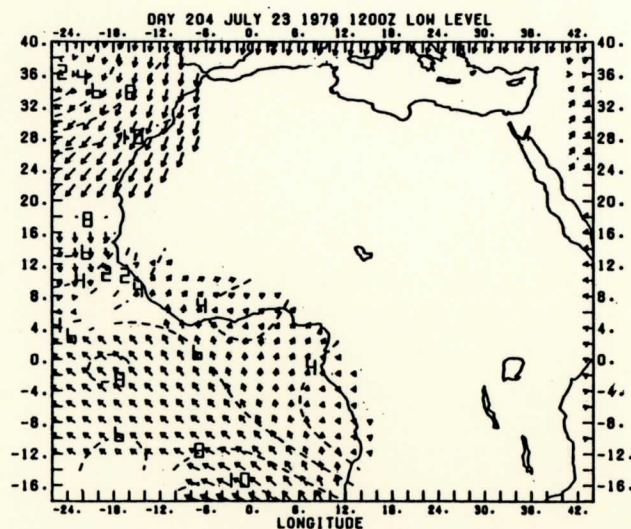
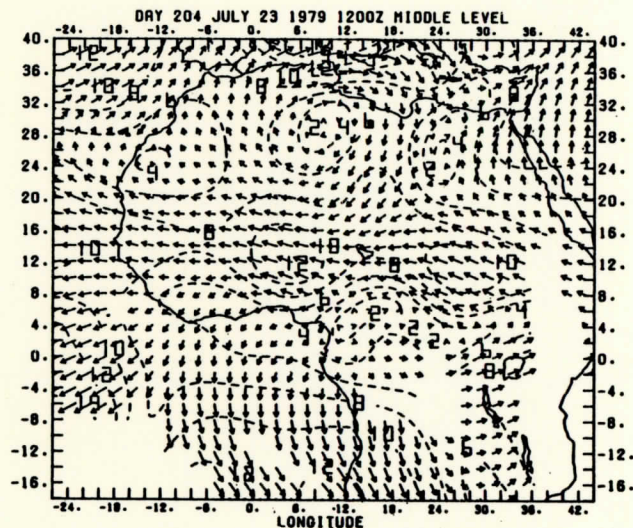


WEST AFRICAN MONSOON WINDSETS FROM GEOSTATIONARY SATELLITE

JULY 15th, 1979 - AUGUST 16th, 1979



BY

ĚKUNDAYO E. BALOGUN

Department of Physics,
University of Ife
Ife - Ife, Nigeria

Space Science and Engineering Center
The University of Wisconsin - Madison
Director - Verner E. Suomi

NATIONAL SCIENCE FOUNDATION UNDER GRANT ATM - 8024910

APRIL 1982

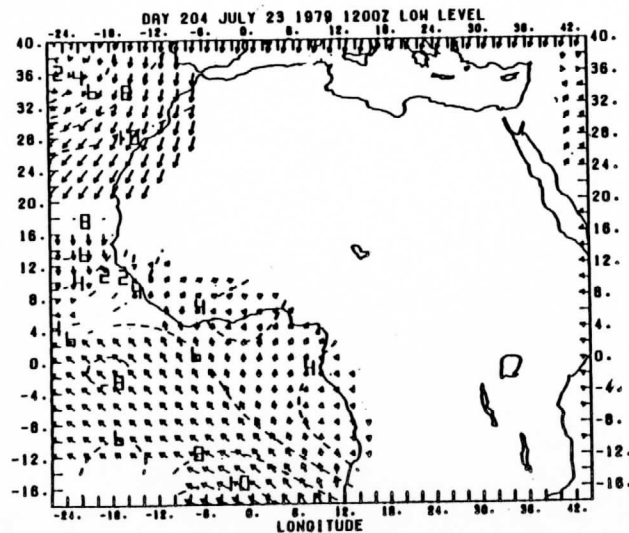
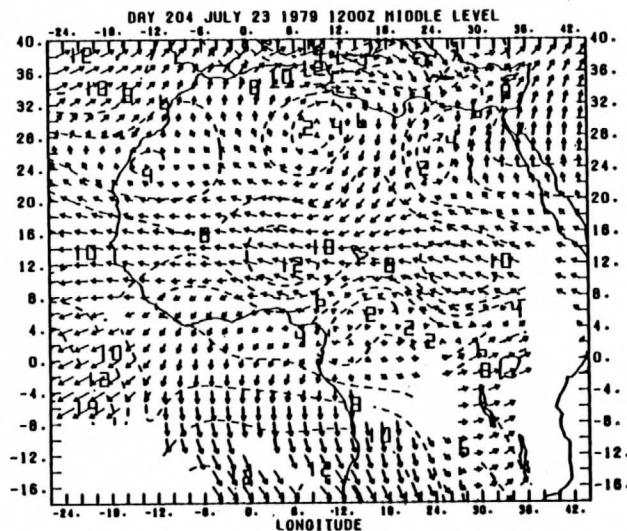
I personally appreciate
Prof Suomi's contributions
to satellite meteorology.

I will always remember his
encouragements to young scientists

RFB
5/12/82.

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1. INTRODUCTION

This document presents gridded ($2^{\circ} \times 2^{\circ}$) windfields obtained by analyzing satellite observed cloud and water vapor elements tracked by using the Man-computer Interactive Data Access System (McIDAS) developed at the Space Science and Engineering Center, University of Wisconsin-Madison, USA. The windfields were obtained for the Special Observation Period (SOP) of the West African Monsoon Experiment (WAMEX; July 15th, to August 15th, 1979) over the West African Region. The imagery from which the cloud tracer and the water vapor tracer winds were computed were generated by the METEOSAT, the first geostationary meteorological satellite owned and operated by the European Space Agency (ESA).

Forty-three percent of the wind data described the flow fields at the lower level of the atmosphere between 1000 mb and 850 mb. Twenty-eight percent of the data described the flow at the middle level (essentially between 850 mb and 300 mb) and the upper level flow field (between 300 mb and 150 mb) is described by the remaining twenty-nine percent of the windset. Windsets for the lower level were obtained by tracking cloud elements. Tracking water vapor inhomogeneities provided most of the winds at the middle level and some winds at the upper levels. Most of the winds at the upper level were cloud drift winds. While the WAMEX area was delimited by Latitude 25°N and Latitude 10°S and by Longitude 25°E and Longitude 25°W , water vapor and cloud drift winds were obtained for areas within Latitude 40°N and Latitude 20°S and between Longitude 45°E and Longitude 25°W to capture atmospheric circulation that may have impinged on weather events in the WAMEX area during the period under consideration. The

gridded windset has an accuracy and density sufficient for describing mean windfields and for computing mean synoptic divergence and vorticity fields.

The principal objective of the WAMEX was the acquisition of a data base which would provide a better understanding of the three-dimensional structure of the monsoon flow over the West African Region. Details of the WAMEX program, which was designed as part of the Global Atmospheric Research Program (GARP), can be found in the GARP Joint Operational Committee Publication Series No. 21 of June 1978; GARP Special Report No. 27 of October 1977; and GARP Special Report No. 23 of December 1976. The WAMEX Program focused attention on important atmospheric systems that were considered to play major roles in influencing the West African Monsoons, namely: the Tropical Easterly Jet (TEJ); the African Easterly Jet (AEJ) and the subtropical high pressure systems of both hemispheres. It was hoped that the data base acquired during WAMEX would help to define the specific roles that these systems play on the onset, intensity and the variations in the monsoon system. The operational phase of WAMEX extended from 1 May to 31 August 1979.

1.1 Conventional Wind Observation during SOP

Owing to instrument failure and communications problems the quantity and quality of the wind observation from conventional sources during the WAMEX operational period fell far short of expectations. Wind maps produced from the conventional data sources (even in the delayed mode) left several gaps (both temporal and spatial) that rendered them of very limited use for synoptic scale analysis. Of the five meteorological stations that attempted radiosonde and

wind measurements four times a day during the SOP, only two had a fairly complete observation that frequently. About a dozen stations made observations around 1200Z, but observations were very infrequent at several stations. At many stations observations were not made for several days running. Partially processed radiosonde data from some stations in the WAMEX area during the SOP is provided in Appendix I. The data shows the important radiosonde information provided by the WAMEX data center in Dakar. The gaps in the data underscores the difficulty of relying solely on this source of data for upper air analysis during the SOP. The radiosonde wind data was not included in the analysis of the grid point winds but has served as background knowledge and also used for quality control and editing purposes for the satellite derived winds.

1.2 Satellite Imagery

Only the data from the METEOSAT (in digital form) was used for this project. Merging data from different satellites was not considered appropriate for this project because of the errors that may be introduced in the attempt to reconcile the characteristics of the data from other satellites with those of the METEOSAT.

The METEOSAT had a unique view of the African continent and the WAMEX area in particular since the area was within thirty degrees of the subpoint of the satellite. The METEOSAT produced images of the WAMEX area once every thirty minutes. The principal payload of the satellite is a multispectral radiometer which has two identical adjacent visible channels in the 0.4-1.1 μm spectral band, a thermal infrared channel in the 10.5-12.5 μm band and an

infrared water vapor channel in the 5.7-7.1 μm band. The water vapor spectral band was normally operated in place of one of the visible channels and because of this, two possible sets of images were available in any 30 minute period: images with 2.5 km resolution in the visible channel and a 5 km resolution in the infrared channel; or images with 5 km resolution in the visible channel and a 5 km resolution in the infrared channel. The second set of the images was used since the information from the three channels was needed to estimate drift winds. With the second set of images, the resolution of the images from the visible channel remained 2.5 km in the east-west direction and the only reduction in resolution was in the north-south direction. The horizontal resolution of the satellite decreases with the distance from the subpoint near the Greenwich meridian and the equator. A picture element along the Greenwich meridian at Latitude 45°N (corresponding to a nadir angle of 6.78°) covers an area 8.3 km x 5.2 km in the visible data.

Three images at thirty minutes interval centered at 0000Z and 1200Z were obtained from the European Space Agency for the SOP. When data was not available for these time periods any usable data for the nighttime and daytime periods for the day was used. A detailed data log for the METEOSAT data available for this project is provided in Appendix II. Missing data and unusable data from the satellite during the SOP period were detailed. The METEOSAT data had been partially processed by the European Space Agency. To use the METEOSAT data for wind determination, the images had to be put through a navigation process to perform the transformation of picture elements from the satellite image coordinate system to an earth

coordinate system. The navigation process was based on the METEOSAT flight dynamics report supplied by the European Space Agency and a satisfactory image alignment to the nearest pixel was achieved for every image used for the project. When navigation was impossible or unsatisfactory the data was discarded. The same navigation process sufficed for the visible, and the corresponding infrared and water vapor imagery since the three types had been aligned by ESA. (An example of water vapor and visible channel imagery for 1200Z for each day is provided when available on opposite pages from page 1 to page 65.)

2. WINDSETS FROM METEOSAT IMAGERY

The prerequisites required for a successful computation of winds from satellite imagery are:

- a series of satellite imagery with good geometric fidelity
- a system to receive and store the relevant satellite data
- an algorithm, relating satellite elements to corresponding earth coordinates
- an interactive image processing system to interpret the data
- a method for determining good tracer elements on the imagery and
a method of tracking them accurately
- a method of determining the height of the tracer
- a method for quality control of the products.

With a set of imagery with good geometric fidelity, the McIDAS provides both the hardware and the software facilities to meet all the above prerequisites. A full description of the facility was published by Smith (1975). The capability of the facility has increased both in

sophistication and versatility over the years and this has led to substantial improvement in the analysis of satellite data processed by the use of the facility (Suchman, et al., 1981). The system has the capability to use original digital satellite data, enhance a satellite image, magnify it, combine adjacent images into a loop of any length, double loop images from different spectral bands, and vary loop speeds. The system can navigate satellite images, locate and track clouds and water vapor inhomogeneities, and display the result as a vector plot superimposed on the images. Recent developments on the McIDAS such as the dynamic vector interactive analysis program permit the user to compare the speed and direction of a cloud or water vapor tracer interactively with radiosonde wind data for different levels to establish levels of best fit. The false stereo facility similar to that described by Hasler (1981) has also been incorporated into the system.

A sequence of three cloud or water vapor images with a time interval of thirty minutes between the images was used for wind computations. Although several procedures used for this project are common in the computation of cloud drift and water vapor drift winds, there are a few differences in the processing of the data that necessitate separate discussions of the procedures.

2.1 Computation of Cloud Drift Winds

Experience on the computation of cloud drift winds at SSEC and elsewhere has accumulated over the years. The problems involved in the measurement of cloud displacements and the extent to which cloud displacements represent winds in the region of the atmosphere in which they are

embedded have been addressed in publications by Fujita et al. (1975), Bauer (1976), Suchman and Martin (1976), Hubert (1979), Mosher (1979), Balogun (1979), Hasler, et al. (1979) and others. The various steps in the computation of cloud drift winds are considered below.

(i) Target selection and tracking Properly navigated and aligned sequence of three images at thirty minute intervals from the original infrared and visible digital data were put into two loops. Double looping of the infrared and visible images on the McIDAS system allowed for the transfer from one image sequence to the other. The loops were viewed at varying speeds to help in separating the various fields of motion. While executing the looping process, the imageries were also subjected to varying enhancements to bring out various trackable features of the clouds. After a cloud tracer has been selected, two measurements of cloud displacements were made from the sequence of the three images. If the two measurements passed a selection criteria, to be discussed below, they were averaged and recorded.

There are two types of cloud tracking methods available on the McIDAS: single pixel and correlation. Johnson and Suchman (1981) describe these methods. In the correlation tracking procedure, the operator places a square box cursor over the cloud target of interest. The computer then performs a correlation analysis on the original digital data within the box for successive pictures. The correlation computation measures the cloud displacement to less than a picture element. Where cloud targets were difficult to track by the correlation method and where the tracking of some cloud targets needed to be rechecked, the single pixel method, which allowed the operator to select and control the cloud targets, was used. Single pixel tracking

of clouds was used only in a few cases and less than 5% of the cloud drift winds were determined by this method.

(ii) Cloud Height Determination The assignment of cloud vectors to the levels where they adequately represent the wind in the troposphere was accomplished on the McIDAS by a method based on satellite imagery from the visible and infrared channels (Mosher 1976). The cloud height algorithm determines the infrared cloud top temperature which has been corrected for emissivity and compares this to the temperatures of a standard atmosphere (with latitude corrections) to establish the heights of clouds. Heights were either automatically or manually assigned to individual targets. Limitations to the method of height determination include erroneous temperature measurements caused by thin cirrus or small clouds, unknown temperature profiles, multivalued answers caused by temperature inversions, overshooting clouds, etc. If the cloud elements tracked have an emissivity of one as in the case of cumulus clouds and are larger than three times the satellite's field of view, then the infrared temperatures computed are closest to the true values of the temperature of the cloud tops. Cloud thickness is computed from the brightness information provided by the visible imagery. The heights of the cloud bases are estimated by subtracting the thickness of the clouds computed from the visible data. The relationship between the brightness and thickness of a cloud is basically a logarithmic function; error or uncertainty in the brightness data can lead to a large thickness error.

Cloud tracers with bases below 850 mb have heights assigned to their bases. Clouds with tops at about 300 mb have heights assigned to the cloud tops. Other tracers have heights assigned to the middle of the cloud.

(iii) Editing of Cloud Drift Winds Quality control of the cloud drift winds begins during the tracking of each wind. Since a sequence of three images at 30 minutes interval was used it was possible to compute two successive vectors for each cloud target. Any pair differing by more than 5 msec^{-1} in either the u or v components were rejected. Height measurements were also made twice. Any pair differing in height by more than 100 mb was flagged. Vector pairs which agreed with the residual criteria were averaged. The averaged data were then displayed over the cloud imagery. Different colors were used for vectors at different levels. Duplicate winds and winds at the same assigned levels which differed significantly from neighboring winds were also removed. To check heights, the dynamic vector analysis program existing in the McIDAS system permitted the operator to compare interactively the speed and direction of computed cloud drift wind with winds at different levels from an appropriate (almost colocated) radiosonde data. Where heights were difficult to discern, false stereo images were generated to produce a three dimensional effect that enables clouds at different levels to be identified to facilitate the assignment of heights. Heights were assigned in whole millibars.

2.2 Computation of Water Vapor Drift Winds

Although Steranka et al. (1973) used the Nimbus THIR data to make global analysis of moisture and windfields, the feasibility of using water vapor images as a tracer to obtain wind fields was first demonstrated by Mosher (1977) using loops of twelve hours between consecutive overpasses of Nimbus THIR in the tropical regions. More recent efforts to compute water vapor drift winds were by Kästner et al. (1980), Johnson (1980), Endlich and Wolf (1980), Eigenwilling and Fischer (1982), and Mosher and Stewart (1981).

This project provided the first opportunity to produce a large number of water vapor drift winds. The objective was to use the water vapor drift winds to complement the cloud drift winds obtained for the middle and upper levels of the troposphere over the West African region.

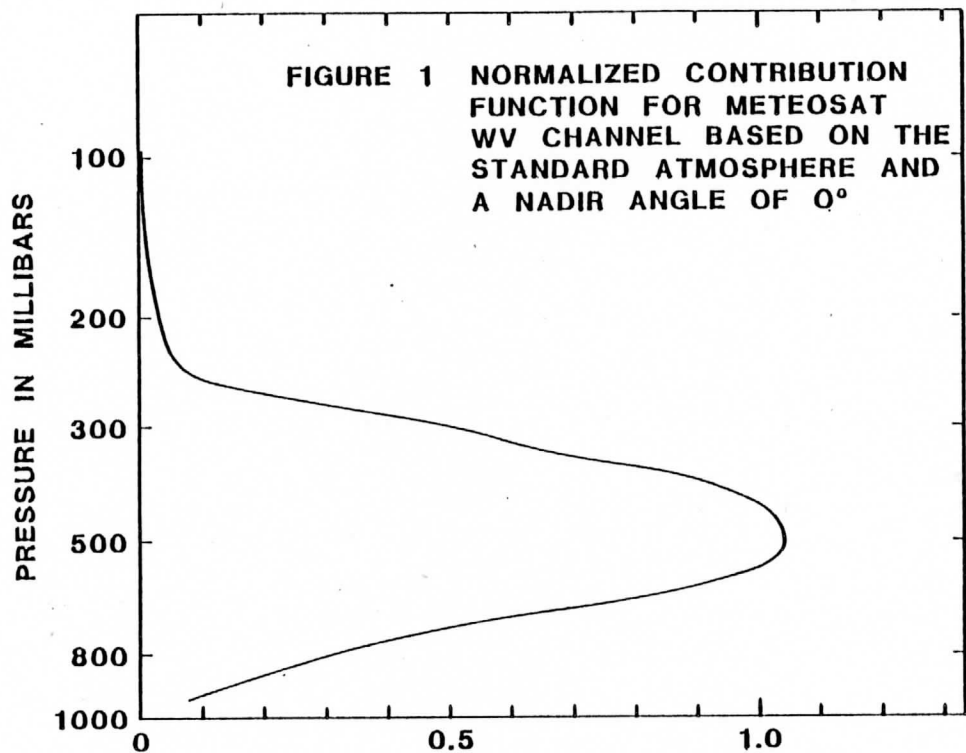
(i) Water Vapor target Selection and Tracking The selection and tracking of water vapor tracers presented more difficulties than the tracking of cloud tracers. The guidance of accumulated experience was very limited in the case of water vapor tracking because the estimation of air motion by tracking water vapor is relatively new.

Water vapor fields shown on the METEOSAT imageries are flat and show very little contrast. The darkest and brightest returns sometimes occupied only 20% of the total possible brightness range (Johnson, 1980). Contrasts in brightness temperature may be no more than 12°K (Kästner et al., 1980) even under extreme humidity conditions of 20% or 80%. Inhomogeneities in the water vapor imagery were found to be reliable tracers. Detecting these inhomogeneities required preprocessing of the water vapor data. Contemporaneous research into the

characteristics of the water vapor tracked winds at SSEC (Mosher and Stewart, 1981), provided some background on the kind of filtering and enhancements necessary to bring out the inhomogeneities. After trying gray scale stretching, false coloring and digital filters, it was discovered that sliced gray scale stretching gave the greatest enhancement to the pure water vapor structures that could be confidently tracked interactively on the McIDAS. High pass filtering applied to the water vapor imagery tended to emphasize the noise in the data sets and low pass filtering washed out the important features of the imagery. The sliced gray scale stretching expands a narrow range of gray scale into the full range of the gray scale. Input values less than the bottom of the slice are set to black and the input values greater than the slice are set to white. Because of the fuzziness of the imagery, the correlation tracking was not considered an appropriate tracking procedure for the water vapor tracers. The tracking sequence images were enlarged by a factor of two to facilitate tracking by the single pixel method. Edge detection procedures whereby contours of certain radiance values are tracked (Käestner et al. 1980 and Eigenwillig and Fischer 1981) and automatic tracking procedures (Endlich and Wolf, 1980) have been suggested, but the single pixel tracking of inhomogeneities made prominent by sliced gray scale stretching worked best on the McIDAS.

