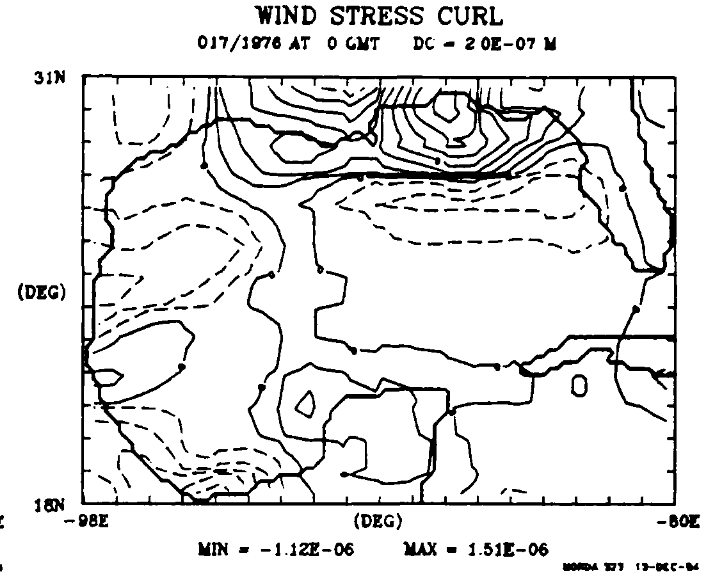
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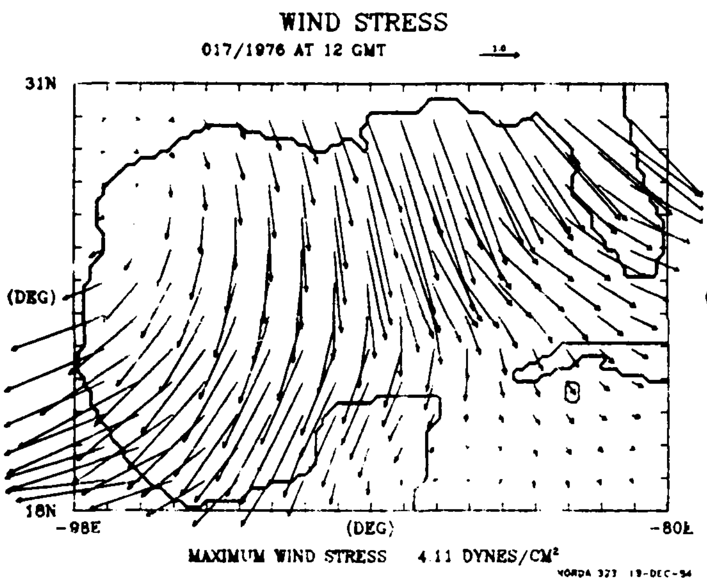
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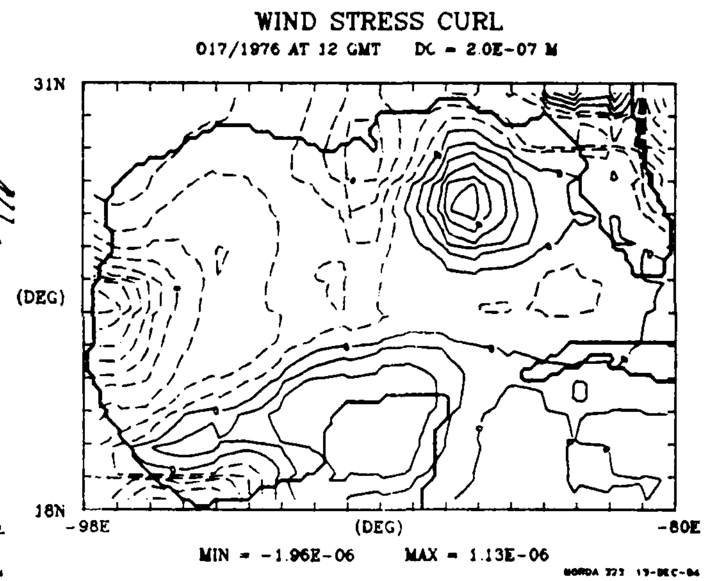
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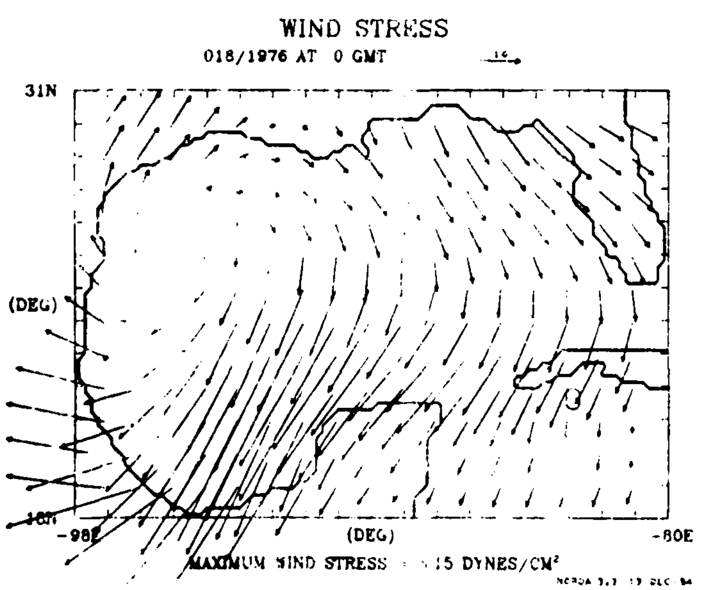
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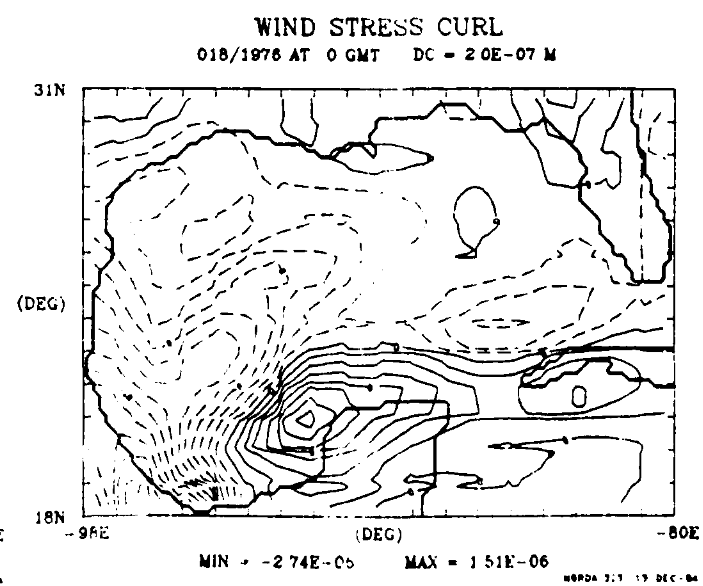
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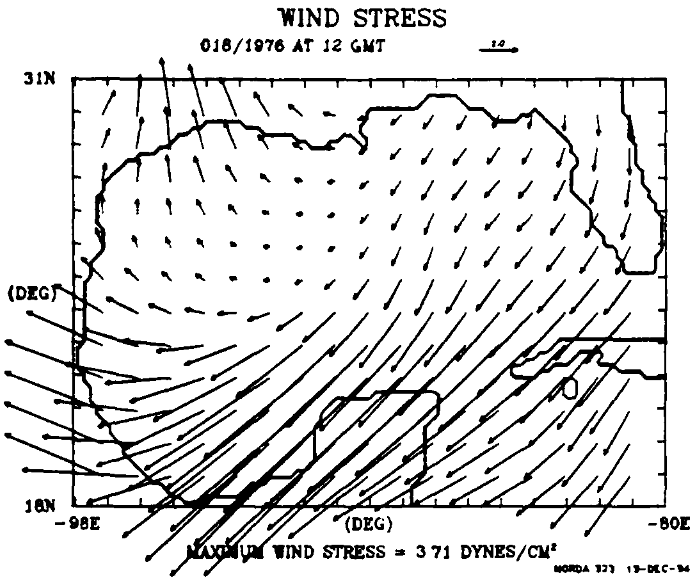
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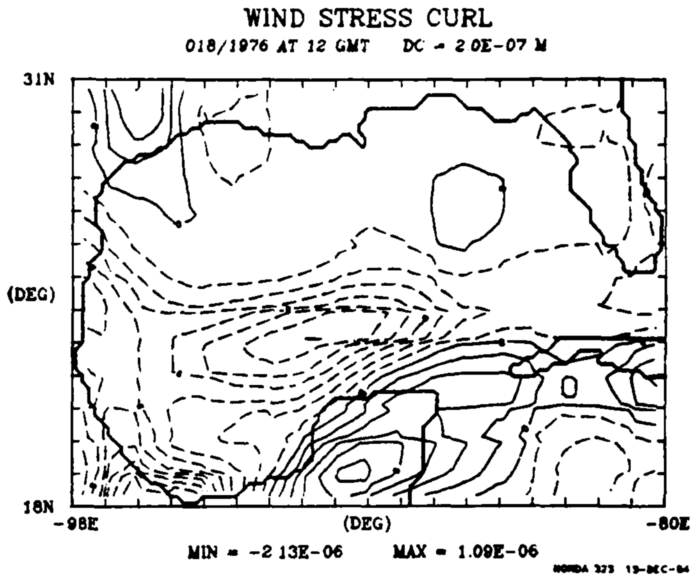
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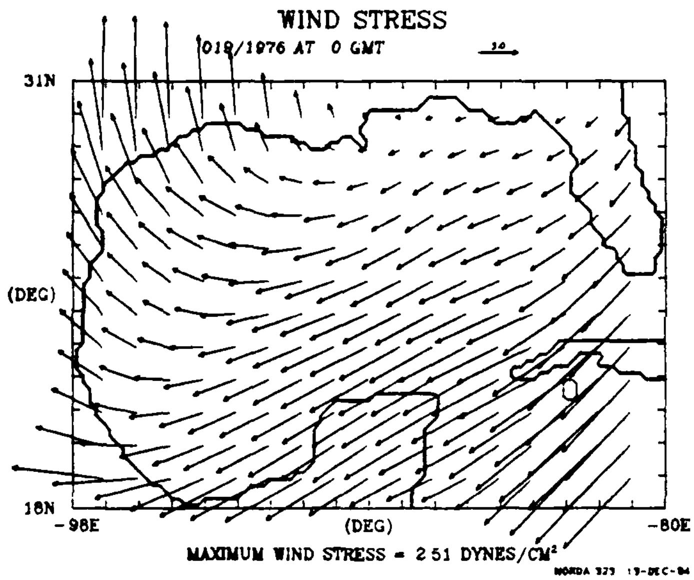
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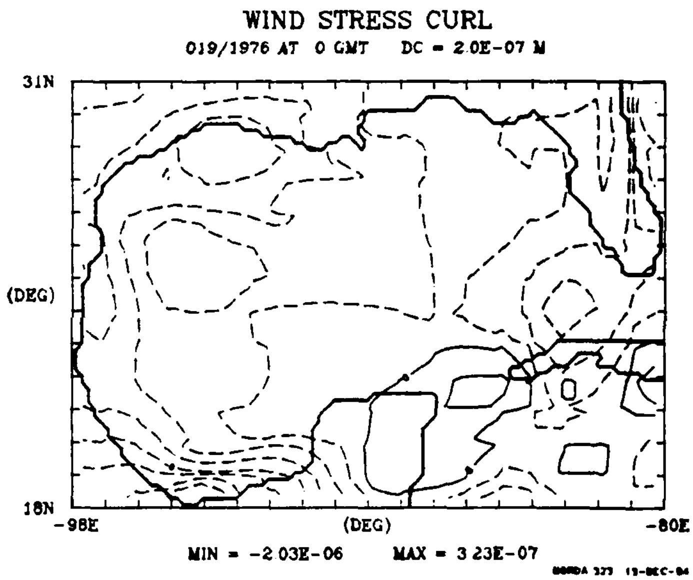
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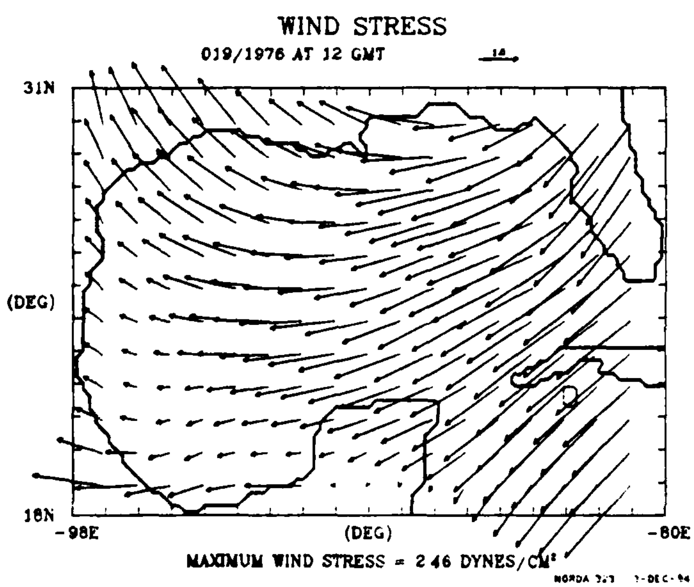
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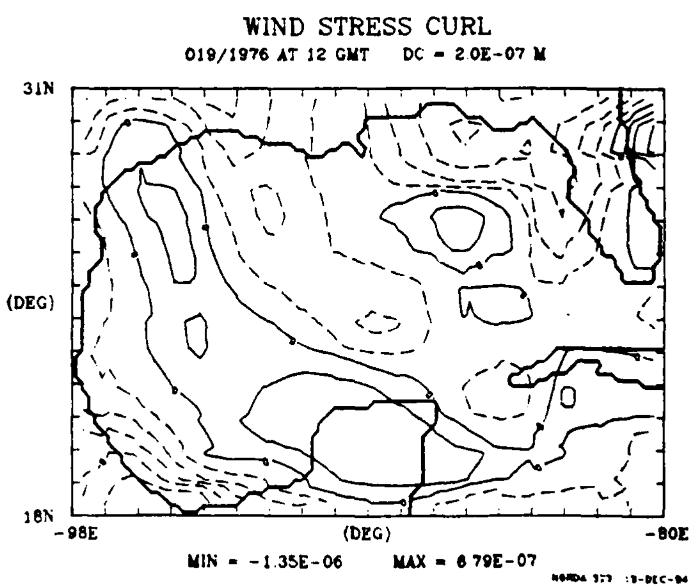
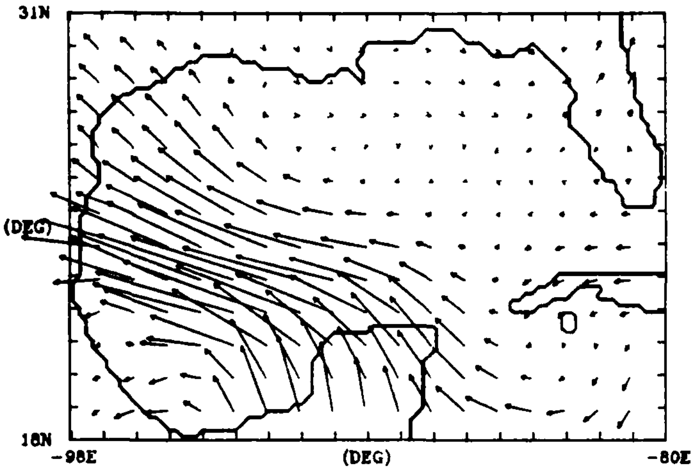
-80E
MAXIMUM WIND STRESS = 2.46 DYNES/CM²


WIND STRESS CURL
019/1976 AT 12 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.35E-06 MAX = 6.79E-07

WIND STRESS

193/1976 AT 0 GMT

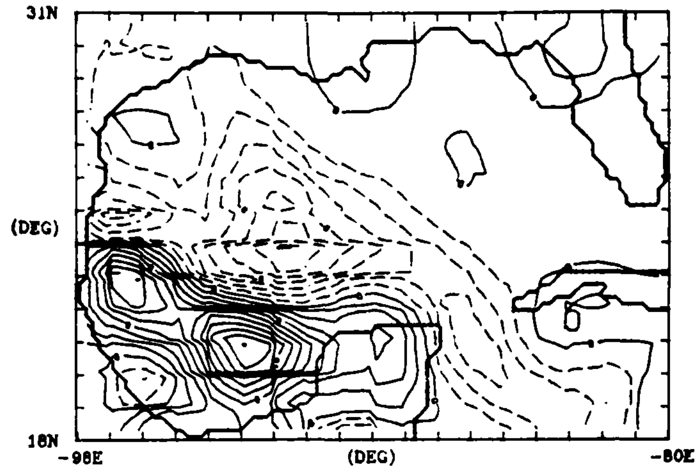


MAXIMUM WIND STRESS = 3.70 DYNES/CM²

NORDA 323 19-DEC-84

WIND STRESS CURL

193/1976 AT 0 GMT DC = 2.0E-07 M

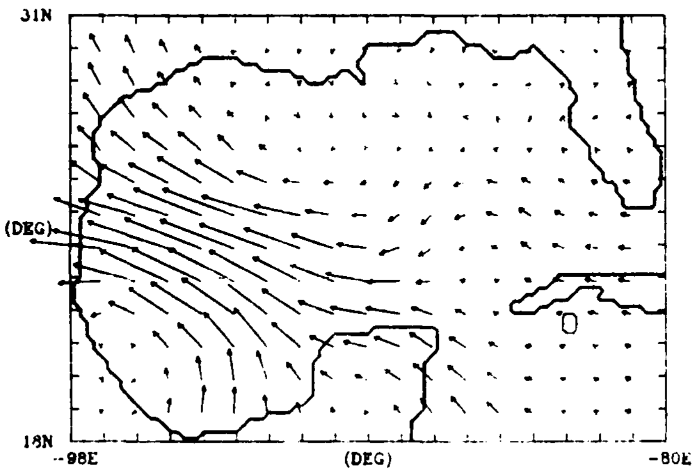


MIN = -1.42E-06 MAX = 2.21E-06

NORDA 323 19-DEC-84

WIND STRESS

193/1976 AT 12 GMT

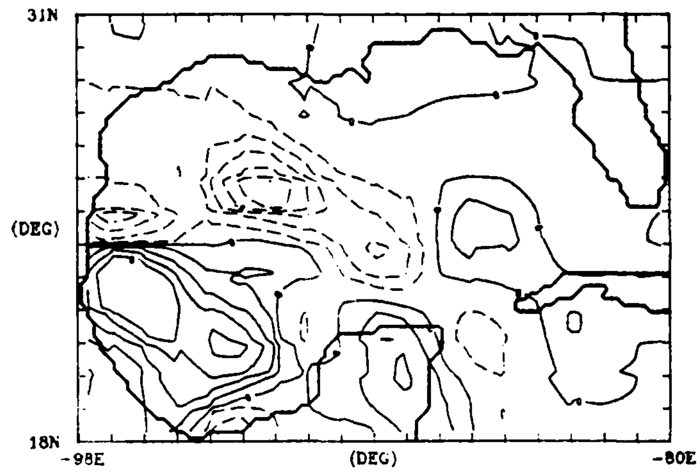


MAXIMUM WIND STRESS = 2.04 DYNES/CM²

NORDA 323 19-DEC-84

WIND STRESS CURL

193/1976 AT 12 GMT DC = 2.0E-07 M

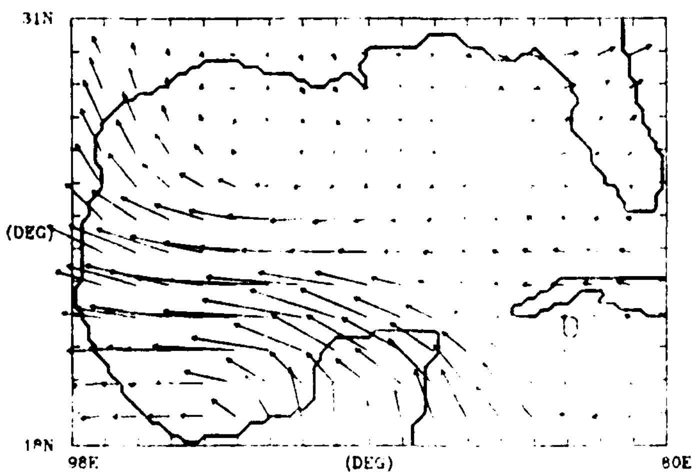


MIN = -1.20E-06 MAX = 1.31E-06

NORDA 323 19-DEC-84

WIND STRESS

194/1976 AT 0 GMT

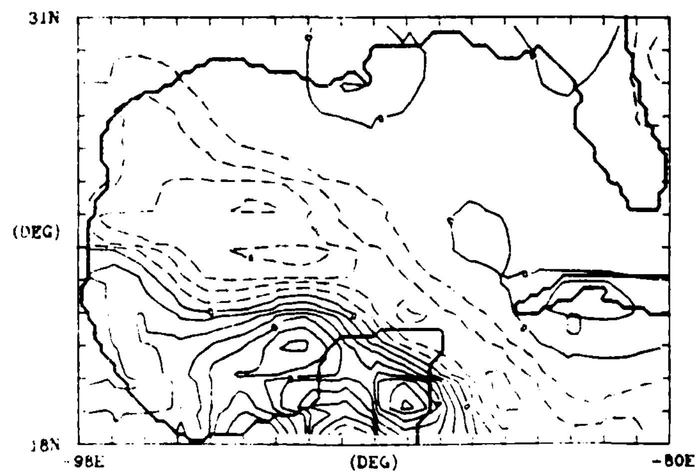


MAXIMUM WIND STRESS = 2.56 DYNES/CM²

NORDA 323 19-DEC-84

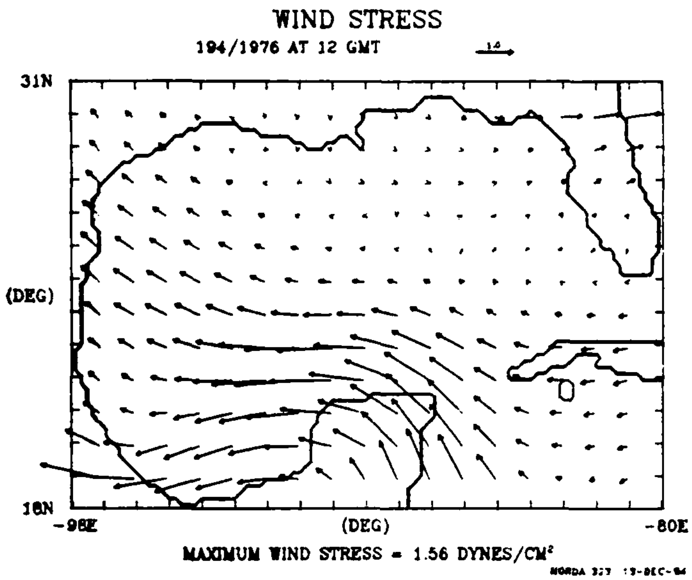
WIND STRESS CURL

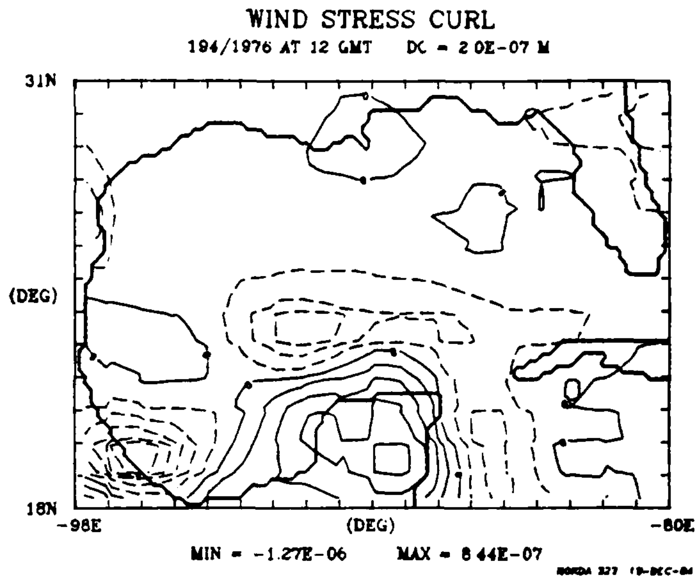
194/1976 AT 0 GMT DC = 2.0E-07 M

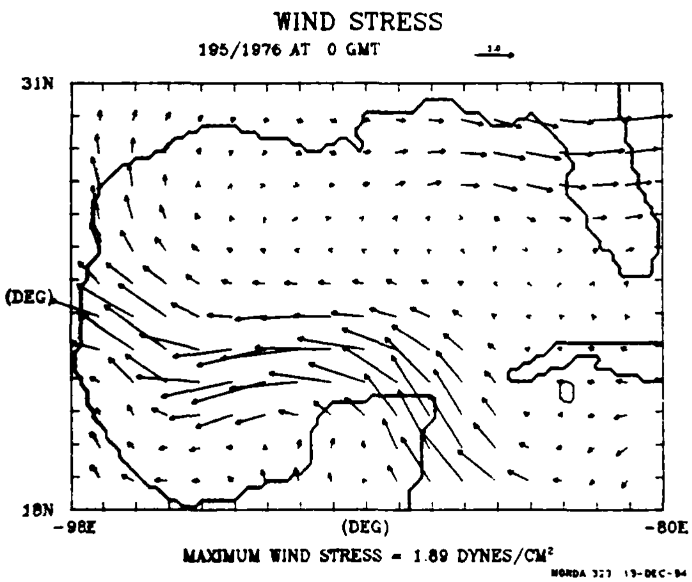


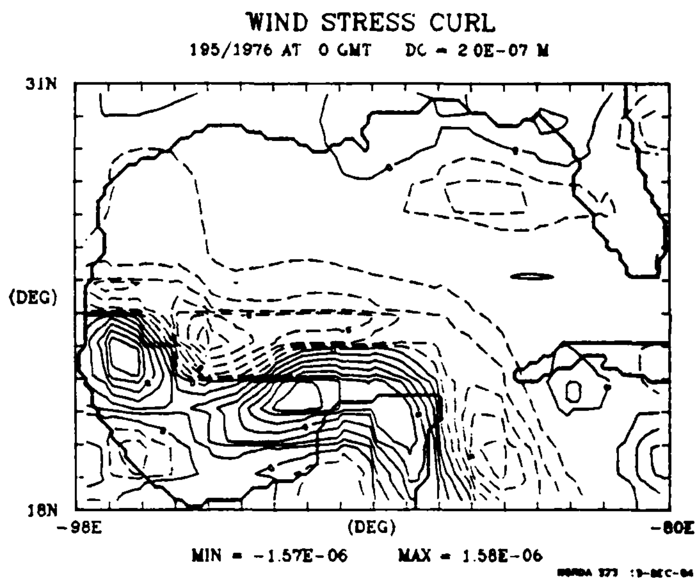
MIN = -9.62E-07 MAX = 1.53E-06

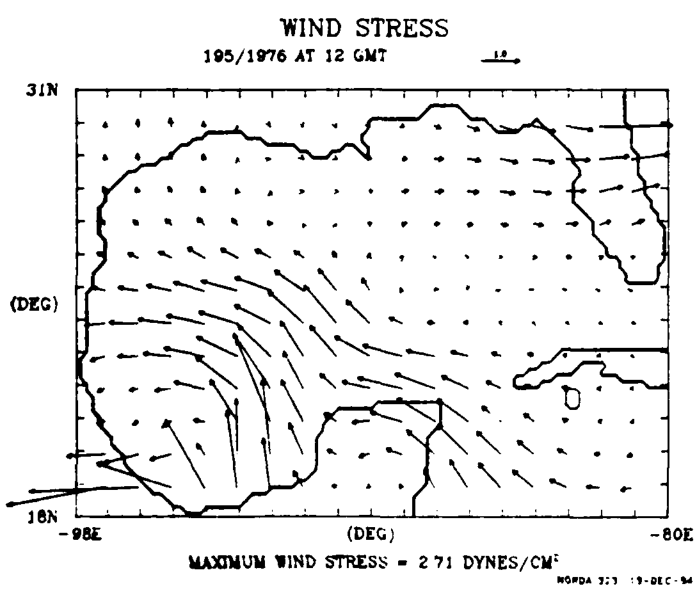
NORDA 323 19-DEC-84

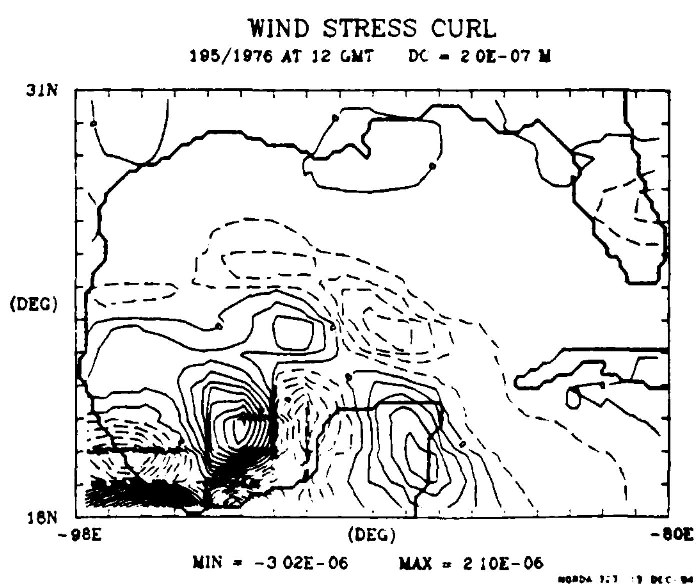

WIND STRESS
194/1976 AT 12 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.56 DYNES/CM²

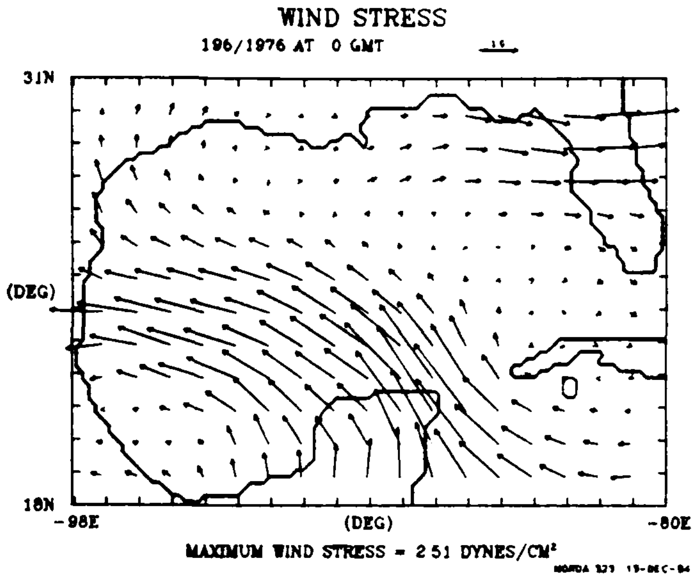

WIND STRESS CURL
194/1976 AT 12 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.27E-06 MAX = 8.44E-07

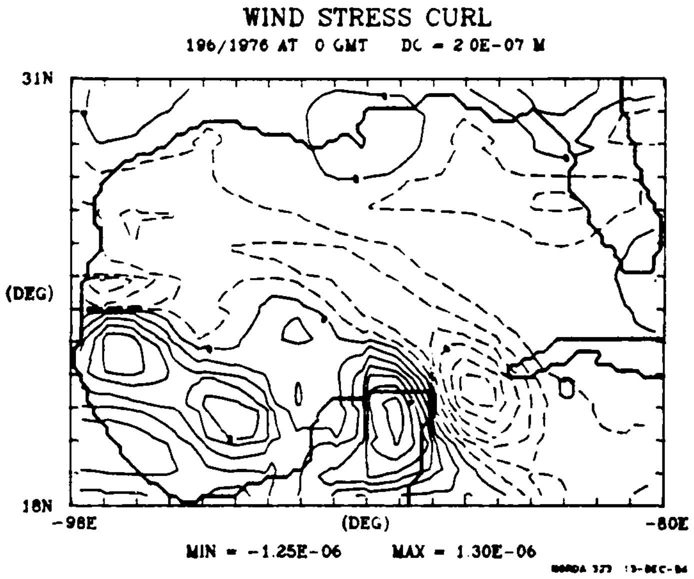

WIND STRESS
195/1976 AT 0 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.89 DYNES/CM²

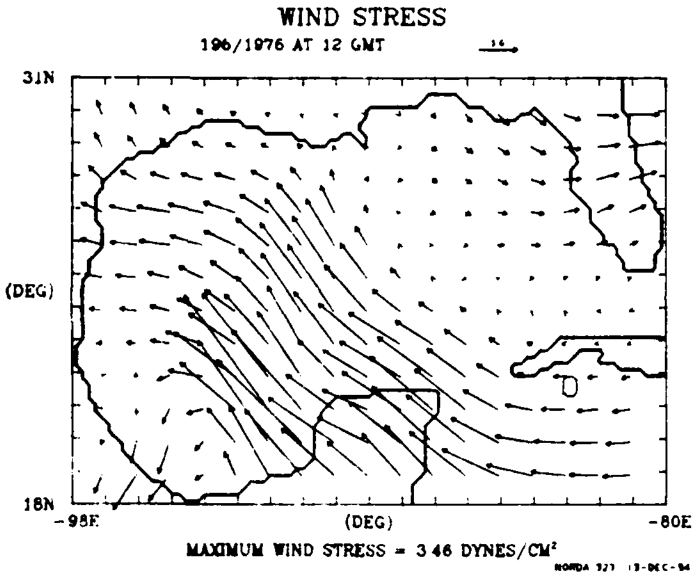

WIND STRESS CURL
195/1976 AT 0 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.57E-06 MAX = 1.58E-06

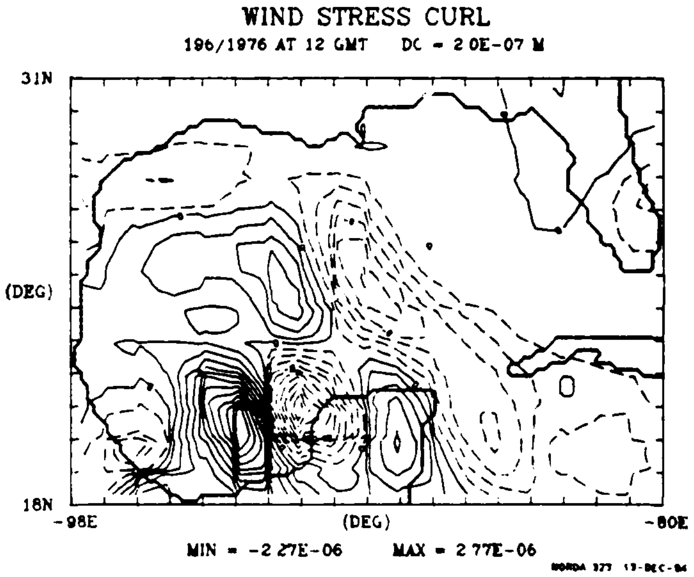

WIND STRESS
195/1976 AT 12 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.71 DYNES/CM²

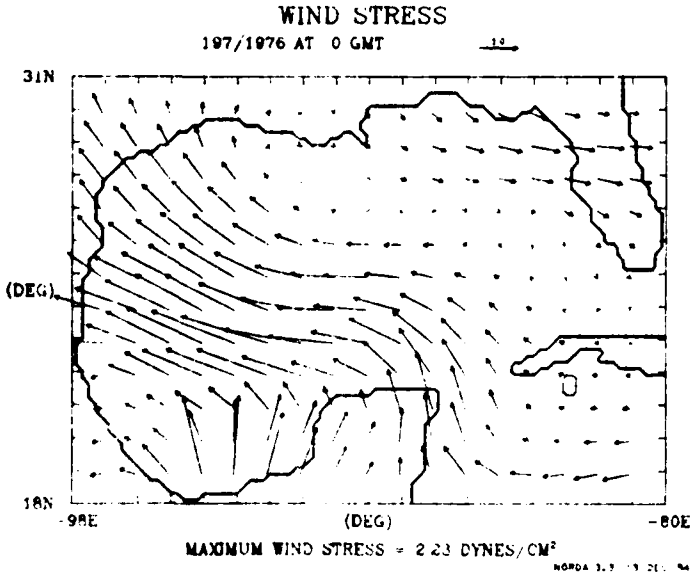

WIND STRESS CURL
195/1976 AT 12 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -3.02E-06 MAX = 2.10E-06

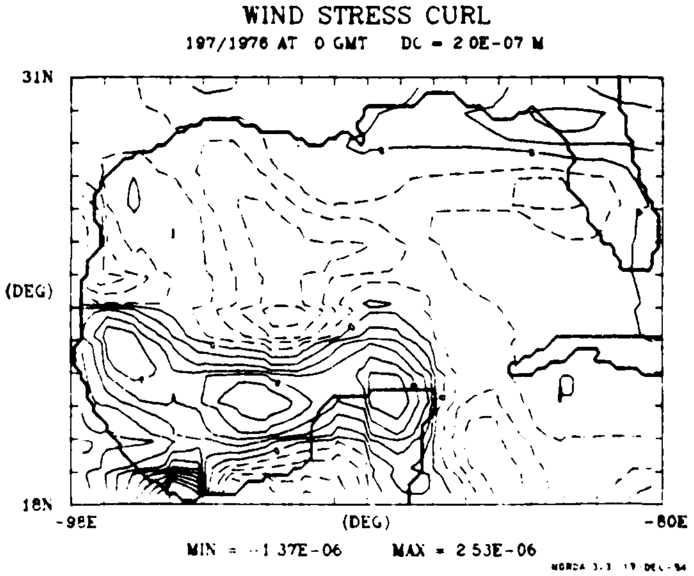

WIND STRESS
196/1976 AT 0 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.51 DYNES/CM²


WIND STRESS CURL
196/1976 AT 0 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.25E-06 MAX = 1.30E-06


WIND STRESS
196/1976 AT 12 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.46 DYNES/CM²

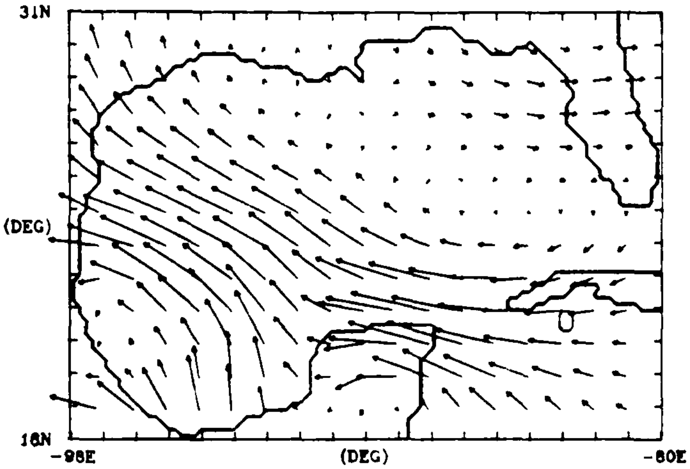

WIND STRESS CURL
196/1976 AT 12 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.27E-06 MAX = 2.77E-06


WIND STRESS
197/1976 AT 0 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.23 DYNES/CM²


WIND STRESS CURL
197/1976 AT 0 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.37E-06 MAX = 2.53E-06

WIND STRESS

197/1976 AT 12 GMT

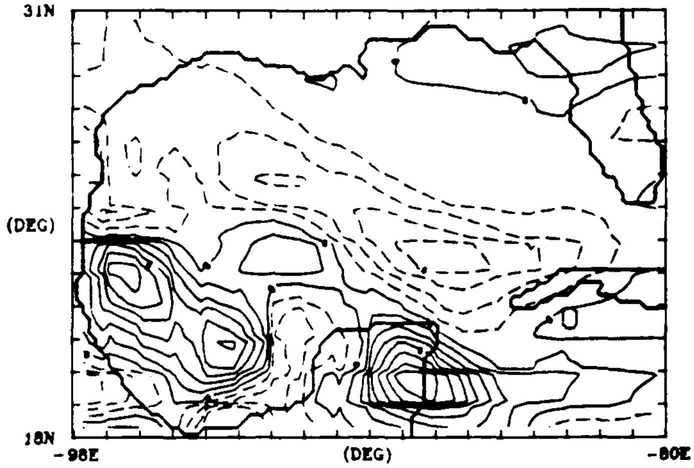


MAXIMUM WIND STRESS = 2.04 DYNES/CM²

NORDA 323 19-DEC-84

WIND STRESS CURL

197/1976 AT 12 GMT DC = 2.0E-07 M

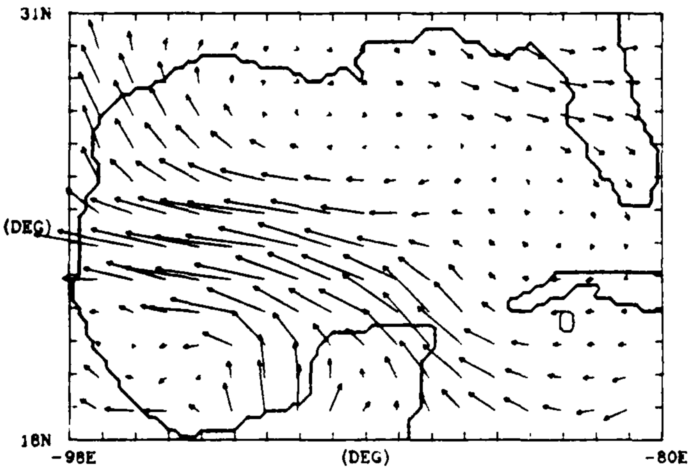


MIN = -1.49E-06 MAX = 1.60E-06

NORDA 323 19-DEC-84

WIND STRESS

198/1976 AT 0 GMT

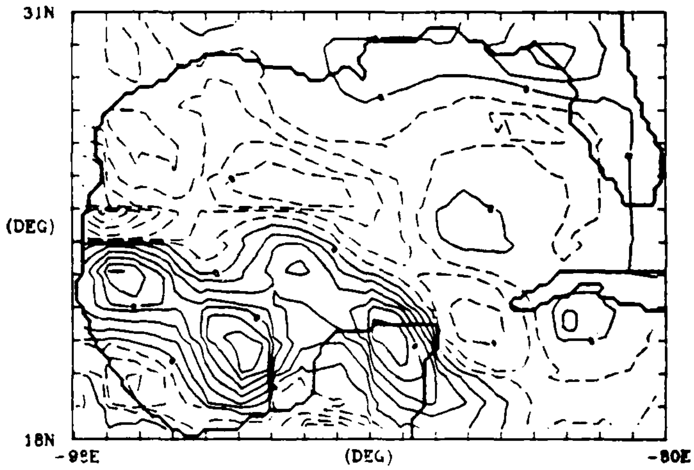


MAXIMUM WIND STRESS = 1.99 DYNES/CM²

NORDA 323 19-DEC-84

WIND STRESS CURL

198/1976 AT 0 GMT DC = 2.0E-07 M

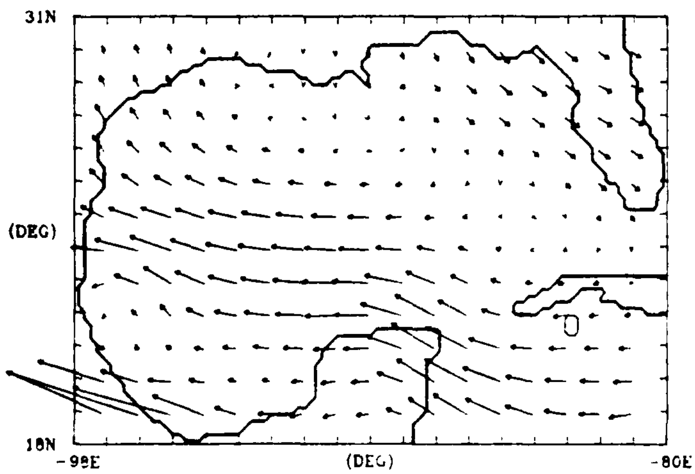


MIN = -1.48E-06 MAX = 1.37E-06

NORDA 323 19-DEC-84

WIND STRESS

198/1976 AT 12 GMT

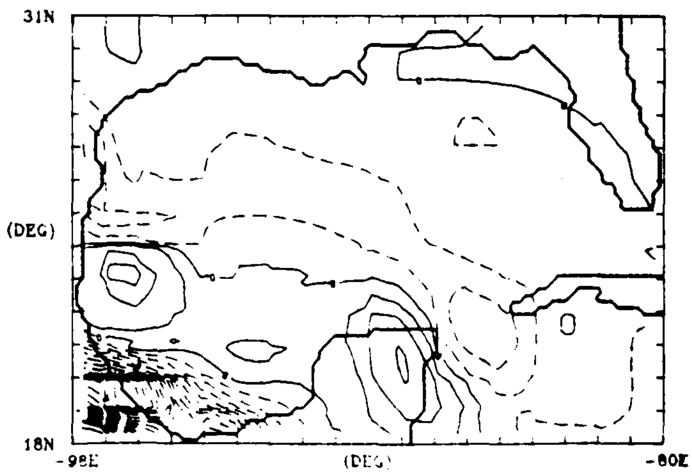


MAXIMUM WIND STRESS = 5.01 DYNES/CM²

NORDA 323 19-DEC-84

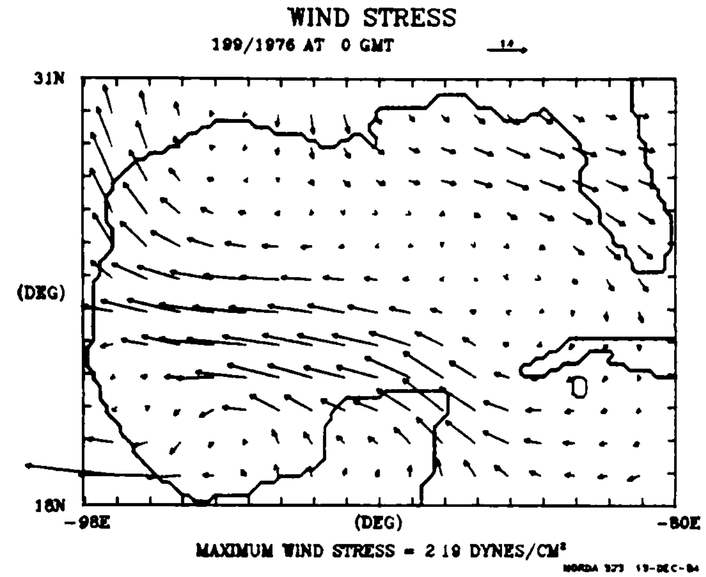
WIND STRESS CURL

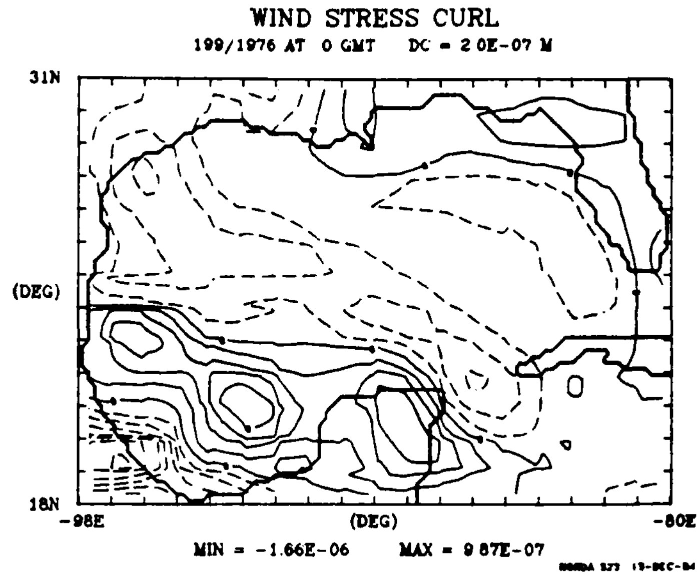
198/1976 AT 12 GMT DC = 2.0E-07 M

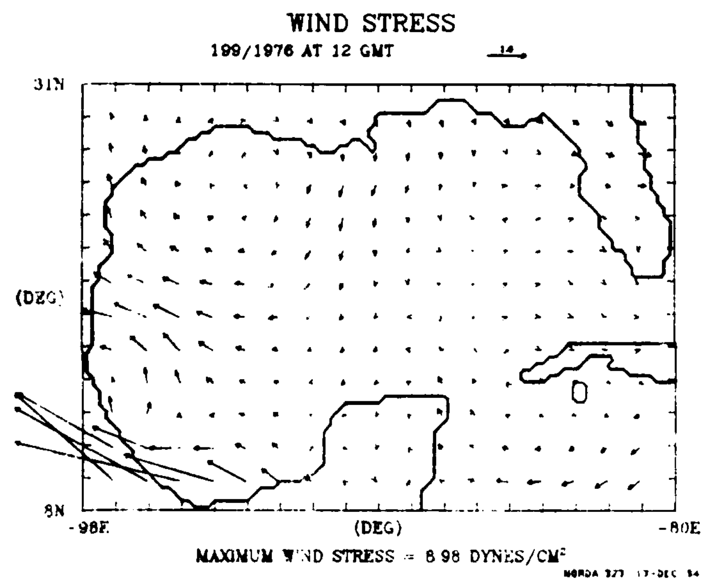


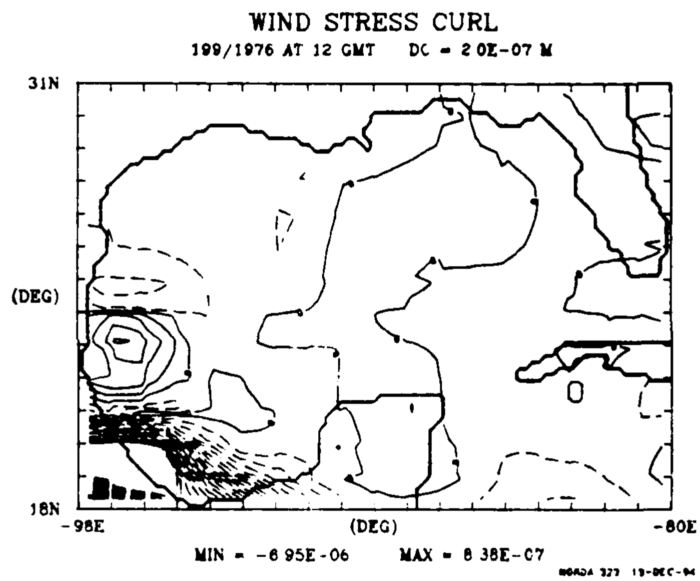
MIN = -3.40E-06 MAX = 1.50E-06

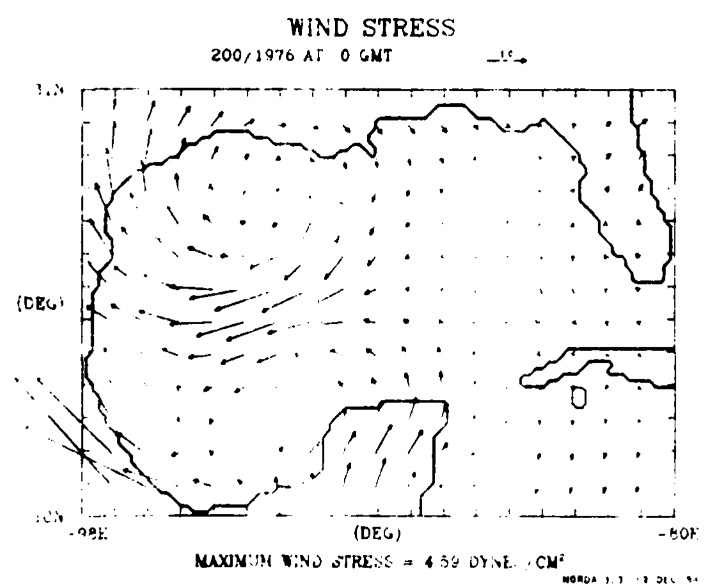
NORDA 323 19-DEC-84

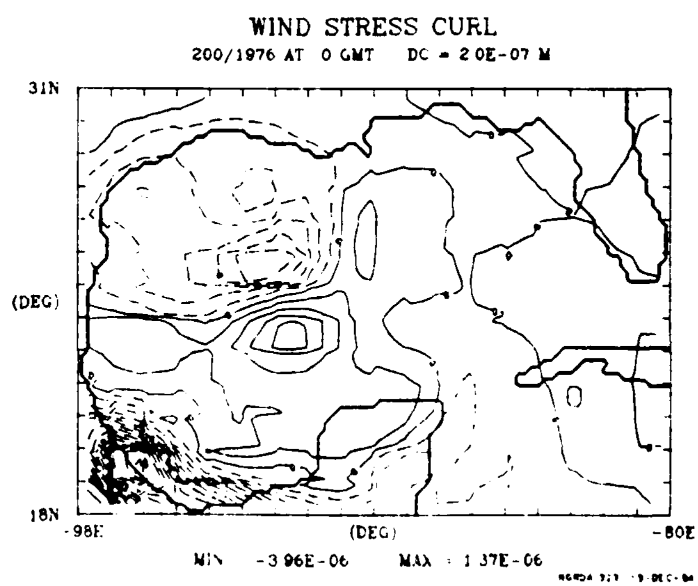

WIND STRESS
199/1976 AT 0 GMT
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.19 DYNES/CM²


WIND STRESS CURL
199/1976 AT 0 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.66E-06 MAX = 9.87E-07

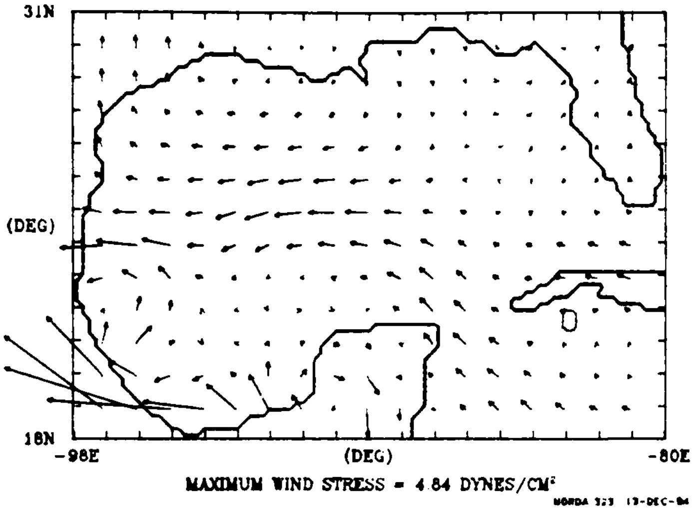

WIND STRESS
199/1976 AT 12 GMT
31N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 8.98 DYNES/CM²


WIND STRESS CURL
199/1976 AT 12 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -6.95E-06 MAX = 8.38E-07

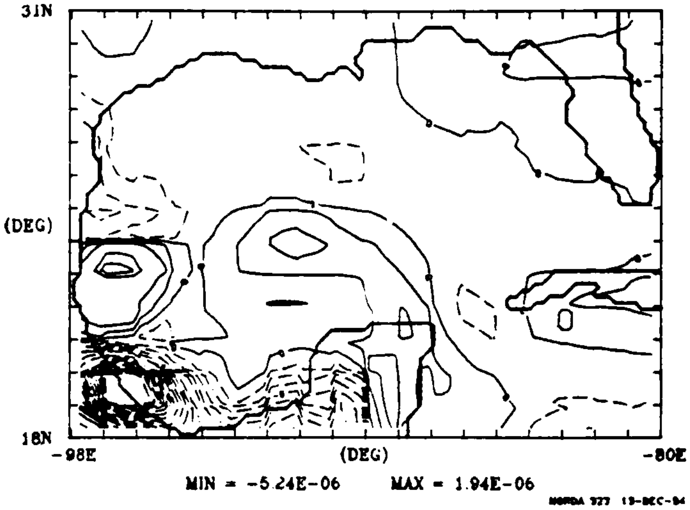

WIND STRESS
200/1976 AT 0 GMT
(DEG)
-80E


WIND STRESS CURL
200/1976 AT 0 GMT DC = 2.0E-07 M
31N
(DEG)
18N
-98E
(DEG)
-80E

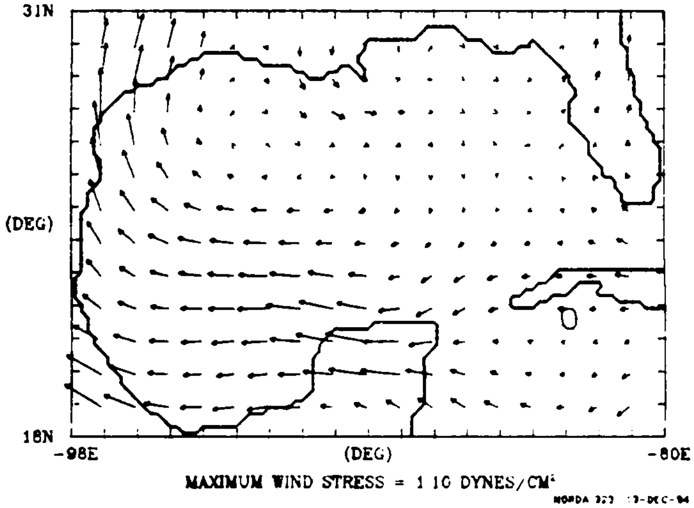
WIND STRESS
200/1976 AT 12 GMT



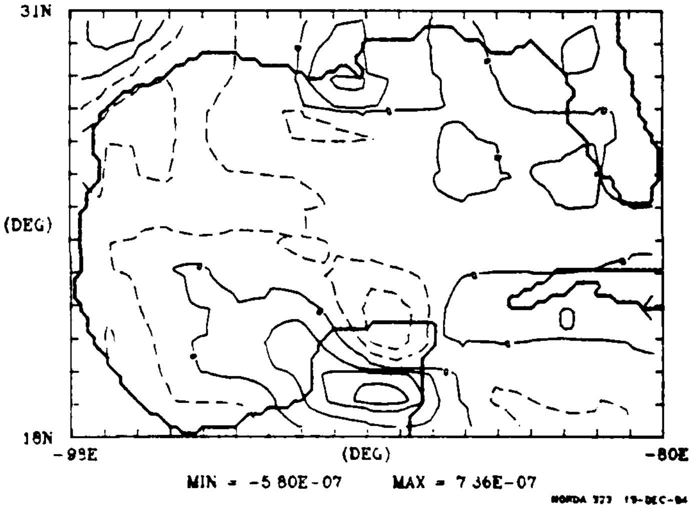
WIND STRESS CURL
200/1976 AT 12 GMT DC = 2.0E-07 M



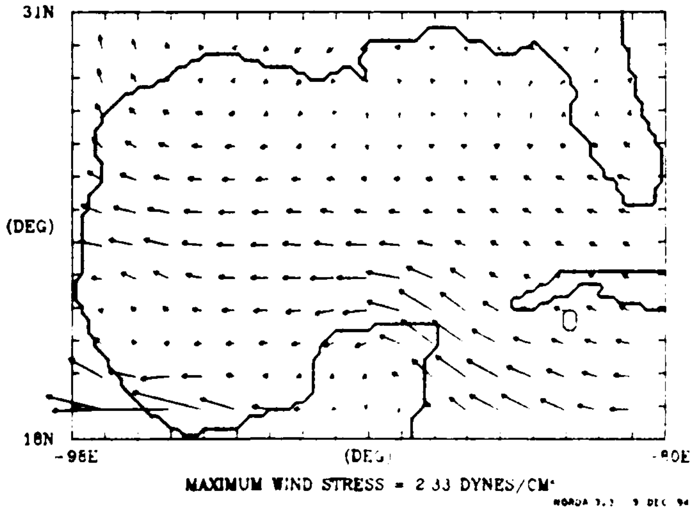
WIND STRESS
201/1976 AT 0 GMT



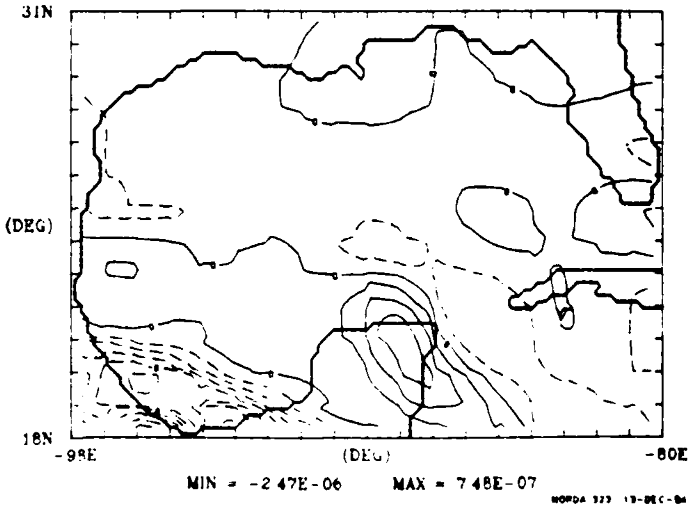
WIND STRESS CURL
201/1976 AT 0 GMT DC = 2.0E-07 M



WIND STRESS
201/1976 AT 12 GMT



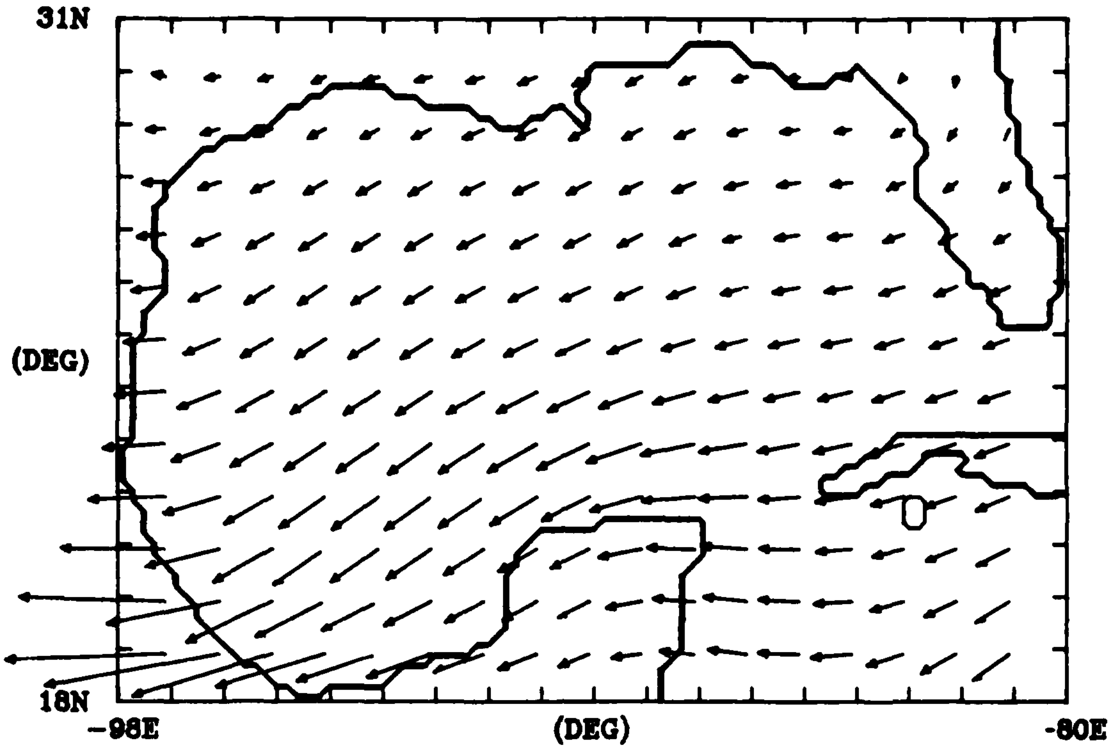
WIND STRESS CURL
201/1976 AT 12 GMT DC = 2.0E-07 M