(ii) Assignment of Heights to Water Vapor Winds There was a greater difficulty in assigning heights to the water vapor drift winds than to the cloud drift winds. The contribution function of water vapor (the product of the weighting function and the Planck's

function) which shows the amount of image signal coming from different altitudes and recorded by the satellite, is broad. This implies that the information content of the measured radiances is related to a thick atmospheric layer. Figure 1 shows the normalized contribution function for the METEOSAT water vapor channel based on a standard atmosphere at the subpoint of the satellite. The water vapor channel therefore senses radiation emitted by water vapor mainly in the layer between 720 mb and 330 mb with a maximum at 480 mb (Fischer et al., 1981). The radiation received by the satellite also depends as much on the amount of the water vapor structure emitting the radiation as on its height. As noted by Mosher and Stewart (1981), as water vapor structure gains height, it gets brighter and as the same structure gains more water vapor it becomes brighter. The contribution function also varies because of changing temperature profiles and synoptic situation. Because of this it was not possible to determine the height of water vapor tracer from the observed infrared radiation provided by the water vapor channel. The heights of the water vapor elements (inhomogeneities) tracked had to be determined from other information. In this project, they were determined indirectly from the heights of clouds in the vicinity of the water vapor structures. Heights were manually assigned to the water vapor features. Because of the double looping facilities on the McIDAS it was possible to view sequences of images from the infrared and water vapor channels simultaneously and to compare heights of features common to both images. Heights were then assigned to water vapor features from the height of clouds observed in the thermal infrared channel judged to be at the same level as the water vapor structure. The meteorological



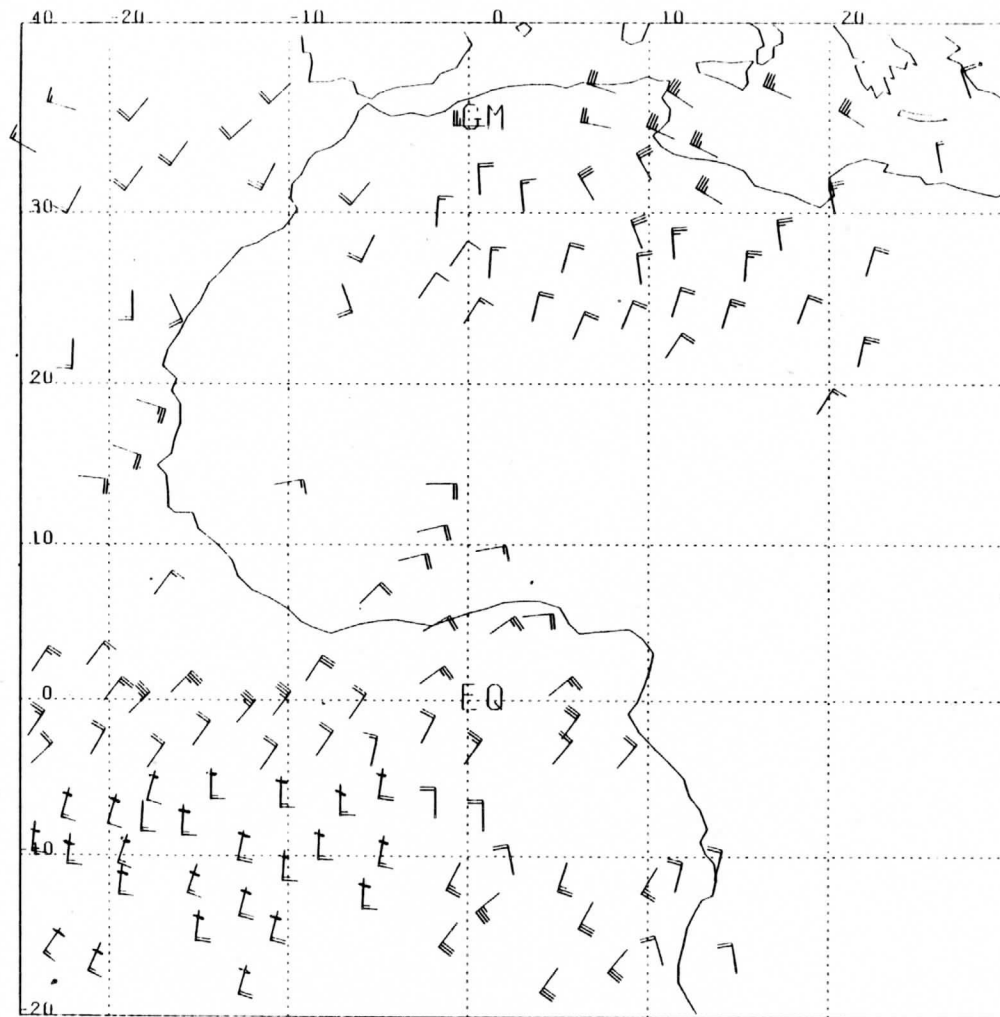
condition depicted by the images also helped in the evaluation of heights. The dynamic vector interactive analysis program and the false stereo capabilities of the McIDAS proved to be useful tools in examining such subjectively assigned heights.

(iii) Editing of Water Vapor Winds As in the case of cloud drift winds, pairs of water vapor drift winds were computed and those that agreed with the residual criteria were averaged and displayed over the water vapor imagery. Looping of the imagery allowed vectors which did not fit any motion of the water vapor to be deleted. In some cases, it was observed that a "fleet" of water vapor winds moved at a clearly distinct level and direction from the general direction of motion of other vectors. In such cases (see Fig. 2) the vectors were separated, had their heights reevaluated and were analyzed separately.

2.3 Accuracy of Cloud Drift and Water Vapor Drift Winds

Possible sources of errors in cloud drift and water vapor drift winds are: navigation process, height computation, resolution, cloud or water vapor not moving with the windspeed, and operator decisions. Some of the steps taken to minimize these errors have been discussed elsewhere in this report. Suchman and Martin (1976) and Suchman et al. (1981) have also discussed errors involved in the computation of cloud drift winds on the McIDAS.

Accuracy of satellite derived winds depends essentially on the data characteristics and the precision and consistency of the McIDAS. Although Mosher and Sawyer (1975) and Bauer (1976) have demonstrated that rawinsonde and cloud drift wind comparison gave discrepancies of $\pm 5 \text{ msec}^{-1}$ as have rawindsonde and rawindsonde comparison; rawindsonde data are still used as



DAY 79196 TIME 113000 849- 301 MB WIN

Figure 2.

Water vapor tracked winds: Two levels of flow are identified. Winds with crossed barbs are at a level between 800 mb and 700 mb. Other winds are at levels between 600 mb and 400 mb.

ground truth data in the verification of satellite derived winds. From contemporaneous research at SSEC: Spencer (1981) and Mosher and Stewart (1981) determined root mean square errors in the computation of cloud drift winds (vis-a-vis radiosonde winds) to be about 2 m sec^{-1} for the low level cloud winds and 3.5 m sec^{-1} for the upper level cloud winds. Water vapor winds were found to be only about 2 m sec^{-1} worse than cloud tracked winds. Eigenwillig and Fisher (1982) showed that comparison of radiosonde winds with winds derived from METEOSAT data over Europe gave an rms value of 4.9 m sec^{-1} .

3. DATA COVERAGE

Although attention was focused on the WAMEX area as indicated earlier satellite tracer winds were actually obtained for a much larger area. A total of 20,794 satellite derived wind vectors were obtained; 8,860 (42.6%) of these were low level winds, 5,933 (28.5%) were middle level winds, and 6001 (28.9%) were upper level winds. About forty-two percent of the winds (8,671) were computed for the nighttime. It should be noted that there were as many middle level winds as there were upper level winds. Water vapor drift winds made substantial contributions (87%) to the middle level data. Water vapor drift accounted for over ninety-five percent of the winds at the mid-level during the nighttime. During the daytime, the contribution was about 72%. Daytime data with substantial contributions from the water vapor drift winds are underlined in Table 1.

Due to malfunctioning of some sensors on the METEOSAT there were no data on two days. Data provided on some days could not be used either because of missing information on the data

TABLE 1. Number and Temporal Distribution of Vectors used
in Computing Grid Point Winds

Date	Julian Day	Night Time Winds				Day Time Winds				Tot. No. of Winds Each Day
		Low	Middle	Upper	Total	Low	Middle	Upper	Total	
July 15, 1979	196	185	142	80	407	274	214	277	765	1,172
July 16, 1979	197	147	62	145	354	248	207	200	655	1,009
July 17, 1979	198	78	167	110	355 ⁺	238	190	186	614	969
July 18, 1979	199	143	112	277	532	257	205	195	657	1,189
July 19, 1979	200	158	144	137	439	256	74	180	510	949
July 20, 1979	201	-	-	-	-	257	44	169	470	470
July 21, 1979	202	132	226	164	522	88	163	101	352 ⁺	874
July 22, 1979	203	139	198	172	509	129	94	89	312	821
July 23, 1979	204	-	223	140	363	165	207	210	582	945
July 24, 1979	205	131	216	181	528	-	-	-	-	528
July 25, 1979	206	160	185	216	561	249	15	162	426	987
July 26, 1979	207	-	-	-	-	241	18	163	422	422
July 27, 1979	208	-	-	-	-	230	174	151	555	555
July 28, 1979	209	109	171	165	445	-	-	-	-	445
July 29, 1979	210	111	154	135	400	245	32	176	453	853
July 30, 1979	211	-	-	-	-	181	65	85	331	331
July 31, 1979	212	126	151	175	452	232	64	103	399	851
Aug. 1, 1979	213	118	156	143	417	274	-	-	274	691
Aug. 2, 1979	214	-	-	-	-	251	-	-	251	251
Aug. 3, 1979	215	-	-	-	-	-	-	-	-	-
Aug. 4, 1979	216	-	-	-	-	-	130	52	182*	182
Aug. 5, 1979	217	-	86	71	157 ⁺	209	168	176	553*	710
Aug. 6, 1979	218	-	-	-	-	76	34	23	133*	133
Aug. 7, 1979	219	-	-	-	-	-	-	-	-	-
Aug. 8, 1979	220	-	-	-	-	239	62	47	348*	348
Aug. 9, 1979	221	-	-	-	-	212	86	109	407*	407
Aug. 10, 1979	222	186	149	102	437	245	85	52	382	819
Aug. 11, 1979	223	182	175	91	448	307	-	-	307	755
Aug. 12, 1979	224	-	-	-	-	318	84	126	528	528
Aug. 13, 1979	225	-	-	-	-	279	-	-	279	279
Aug. 14, 1979	226	160	224	126	510	307	168	58	533	1,043
Aug. 15, 1979	227	158	213	133	504	278	73	92	443	947
Aug. 16, 1979	228	152	123	56	331	-	-	-	-	331
TOTALS		2,575	3,277	2,819	8,671	6,285	2,656	3,182	12,123	20,794

⁺Winds computed for time period 0300Z - 500Z

*Winds computed for time period 1500Z - 1700Z

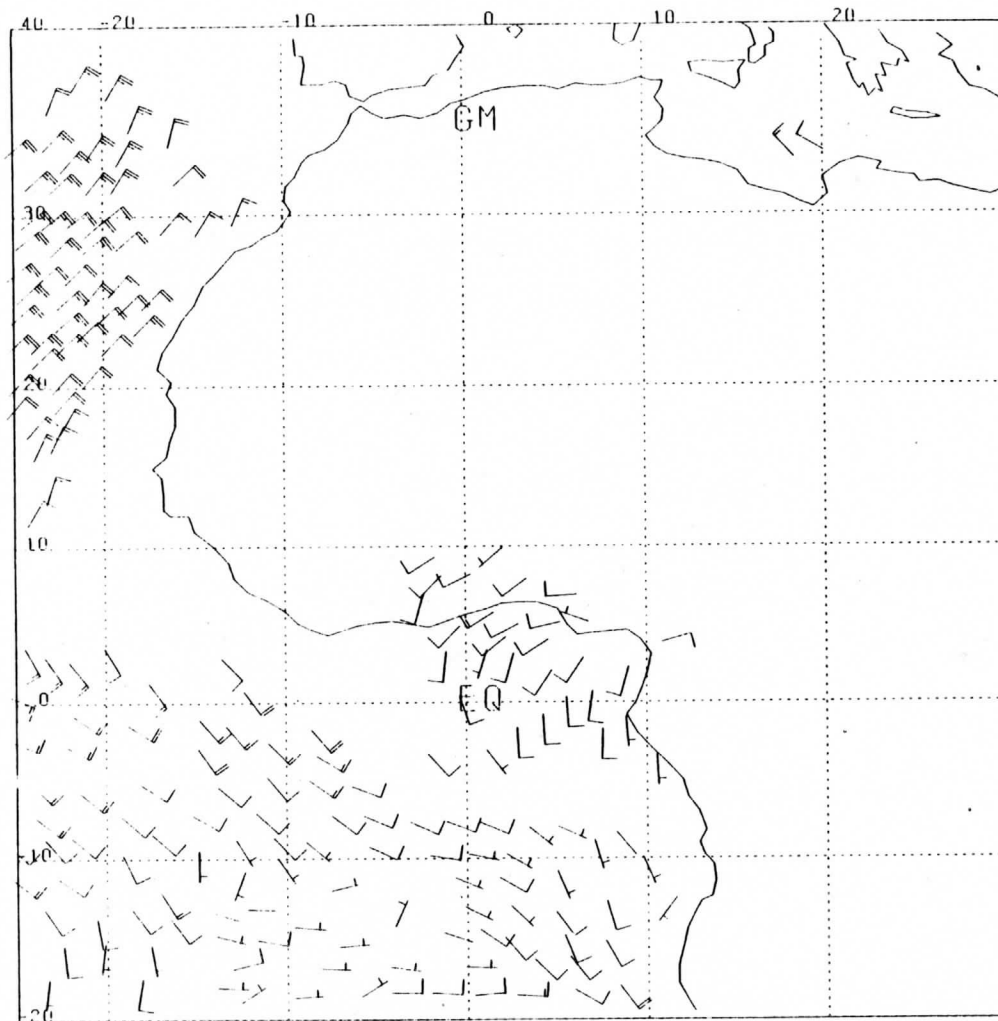
tapes or because of difficulties in obtaining a satisfactory navigation or image alignment. In the absence of trackable clouds and water vapor, it was also impossible to obtain cloud drift or water vapor drift winds.

3.1 Low Level Coverage

It was possible to track the trade wind cumulus over the south Atlantic and around the Canary Islands in the north Atlantic with greater ease and confidence. These areas have an abundance of good quality low level winds (see Fig. 3). The bases of the trade cumulus tend to be at constant levels. Over the south Atlantic, cumulus bases were estimated at about 970 mb level. Tracking low-level clouds over land areas presented some difficulties because of the rapid growth and dissipation of clouds over such areas. Image frequency of one per half hour did not capture the motion of small cumulus clouds whose lifetimes were of the order of one-half hour or less. Tracking low-level mesoscale features did provide a few winds at the low levels but less than 200 of such features could be tracked during the entire course of wind tracking. The land areas over West Africa did not have as many wind vectors as expected. Rapid scan satellite data at intervals of fifteen minutes could have produced more cloud drift winds in this area but that form of satellite data was not available for this project.

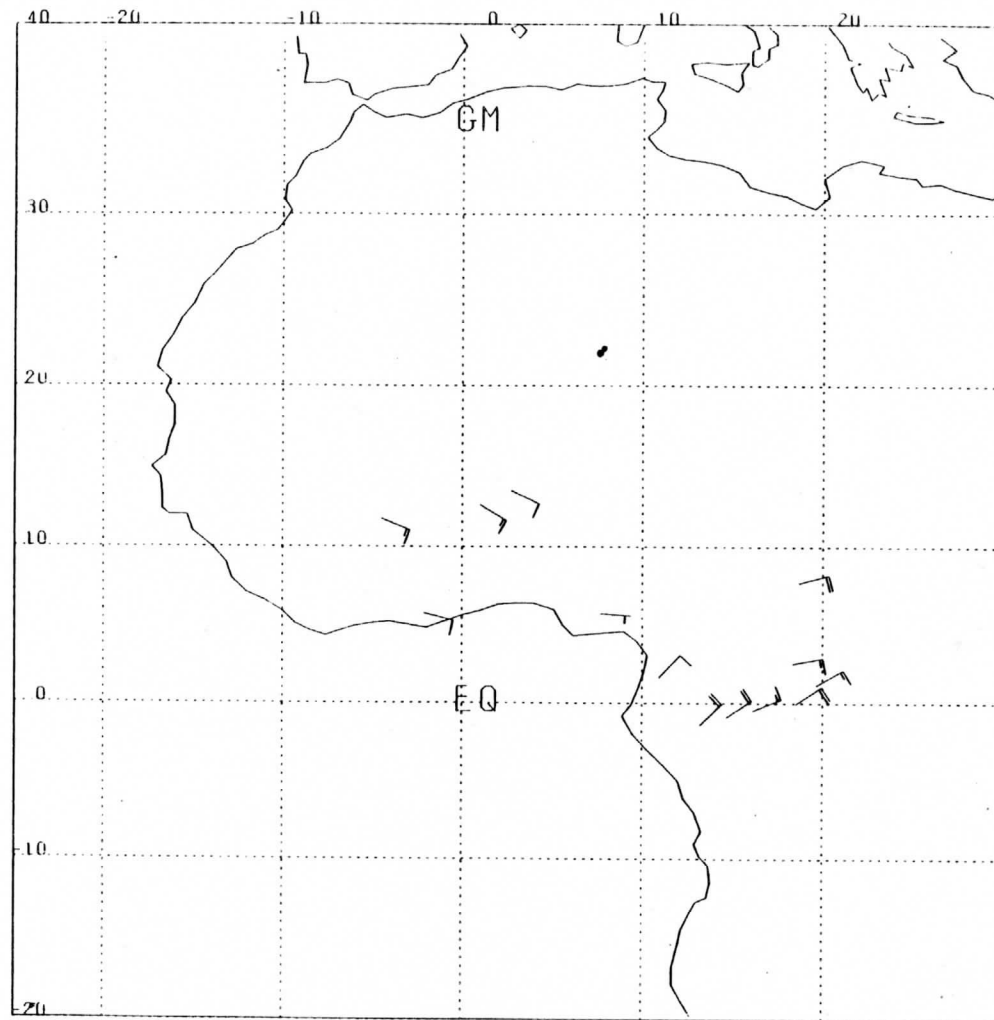
3.2 Middle Level Coverage

Figures 4 and 2 respectively illustrate the difference between middle level coverage with only cloud drift wind and with only water vapor drift winds.



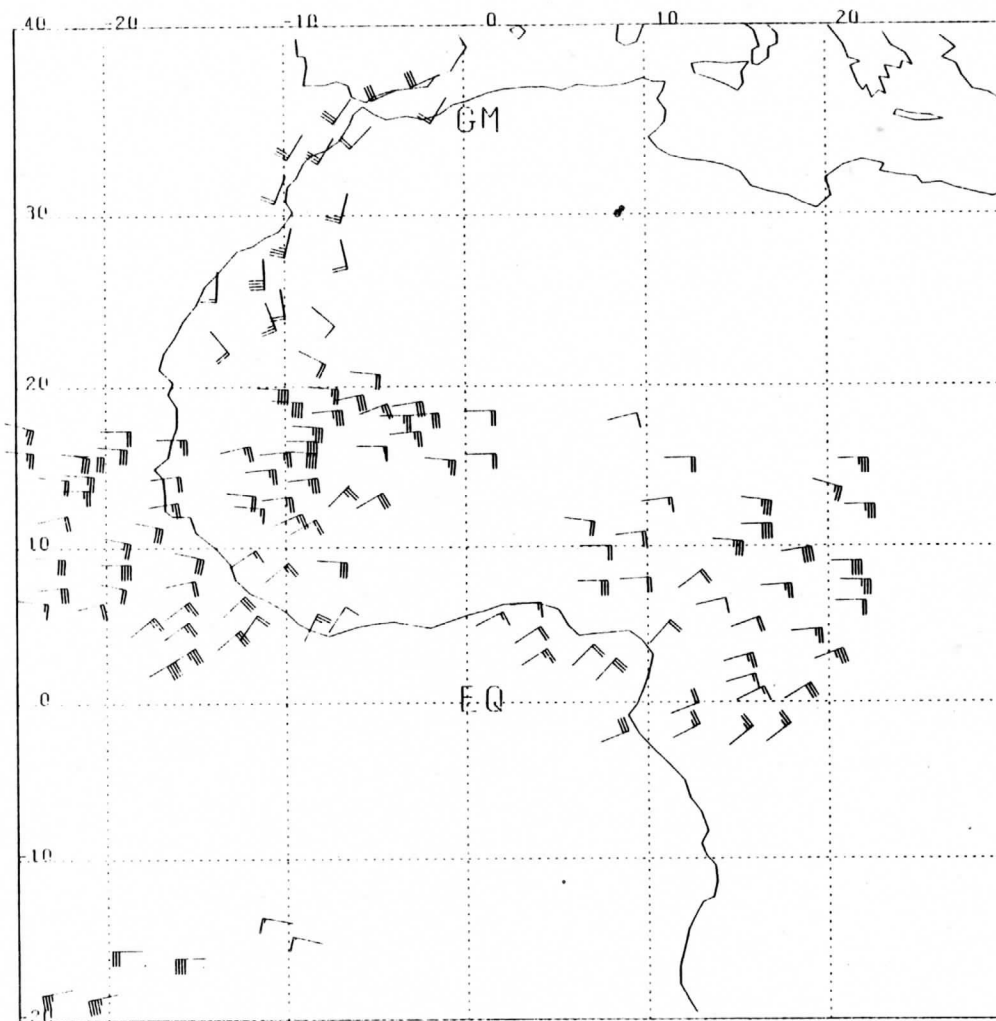
DAY 79196 TIME 113000 999 850 MB WIN

Figure 3. Low level cloud drift winds.



DAY 79196 TIME113000 849- 301 MB WIN

Figure 4. Middle level cloud drift winds.



DAY 79196 TIME 113000 300- 100 MB WIND

Figure 5. Upper level cloud drift winds.

3.3 Upper Level Coverage

High level cirrus clouds were also easy to identify on satellite cloud imageries. Figure 5 depicts the upper level data from cloud drift winds. As in the case of middle level winds, better coverage was obtained when water vapor drift winds were added to the cloud drift winds.

4. GRIDDED WIND FIELDS

Wind data obtained within Latitude 40°N and 18°S and between Longitude 26°W and 42°E were interpolated into a $2^{\circ}\times 2^{\circ}$ grid using a hybrid of the Wind Editing and Analysis Program of the Stanford Research Institute (Mancuso and Endlich, 1973), which will be referred to here as WIND*SRI and the Barnes analysis scheme (Barnes, 1973). An analysis area containing data was divided into boxes with dimensions equal to the $2^{\circ}\times 2^{\circ}$ grid spacing. If wind vectors are found in a box, they were averaged according to WIND*SRI. That is, vectors were averaged according to the inverse square of their distance from the center of the box and the grid value was stored for later analysis using the Barnes's scheme. If no winds were found in the box, the box was flagged for possible later deletion from the analysis. The Barnes analysis fitted harmonic functions to the spatial distribution of data. It could be adjusted to provide any amount of low pass filtering. The filtering chosen for this analysis was such that it minimized random errors and eliminated small scale variations. The use of the Barnes scheme also facilitated interpolation of data from higher density areas into areas with poor data coverage.

Wind components for each grid point were obtained from a minimum of two observations within a six degree radius from the point. A maximum of ten observations was used to calculate grid point values in data rich areas.

Wind vectors were represented at each grid point by arrows. Lengths of arrows were drawn proportional to the speed, and isotachs have been drawn at intervals of 2 m sec^{-1} .

An examination of the gridded winds at the low level shows that the flow at this level agrees in general with climatological expectations (see Hastenrath and Lamb, 1977). There are, however, day to day variations in the speed. During some days in August low level circulations tend to develop along the African coast. There were also instances of unexplained accelerations in the windfield as air moved into the coastal areas of West Africa.

Prominent features of the gridded winds at the mid-tropospheric level are the subtropical high pressure systems over the Northwest Africa and the mid-tropospheric jet often observed somewhere between Latitude 7°N and 20°N . The high pressure system over the southern Atlantic is not prominent on the individual maps. Maximum speeds in the jet stream vary from about 8 m sec^{-1} to about 14 m sec^{-1} . It is also observed on many maps that diffluent flows originating in the northern and southern boundaries of the area of the mid-level jet respectively flow into the northern high pressure system and into the circulation system of the southern Atlantic after crossing the equator. Cross equatorial flow at this level was however neither found to be as strong as in the upper troposphere nor as consistent.

Most of the windfields analysed at this level bear some resemblance to winds between 600 mb and 400 mb level (see Van de Boogard, 1979 and Sadler and Oda, 1979). It was possible in some instances to isolate some flow fields at a lower level. Maps on pages 2 and 25 show examples of windfields that were judged to be closer to 700 mb levels winds than to 500 mb winds over the southern Atlantic. The orientation of the flow shown on these maps indicate that the monsoon flow could be detected at a level as high as 700 mb.

At the upper levels, the prominent features are the Tropical Easterly Jet, the Northern Hemisphere subtropical high pressure system which, however, could not be defined on many maps because of poor data to the north of the WAMEX area, and the strong westerlies of the southern hemisphere. As expected strong diffluent flow characterized the regions of strong convective activity over the West African region. Cross equatorial flow was stronger and also more prominent at this level than at the middle level. On some maps (see pages 8 and 26 for examples) very strong gradients in the windspeed and breaks in the flow were observed. Similar breaks in the upper level wind flow were also observed in the Asian summer monsoon windsets (Young et al., 1980). The check on the satellite derived data could not attribute these gradients and breaks to inadequacies in the data. Although mean windfields at about 200 mb level for the month of July by Van de Boogard did show some gradients in the flow over the region of present interest, not much support could be found for these unusual phenomena in climatological maps.

5. CONCLUDING REMARKS

Half-hour images provided ample low level tracer winds over the south Atlantic Ocean but very few winds over the land areas of West Africa, where many cumulus clouds developed and dissipated in less than half an hour. The use of rapid scan satellite data at about fifteen minute interval should produce a better coverage of low level cloud drift winds over the area.

Water vapor images provided more information about air motion at the mid-tropospheric level than did the visible and infrared images. Studies at the Space Science and Engineering Center by Mosher and Stewart (1981) show that the quality and the quantity of the water vapor drift winds can be improved if the time interval between the images is extended to between one or two hours. Data with such interval between images was not available for this project. Although water vapor drift winds were found to be less accurate than cloud drift winds, the experience of this project confirms that they can provide useful information about the mid-tropospheric flow.

Grid point data around the immediate boundaries of data void areas on the grid point analysis maps should be used with caution as the objective analysis procedures used to interpolate winds often make such boundary data unreliable.

Despite gaps due to bad data or to the absence of tracers, the satellite derived windsets provided more information about the windfield at the lower, middle and upper levels of the

troposphere over the West African region during the special observation period of WAMEX than was available from conventional data sources.

6. ACKNOWLEDGEMENTS

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The assistance of several people made the execution of this project possible. Publications by scientists at the Center, cited in this document, testify to the scientific guidance that the project received. The advice and comments given by Drs. David Martin and Fred Mosher were highly appreciated. The administrative and technical support provided by the Center was not as easily documented but was equally valuable and appreciated.

I also recognize with gratitude the enthusiastic support by the wind trackers (Denise Laitsch and Tod Stewart), programmers (Tom Whittaker, Brian Auvine and Dave Santek), data processing technicians (Dee Wade and Jeneane Stuessy), librarians (Katherine Gratke and Janet Meyer), editing staff (Terri Gregory and Willis Thomas), and secretaries (Joanne Allen, Angie Crowell, and Christine Paurus), and several others at the Center who contributed immensely to the completion of this project.

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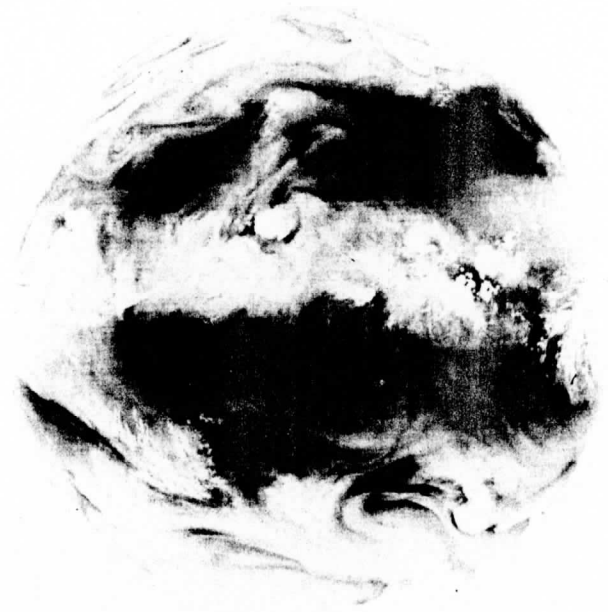
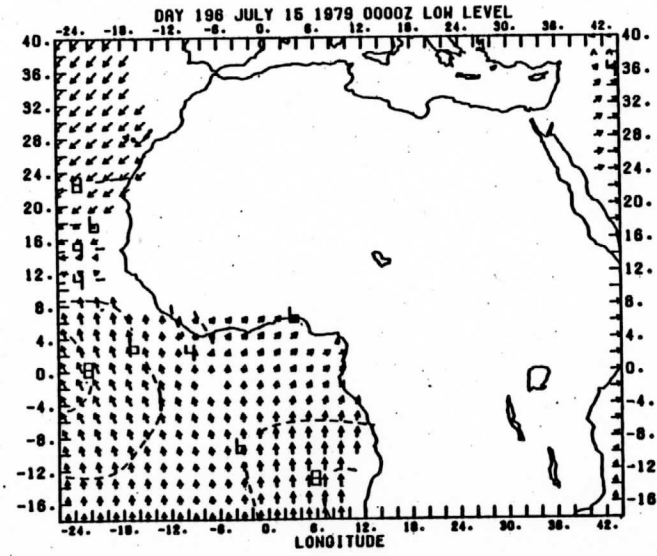
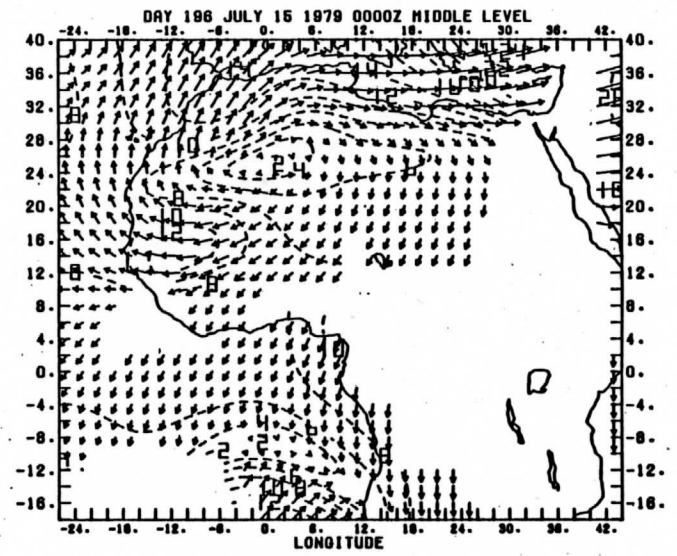
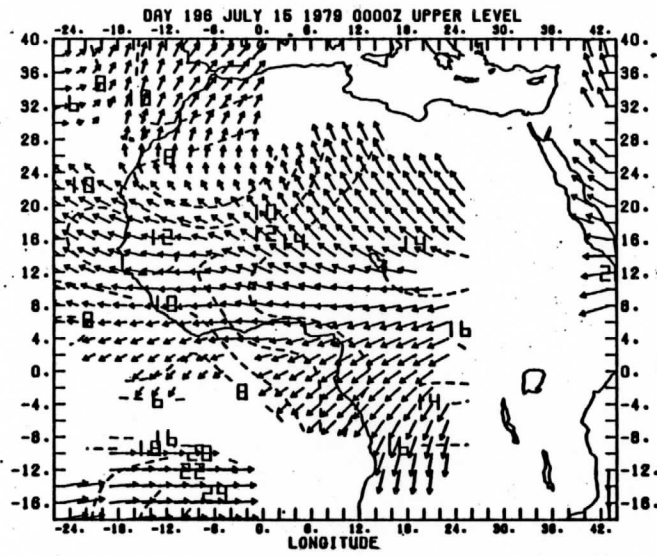
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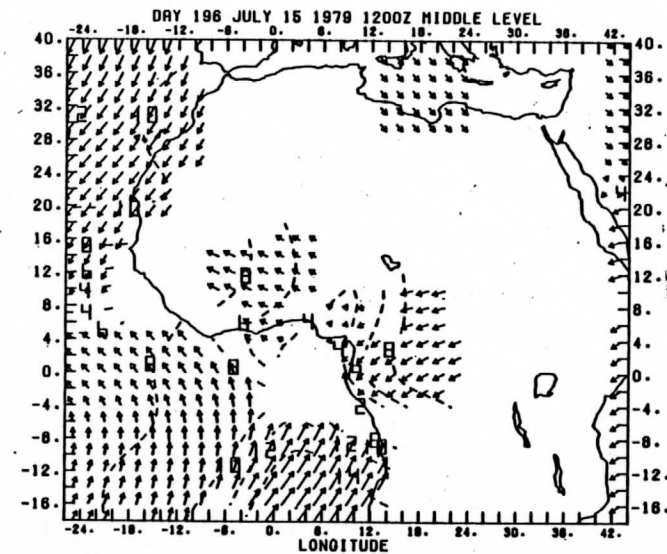
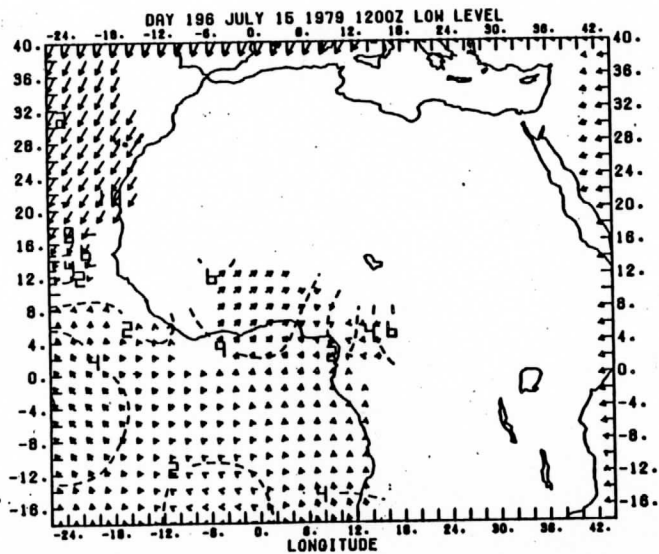
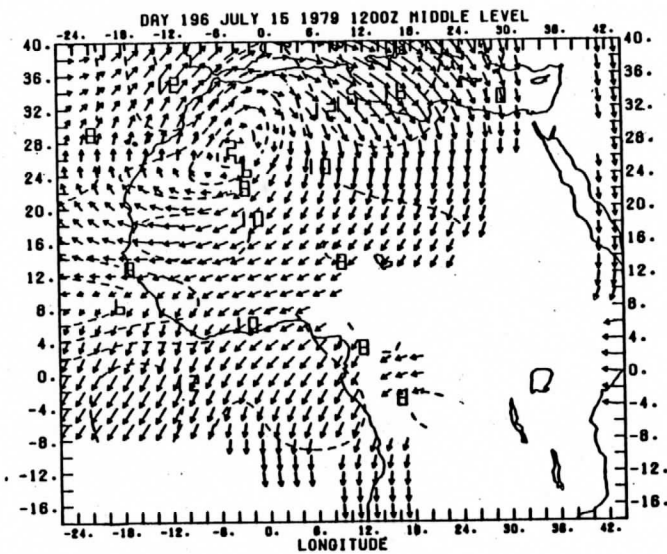
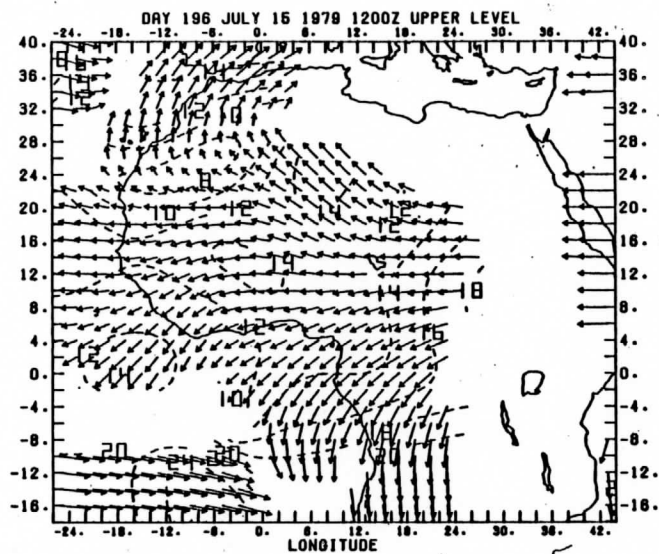
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GRIDDED WIND FIELDS