APPENDIX B: SEASONALLY AVERAGED WIND STRESS AND WIND STRESS CURL CLIMATOLOGIES FOR THE PERIOD 1967-1982

WIND STRESS

WINTER 1967-1982

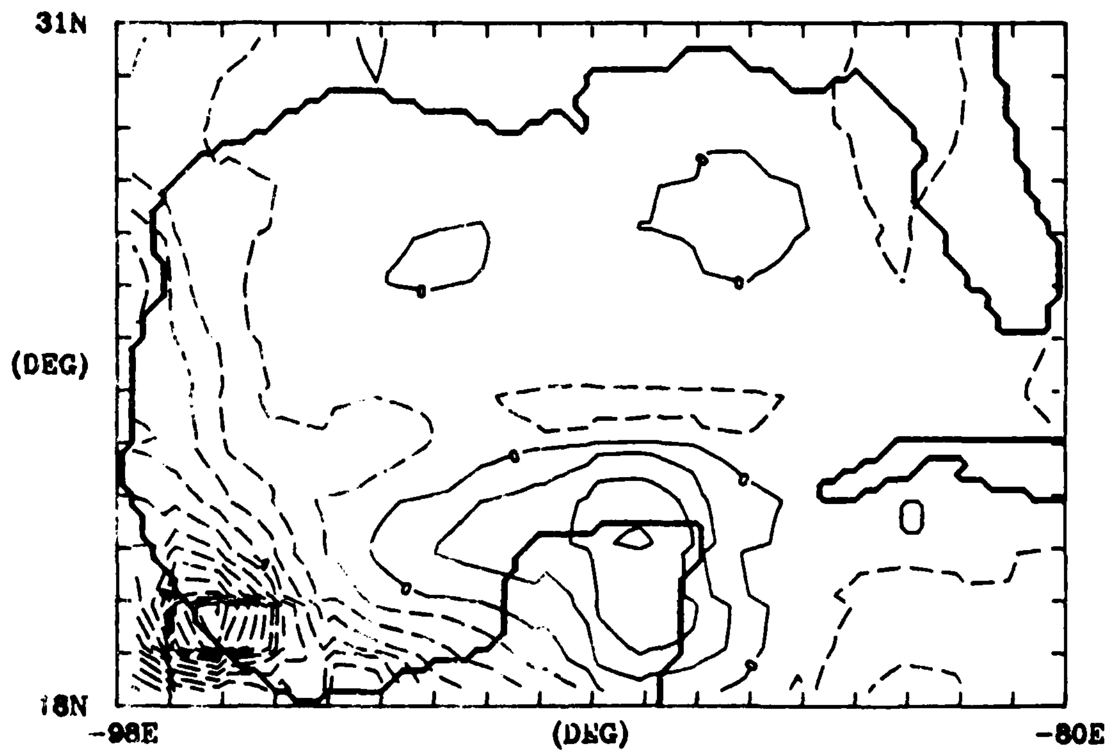


MAXIMUM WIND STRESS = 2.79 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

WINTER 1967-1982 DC = 1.0E-07 MKS

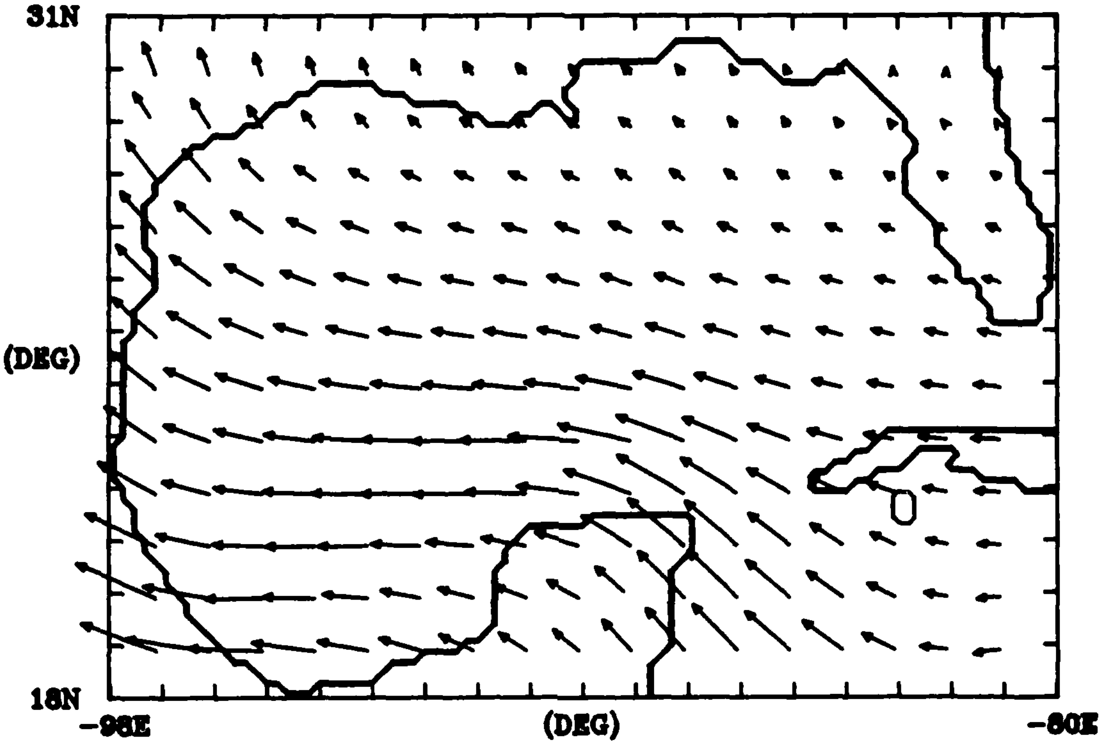


MIN = -1.42E-06 MAX = 3.15E-07

NORDA 323 12-DEC-84

WIND STRESS

SPRING 1967-1982

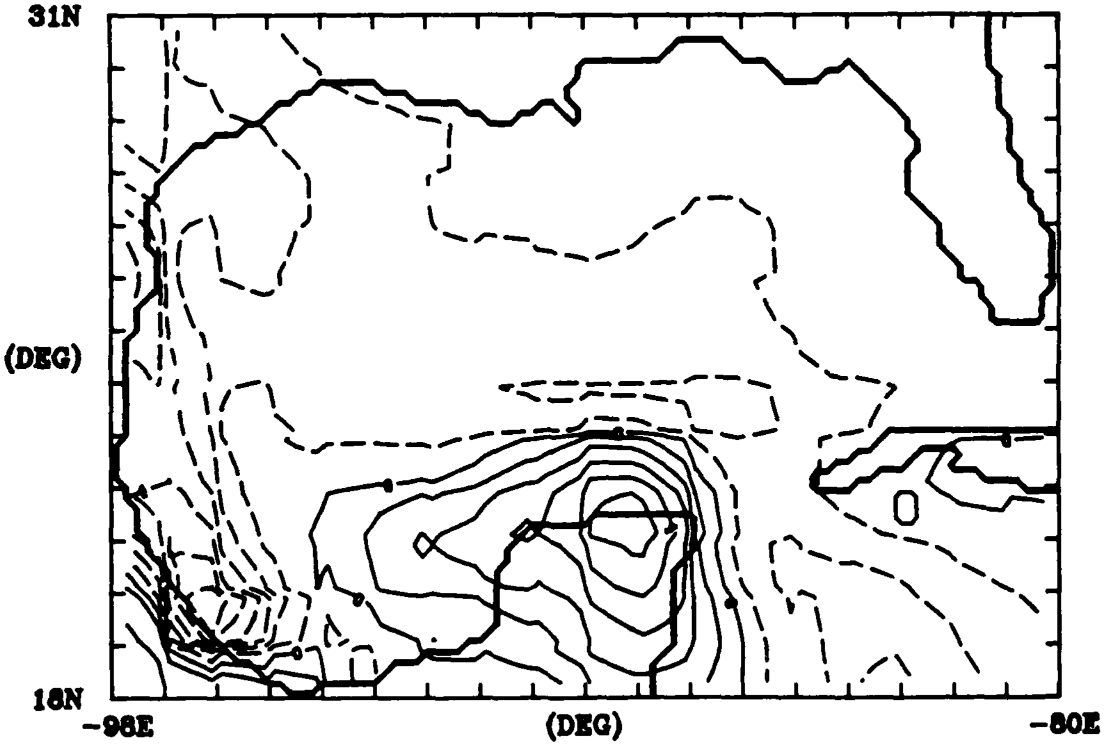


MAXIMUM WIND STRESS = 1.33 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

SPRING 1967-1982 DC = 1.0E-07 MKS

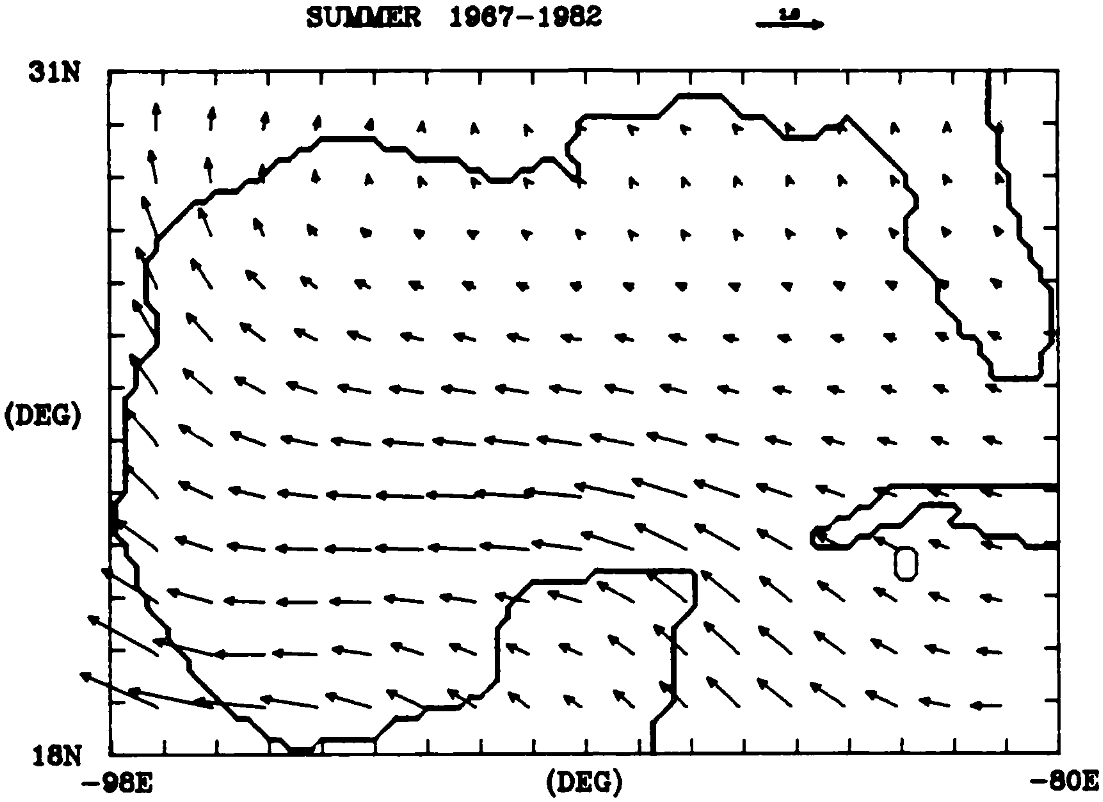


MIN = -7.86E-07 MAX = 5.85E-07

NORDA 323 12-DEC-84

WIND STRESS

SUMMER 1967-1982

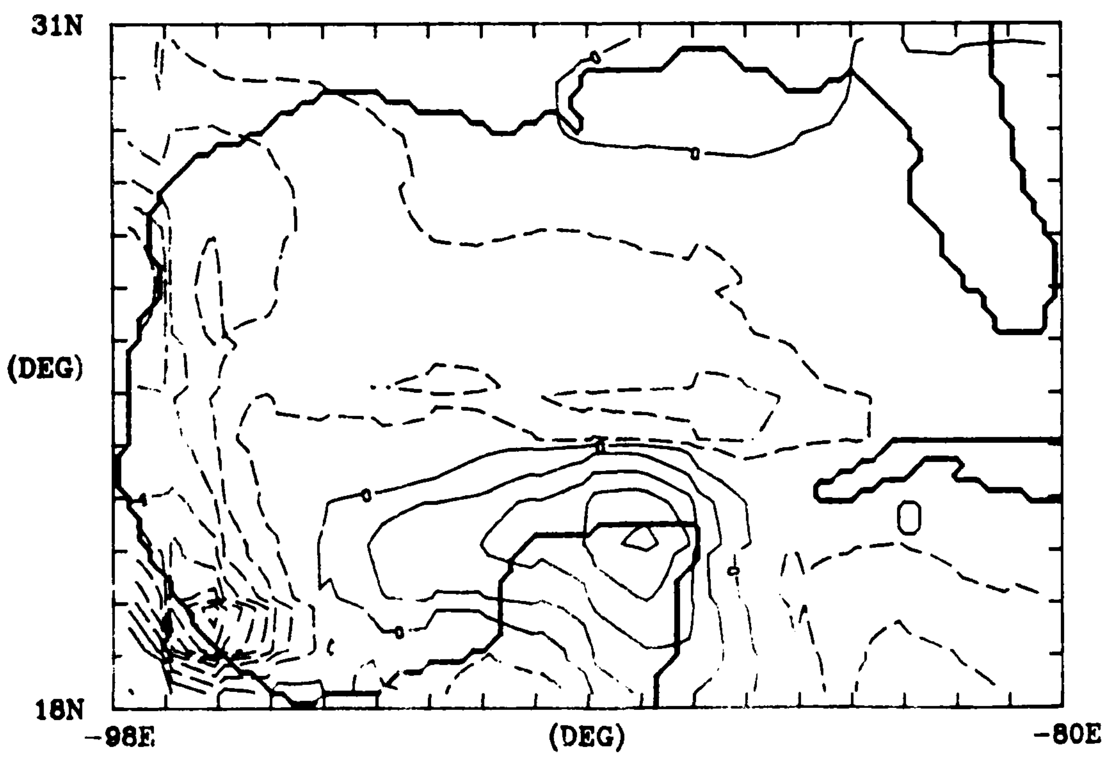


MAXIMUM WIND STRESS = 1.29 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

SUMMER 1967-1982 DC = 1.0E-07 MKS

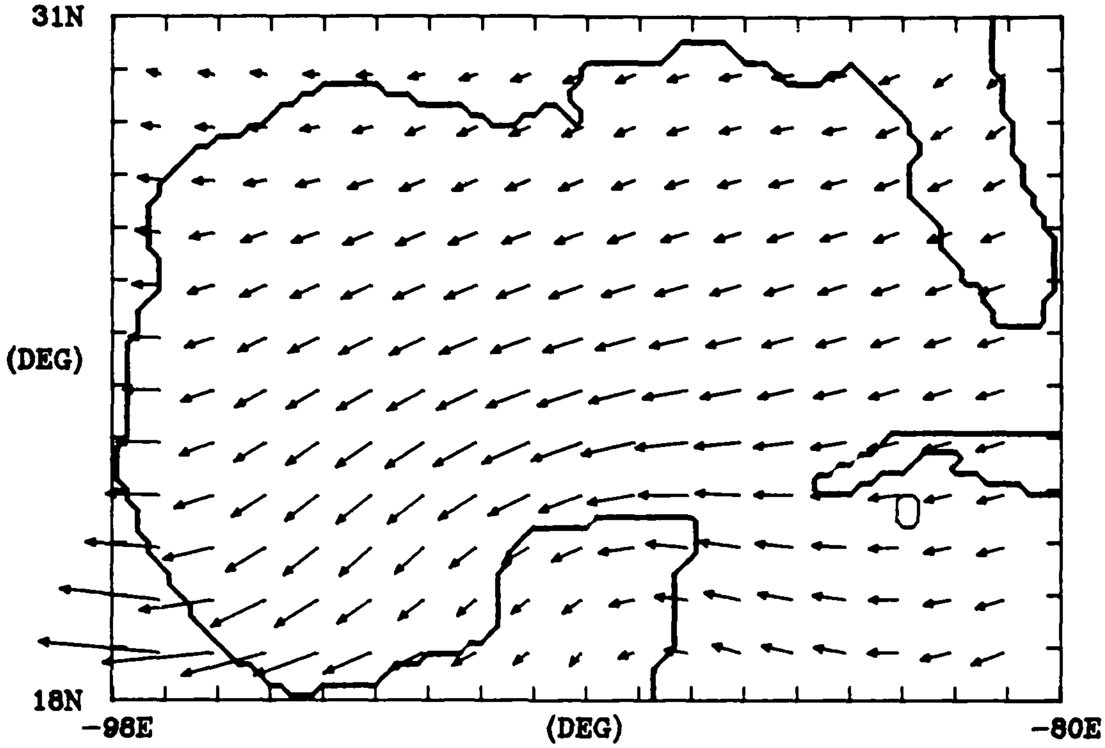


MIN = -8.64E-07 MAX = 4.31E-07

NORDA 323 12-DEC-84

WIND STRESS

FALL 1967-1982

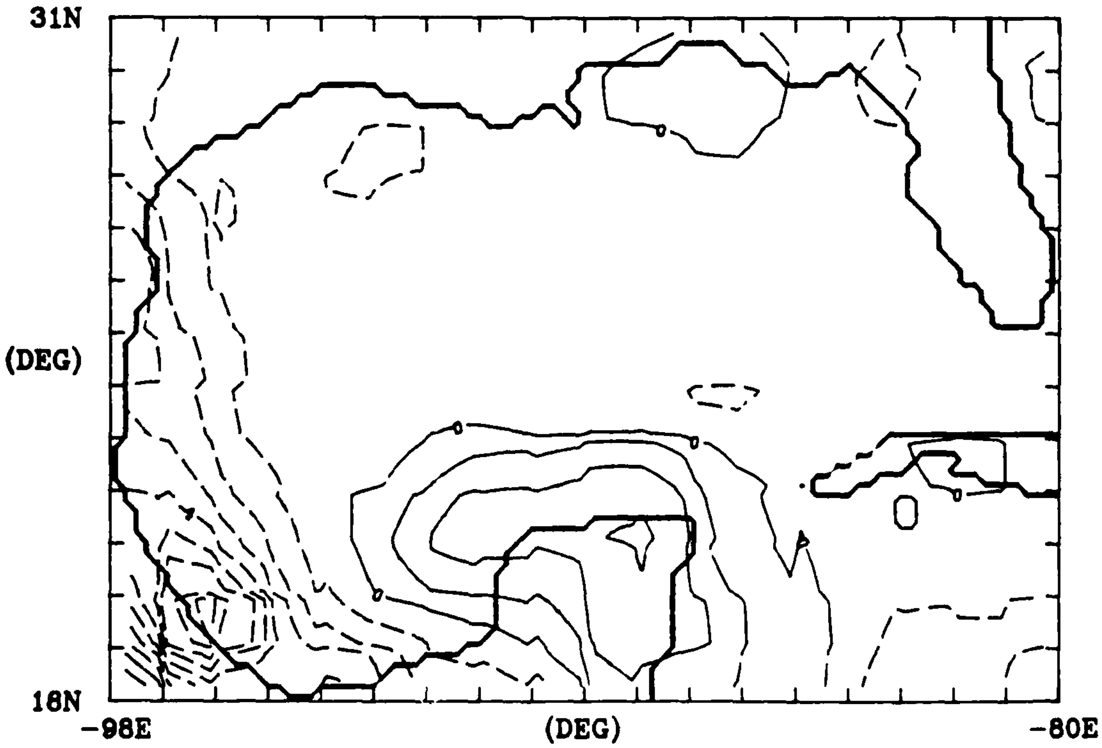


MAXIMUM WIND STRESS = 1.84 DYNES/CM²

NORDA 323 12-DEC-84

WIND STRESS CURL

FALL 1967-1982 DC = 1.0E-07 MKS



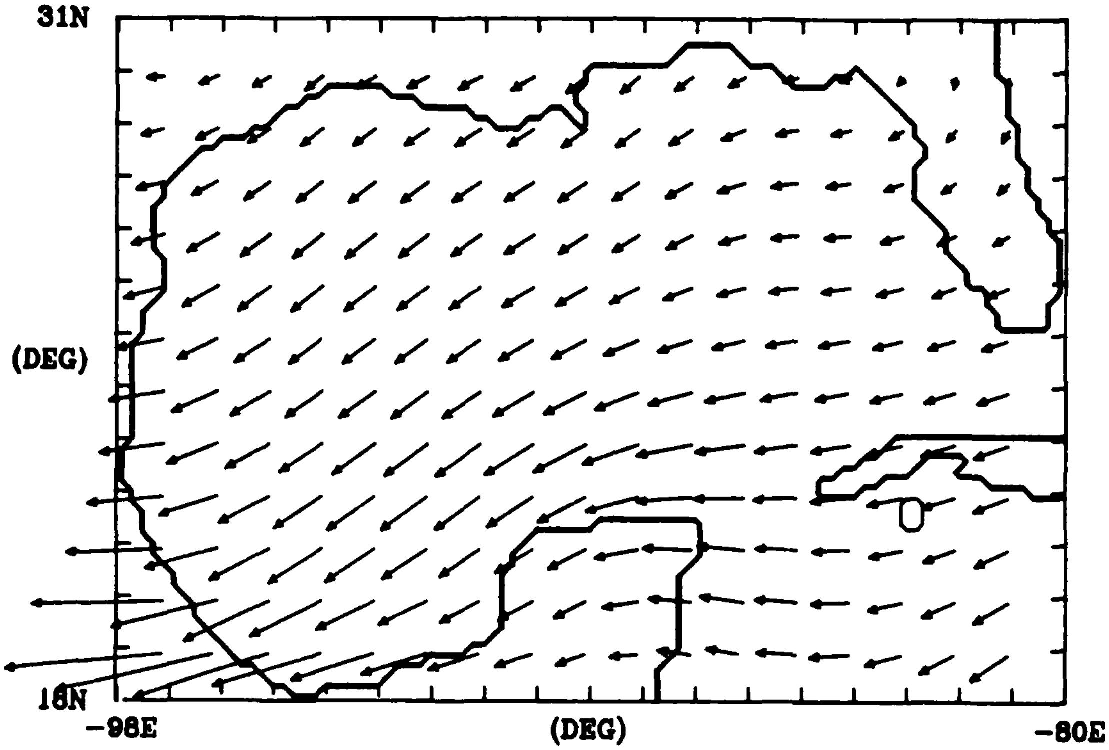
MIN = -9.53E-07 MAX = 3.22E-07

NORDA 323 12-DEC-84

APPENDIX C: MONTHLY AVERAGED WIND STRESS AND WIND STRESS CURL CLIMATOLOGIES FOR THE PERIOD 1967-1982

WIND STRESS

JANUARY 1967-1982

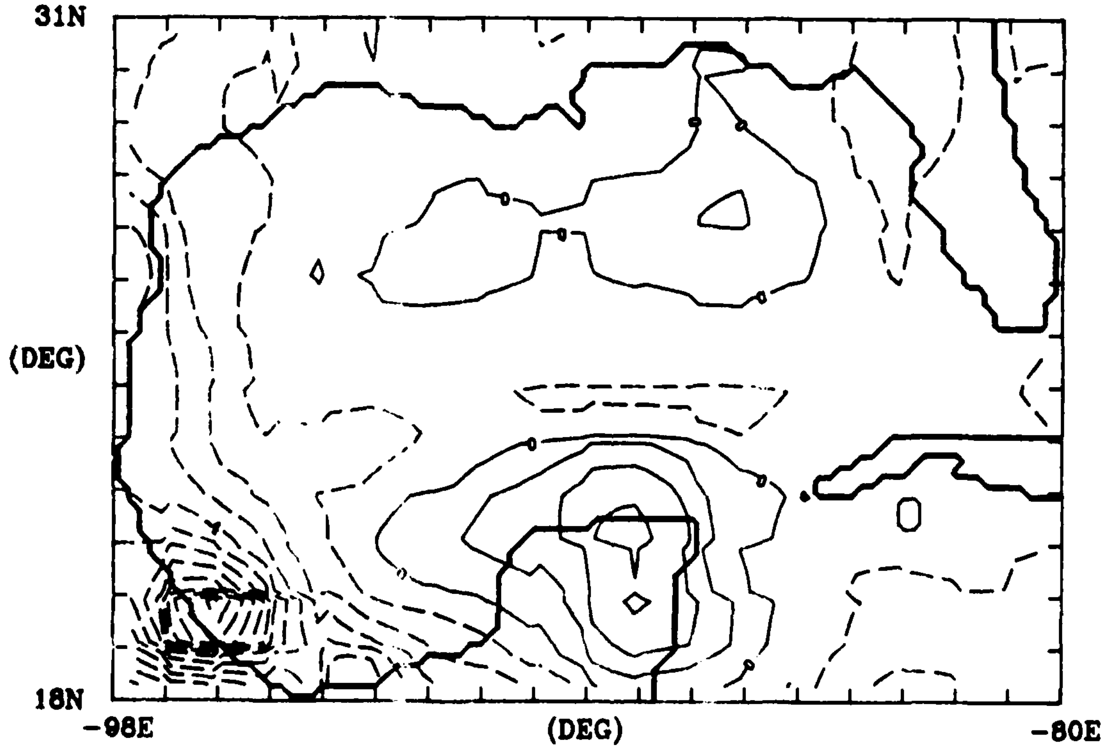


MAXIMUM WIND STRESS = 2.53 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JANUARY 1967-1982 DC = 1.0E-07

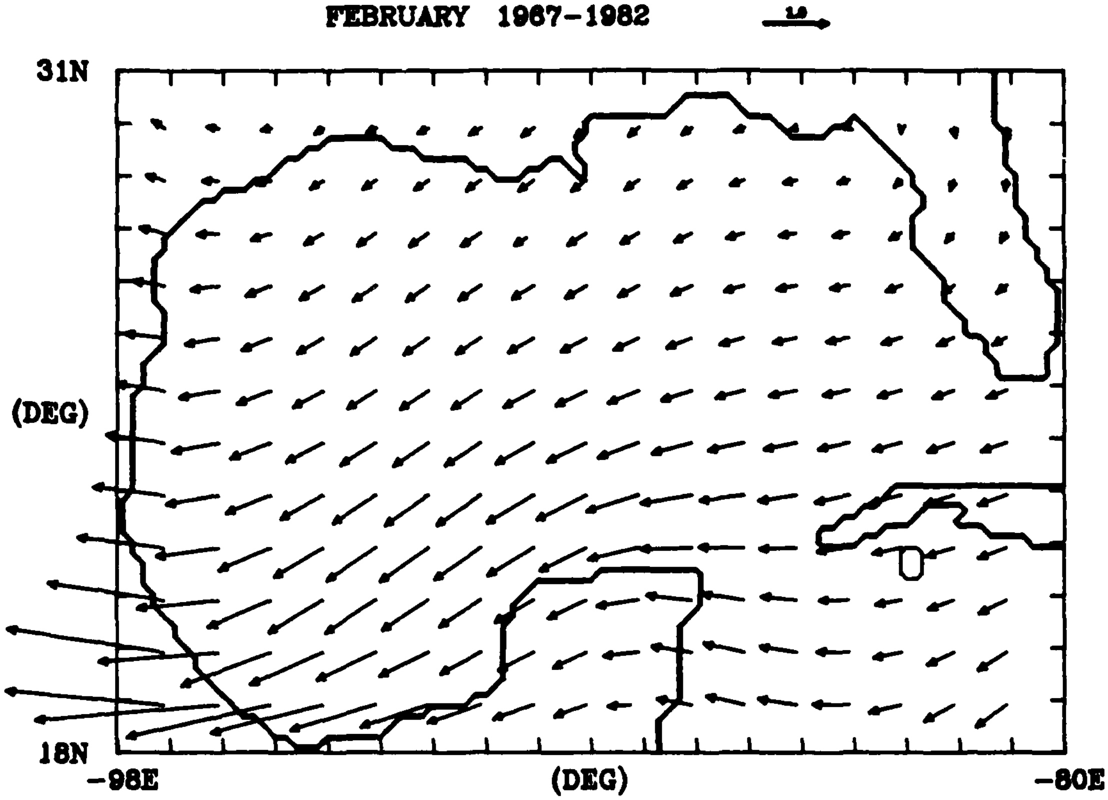


MIN = -1.23E-06 MAX = 3.29E-07

NORDA 323 13-DEC-84

WIND STRESS

FEBRUARY 1967-1982

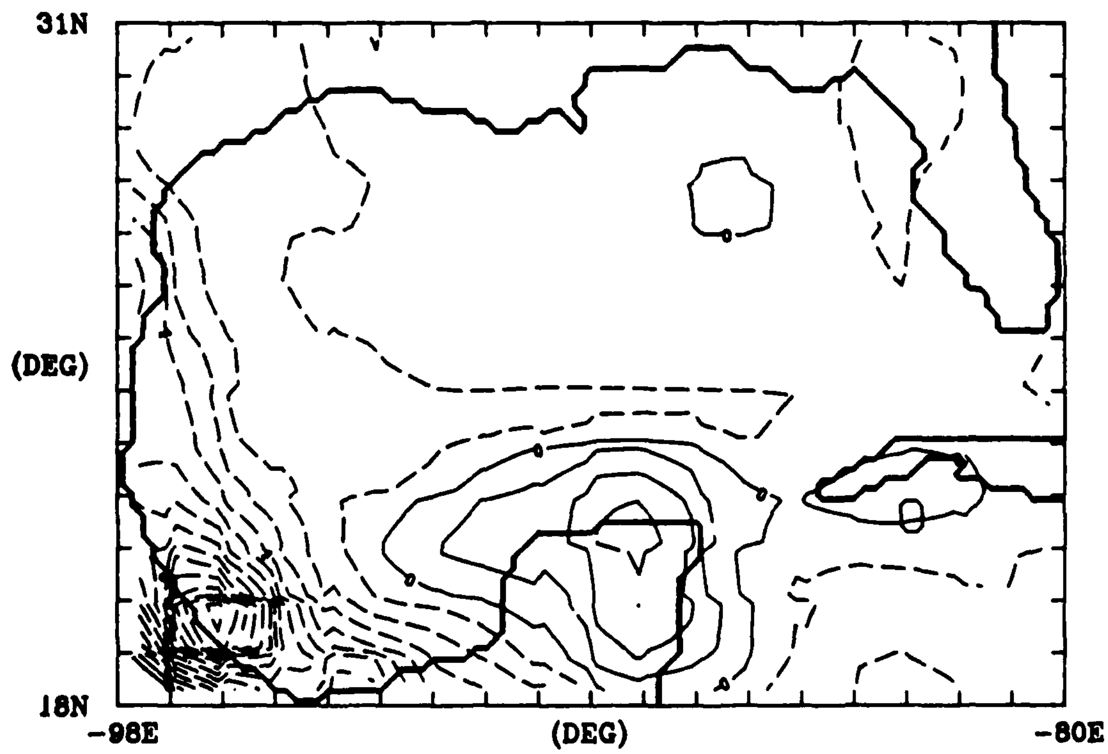


MAXIMUM WIND STRESS = 2.92 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

FEBRUARY 1967-1982 DC = 1.0E-07

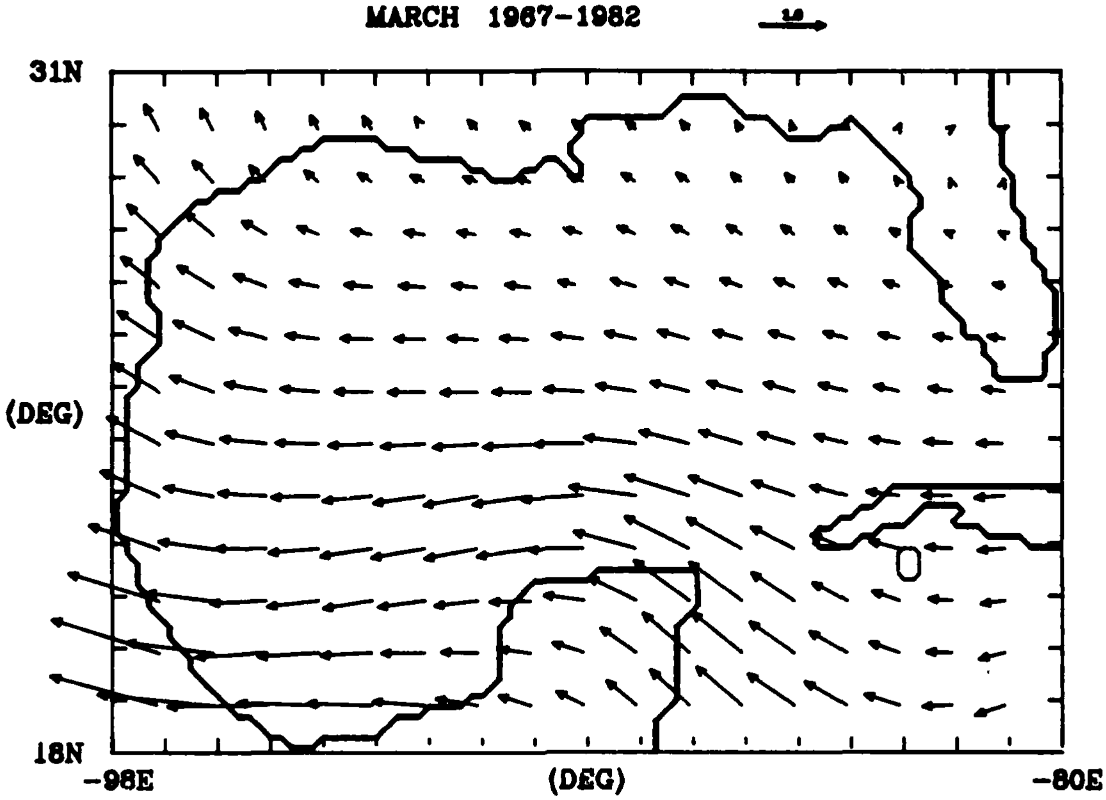


MIN = -1.57E-06 MAX = 3.93E-07

NORDA 323 13-DEC-84

WIND STRESS

MARCH 1967-1982

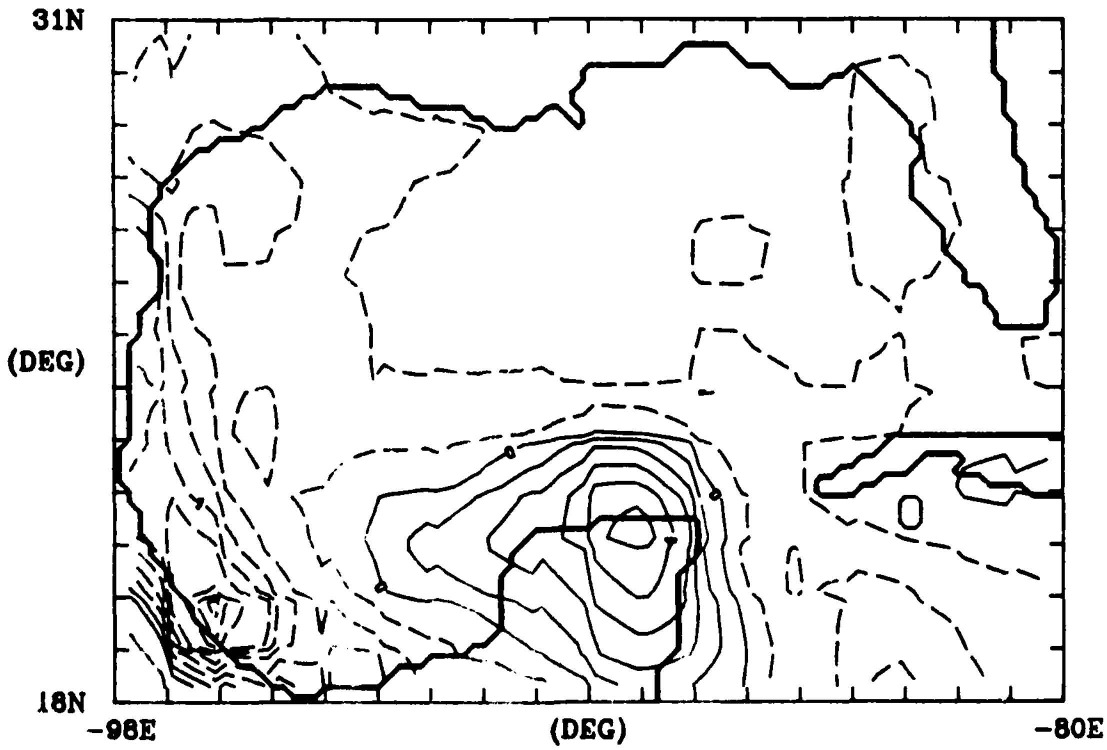


MAXIMUM WIND STRESS = 1.76 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

MARCH 1967-1982 DC = 1.0E-07

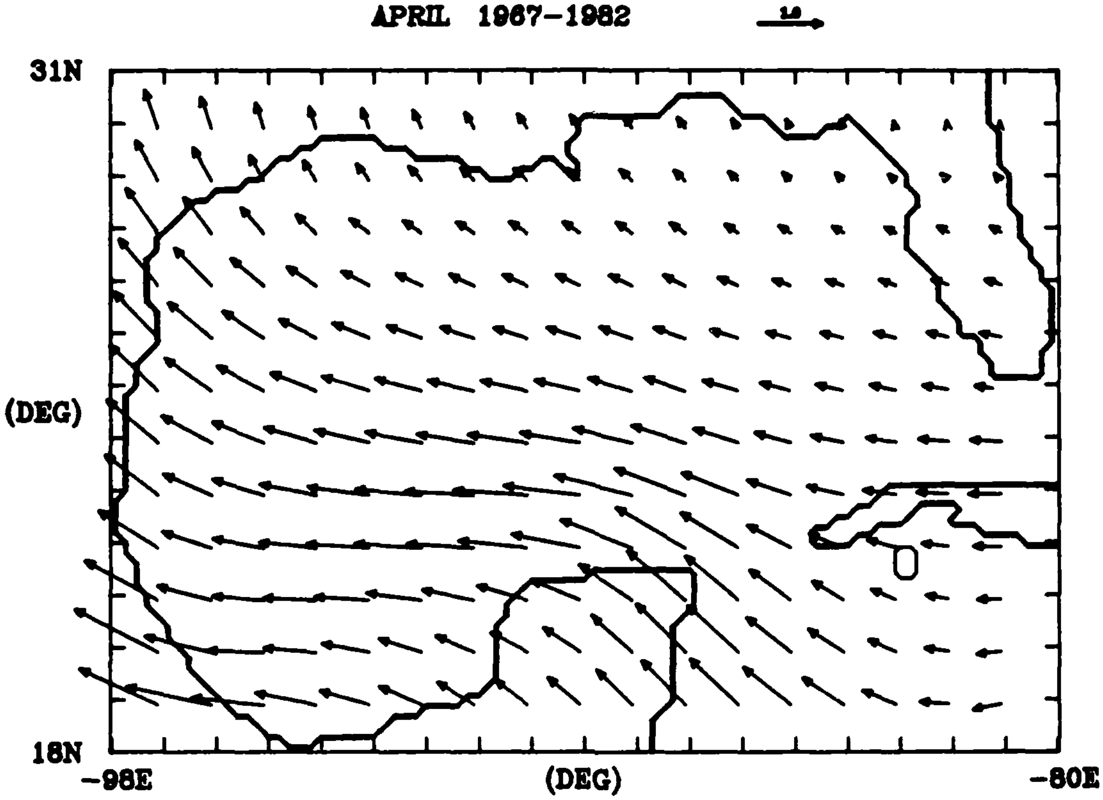


MIN = -9.55E-07 MAX = 6.17E-07

NORDA 323 13-DEC-84

WIND STRESS

APRIL 1967-1982

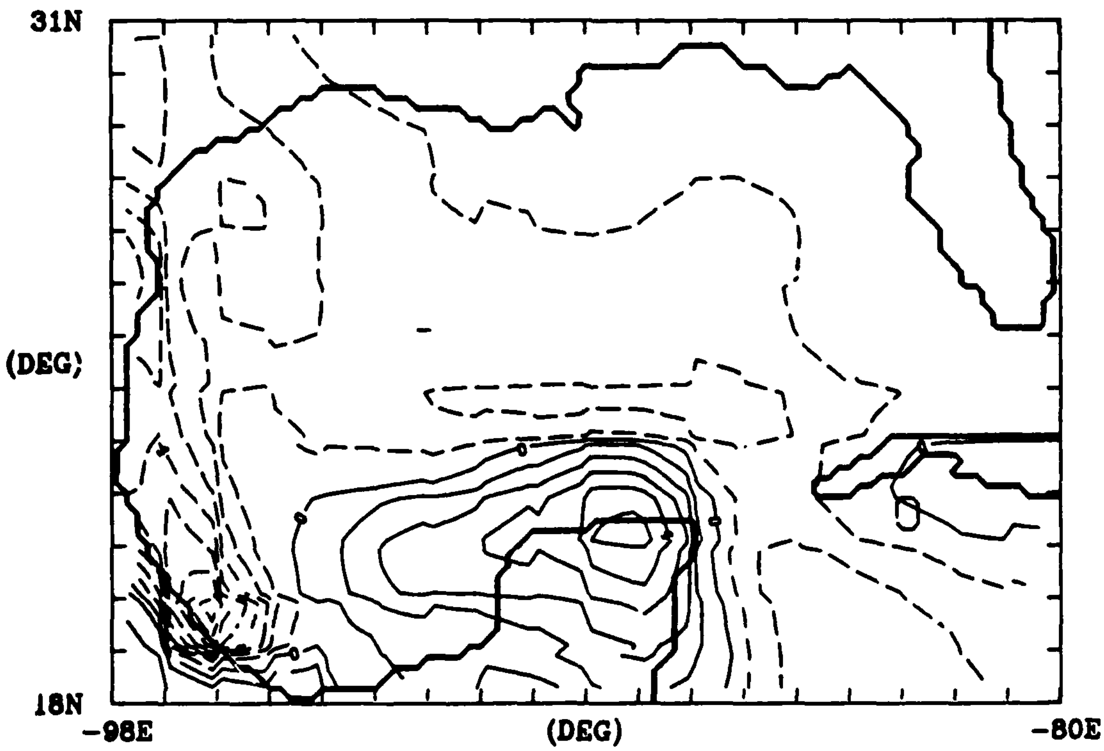


MAXIMUM WIND STRESS = 1.43 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

APRIL 1967-1982 DC = 1.0E-07

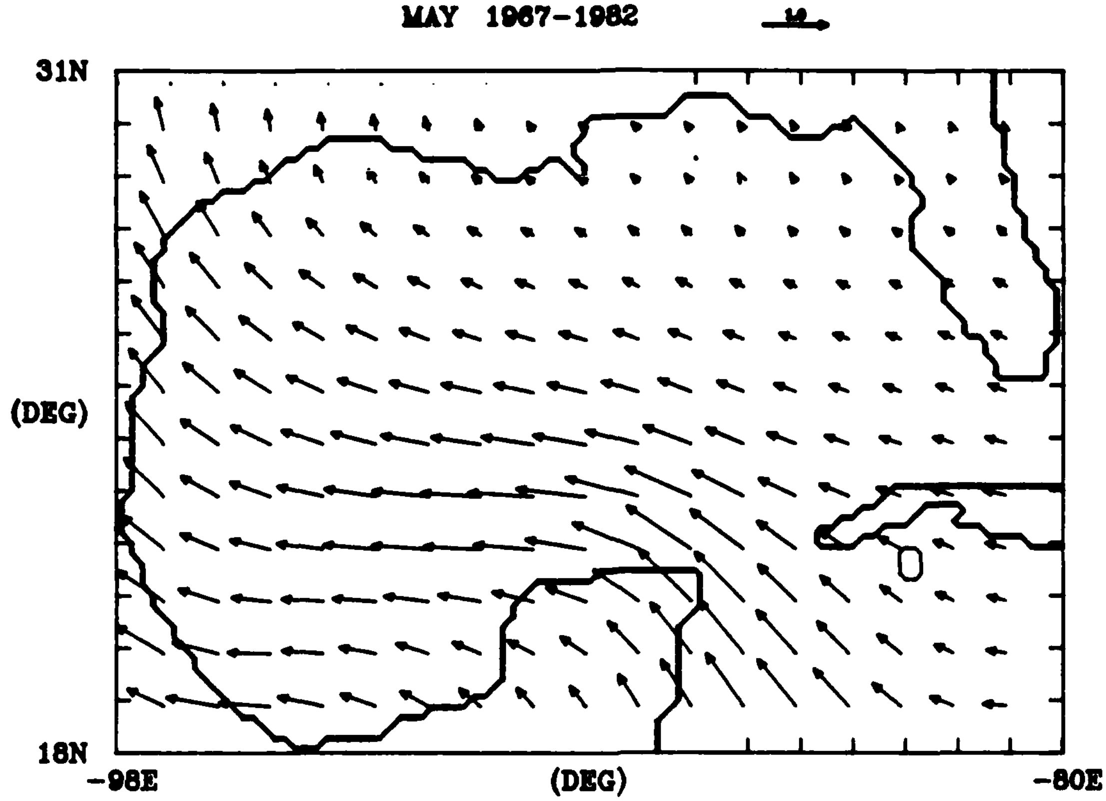


MIN = -8.92E-07 MAX = 6.94E-07

NORDA 323 13-DEC-84

WIND STRESS

MAY 1967-1982

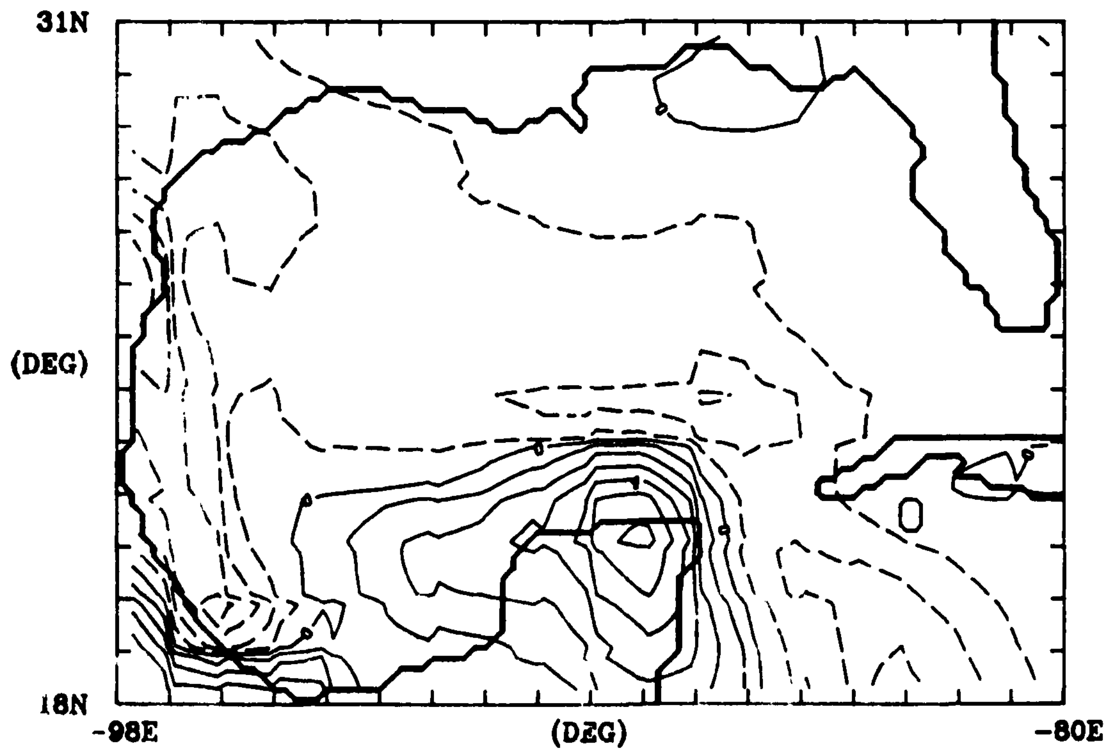


MAXIMUM WIND STRESS = 1.16 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

MAY 1967-1982 DC = 1.0E-07

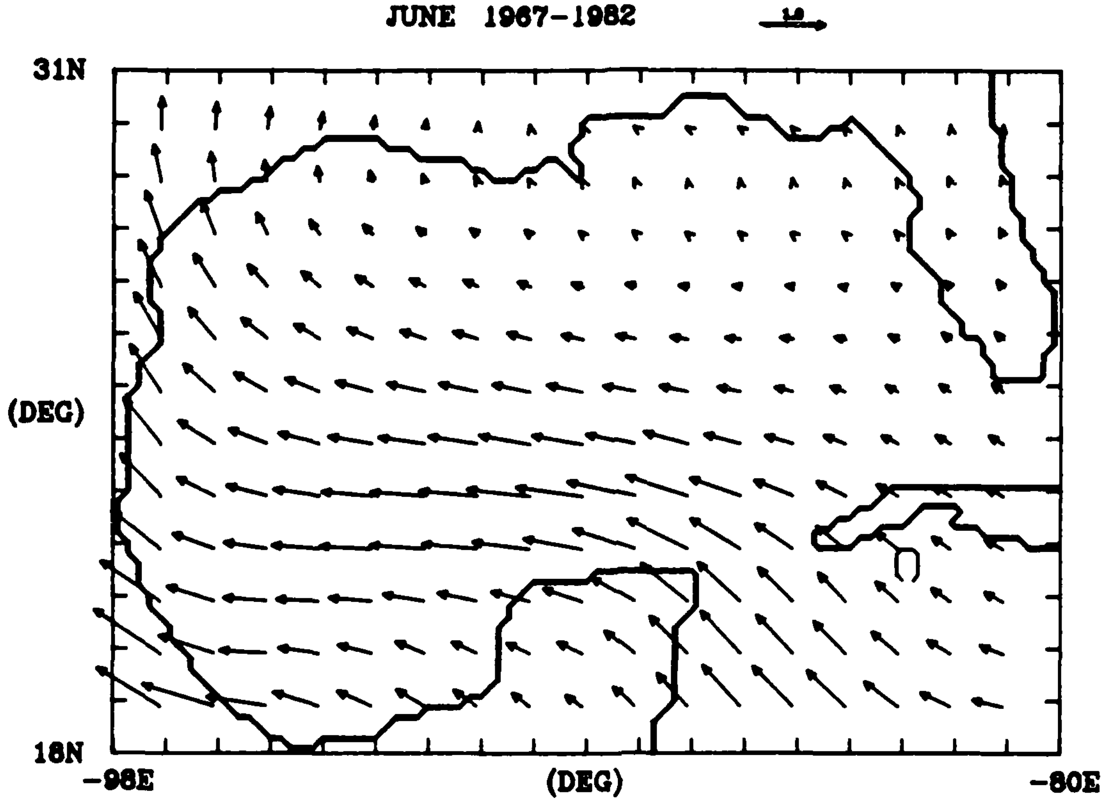


MIN = -5.70E-07 MAX = 6.35E-07

NORDA 323 13-DEC-84

WIND STRESS

JUNE 1967-1982

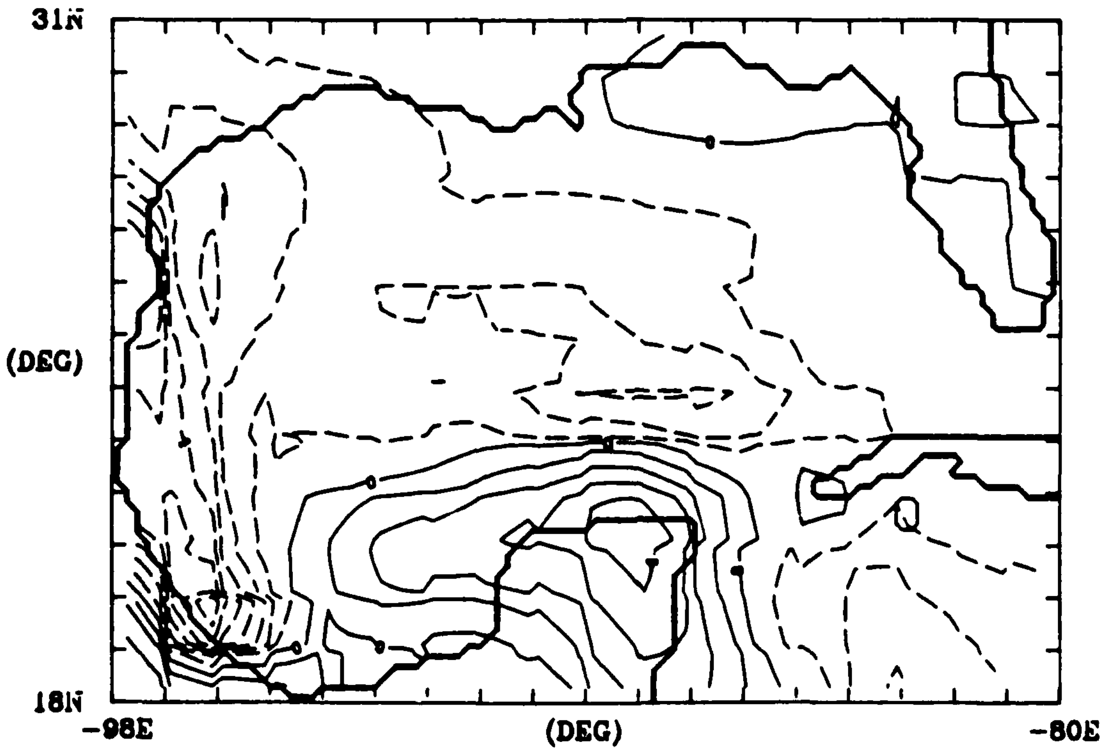


MAXIMUM WIND STRESS = 1.22 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JUNE 1967-1982 DC = 1.0E-07

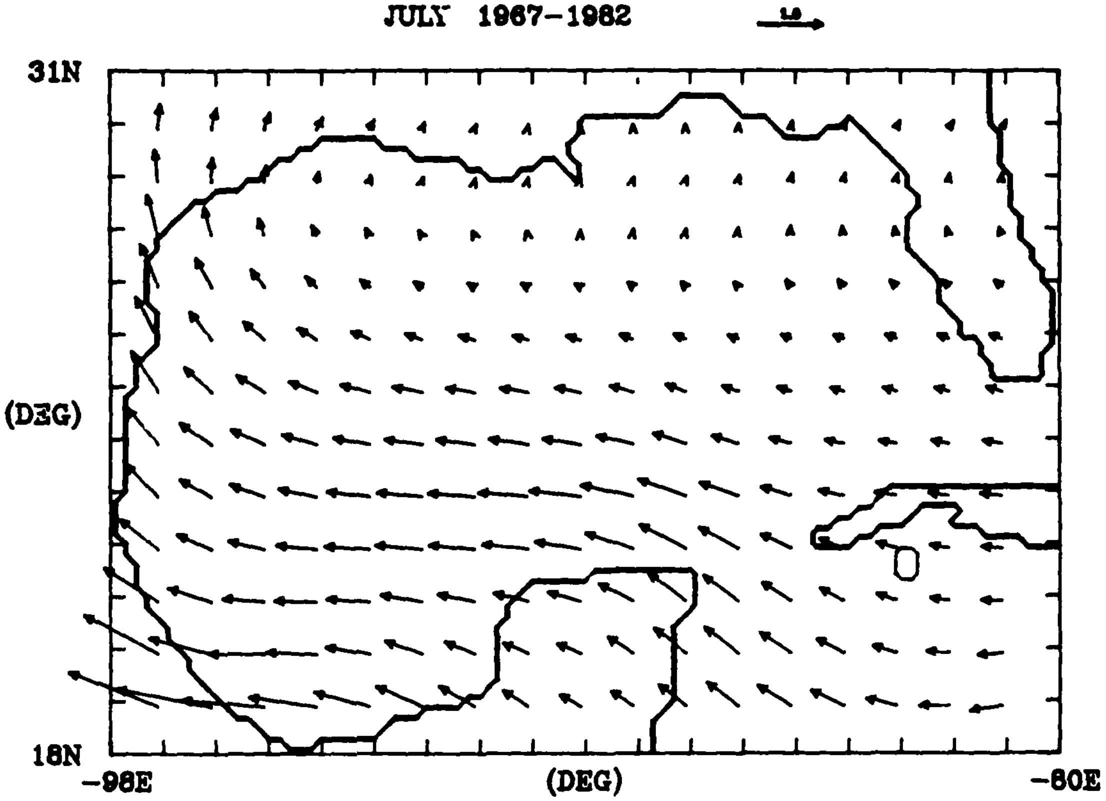


MIN = -8.07E-07 MAX = 5.13E-07

NORDA 323 13-DEC-84

WIND STRESS

JULY 1967-1982

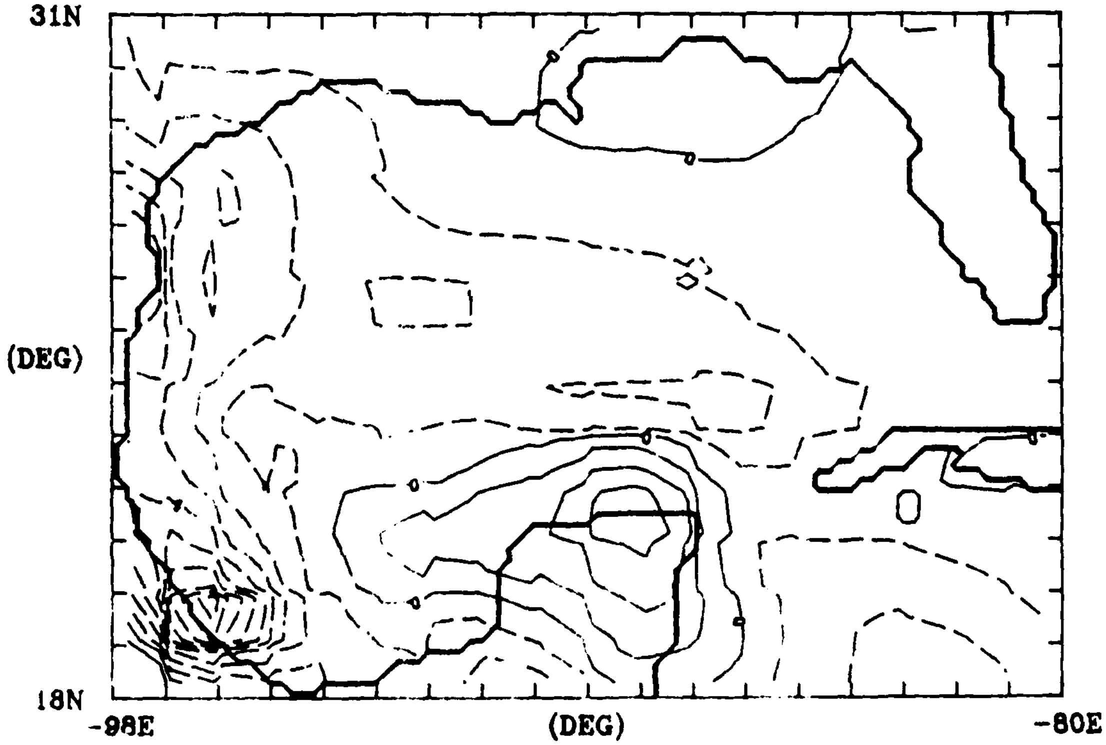


MAXIMUM WIND STRESS = 1.47 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JULY 1967-1982 DC = 1.0E-07

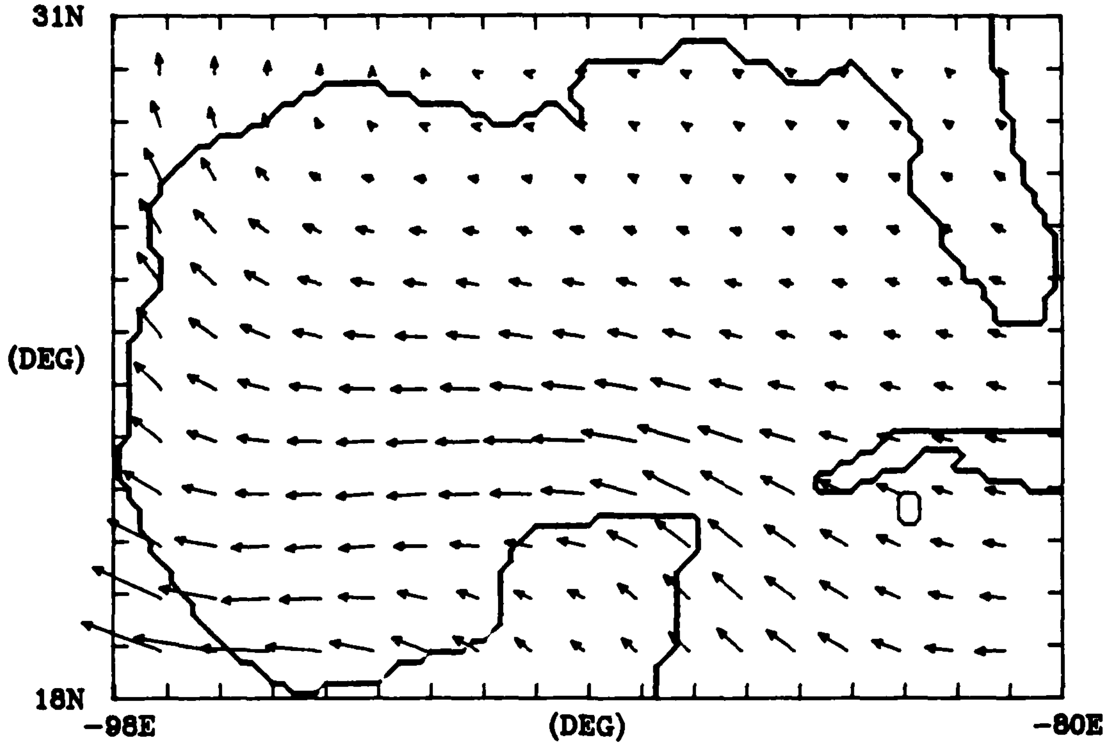


MIN = -9.71E-07 MAX = 3.72E-07

NORDA 323 13-DEC-84

WIND STRESS

AUGUST 1967-1982

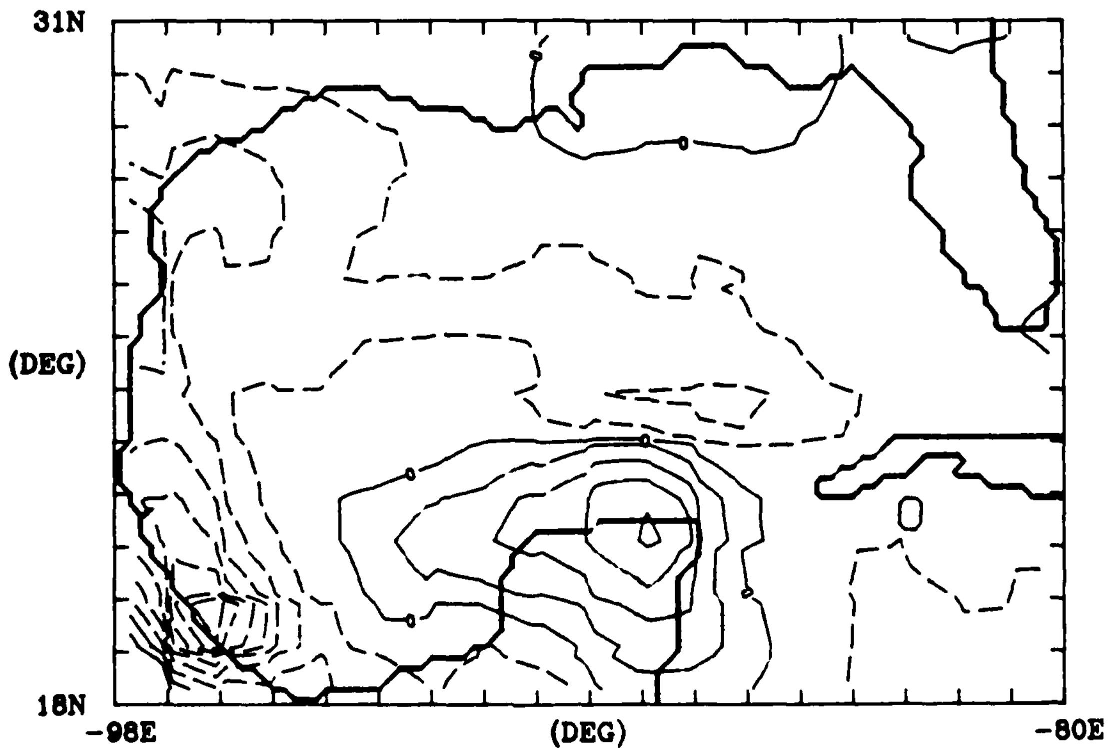


MAXIMUM WIND STRESS = 1.28 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

AUGUST 1967-1982 DC = 1.0E-07

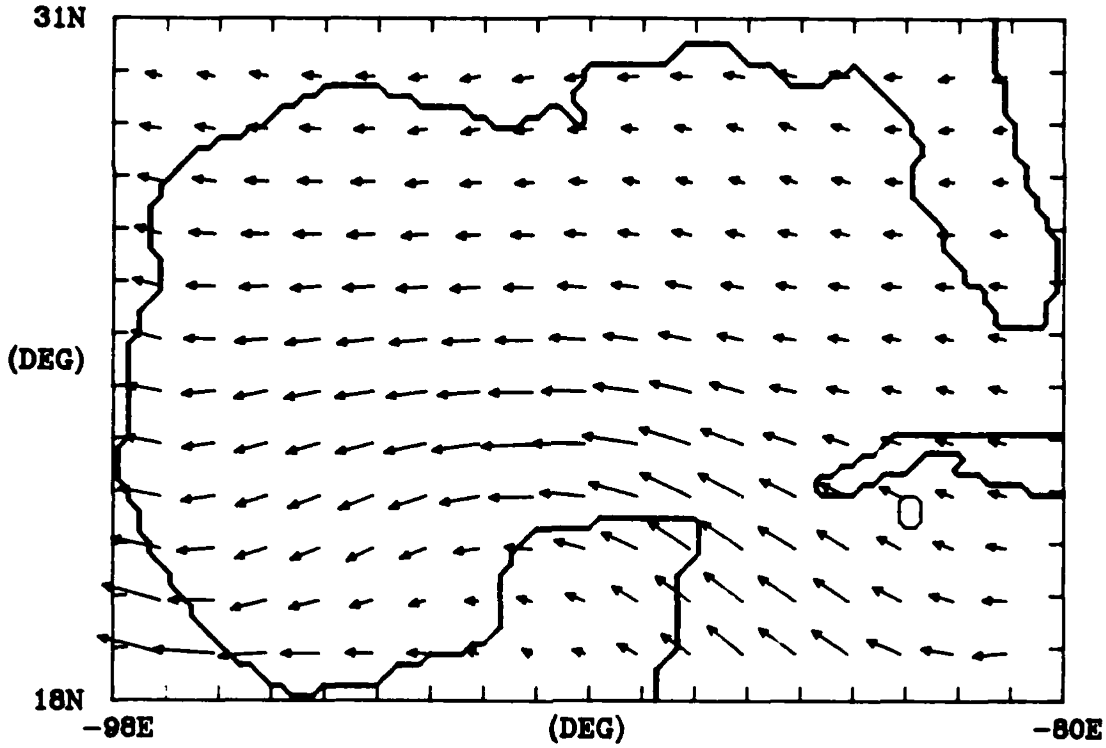


MIN = -8.08E-07 MAX = 4.28E-07

NORDA 323 13-DEC-84

WIND STRESS

SEPTEMBER 1967-1982

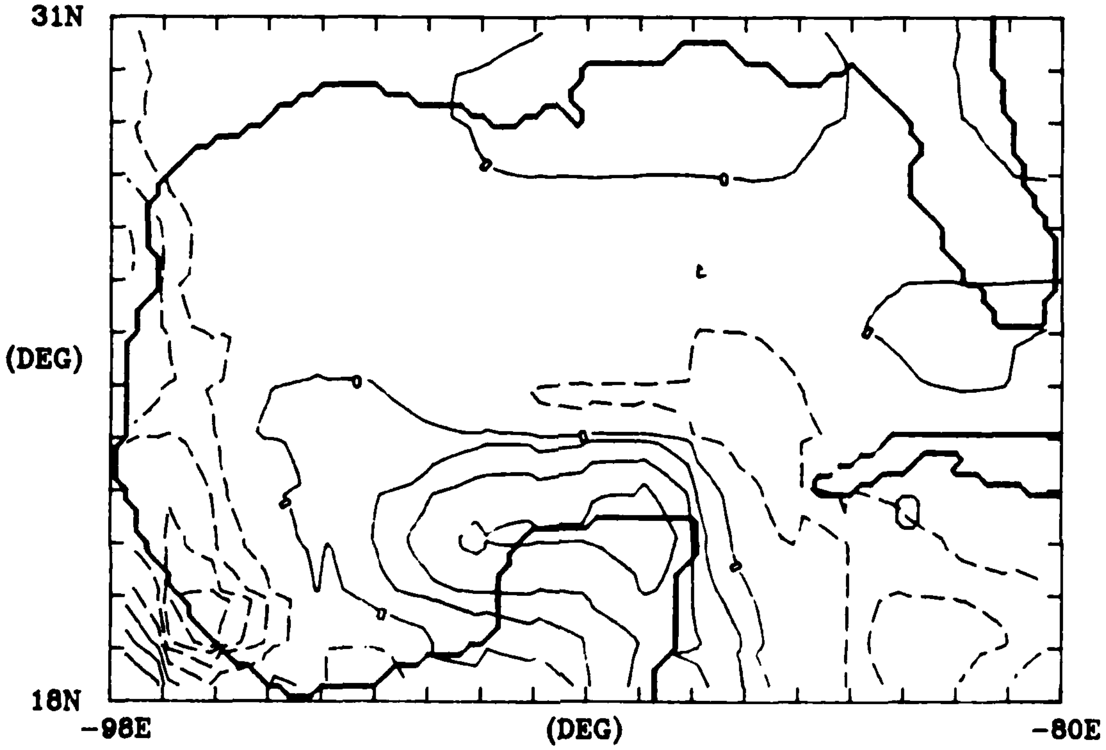


MAXIMUM WIND STRESS = 0.98 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

SEPTEMBER 1967-1982 DC = 1.0E-07

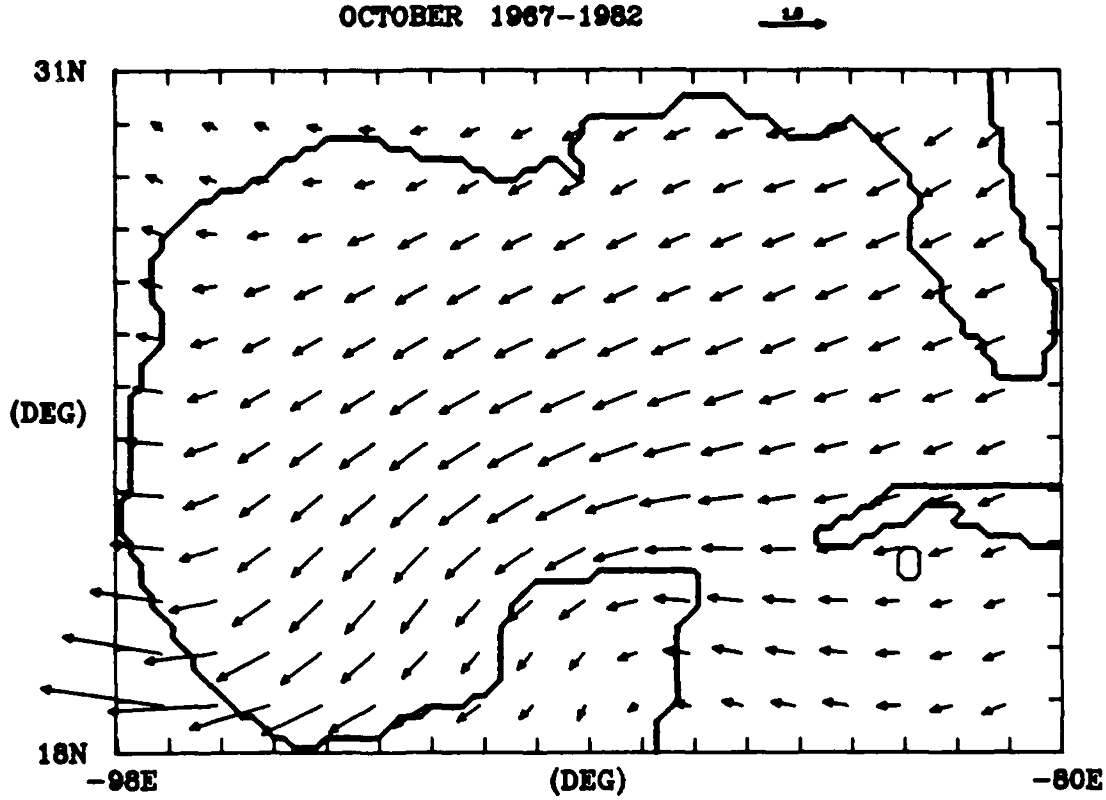


MIN = -5.34E-07 MAX = 3.83E-07

NORDA 323 13-DEC-84

WIND STRESS

OCTOBER 1967-1982

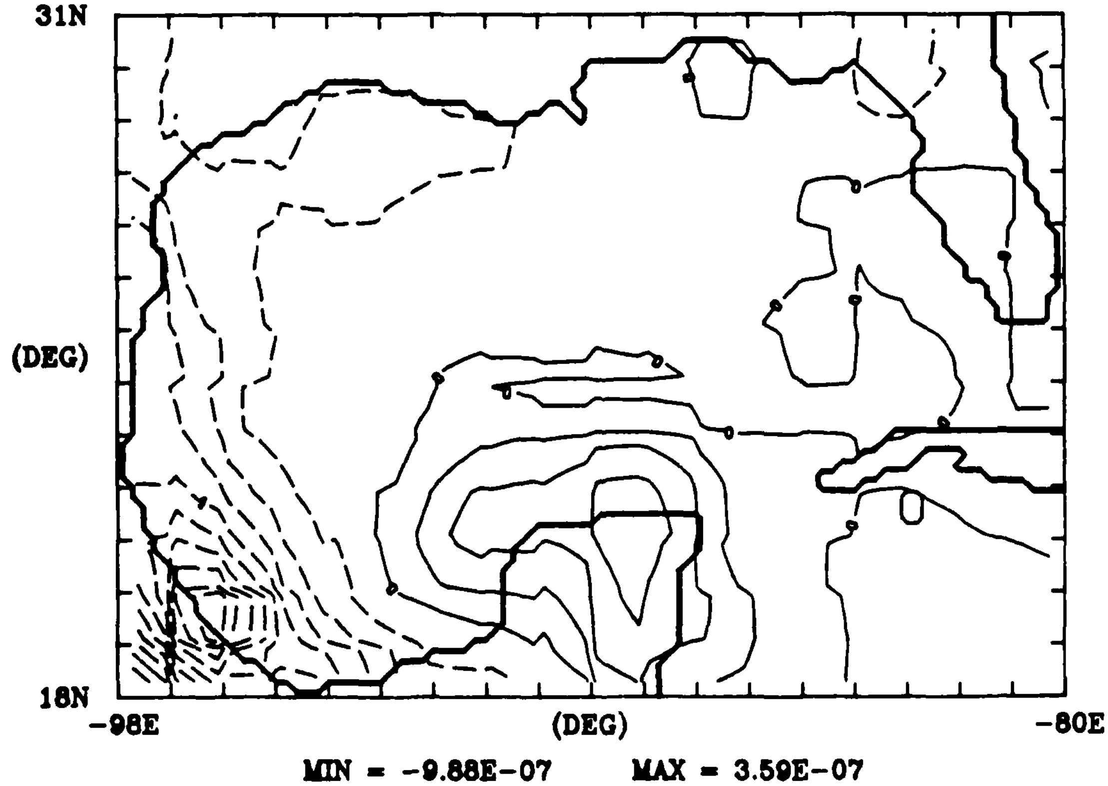


MAXIMUM WIND STRESS = 1.90 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

OCTOBER 1967-1982 DC = 1.0E-07

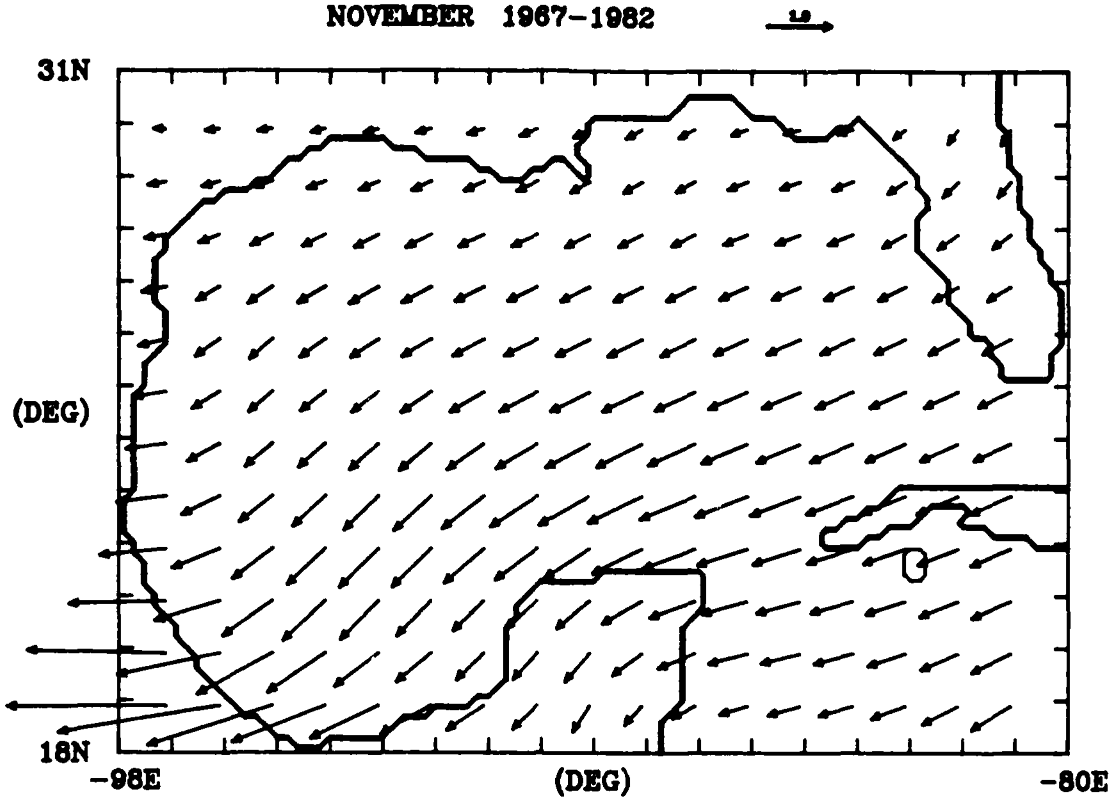


MIN = -9.88E-07 MAX = 3.59E-07

NORDA 323 13-DEC-84

WIND STRESS

NOVEMBER 1967-1982

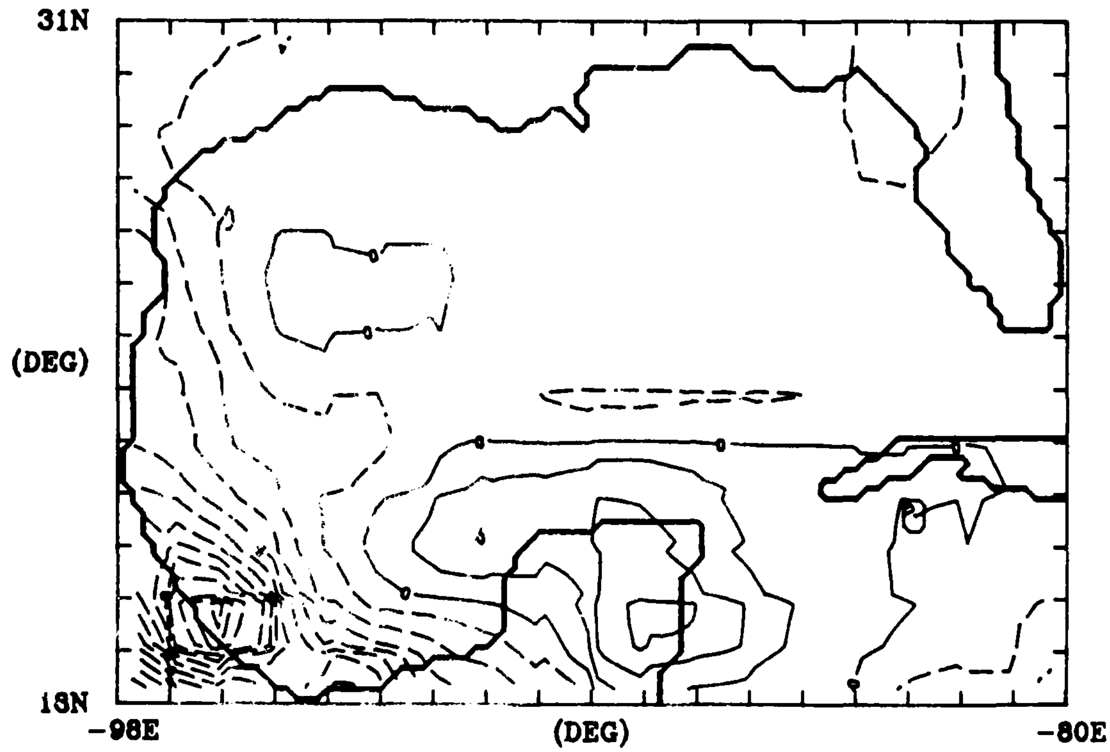


MAXIMUM WIND STRESS = 2.67 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

NOVEMBER 1967-1982 DC = 1.0E-07

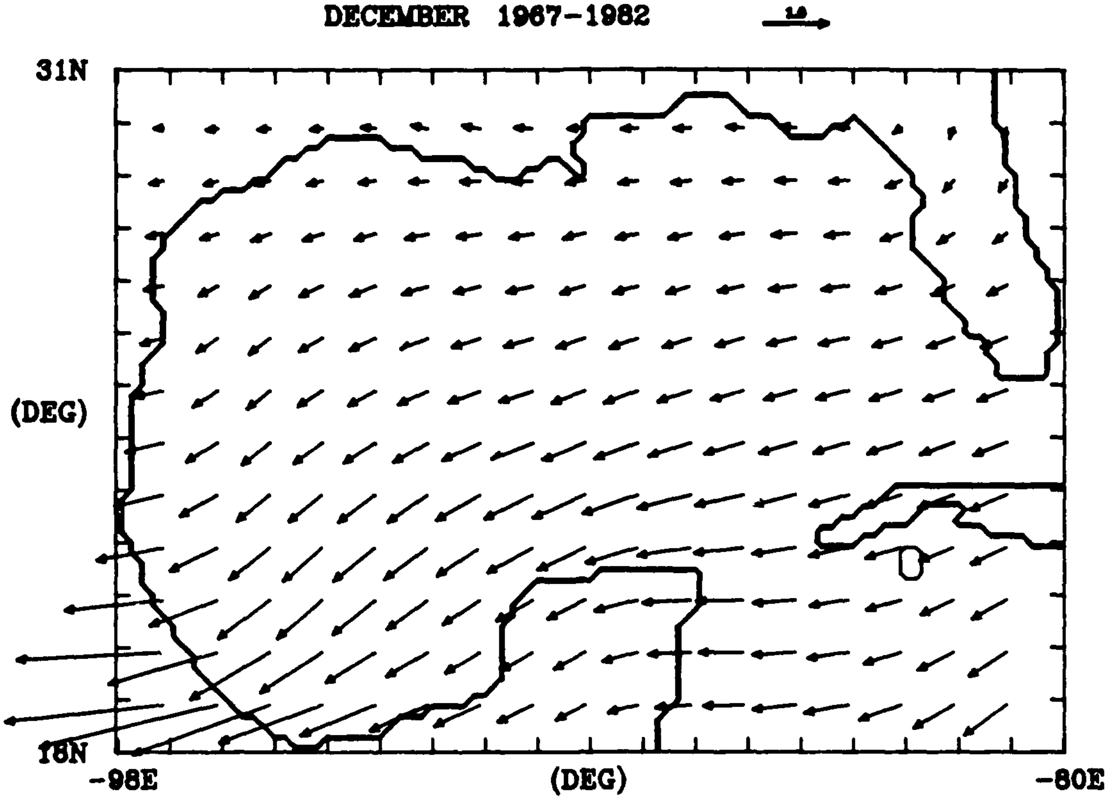


MIN = -1.34E-06 MAX = 3.29E-07

NORDA 323 13-DEC-84

WIND STRESS

DECEMBER 1967-1982

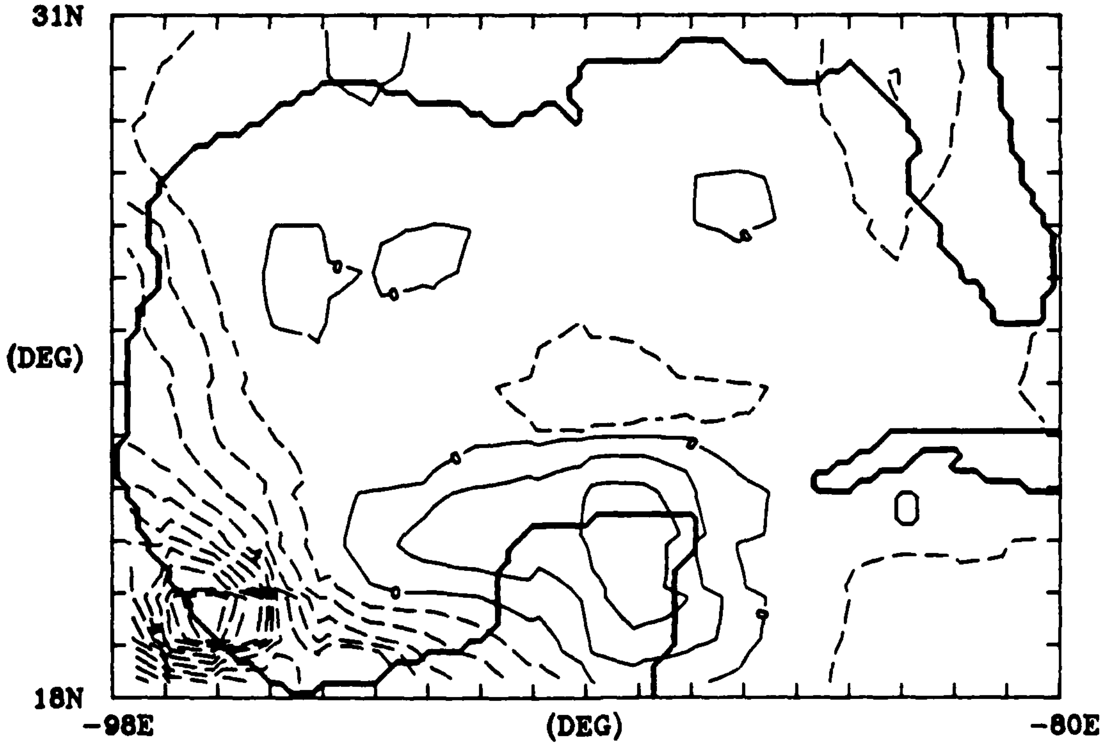


MAXIMUM WIND STRESS = 2.96 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

DECEMBER 1967-1982 DC = 1.0E-07

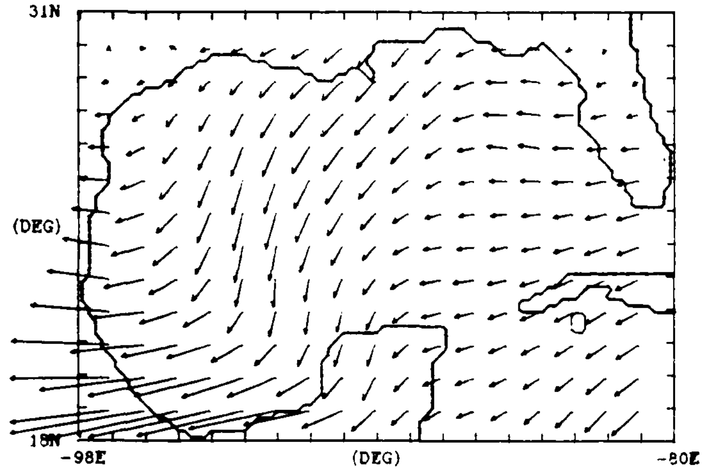


MIN = -1.45E-06 MAX = 2.75E-07

NORDA 323 13-DEC-84

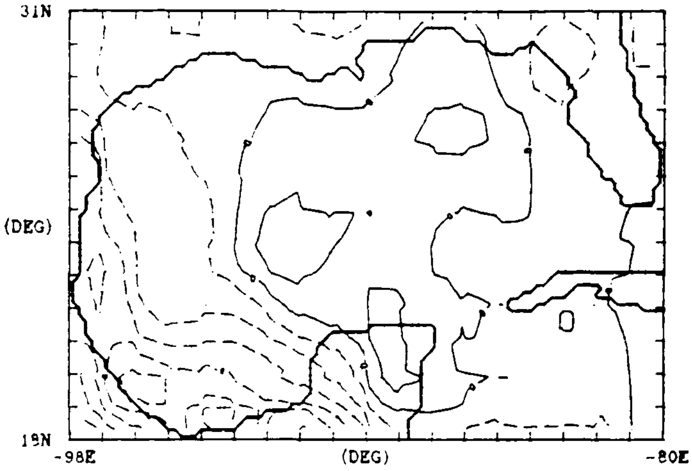
APPENDIX D: MONTHLY AVERAGED WIND STRESS AND WIND STRESS CURL EACH YEAR FROM 1967-1982