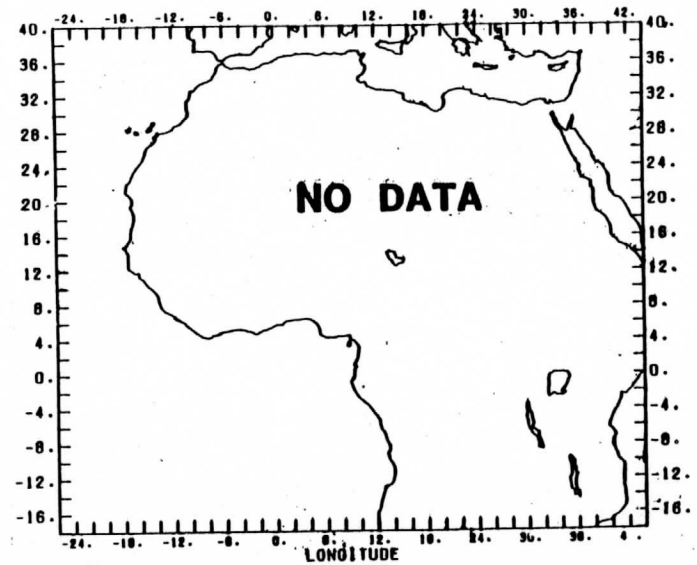
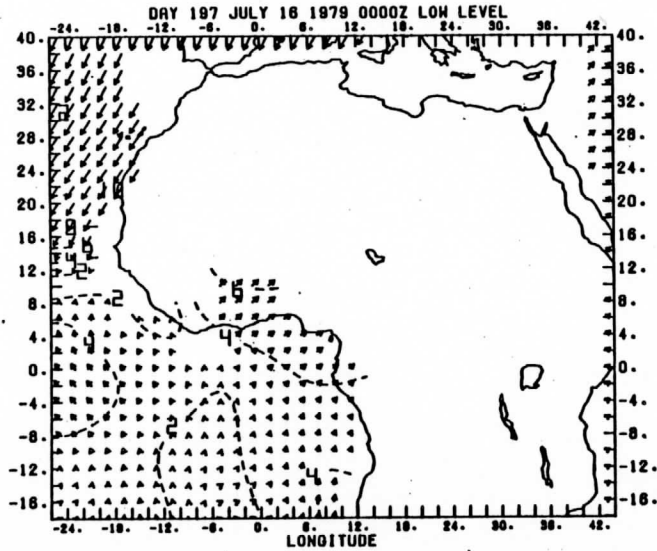
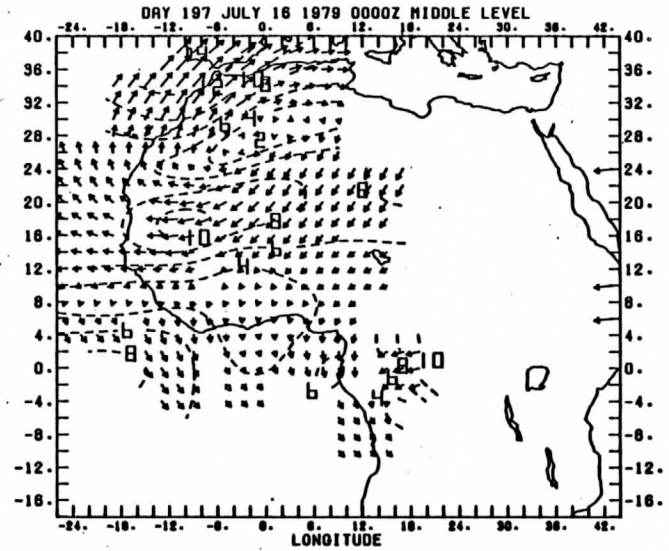
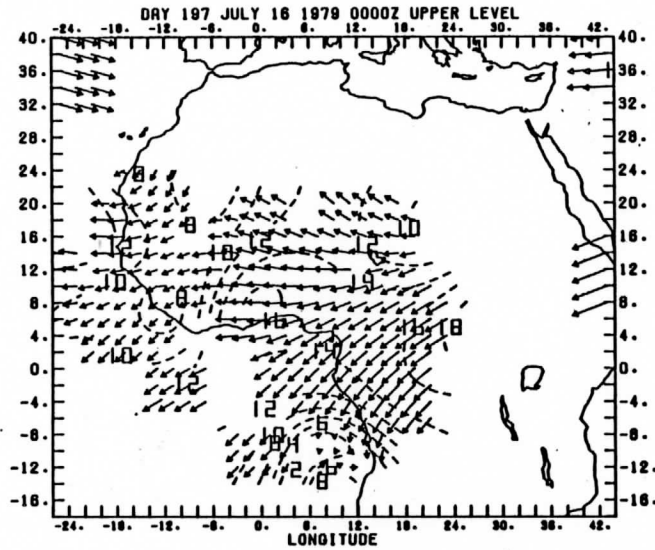
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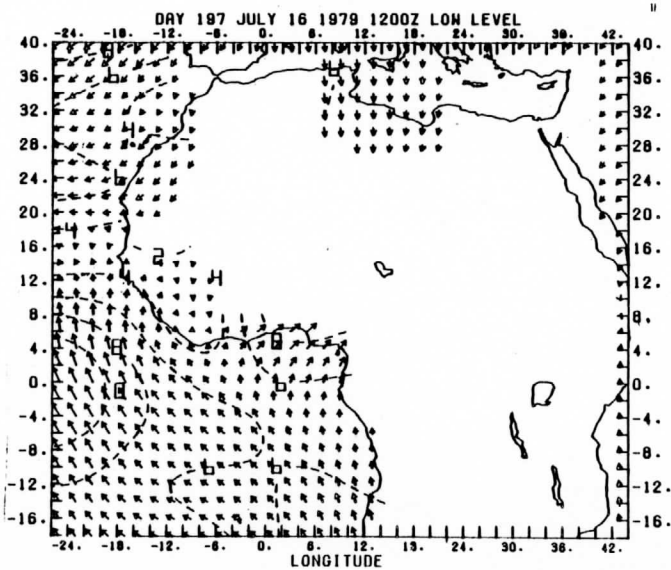
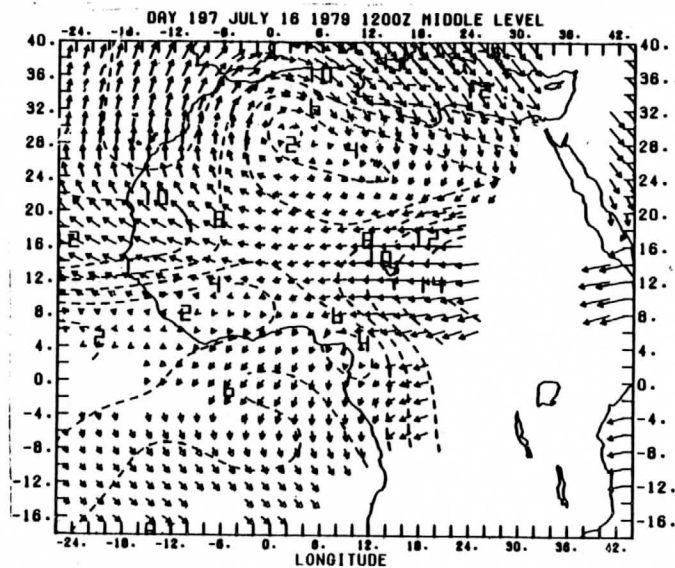
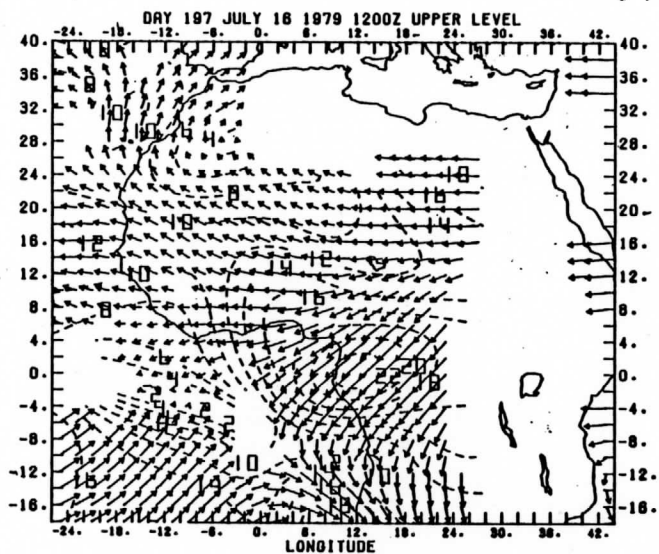
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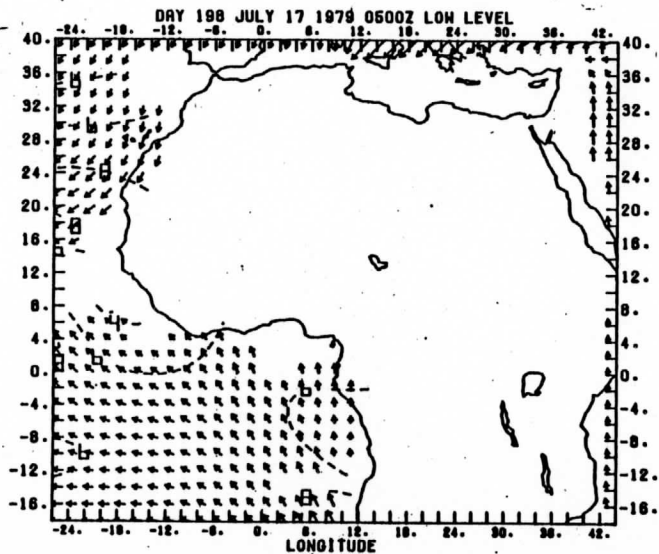
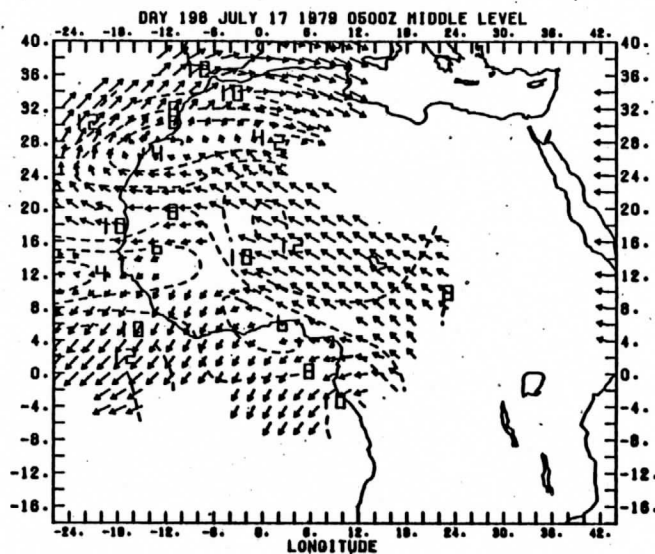
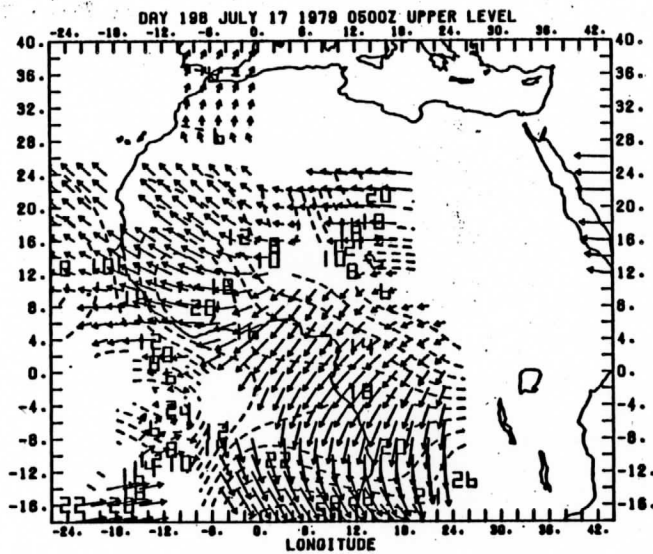
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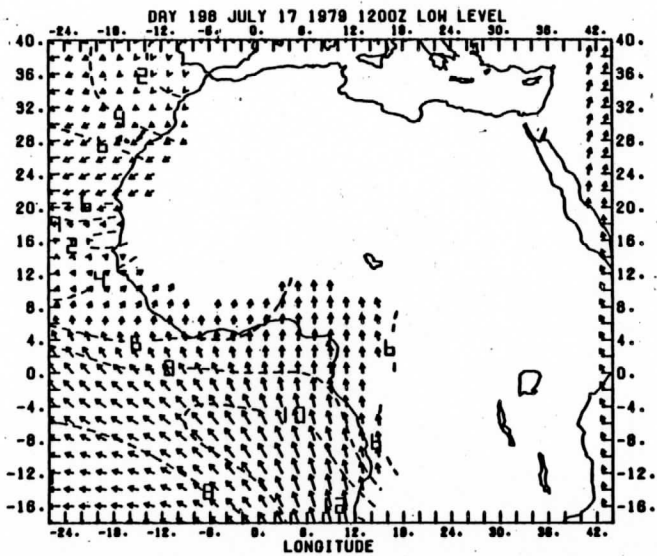
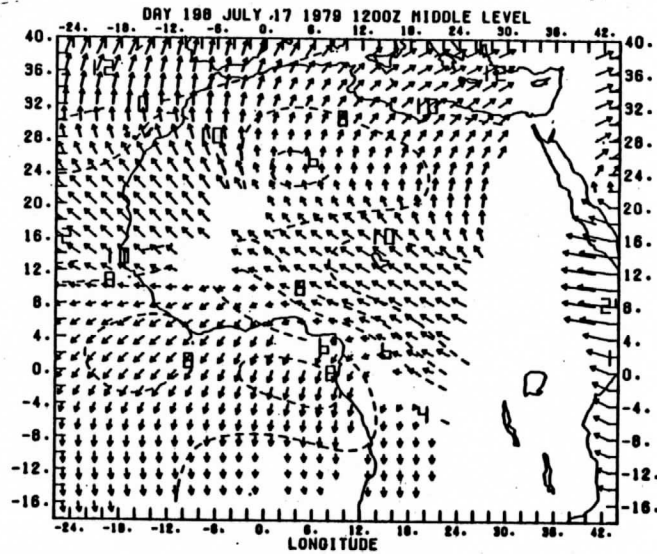
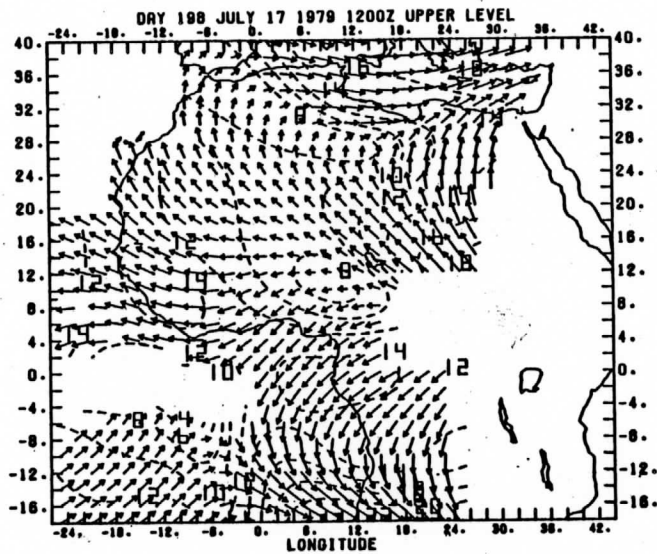
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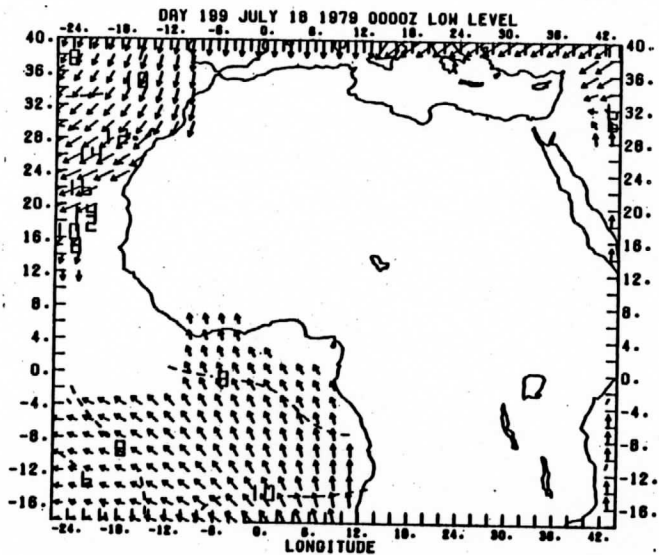
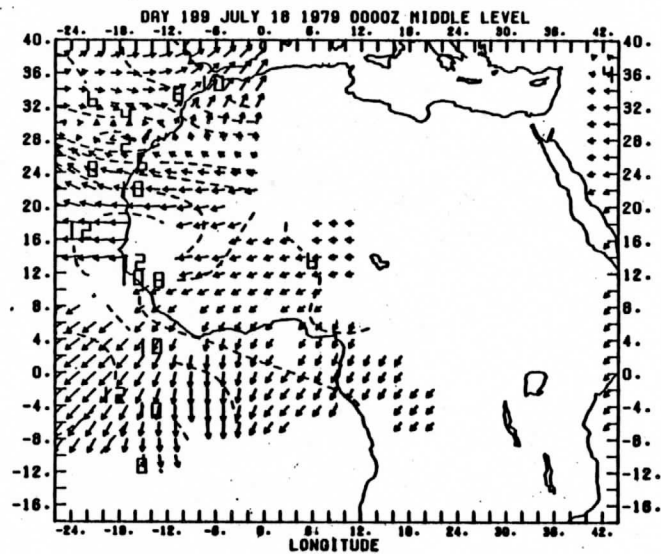
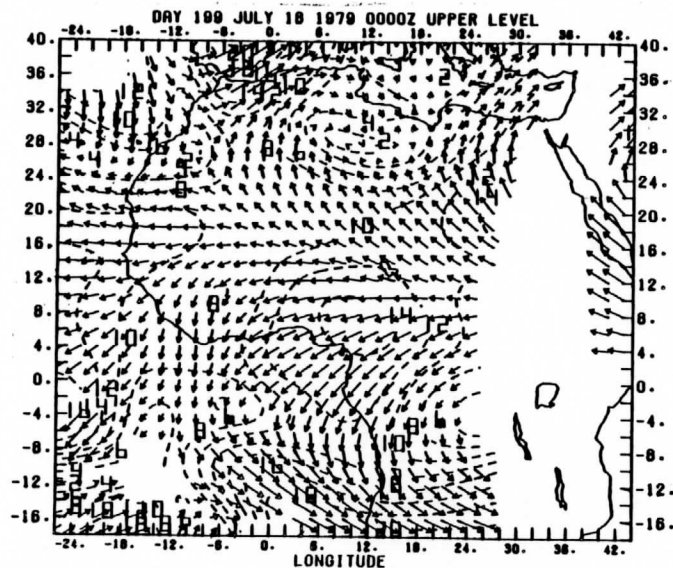
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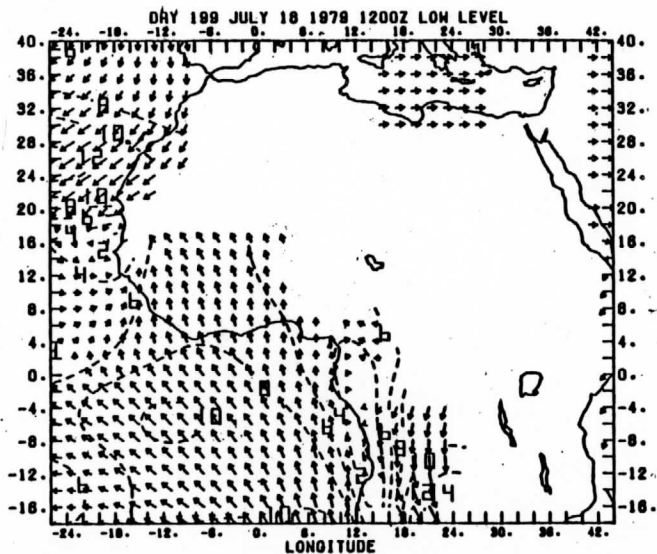
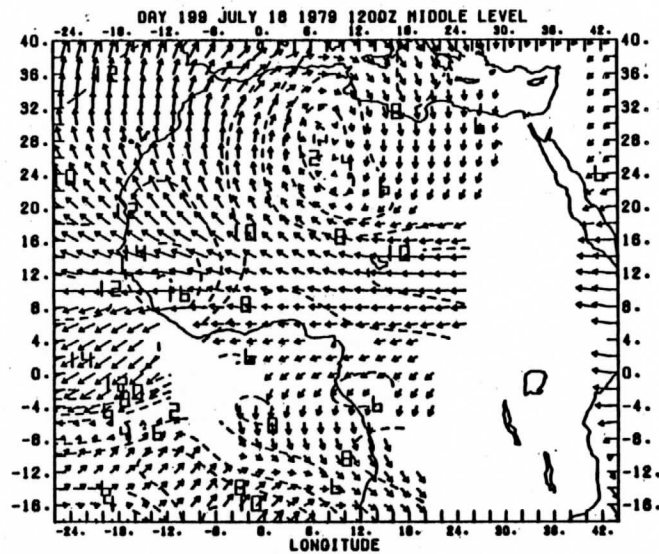
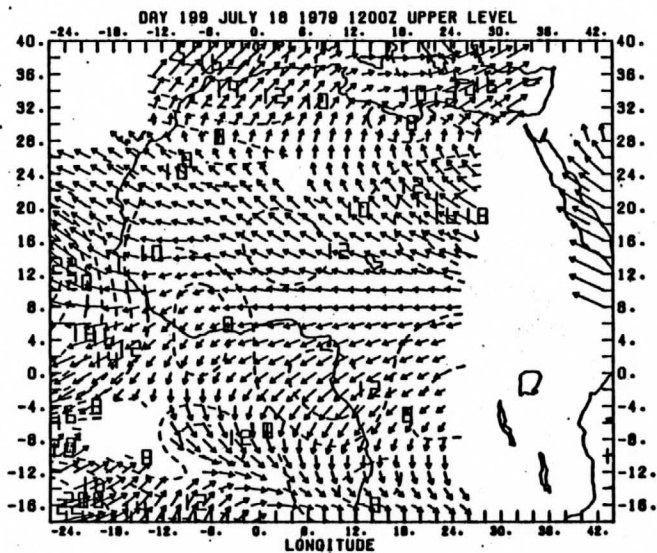
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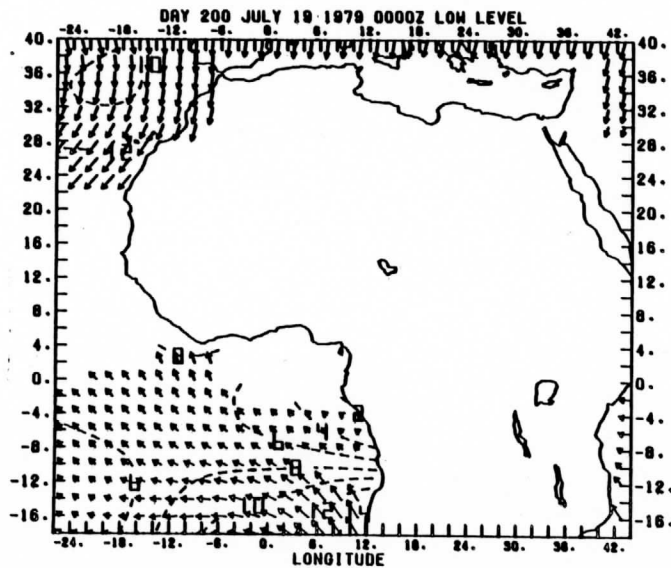
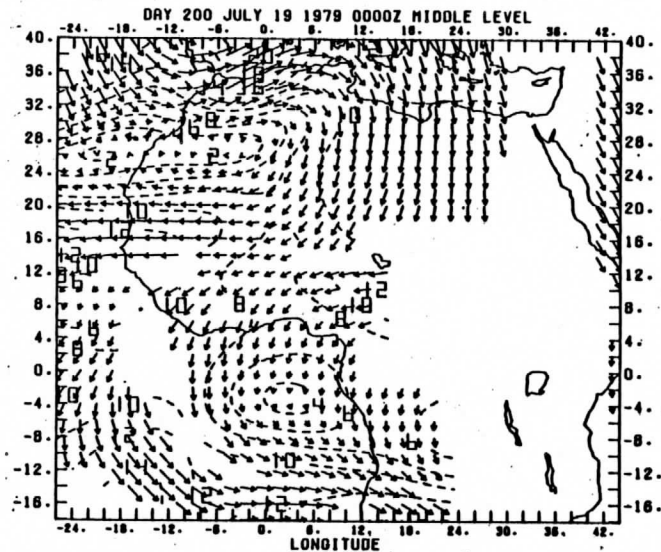
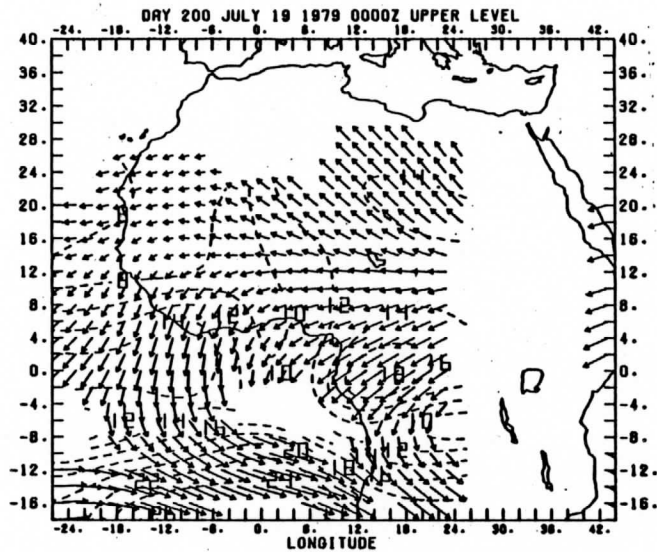
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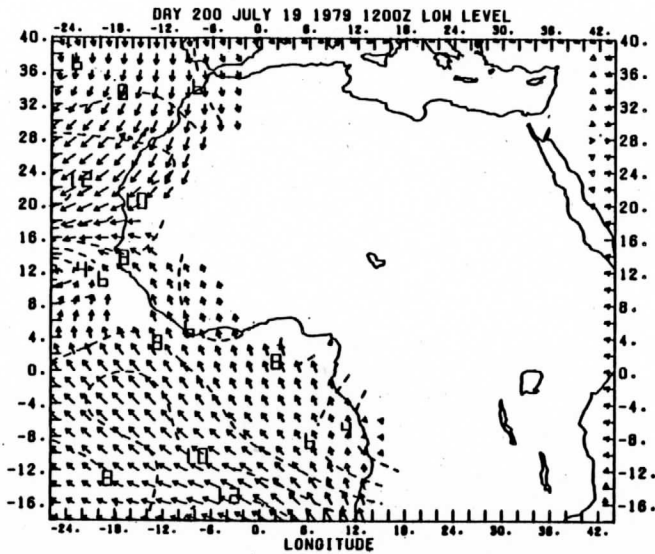
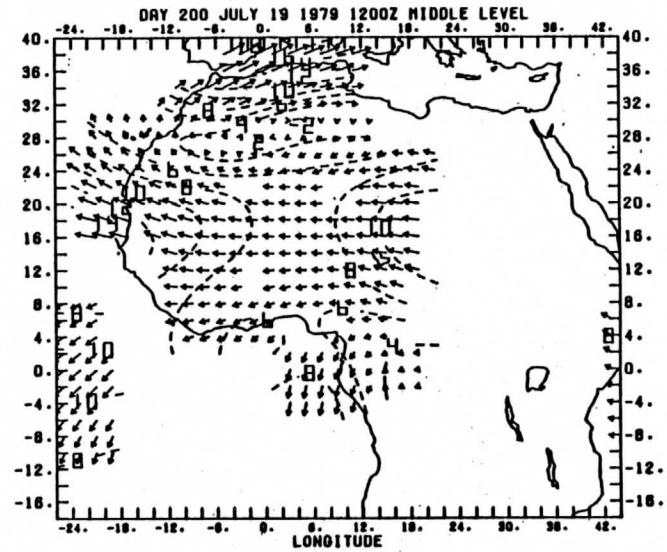
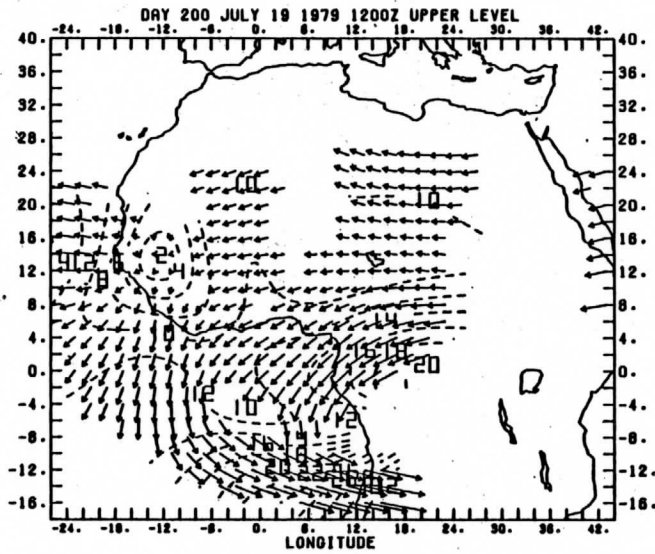
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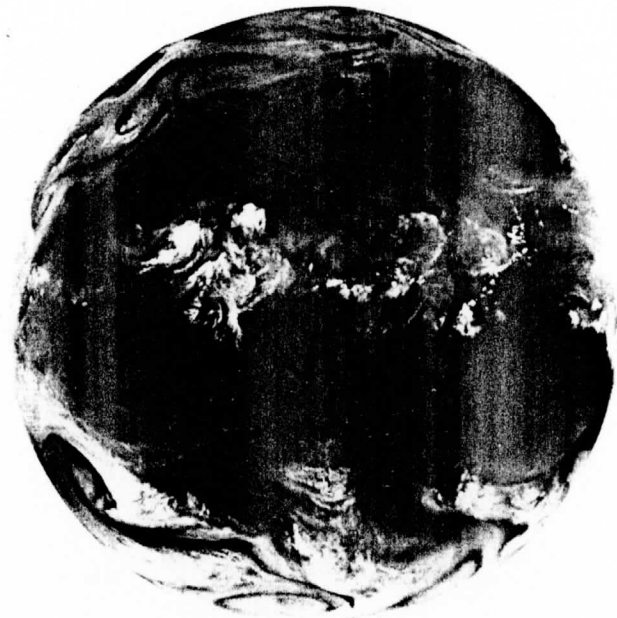
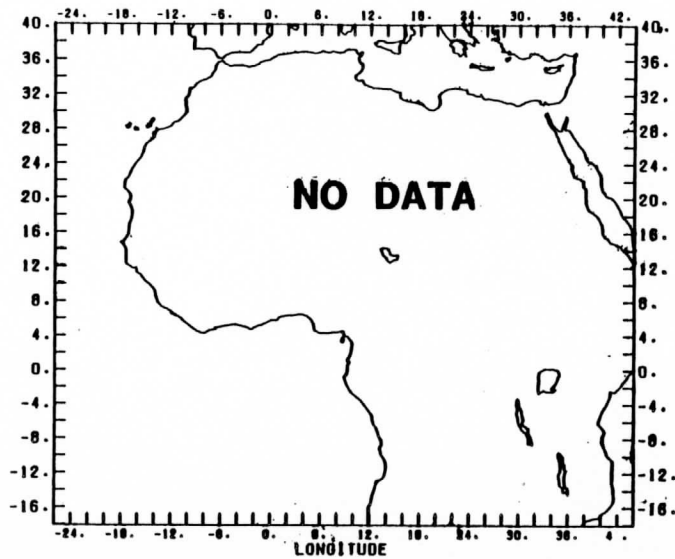
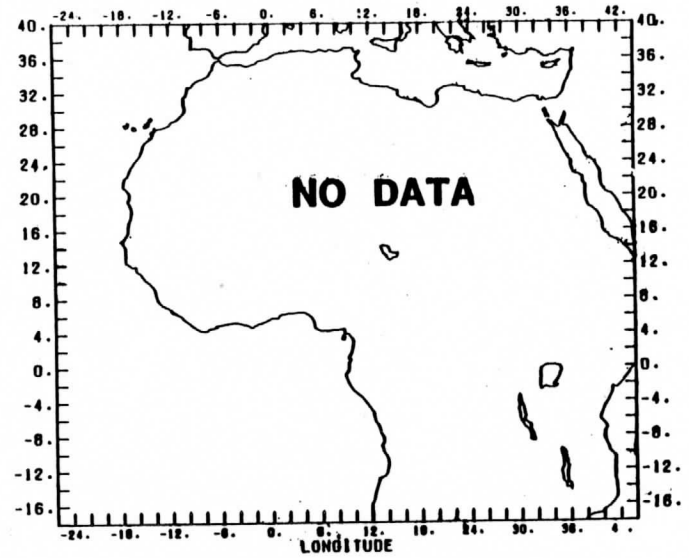
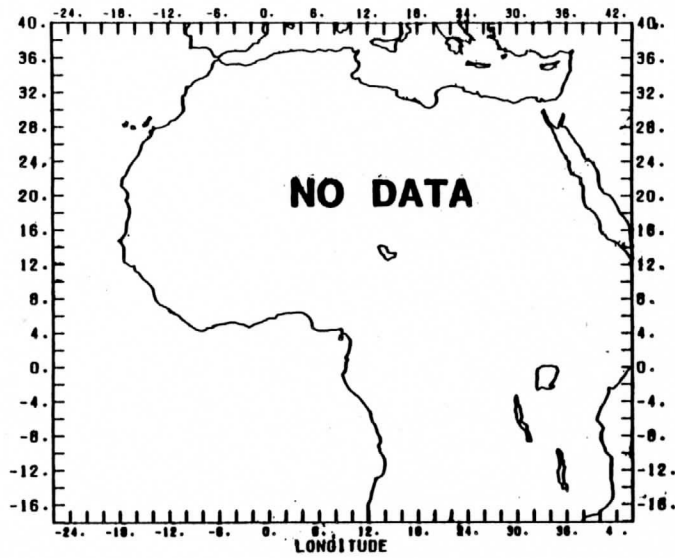
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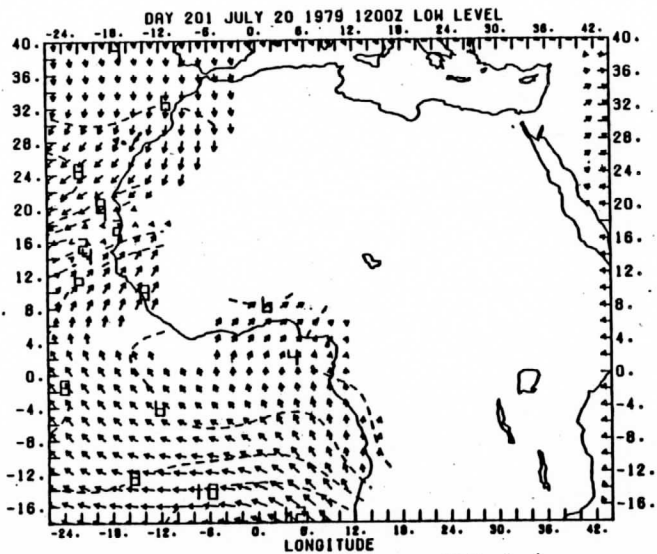
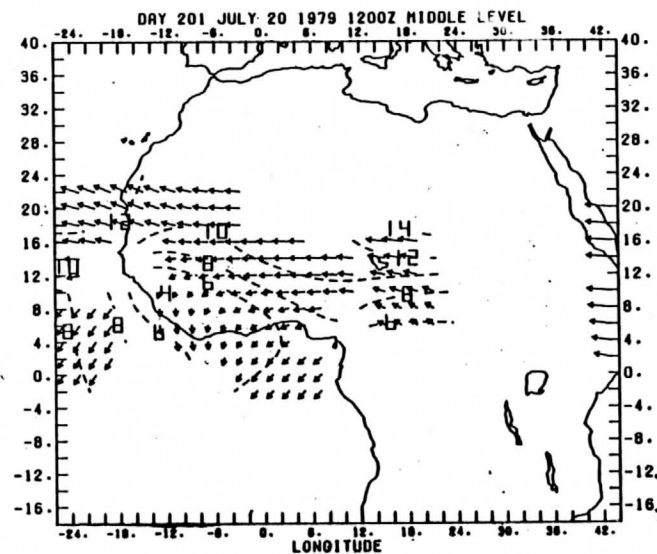
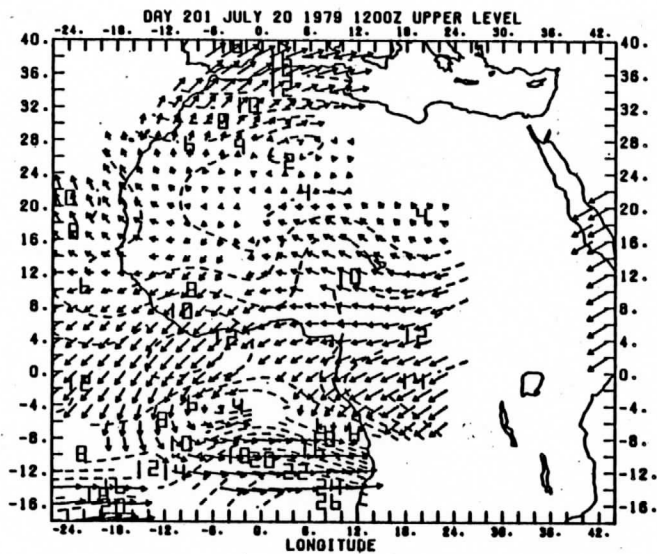
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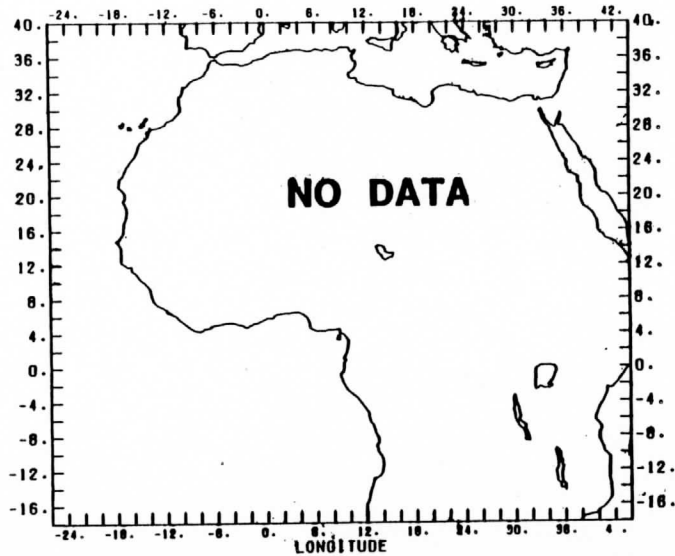
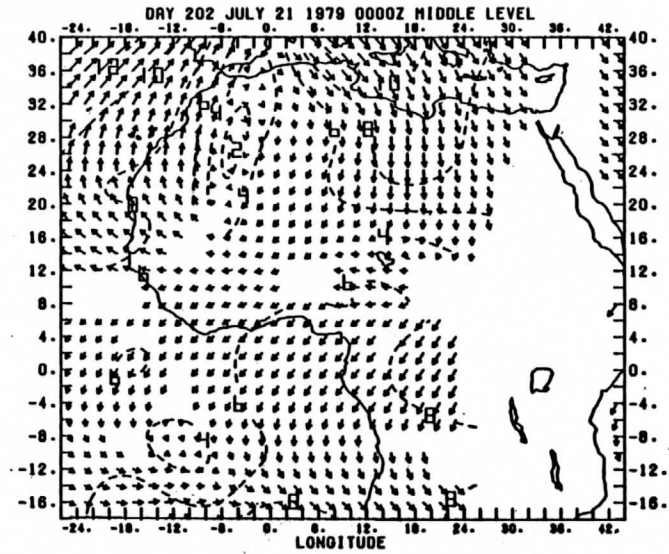
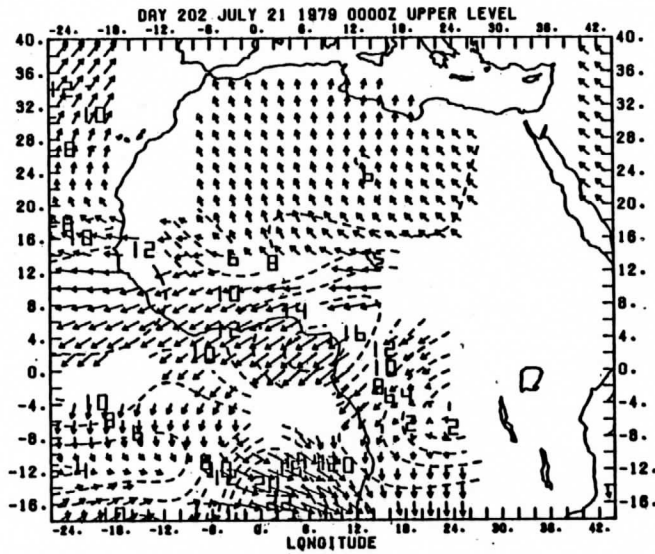
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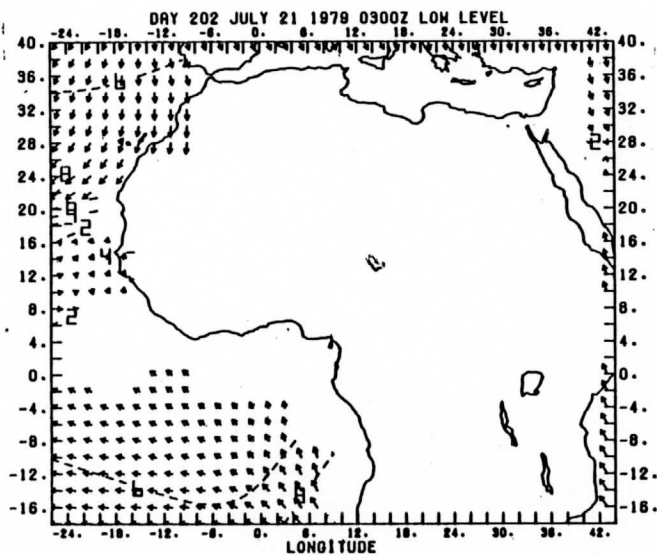
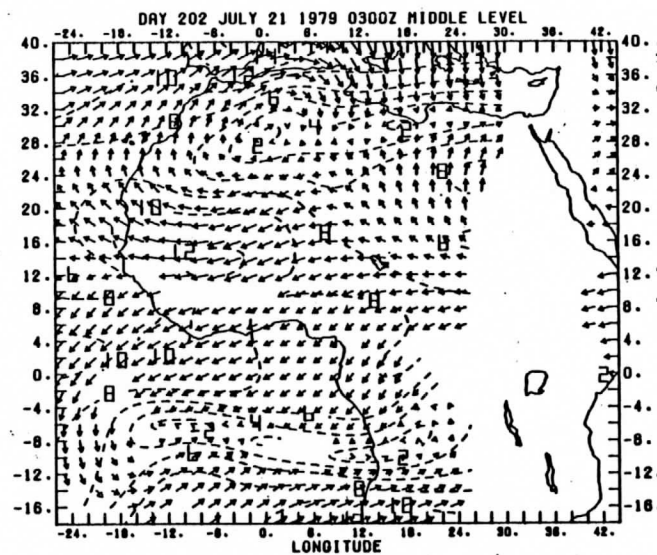
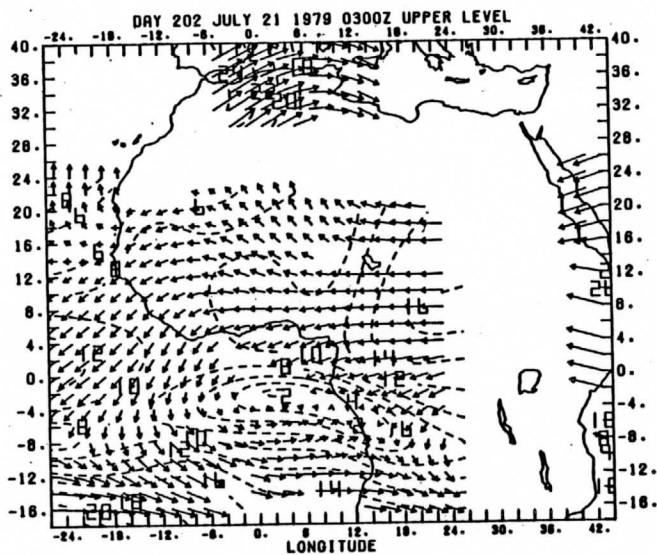
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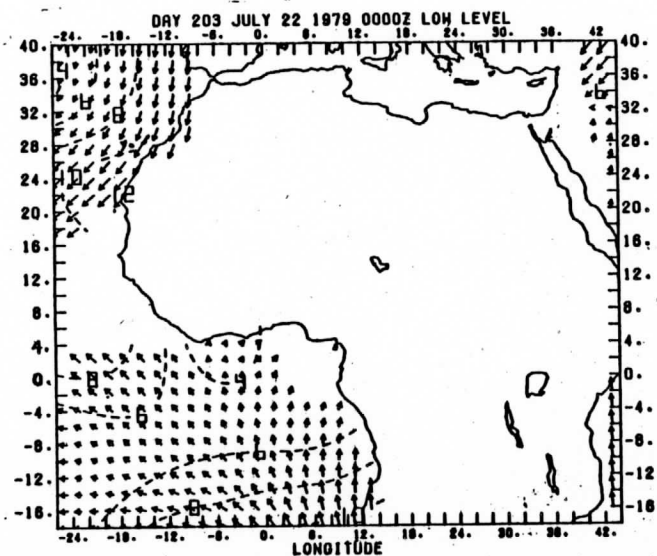
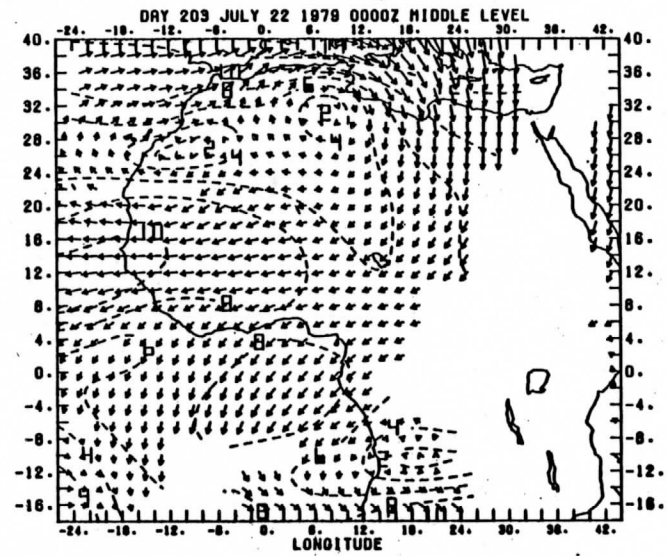
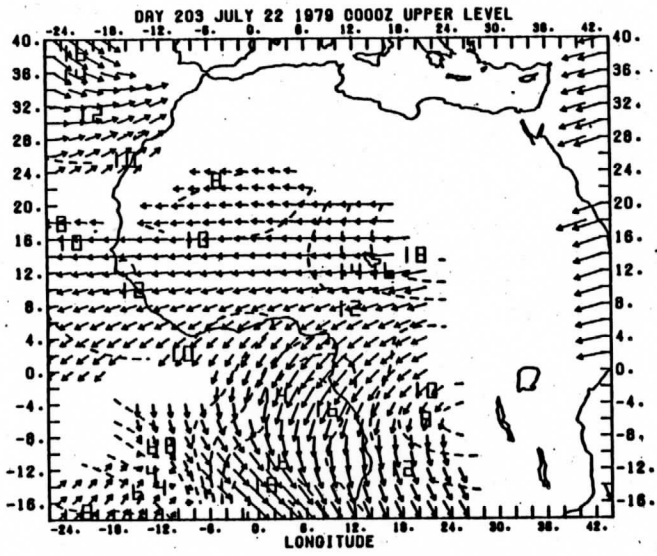
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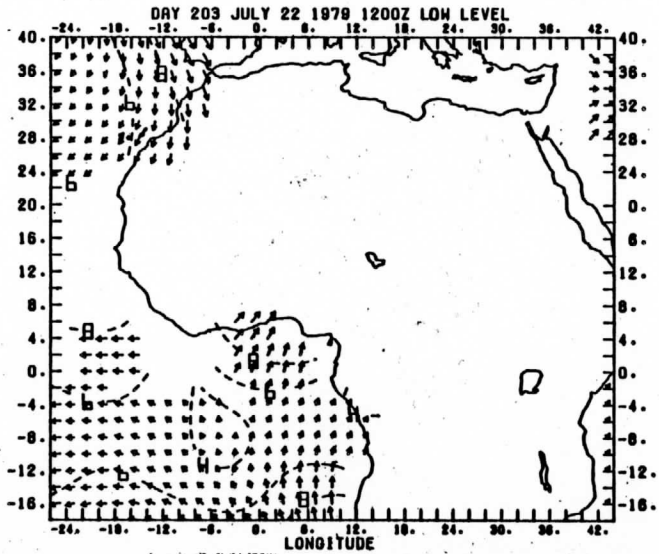
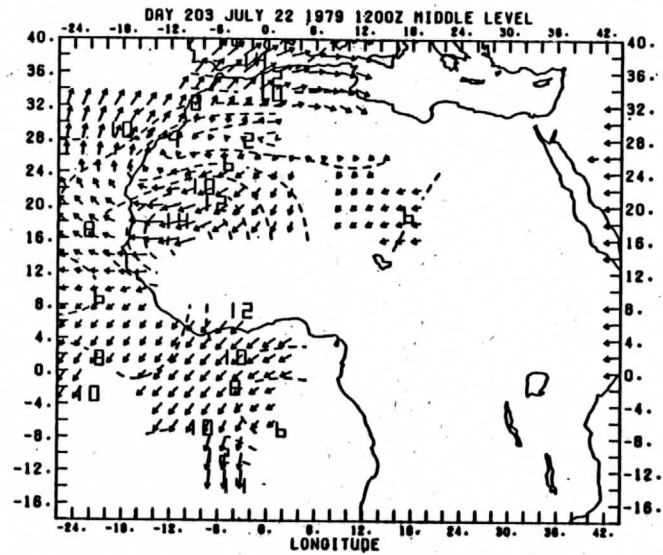
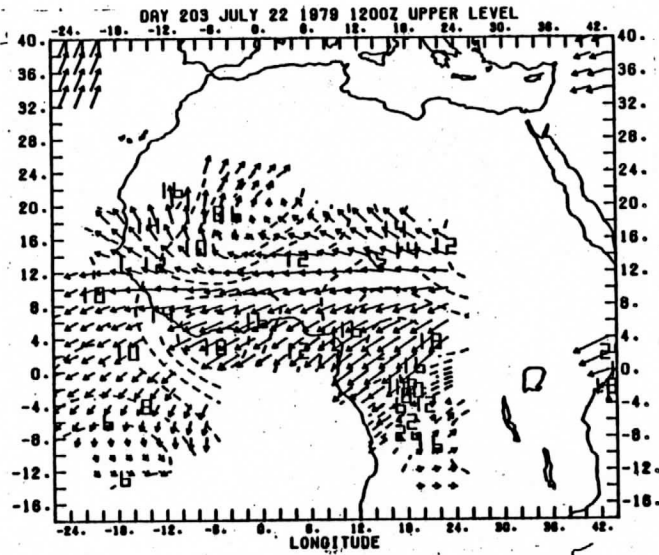
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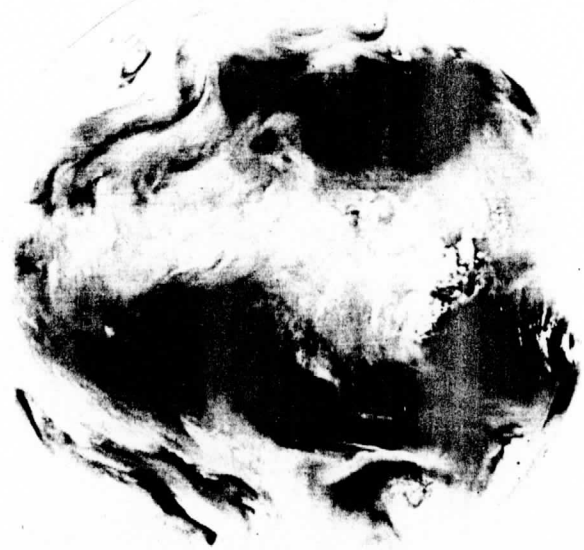
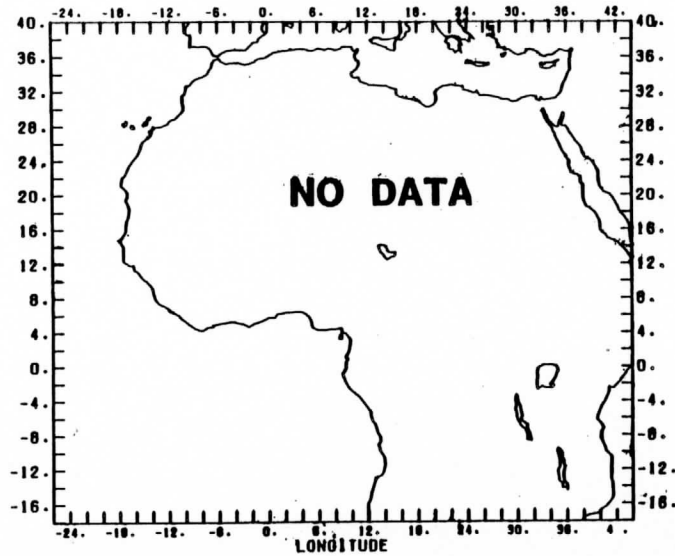
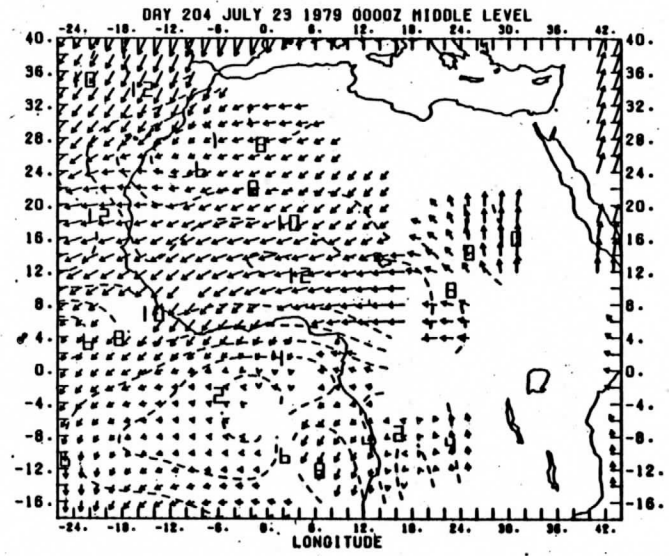
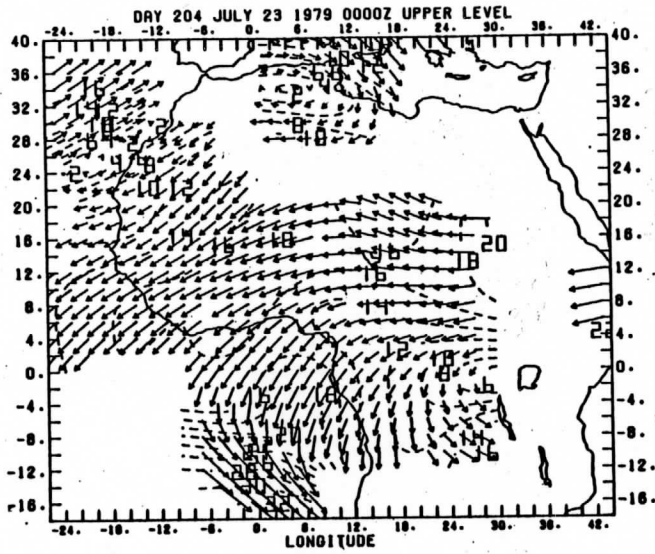
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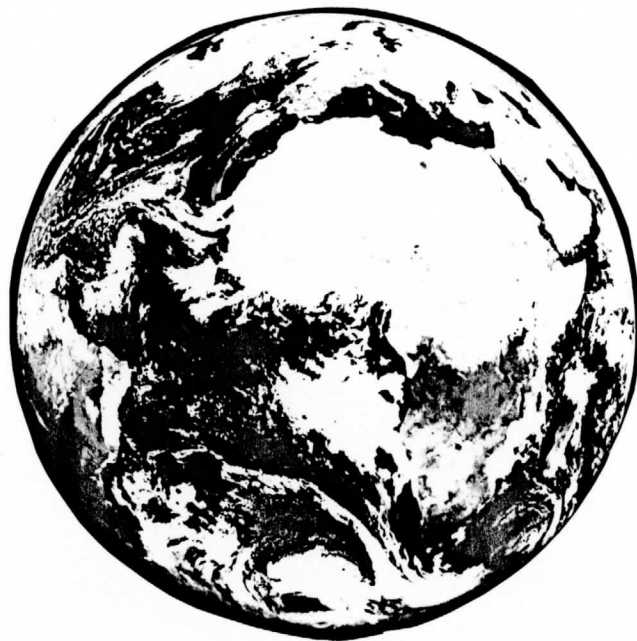
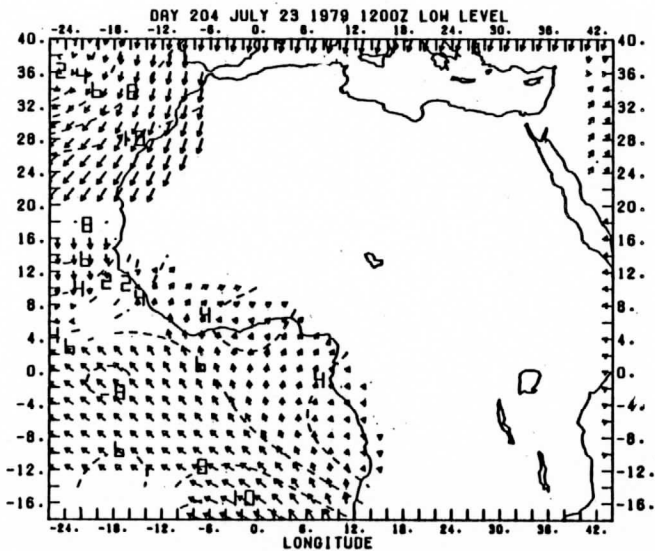
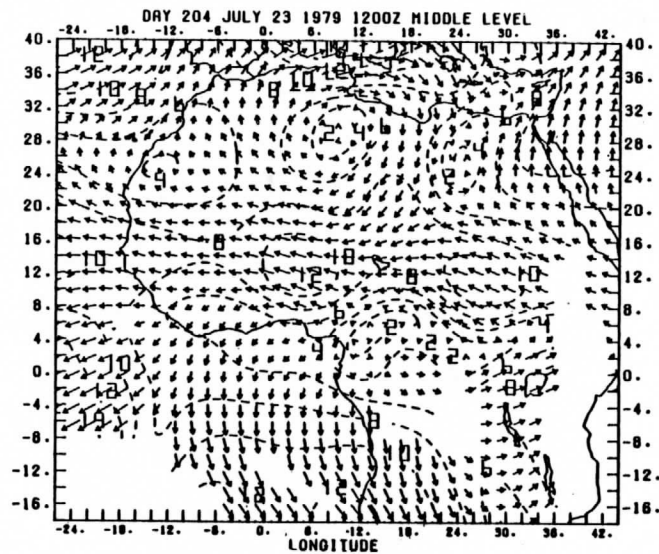
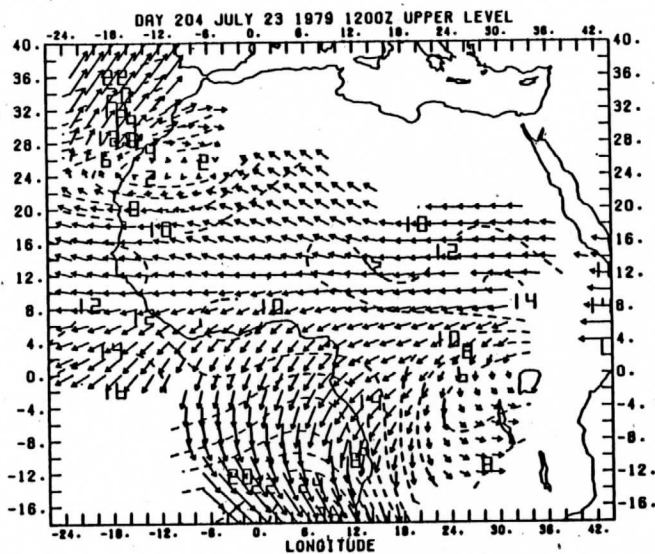
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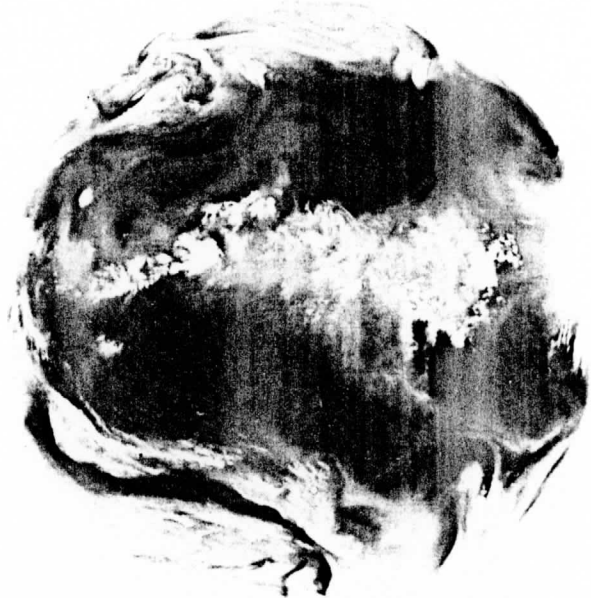
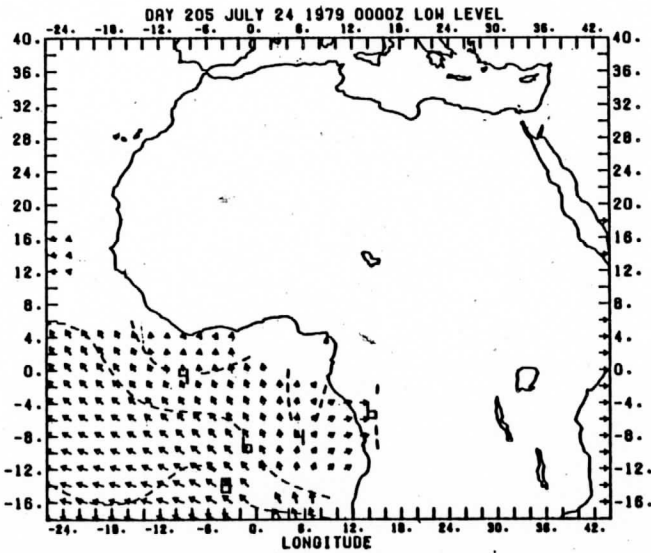
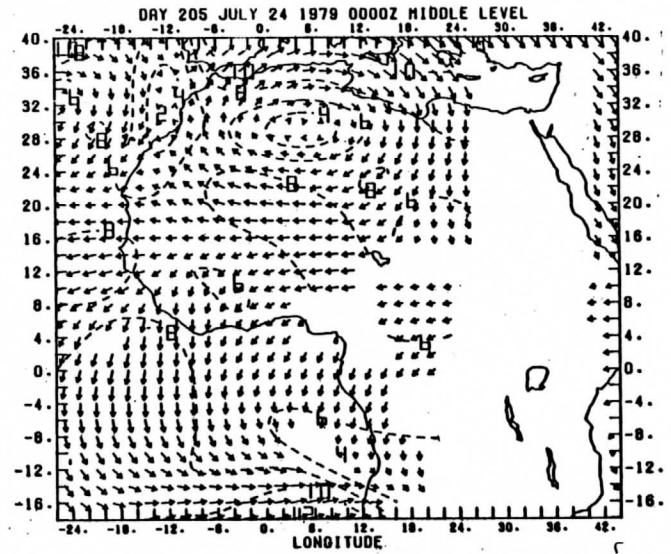
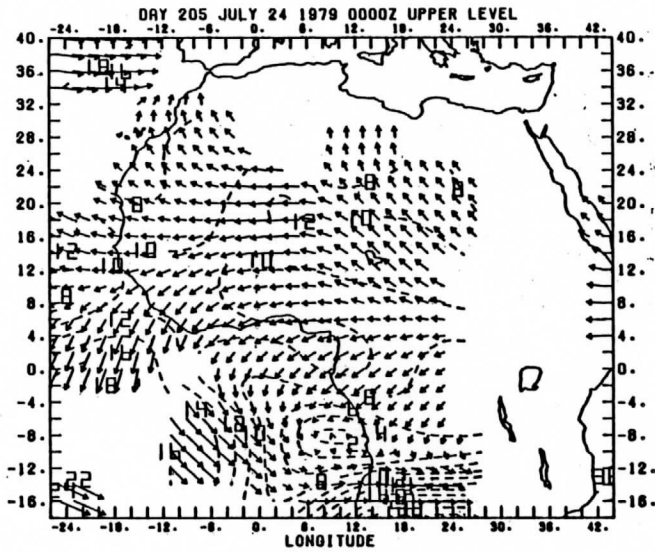
DAY 204 JULY 23, 1979 0000Z



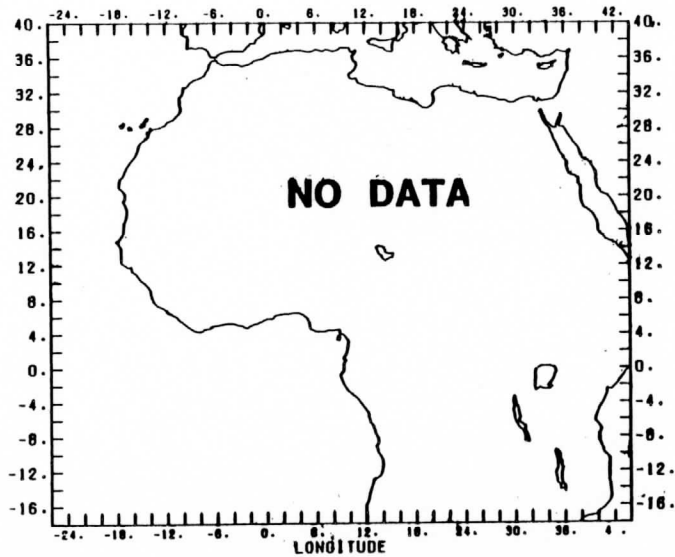
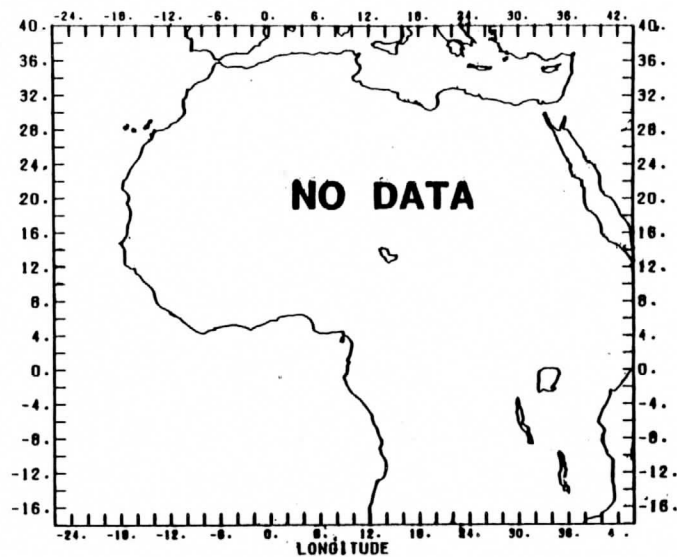
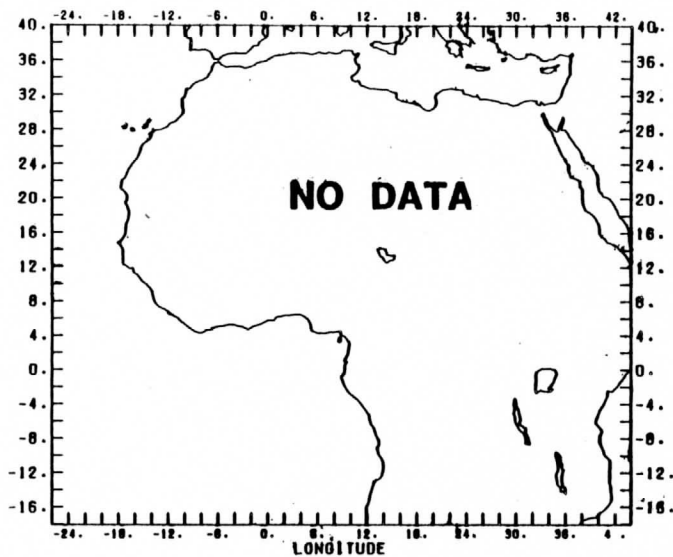
DAY 204 JULY 23, 1979 1200Z