WIND STRESS
JANUARY/1967



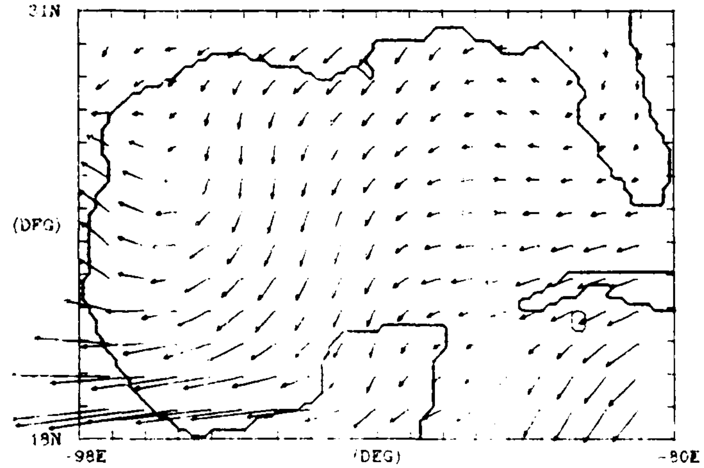
MAXIMUM WIND STRESS = 3.41 DYNES/CM²

WIND STRESS CURL
JANUARY/1967 DC = 2.0E-07 MKS



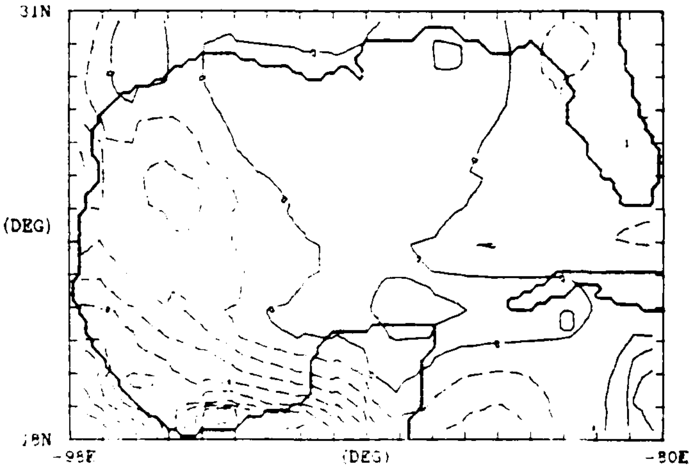
MIN = -1.29E-06 MAX = 3.73E-07

WIND STRESS
FEBRUARY/1967



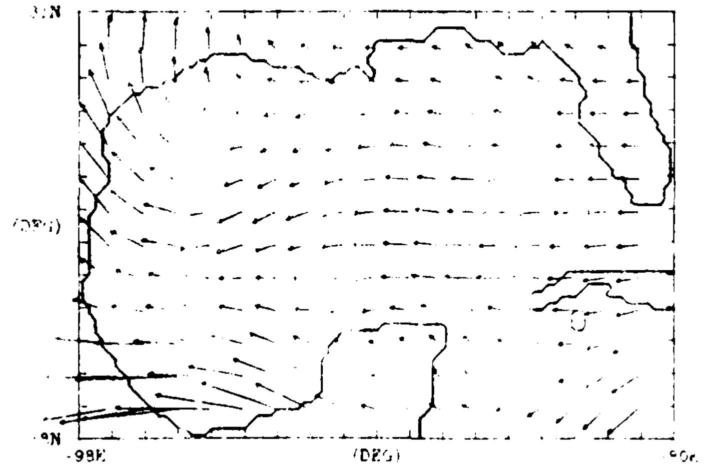
MAXIMUM WIND STRESS = 3.16 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1967 DC = 2.0E-07 MKS



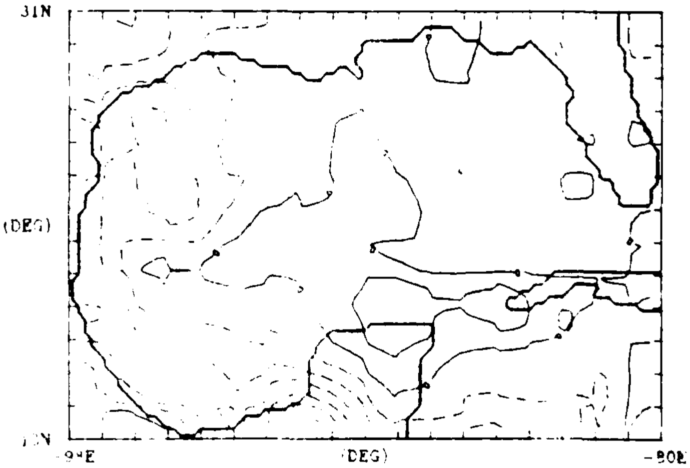
MIN = -1.84E-06 MAX = 5.13E-07

WIND STRESS
MARCH/1967



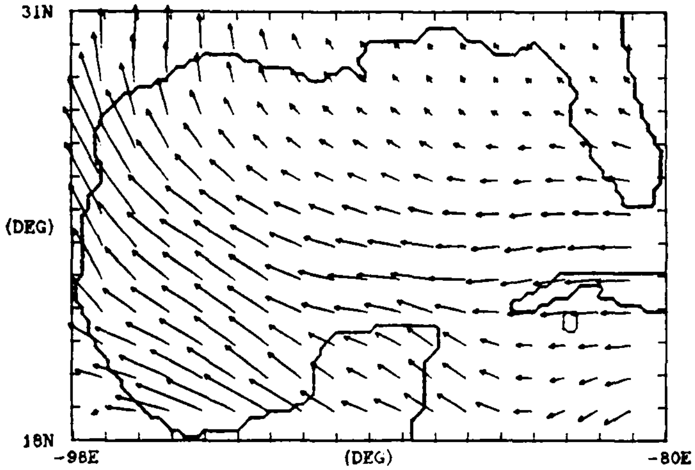
MAXIMUM WIND STRESS = [illegible] DYNES/CM²

WIND STRESS CURL
MARCH/1967 DC = 2.0E-07 MKS



MIN = [illegible] MAX = 3.51E-07

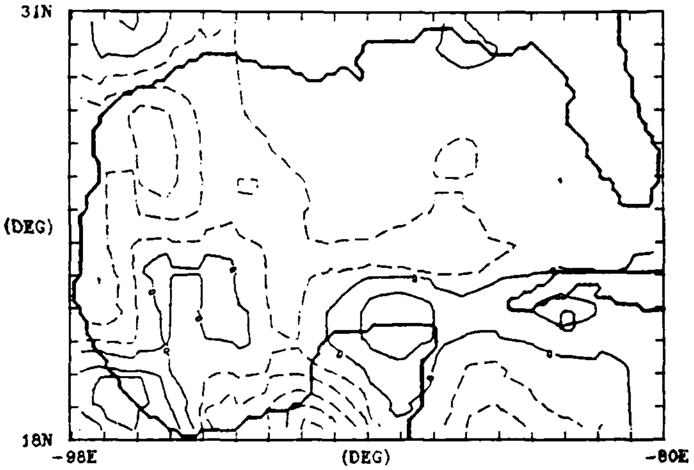
WIND STRESS
APRIL/1967



MAXIMUM WIND STRESS = 2.00 DYNES/CM²

NORDA 323 13-DEC-94

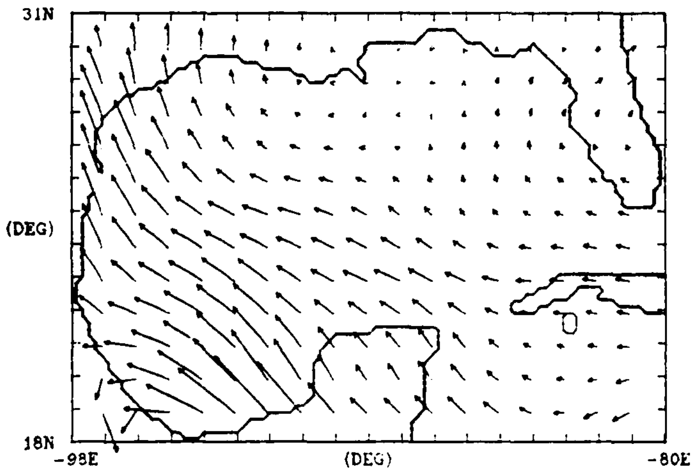
WIND STRESS CURL
APRIL/1967 DC = 2.0E-07 MKS



MIN = -1.09E-06 MAX = 5.81E-07

NORDA 323 13-DEC-94

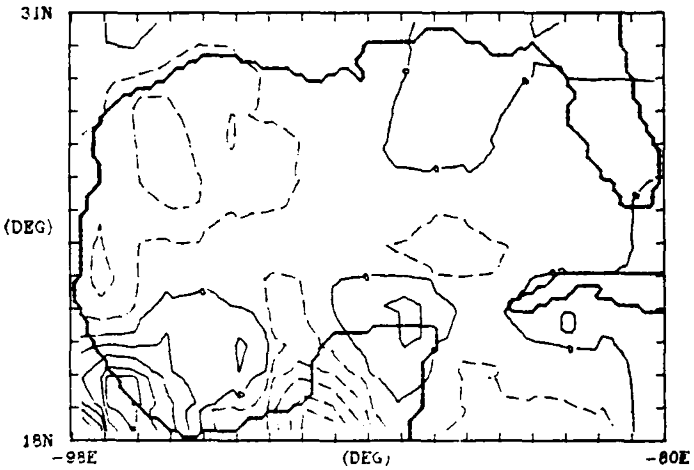
WIND STRESS
MAY/1967



MAXIMUM WIND STRESS = 1.90 DYNES/CM²

NORDA 323 13-DEC-94

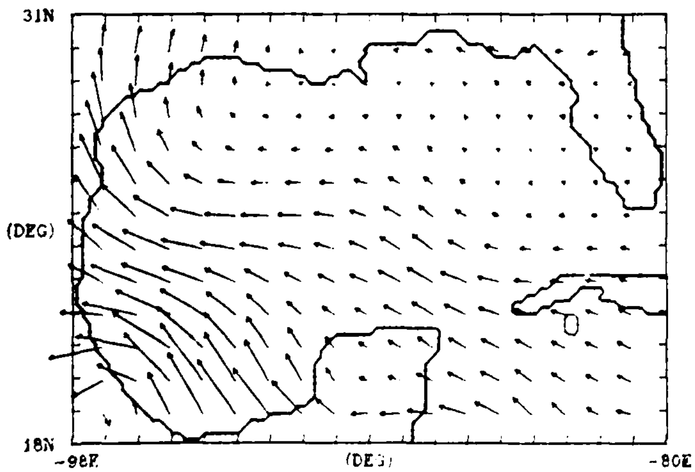
WIND STRESS CURL
MAY/1967 DC = 2.0E-07 MKS



MIN = -1.17E-06 MAX = 1.01E-06

NORDA 323 13-DEC-94

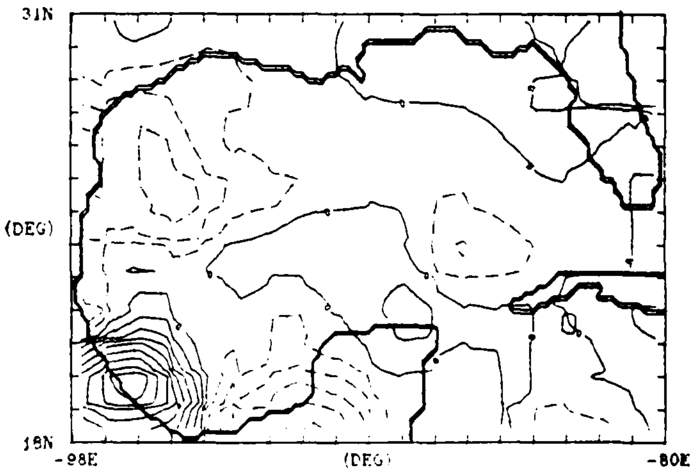
WIND STRESS
JUNE/1967



MAXIMUM WIND STRESS = 1.75 DYNES/CM²

NORDA 323 13-DEC-94

WIND STRESS CURL
JUNE/1967 DC = 2.0E-07 MKS

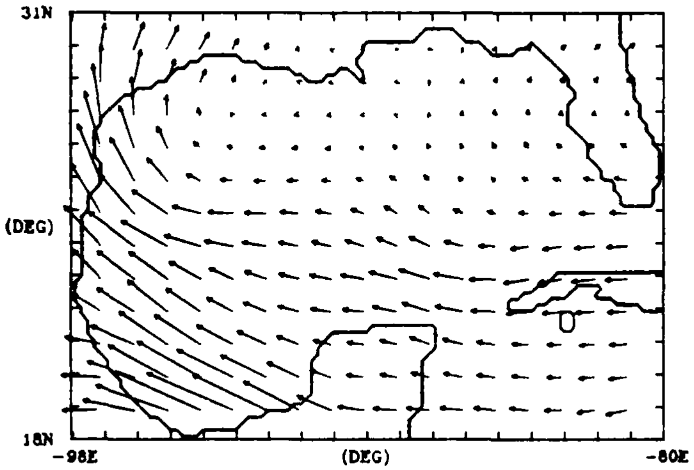


MIN = -1.05E-06 MAX = 1.77E-06

NORDA 323 13-DEC-94

WIND STRESS

JULY/1967

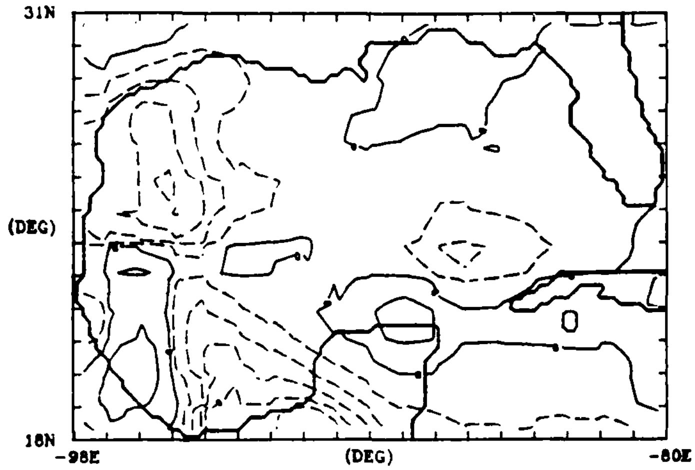


MAXIMUM WIND STRESS = 2.31 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JULY/1967 DC = 2.0E-07 MKS

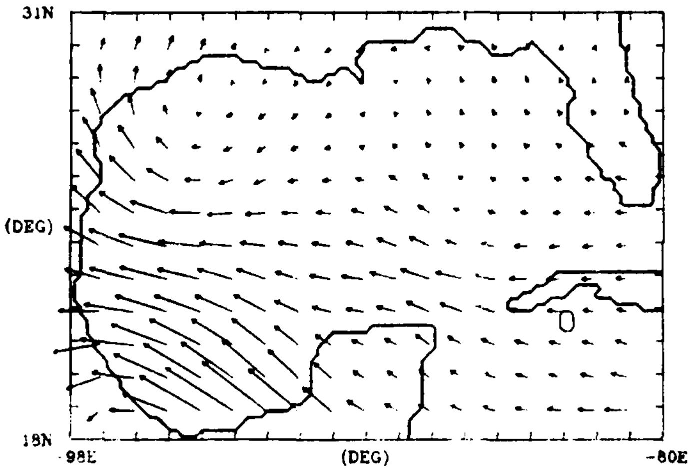


MIN = -1.41E-06 MAX = 3.75E-07

NORDA 323 13-DEC-84

WIND STRESS

AUGUST/1967

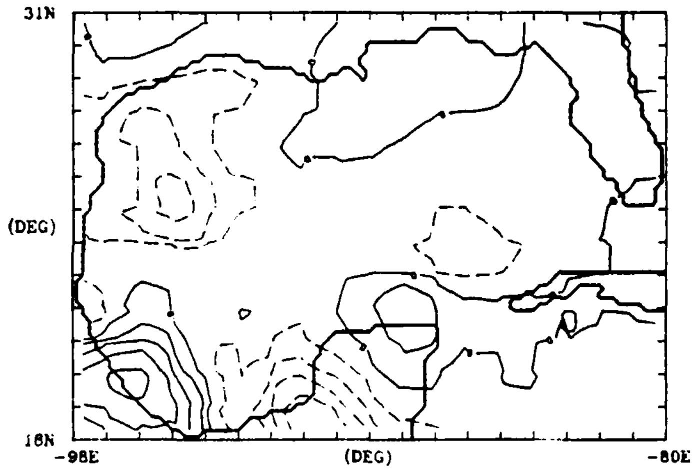


MAXIMUM WIND STRESS = 1.97 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

AUGUST/1967 DC = 2.0E-07 MKS

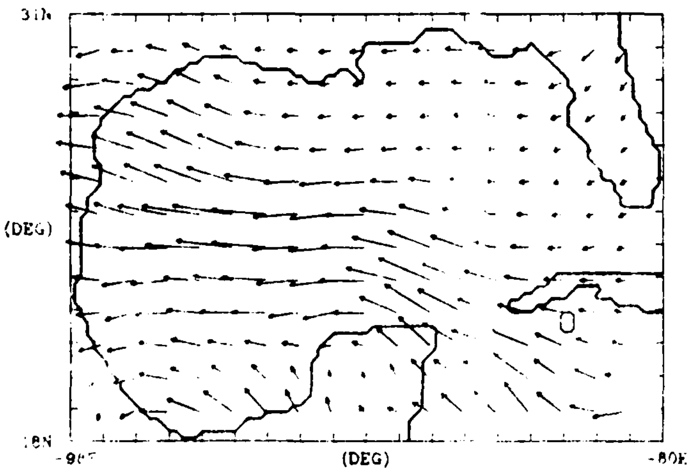


MIN = -1.16E-06 MAX = 8.65E-07

NORDA 323 13-DEC-84

WIND STRESS

SEPTEMBER/1967

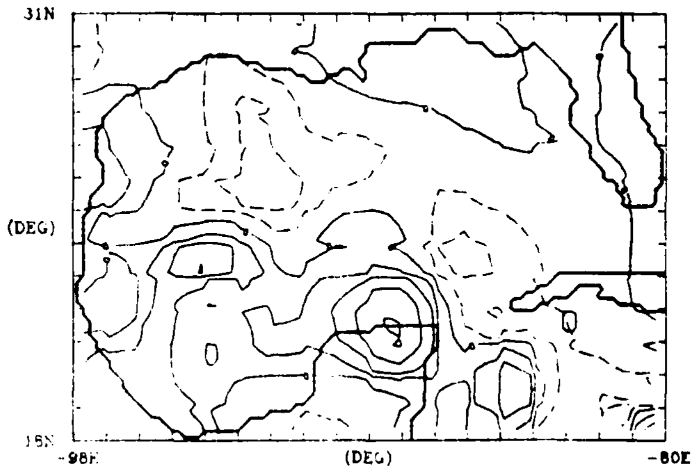


MAXIMUM WIND STRESS = 1.50 DYNES/CM²

NORDA 323 13-DEC-84

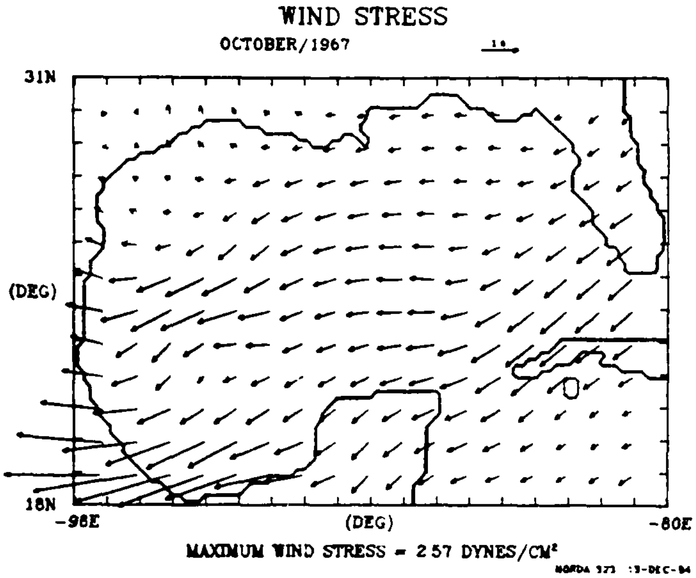
WIND STRESS CURL

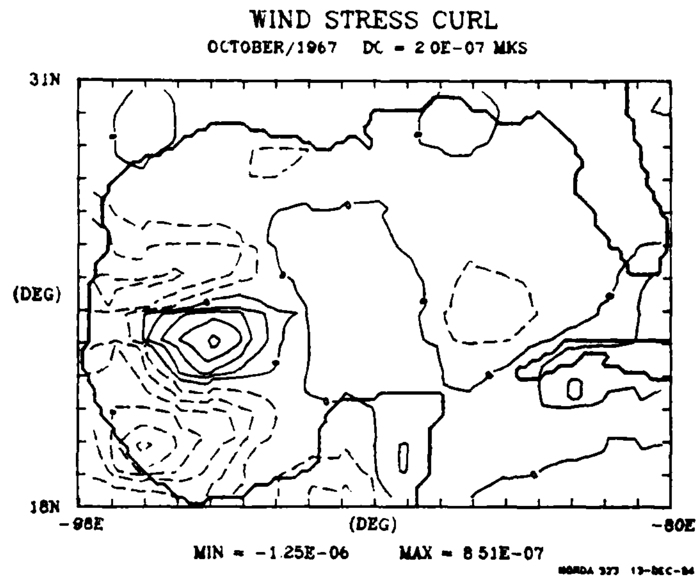
SEPTEMBER/1967 DC = 2.0E-07 MKS

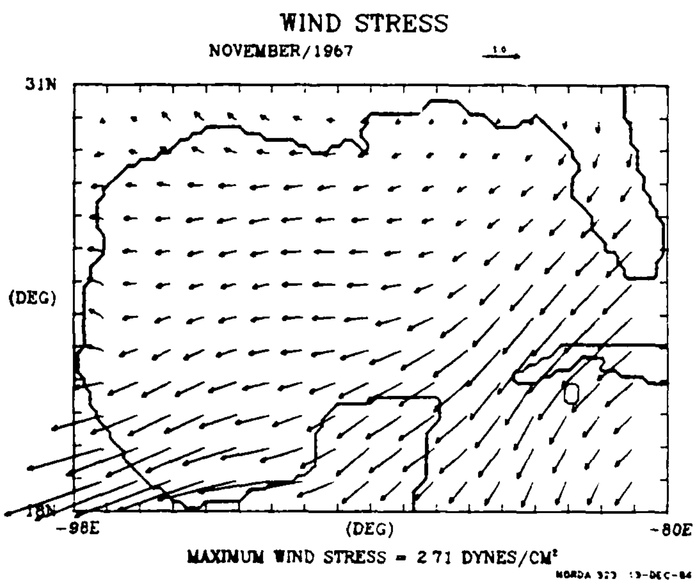


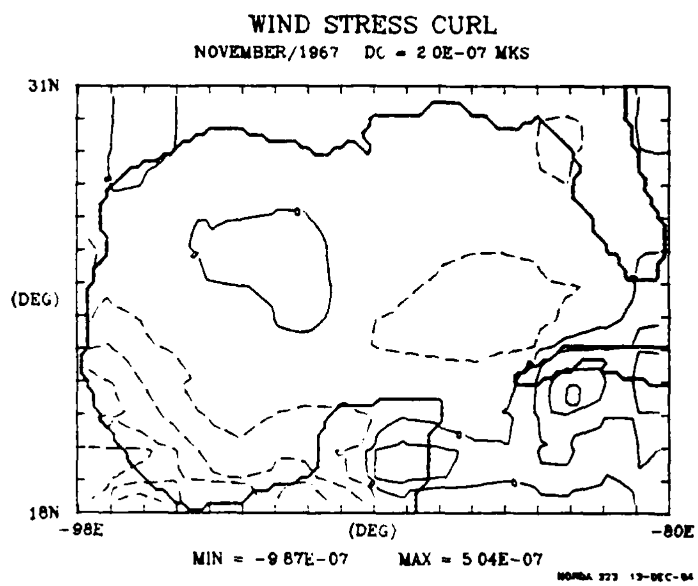
MIN = -5.68E-07 MAX = 8.18E-07

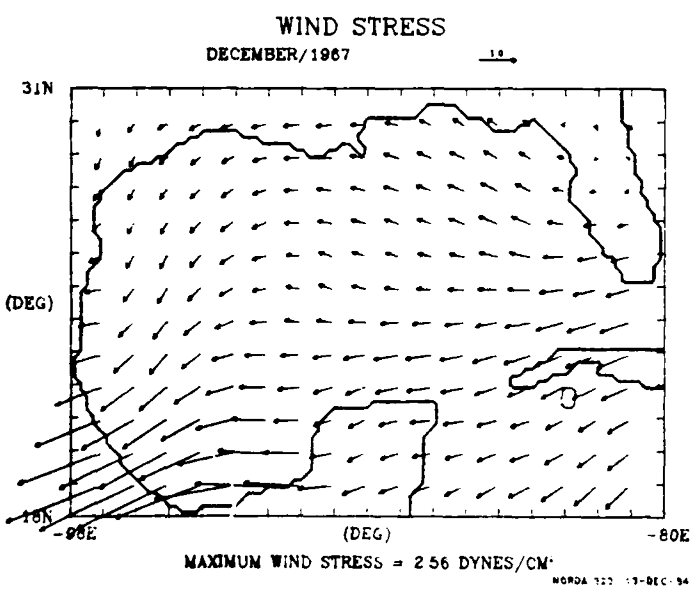
NORDA 323 13-DEC-84

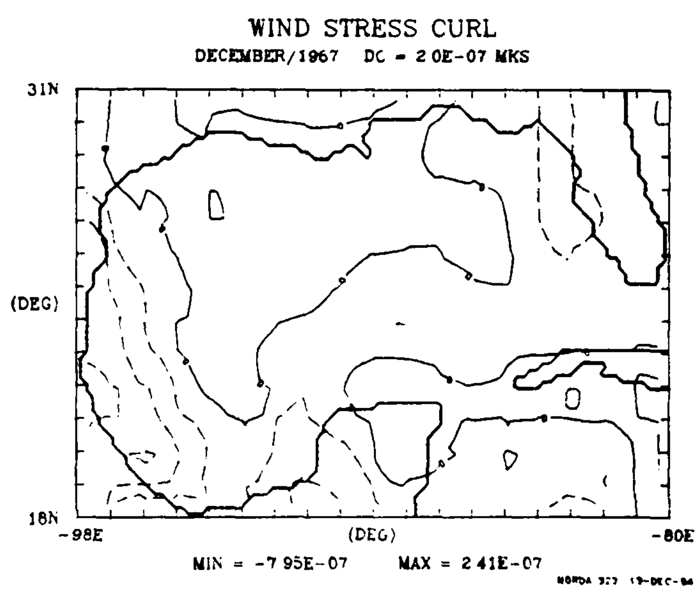

WIND STRESS
OCTOBER/1967
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2 57 DYNES/CM²

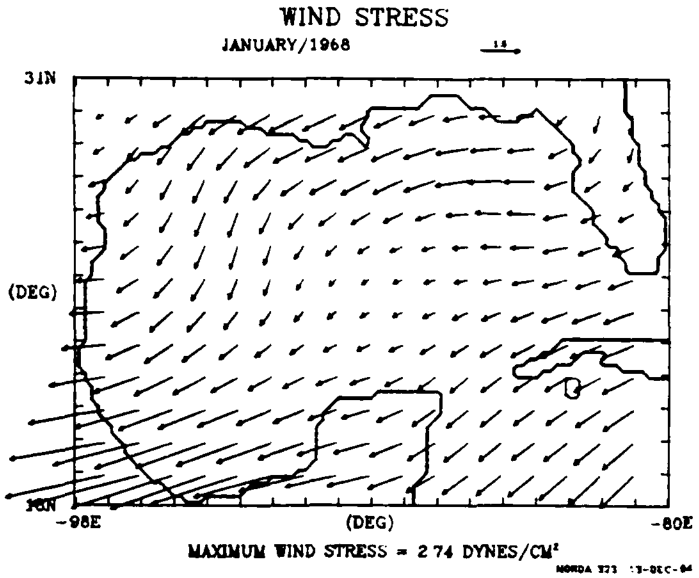

WIND STRESS CURL
OCTOBER/1967 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.25E-06 MAX = 8 51E-07

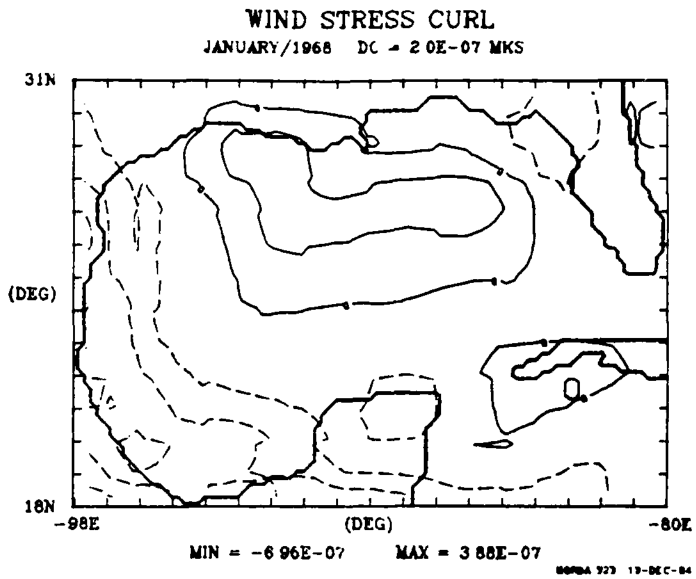

WIND STRESS
NOVEMBER/1967
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2 71 DYNES/CM²

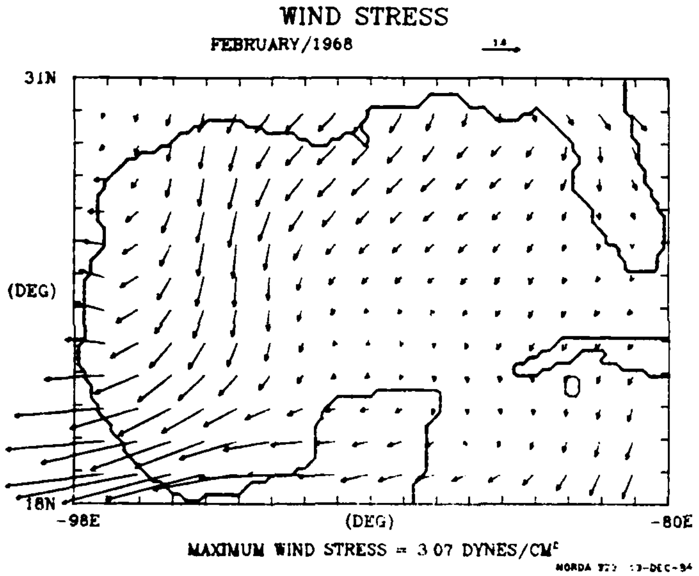

WIND STRESS CURL
NOVEMBER/1967 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -9 87E-07 MAX = 5 04E-07

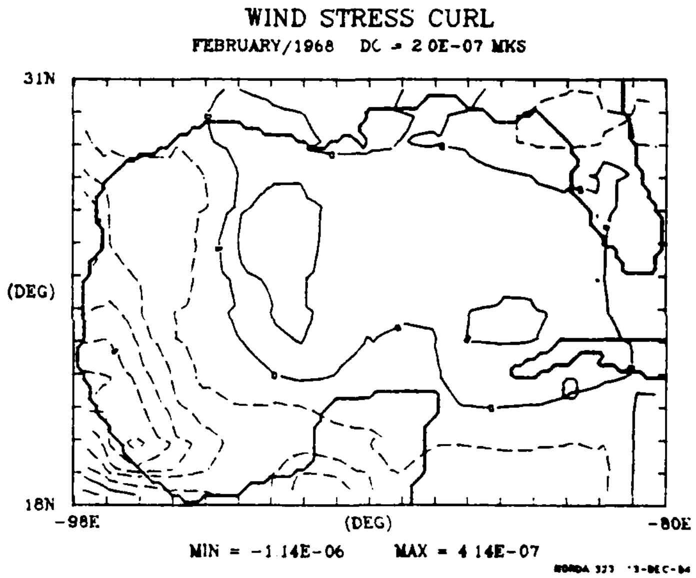

WIND STRESS
DECEMBER/1967
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2 56 DYNES/CM²

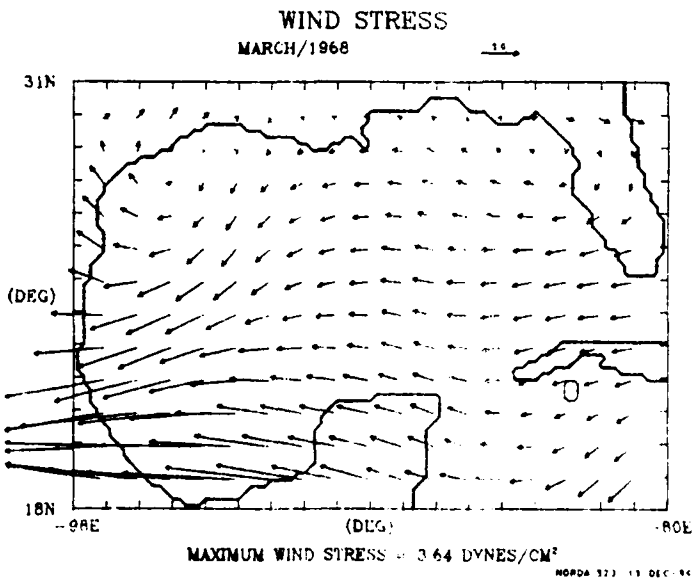

WIND STRESS CURL
DECEMBER/1967 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -7 95E-07 MAX = 2 41E-07

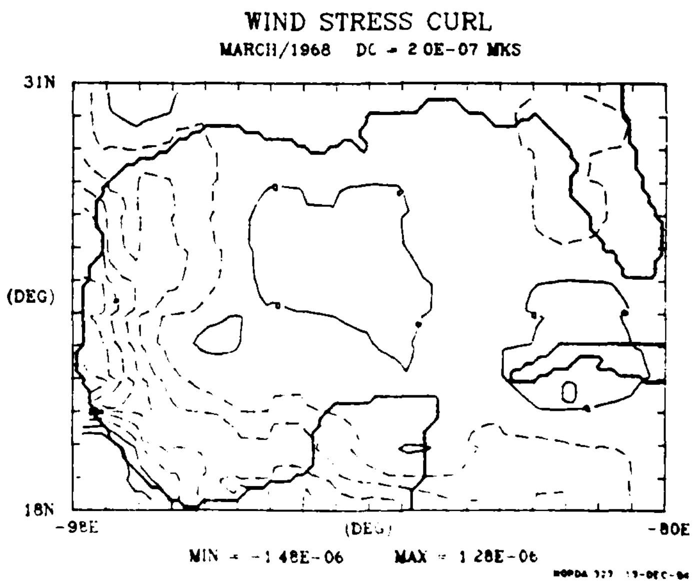

WIND STRESS
JANUARY/1968
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2 74 DYNES/CM²


WIND STRESS CURL
JANUARY/1968 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -6 96E-07 MAX = 3 88E-07

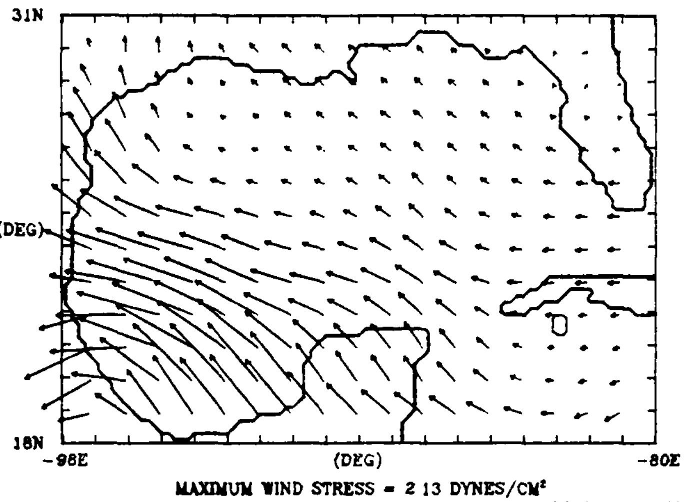

WIND STRESS
FEBRUARY/1968
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3 07 DYNES/CM²


WIND STRESS CURL
FEBRUARY/1968 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1 14E-06 MAX = 4 14E-07


WIND STRESS
MARCH/1968
31N
(DEG)
18N
-98E
-80E
MAXIMUM WIND STRESS = 3 64 DYNES/CM²

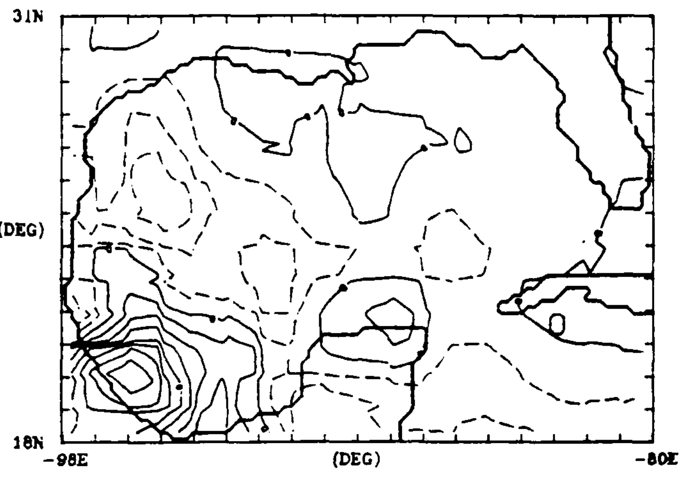

WIND STRESS CURL
MARCH/1968 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
-80E
MIN = -1 48E-06 MAX = 1 28E-06

WIND STRESS
APRIL/1968



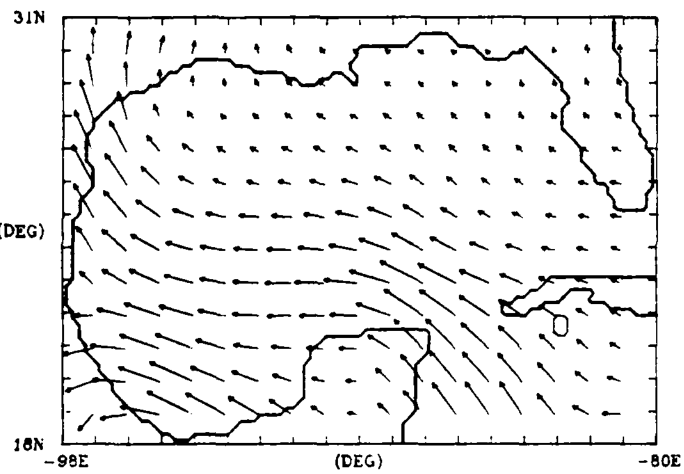
MAXIMUM WIND STRESS = 2.13 DYNES/CM²

WIND STRESS CURL
APRIL/1968 DC = 2.0E-07 MKS



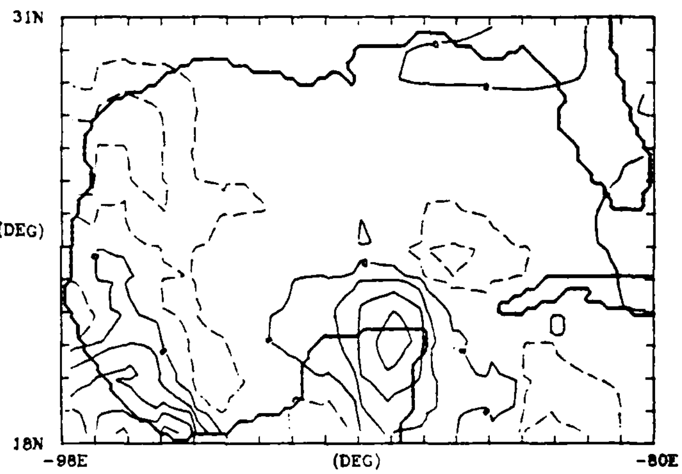
MIN = -7.40E-07 MAX = 1.59E-06

WIND STRESS
MAY/1968



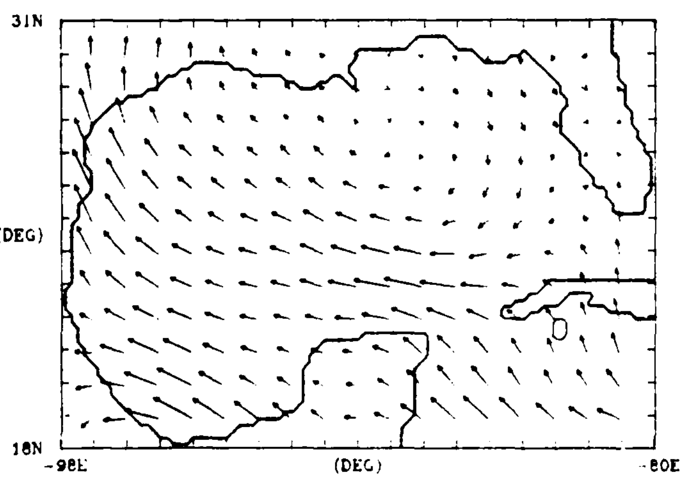
MAXIMUM WIND STRESS = 1.25 DYNES/CM²

WIND STRESS CURL
MAY/1968 DC = 2.0E-07 MKS



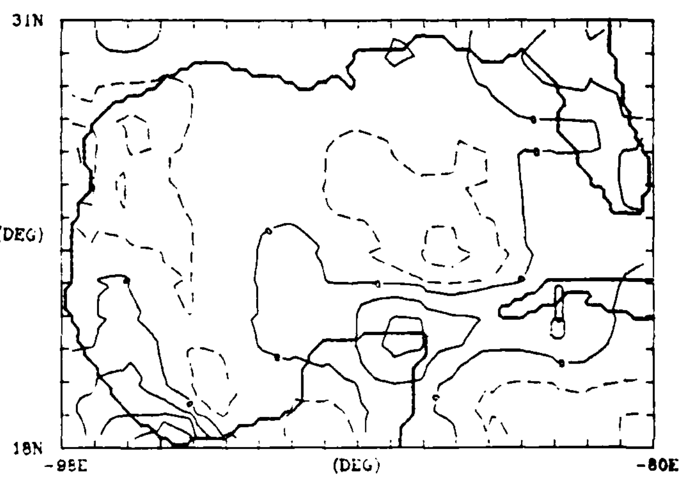
MIN = -5.99E-07 MAX = 9.06E-07

WIND STRESS
JUNE/1968



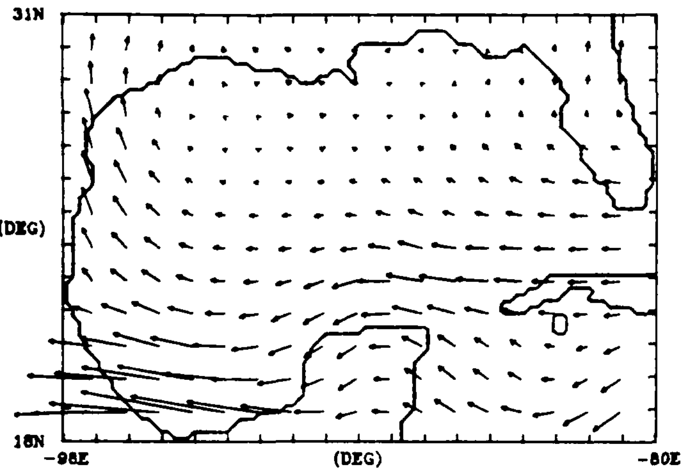
MAXIMUM WIND STRESS = 1.06 DYNES/CM²

WIND STRESS CURL
JUNE/1968 DC = 2.0E-07 MKS



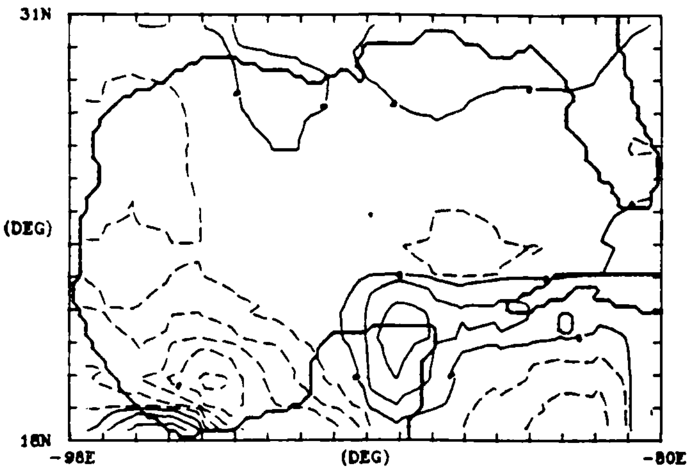
MIN = -6.27E-07 MAX = 7.81E-07

WIND STRESS
JULY/1968



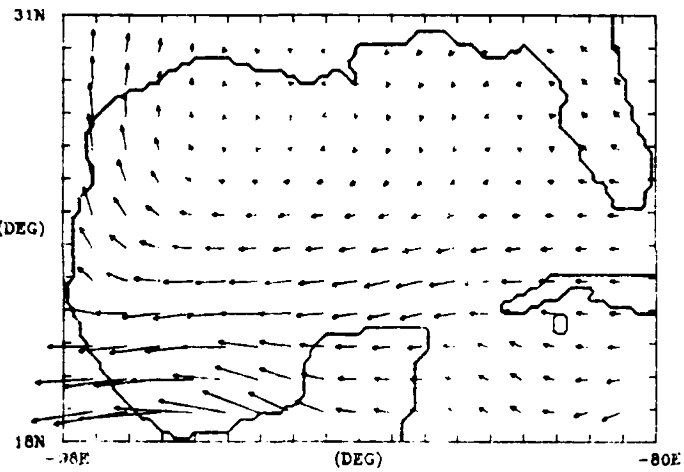
MAXIMUM WIND STRESS = 2.76 DYNES/CM²

WIND STRESS CURL
JULY/1968 DC = 2.0E-07 MKS



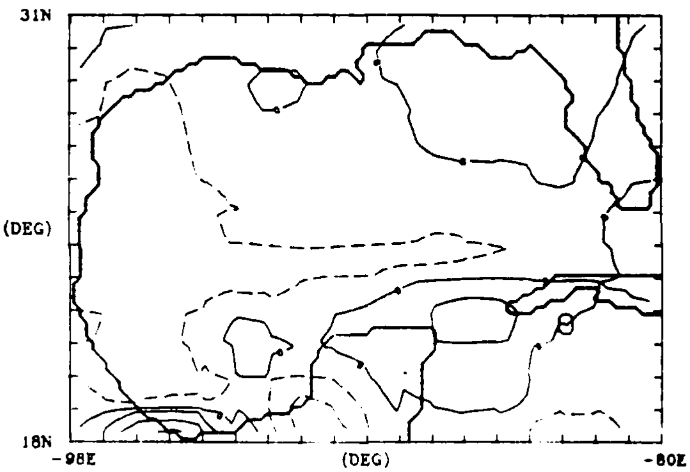
MIN = -1.09E-06 MAX = 6.00E-07

WIND STRESS
AUGUST/1968



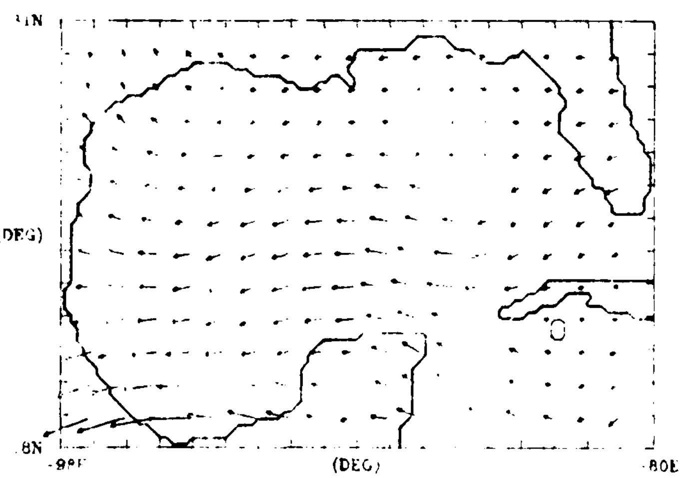
MAXIMUM WIND STRESS = 1.99 DYNES/CM²

WIND STRESS CURL
AUGUST/1968 DC = 2.0E-07 MKS



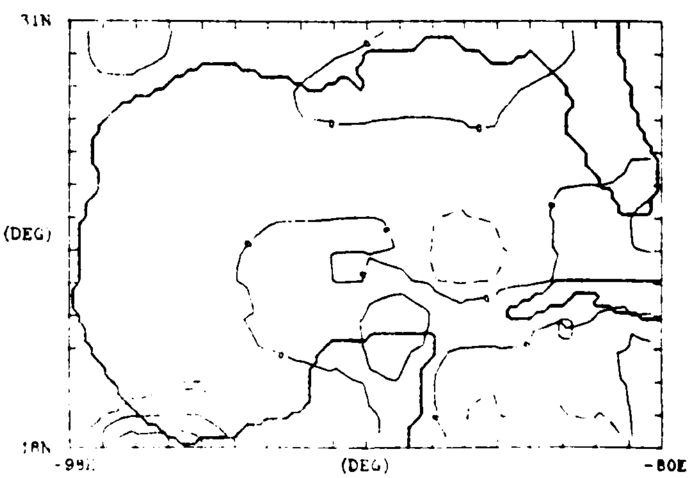
MIN = -6.80E-07 MAX = 6.51E-07

WIND STRESS
SEPTEMBER/1968



MAXIMUM WIND STRESS = [illegible] DYNES/CM²

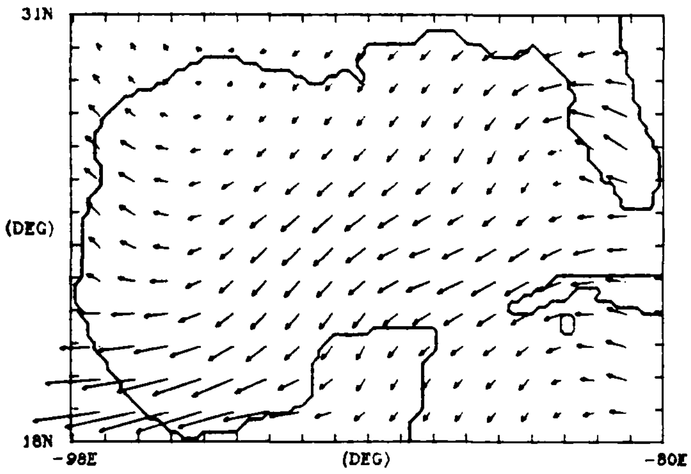
WIND STRESS CURL
SEPTEMBER/1968 DC = 2.0E-07 MKS



MIN [illegible] 1.98E-07 MAX = 3.06E-07

WIND STRESS

OCTOBER/1968

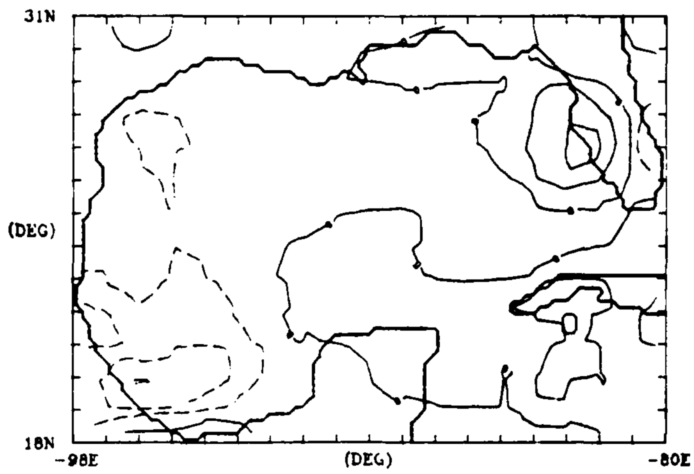


MAXIMUM WIND STRESS = 1.76 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

OCTOBER/1968 DC = 2.0E-07 MKS

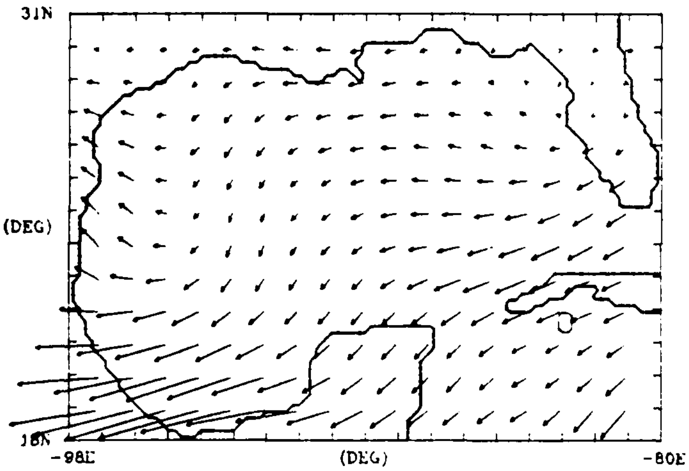


MIN = -6.14E-07 MAX = 5.08E-07

NORDA 323 13-DEC-84

WIND STRESS

NOVEMBER/1968

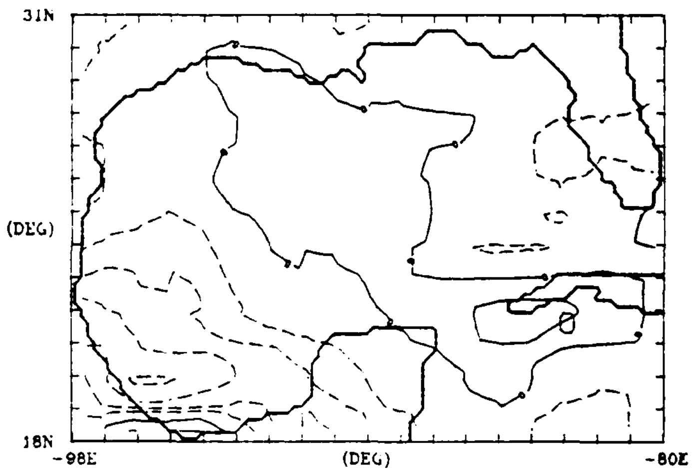


MAXIMUM WIND STRESS = 2.60 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

NOVEMBER/1968 DC = 2.0E-07 MKS

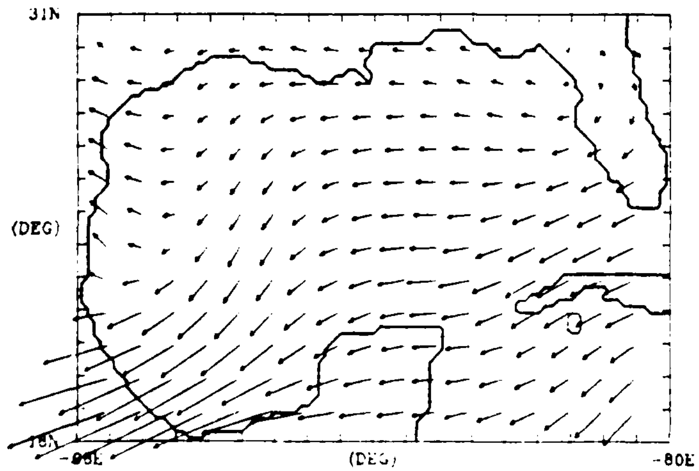


MIN = -8.56E-07 MAX = 2.84E-07

NORDA 323 13-DEC-84

WIND STRESS

DECEMBER/1968

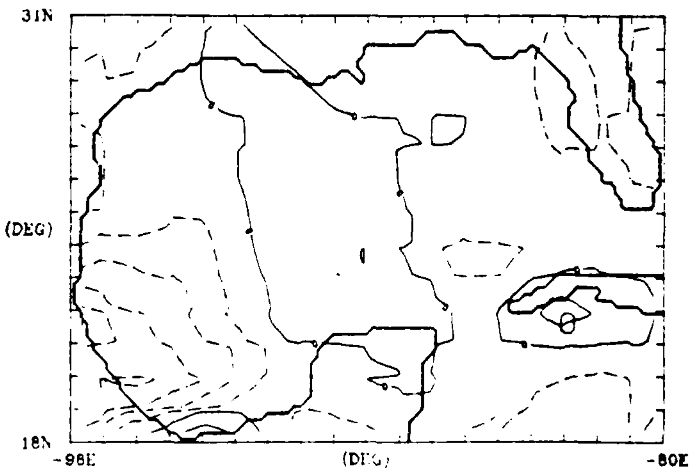


MAXIMUM WIND STRESS = 2.82 DYNES/CM²

NORDA 323 13-DEC-84

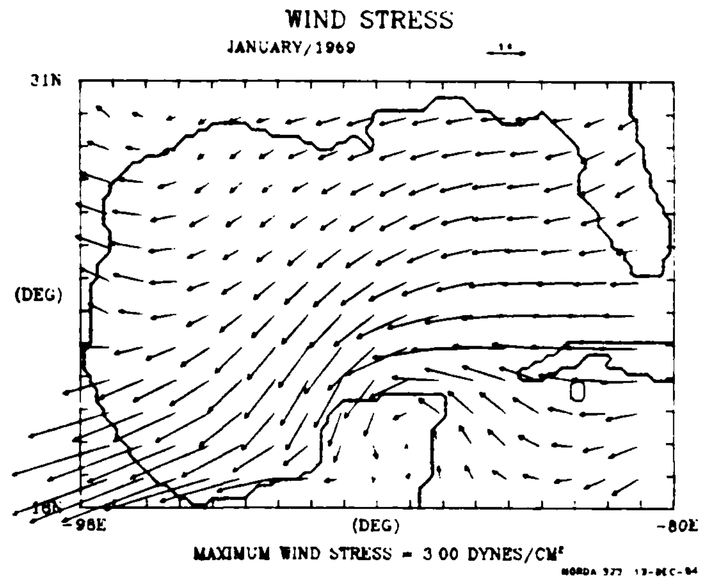
WIND STRESS CURL

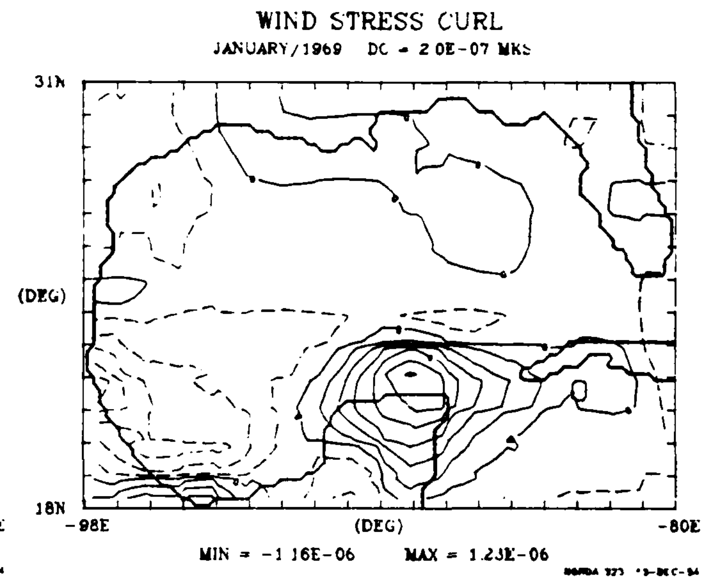
DECEMBER/1968 DC = 2.0E-07 MKS

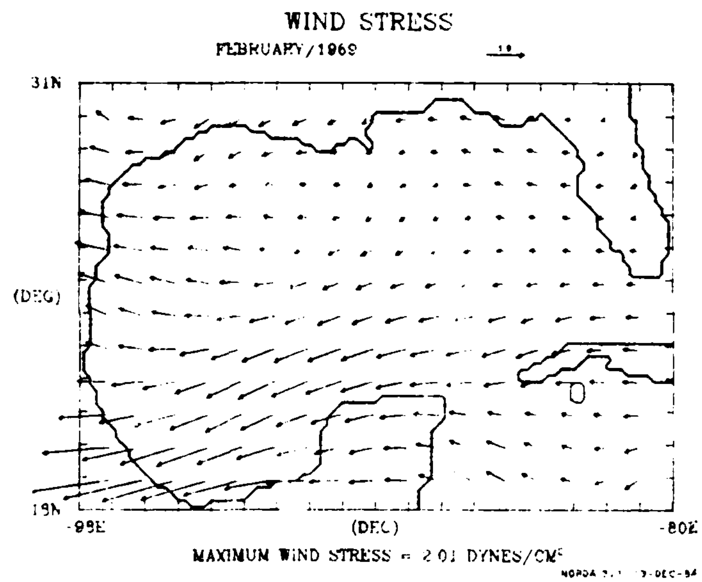


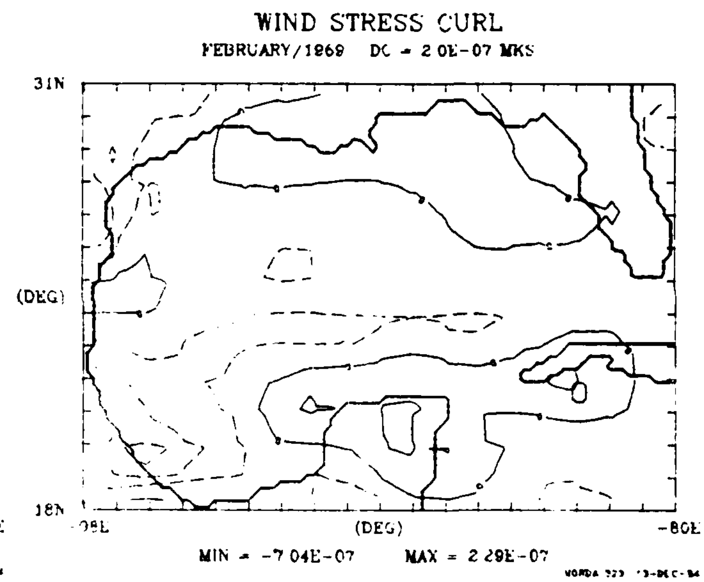
MIN = -1.02E-06 MAX = 2.82E-07

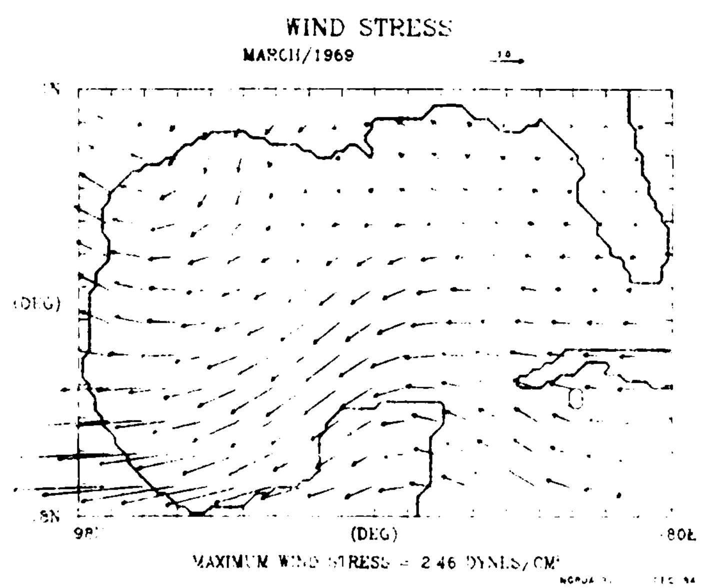
NORDA 323 13-DEC-84

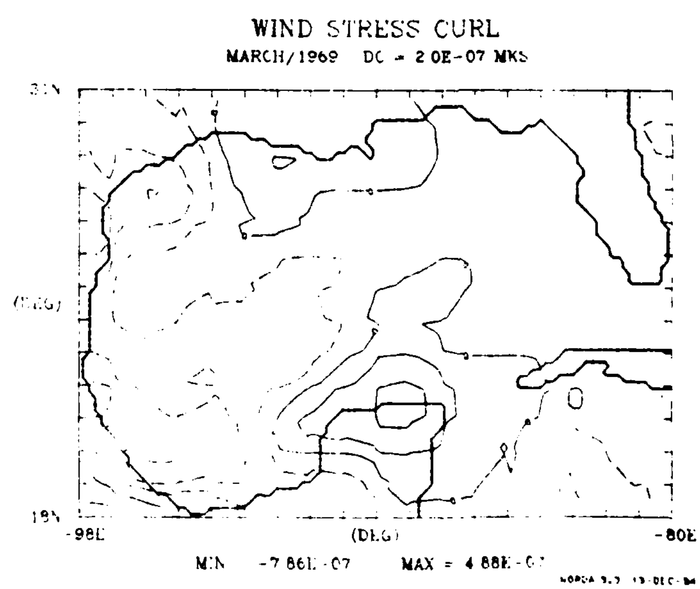

WIND STRESS
JANUARY/1969
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.00 DYNES/CM²

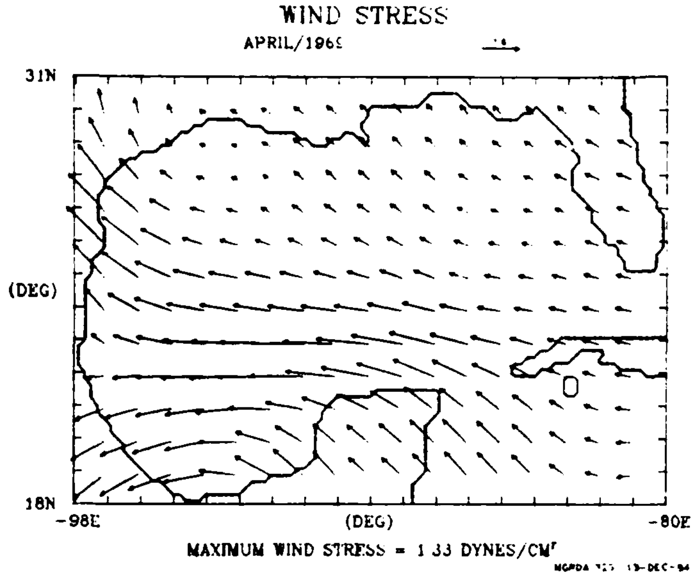

WIND STRESS CURL
JANUARY/1969 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.16E-06 MAX = 1.23E-06

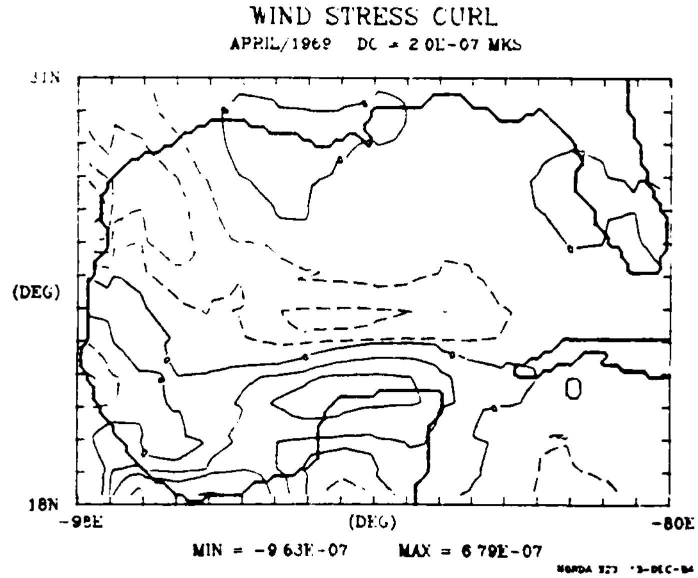

WIND STRESS
FEBRUARY/1969
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.01 DYNES/CM²

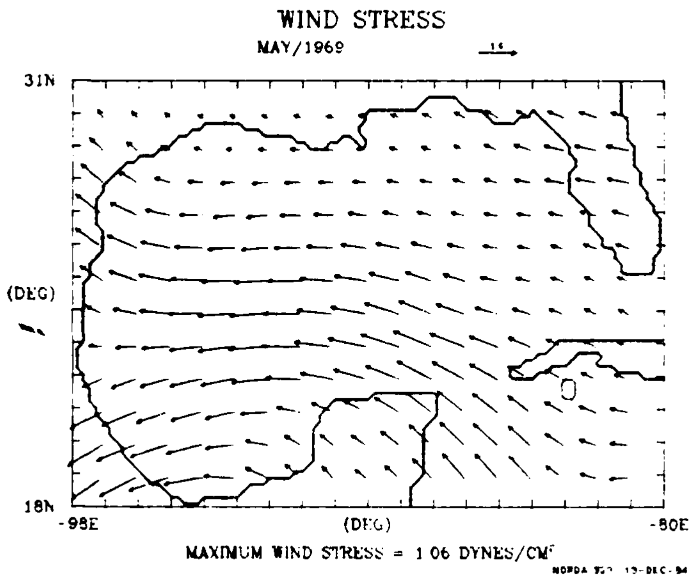

WIND STRESS CURL
FEBRUARY/1969 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -7.04E-07 MAX = 2.29E-07

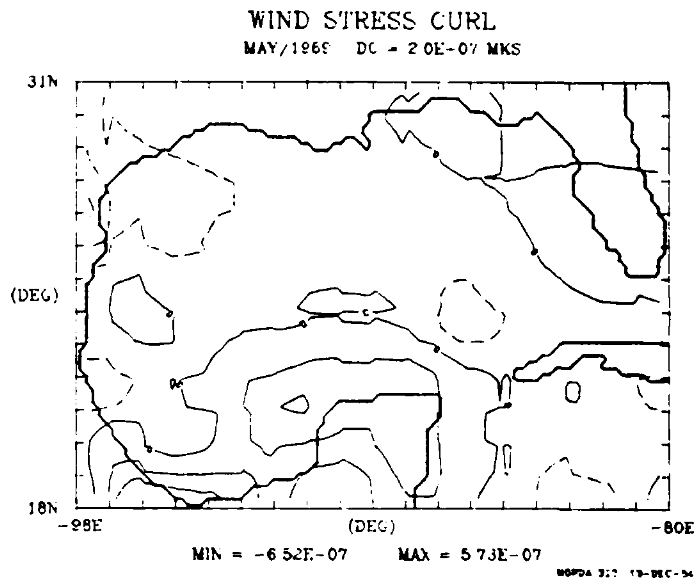

WIND STRESS
MARCH/1969
(DEG)
(DEG)
-80E
MAXIMUM WIND STRESS = 2.46 DYNES/CM²

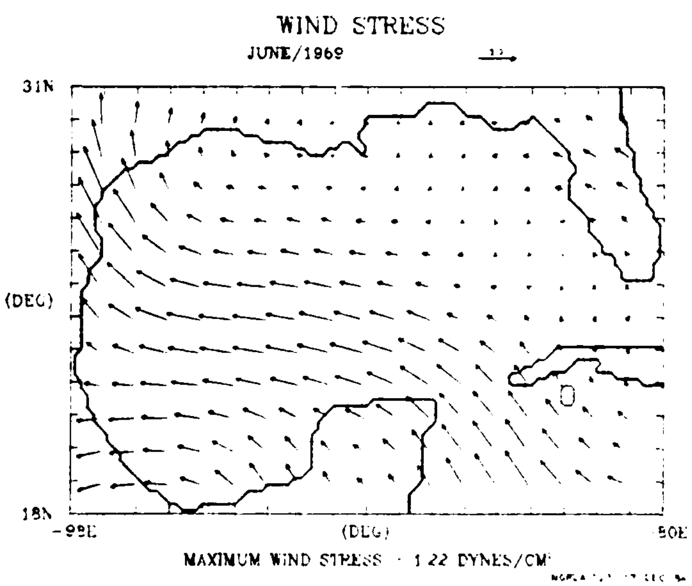

WIND STRESS CURL
MARCH/1969 DC = 2.0E-07 MKS
18N
-98E
-80E
MAX = 4.88E-07

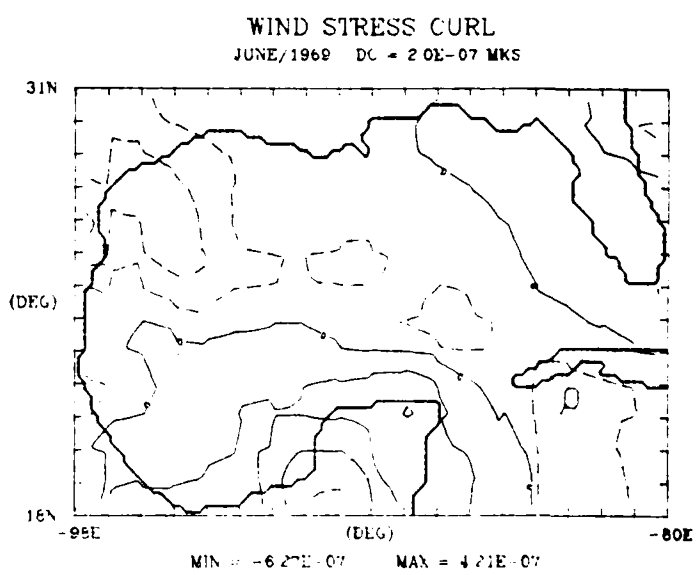

WIND STRESS
APRIL/1969
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1 33 DYNES/CM²

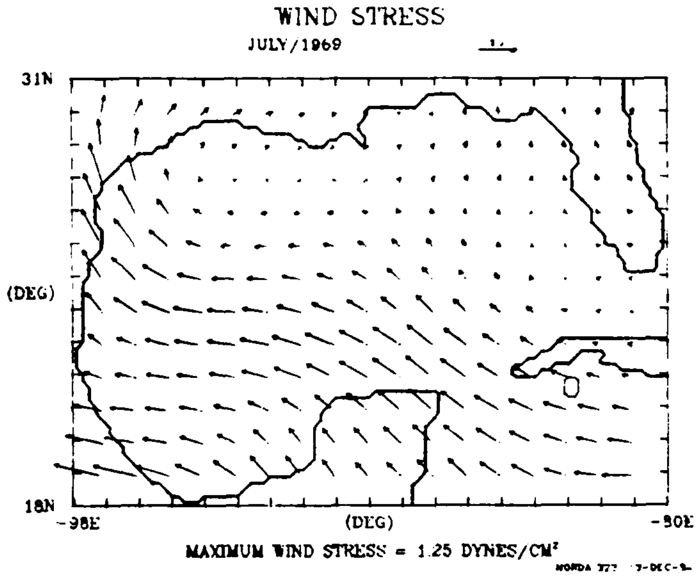

WIND STRESS CURL
APRIL/1969 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -9 63E-07 MAX = 6 79E-07

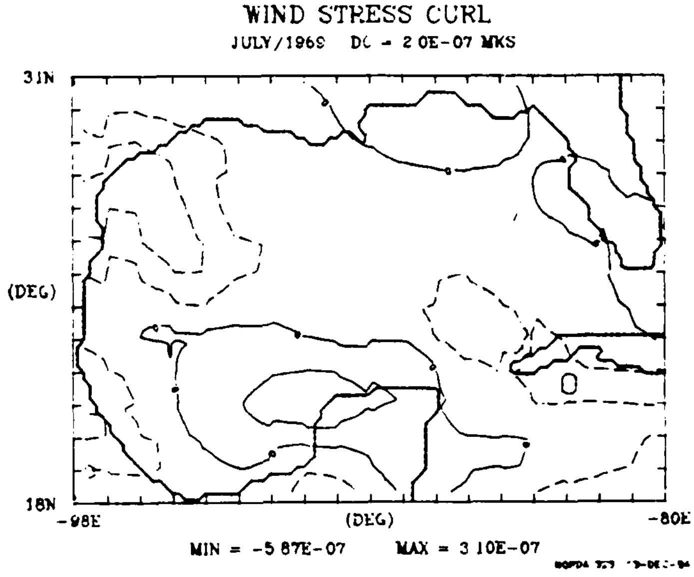

WIND STRESS
MAY/1969
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1 06 DYNES/CM²

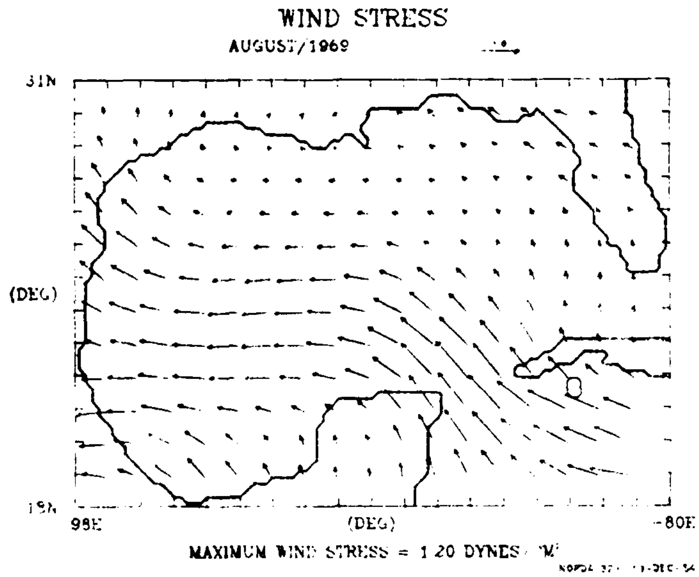

WIND STRESS CURL
MAY/1969 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -6 52E-07 MAX = 5 73E-07

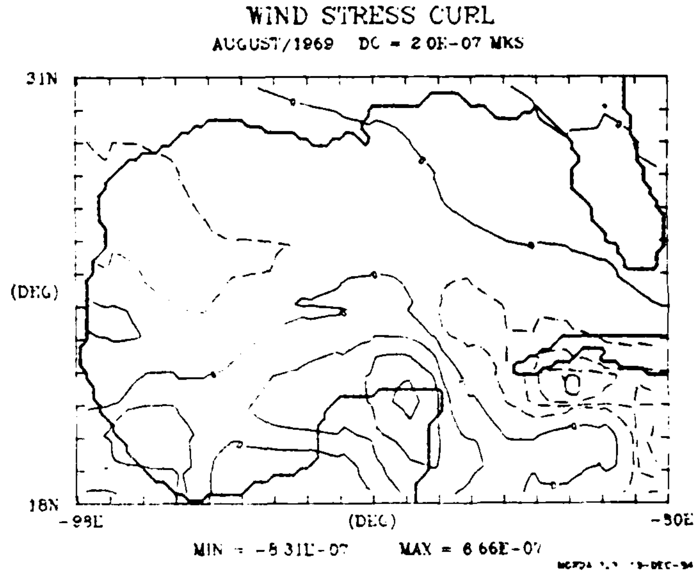

WIND STRESS
JUNE/1969
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1 22 DYNES/CM²