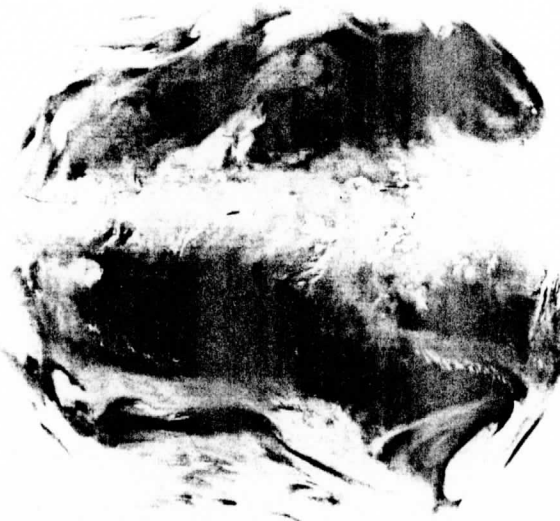
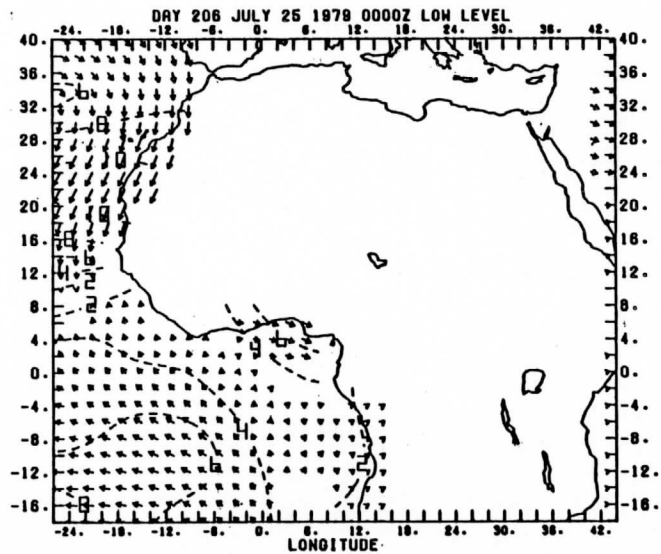
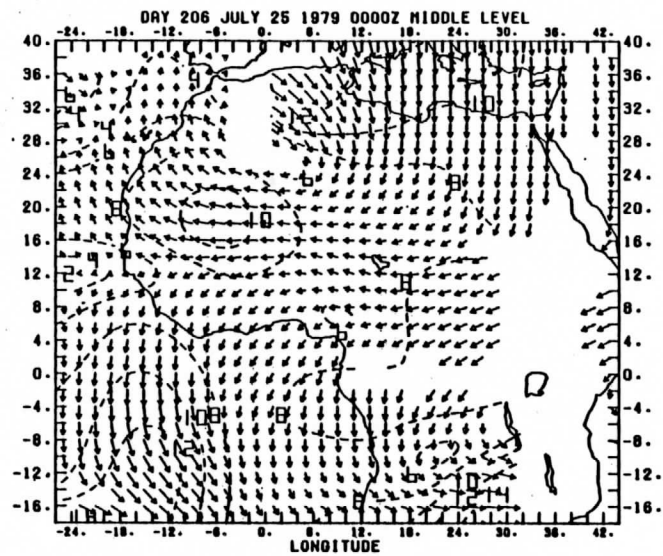
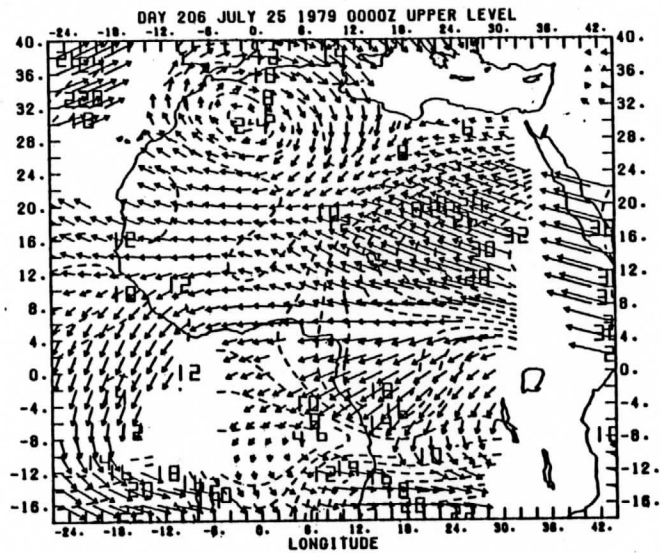
DAY 205 JULY 24, 1979 0000Z



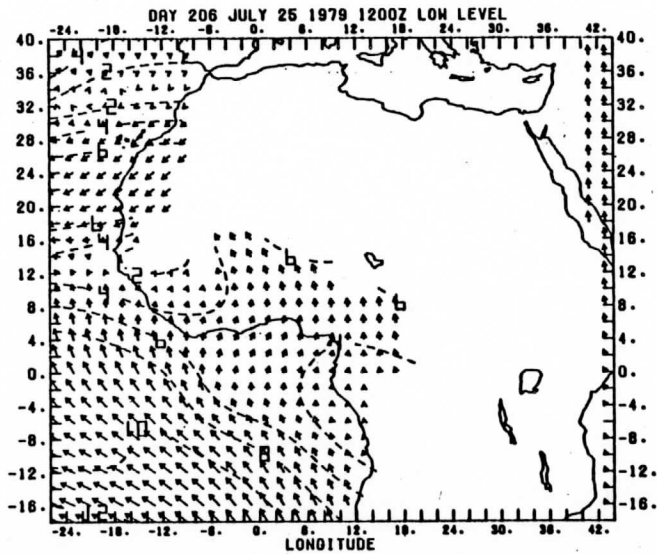
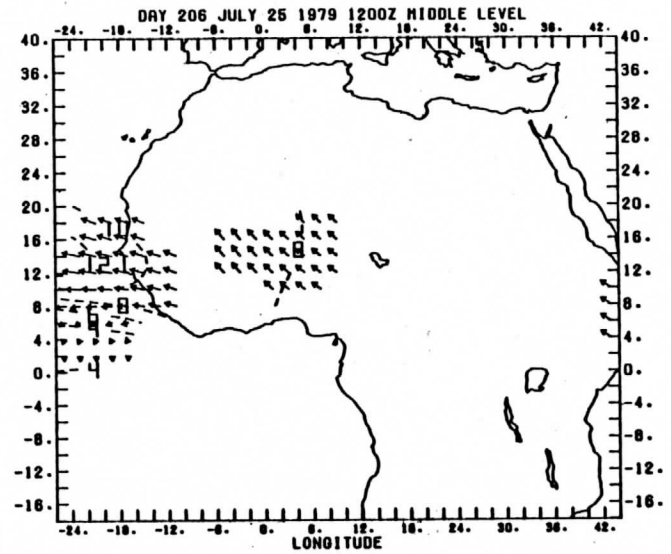
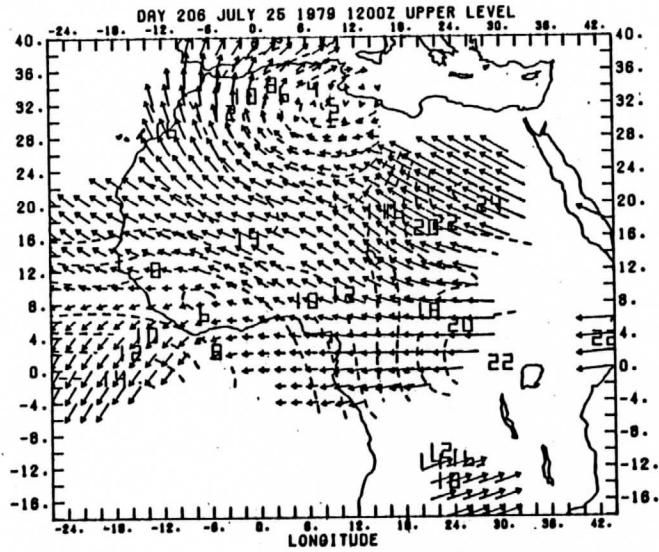
DAY 205 JULY 24, 1979 1200Z