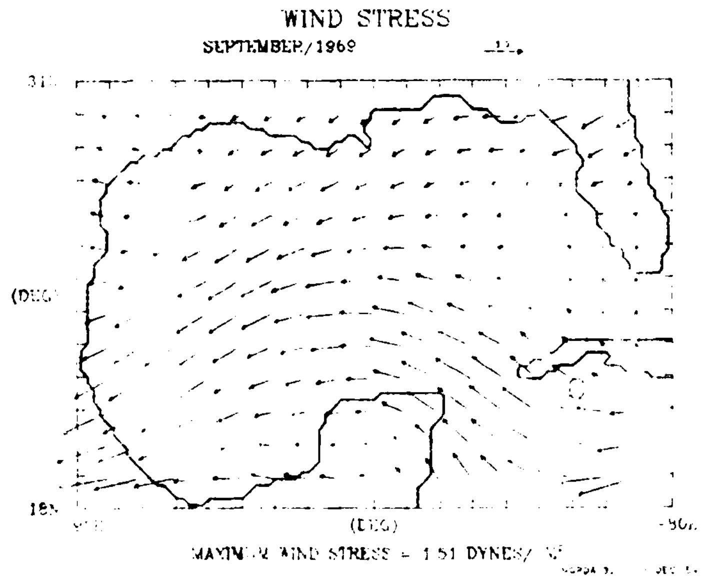

WIND STRESS CURL
JUNE/1969 DC = 2 0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MAX = 4 21E-07

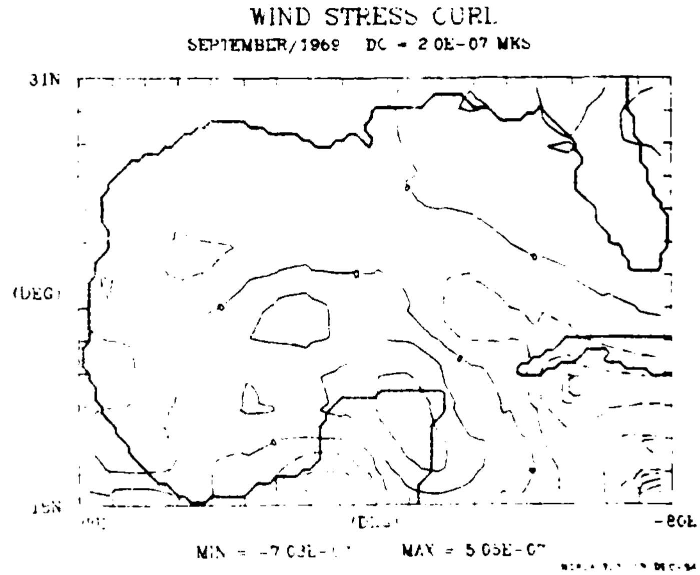

WIND STRESS
JULY/1969
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.25 DYNES/CM²


WIND STRESS CURL
JULY/1969 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -5.87E-07 MAX = 3.10E-07

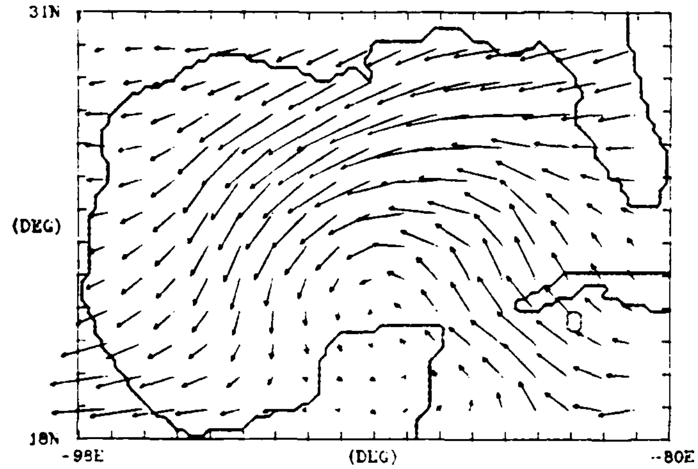

WIND STRESS
AUGUST/1969
31N
(DEG)
98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.20 DYNES


WIND STRESS CURL
AUGUST/1969 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MAX = 6.66E-07


WIND STRESS
SEPTEMBER/1969
18N
(DEG)

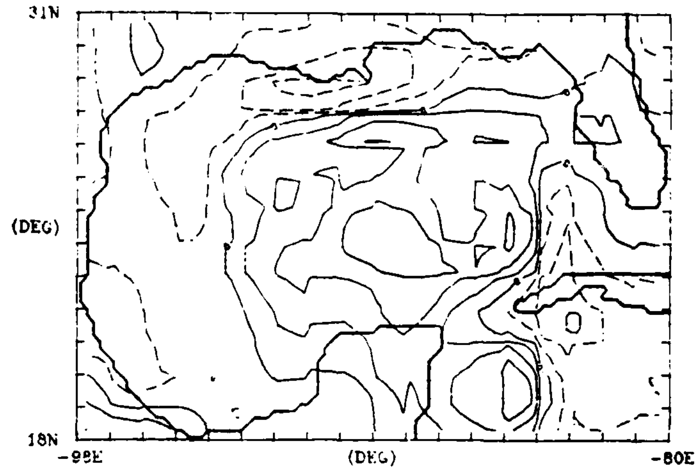

WIND STRESS CURL
SEPTEMBER/1969 DC = 2.0E-07 MKS
31N
(DEG)
-80E
MAX = 5.05E-07

WIND STRESS
OCTOBER/1969



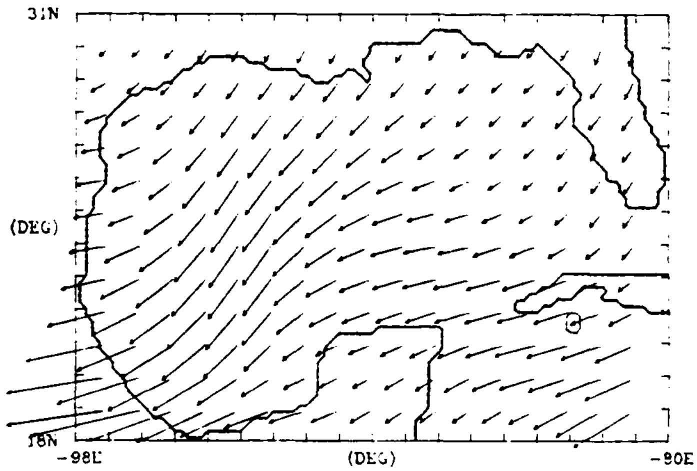
MAXIMUM WIND STRESS = 2.05 DYNES/CM²

WIND STRESS CURL
OCTOBER/1969 DC = 2.0E-07 MKS



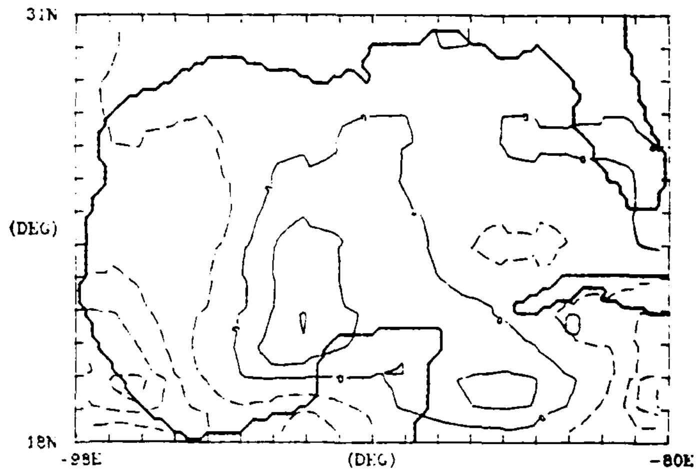
MIN = -7.07E-07 MAX = 7.63E-07

WIND STRESS
NOVEMBER/1969



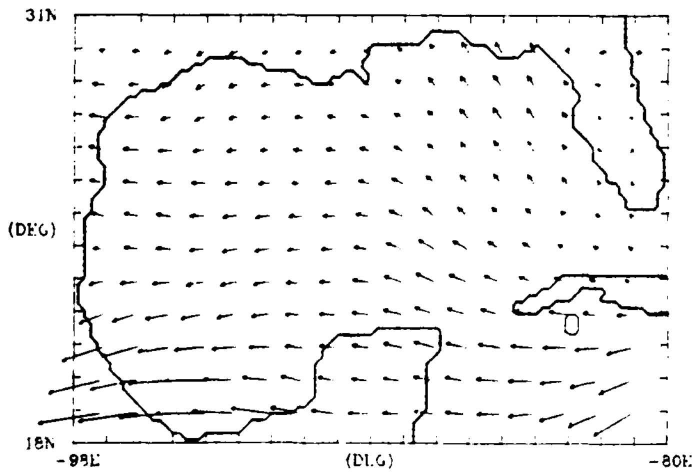
MAXIMUM WIND STRESS = 3.04 DYNES/CM²

WIND STRESS CURL
NOVEMBER/1969 DC = 2.0E-07 MKS



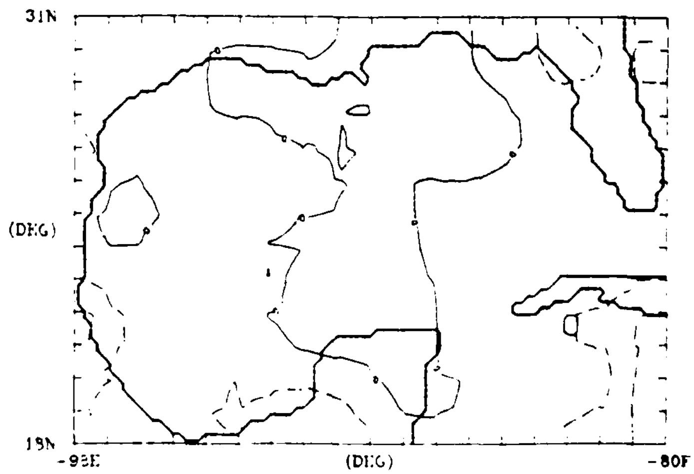
MIN = -8.93E-07 MAX = 4.15E-07

WIND STRESS
DECEMBER/1969



MAXIMUM WIND STRESS = 1.62 DYNES/CM²

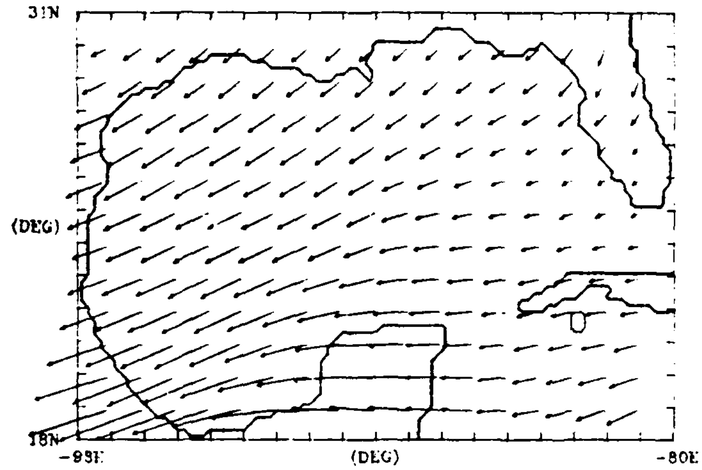
WIND STRESS CURL
DECEMBER/1969 DC = 2.0E-07 MKS



MIN = -5.78E-07 MAX = 7.54E-08

WIND STRESS

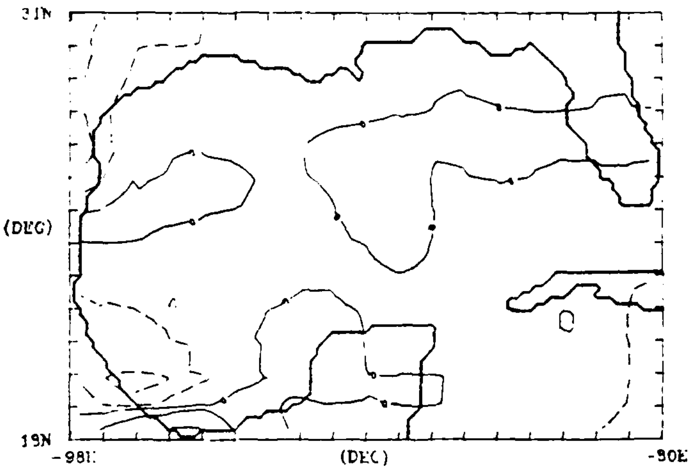
JANUARY/1970



MAXIMUM WIND STRESS = 2.13 DYNES/CM²

WIND STRESS CURL

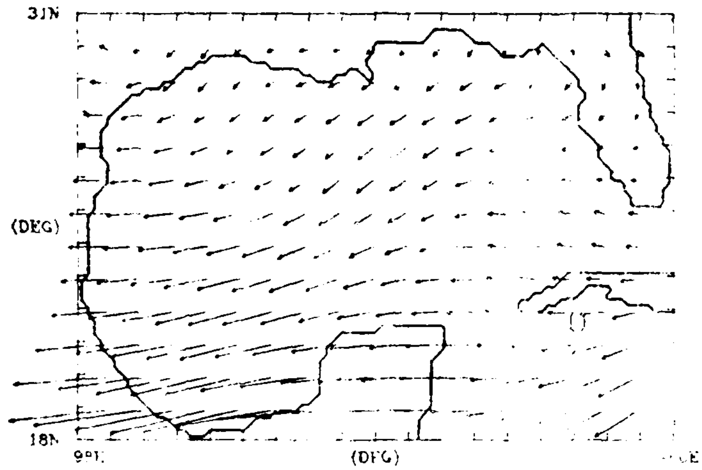
JANUARY/1970 DC = 2.0E-07 MKS



MIN = -5.43E-07 MAX = 4.32E-07

WIND STRESS

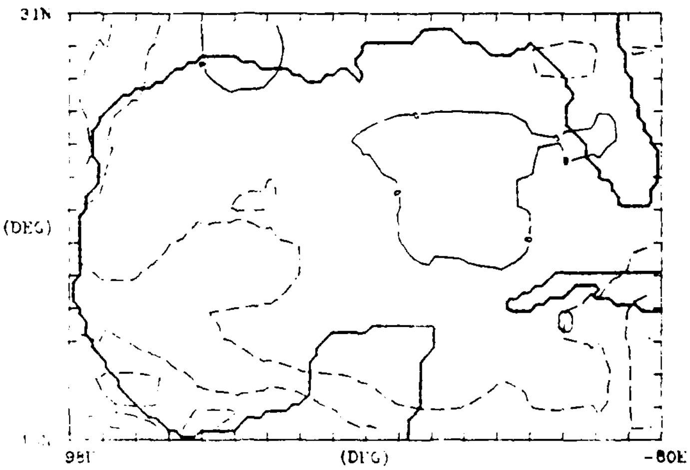
FEBRUARY/1970



MAXIMUM WIND STRESS = 2.82 [illegible]

WIND STRESS CURL

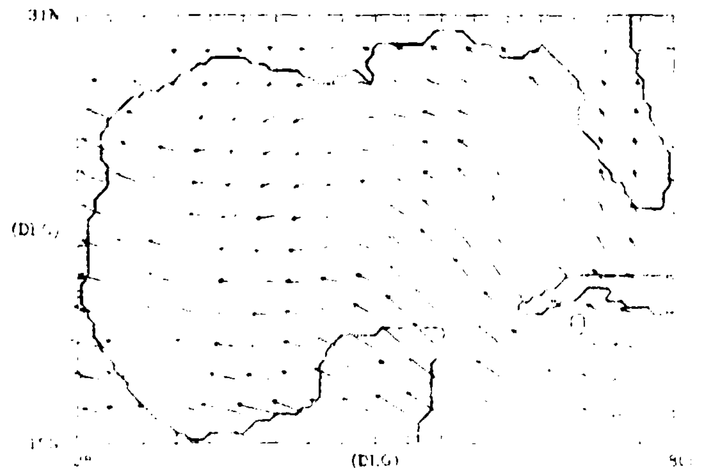
FEBRUARY/1970 DC = 2.0E-07 MKS



MIN = -7.40E-07 MAX = 1.09E-07

WIND STRESS

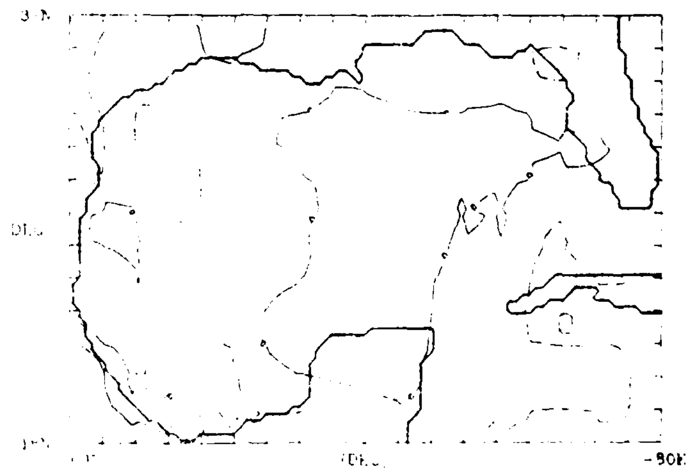
MARCH/1970



MAXIMUM WIND STRESS = [illegible]

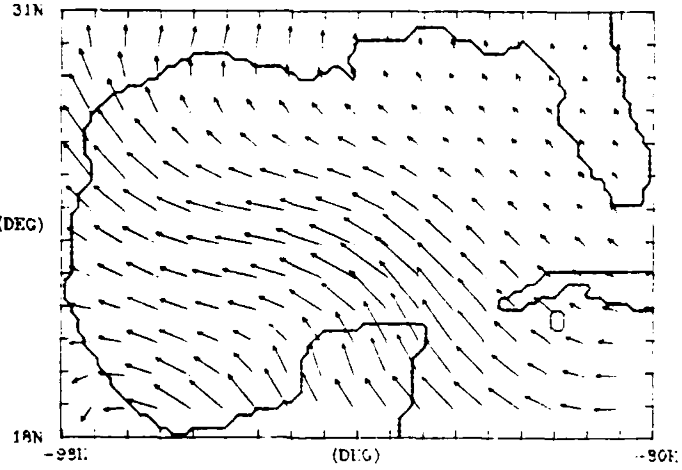
WIND STRESS CURL

MARCH/1970 DC = 2.0E-07 MKS



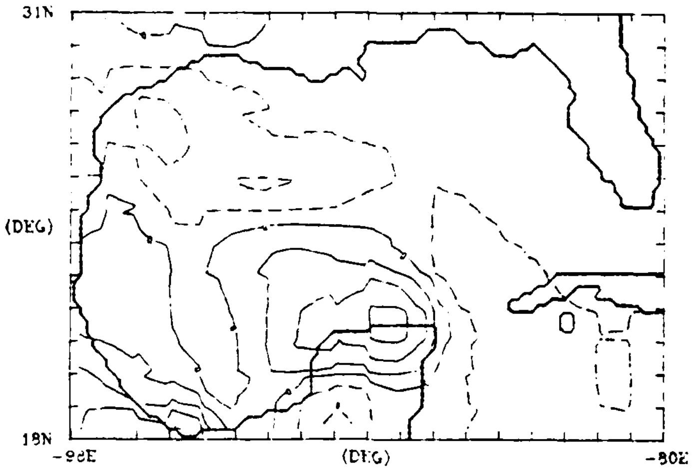
MIN = -4.51E-07 MAX = 5.63E-07

WIND STRESS
APRIL/1970



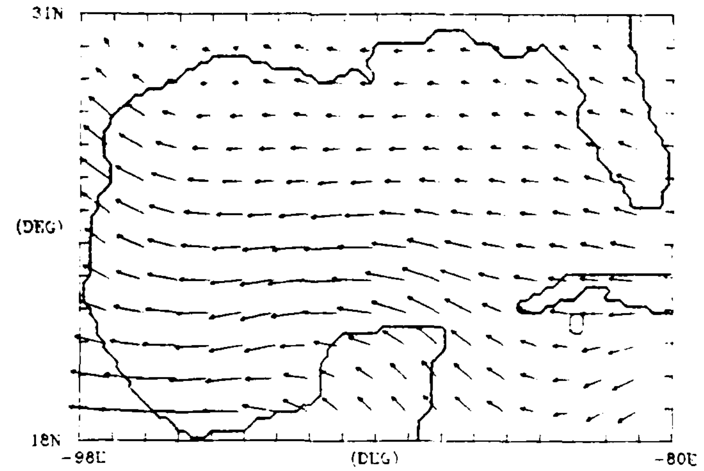
MAXIMUM WIND STRESS = 1.57 DYNES/CM²

WIND STRESS CURL
APRIL/1970 DC = 2.0E-07 MKS



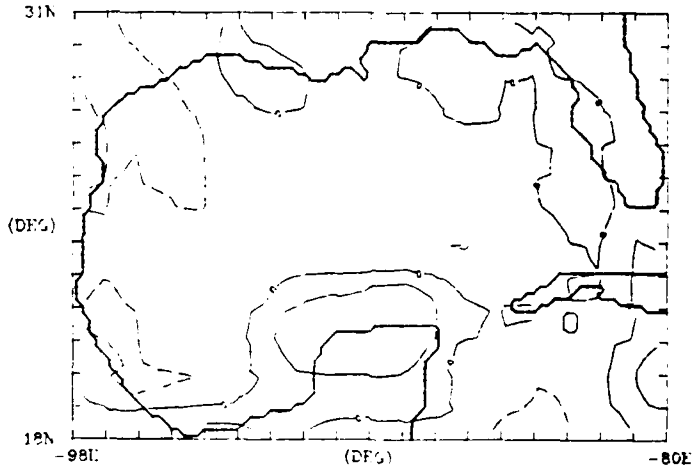
MIN = -4.98E-07 MAX = 8.34E-07

WIND STRESS
MAY/1970



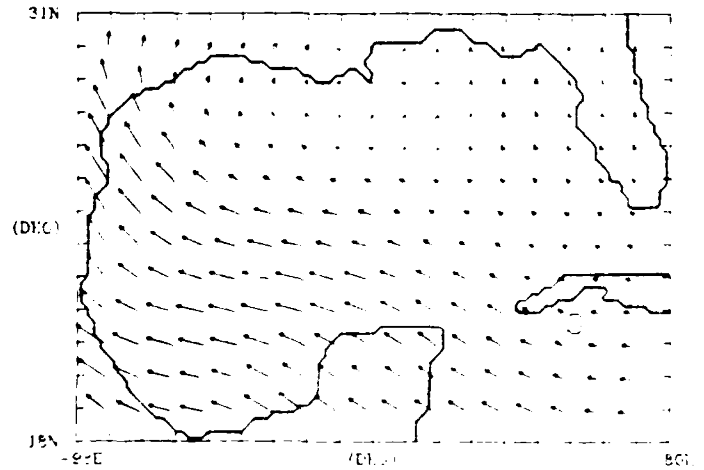
MAXIMUM WIND STRESS = 1.09 DYNES/CM²

WIND STRESS CURL
MAY/1970 DC = 2.0E-07 MKS



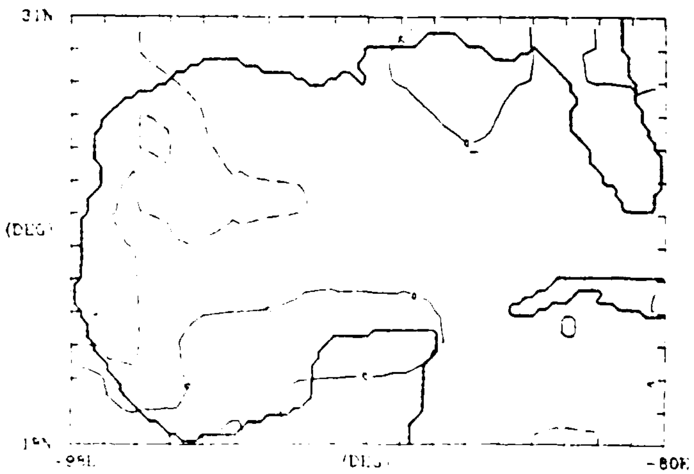
MIN = -5.89E-07 MAX = 4.32E-07

WIND STRESS
JUNE/1970



MAXIMUM WIND STRESS = 1.05 DYNES/CM²

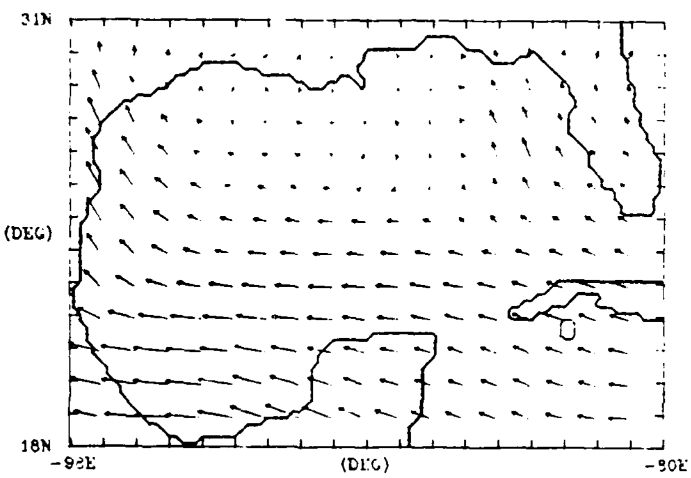
WIND STRESS CURL
JUNE/1970 DC = 2.0E-07 MKS



MIN = -5.71E-07 MAX = 2.22E-07

WIND STRESS

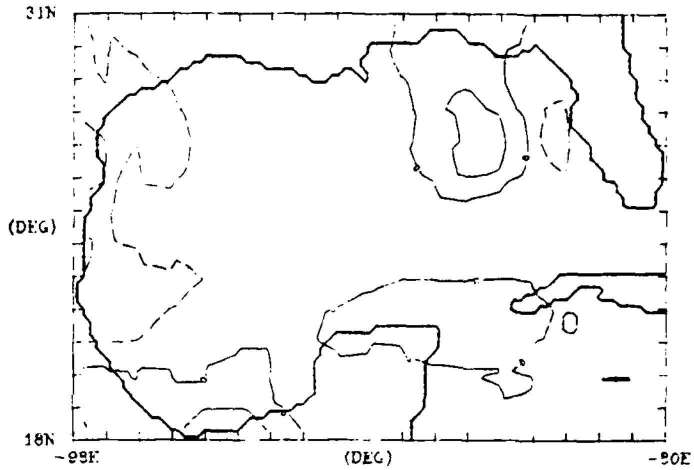
JULY/1970



MAXIMUM WIND STRESS = 0.91 DYNES/CM²

WIND STRESS CURL

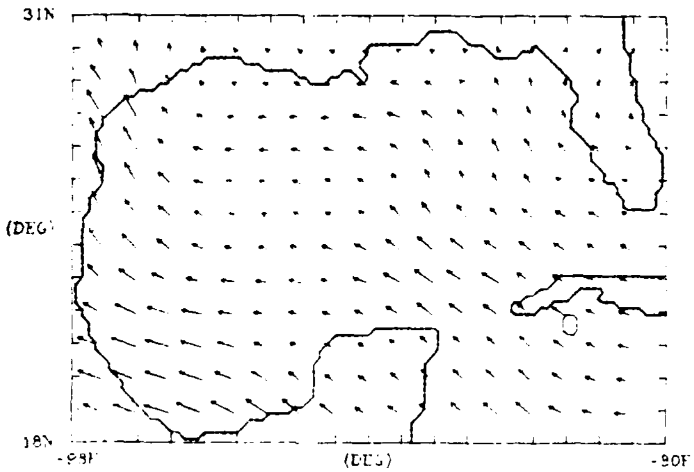
JULY/1970 DC = 2.0E-07 MKS



MIN = -4.99E-07 MAX = 3.94E-07

WIND STRESS

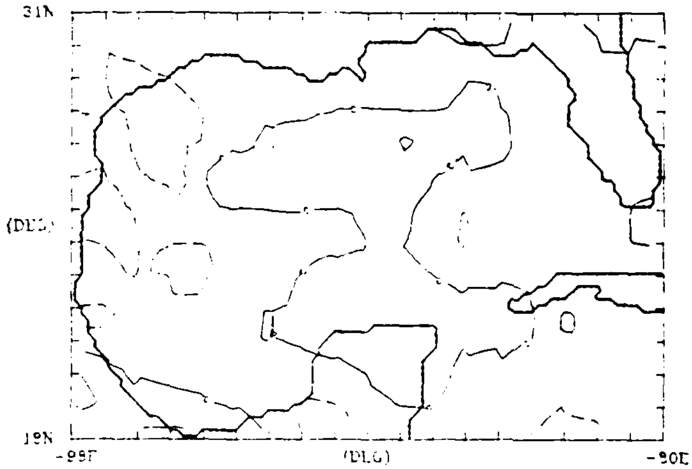
AUGUST/1970



MAXIMUM WIND STRESS = 0.91 DYNES/CM²

WIND STRESS CURL

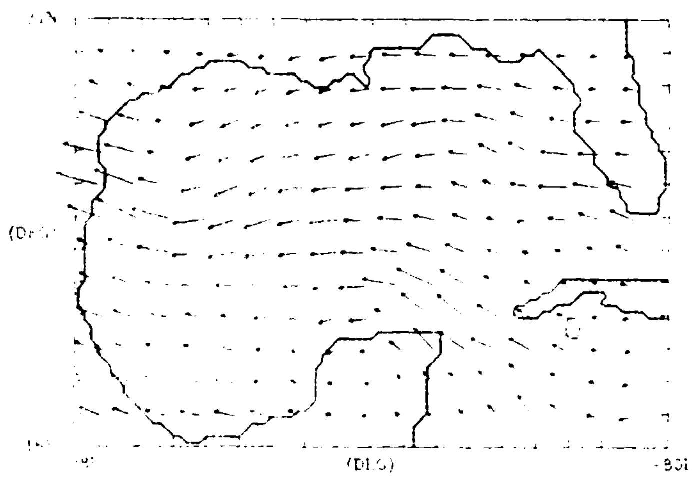
AUGUST/1970 DC = 2.0E-07 MKS



MIN = -3.66E-07 MAX = 2.49E-07

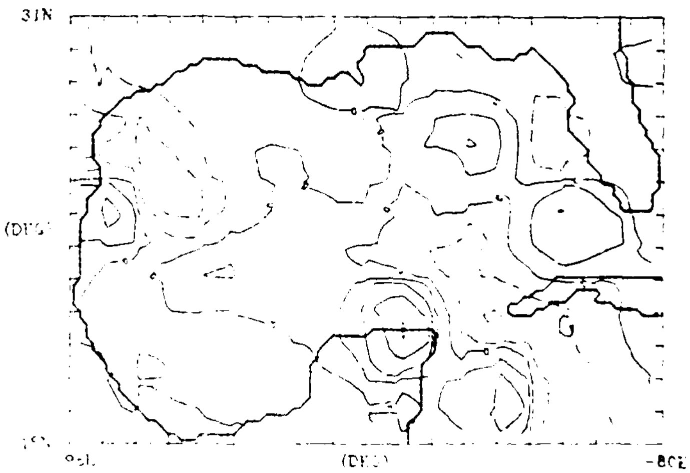
WIND STRESS

SEPTEMBER/1970

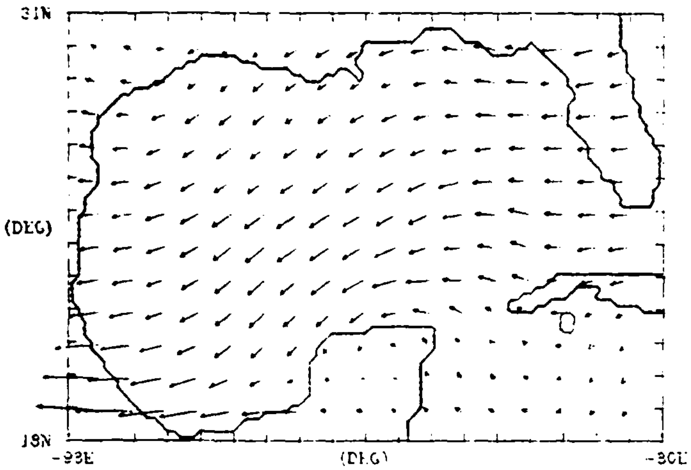


WIND STRESS CURL

SEPTEMBER/1970 DC = 2.0E-07 MKS

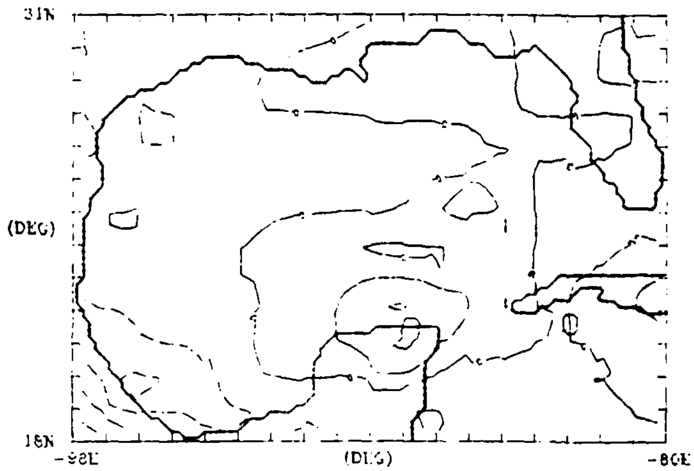


WIND STRESS
OCTOBER/1970



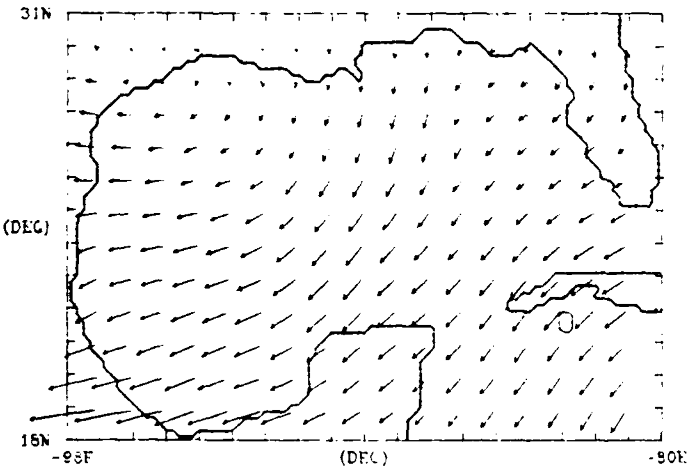
MAXIMUM WIND STRESS = 1.54 DYNES/CM²

WIND STRESS CURL
OCTOBER/1970 DC = 2.0E-07 MKS



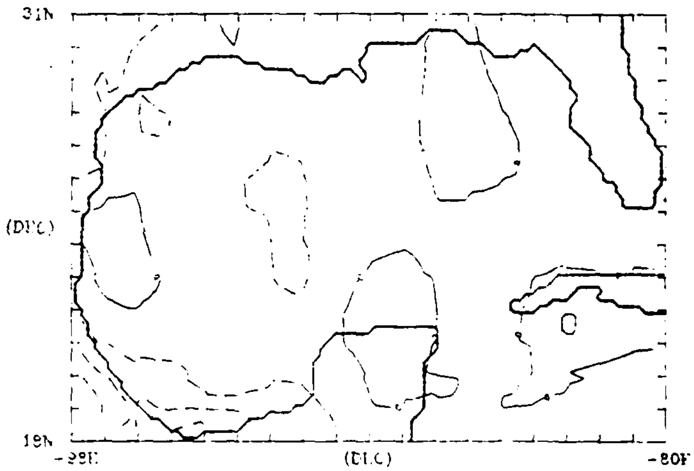
MIN = -4.75E-07 MAX = 4.25E-07

WIND STRESS
NOVEMBER/1970



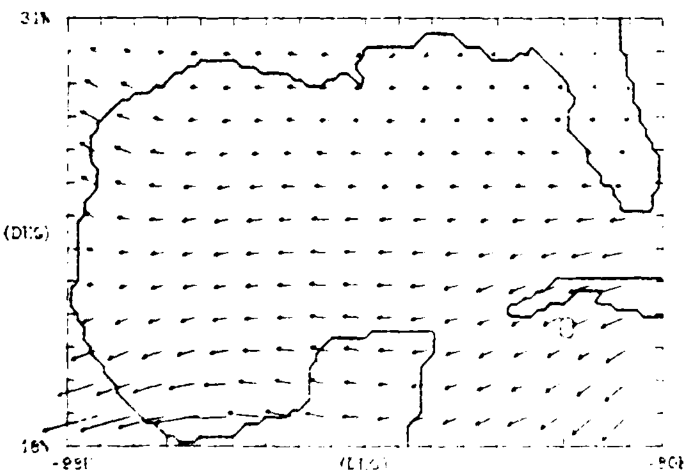
MAXIMUM WIND STRESS = 1.74 DYNES/CM²

WIND STRESS CURL
NOVEMBER/1970 DC = 2.0E-07 MKS



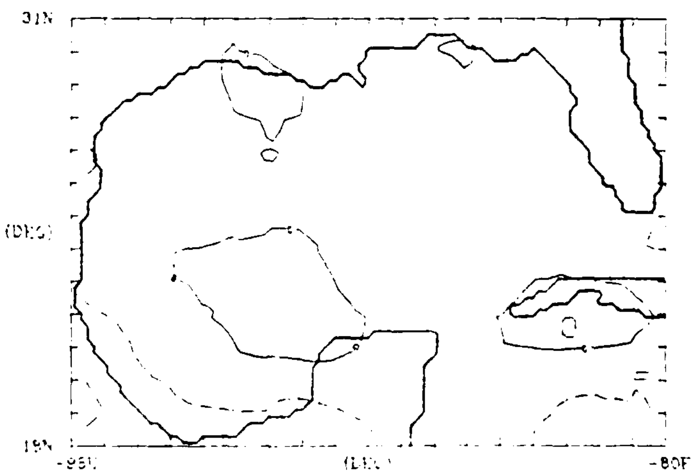
MIN = -7.55E-07 MAX = 1.53E-07

WIND STRESS
DECEMBER/1970



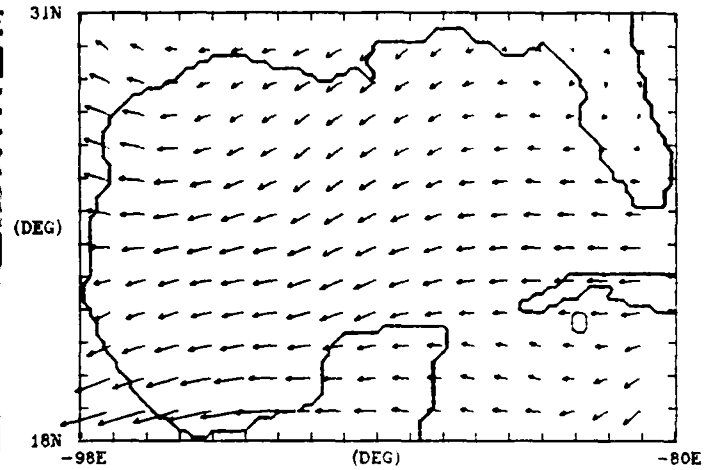
MAXIMUM WIND STRESS = 1.42 DYNES/CM²

WIND STRESS CURL
DECEMBER/1970 DC = 2.0E-07 MKS



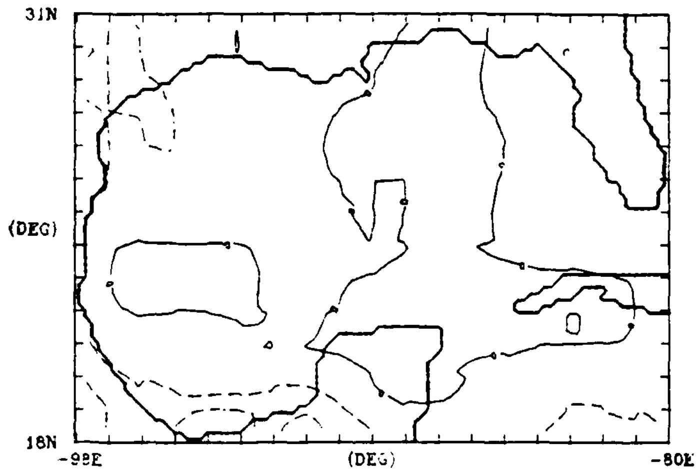
MIN = -4.25E-07 MAX = 1.59E-07

WIND STRESS
JANUARY/1971



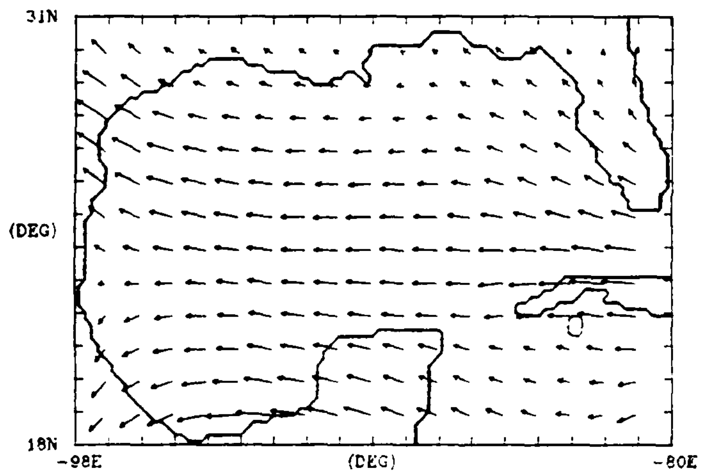
MAXIMUM WIND STRESS = 1.27 DYNES/CM²

WIND STRESS CURL
JANUARY/1971 DC = 2.0E-07 MKS



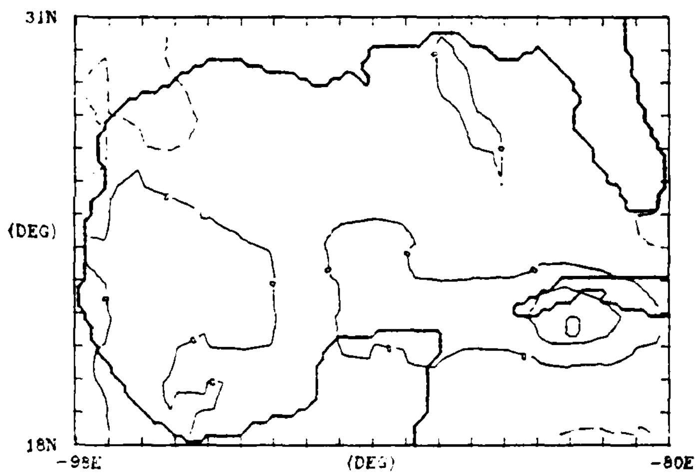
MIN = -6.06E-07 MAX = 1.28E-07

WIND STRESS
FEBRUARY/1971



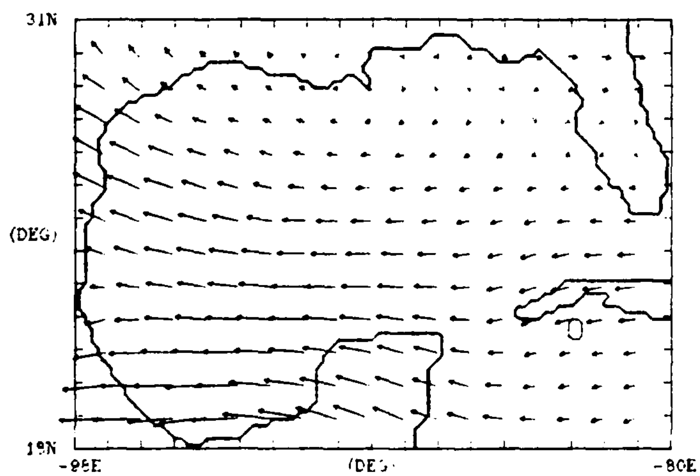
MAXIMUM WIND STRESS = 0.86 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1971 DC = 2.0E-07 MKS



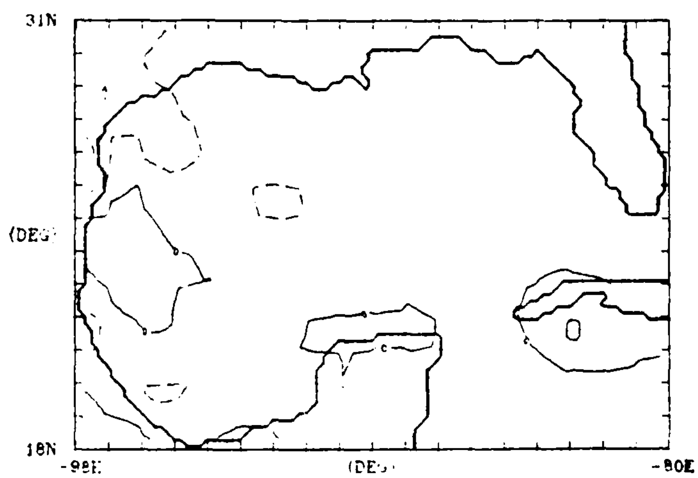
MIN = -3.34E-07 MAX = 3.14E-07

WIND STRESS
MARCH/1971



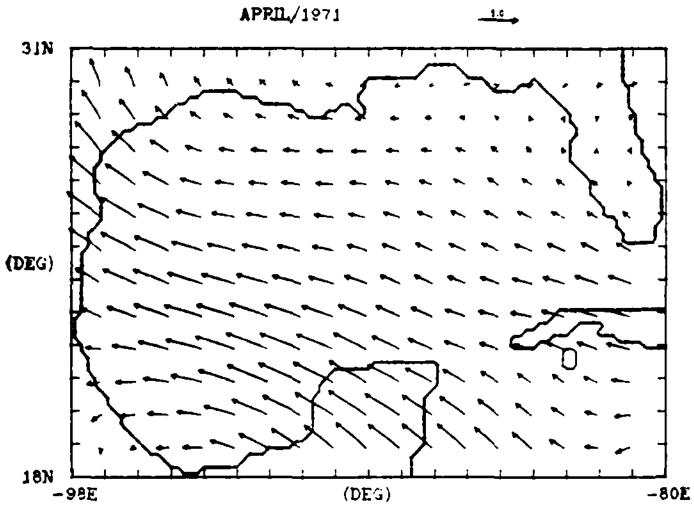
MAXIMUM WIND STRESS = 1.20 DYNES/CM²

WIND STRESS CURL
MARCH/1971 DC = 2.0E-07 MKS



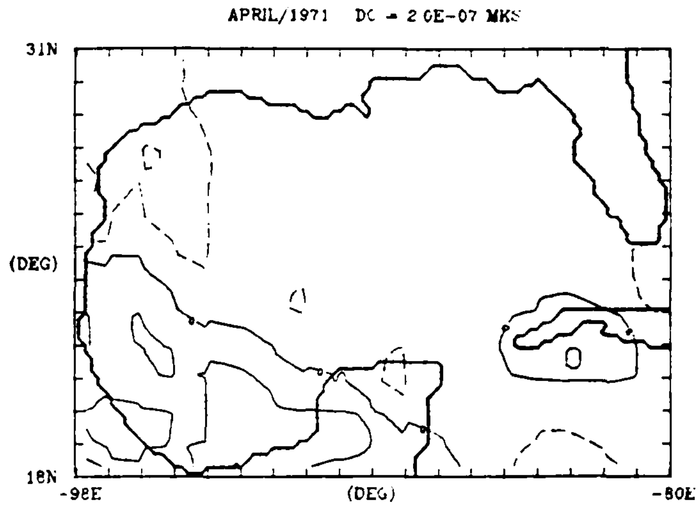
MIN = -4.36E-07 MAX = 1.73E-07

WIND STRESS
APRIL/1971



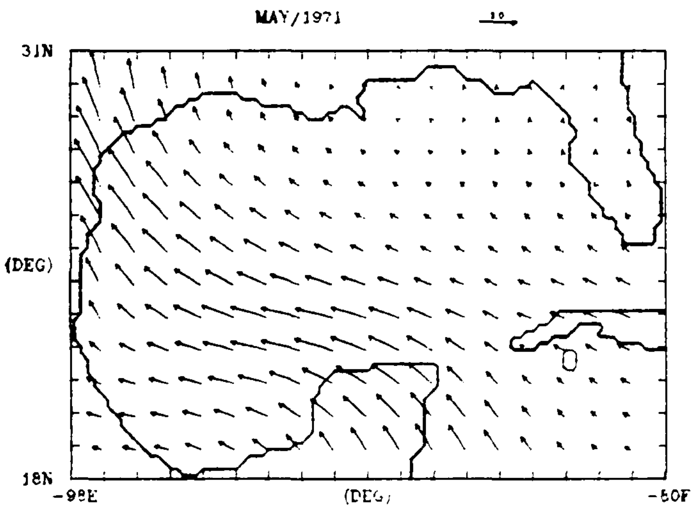
MAXIMUM WIND STRESS = 1.09 DYNES/CM²

WIND STRESS CURL
APRIL/1971 DC = 2.0E-07 MKS



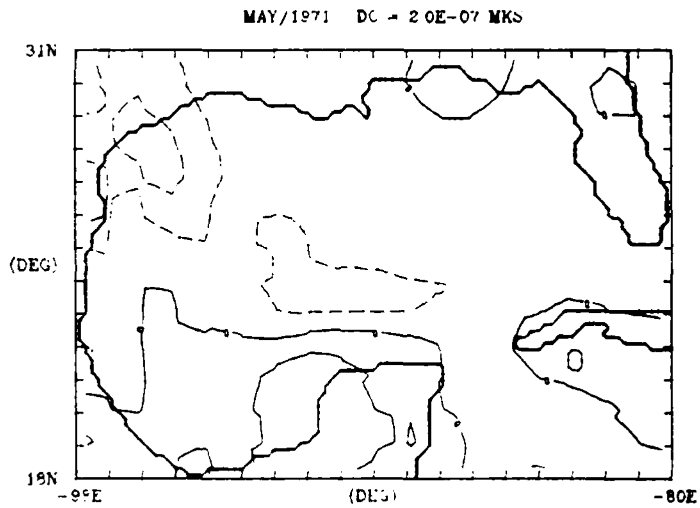
MIN = -6.79E-07 MAX = 4.12E-07

WIND STRESS
MAY/1971



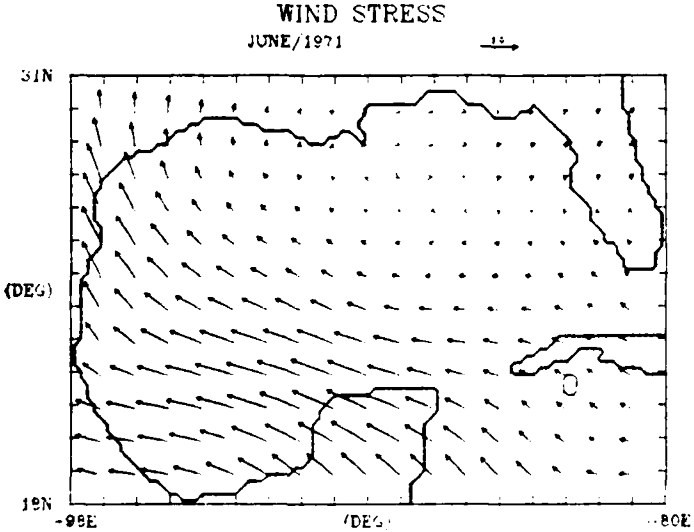
MAXIMUM WIND STRESS = 1.31 DYNES/CM²

WIND STRESS CURL
MAY/1971 DC = 2.0E-07 MKS



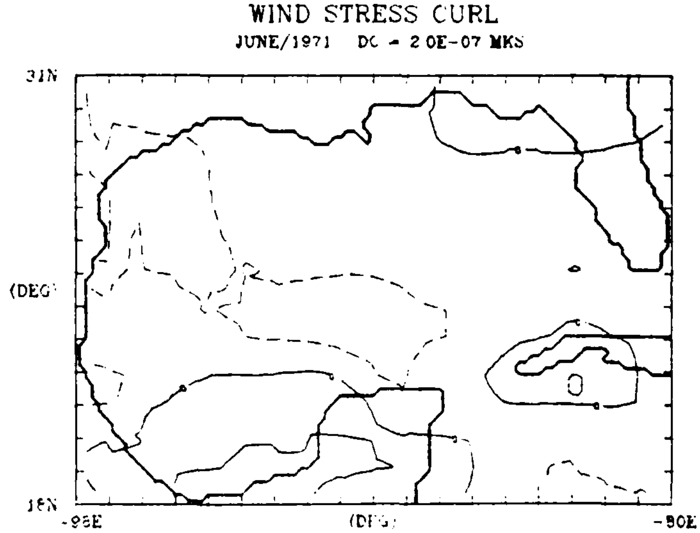
MIN = -5.19E-07 MAX = 3.17E-07

WIND STRESS
JUNE/1971

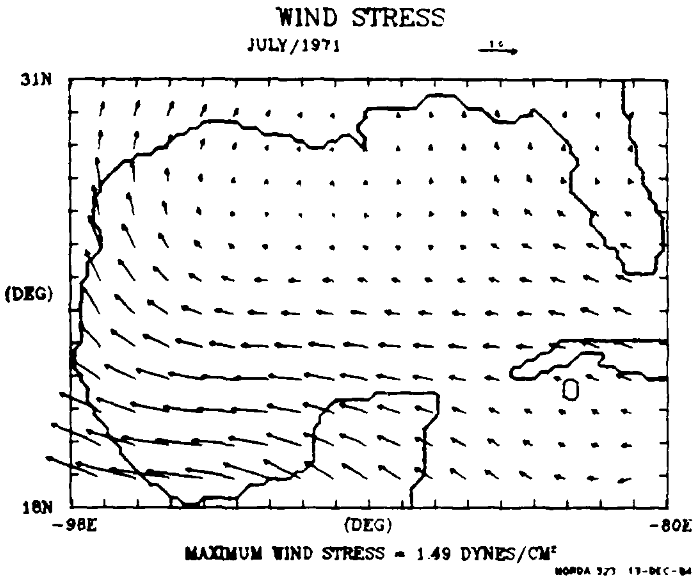


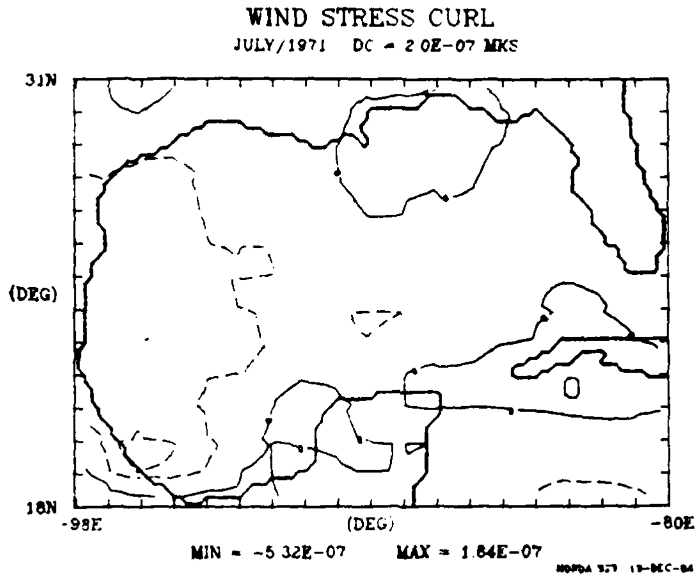
MAXIMUM WIND STRESS = 1.10 DYNES/CM²

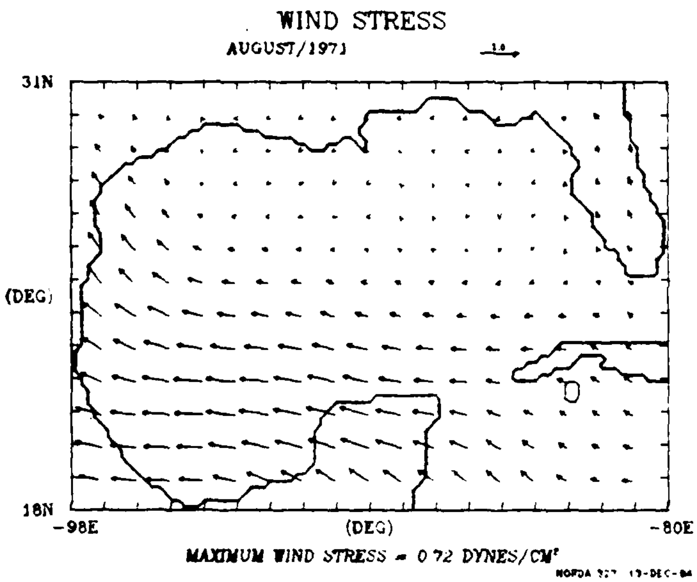
WIND STRESS CURL
JUNE/1971 DC = 2.0E-07 MKS

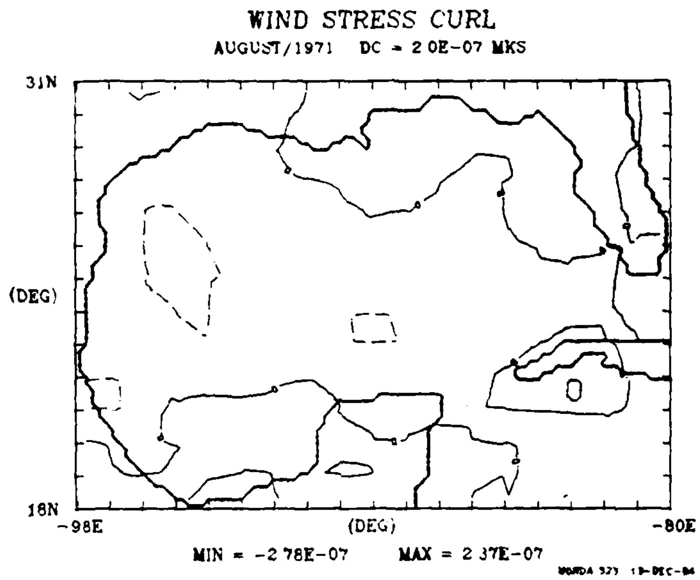


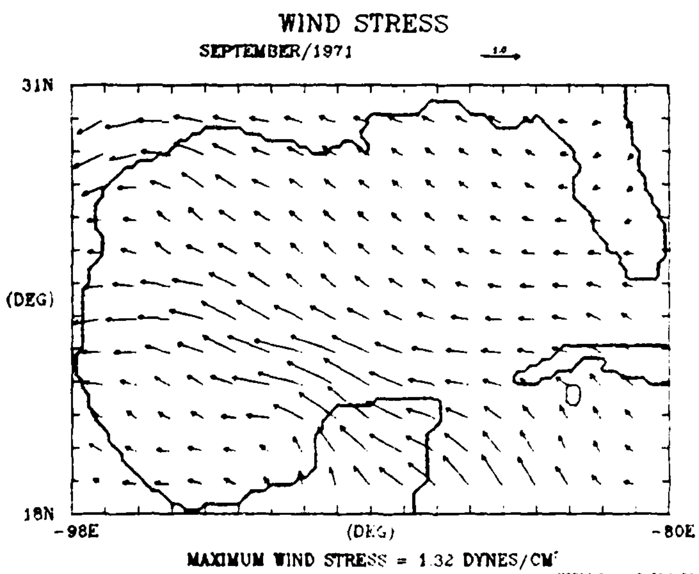
MIN = -6.01E-07 MAX = 3.37E-07

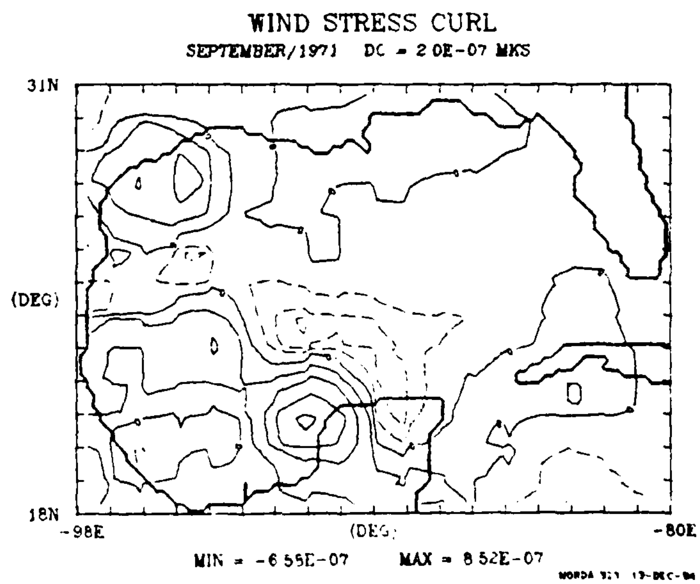

WIND STRESS
JULY/1971
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.49 DYNES/CM²


WIND STRESS CURL
JULY/1971 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -5.32E-07 MAX = 1.84E-07


WIND STRESS
AUGUST/1971
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 0.72 DYNES/CM²

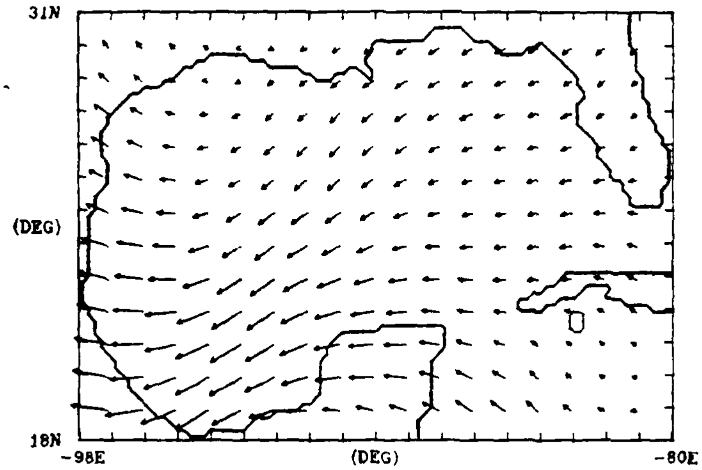

WIND STRESS CURL
AUGUST/1971 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.78E-07 MAX = 2.37E-07


WIND STRESS
SEPTEMBER/1971
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.32 DYNES/CM²


WIND STRESS CURL
SEPTEMBER/1971 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -6.55E-07 MAX = 8.52E-07

WIND STRESS

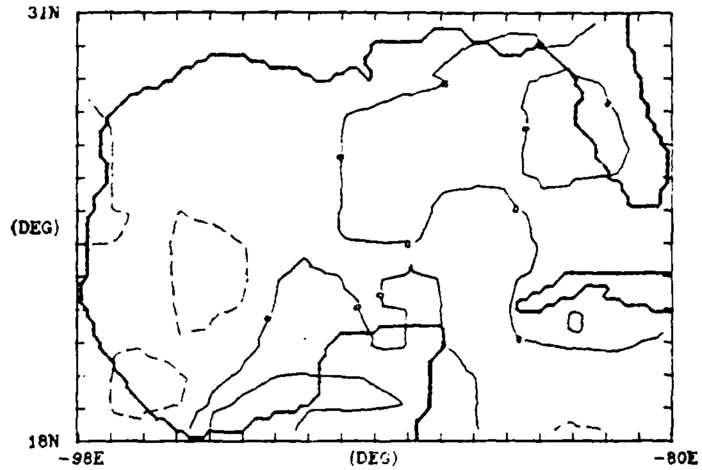
OCTOBER/1971



MAXIMUM WIND STRESS = 0.94 DYNES/CM²

WIND STRESS CURL

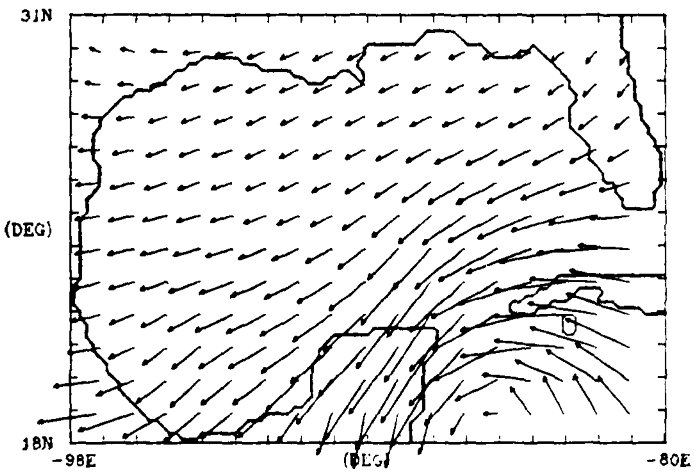
OCTOBER/1971 DC = 2.0E-07 MKS



MIN = -3.95E-07 MAX = 3.59E-07

WIND STRESS

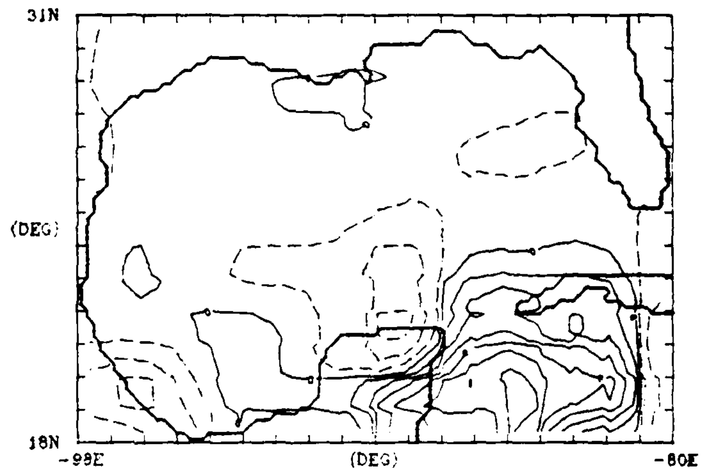
NOVEMBER/1971



MAXIMUM WIND STRESS = 2.20 DYNES/CM²

WIND STRESS CURL

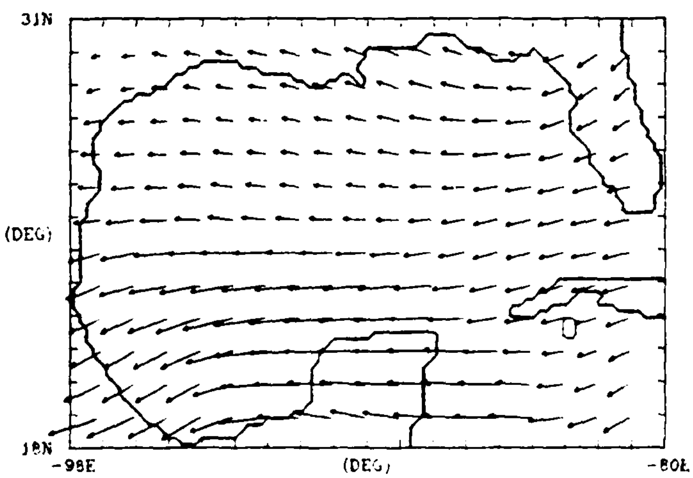
NOVEMBER/1971 DC = 2.0E-07 MKS



MIN = -6.64E-07 MAX = 1.29E-06

WIND STRESS

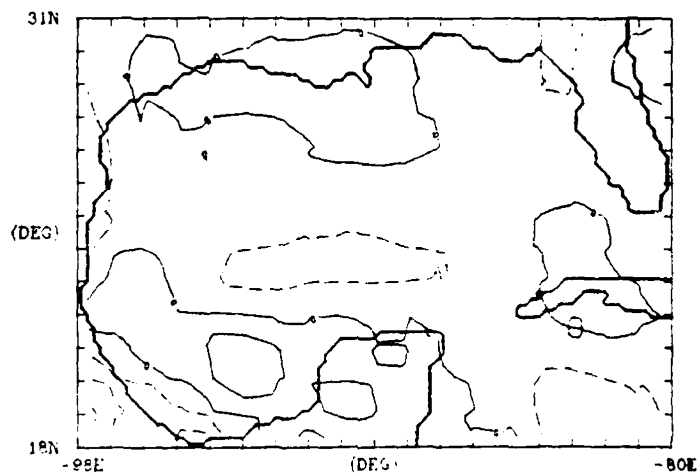
DECEMBER/1971



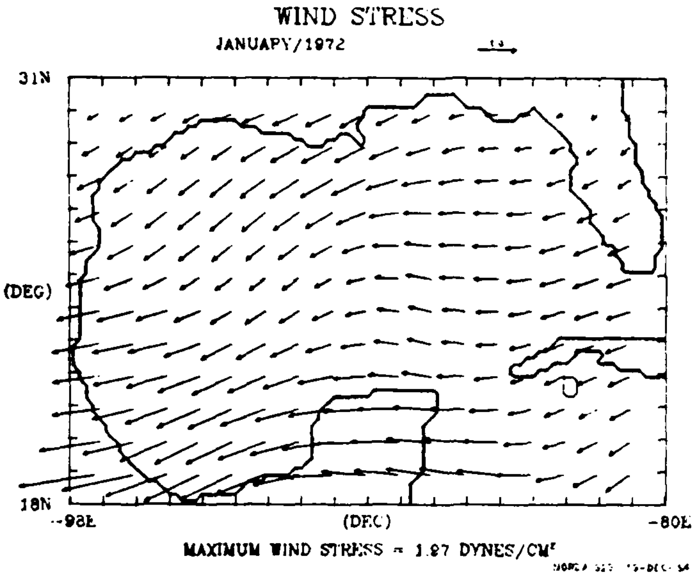
MAXIMUM WIND STRESS = 1.34 DYNES/CM²

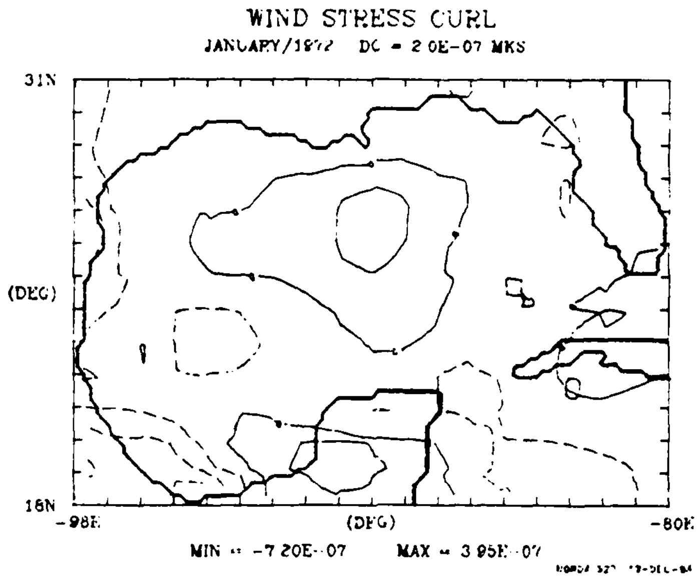
WIND STRESS CURL

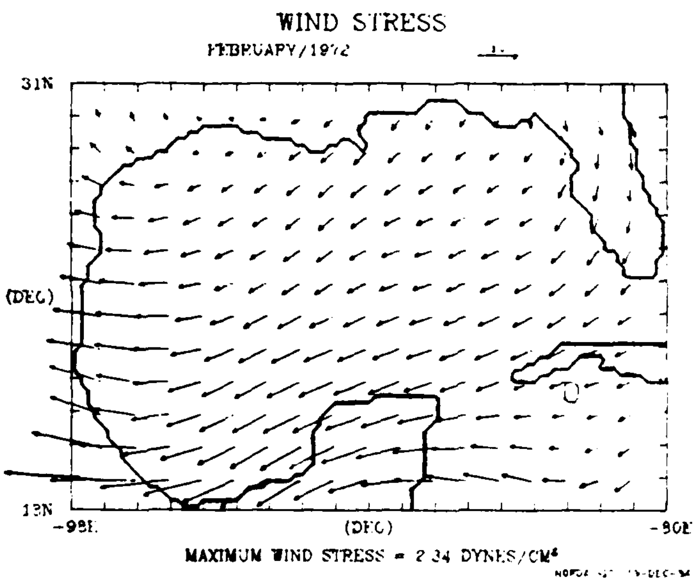
DECEMBER/1971 DC = 2.0E-07 MKS

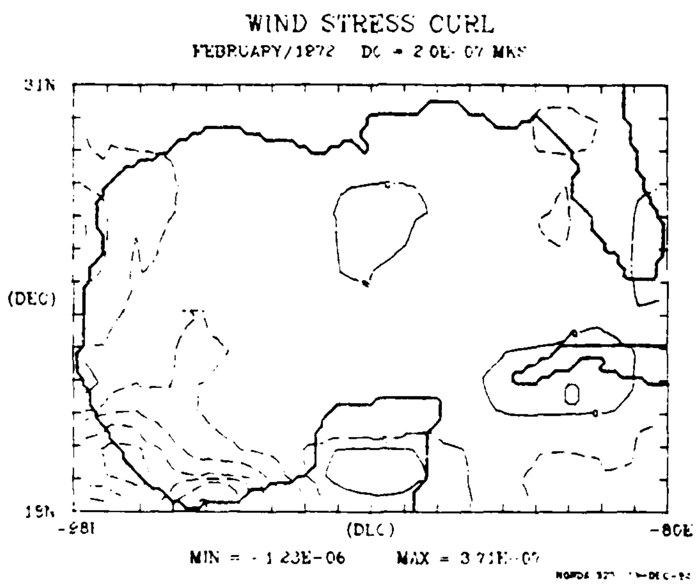


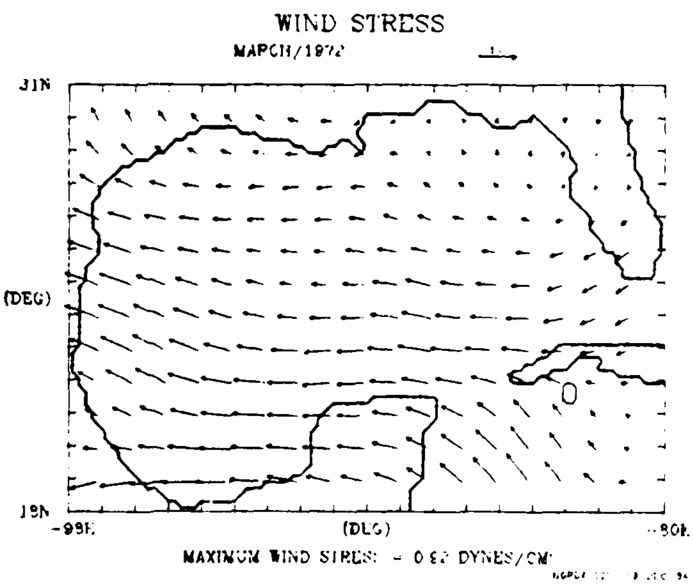
MIN = -6.54E-07 MAX = 3.60E-07

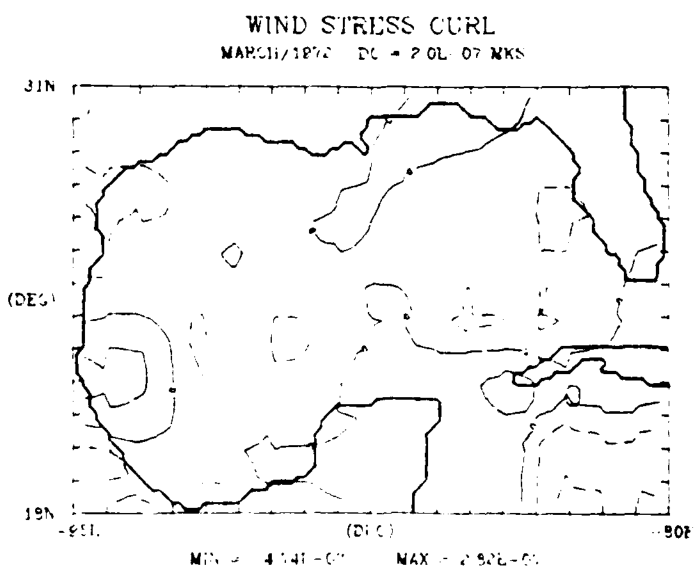

WIND STRESS
JANUARY/1972
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.97 DYNES/CM²


WIND STRESS CURL
JANUARY/1972 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -7.20E-07
MAX = 3.95E-07

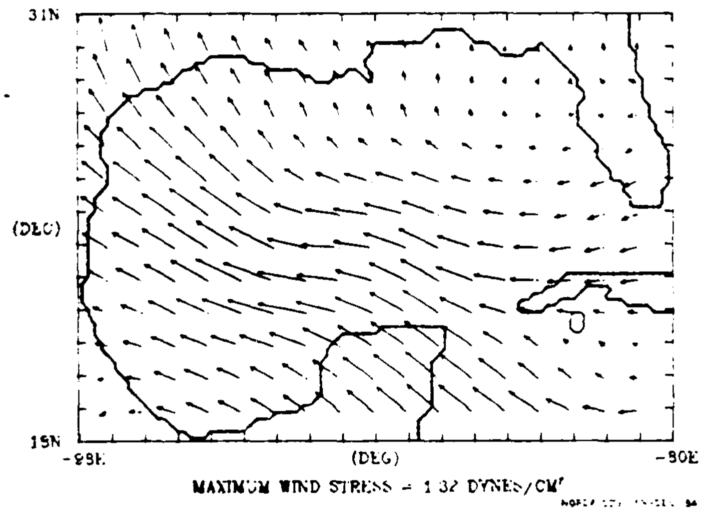

WIND STRESS
FEBRUARY/1972
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.34 DYNES/CM²