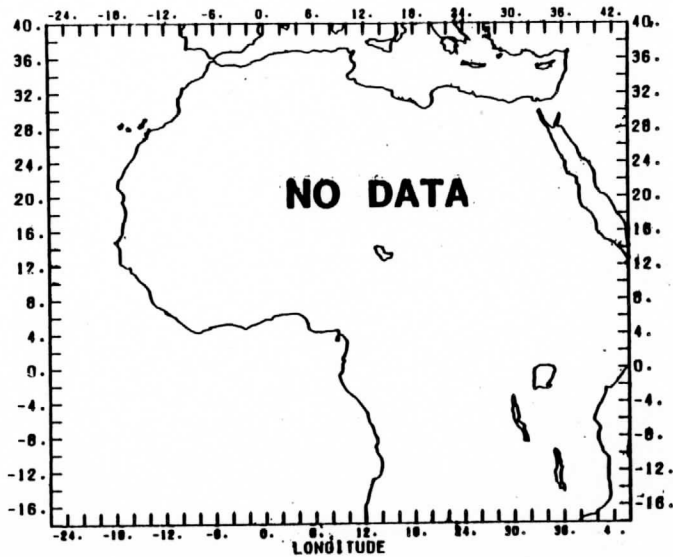
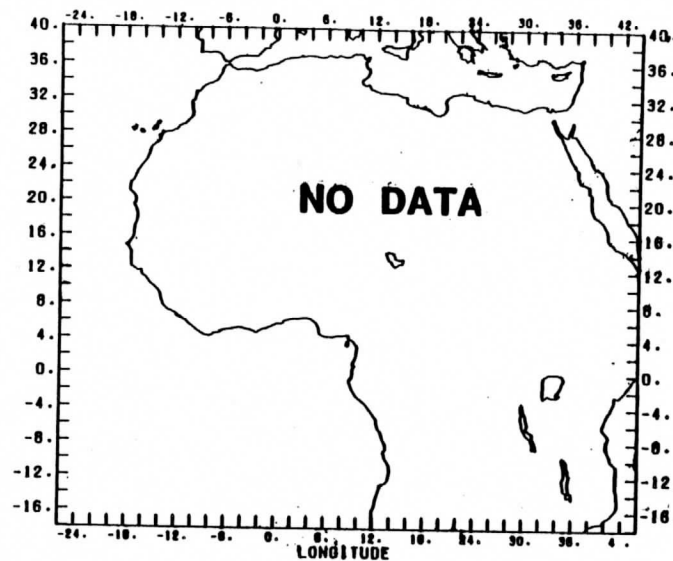
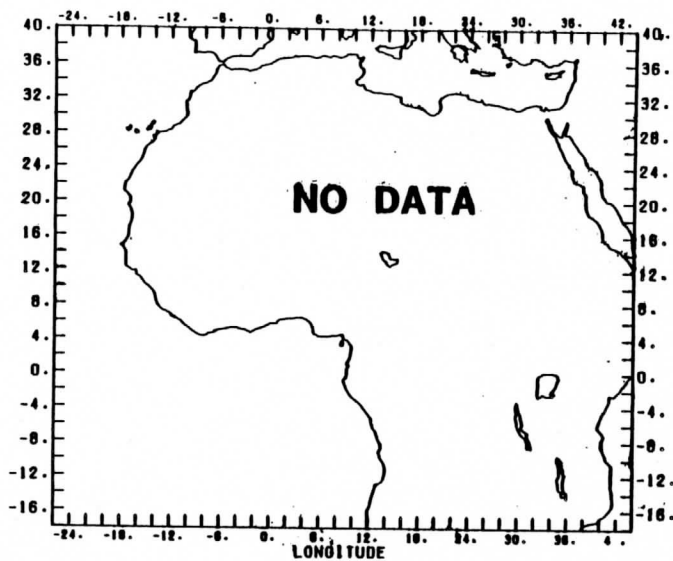
DAY 206 JULY 25, 1979 0000Z



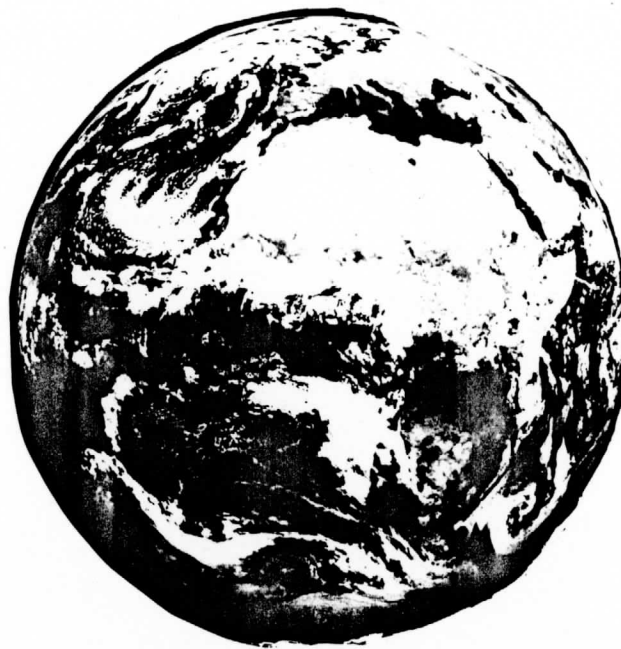
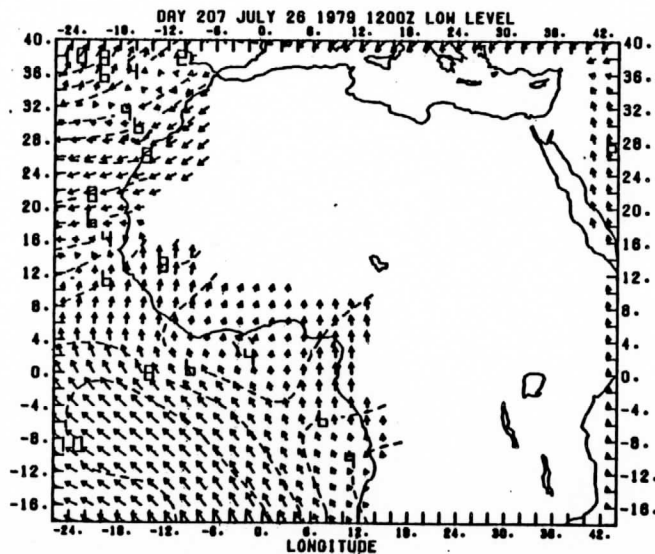
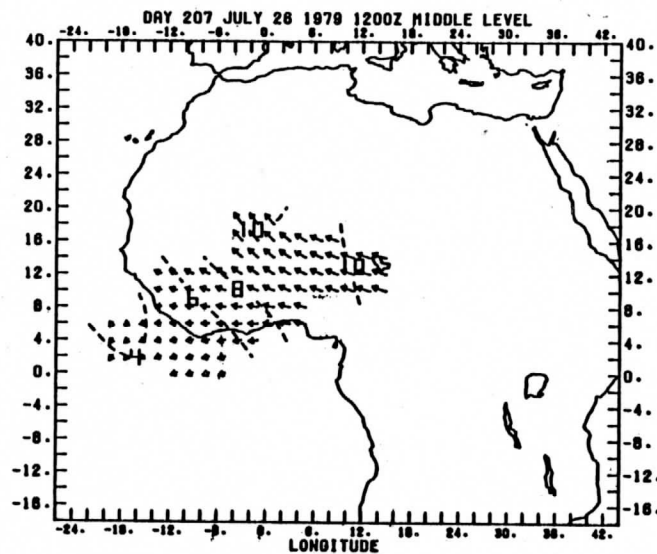
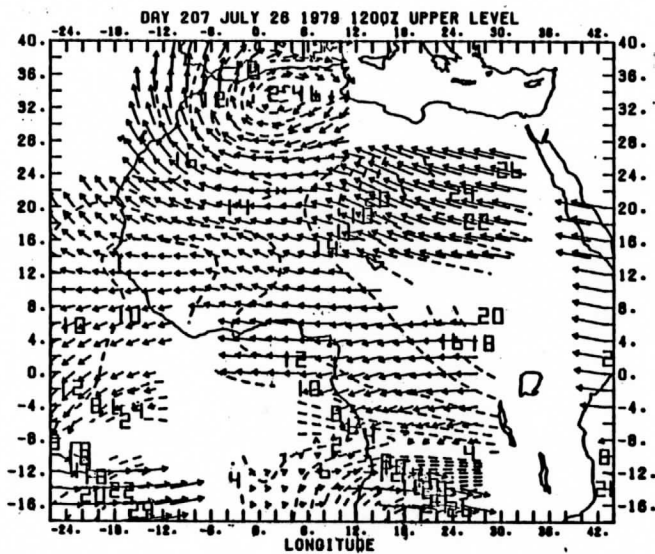
DAY 206 JULY 25, 1979 1200Z



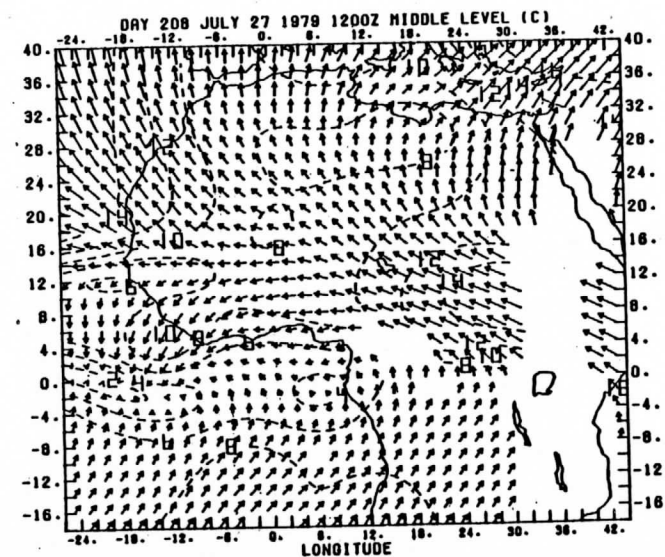
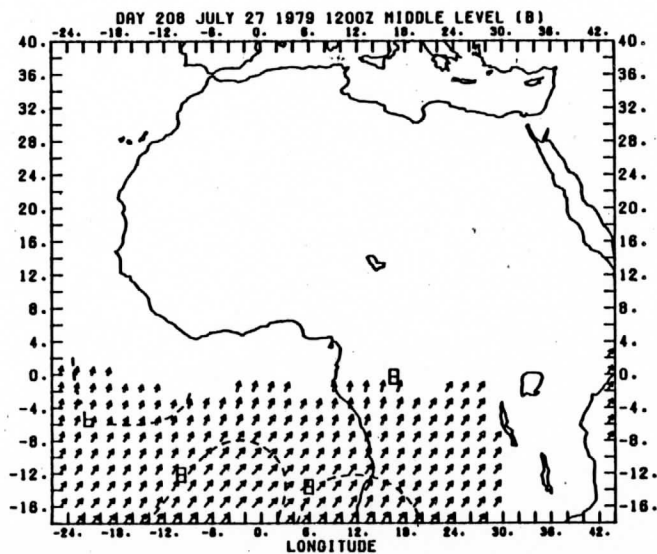
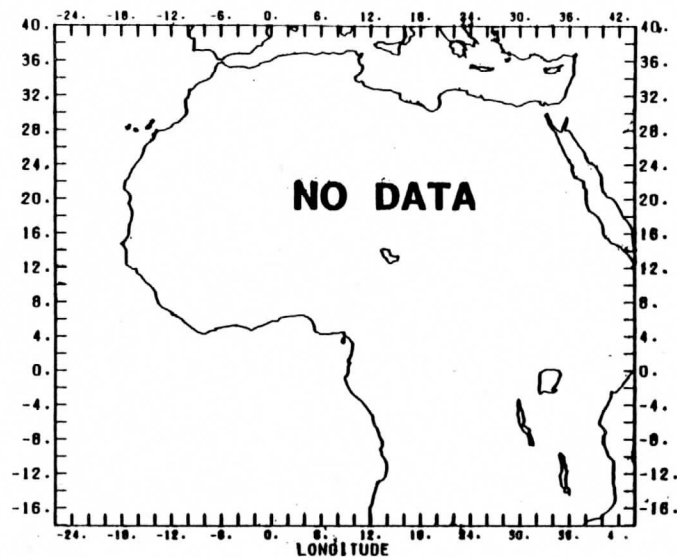
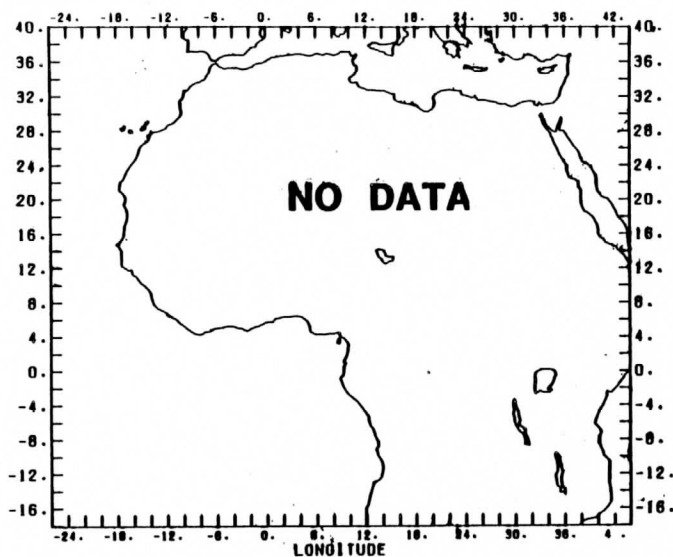
DAY 207 JULY 26, 1979 0000Z



DAY 207 JULY 26, 1979 1200Z

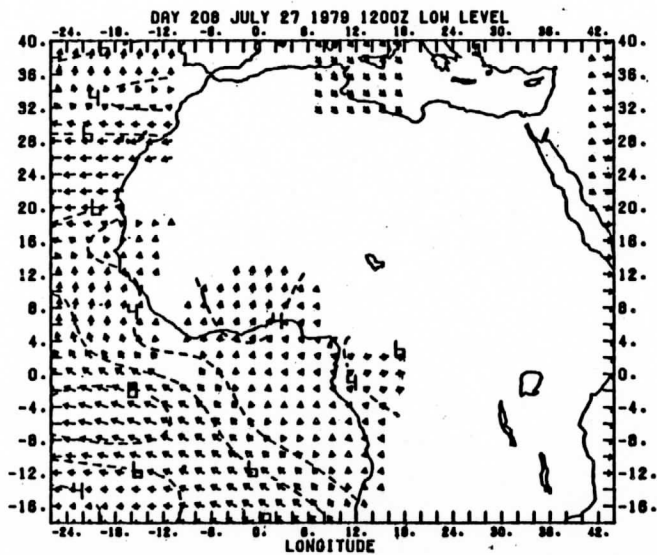
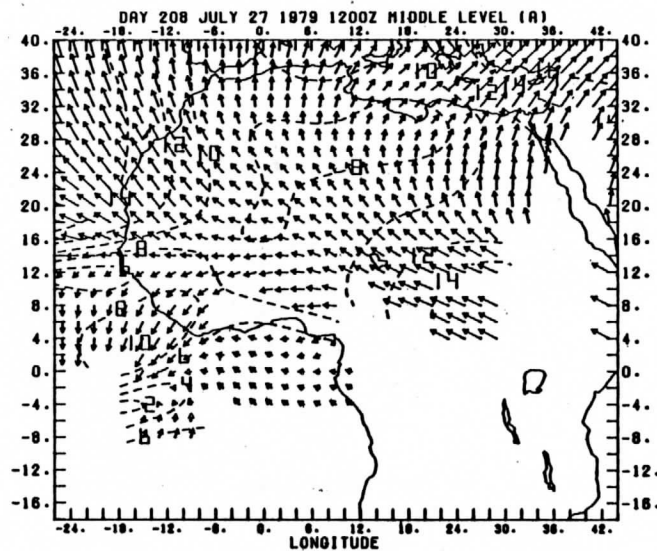
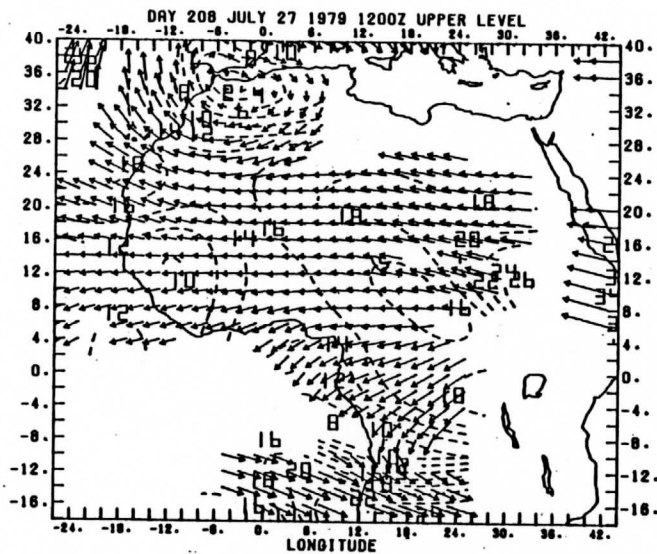


DAY 208 JULY 27, 1979 0000Z

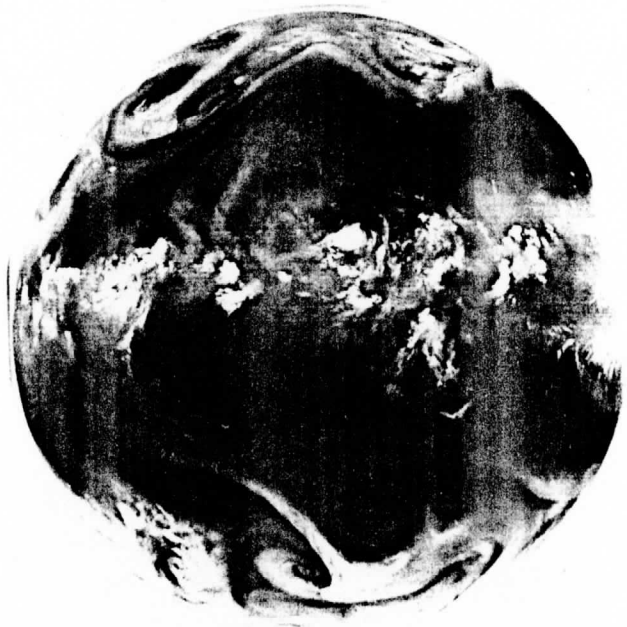
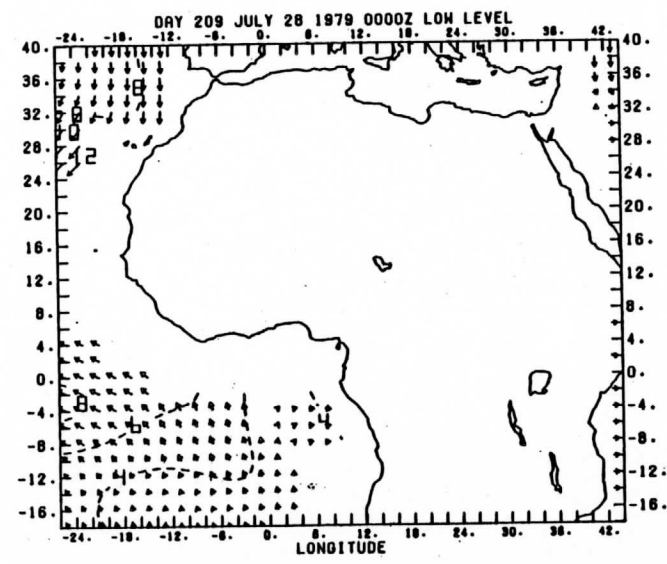
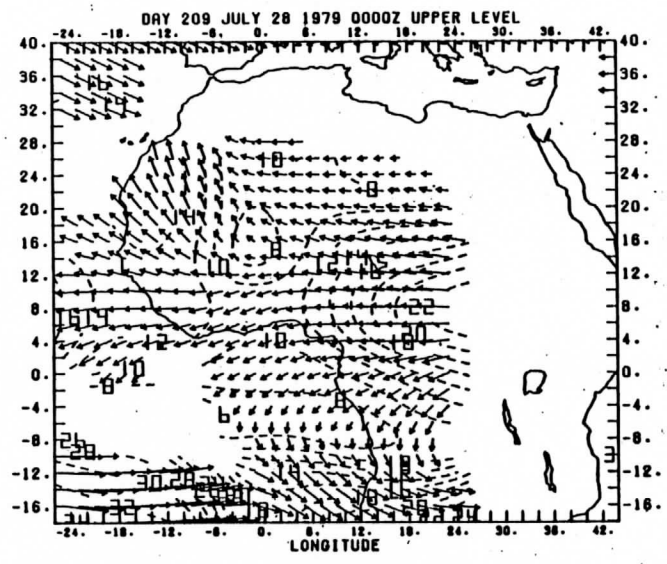
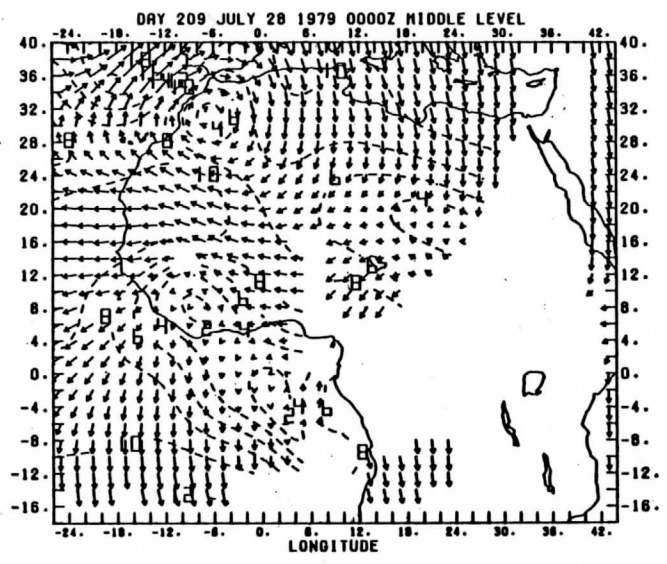


Middle level water vapor data for Day 208 present another example of multilevel flow. The map at the top left shows middle level flow at about 700 mb and the map on the right shows the result of analyzing all data without attempting to separate them. The middle level water vapor drift winds that represent the flow at the middle troposphere (600 mb - 400 mb) is shown on the next page.