WIND STRESS CURL
FEBRUARY/1972 DC = 2.0E-07 MKS
31N
(DEG)
-80E

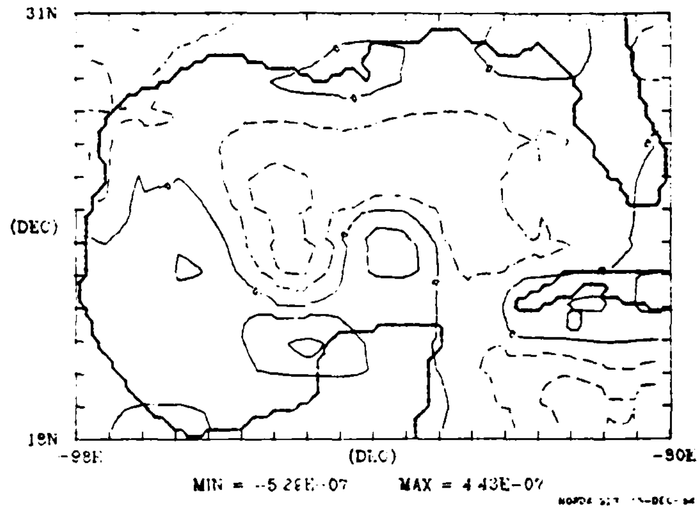

WIND STRESS
MARCH/1972
31N
(DEG)
18N
-98E
(DEG)
-80E


WIND STRESS CURL
MARCH/1972 DC = 2.0E-07 MKS
31N
18N
-80E

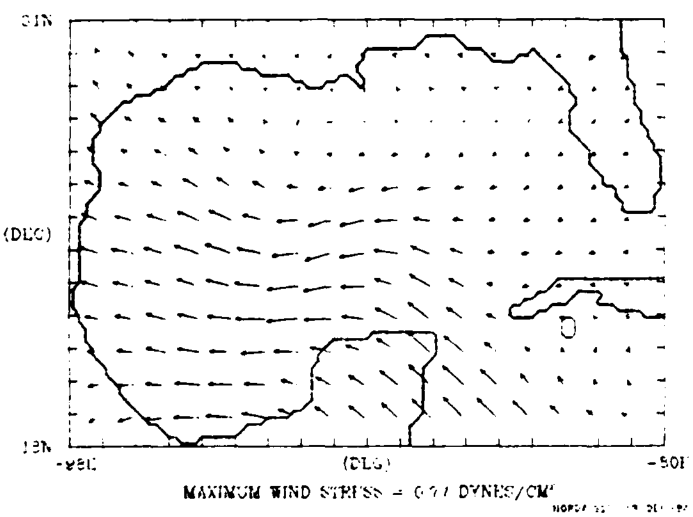
WIND STRESS
APRIL/1972



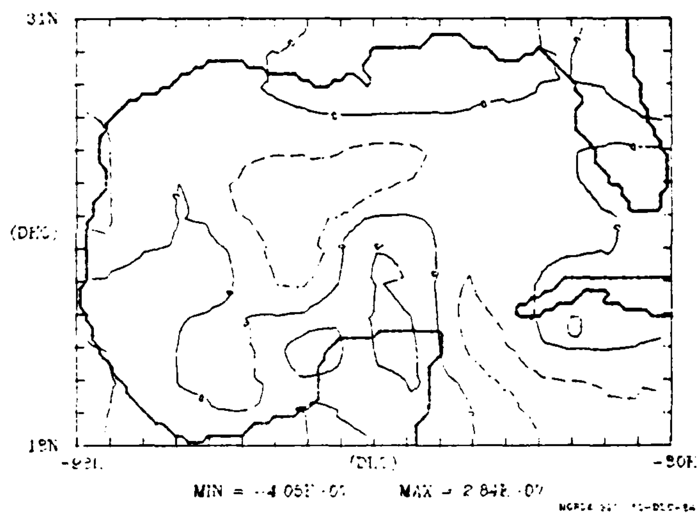
WIND STRESS CURL
APRIL/1972 DC = 2.0E-07 MKS



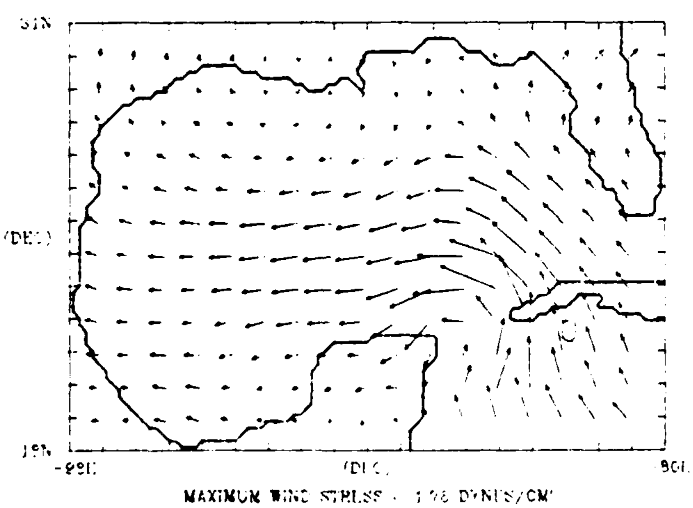
WIND STRESS
MAY/1972



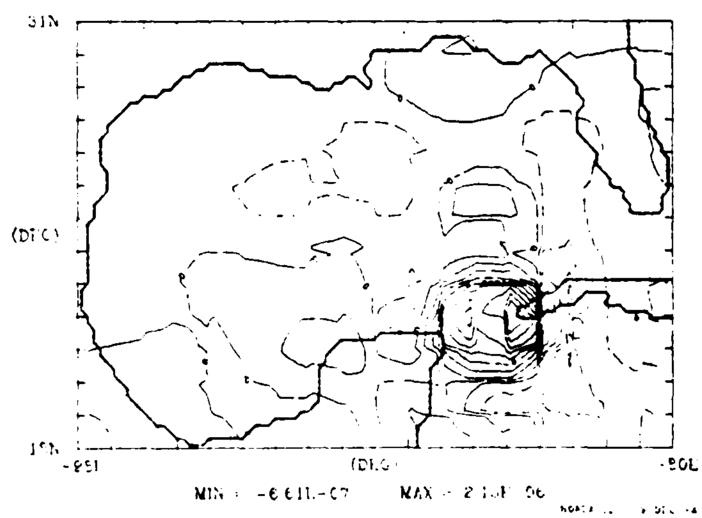
WIND STRESS CURL
MAY/1972 DC = 2.0E-07 MKS



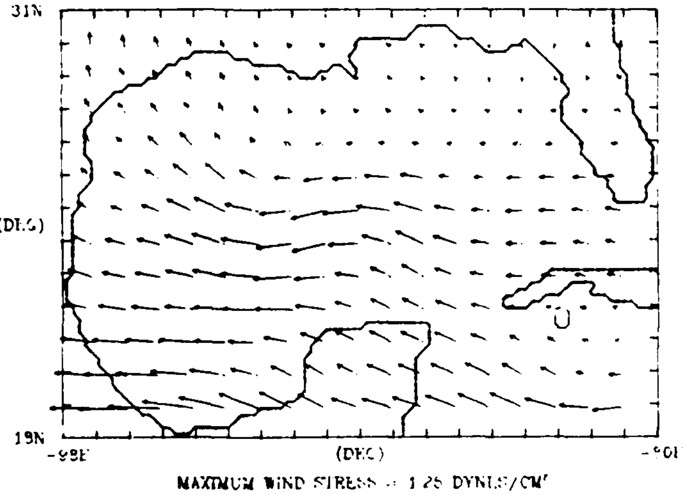
WIND STRESS
JUNE/1972



WIND STRESS CURL
JUNE/1972 DC = 2.0E-07 MKS

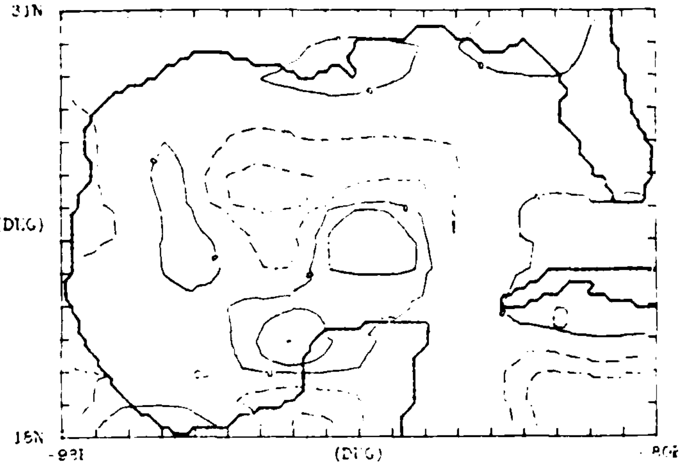


WIND STRESS
JULY/1972



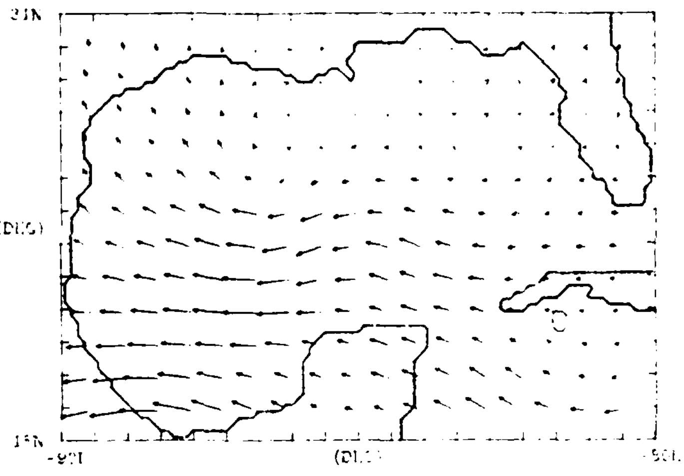
MAXIMUM WIND STRESS = 1.25 DYNES/CM²

WIND STRESS CURL
JULY/1972 DC = 2.0E-07 MKS



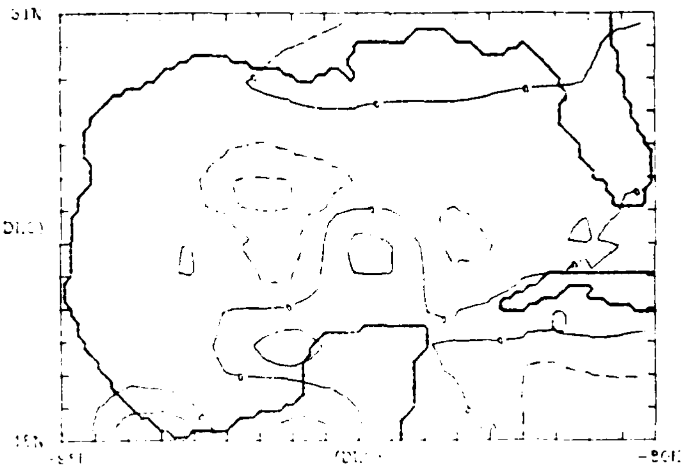
MIN = -5.57E-07 MAX = 4.43E-07

WIND STRESS
AUGUST/1972



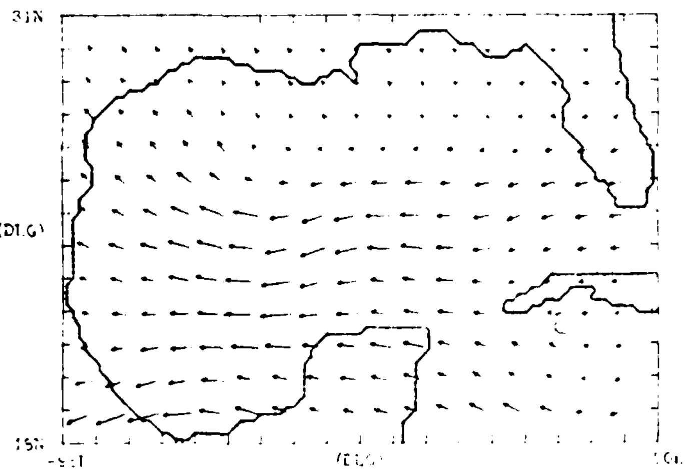
MAXIMUM WIND STRESS = 0.89 DYNES/CM²

WIND STRESS CURL
AUGUST/1972 DC = 2.0E-07 MKS



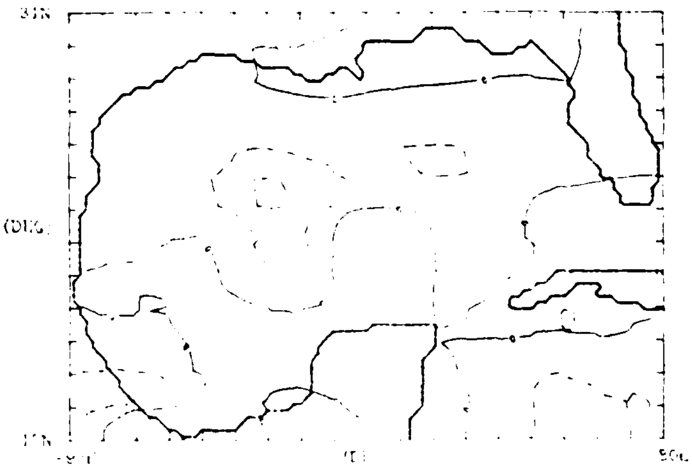
MIN = -4.59E-07 MAX = 3.54E-07

WIND STRESS
SEPTEMBER/1972

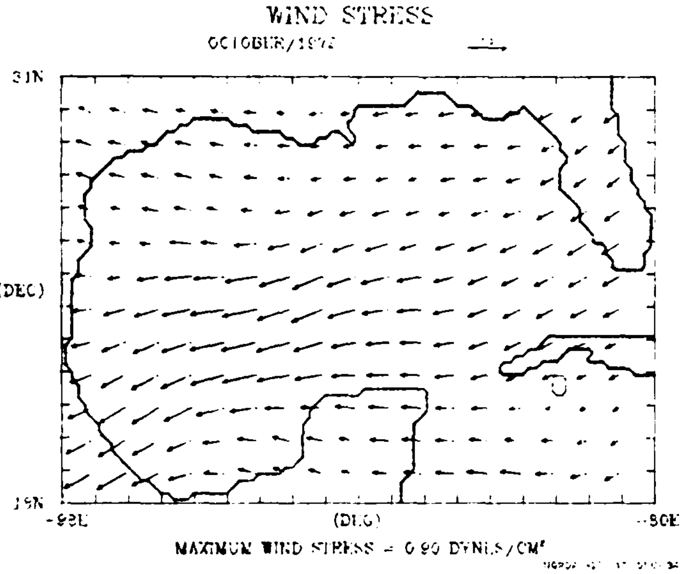


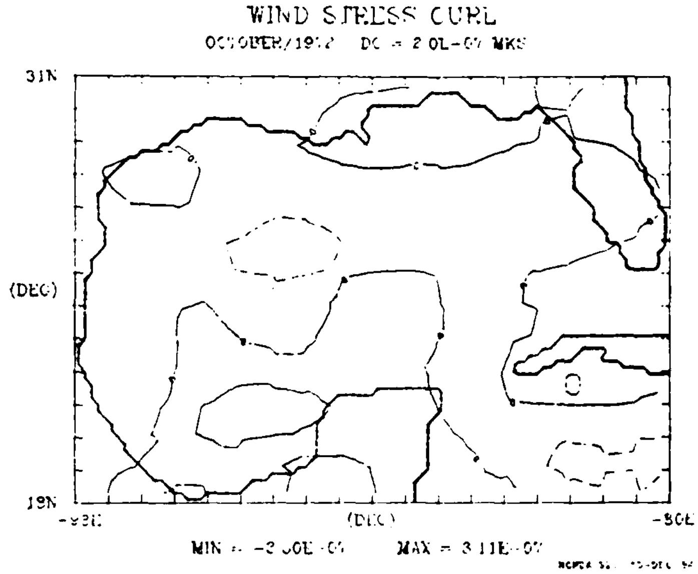
MAXIMUM WIND STRESS = 0.71 DYNES/CM²

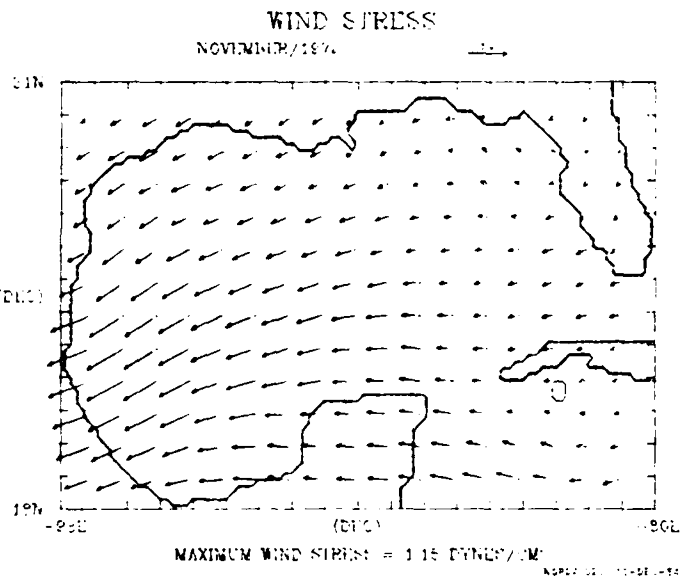
WIND STRESS CURL
SEPTEMBER/1972 DC = 2.0E-07 MKS

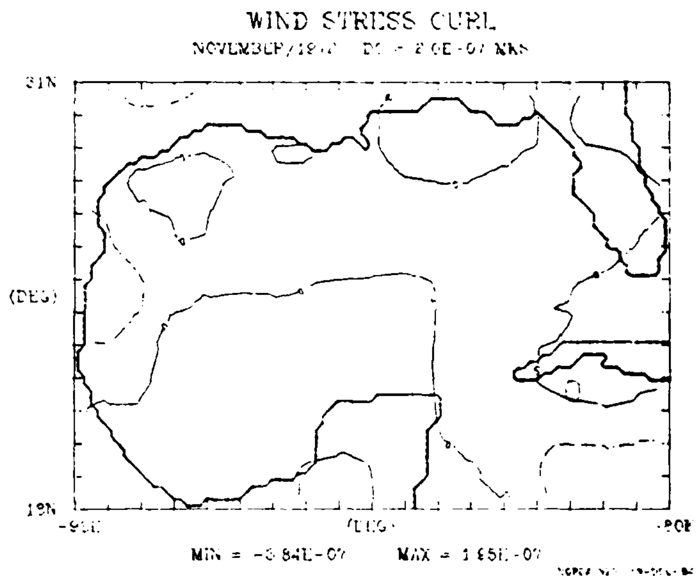


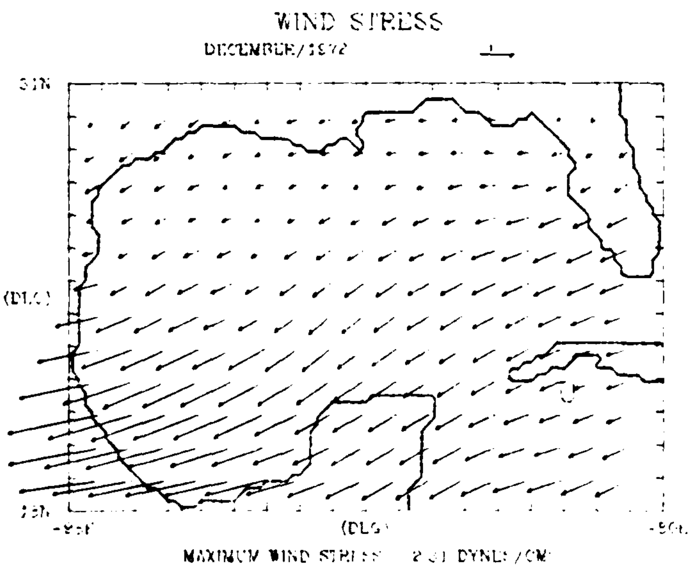
MIN = -4.44E-07 MAX = 2.60E-07

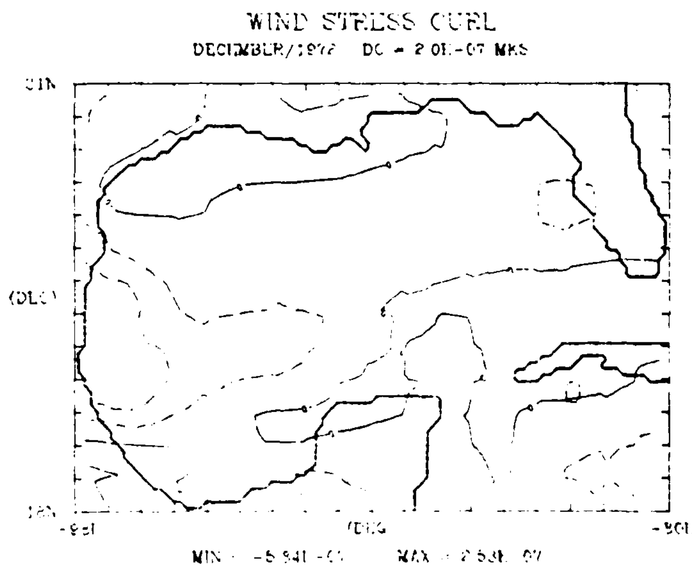

WIND STRESS
OCTOBER/1972
31N
(DEG)
19N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 0.90 DYNES/CM²


WIND STRESS CURL
OCTOBER/1972 DC = 2.0E-07 MKS
31N
(DEG)
19N
-98E
(DEG)
-80E
MIN = -2.00E-07
MAX = 3.11E-07


WIND STRESS
NOVEMBER/1972
31N
(DEG)
19N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.15 DYNES/CM²

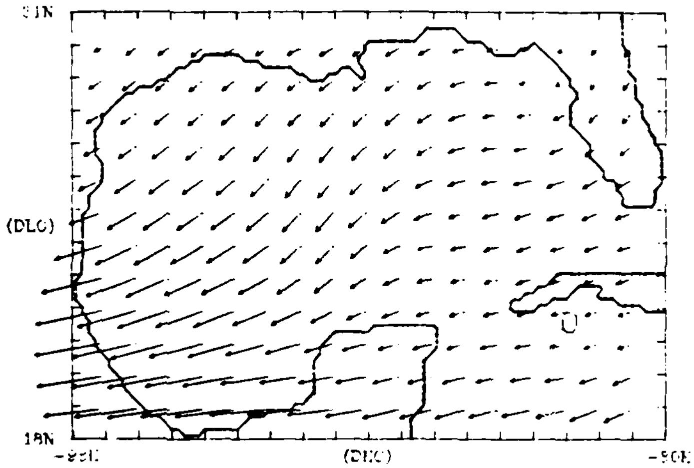

WIND STRESS CURL
NOVEMBER/1972 DC = 2.0E-07 MKS
31N
(DEG)
19N
-98E
(DEG)
-80E
MIN = -3.84E-07
MAX = 1.95E-07


WIND STRESS
DECEMBER/1972
31N
(DEG)
19N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS 2.31 DYNES/CM²


WIND STRESS CURL
DECEMBER/1972 DC = 2.0E-07 MKS
31N
(DEG)
19N
-98E
(DEG)
-80E
MIN = -5.94E-07
MAX = 2.53E-07

WIND STRESS

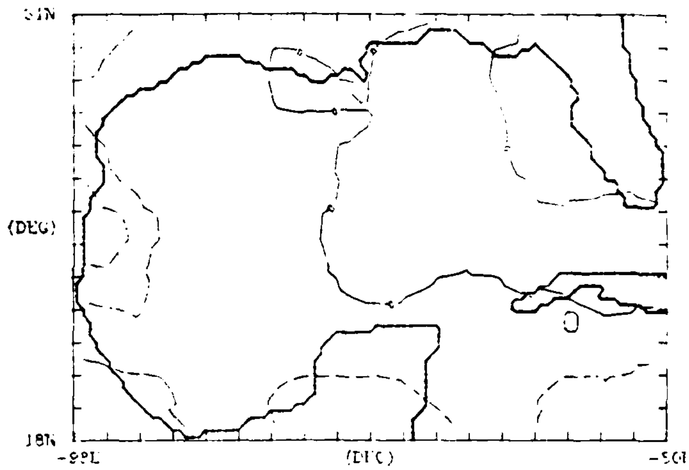
JANUARY/1975



MAXIMUM WIND STRESS = 1.70 DYNES/CM²

WIND STRESS CURL

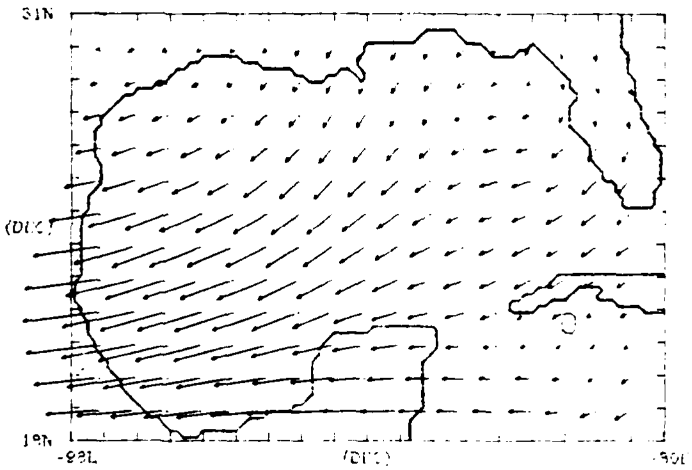
JANUARY/1975 DC = 2.0E-07 MKS



MIN = -5.15E-07 MAX = 1.97E-07

WIND STRESS

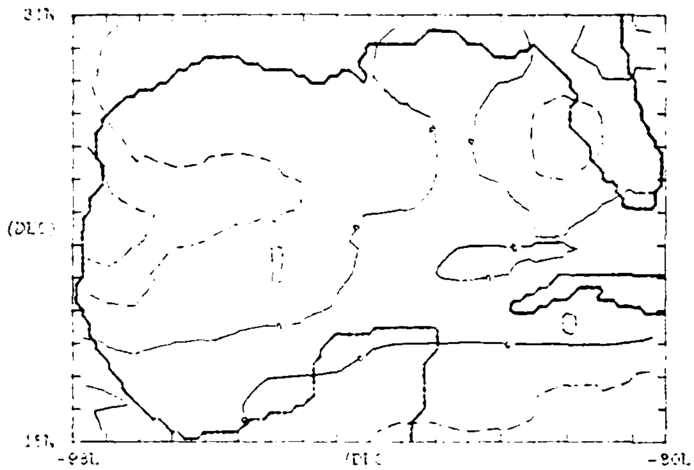
FEBRUARY/1975



MAXIMUM WIND STRESS = 1.86 DYNES/CM²

WIND STRESS CURL

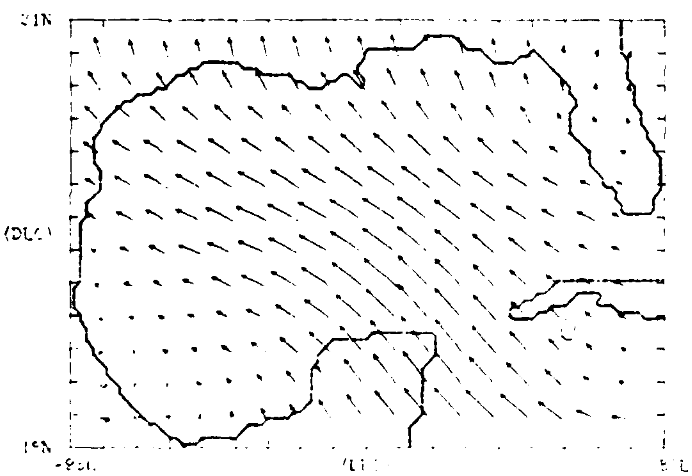
FEBRUARY/1975 DC = 2.0E-07 MKS



MIN = -5.74E-07 MAX = 2.41E-07

WIND STRESS

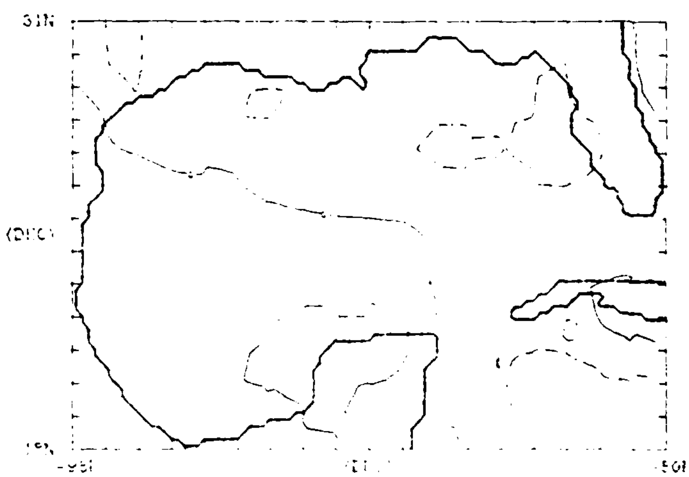
MARCH/1975



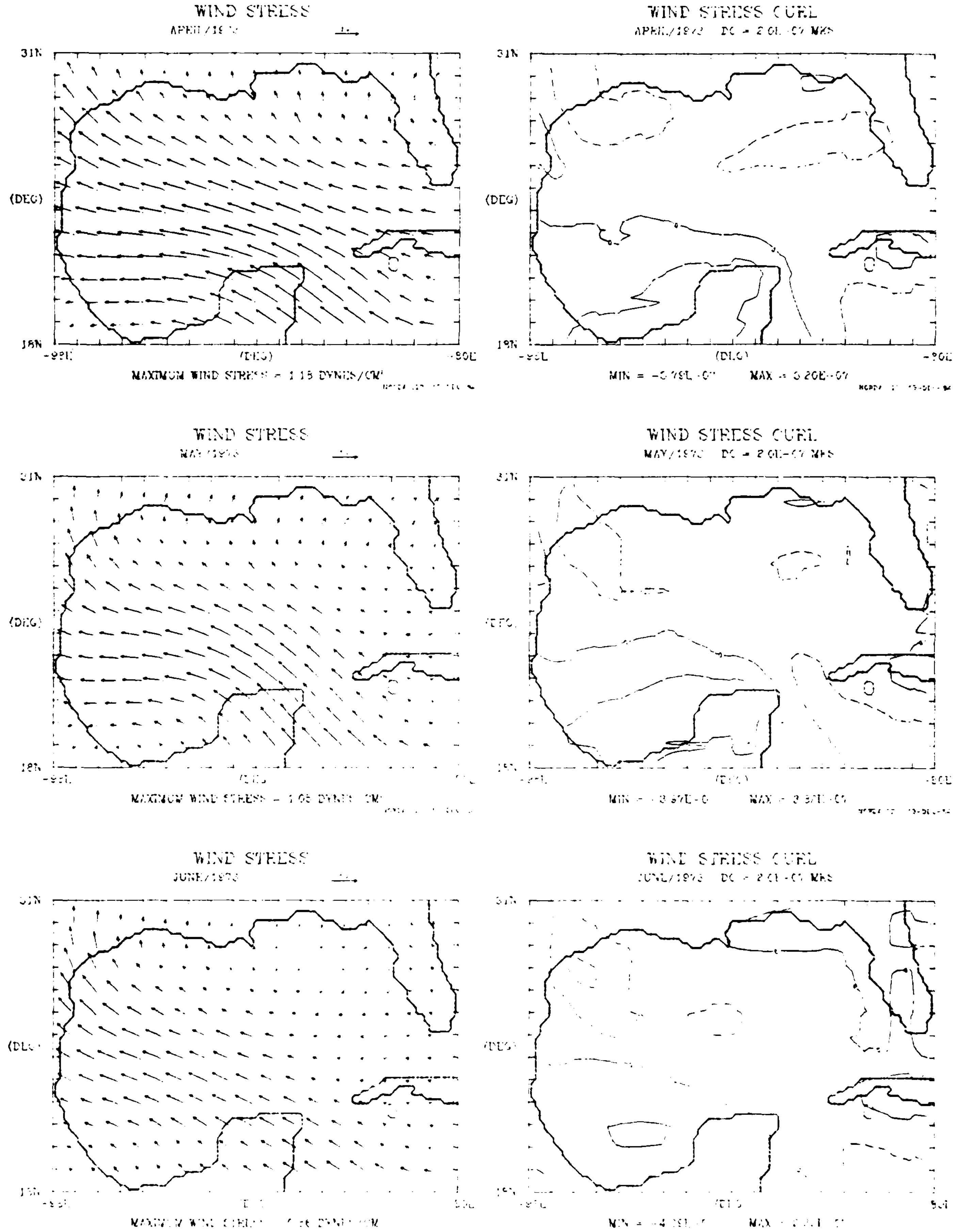
MAXIMUM WIND STRESS = DYNES/CM²

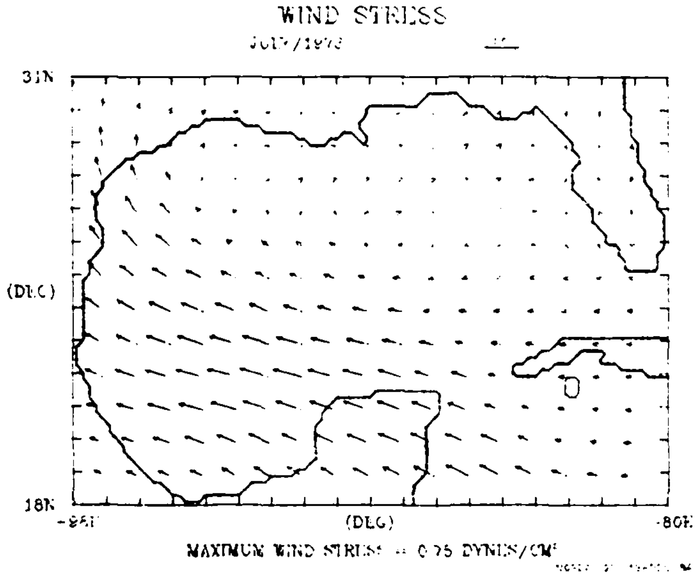
WIND STRESS CURL

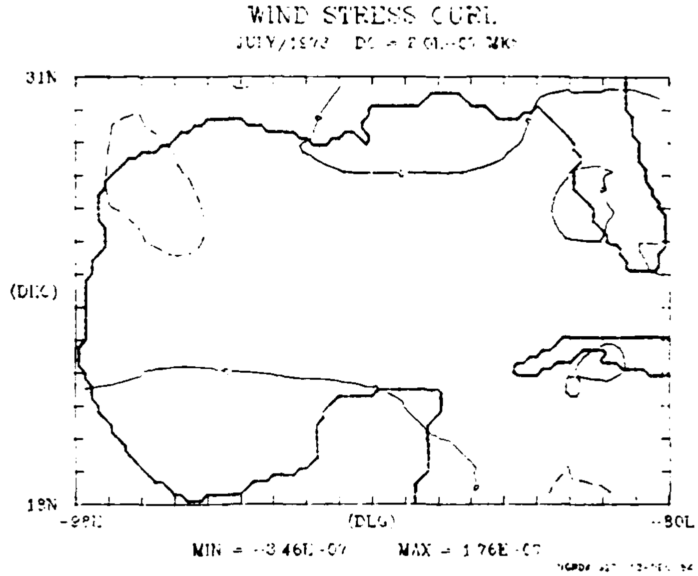
MARCH/1975 DC = 2.0E-07 MKS

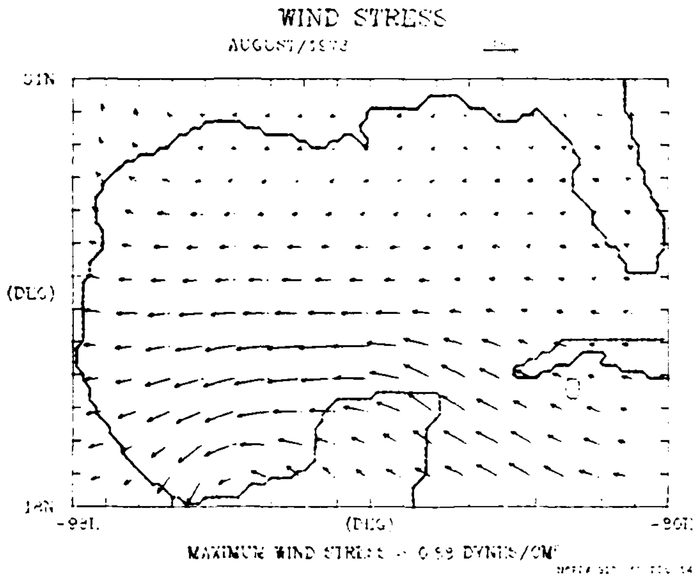


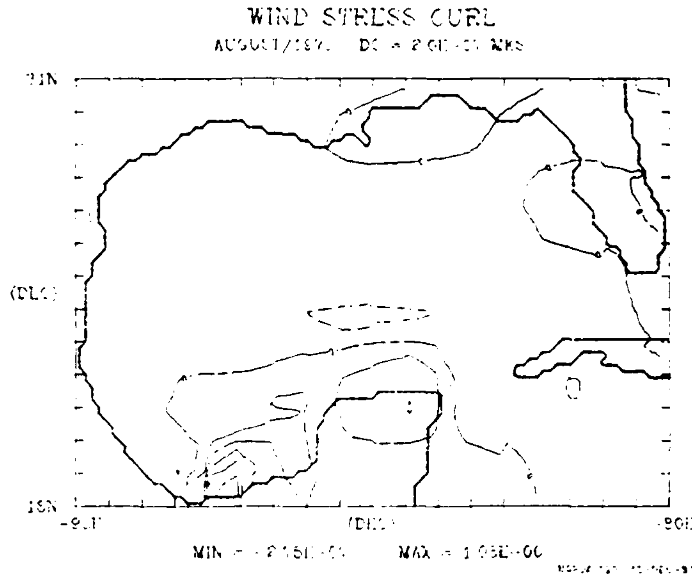
MIN = MAX = 2.55E-07

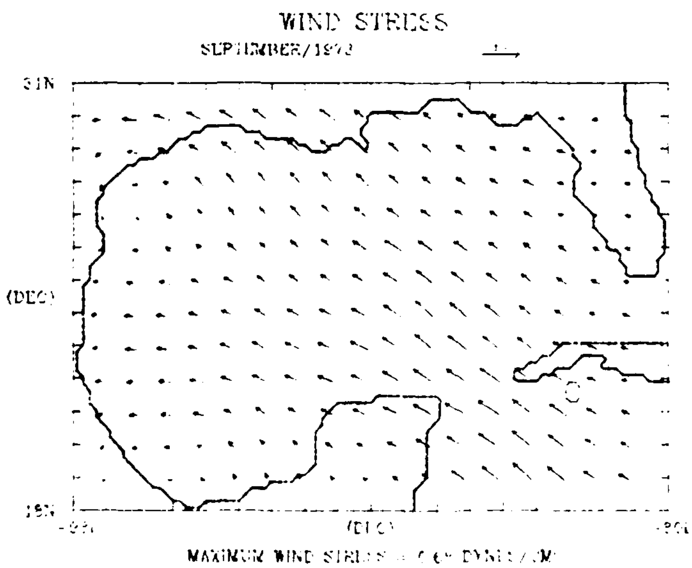

WIND STRESS
31N
(DEG)
18N
MAXIMUM WIND STRESS
DYNES/CM
WIND STRESS CURL
MKS
31N
(DEG)
19N
MIN
MAX
-80E
WIND STRESS
WIND STRESS CURL
MAY/197
MIN
MAX
-80E
WIND STRESS
WIND STRESS CURL
MIN
MAX

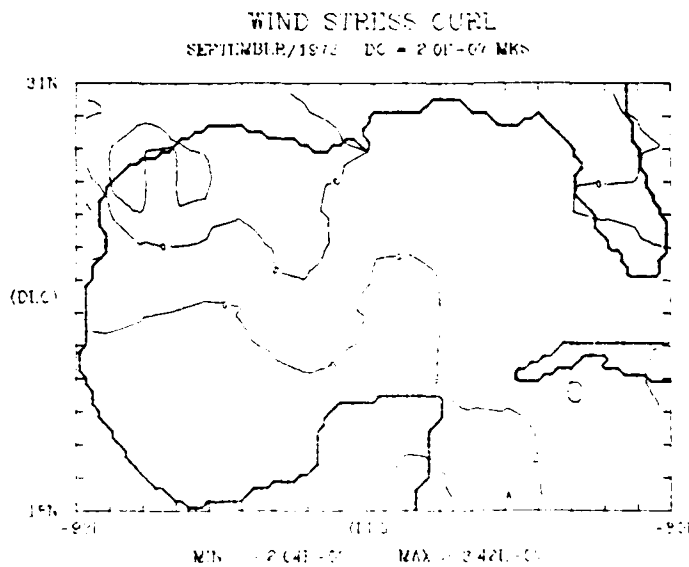

WIND STRESS
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 0.75 DYNES/CM²

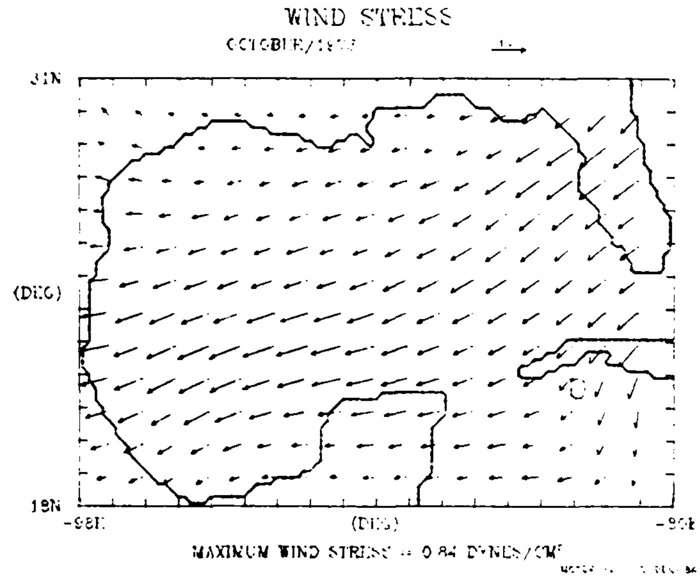

WIND STRESS CURL
31N
(DEG)
18N
(DEG)
-80E
MIN = -3.46E-07
MAX = 1.76E-07

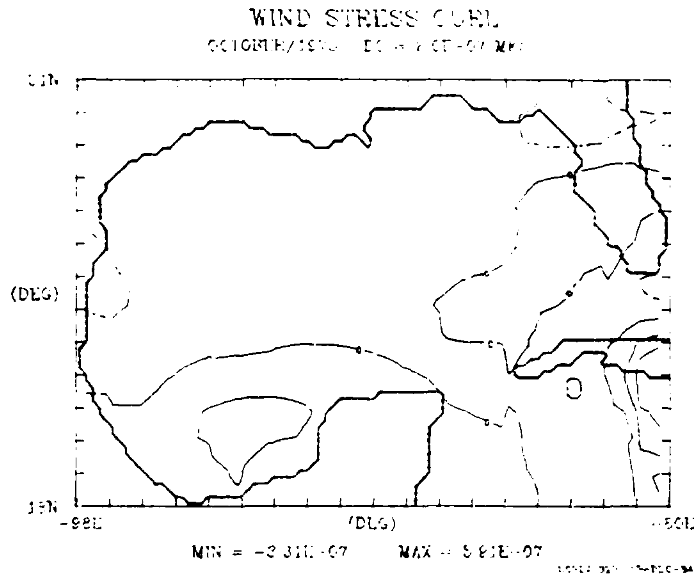

WIND STRESS
(DEG)
(DEG)
-80E

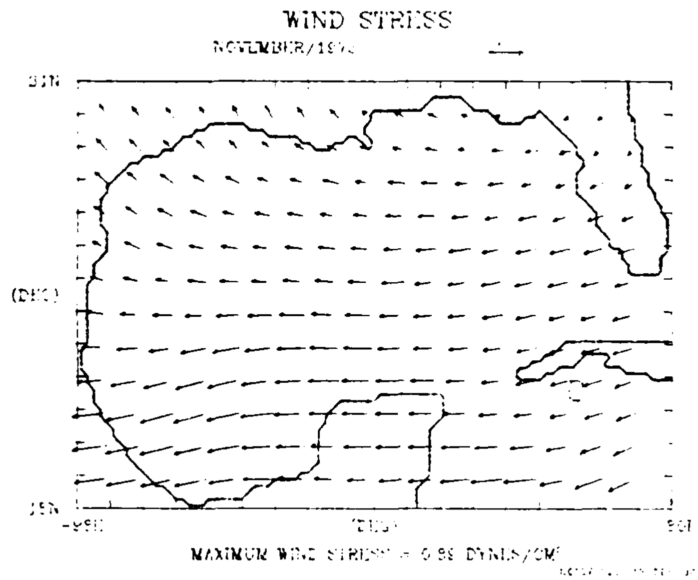

WIND STRESS CURL
(DEG)
-80E

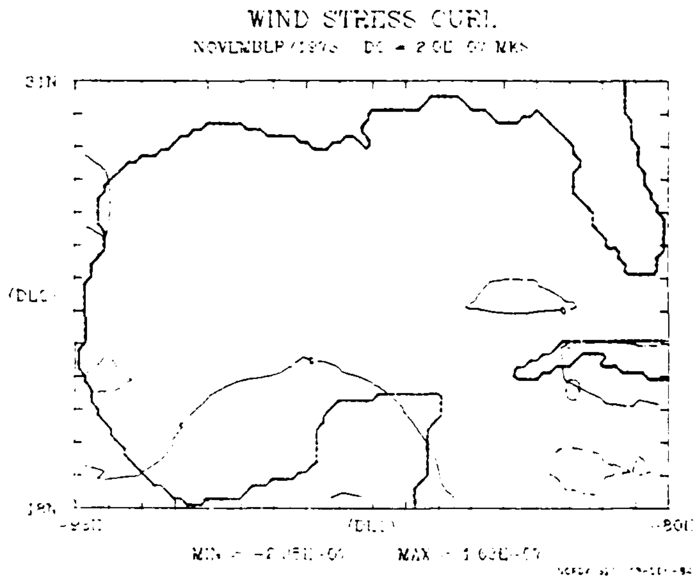

WIND STRESS
31N
(DEG)

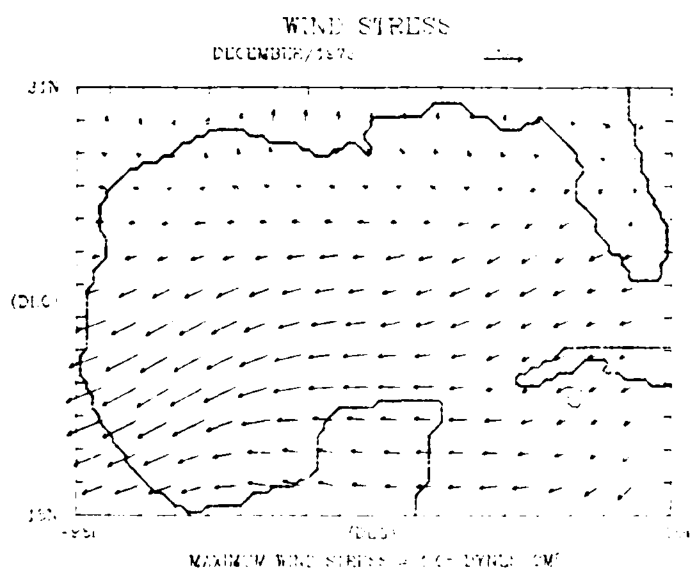

WIND STRESS CURL
31N
(DEG)

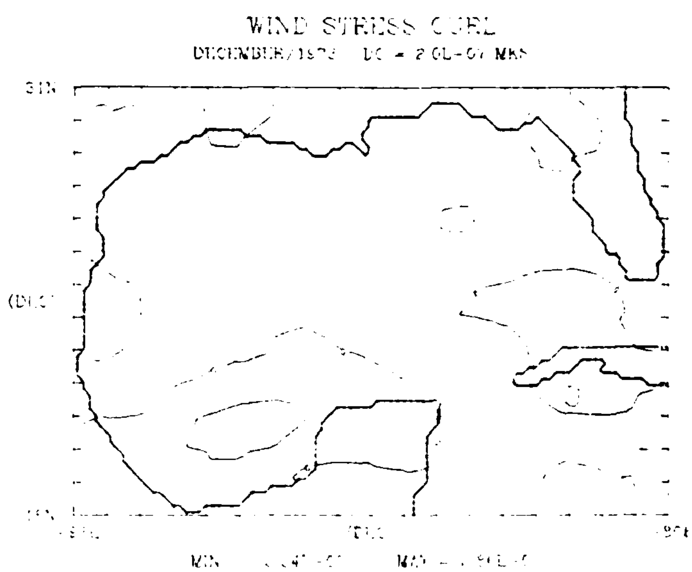

WIND STRESS
(DEG)
MAXIMUM WIND STRESS = 0.84 DYNES/CM

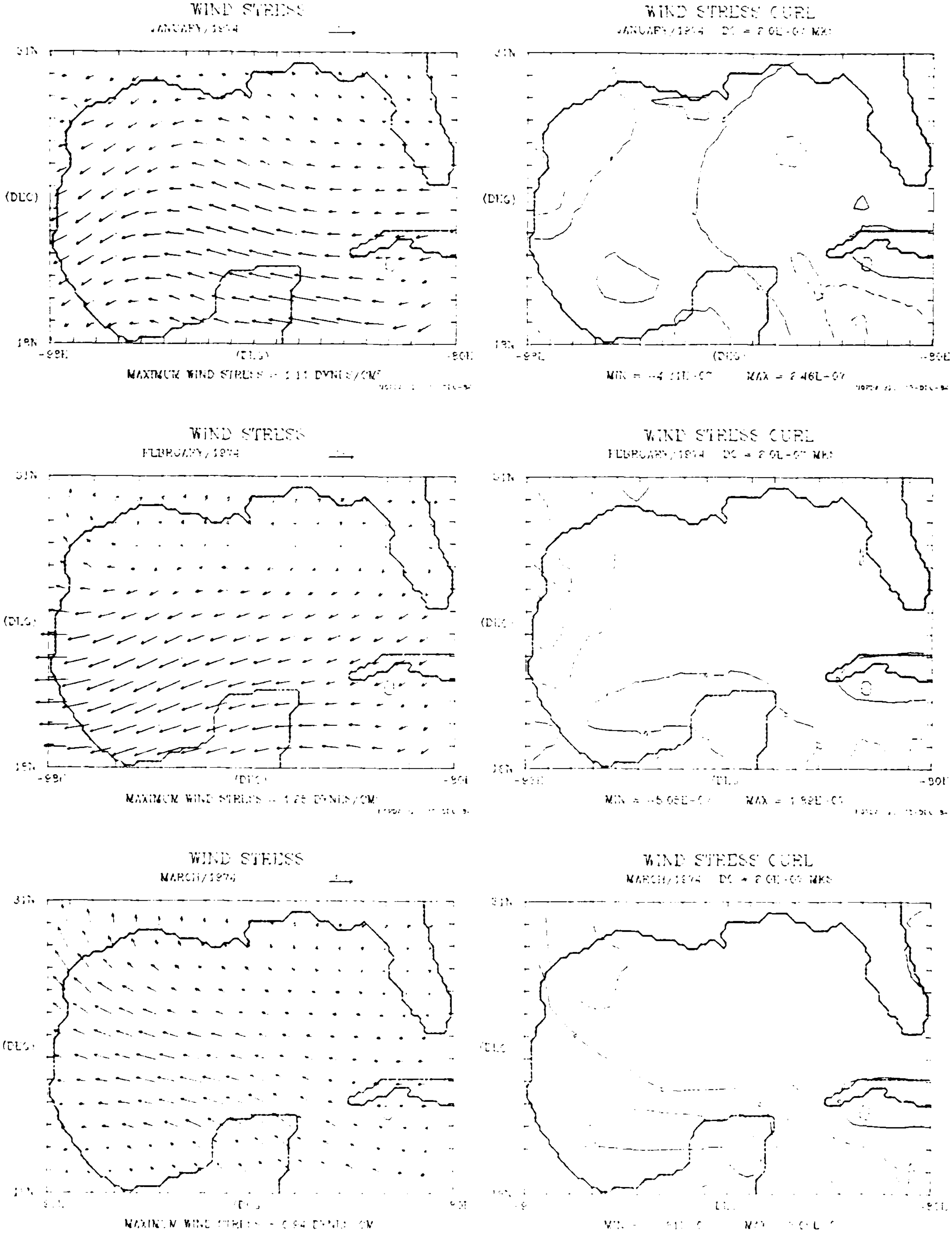

WIND STRESS CURL
(DEG)

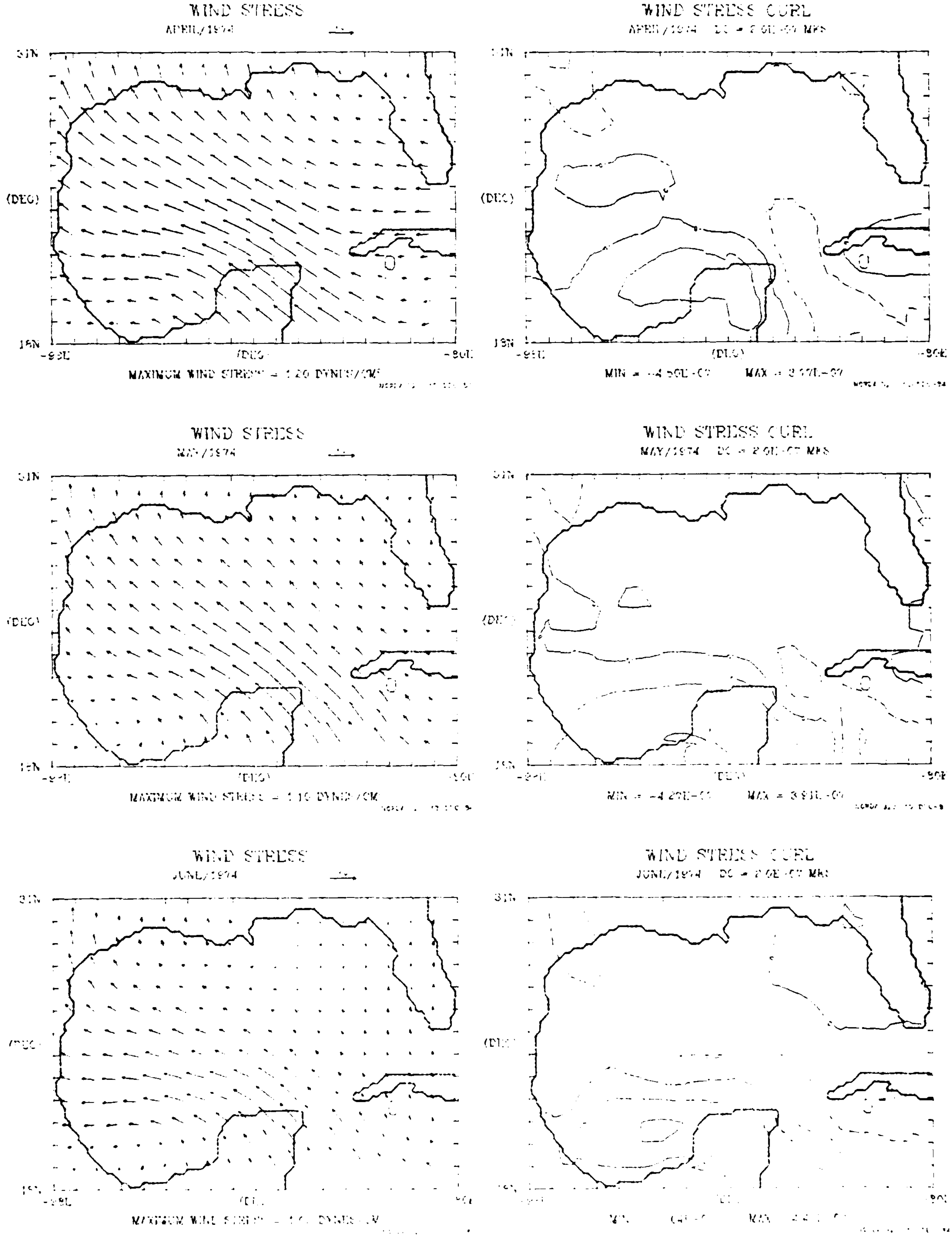

WIND STRESS
NOVEMBER
MAXIMUM WIND STRESS = 0.98 DYNES/CM


WIND STRESS CURL

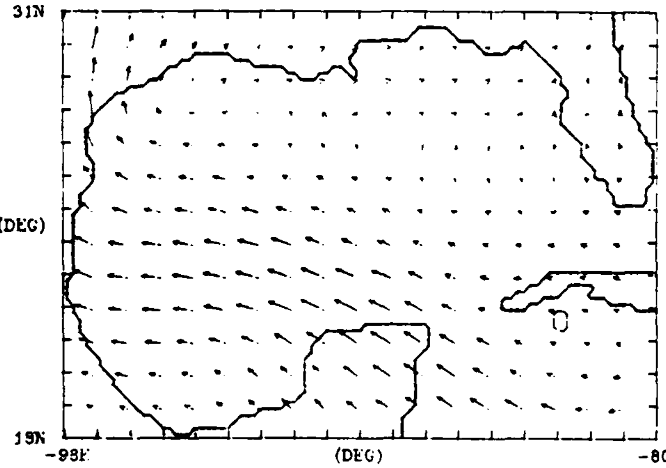

WIND STRESS
DECEMBER


WIND STRESS CURL


WIND STRESS
JANUARY/1974
MAXIMUM WIND STRESS
WIND STRESS CURL
JANUARY/1974
MAX = 2.46E-07
WIND STRESS
FEBRUARY/1974
MAXIMUM WIND STRESS
WIND STRESS CURL
FEBRUARY/1974
WIND STRESS
MARCH/1974
MAXIMUM WIND STRESS
WIND STRESS CURL
MARCH/1974
(DEG)

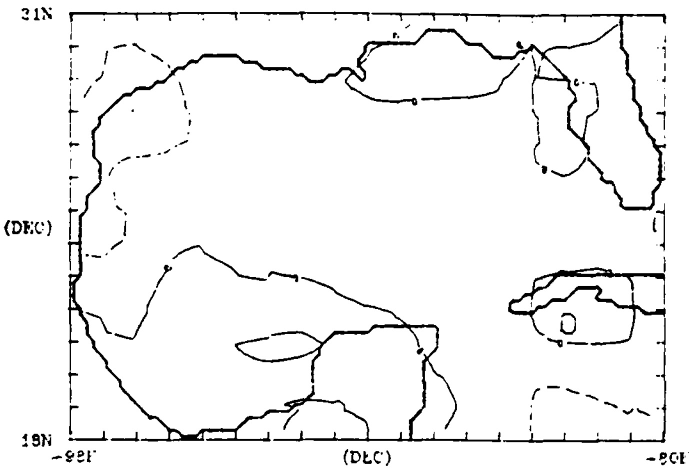

WIND STRESS
APRIL/1974
WIND STRESS CURL
APRIL/1974
(DEG)
MAXIMUM WIND STRESS
WIND STRESS
MAY/1974
WIND STRESS CURL
MAY/1974
MAXIMUM WIND STRESS
WIND STRESS
JUNE/1974
WIND STRESS CURL
JUNE/1974
MAXIMUM WIND STRESS

WIND STRESS
JULY/1974



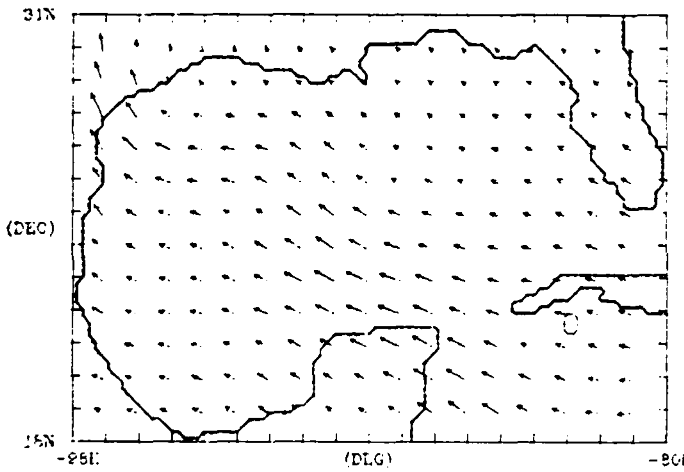
MAXIMUM WIND STRESS = 0.62 DYNES/CM²

WIND STRESS CURL
JULY/1974 DC = 2.0E-07 MKS



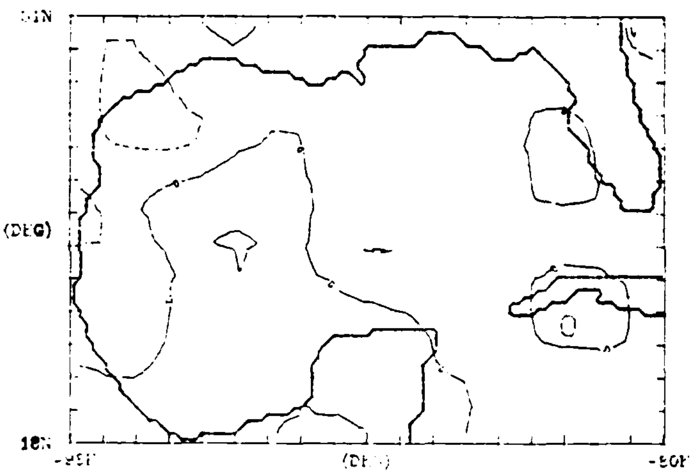
MIN = -4.02E-07 MAX = 2.37E-07

WIND STRESS
AUGUST/1974



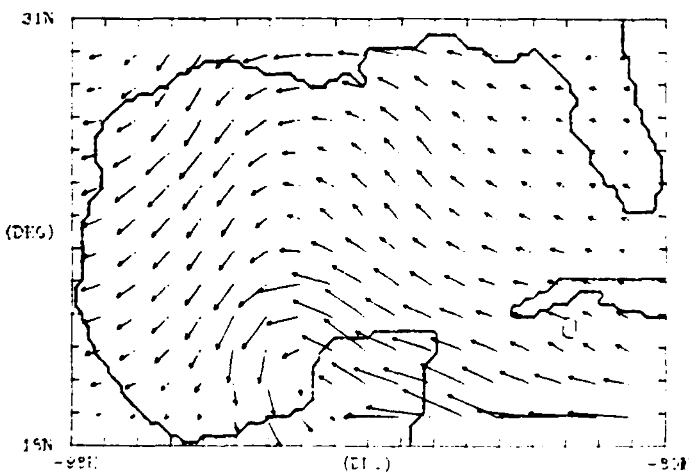
MAXIMUM WIND STRESS = 0.64 DYNES/CM²

WIND STRESS CURL
AUGUST/1974 DC = 2.0E-07 MKS



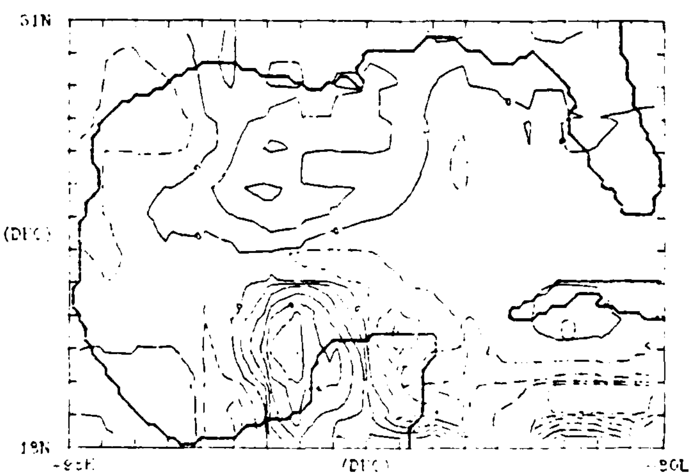
MIN = -3.78E-07 MAX = 1.91E-07

WIND STRESS
SEPTEMBER/1974

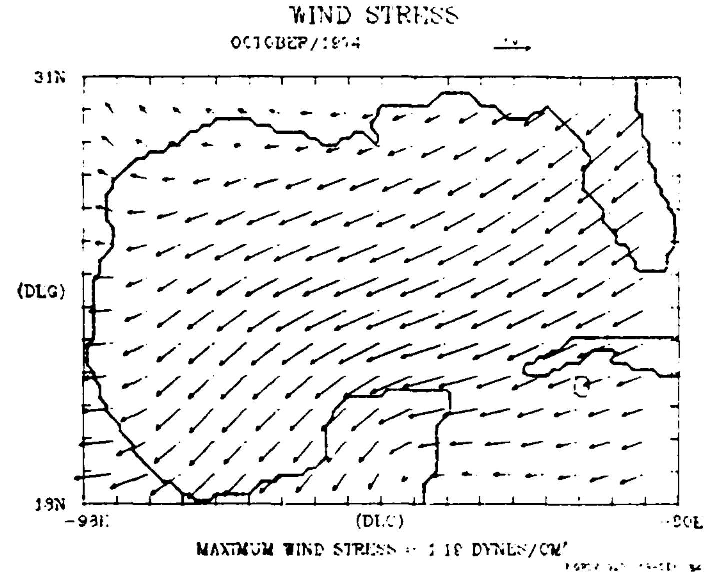


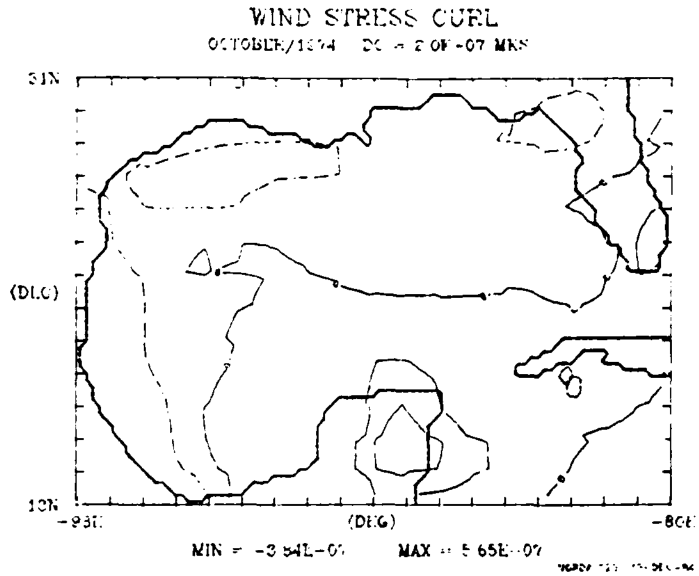
MAXIMUM WIND STRESS = 1.67 DYNES/CM²

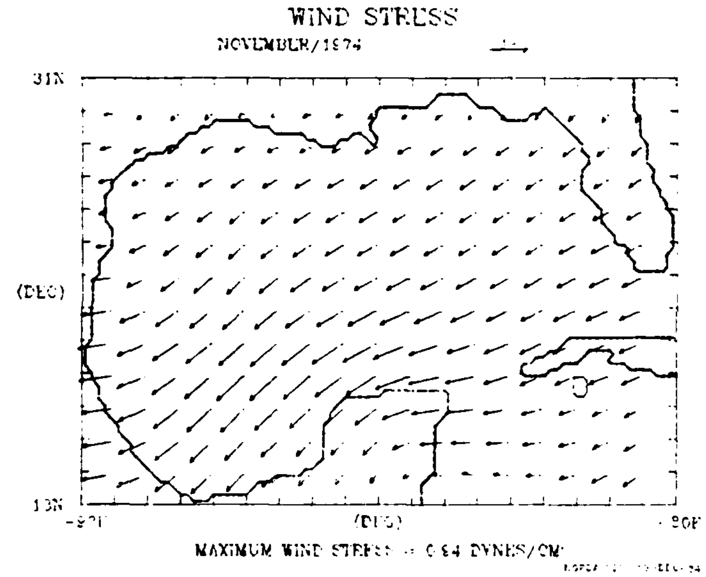
WIND STRESS CURL
SEPTEMBER/1974 DC = 2.0E-07 MKS

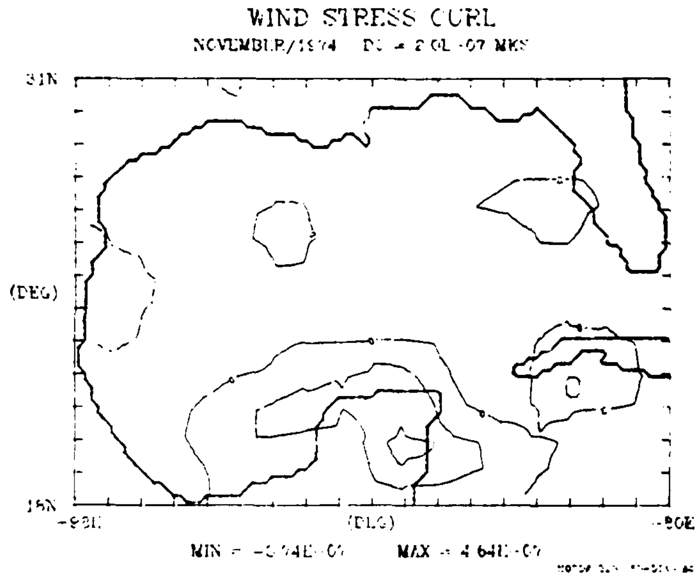


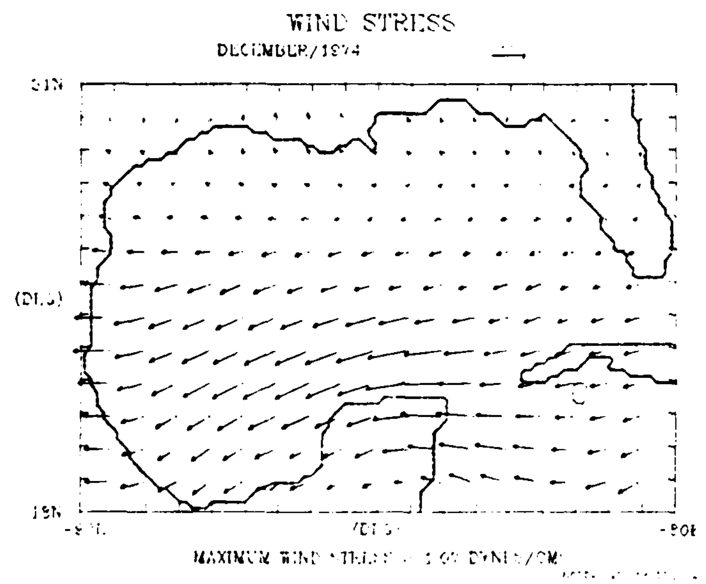
MIN = -9.76E-07 MAX = 1.20E-06

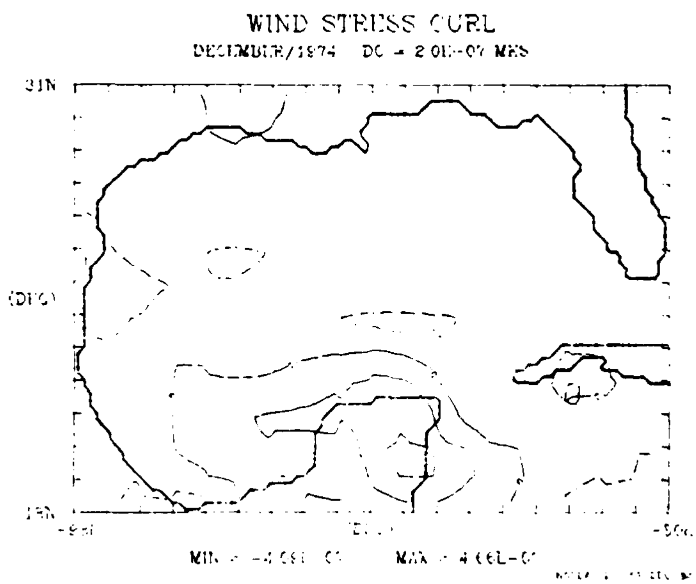

WIND STRESS
OCTOBER/1974
31N
(DEG)
19N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.19 DYNES/CM²

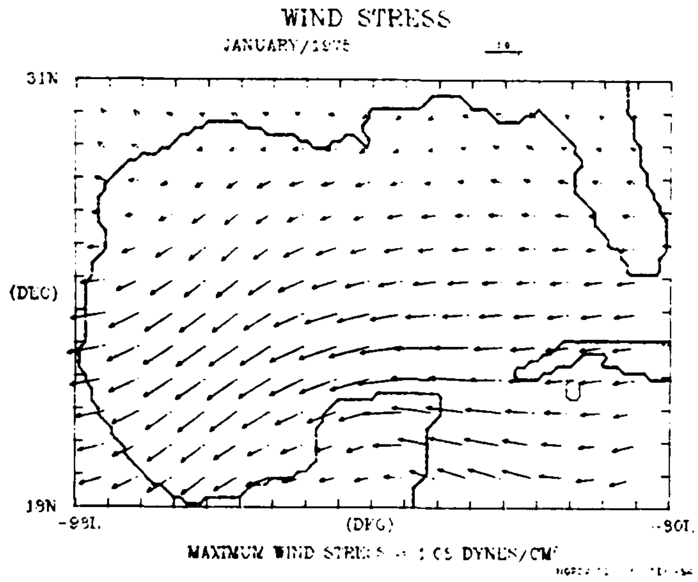

WIND STRESS CURL
OCTOBER/1974 DC = 2.0E-07 MKS
31N
(DEG)
19N
-98E
(DEG)
-80E
MIN = -3.54E-07 MAX = 5.65E-07

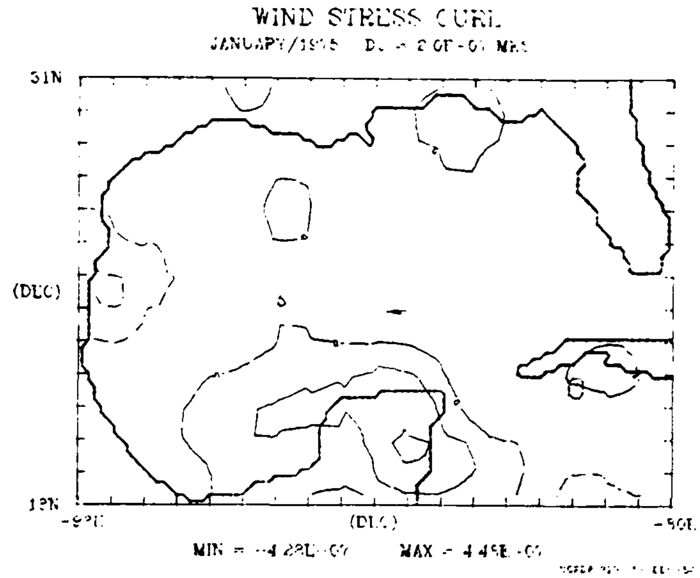

WIND STRESS
NOVEMBER/1974
31N
(DEG)
19N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 0.84 DYNES/CM²

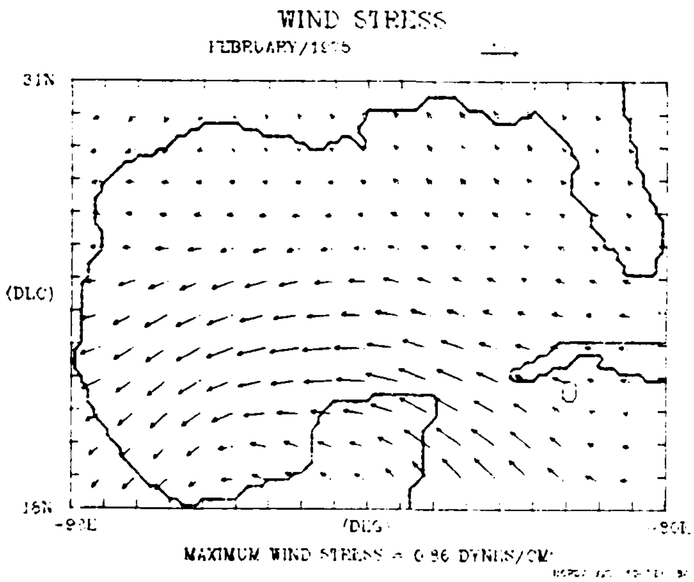

WIND STRESS CURL
NOVEMBER/1974 DC = 2.0E-07 MKS
31N
(DEG)
19N
-98E
(DEG)
-80E
MAX = 4.64E-07

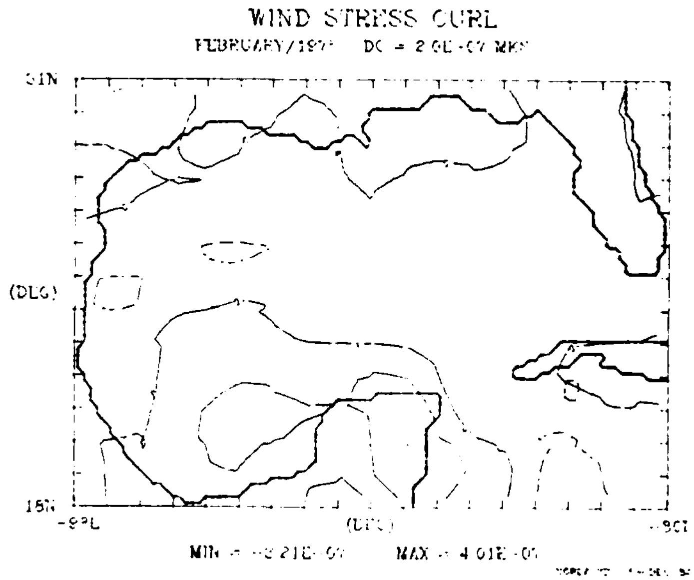

WIND STRESS
DECEMBER/1974
31N
(DEG)
19N
-80E

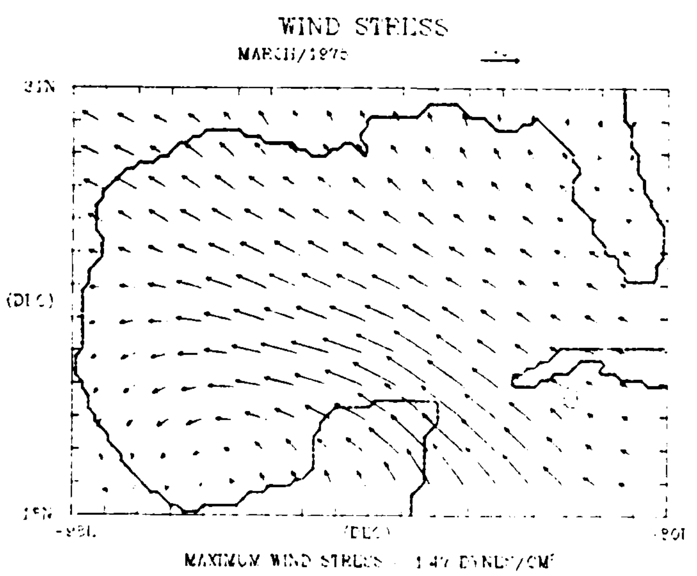

WIND STRESS CURL
DECEMBER/1974 DC = 2.0E-07 MKS
31N
(DEG)

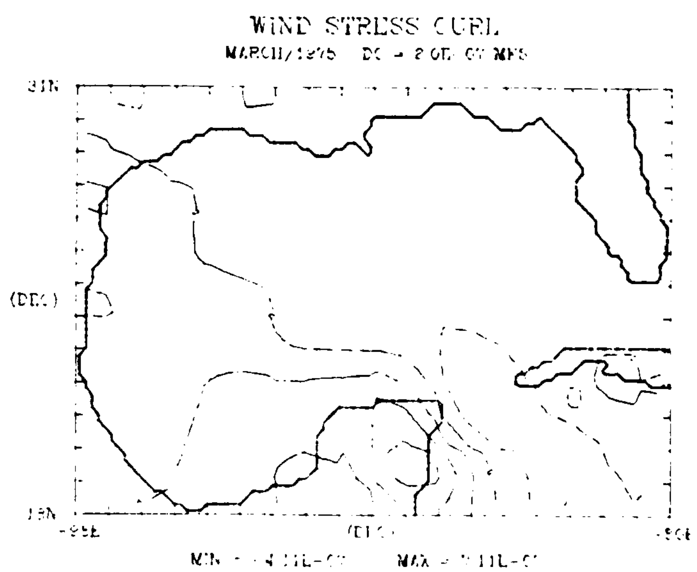

WIND STRESS
31N
(DEG)
19N
DYNES/CM

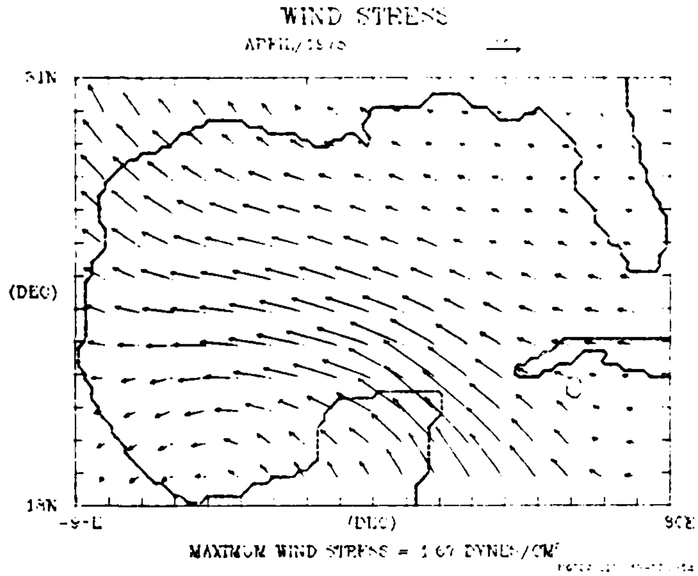

WIND STRESS CURL
31N
(DEG)
19N
MIN
MAX

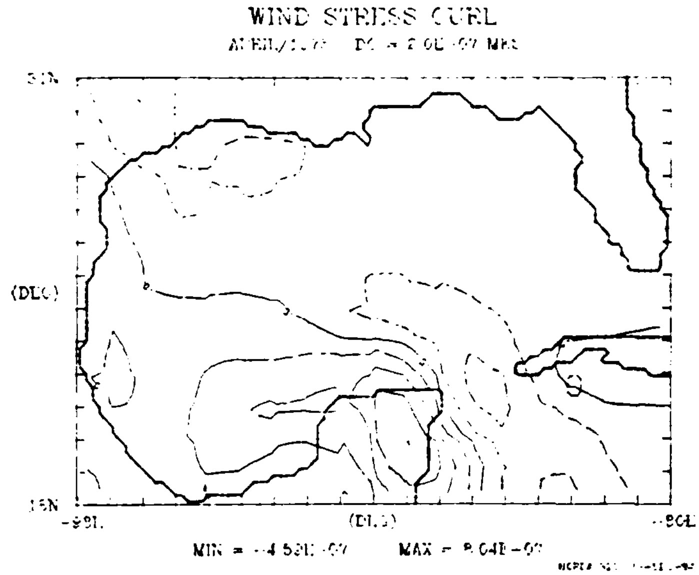

WIND STRESS
(DEG)
MAXIMUM WIND STRESS

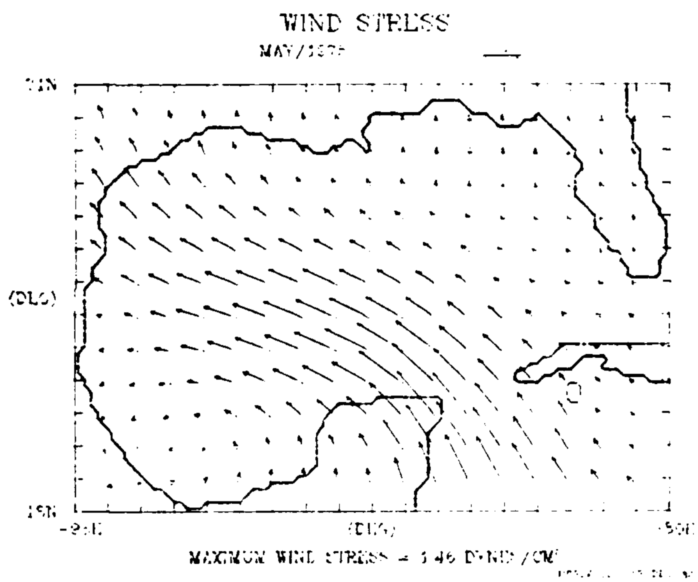

WIND STRESS CURL
MIN
MAX

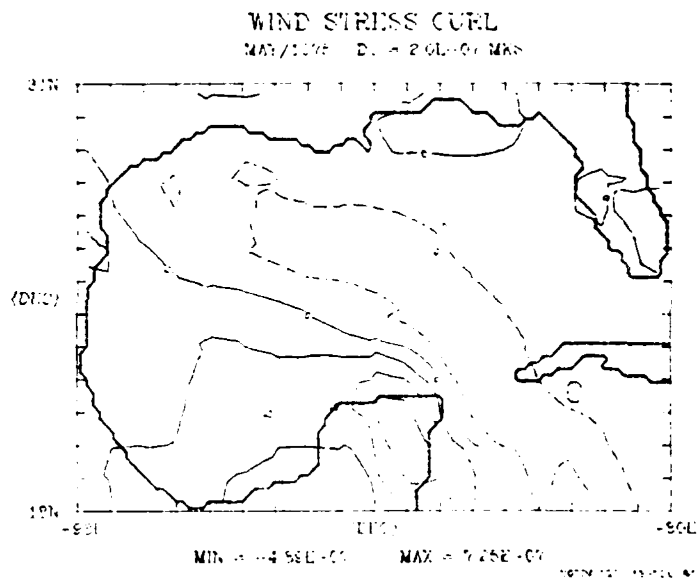

WIND STRESS
MAXIMUM WIND STRESS

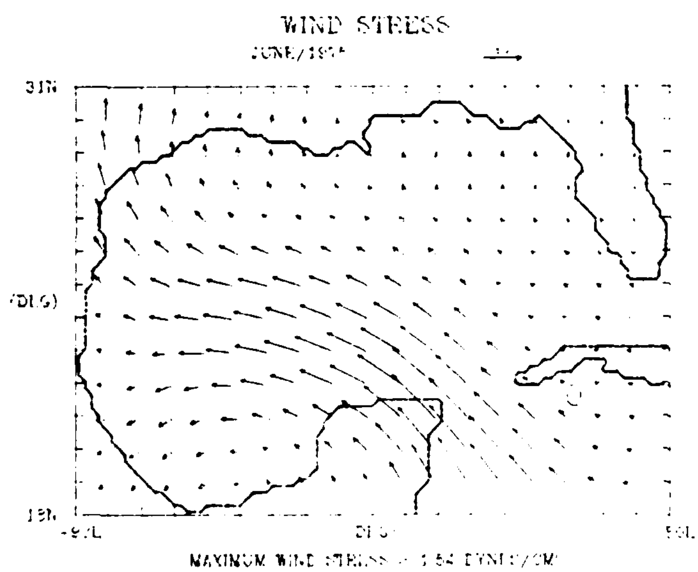

WIND STRESS CURL
(DEG)
MIN
MAX

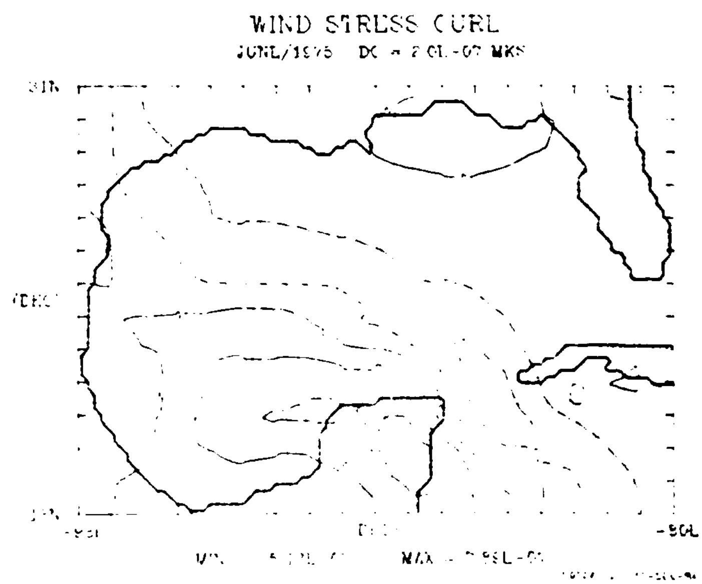

WIND STRESS
31N
(DEG)
18N
(DEG)
MAXIMUM WIND STRESS

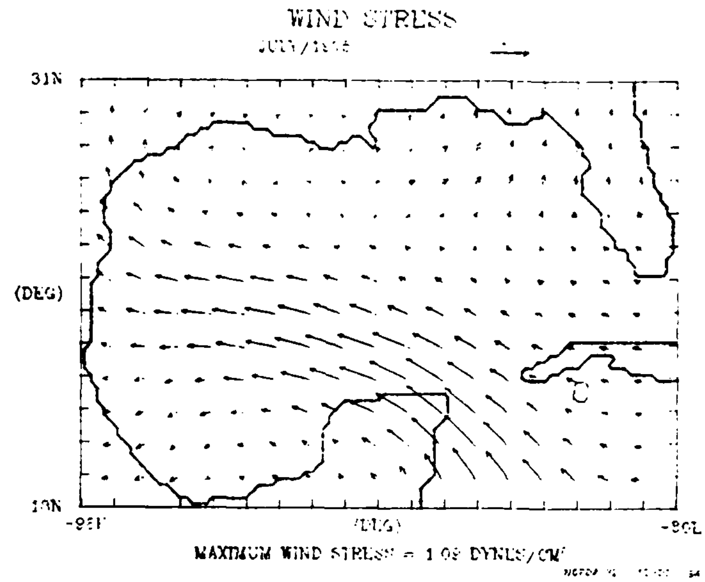

WIND STRESS CURL
31N
(DEG)
18N
-80E

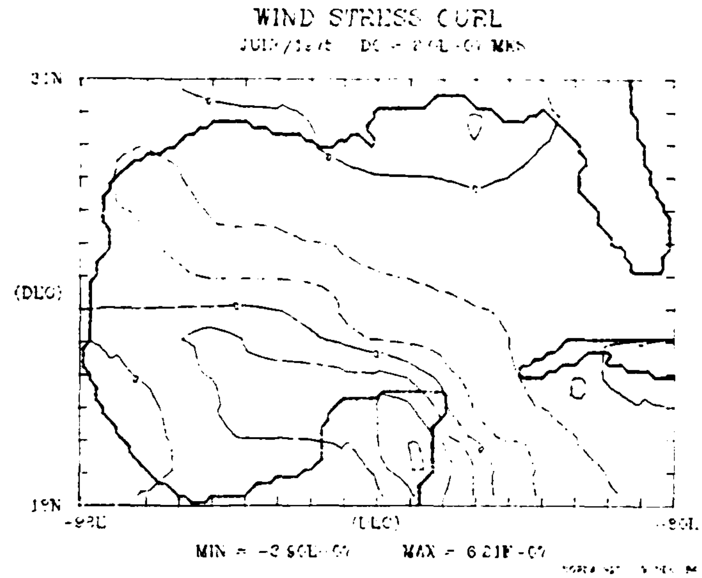

WIND STRESS
(DEG)
MAXIMUM WIND STRESS

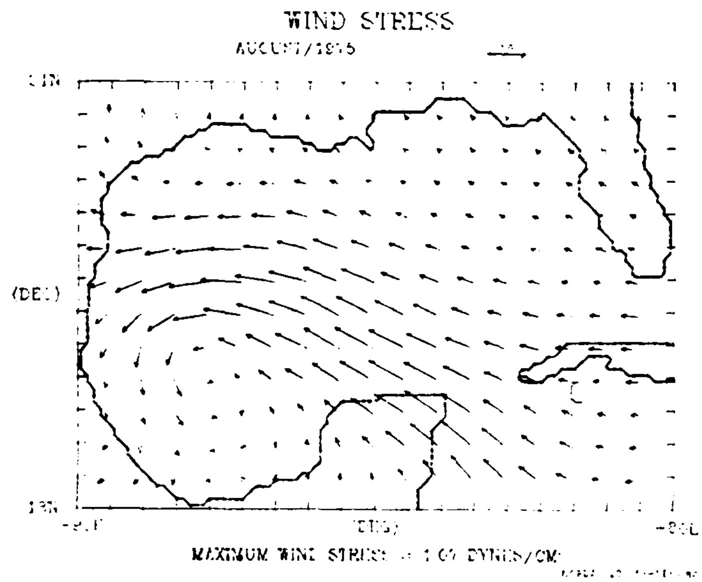

WIND STRESS CURL
31N
-80E

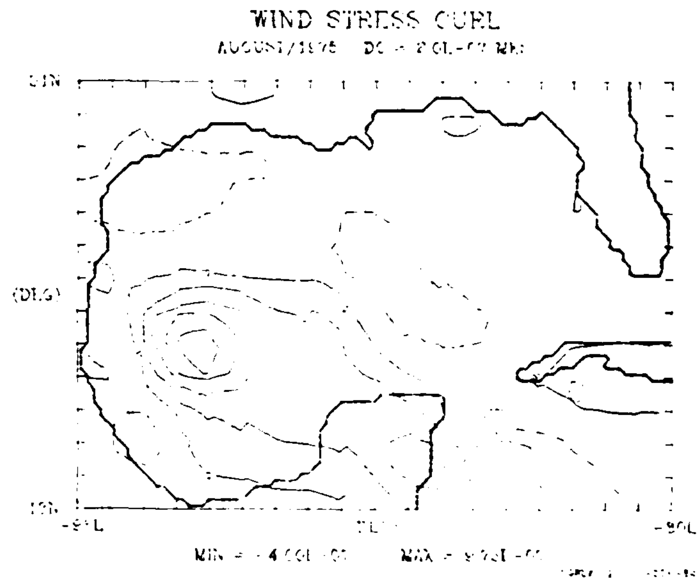

WIND STRESS
31N
(DEG)
MAXIMUM WIND STRESS

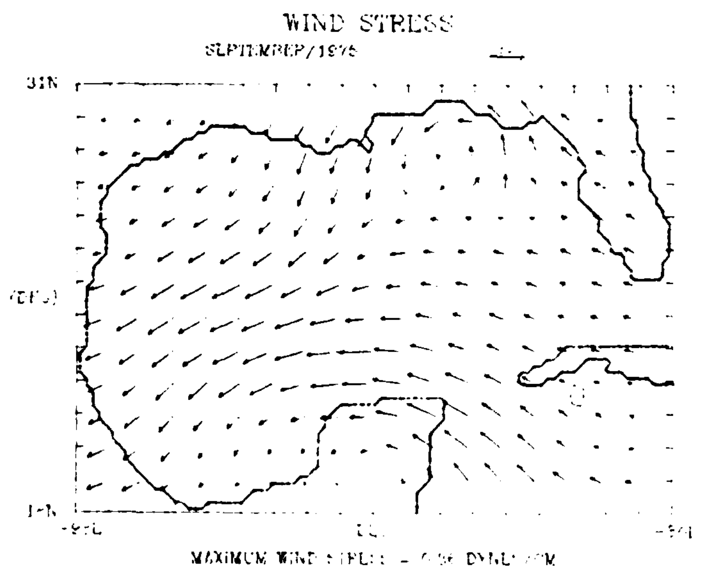

WIND STRESS CURL
JUNE/1975
31N
-80E

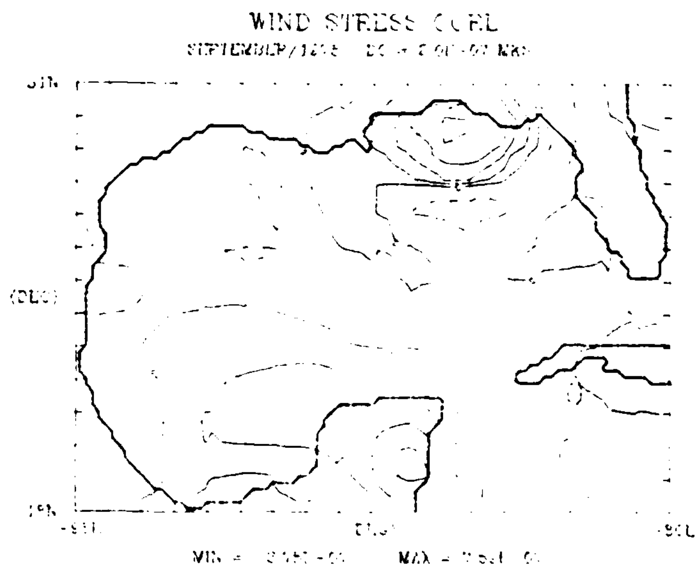

WIND STRESS
31N
(DEG)
19N
MAXIMUM WIND STRESS = 1.09 DYNES/CM

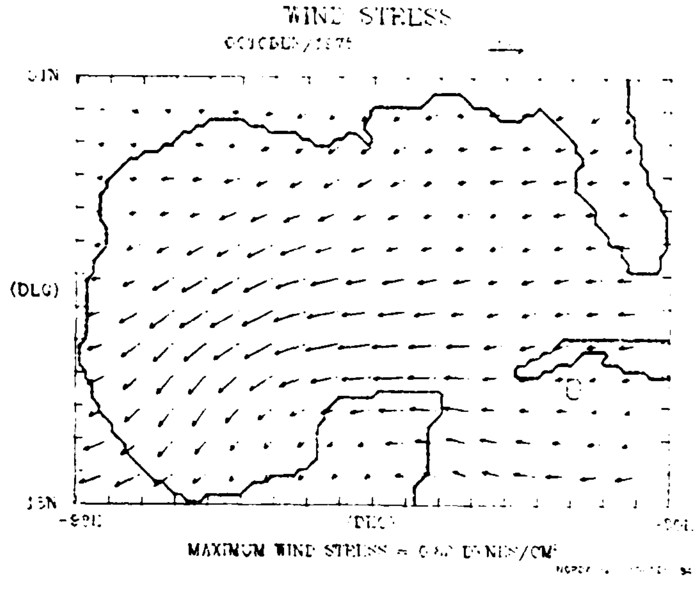

WIND STRESS CURL
(DEG)
19N
MIN =
MAX =

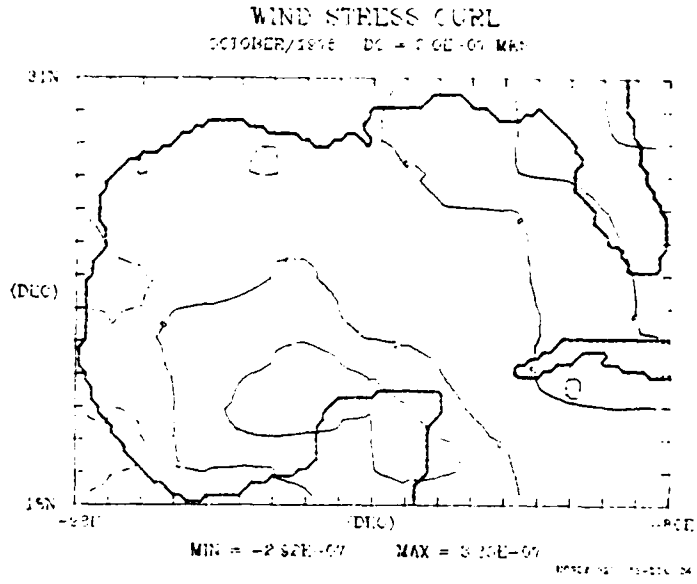

WIND STRESS
MAXIMUM WIND STRESS

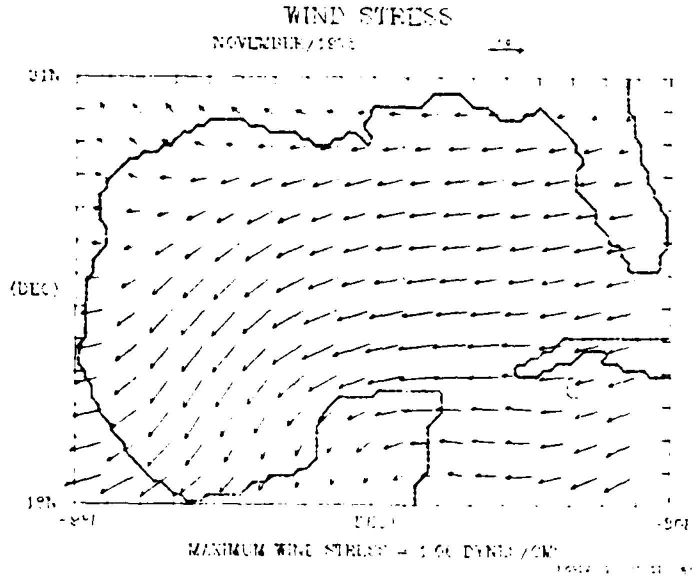

WIND STRESS CURL
(DEG)

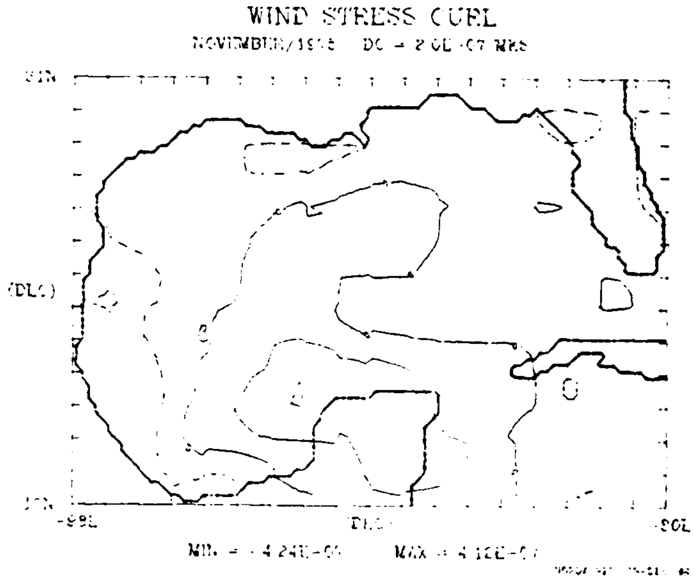

WIND STRESS
SEPTEMBER/1975
31N
MAXIMUM WIND STRESS

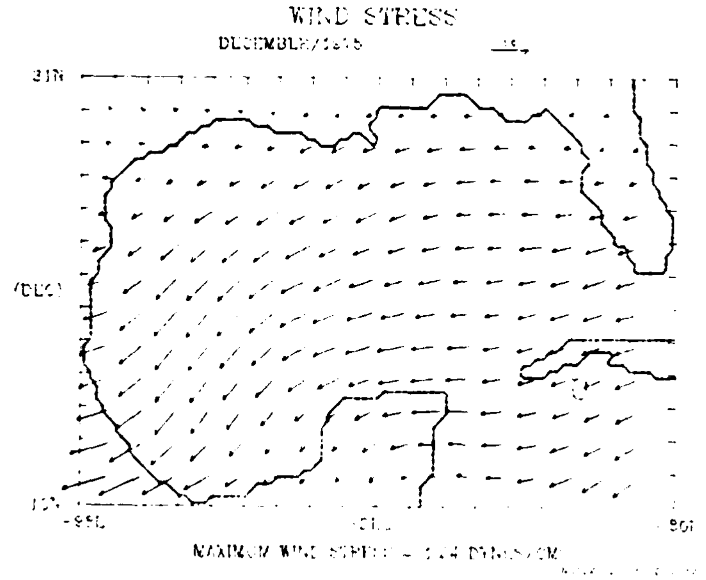

WIND STRESS CURL
(DEG)
19N

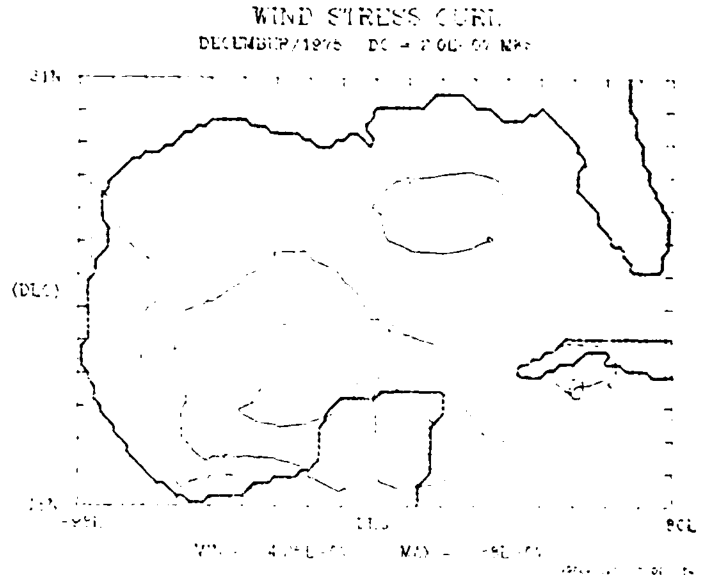

WIND STRESS
(DEG)
MAXIMUM WIND STRESS

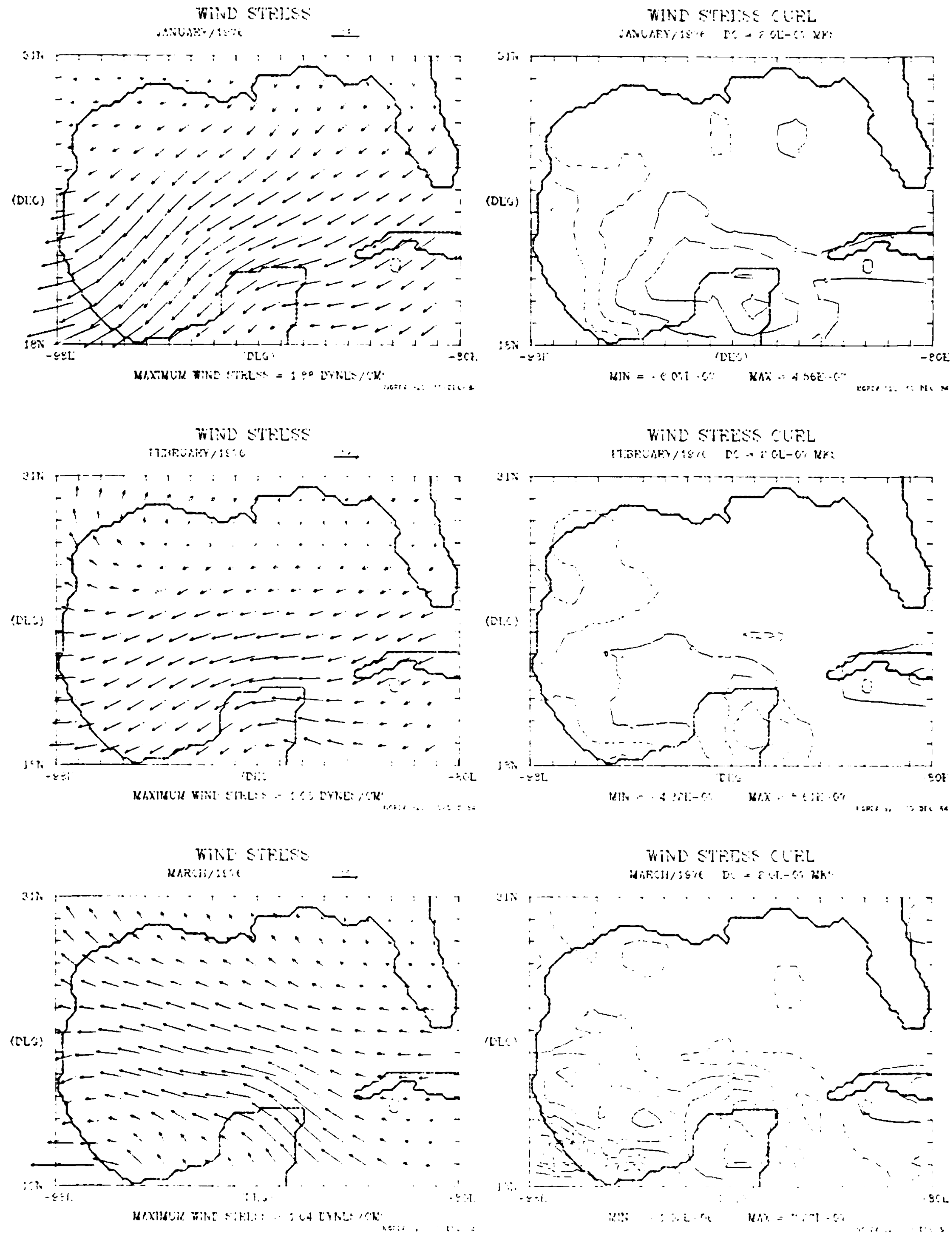

WIND STRESS CURL
(DEG)
MAX =

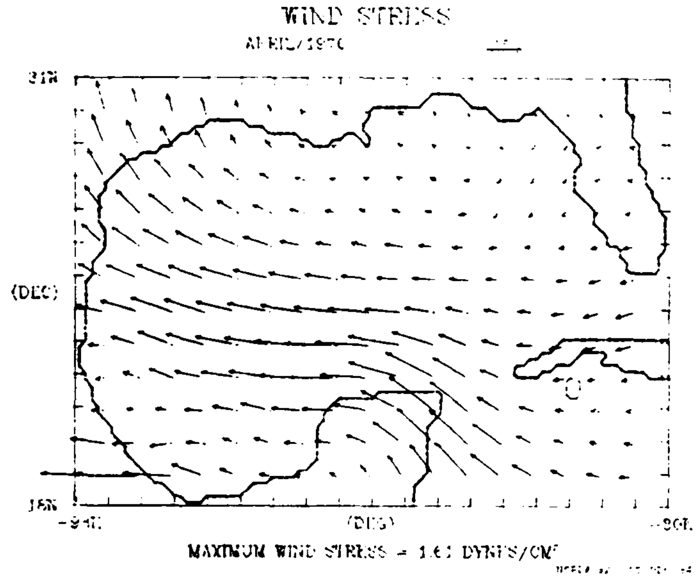

WIND STRESS
(DEG)

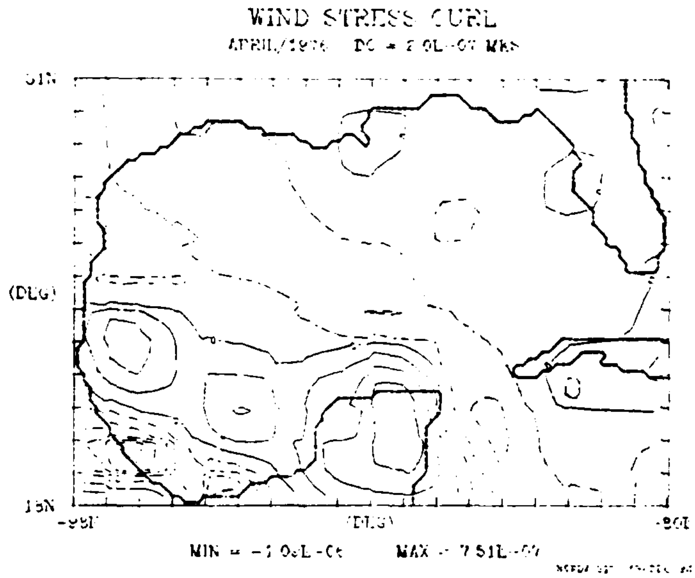

WIND STRESS CURL
(DEG)

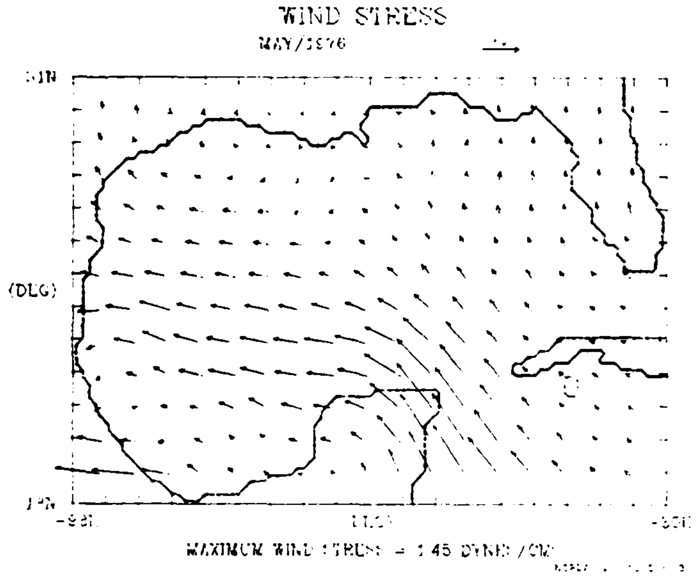

WIND STRESS

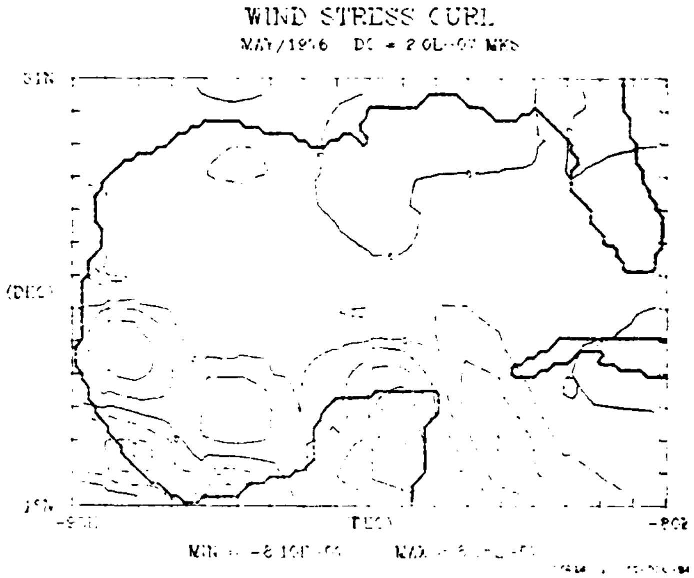

WIND STRESS CURL

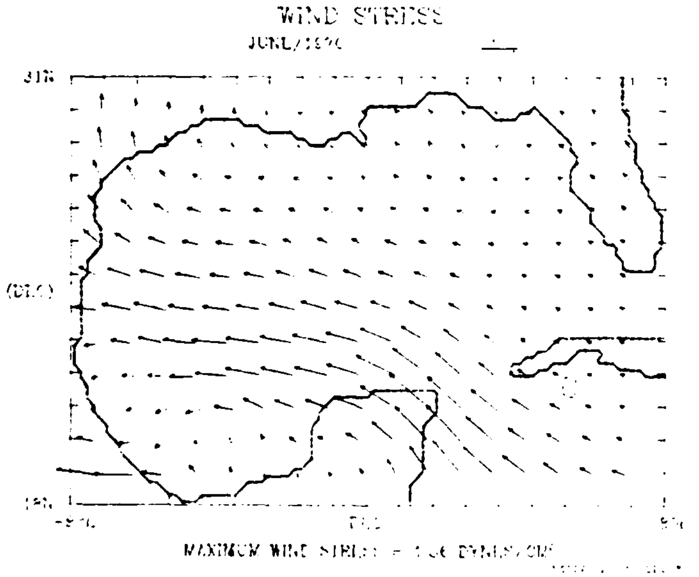

WIND STRESS
WIND STRESS CURL
(DEG)
WIND STRESS
WIND STRESS CURL
(DEG)
WIND STRESS
WIND STRESS CURL
(DEG)

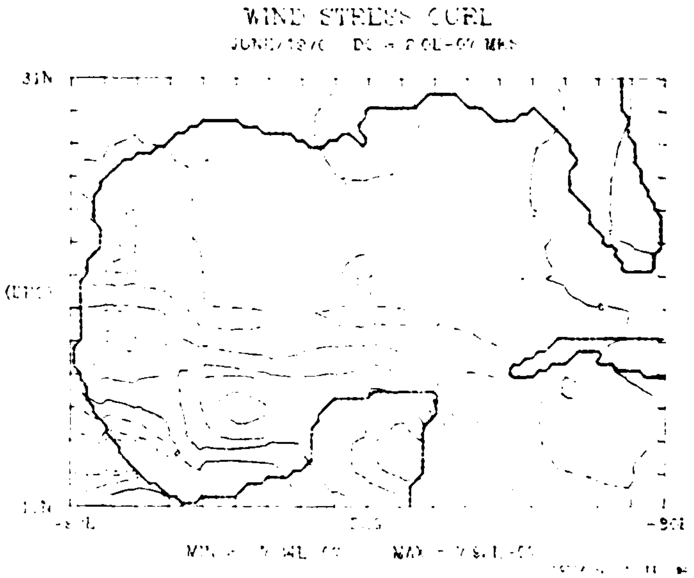

WIND STRESS
APRIL/1976
31N
(DEG)
18N
(DEG)
MAXIMUM WIND STRESS = 1.61 DYNES/CM²

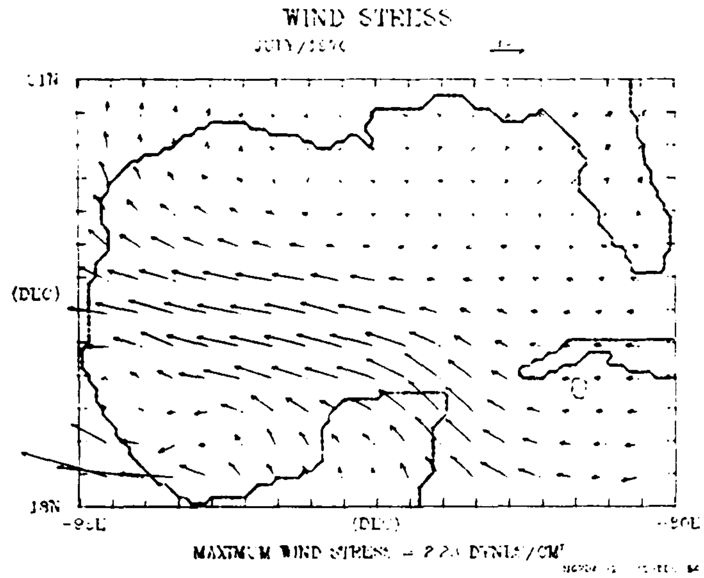

WIND STRESS CURL
31N
(DEG)
18N
(DEG)
-80E

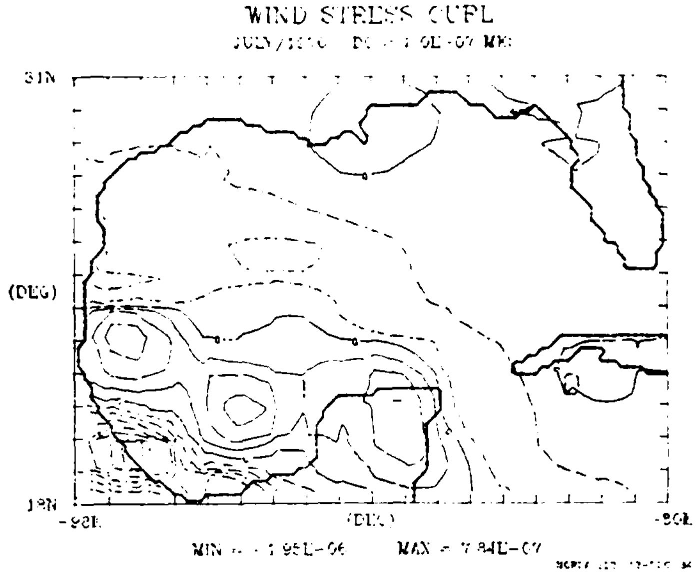

WIND STRESS
MAY/1976
(DEG)
MAXIMUM WIND STRESS = 1.45 DYNES/CM²

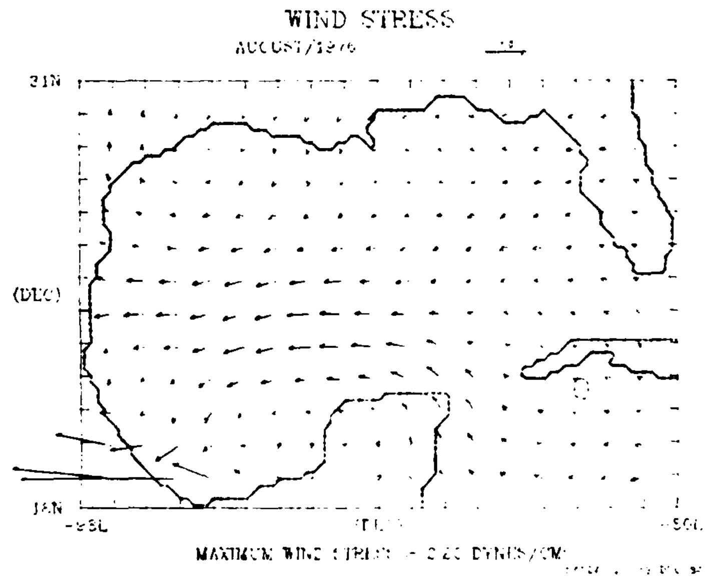

WIND STRESS CURL
31N
-80E

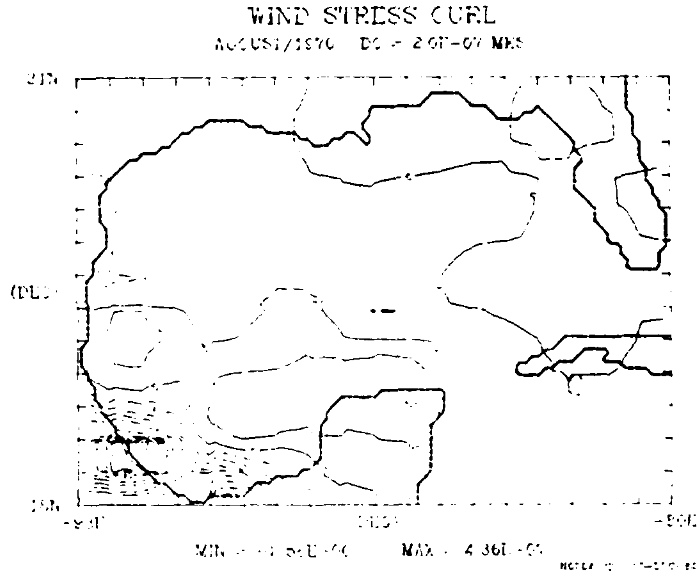

WIND STRESS
31N

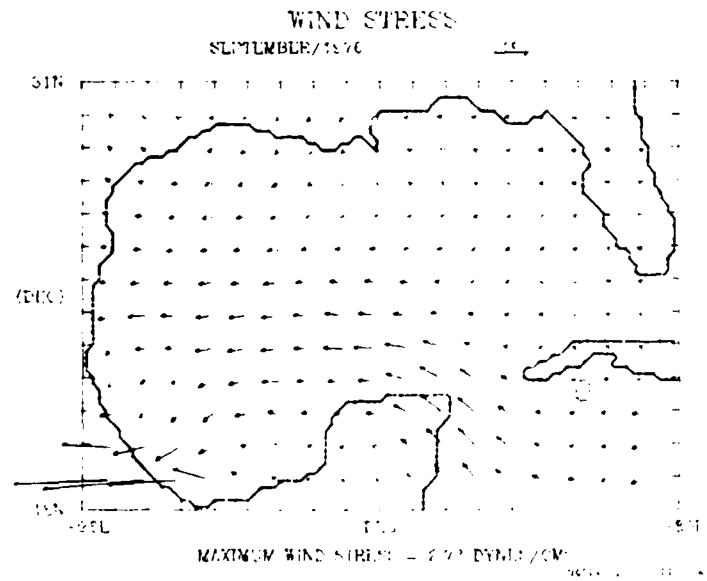

WIND STRESS CURL
31N

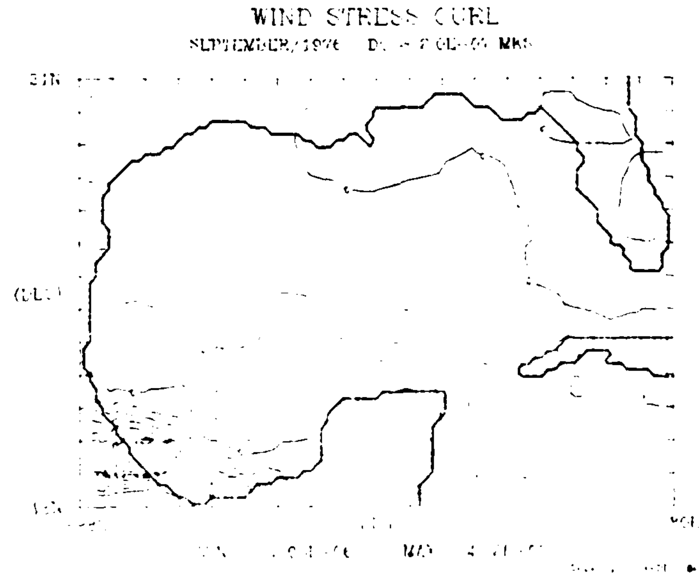

WIND STRESS
31N
(DEG)
18N
(DEG)
MAXIMUM WIND STRESS

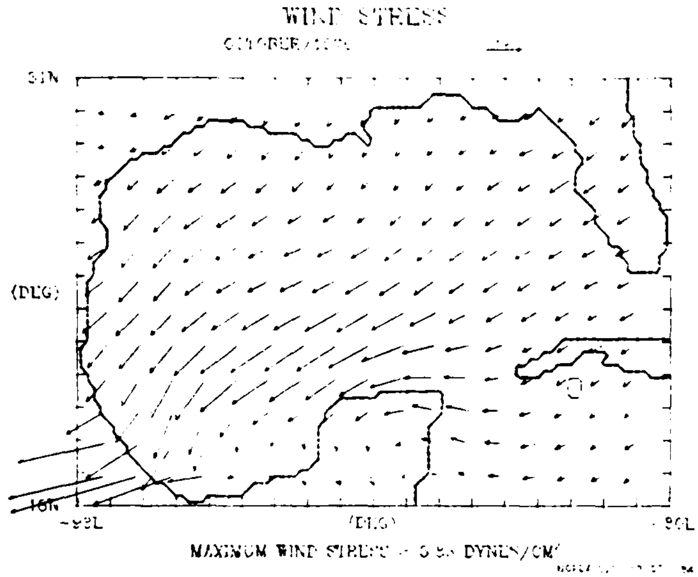

WIND STRESS CURL
31N
(DEG)
18N

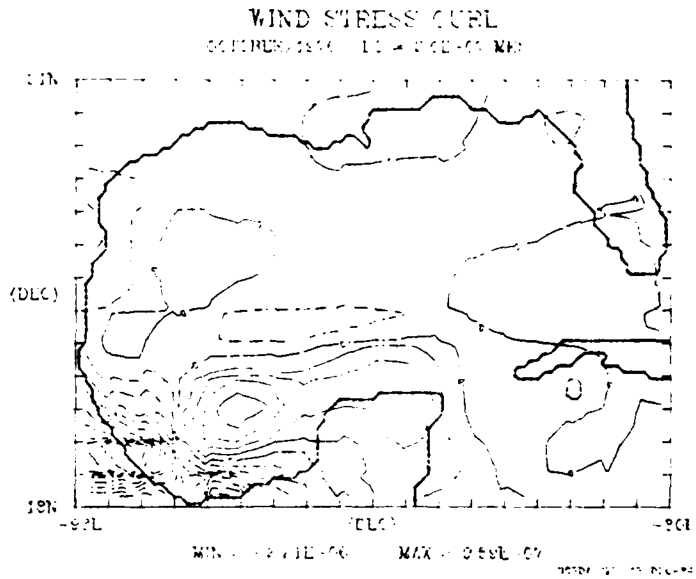

WIND STRESS
31N
(DEG)
MAXIMUM

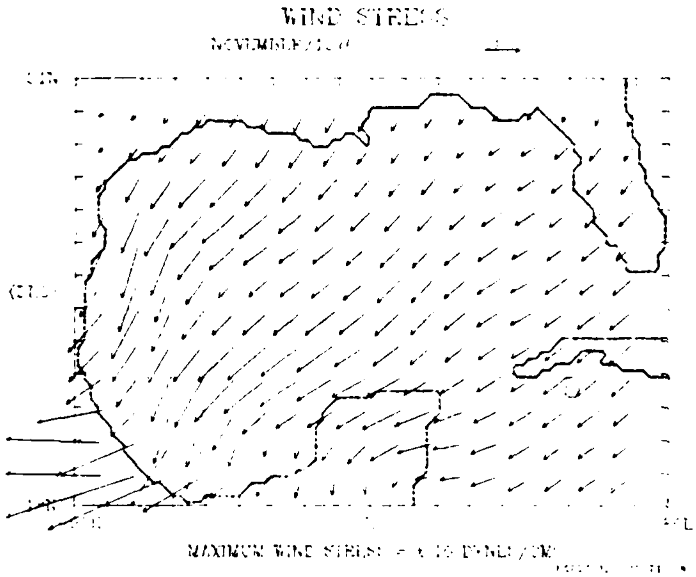

WIND STRESS CURL

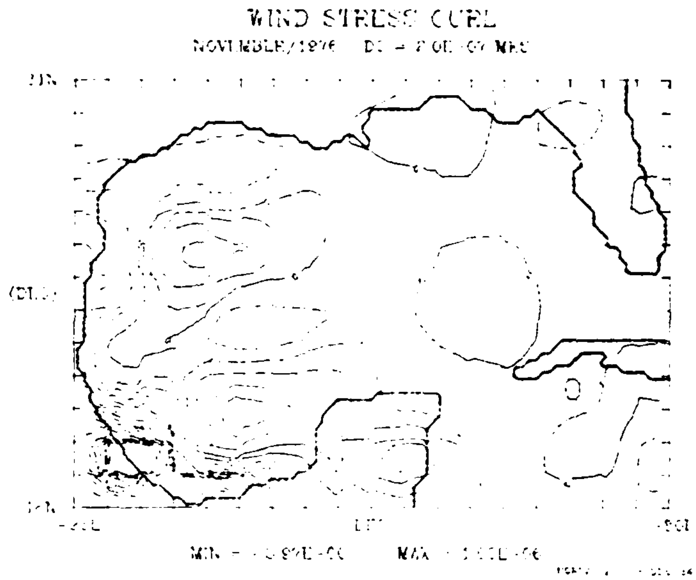

WIND STRESS
31N
MAXIMUM WIND

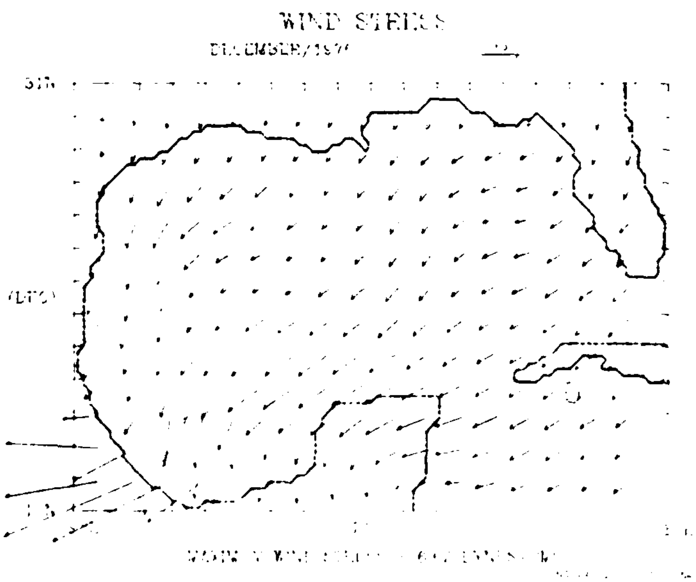

WIND STRESS CURL
31N

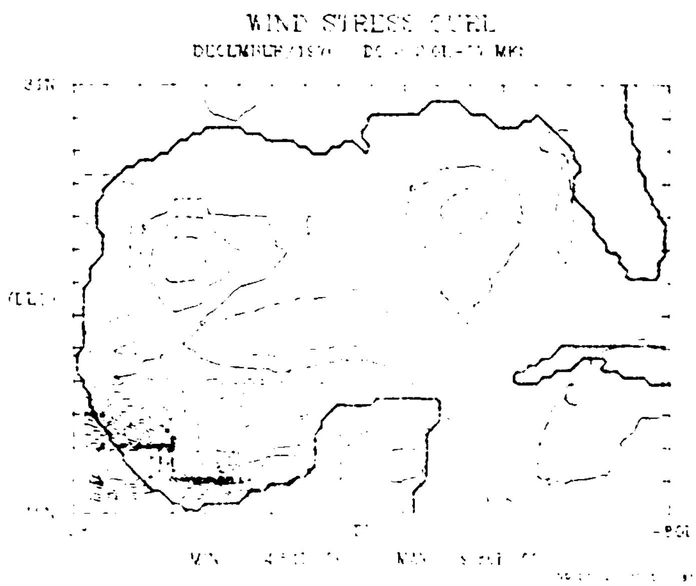

WIND STRESS
(DEG)
MAXIMUM WIND STRESS

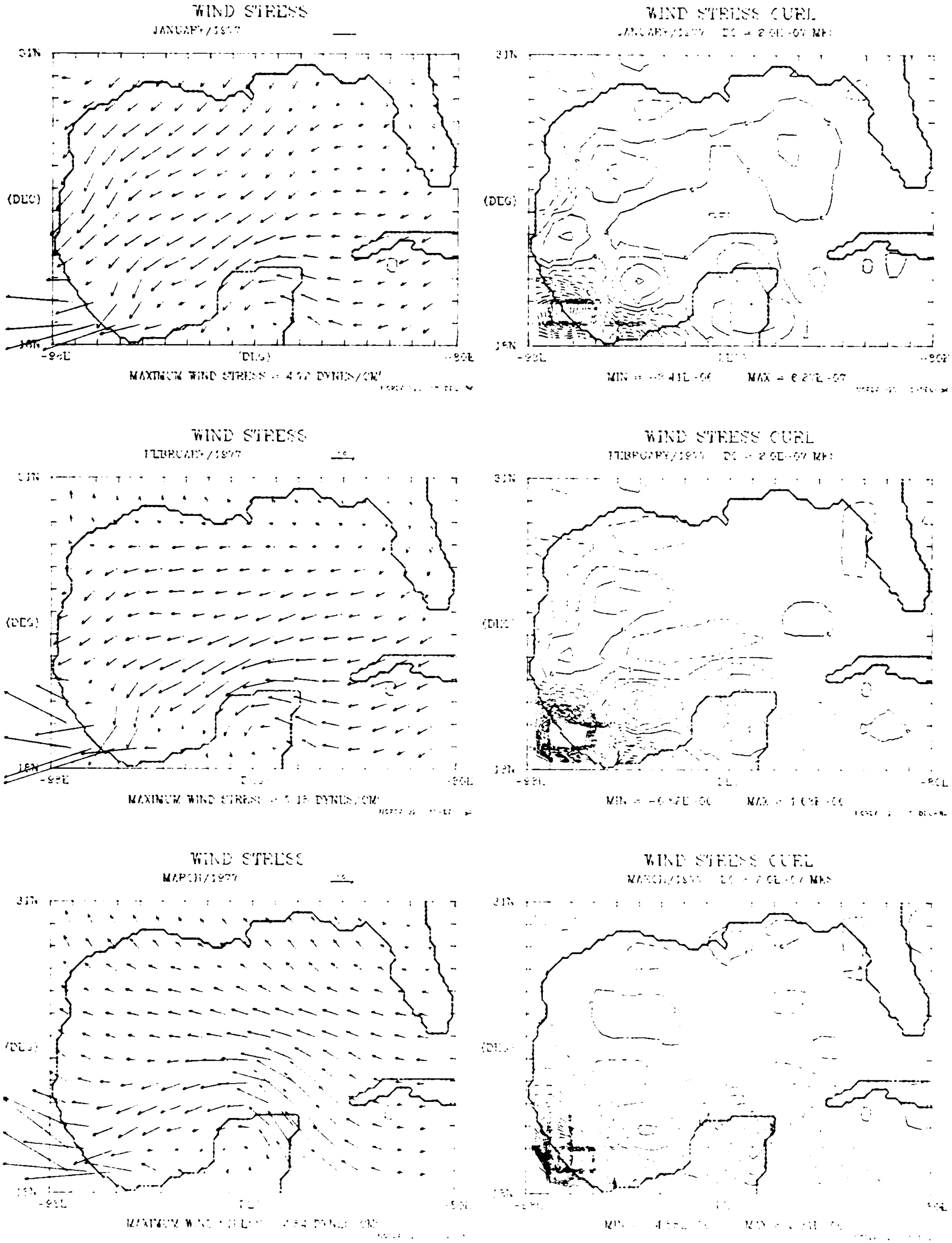

WIND STRESS CURL
(DEG)

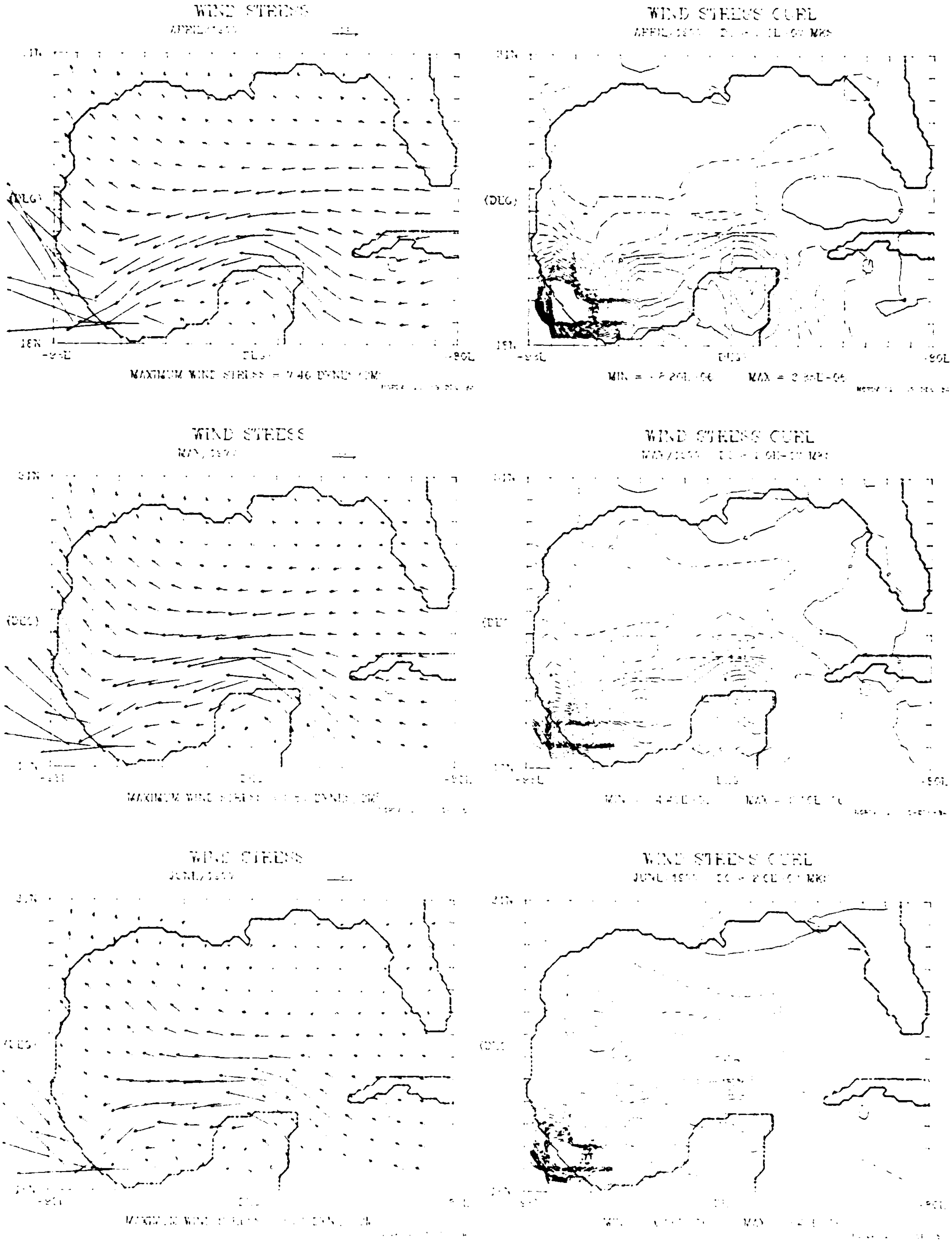

WIND STRESS


WIND STRESS CURL
NOVEMBER/1976


WIND STRESS

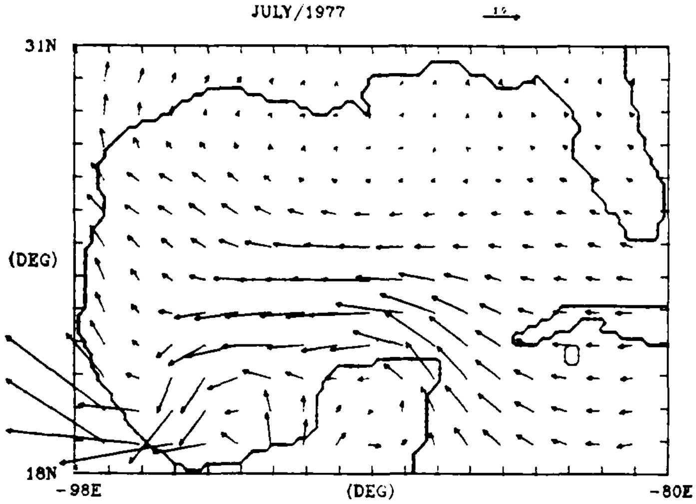

WIND STRESS CURL


WIND STRESS
JANUARY/1977
WIND STRESS CURL
(DEG)
31N
18N
-98E
-80E
WIND STRESS
WIND STRESS CURL
(DEG)
WIND STRESS
MARCH/1977
WIND STRESS CURL
(DEG)


WIND STRESS
WIND STRESS CURL
(DEG)
18N
WIND STRESS
WIND STRESS CURL
(DEG)
WIND STRESS
WIND STRESS CURL

WIND STRESS

JULY/1977

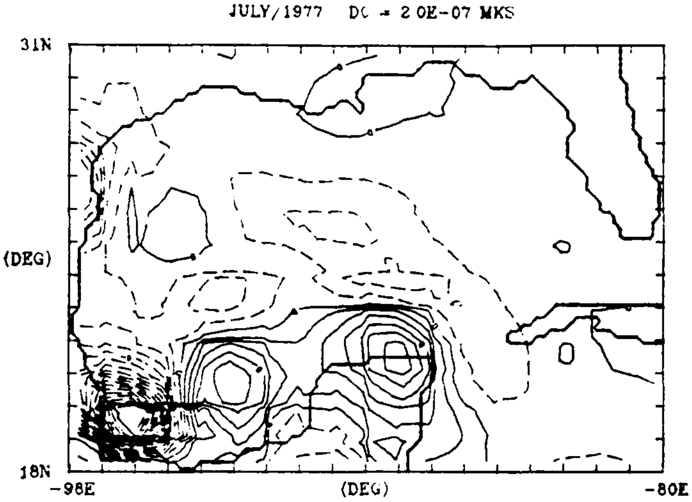


MAXIMUM WIND STRESS = 4.25 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

JULY/1977 DC = 2.0E-07 MKS

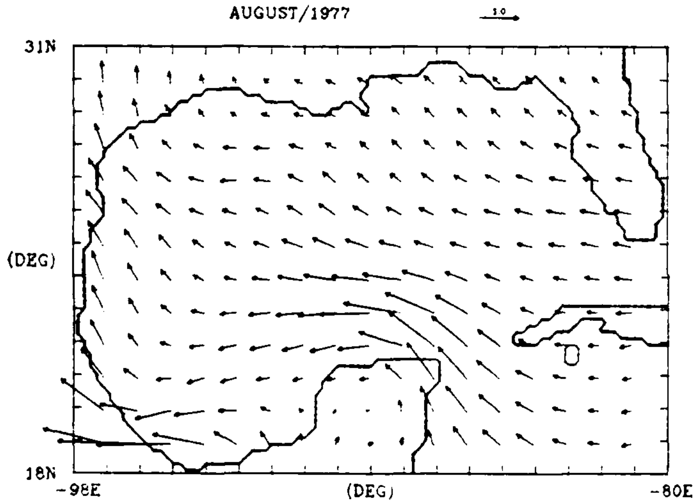


MIN = -5.08E-06 MAX = 1.79E-06

NORDA 323 13-DEC-84

WIND STRESS

AUGUST/1977

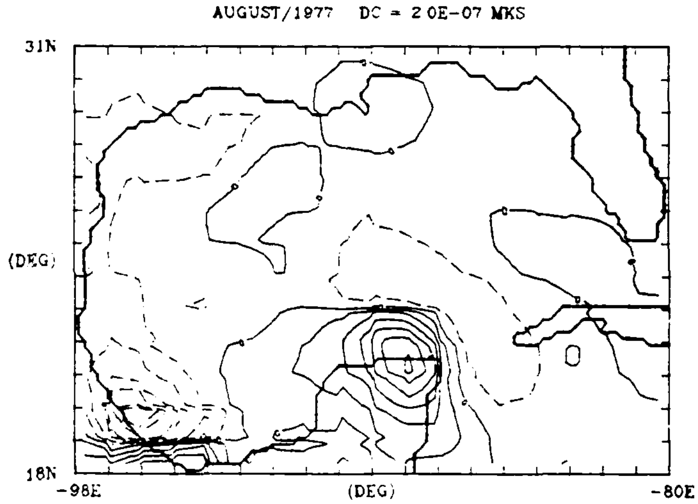


MAXIMUM WIND STRESS = 1.96 DYNES/CM²

NORDA 323 13-DEC-84

WIND STRESS CURL

AUGUST/1977 DC = 2.0E-07 MKS

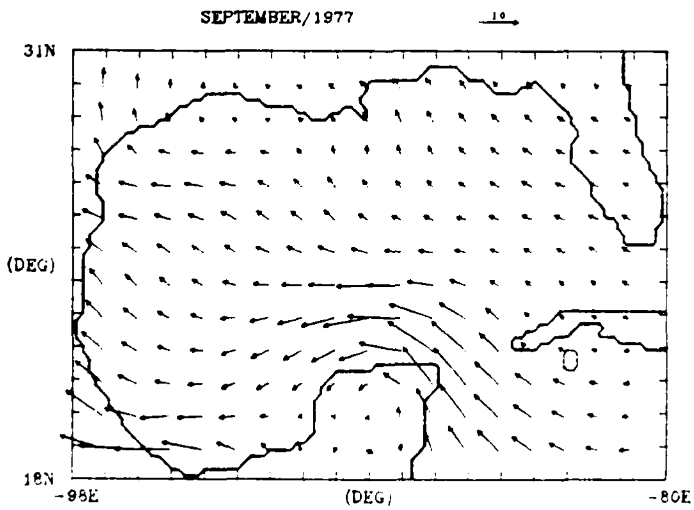


MIN = -2.04E-06 MAX = 1.25E-06

NORDA 323 13-DEC-84

WIND STRESS

SEPTEMBER/1977

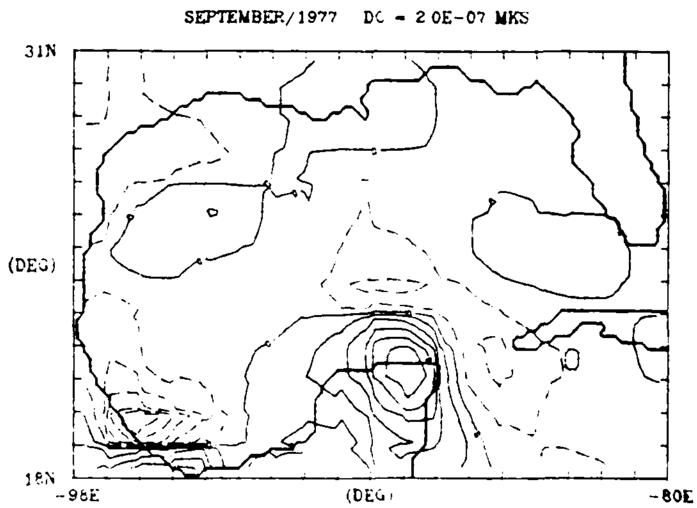


MAXIMUM WIND STRESS = 1.40 DYNES/CM²

NORDA 323 13-DEC-84

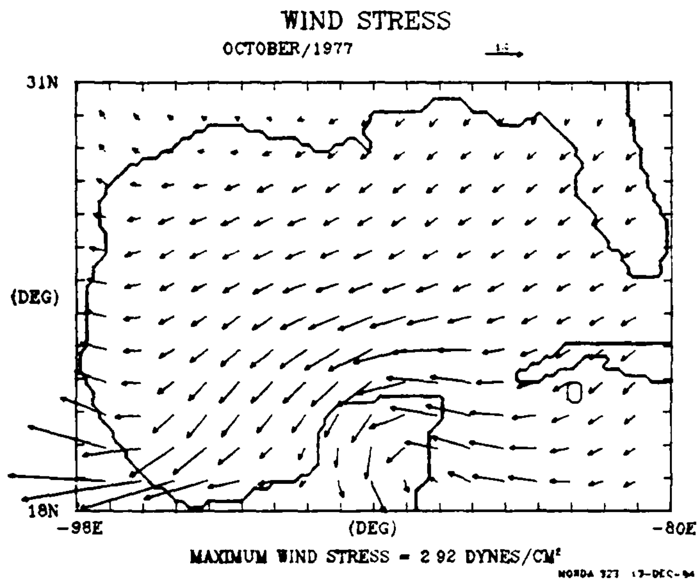
WIND STRESS CURL

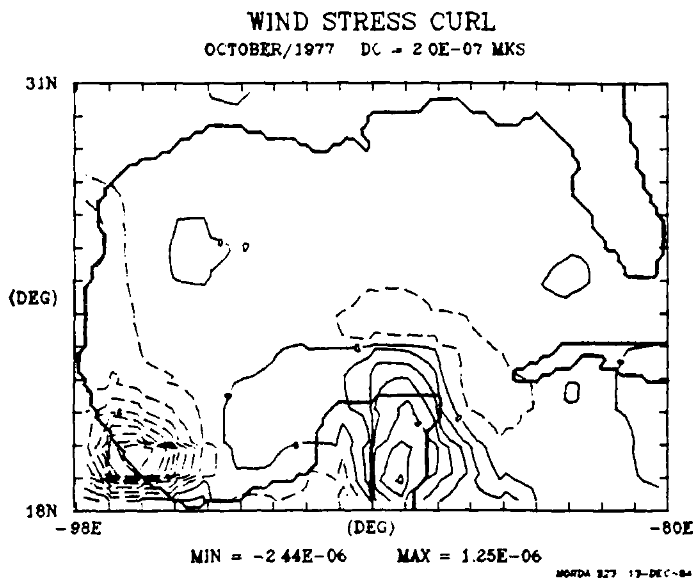
SEPTEMBER/1977 DC = 2.0E-07 MKS

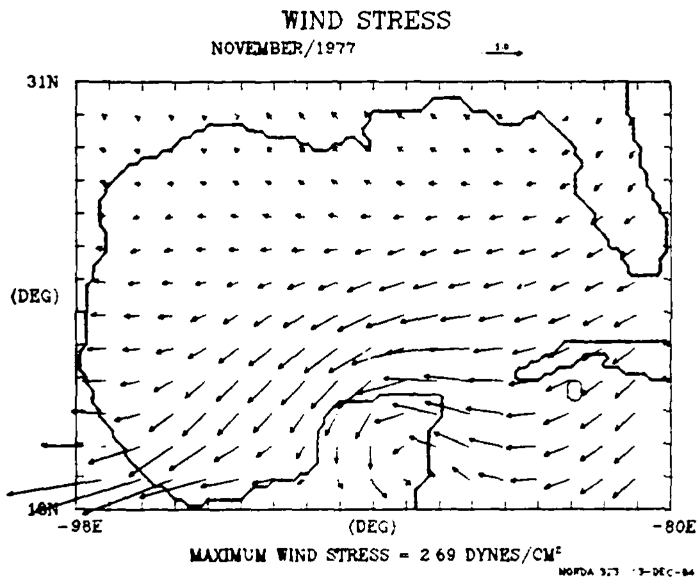


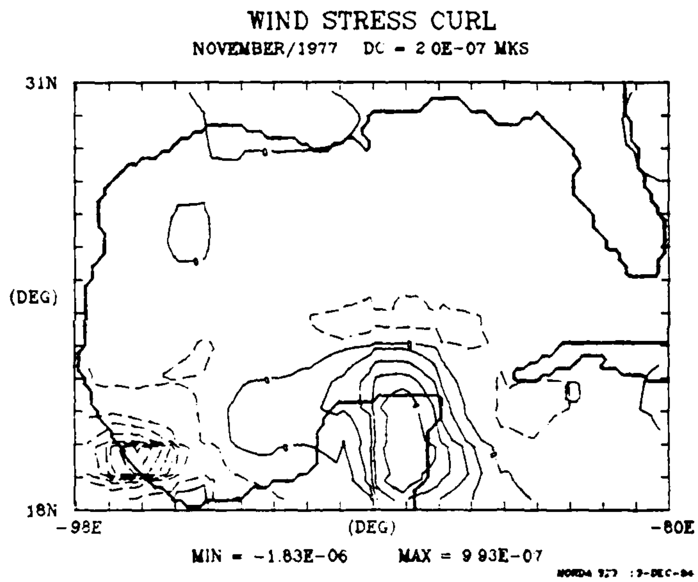
MIN = -1.33E-06 MAX = 1.30E-06

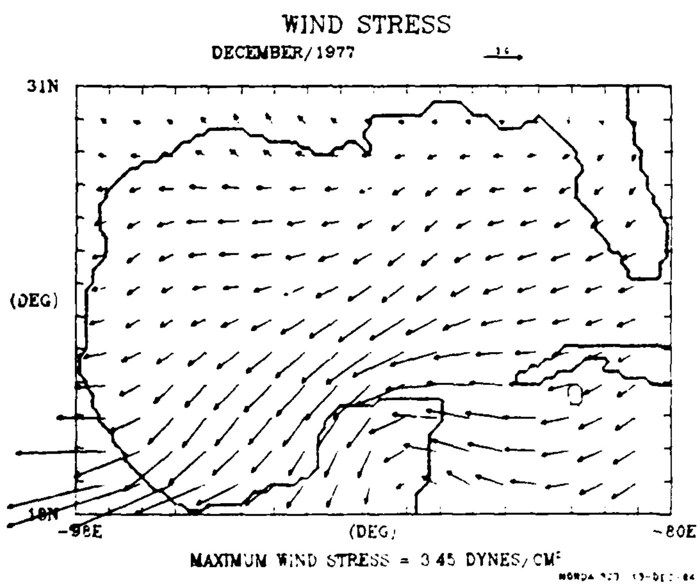
NORDA 323 13-DEC-84

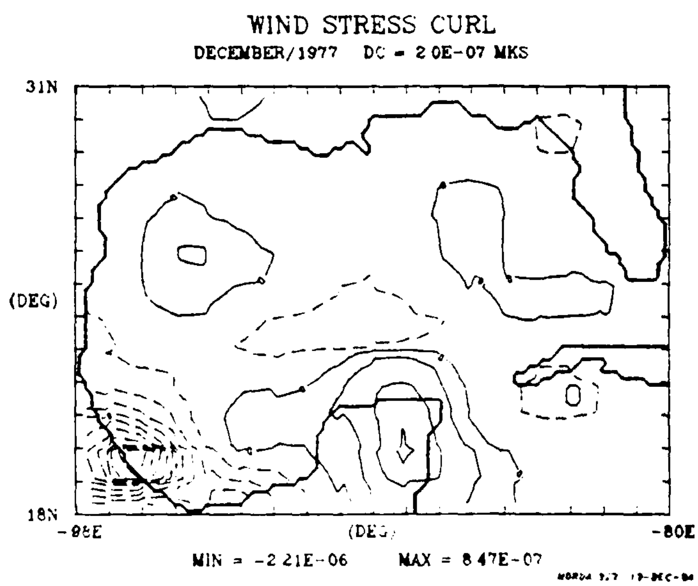

WIND STRESS
OCTOBER/1977
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.92 DYNES/CM²


WIND STRESS CURL
OCTOBER/1977 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.44E-06 MAX = 1.25E-06

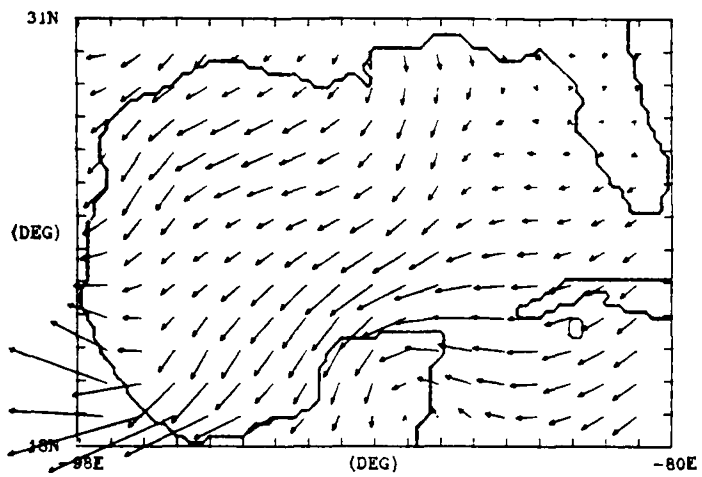

WIND STRESS
NOVEMBER/1977
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.69 DYNES/CM²


WIND STRESS CURL
NOVEMBER/1977 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.83E-06 MAX = 9.93E-07


WIND STRESS
DECEMBER/1977
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.45 DYNES/CM²

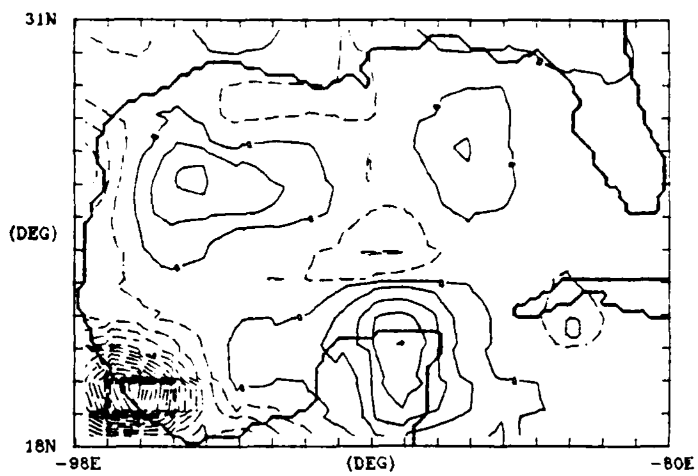

WIND STRESS CURL
DECEMBER/1977 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
-80E
MIN = -2.21E-06 MAX = 8.47E-07

WIND STRESS
JANUARY/1978



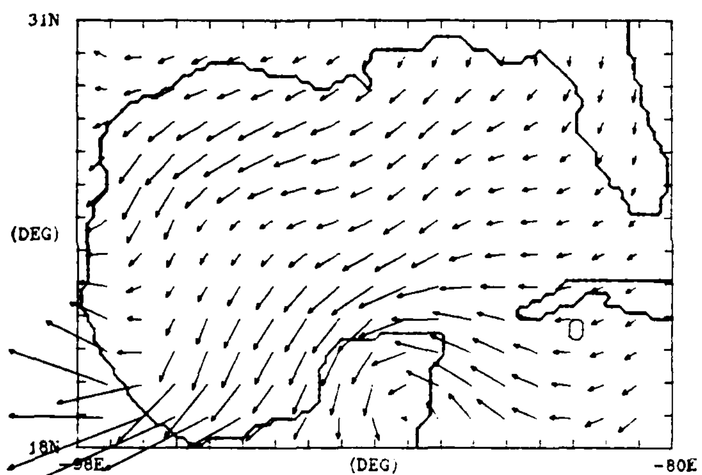
MAXIMUM WIND STRESS = 4.49 DYNES/CM²

WIND STRESS CURL
JANUARY/1978 DC = 2.0E-07 MKS



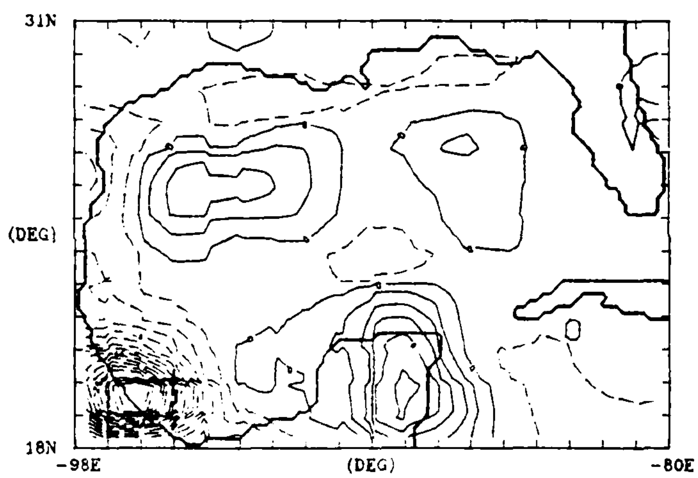
MIN = -3.77E-06 MAX = 8.14E-07

WIND STRESS
FEBRUARY/1978



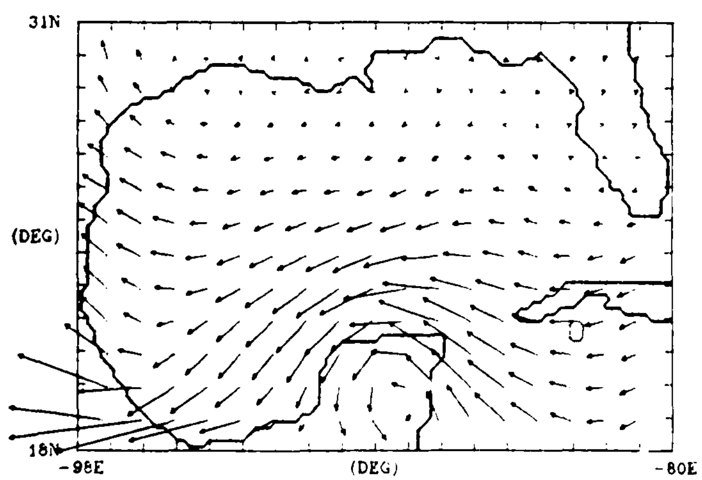
MAXIMUM WIND STRESS = 5.41 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1978 DC = 2.0E-07 MKS



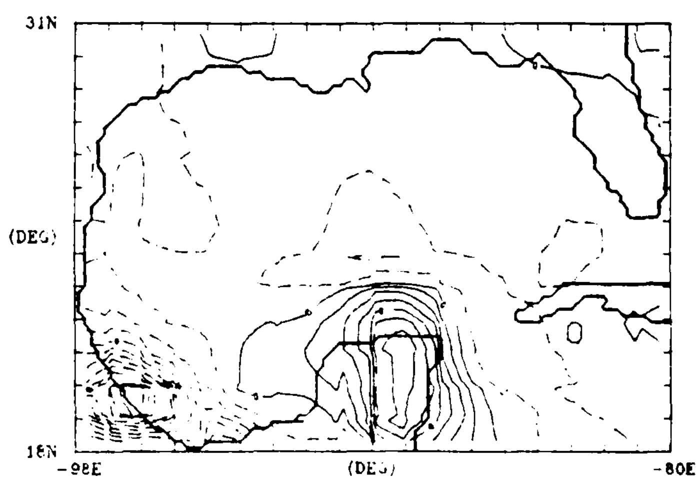
MIN = -4.58E-06 MAX = 1.08E-06

WIND STRESS
MARCH/1978

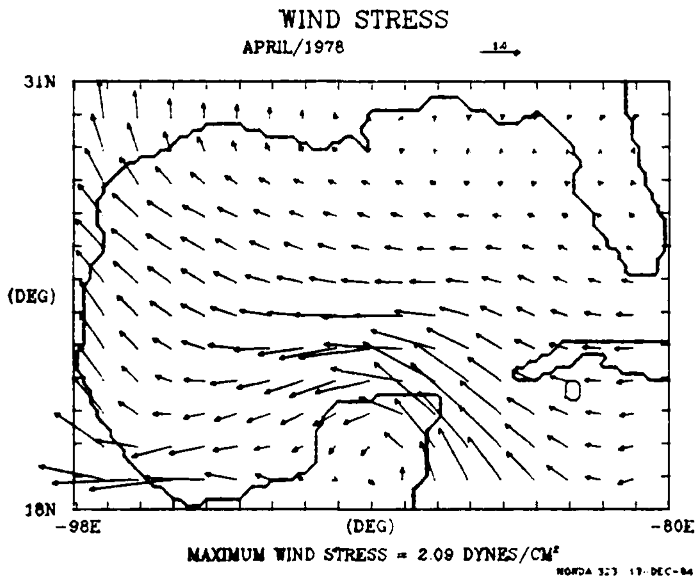


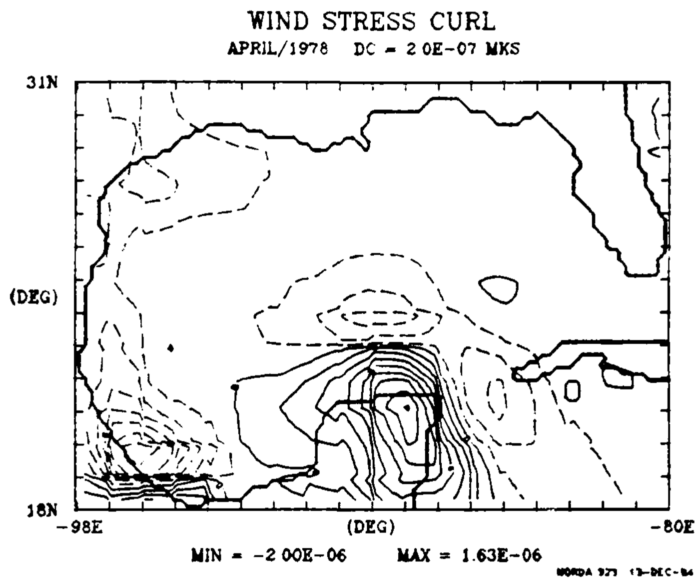
MAXIMUM WIND STRESS = 3.80 DYNES/CM²

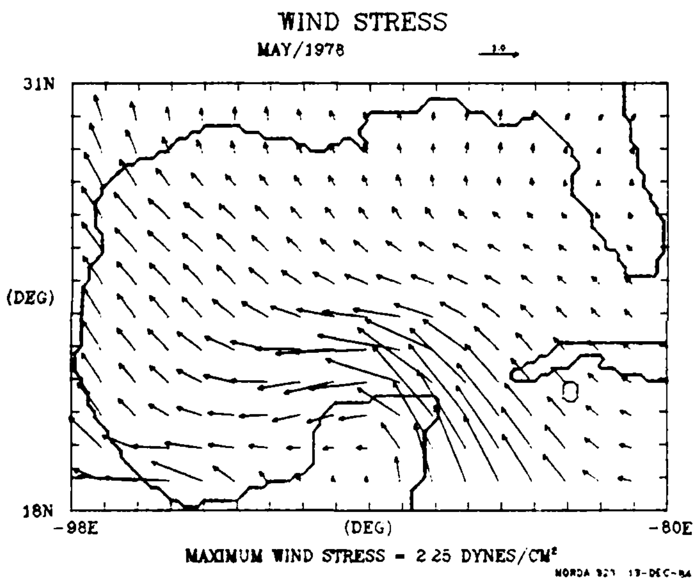
WIND STRESS CURL
MARCH/1978 DC = 2.0E-07 MKS

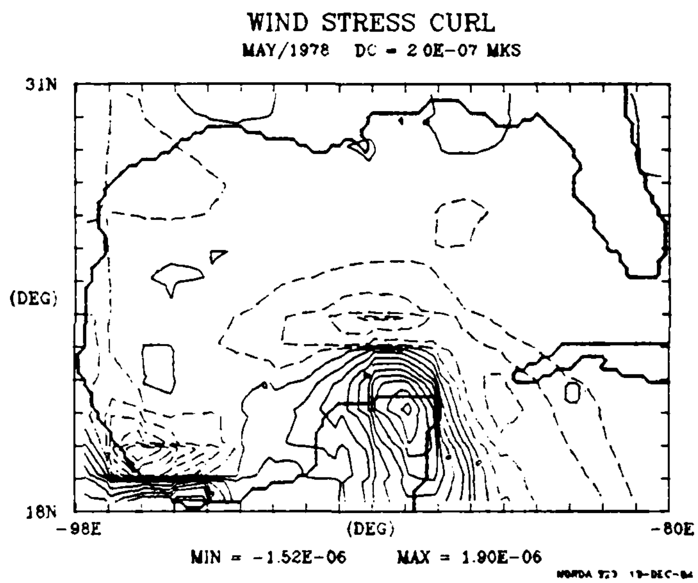


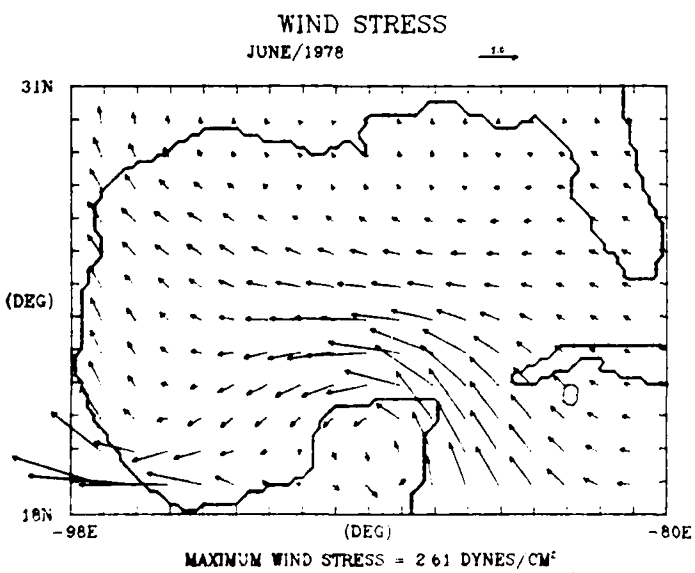
MIN = -3.07E-06 MAX = 1.38E-06

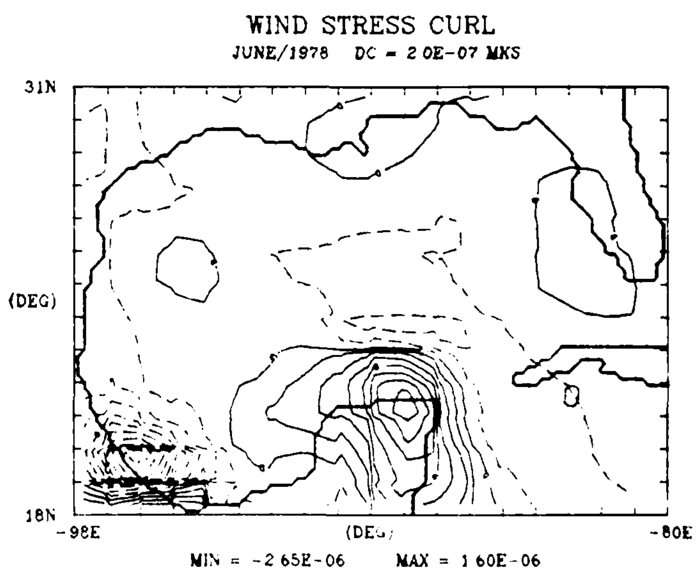

WIND STRESS
APRIL/1978
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.09 DYNES/CM²


WIND STRESS CURL
APRIL/1978 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.00E-06 MAX = 1.63E-06


WIND STRESS
MAY/1978
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.25 DYNES/CM²

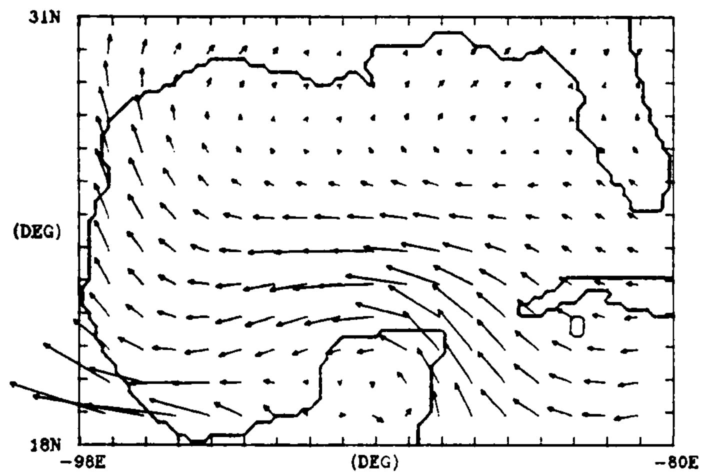

WIND STRESS CURL
MAY/1978 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.52E-06 MAX = 1.90E-06


WIND STRESS
JUNE/1978
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.61 DYNES/CM²


WIND STRESS CURL
JUNE/1978 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
-80E
MIN = -2.65E-06 MAX = 1.60E-06

WIND STRESS

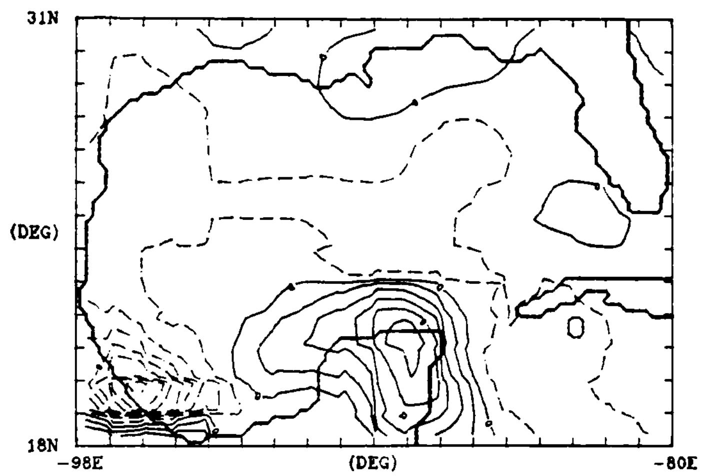
JULY/1978



MAXIMUM WIND STRESS = 2.72 DYNES/CM²

WIND STRESS CURL

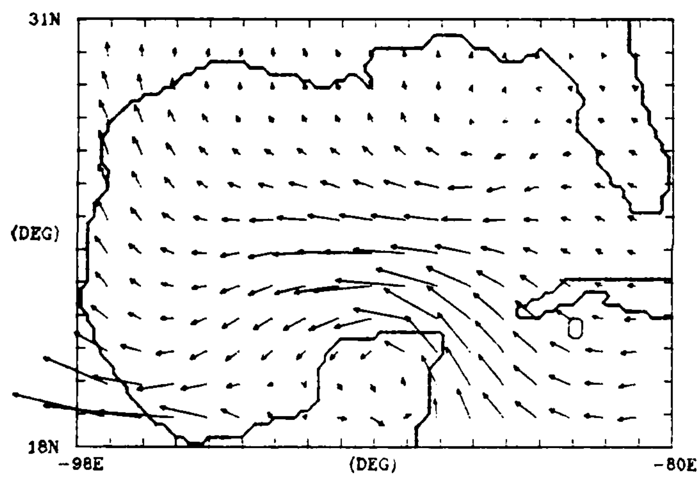
JULY/1978 DC = 2.0E-07 MKS



MIN = -2.24E-06 MAX = 1.19E-06

WIND STRESS

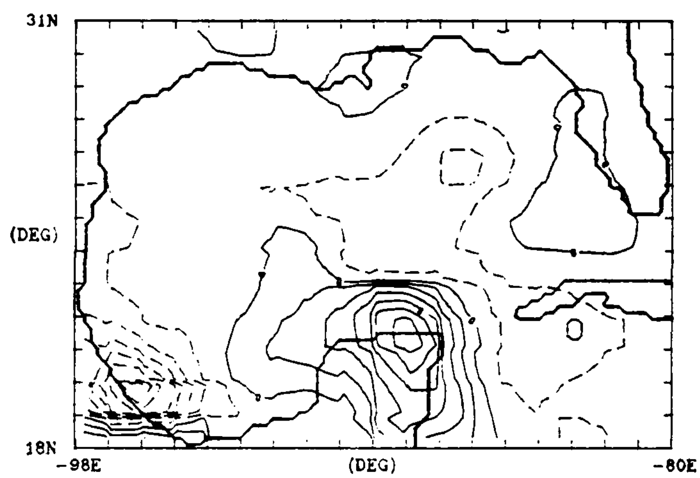
AUGUST/1978



MAXIMUM WIND STRESS = 2.39 DYNES/CM²

WIND STRESS CURL

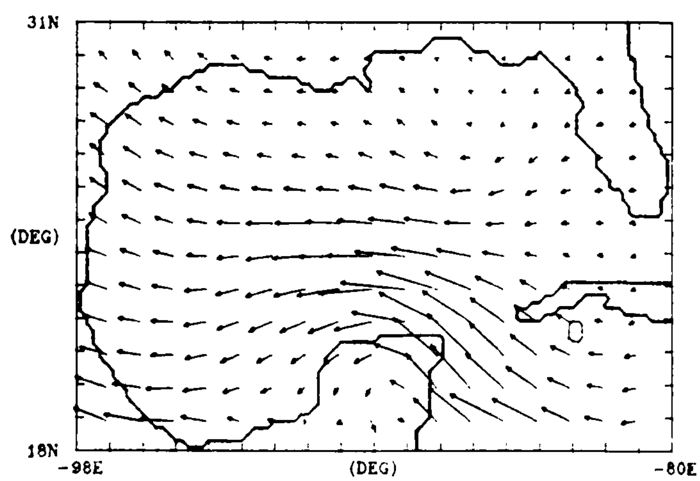
AUGUST/1978 DC = 2.0E-07 MKS



MIN = -1.90E-06 MAX = 1.38E-06

WIND STRESS

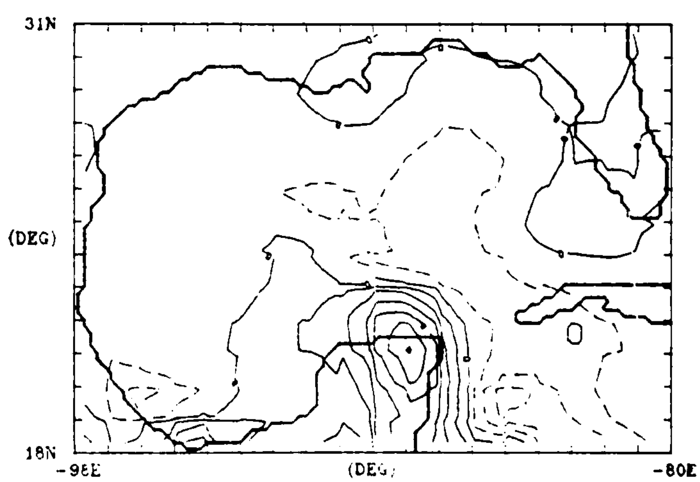
SEPTEMBER/1978



MAXIMUM WIND STRESS = 1.60 DYNES/CM²

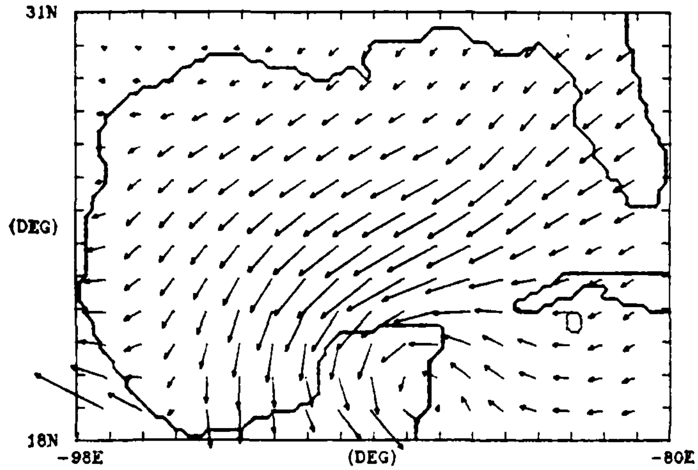
WIND STRESS CURL

SEPTEMBER/1978 DC = 2.0E-07 MKS



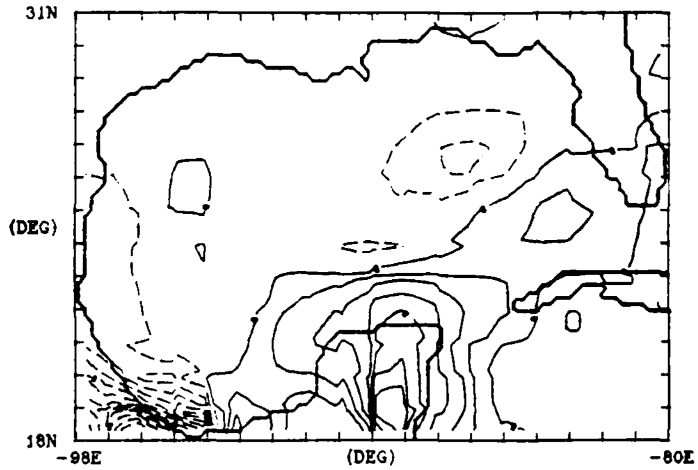
MIN = -6.89E-07 MAX = 1.23E-06

WIND STRESS
OCTOBER/1978



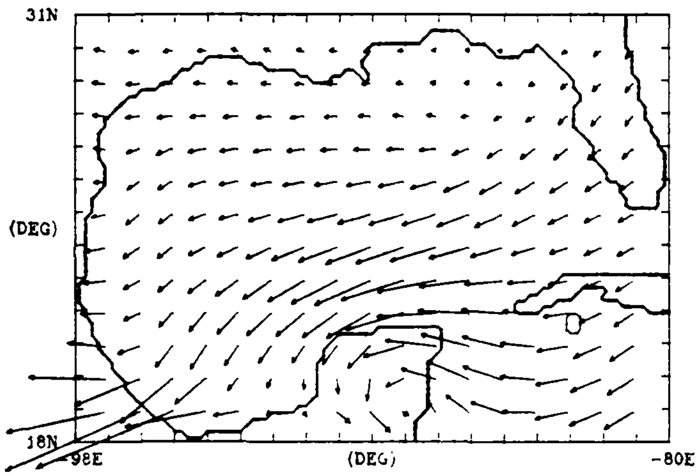
MAXIMUM WIND STRESS = 1.99 DYNES/CM²

WIND STRESS CURL
OCTOBER/1978 DC = 2.0E-07 MKS



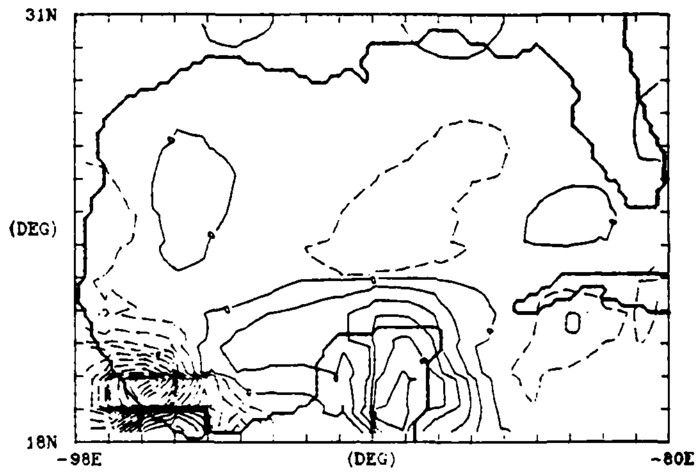
MIN = -2.78E-06 MAX = 1.56E-06

WIND STRESS
NOVEMBER/1978



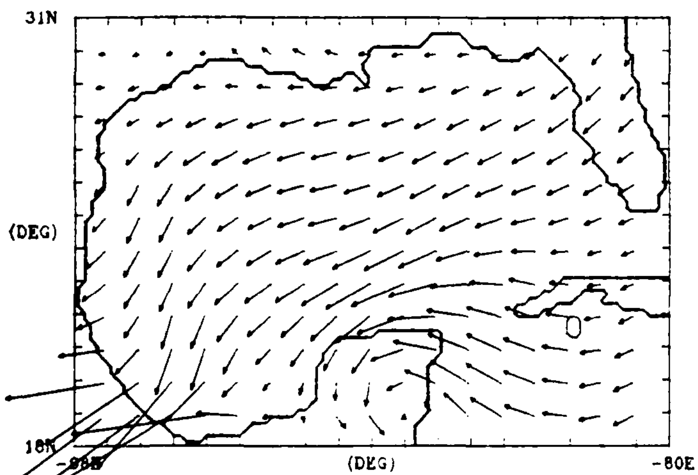
MAXIMUM WIND STRESS = 3.88 DYNES/CM²

WIND STRESS CURL
NOVEMBER/1978 DC = 2.0E-07 MKS



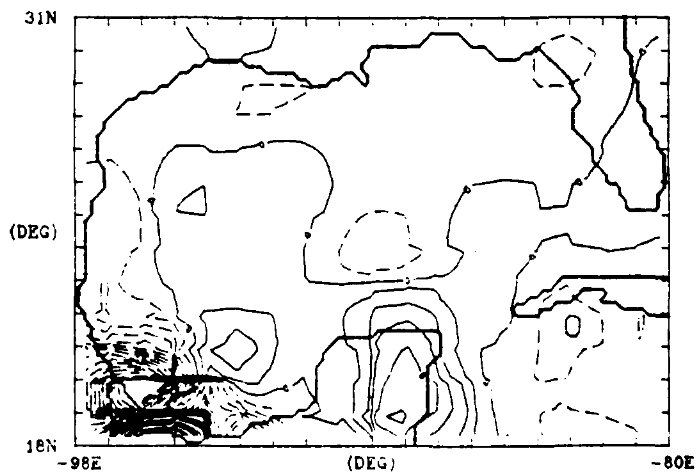
MIN = -3.14E-06 MAX = 1.64E-06

WIND STRESS
DECEMBER/1978

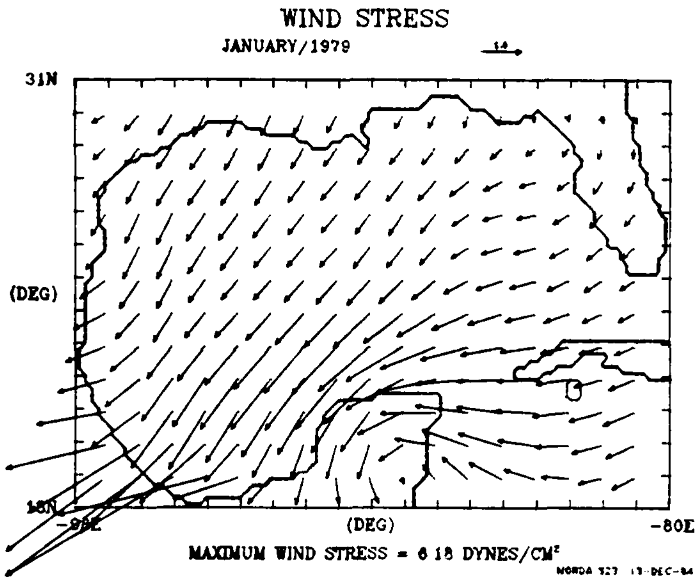


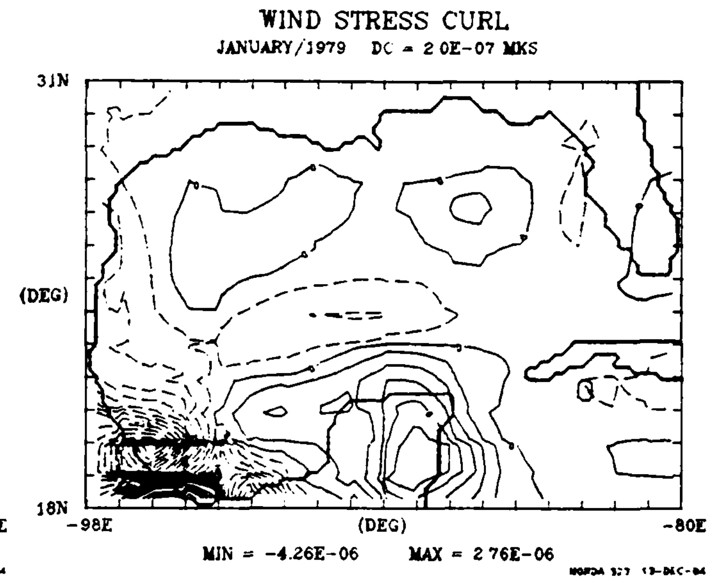
MAXIMUM WIND STRESS = 6.47 DYNES/CM²

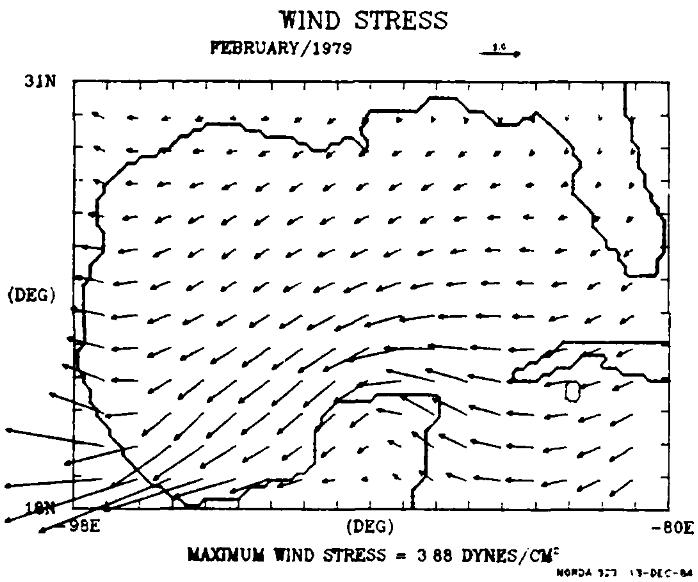
WIND STRESS CURL
DECEMBER/1978 DC = 2.0E-07 MKS

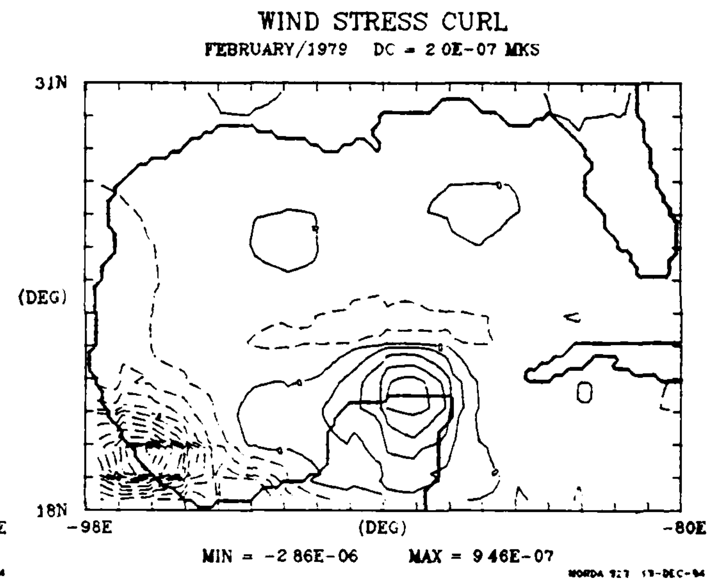


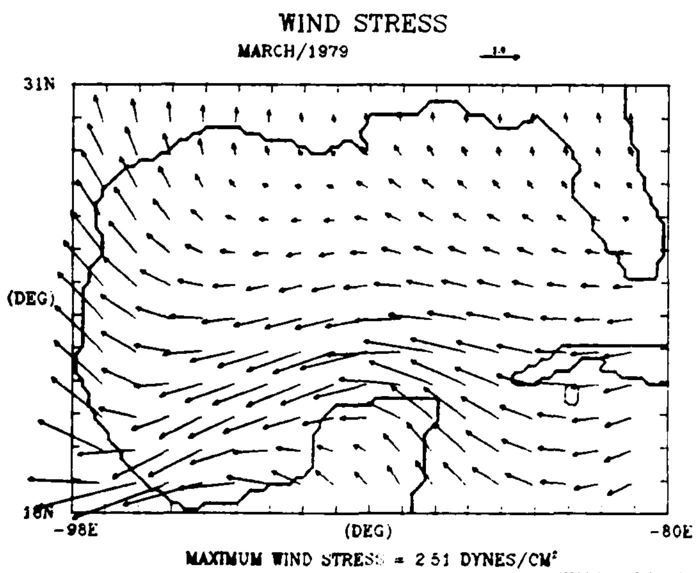
MIN = -5.20E-06 MAX = 3.75E-06

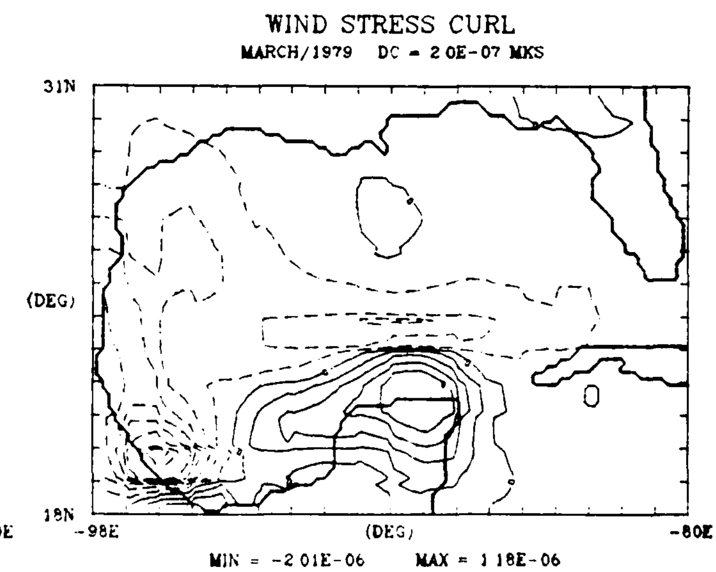

WIND STRESS
JANUARY/1979
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 6.18 DYNES/CM²

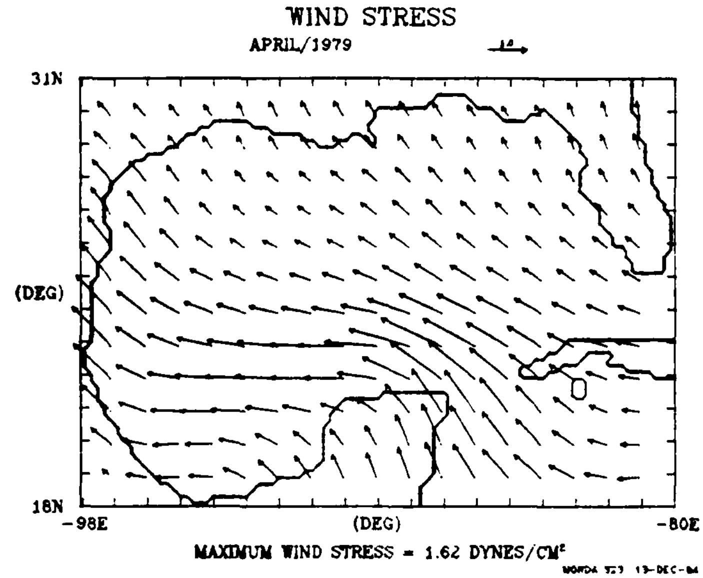

WIND STRESS CURL
JANUARY/1979 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -4.26E-06 MAX = 2.76E-06

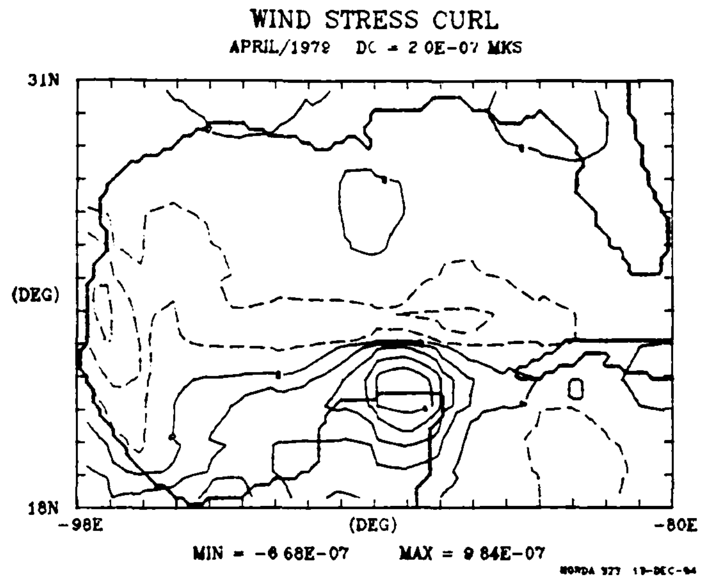

WIND STRESS
FEBRUARY/1979
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.88 DYNES/CM²

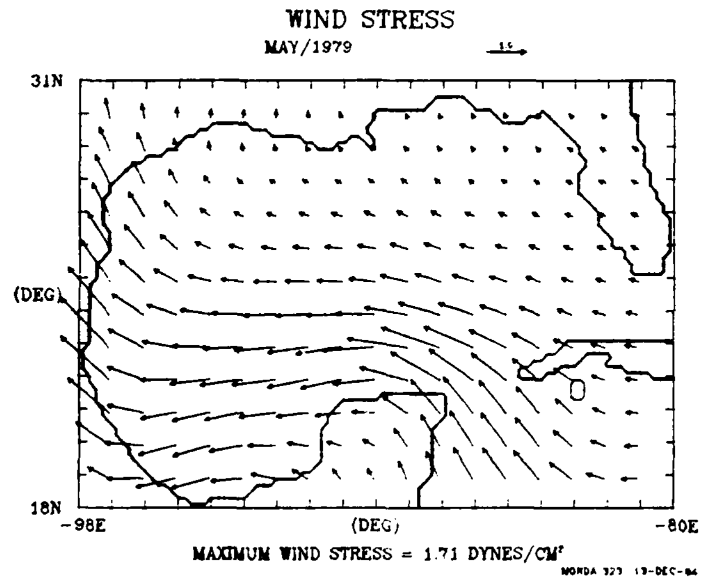

WIND STRESS CURL
FEBRUARY/1979 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.86E-06 MAX = 9.46E-07

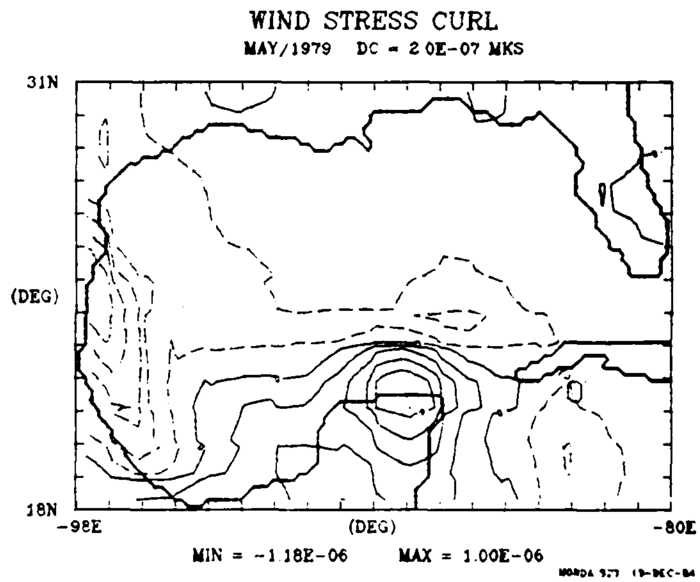

WIND STRESS
MARCH/1979
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.51 DYNES/CM²

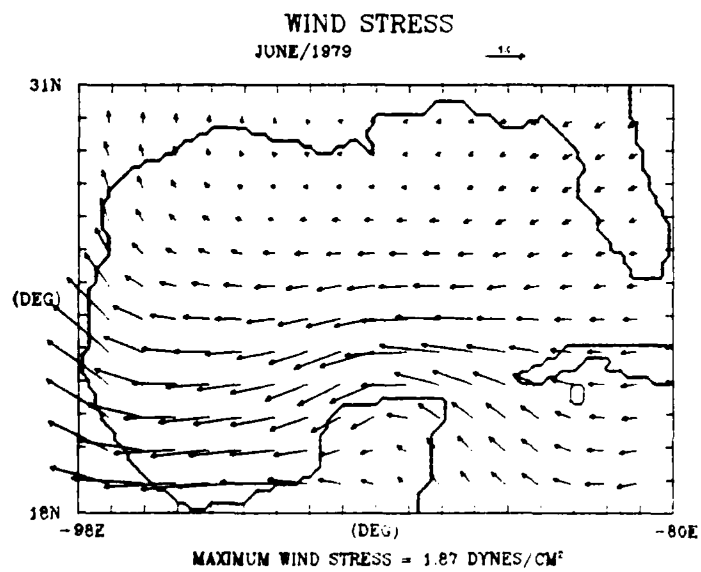

WIND STRESS CURL
MARCH/1979 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.01E-06 MAX = 1.18E-06

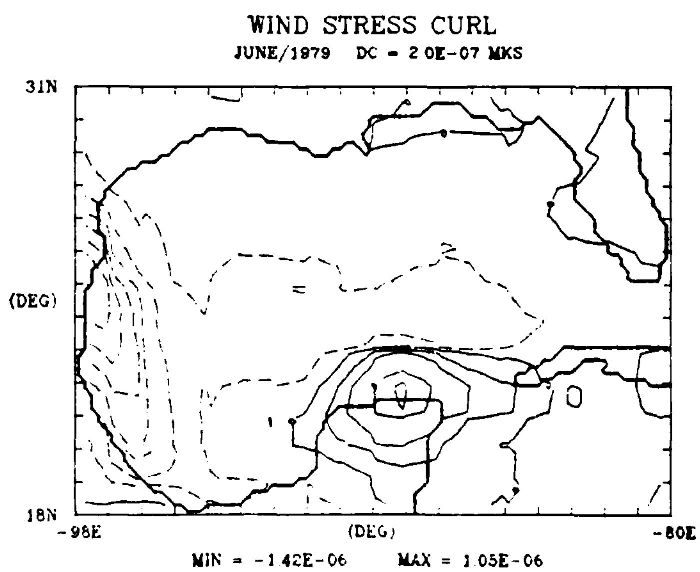

WIND STRESS
APRIL/1979
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.62 DYNES/CM²


WIND STRESS CURL
APRIL/1979 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -6.68E-07 MAX = 9.84E-07

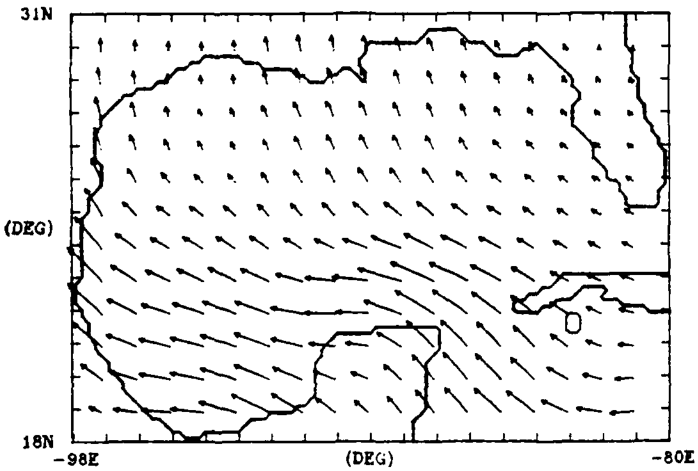

WIND STRESS
MAY/1979
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.71 DYNES/CM²


WIND STRESS CURL
MAY/1979 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.18E-06 MAX = 1.00E-06


WIND STRESS
JUNE/1979
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.87 DYNES/CM²

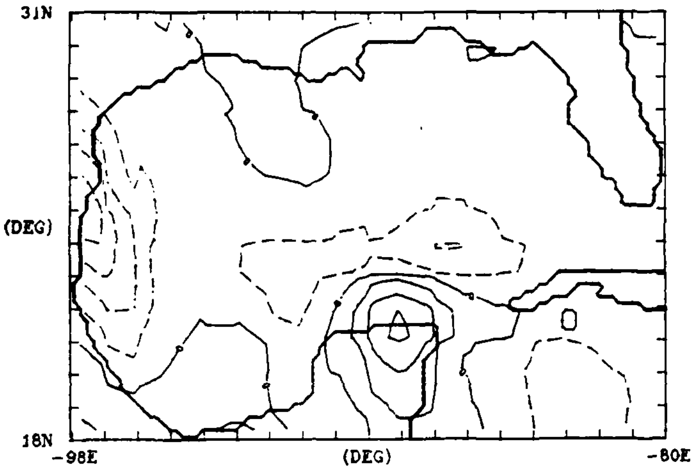

WIND STRESS CURL
JUNE/1979 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.42E-06 MAX = 1.05E-06

WIND STRESS
JULY/1979



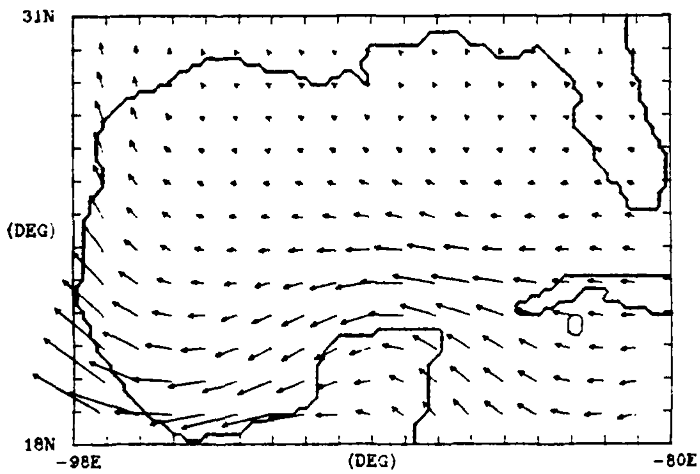
MAXIMUM WIND STRESS = 1.16 DYNES/CM²

WIND STRESS CURL
JULY/1979 DC = 2.0E-07 MKS



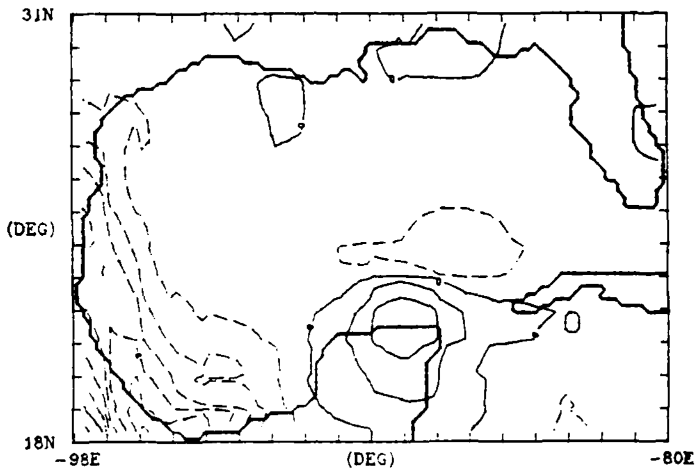
MIN = -9.22E-07 MAX = 6.52E-07

WIND STRESS
AUGUST/1979



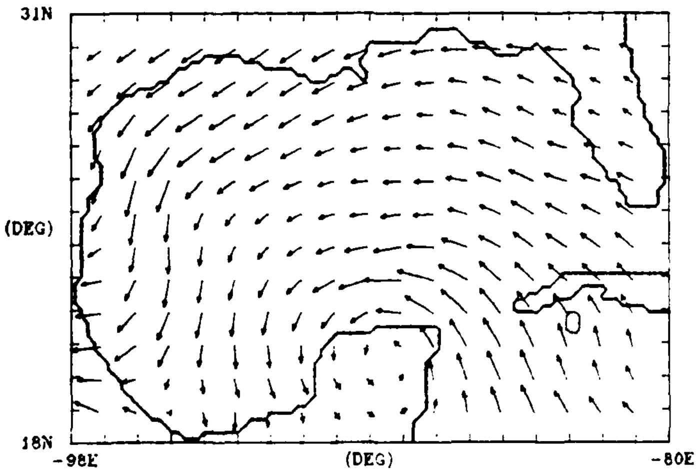
MAXIMUM WIND STRESS = 2.00 DYNES/CM²

WIND STRESS CURL
AUGUST/1979 DC = 2.0E-07 MKS



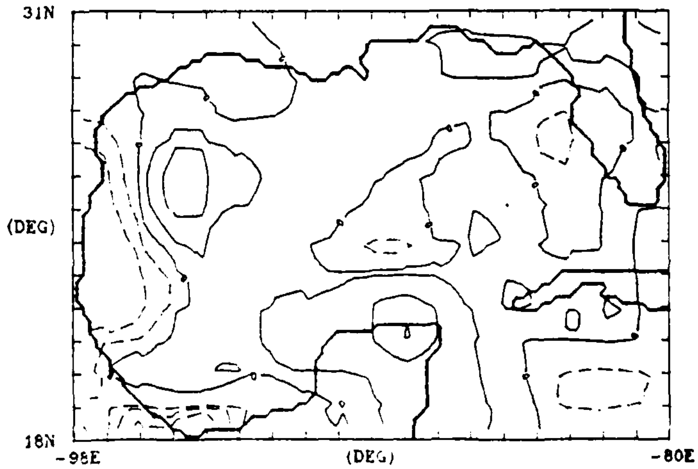
MIN = -1.19E-06 MAX = 5.88E-07

WIND STRESS
SEPTEMBER/1979



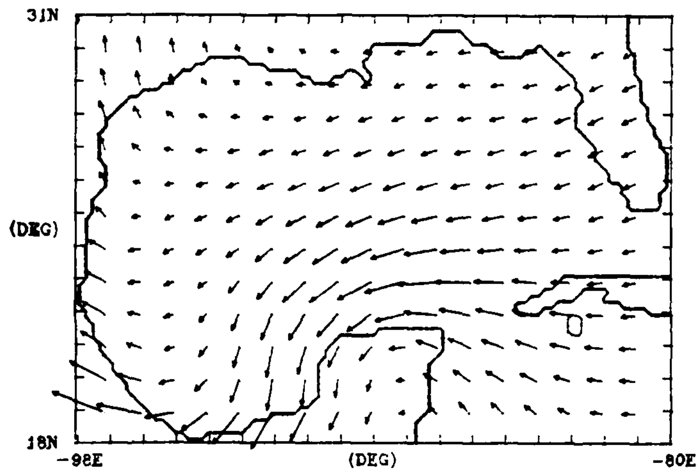
MAXIMUM WIND STRESS = 0.92 DYNES/CM²

WIND STRESS CURL
SEPTEMBER/1979 DC = 2.0E-07 MKS



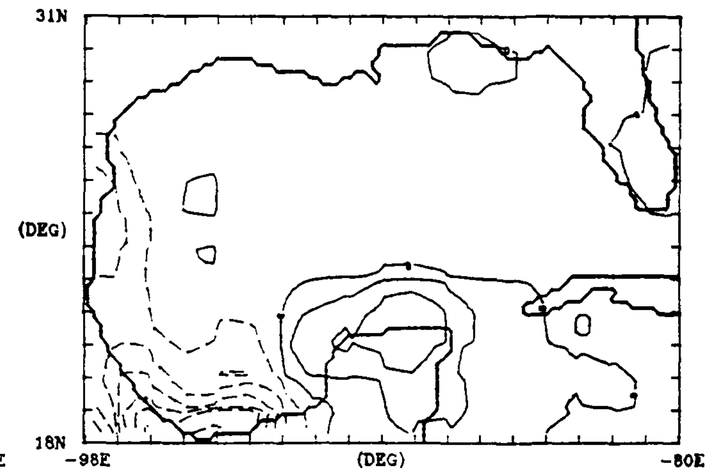
MIN = -1.19E-06 MAX = 8.09E-07

WIND STRESS
OCTOBER/1979



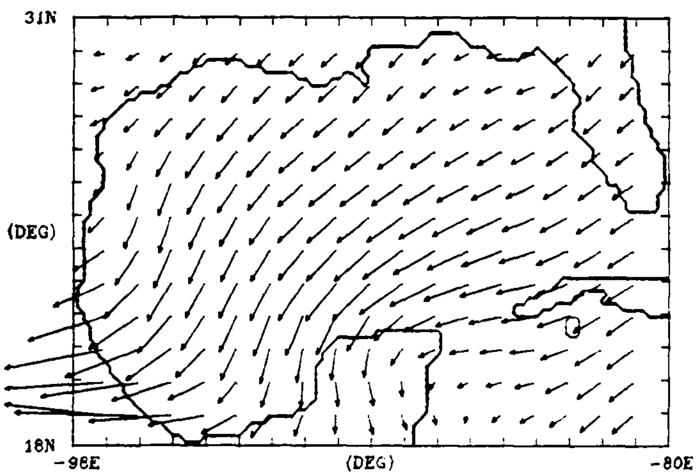
MAXIMUM WIND STRESS = 1.43 DYNES/CM²

WIND STRESS CURL
OCTOBER/1979 DC = 2.0E-07 MKS



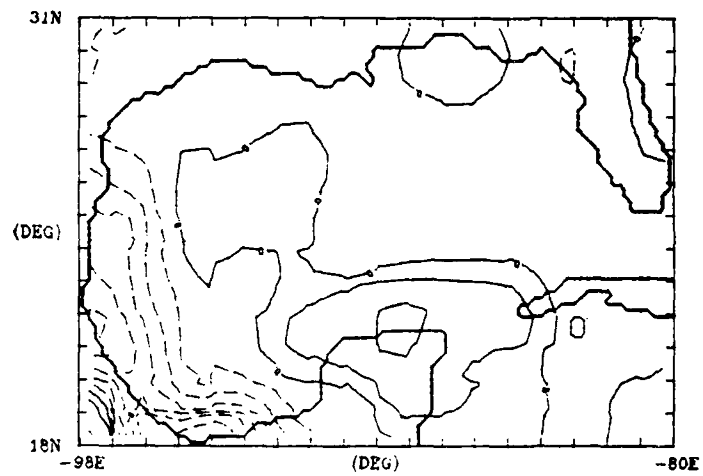
MIN = -1.83E-06 MAX = 5.86E-07

WIND STRESS
NOVEMBER/1979



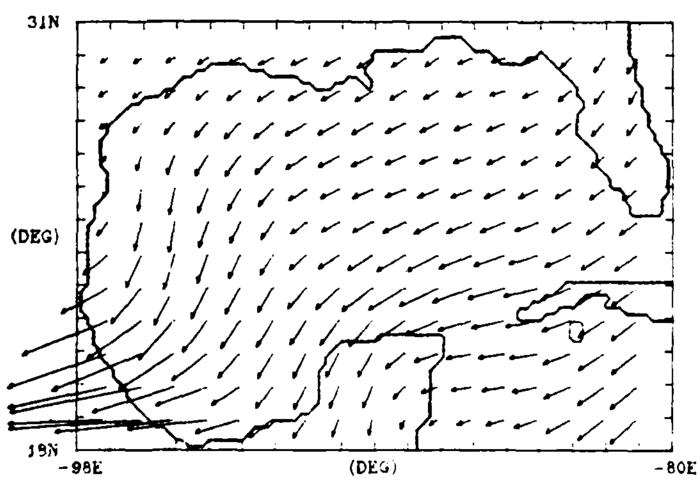
MAXIMUM WIND STRESS = 3.68 DYNES/CM²

WIND STRESS CURL
NOVEMBER/1979 DC = 2.0E-07 MKS



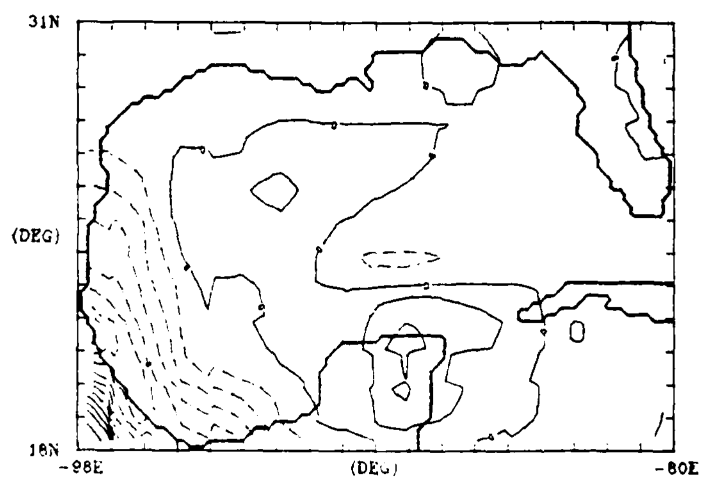
MIN = -1.43E-06 MAX = 8.74E-07

WIND STRESS
DECEMBER/1979



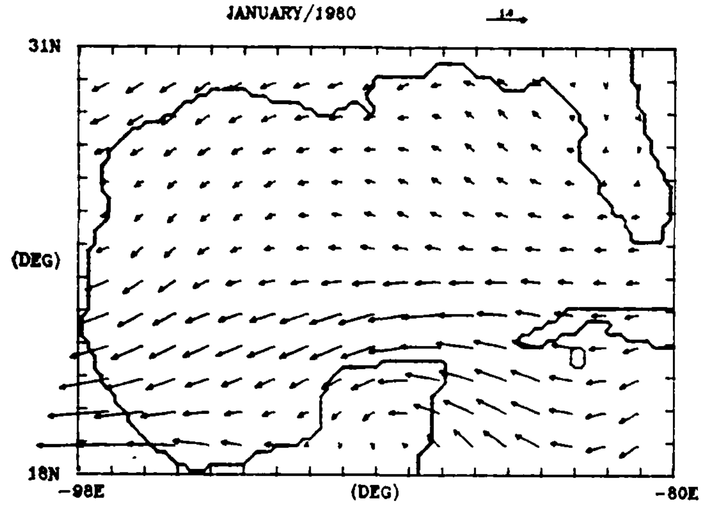
MAXIMUM WIND STRESS = 5.07 DYNES/CM²

WIND STRESS CURL
DECEMBER/1979 DC = 2.0E-07 MKS



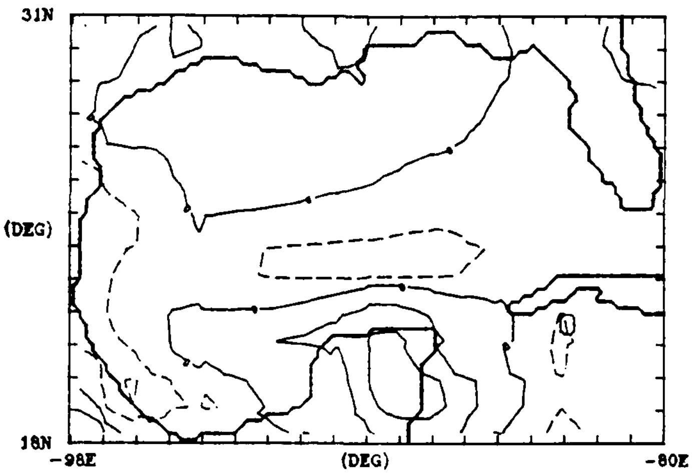
MIN = -1.57E-06 MAX = 1.20E-06

WIND STRESS
JANUARY/1980



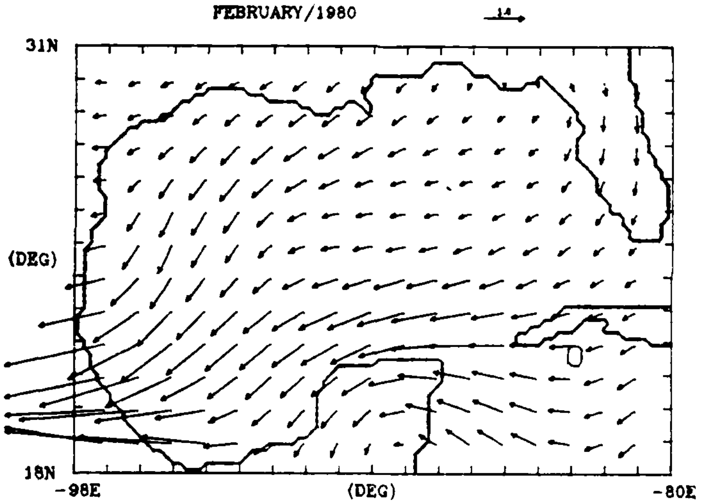
MAXIMUM WIND STRESS = 1.74 DYNES/CM²

WIND STRESS CURL
JANUARY/1980 DC = 2.0E-07 MKS



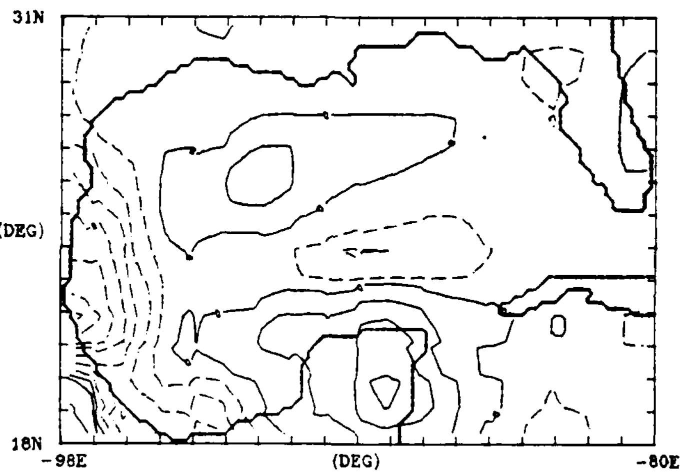
MIN = -4.30E-07 MAX = 5.60E-07

WIND STRESS
FEBRUARY/1980



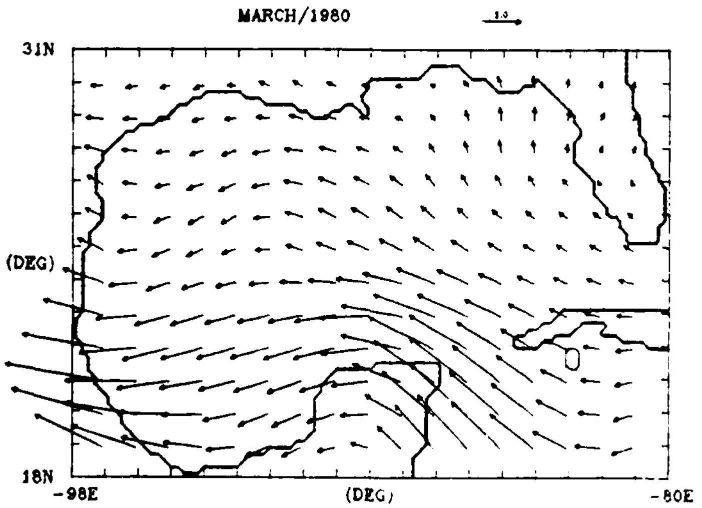
MAXIMUM WIND STRESS = 3.88 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1980 DC = 2.0E-07 MKS



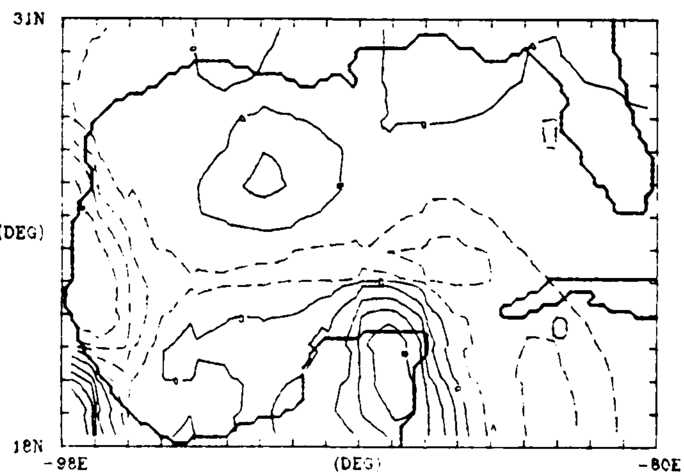
MIN = -1.50E-06 MAX = 1.22E-06

WIND STRESS
MARCH/1980

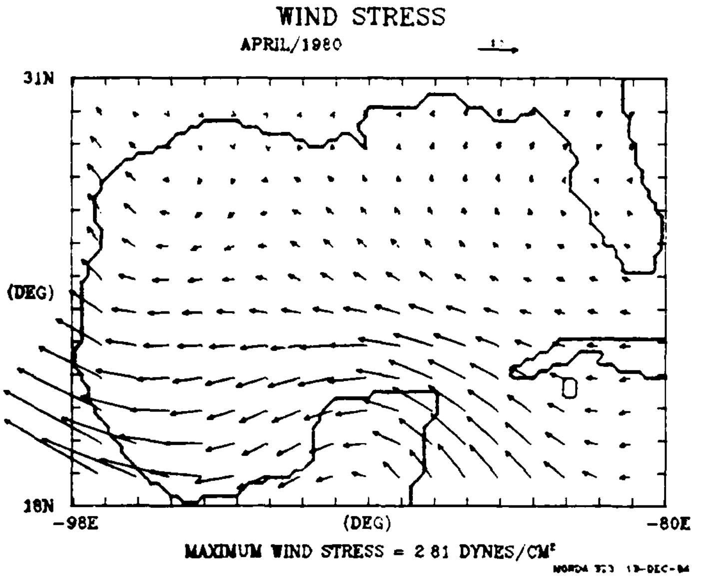


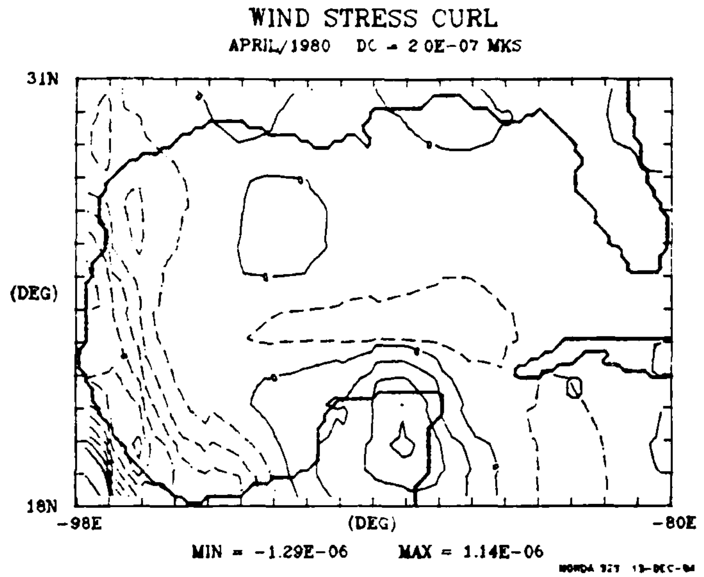
MAXIMUM WIND STRESS = 2.41 DYNES/CM²

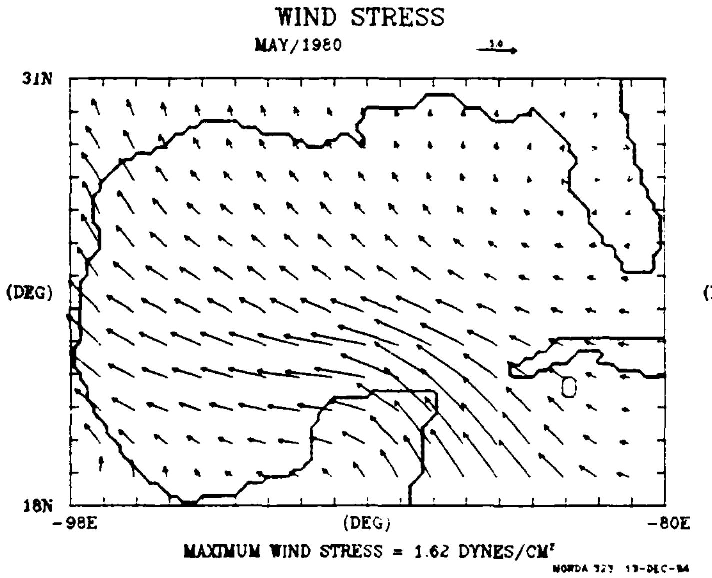
WIND STRESS CURL
MARCH/1980 DC = 2.0E-07 MKS

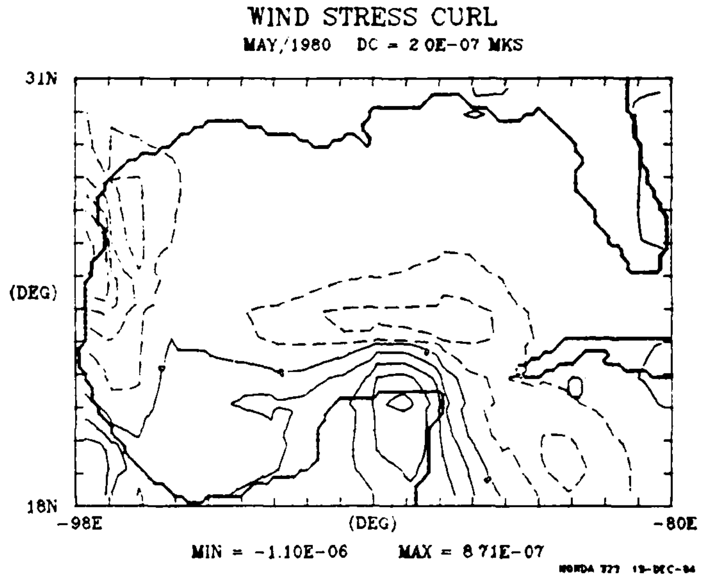


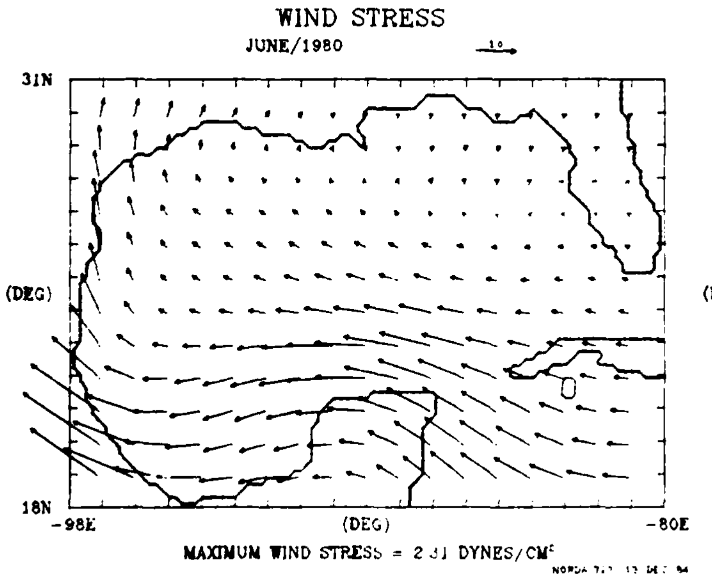
MIN = -9.98E-07 MAX = 1.07E-06

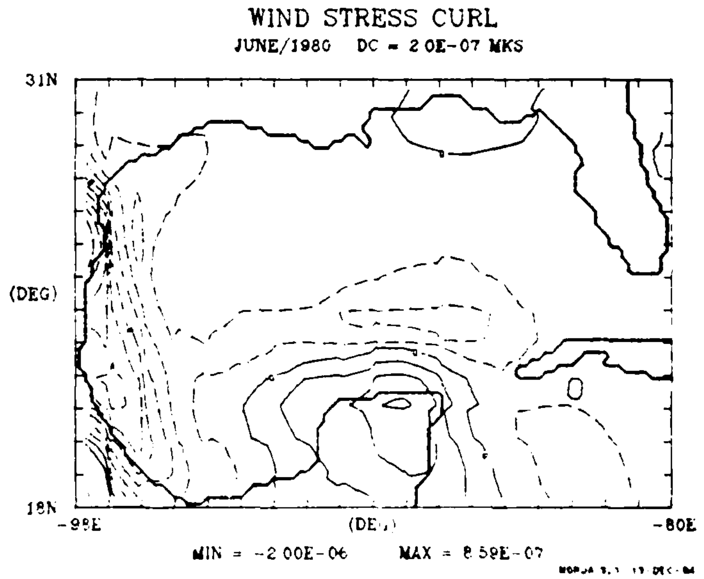

WIND STRESS
APRIL/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.81 DYNES/CM²

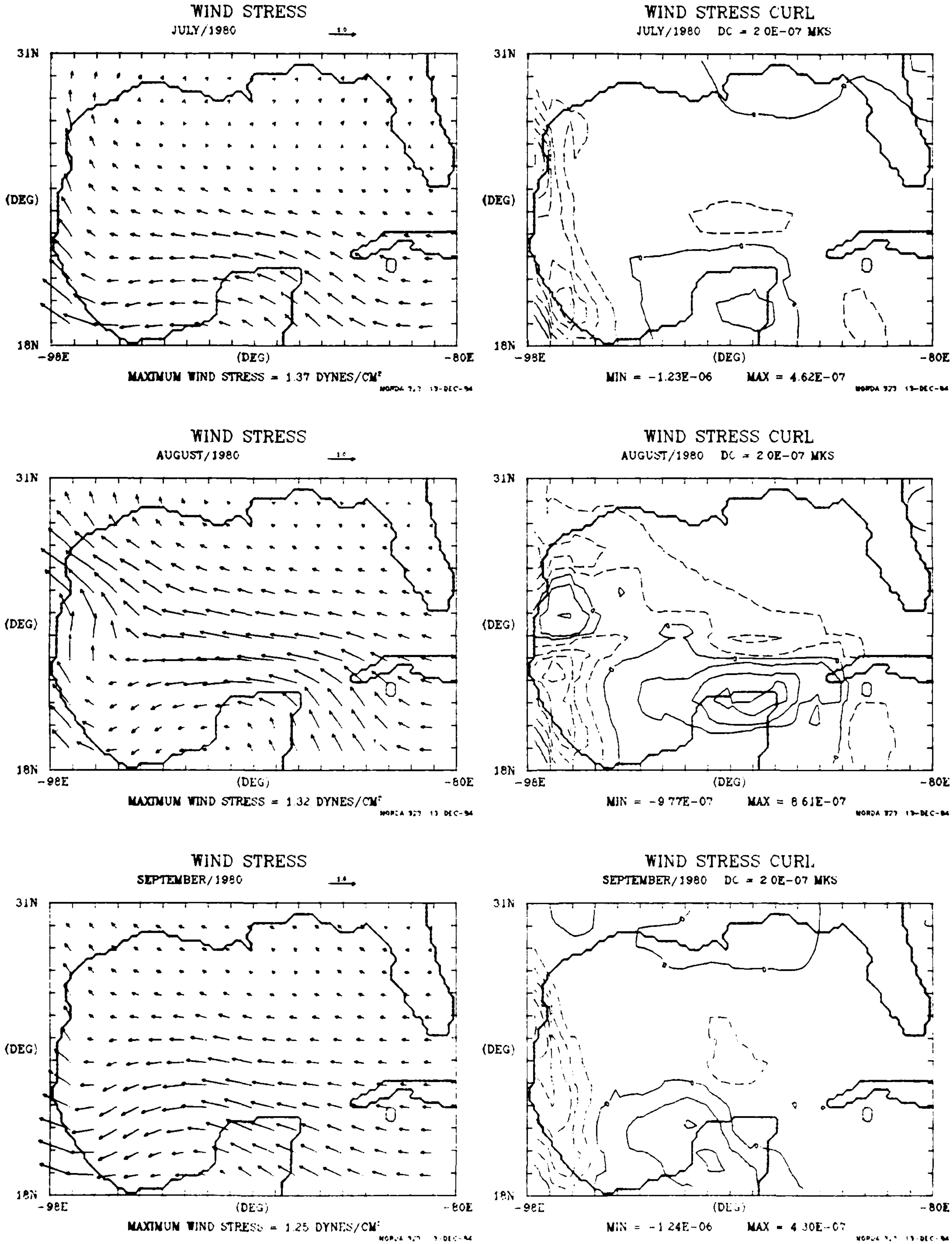

WIND STRESS CURL
APRIL/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.29E-06 MAX = 1.14E-06

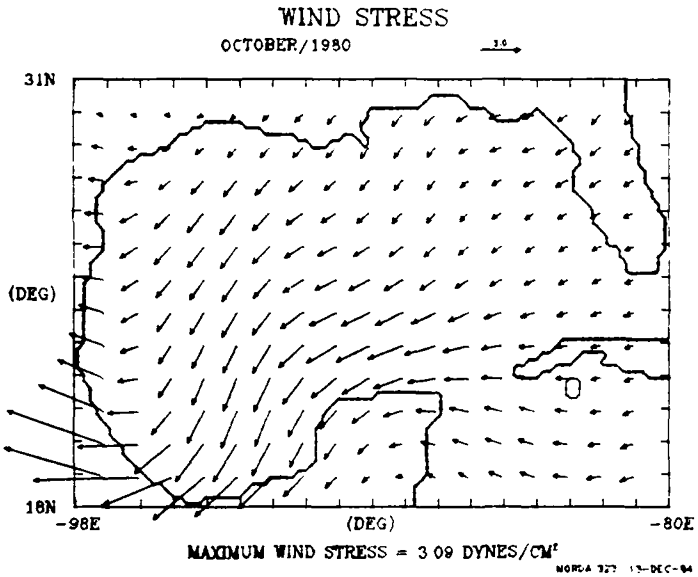

WIND STRESS
MAY/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.62 DYNES/CM²

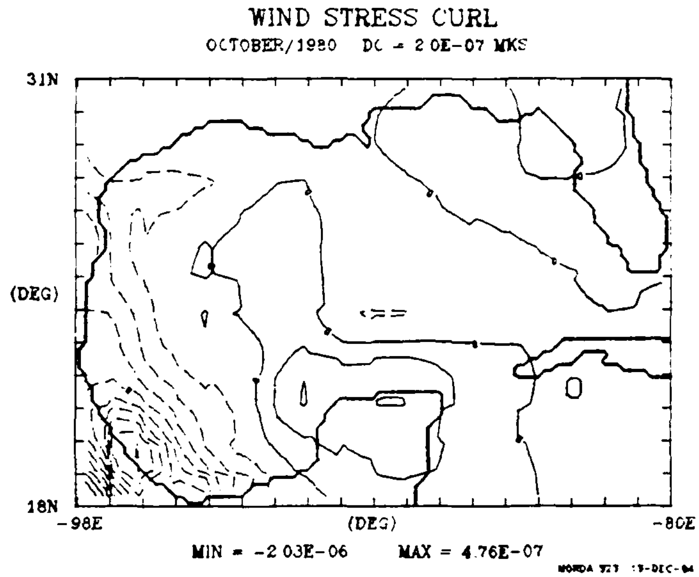

WIND STRESS CURL
MAY/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.10E-06 MAX = 8.71E-07

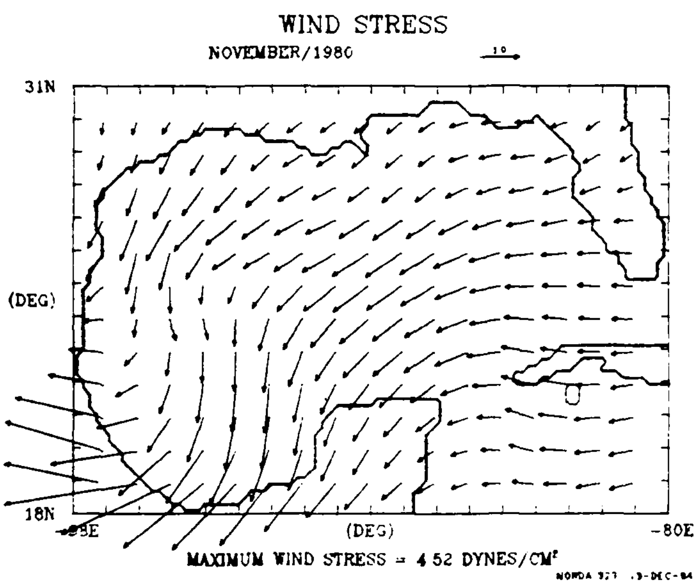

WIND STRESS
JUNE/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 2.31 DYNES/CM²

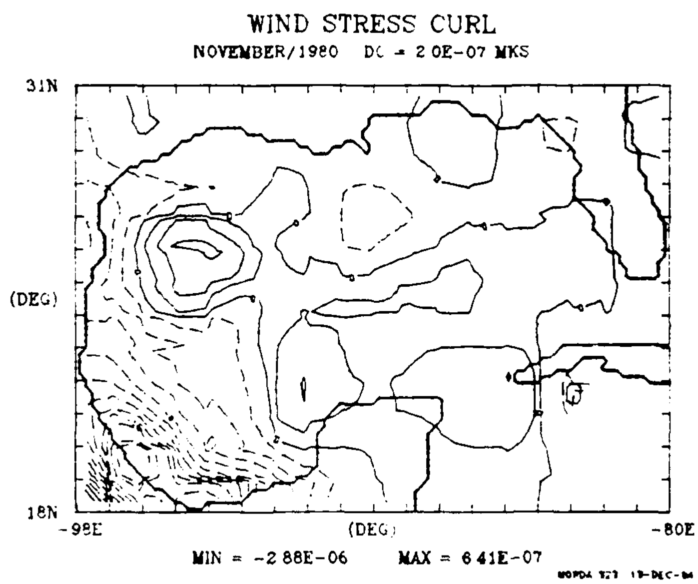

WIND STRESS CURL
JUNE/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
-80E
MIN = -2.00E-06 MAX = 8.59E-07

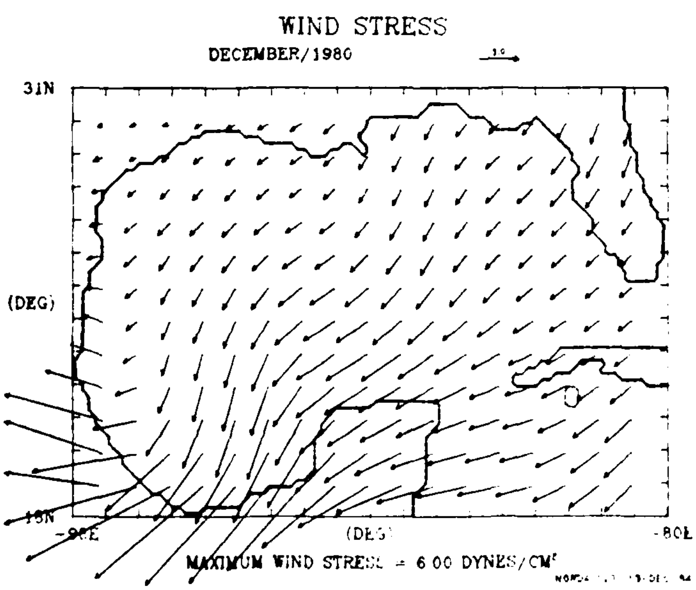

WIND STRESS
JULY/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.37 DYNES/CM²
WIND STRESS CURL
JULY/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.23E-06 MAX = 4.62E-07
WIND STRESS
AUGUST/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.32 DYNES/CM²
WIND STRESS CURL
AUGUST/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -9.77E-07 MAX = 8.61E-07
WIND STRESS
SEPTEMBER/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.25 DYNES/CM²
WIND STRESS CURL
SEPTEMBER/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.24E-06 MAX = 4.30E-07

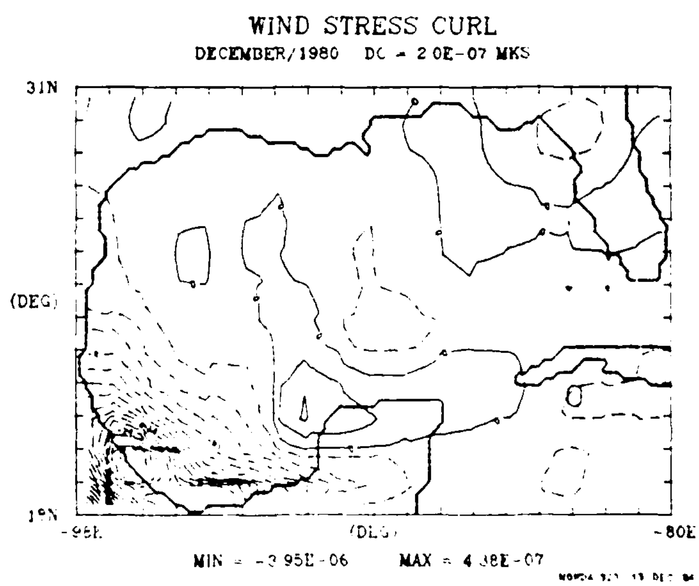

WIND STRESS
OCTOBER/1980
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.09 DYNES/CM²


WIND STRESS CURL
OCTOBER/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.03E-06 MAX = 4.76E-07

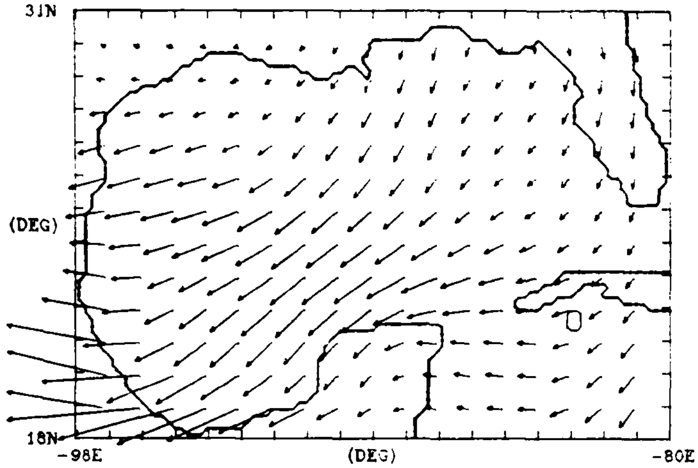

WIND STRESS
NOVEMBER/1980
31N
(DEG)
18N
(DEG)
-80E
MAXIMUM WIND STRESS = 4.52 DYNES/CM²


WIND STRESS CURL
NOVEMBER/1980 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.88E-06 MAX = 6.41E-07


WIND STRESS
DECEMBER/1980
31N
(DEG)
-80E
MAXIMUM WIND STRESS = 6.00 DYNES/CM²

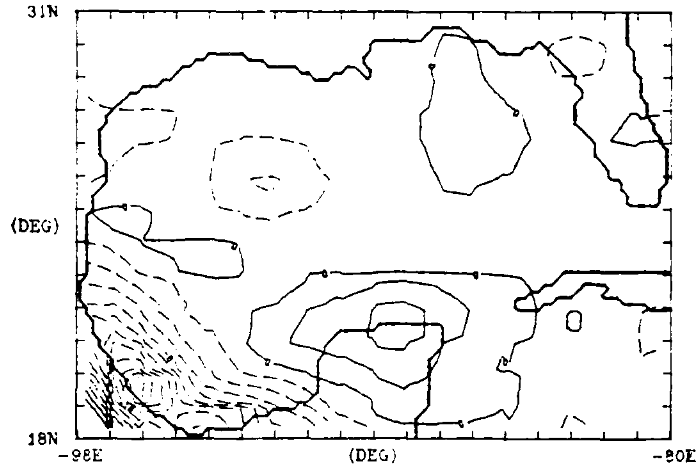

WIND STRESS CURL
DECEMBER/1980 DC = 2.0E-07 MKS
31N
-80E
MIN = -3.95E-06 MAX = 4.38E-07

WIND STRESS
JANUARY/1981



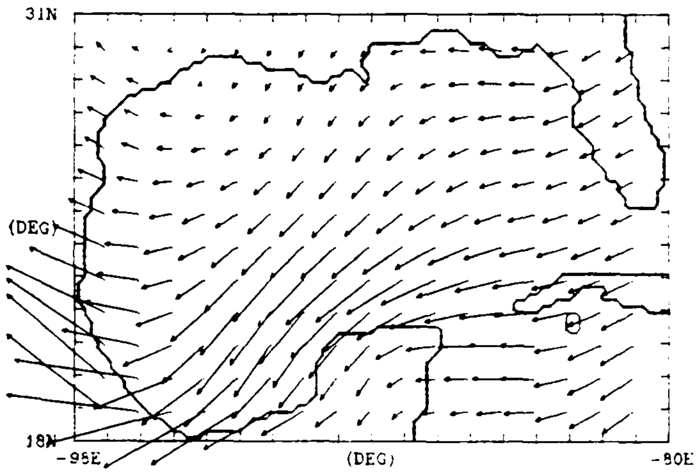
MAXIMUM WIND STRESS = 4.10 DYNES/CM²

WIND STRESS CURL
JANUARY/1981 DC = 2.0E-07 MKS



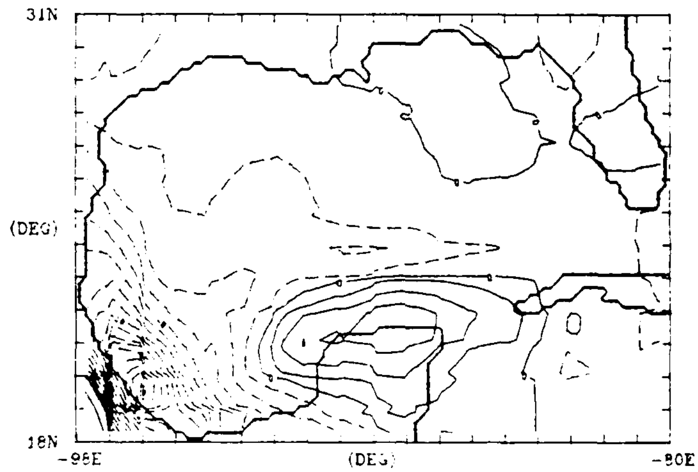
MIN = -2.21E-06 MAX = 7.83E-07

WIND STRESS
FEBRUARY/1981



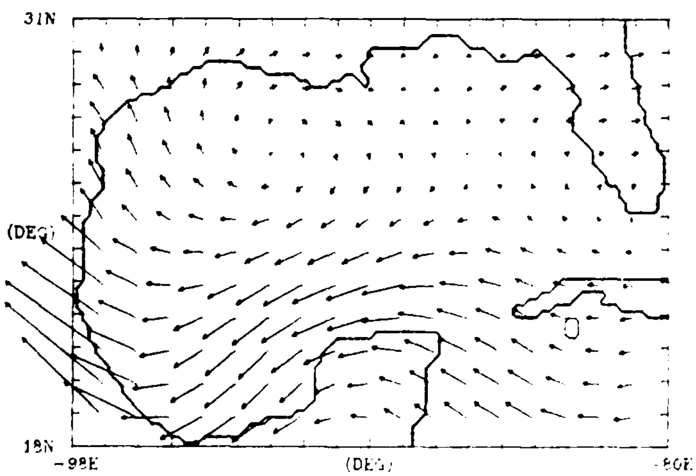
MAXIMUM WIND STRESS = 5.14 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1981 DC = 2.0E-07 MKS



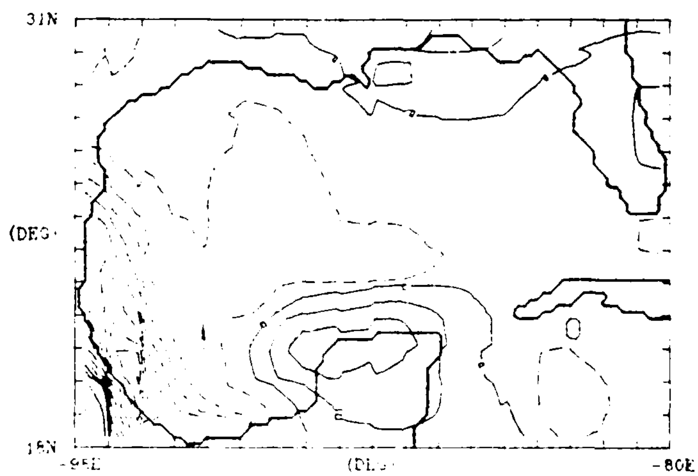
MIN = -3.23E-06 MAX = 1.50E-06

WIND STRESS
MARCH/1981



MAXIMUM WIND STRESS = 3.29 DYNES/CM²

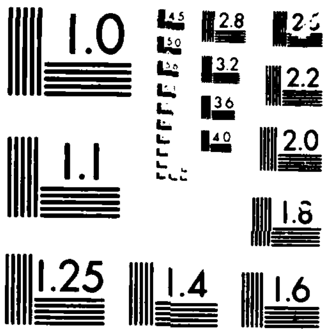
WIND STRESS CURL
MARCH/1981 DC = 2.0E-07 MKS

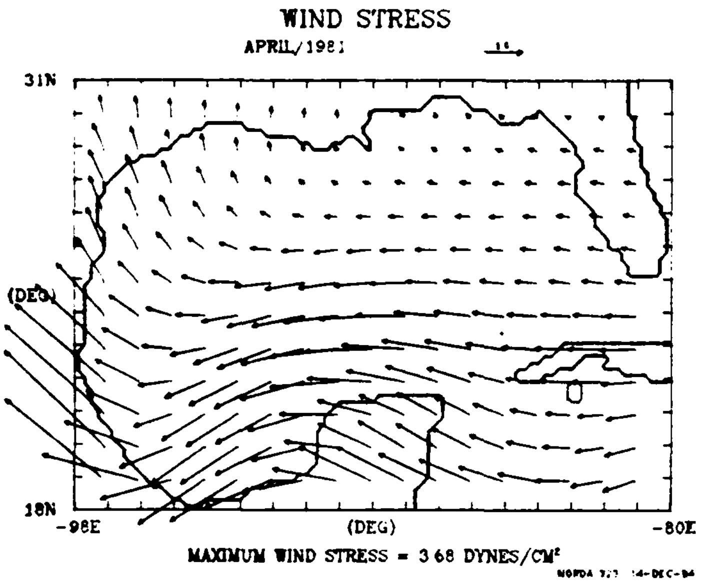


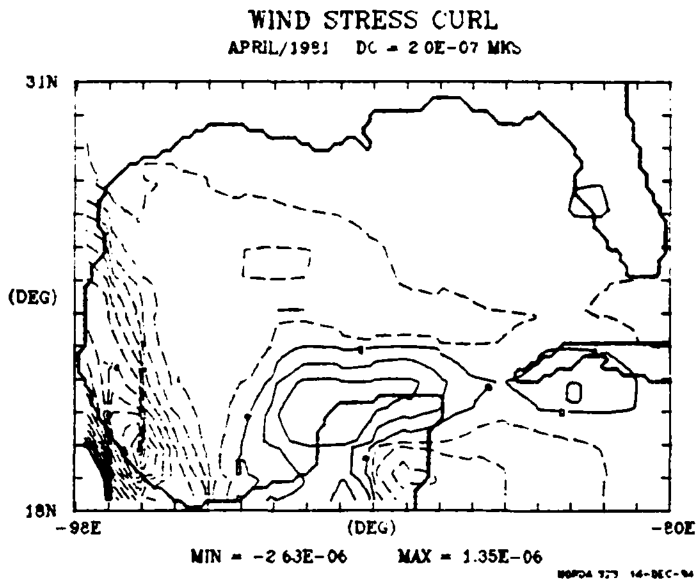
MIN = -1.63E-06 MAX = 1.64E-06

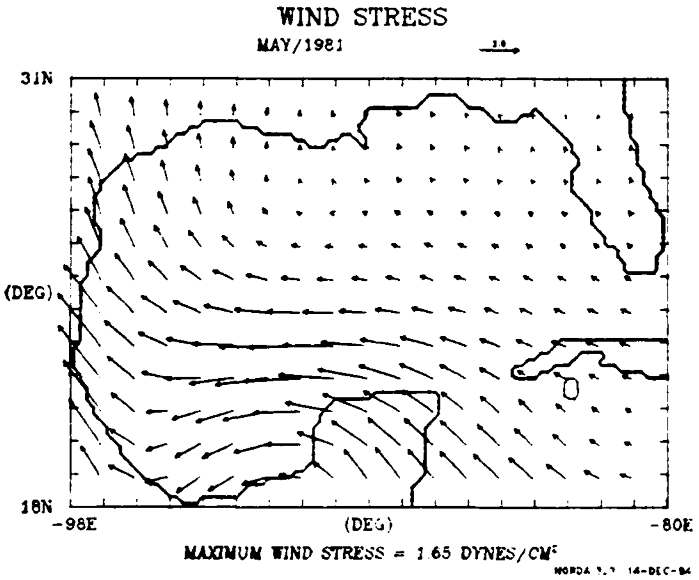
AD-A169 026 NAVY CORRECTED GEOSTROPHIC WIND SET FOR THE GULF OF MEXICO(U) JAYCOR ALEXANDRIA VA R C RHODES ET AL. MAR 85 NORDA-TN-310 N00014-85-R-0578

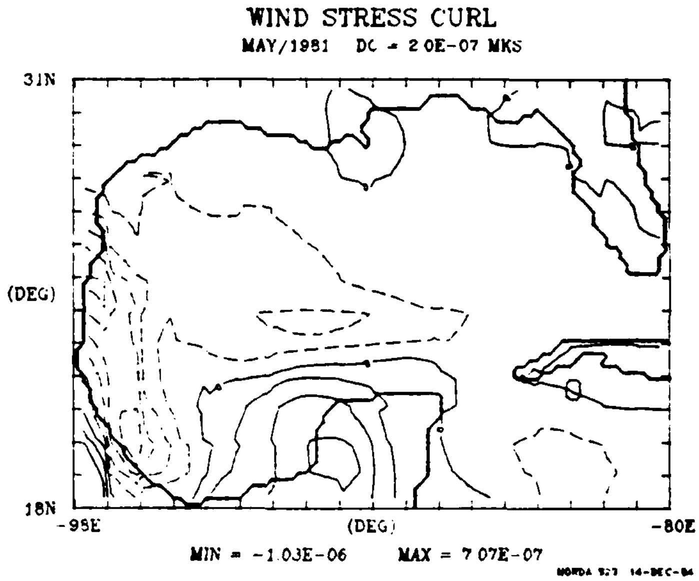
UNCLASSIFIED F/G 4/2 NL

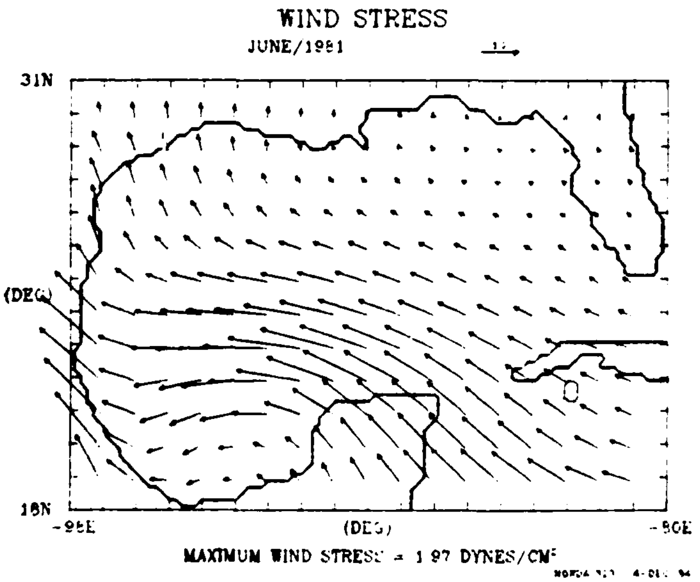

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0

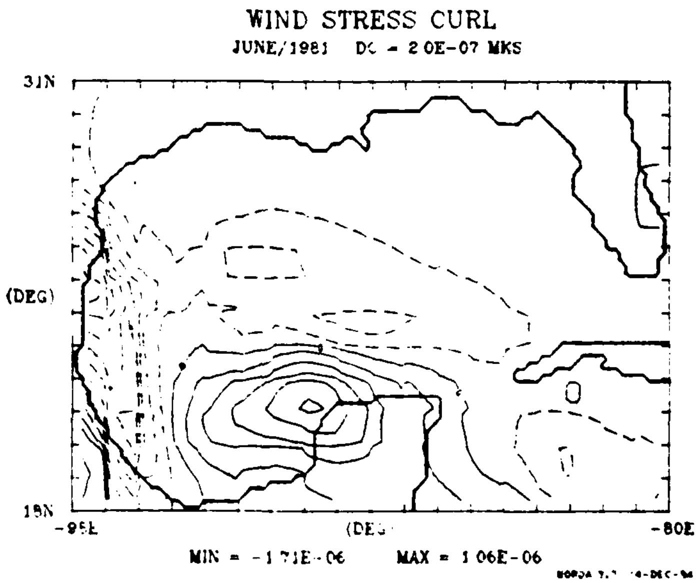

WIND STRESS
APRIL/1981
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.68 DYNES/CM²


WIND STRESS CURL
APRIL/1981 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.63E-06 MAX = 1.35E-06


WIND STRESS
MAY/1981
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.65 DYNES/CM²

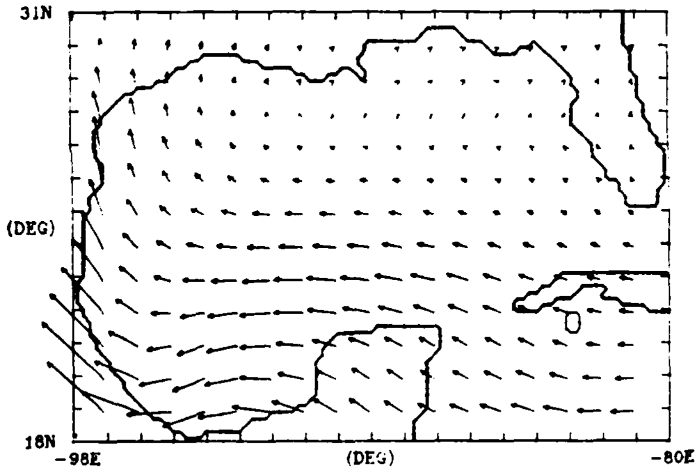

WIND STRESS CURL
MAY/1981 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -1.03E-06 MAX = 7.07E-07


WIND STRESS
JUNE/1981
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 1.97 DYNES/CM²


WIND STRESS CURL
JUNE/1981 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MAX = 1.06E-06

WIND STRESS

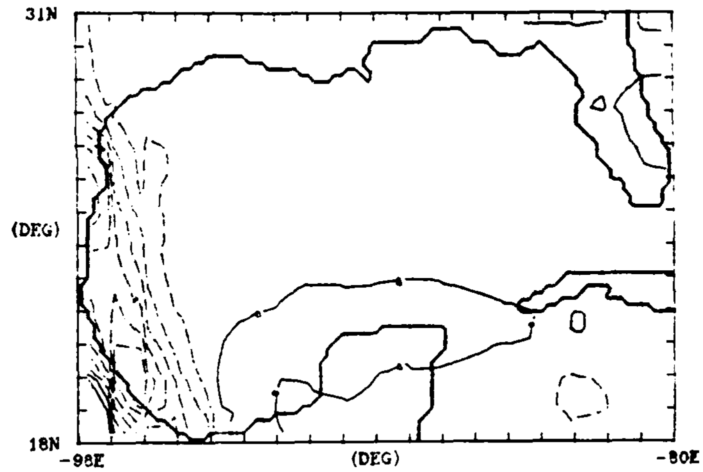
JULY/1981



MAXIMUM WIND STRESS = 2.05 DYNES/CM²

WIND STRESS CURL

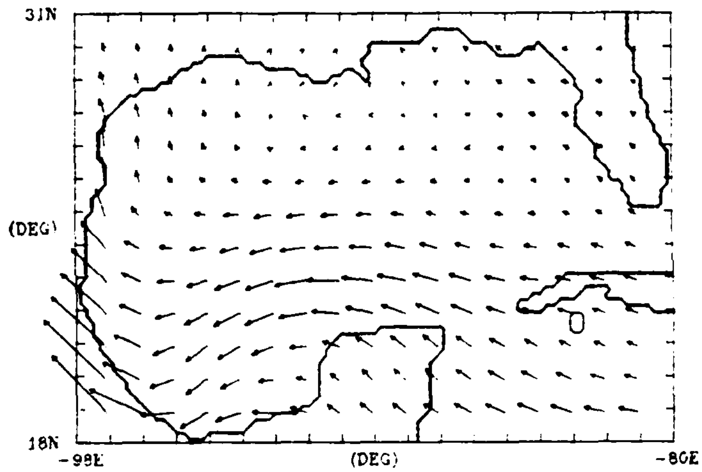
JULY/1981 DC = 2.0E-07 MKS



MIN = -1.49E-06 MAX = 7.28E-07

WIND STRESS

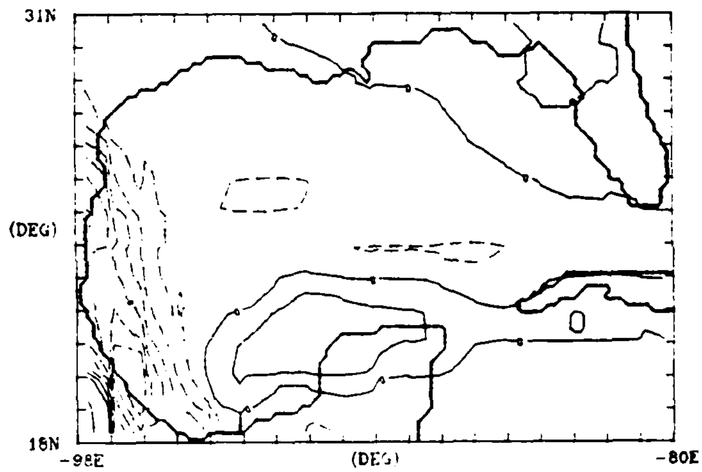
AUGUST/1981



MAXIMUM WIND STRESS = 2.14 DYNES/CM²

WIND STRESS CURL

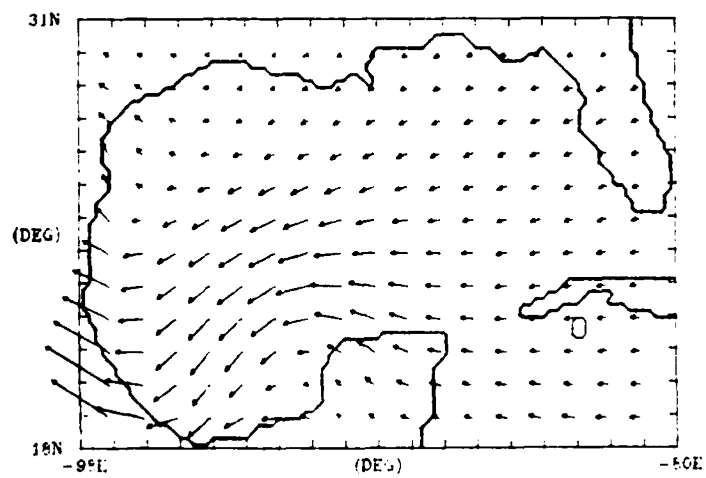
AUGUST/1981 DC = 2.0E-07 MKS



MIN = -1.51E-06 MAX = 9.37E-07

WIND STRESS

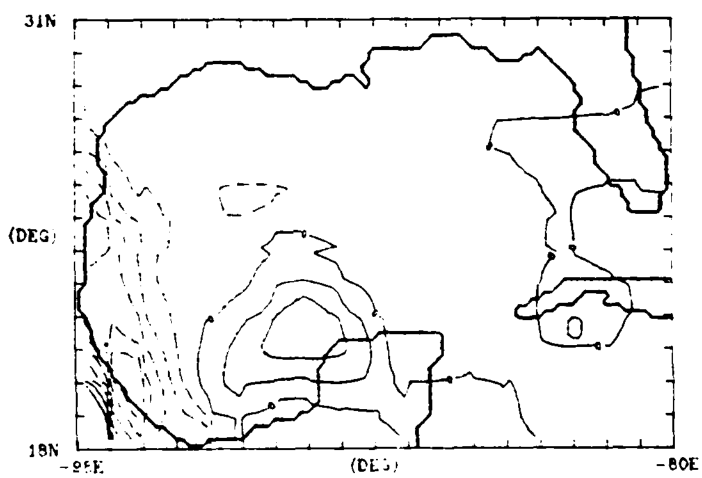
SEPTEMBER/1981



MAXIMUM WIND STRESS = 1.87 DYNES/CM²

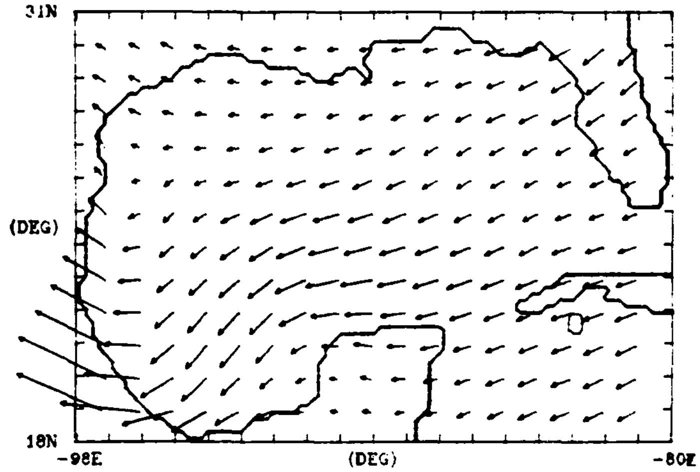
WIND STRESS CURL

SEPTEMBER/1981 DC = 2.0E-07 MKS



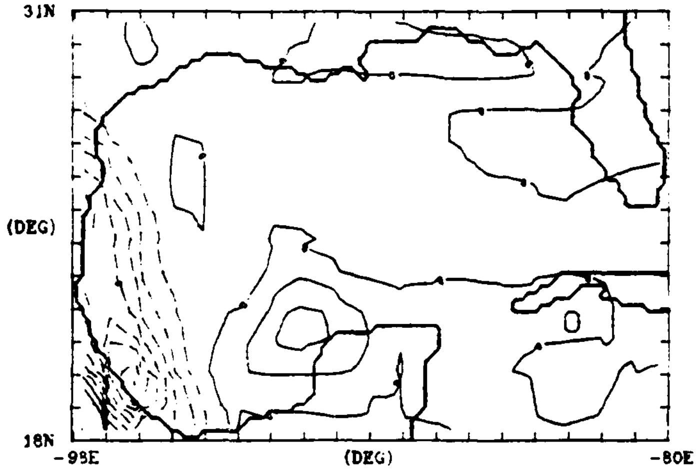
MIN = -1.24E-06 MAX = 7.28E-07

WIND STRESS
OCTOBER/1981



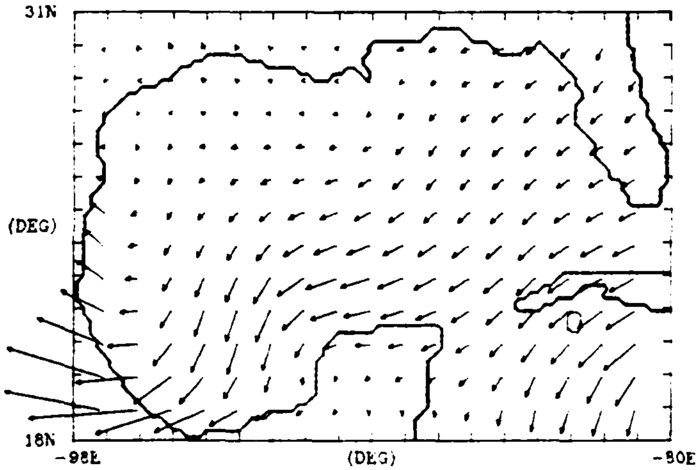
MAXIMUM WIND STRESS = 2.37 DYNES/CM²

WIND STRESS CURL
OCTOBER/1981 DC = 2.0E-07 MKS



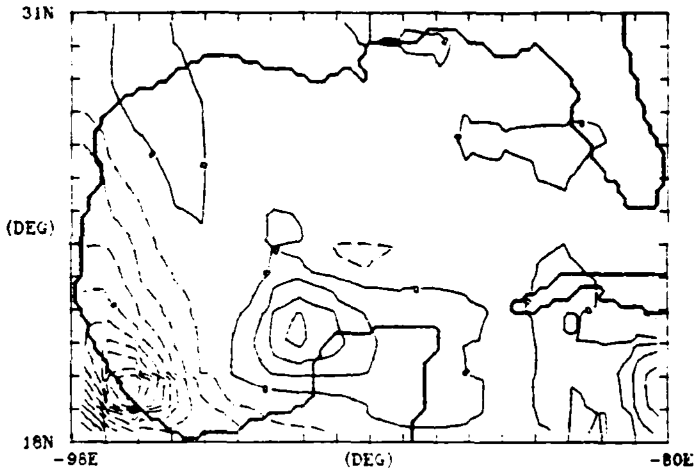
MIN = -1.64E-06 MAX = 8.09E-07

WIND STRESS
NOVEMBER/1981



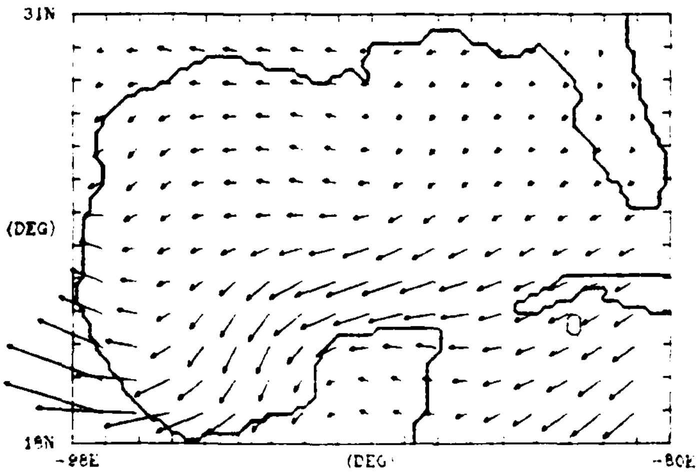
MAXIMUM WIND STRESS = 2.93 DYNES/CM²

WIND STRESS CURL
NOVEMBER/1981 DC = 2.0E-07 MKS



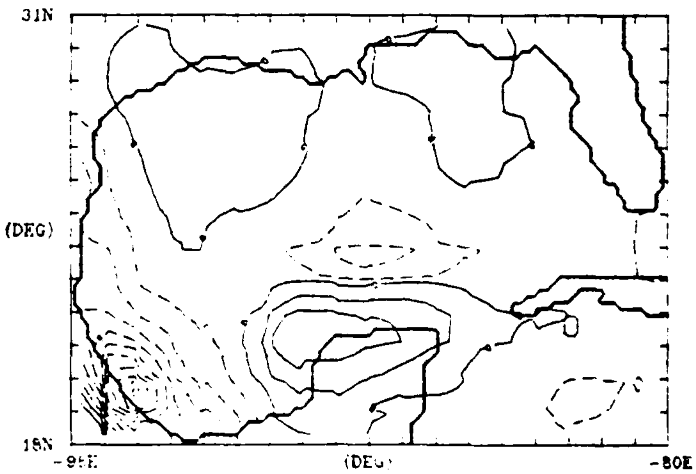
MIN = -2.11E-06 MAX = 7.00E-07

WIND STRESS
DECEMBER/1981



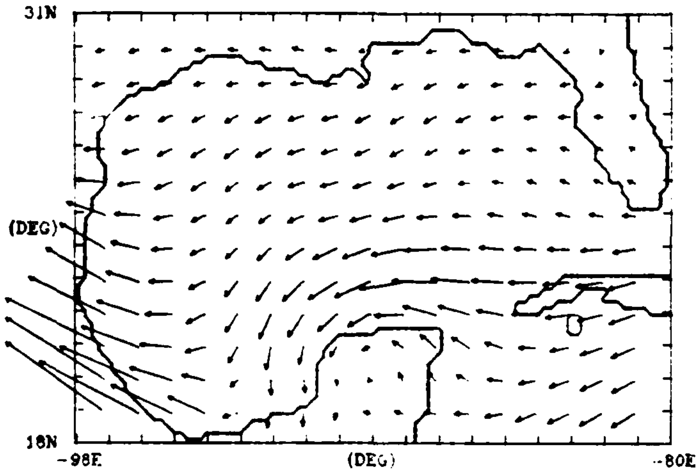
MAXIMUM WIND STRESS = 2.97 DYNES/CM²

WIND STRESS CURL
DECEMBER/1981 DC = 2.0E-07 MKS



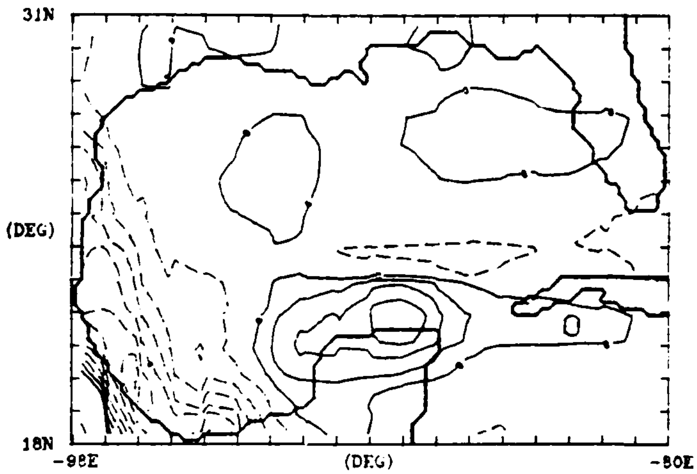
MIN = -1.84E-06 MAX = 8.22E-07

WIND STRESS
JANUARY/1982



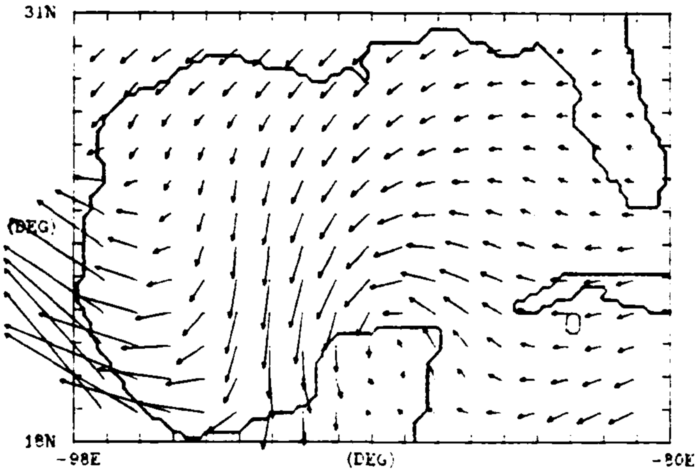
MAXIMUM WIND STRESS = 3.26 DYNES/CM²

WIND STRESS CURL
JANUARY/1982 DC = 2.0E-07 MKS



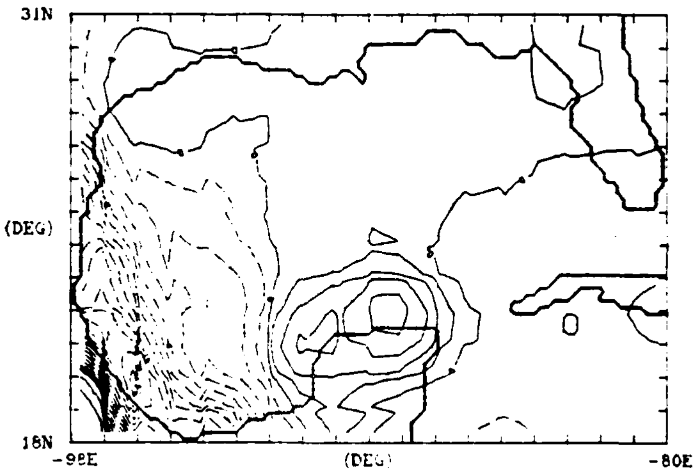
MIN = -1.42E-06 MAX = 1.72E-06

WIND STRESS
FEBRUARY/1982



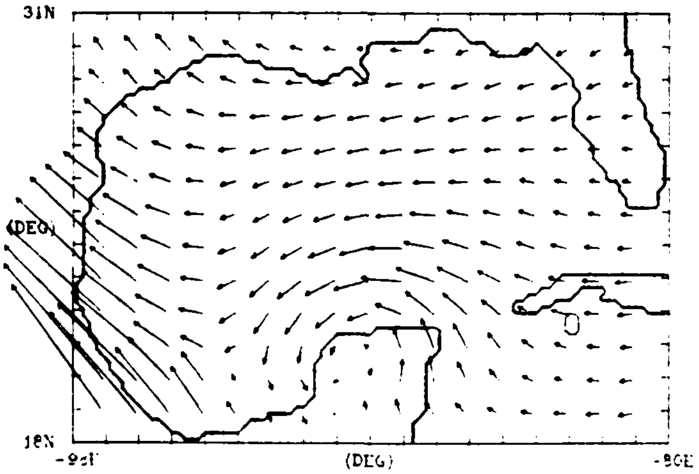
MAXIMUM WIND STRESS = 5.82 DYNES/CM²

WIND STRESS CURL
FEBRUARY/1982 DC = 2.0E-07 MKS



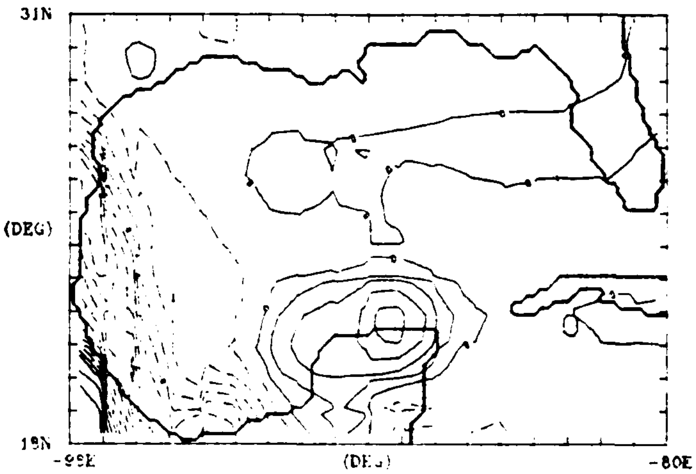
MIN = -2.77E-06 MAX = 2.99E-06

WIND STRESS
MARCH/1982

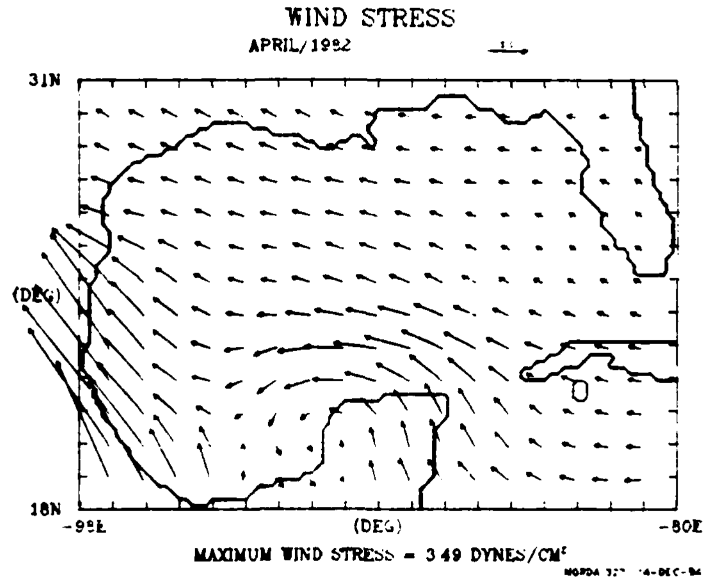


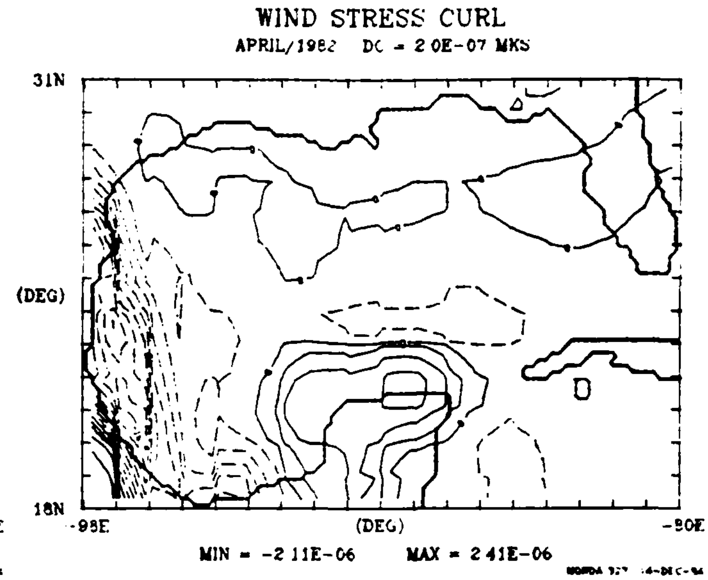
MAXIMUM WIND STRESS = 3.96 DYNES/CM²

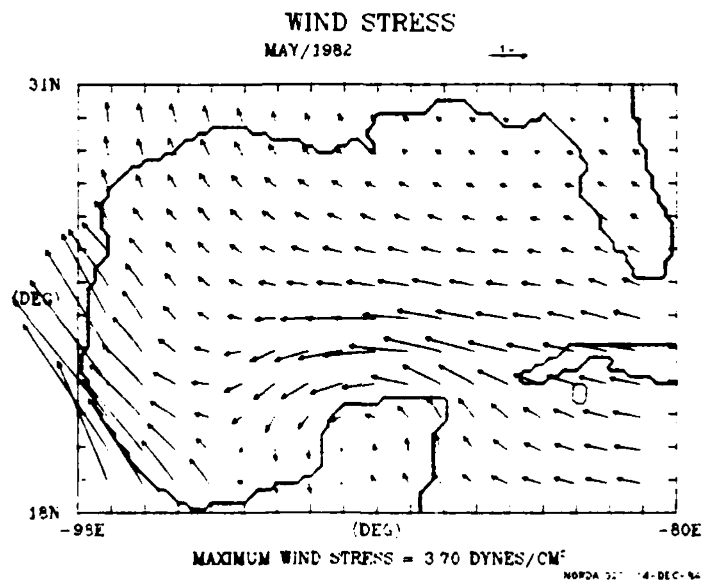
WIND STRESS CURL
MARCH/1982 DC = 2.0E-07 MKS

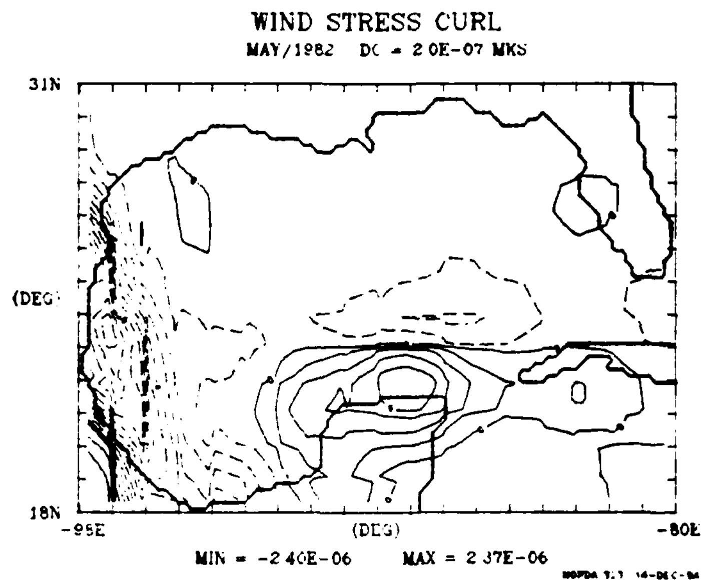


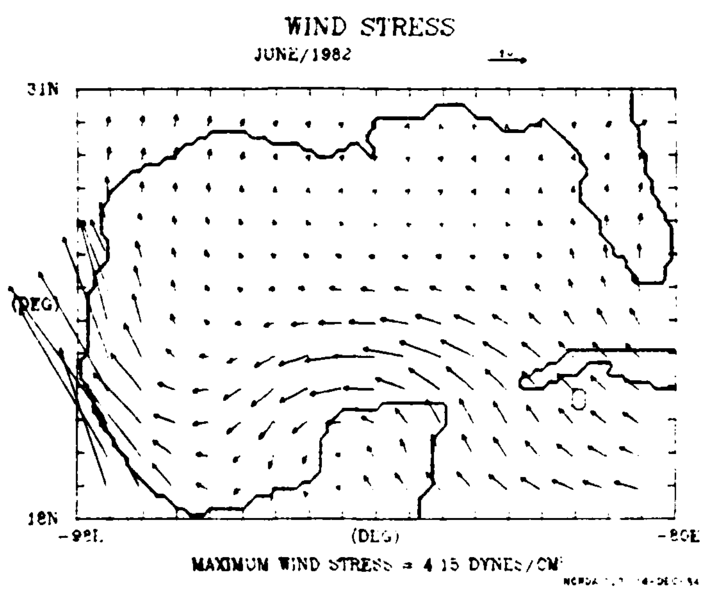
MIN = -2.04E-06 MAX = 2.76E-06

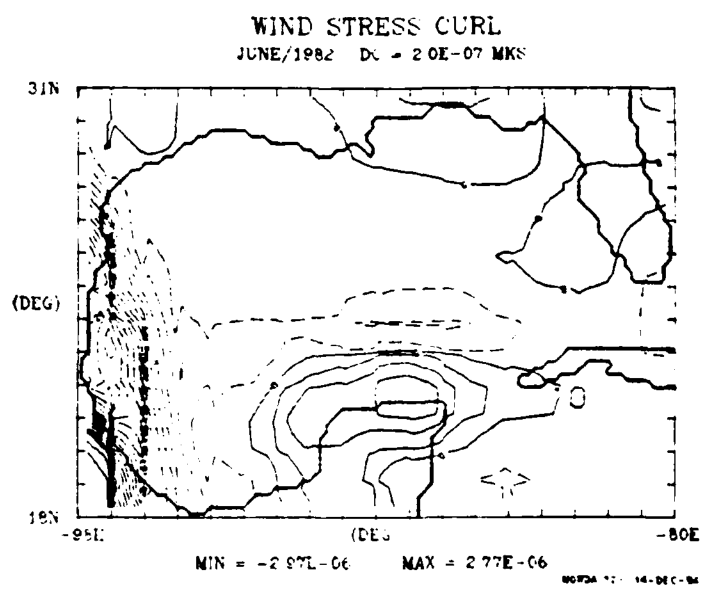

WIND STRESS
APRIL/1982
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.49 DYNES/CM²

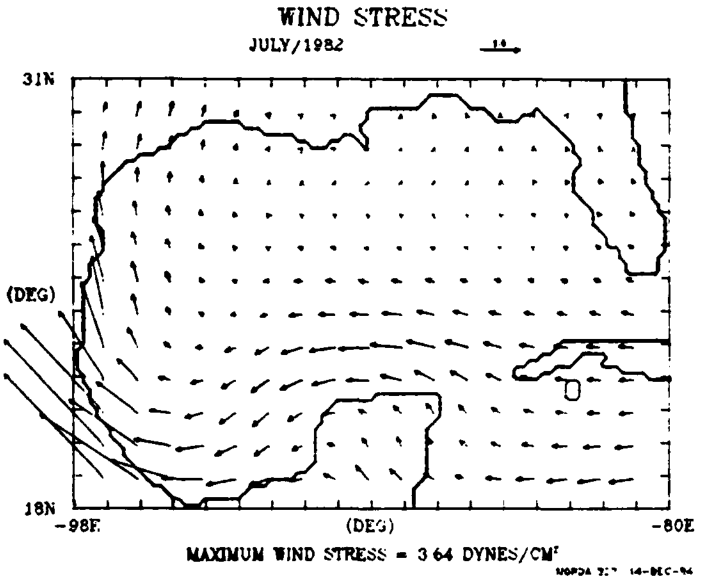

WIND STRESS CURL
APRIL/1982 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.11E-06 MAX = 2.41E-06

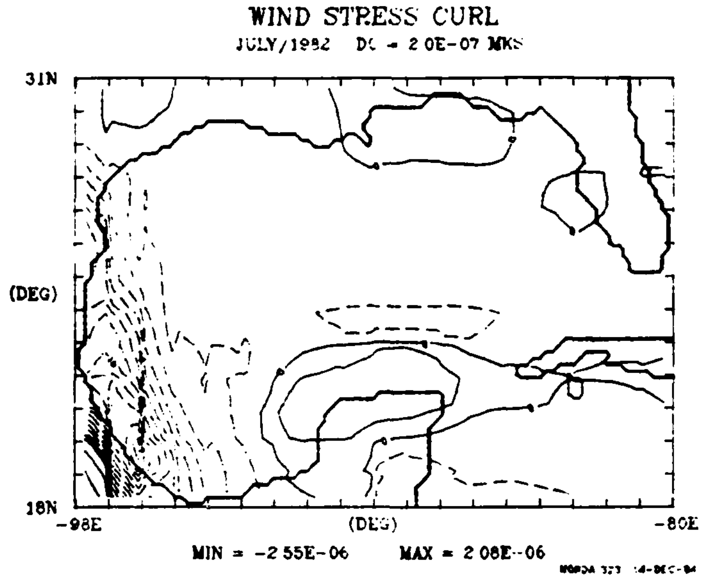

WIND STRESS
MAY/1982
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.70 DYNES/CM²

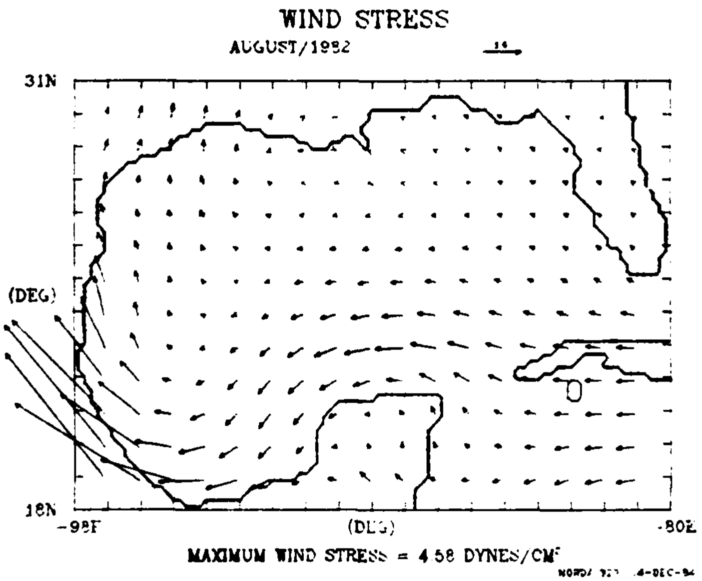

WIND STRESS CURL
MAY/1982 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.40E-06 MAX = 2.37E-06

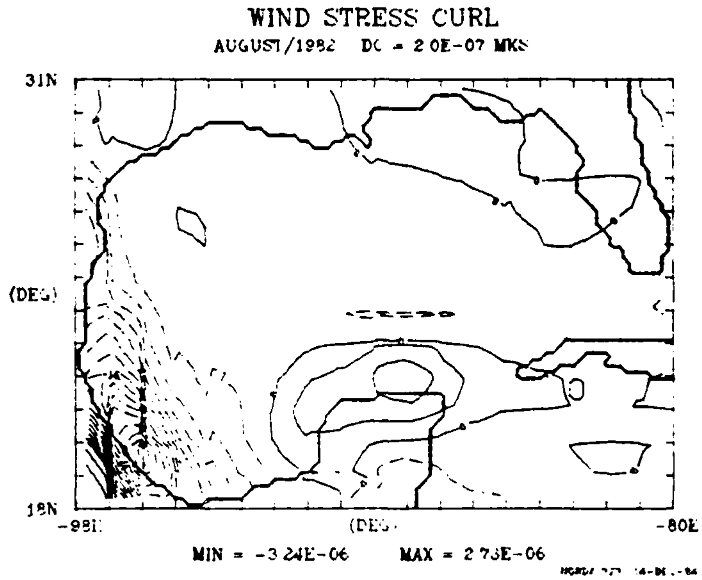

WIND STRESS
JUNE/1982
31N
(DEG)
18N
(DEG)
-80E
MAXIMUM WIND STRESS = 4.15 DYNES/CM²

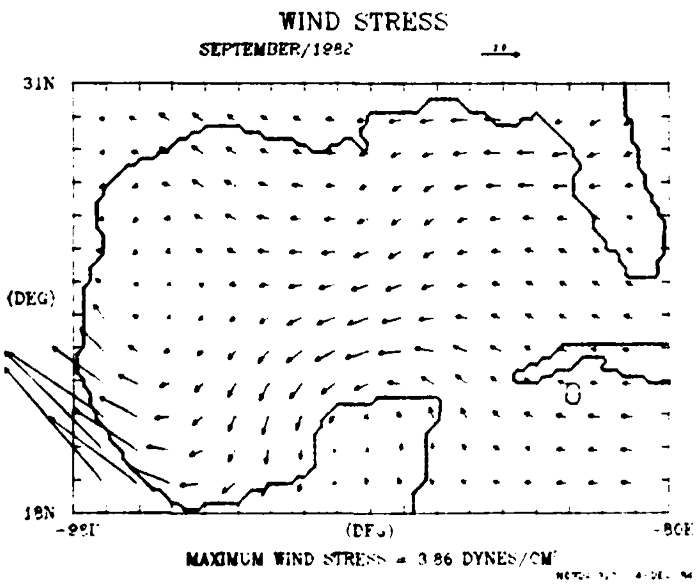

WIND STRESS CURL
JUNE/1982 DC = 2.0E-07 MKS
31N
(DEG)
-80E
MAX = 2.77E-06

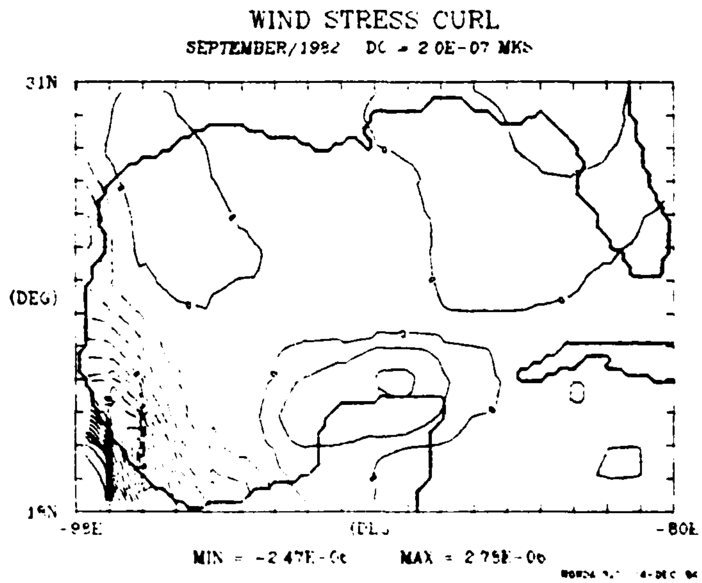

WIND STRESS
JULY/1982
31N
(DEG)
18N
-98E
(DEG)
-80E
MAXIMUM WIND STRESS = 3.64 DYNES/CM²


WIND STRESS CURL
JULY/1982 DC = 2.0E-07 MKS
31N
(DEG)
18N
-98E
(DEG)
-80E
MIN = -2.55E-06 MAX = 2.08E-06

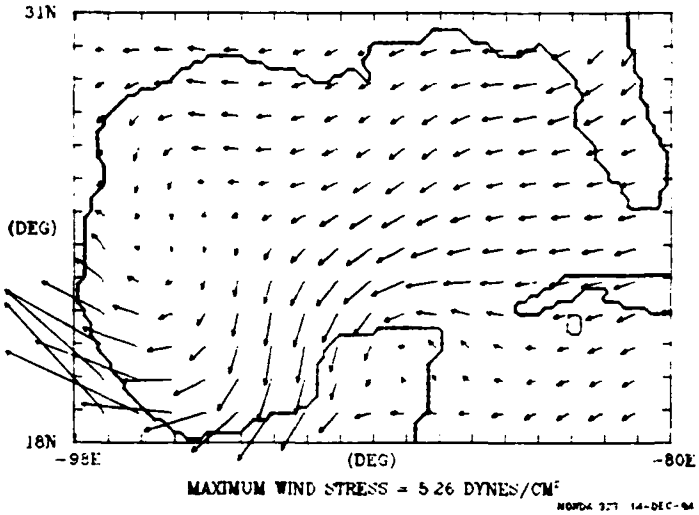

WIND STRESS
AUGUST/1982
31N
(DEG)
18N
(DEG)
-80E
MAXIMUM WIND STRESS = 4.58 DYNES/CM²


WIND STRESS CURL
AUGUST/1982 DC = 2.0E-07 MKS
31N
18N
-80E
MIN = -3.24E-06 MAX = 2.73E-06

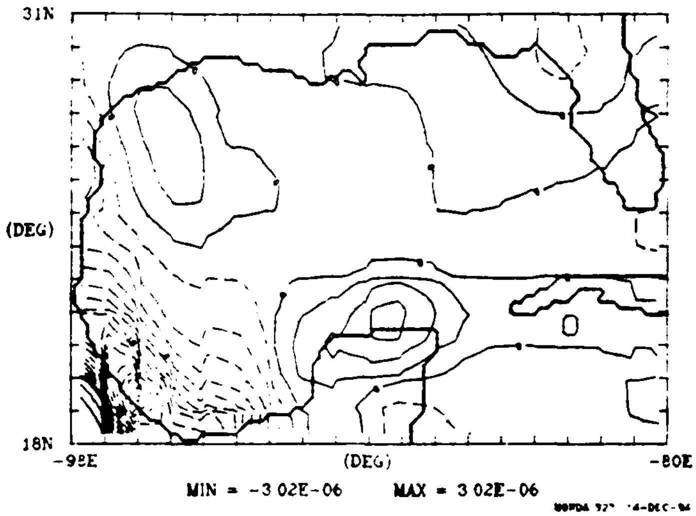

WIND STRESS
SEPTEMBER/1982
31N
(DEG)
18N
MAXIMUM WIND STRESS = 3.86 DYNES/CM²


WIND STRESS CURL
SEPTEMBER/1982 DC = 2.0E-07 MKS
31N
(DEG)
-98E
-80E

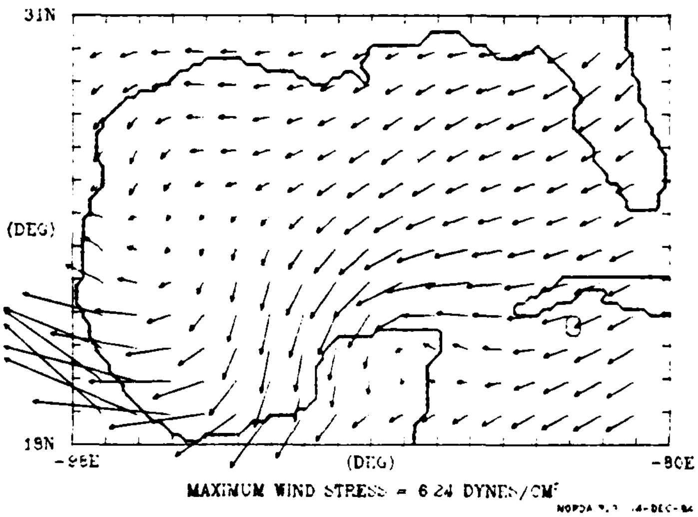
WIND STRESS
OCTOBER/1982



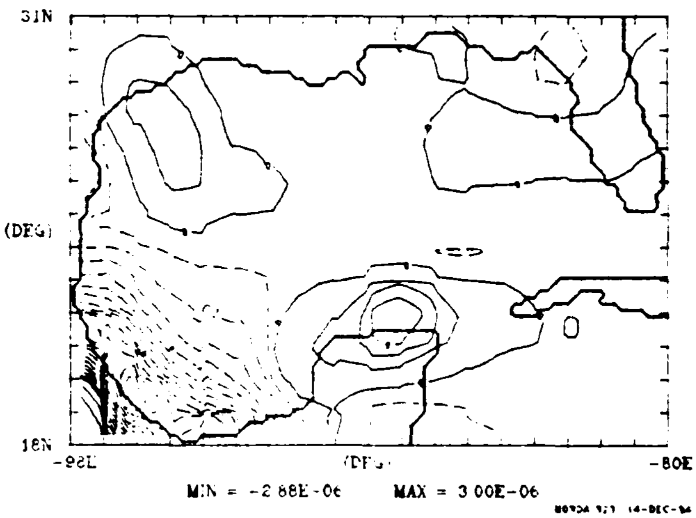
WIND STRESS CURL
OCTOBER/1982 DC = 2.0E-07 MKS



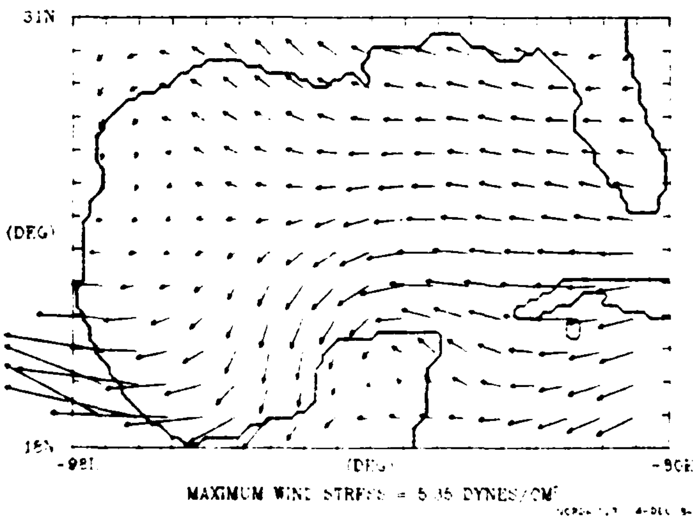
WIND STRESS
NOVEMBER/1982



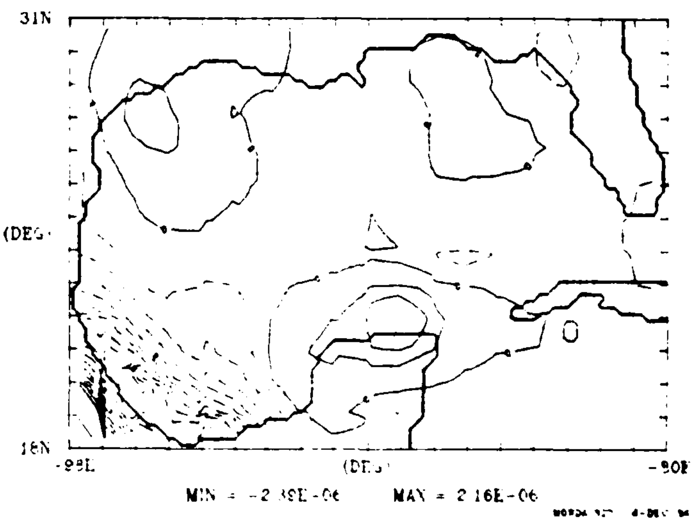
WIND STRESS CURL
NOVEMBER/1982 DC = 2.0E-07 MKS



WIND STRESS
DECEMBER/1982



WIND STRESS CURL
DECEMBER/1982 DC = 2.0E-07 MKS



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12 PERSONAL AUTHOR(S) R. C. Rhodes*, A. J. Wallcraft*, and J. D. Thompson**	
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19 ABSTRACT (Continue on reverse if necessary and identify by block number)

The large variability of the Gulf of Mexico wind field indicates that high-resolution wind data will be required to represent the weather systems affecting ocean circulation. This report presents methods and results of the calculation of a corrected geostrophic wind data set with high temporal and spatial resolution.

Corrected geostrophic wind was calculated from surface pressure analyses compiled by the Fleet Numerical Oceanography Center. The correction factors for wind magnitude and direction were calculated using linear regressions of observed Gulf buoy winds and geostrophic winds deroved at the buoys. The regressions were done for each month to determine the seasonal variability of the correction factors. The magnitude correction was found to be nearly constant (0.675) throughout the year, but the direction correction varied as a sine function dependent on the time of the year.

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The corrected geostrophic wind was calculated twice daily from 1967–1982 on a spherical grid over the Gulf, and the wind stress and wind stress curl fields were then calculated. Twelve-hourly stress and curl fields show large temporal variations of the wind field for both winter and summer months. Seasonal and monthly climatologies of the stress and corresponding curl show positive curl over the Yucatan and negative curl in the southwest Gulf, which are features not seen in any previous study of Gulf wind stress.

END

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