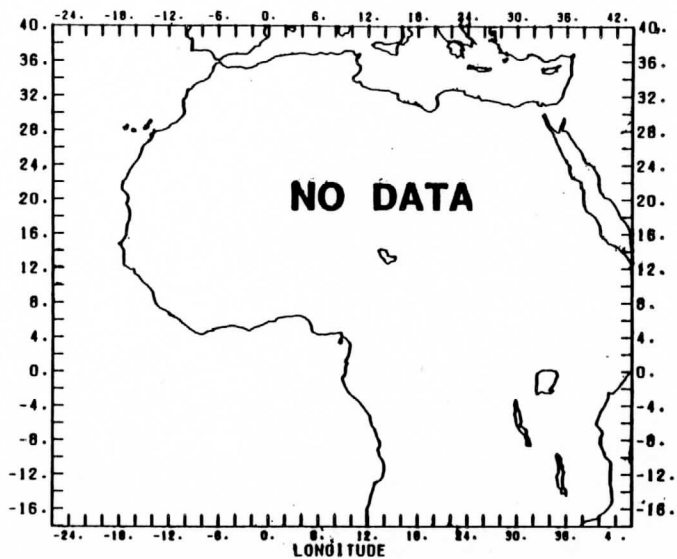
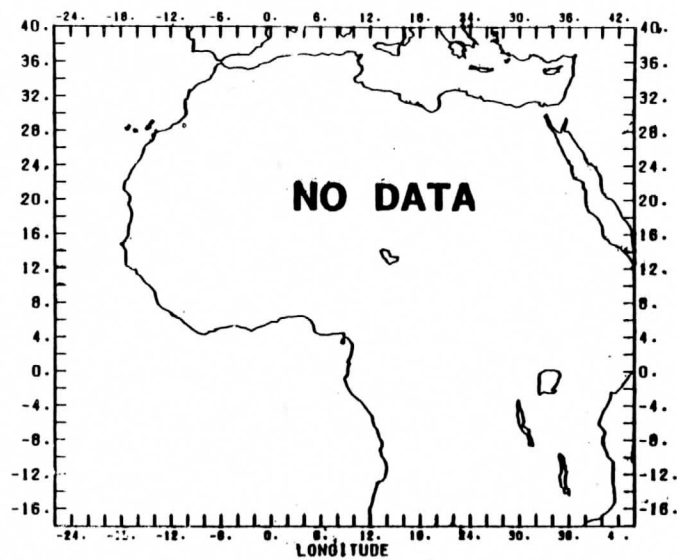
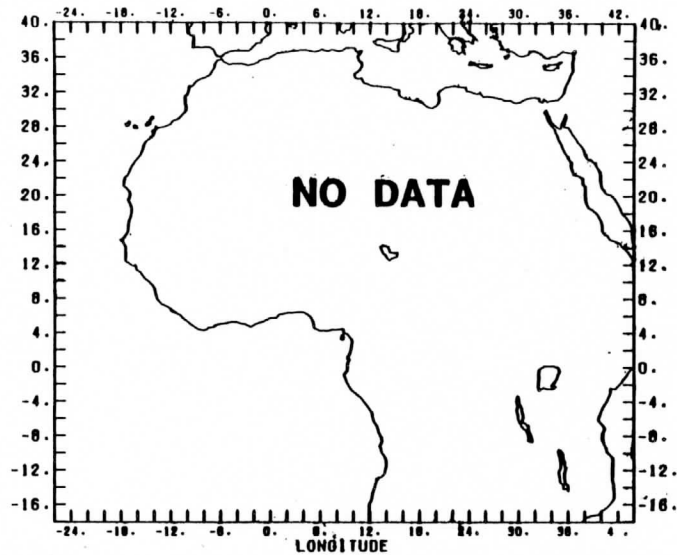
DAY 208 JULY 27, 1979 1200Z



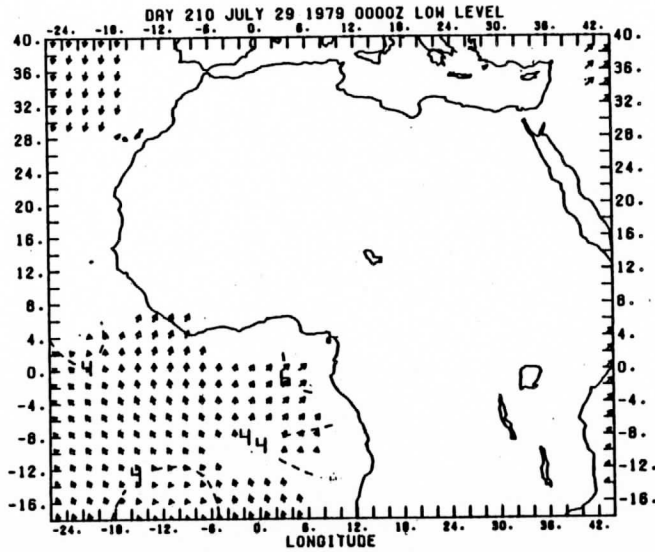
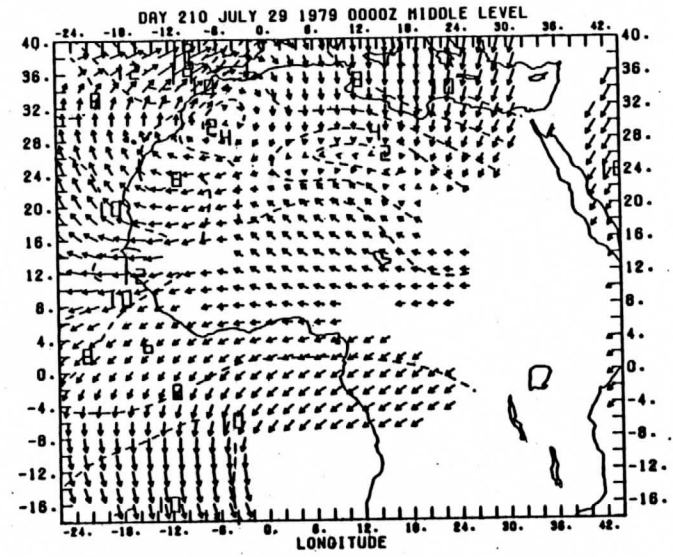
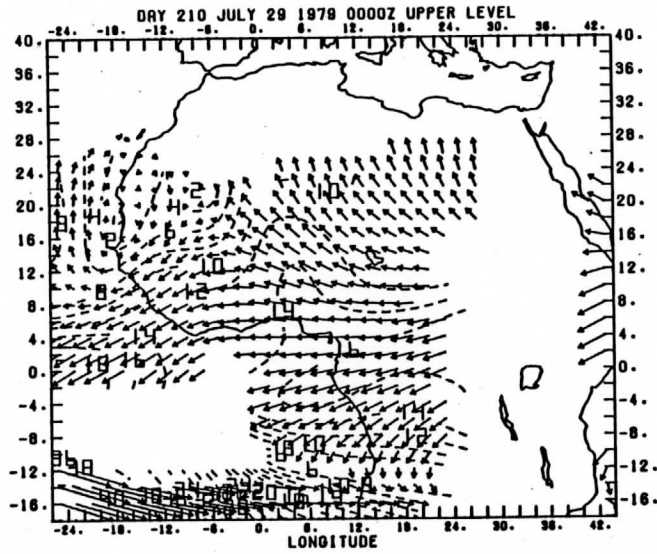
DAY 209 JULY 28, 1979 0000Z



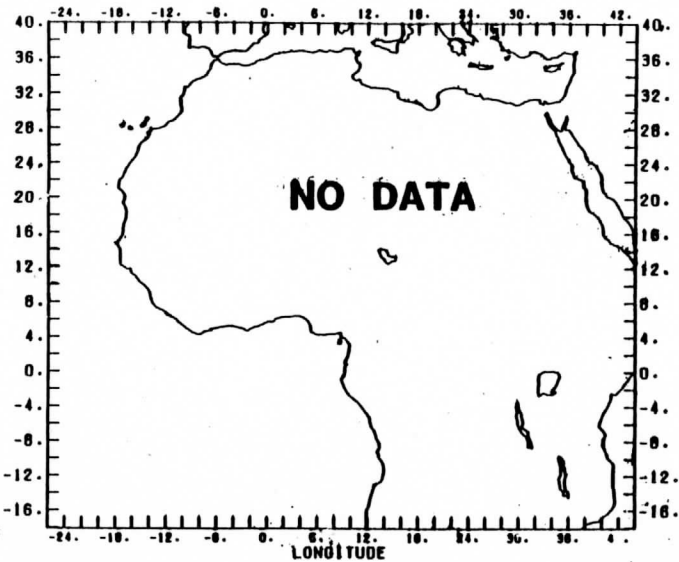
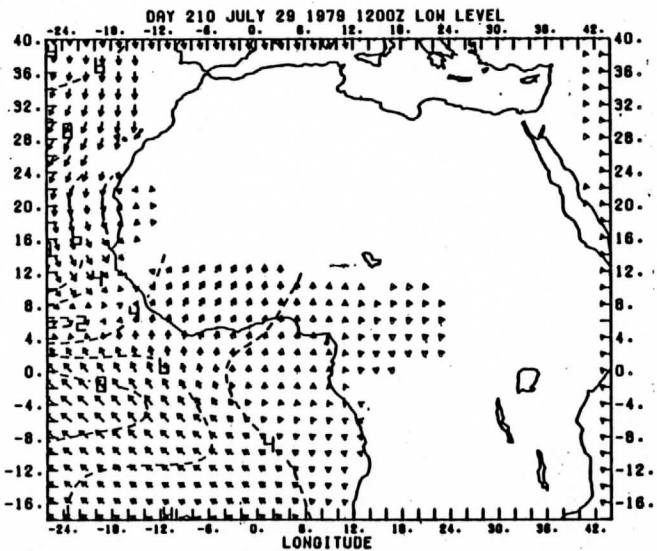
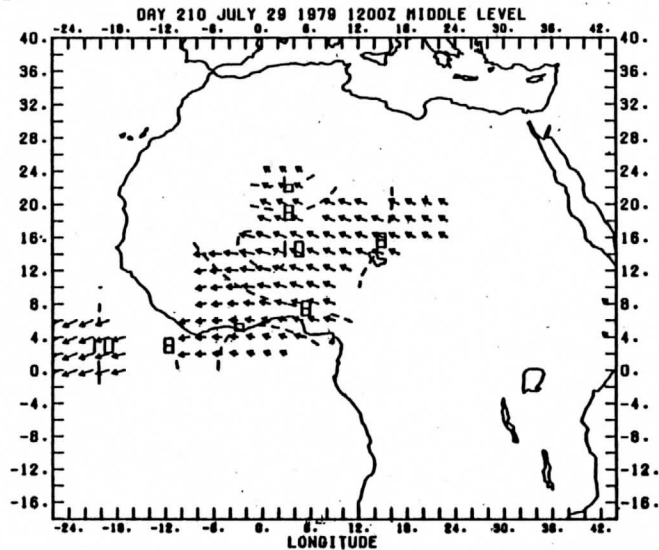
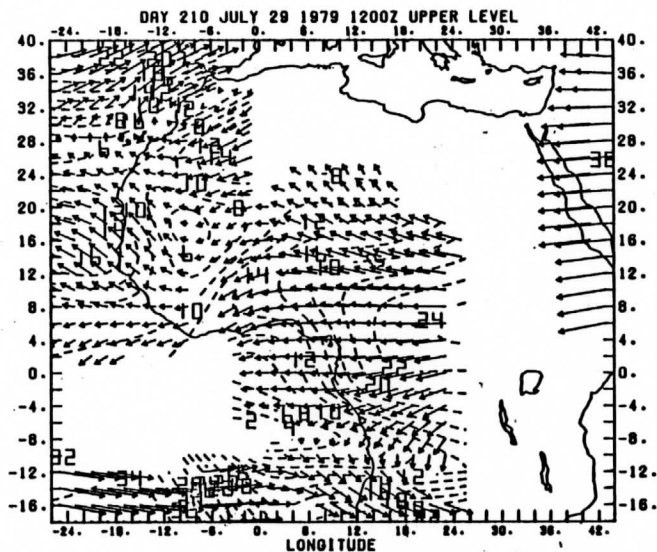
DAY 209 JULY 28, 1979 1200Z



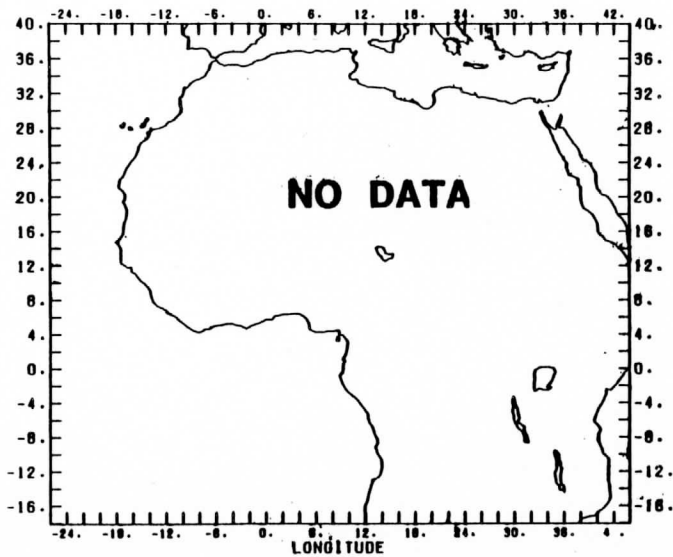
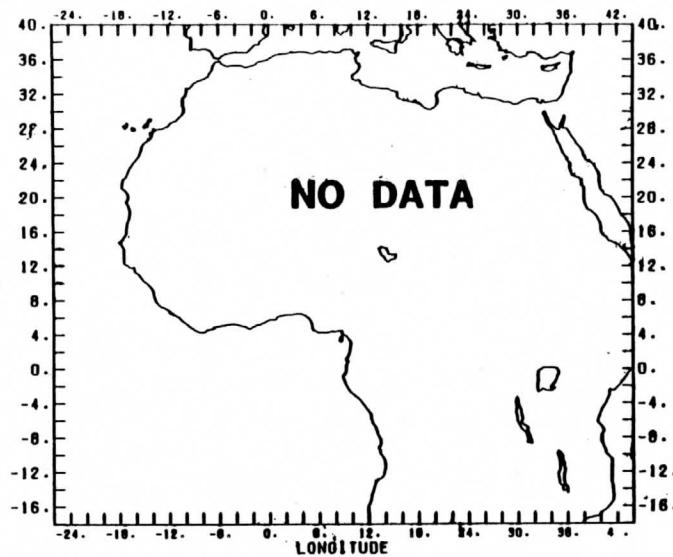
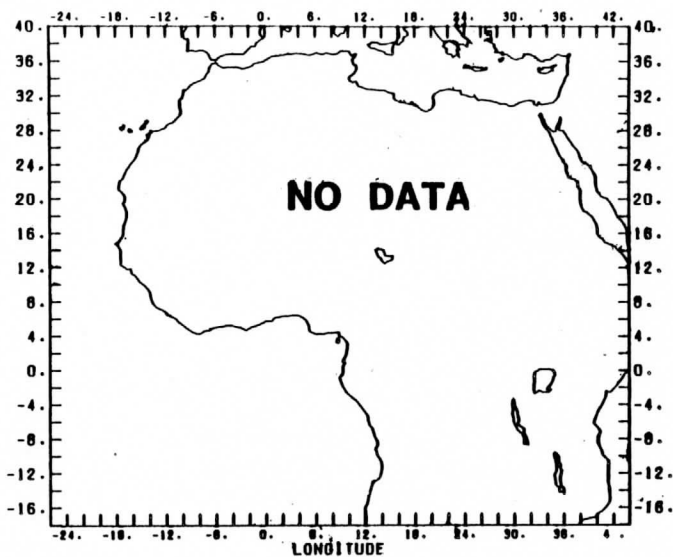
DAY 210 JULY 29, 1979 0000Z



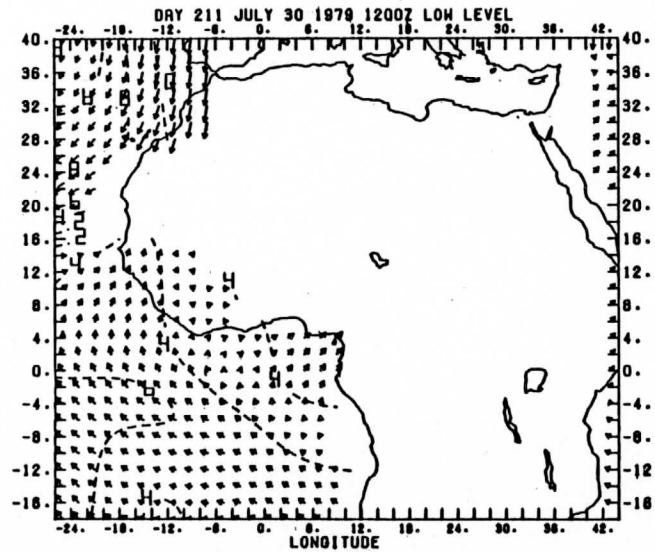
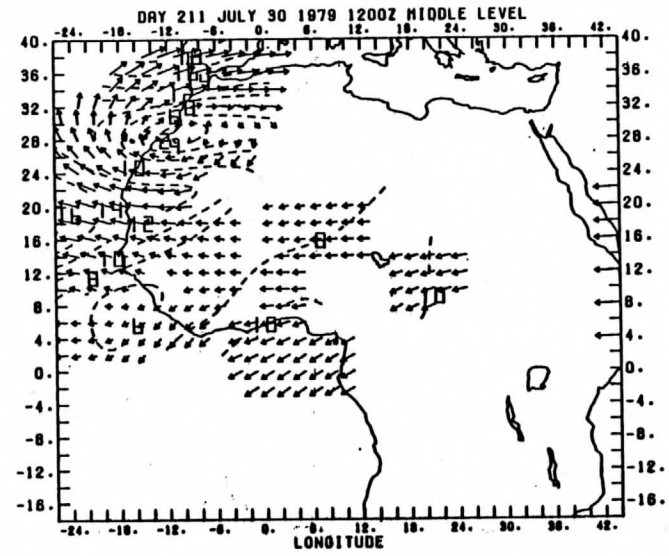
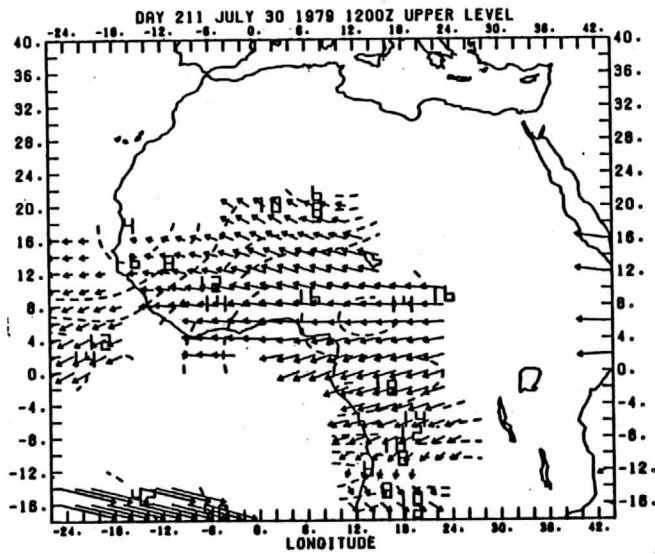
DAY 210 JULY 29, 1979 1200Z



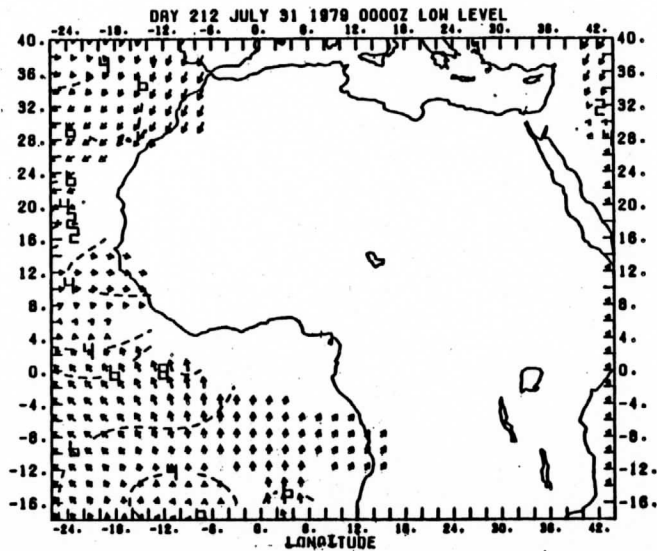
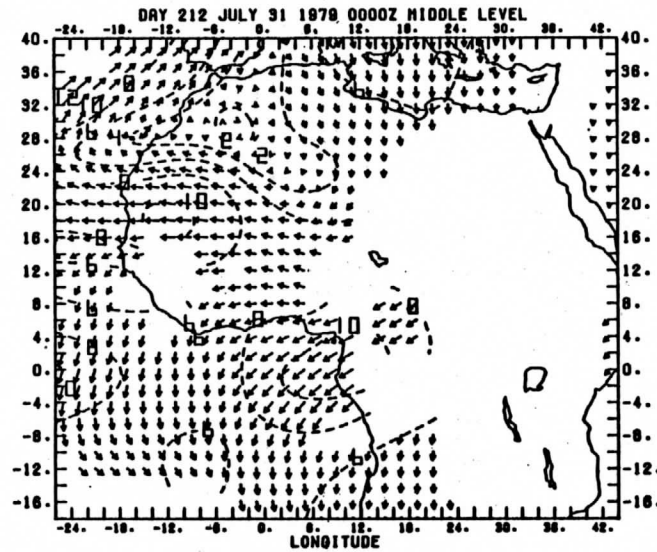
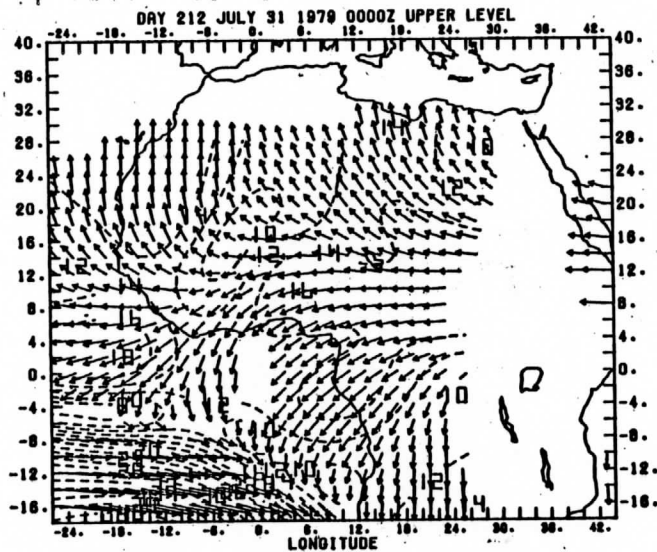
DAY 211 JULY 30, 1979 0000Z



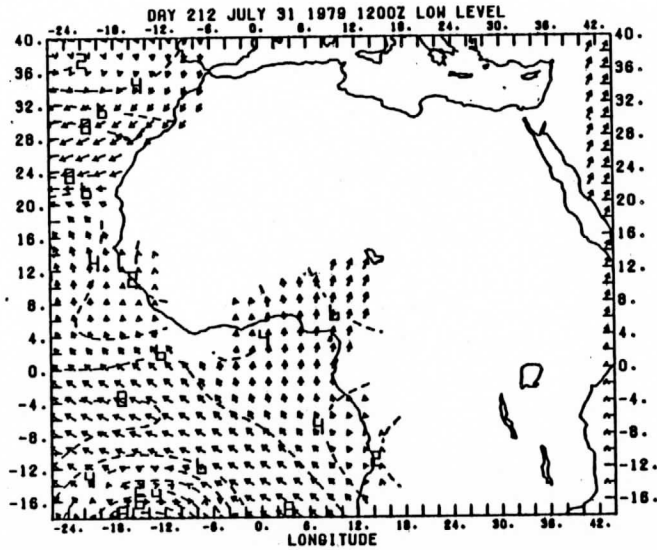
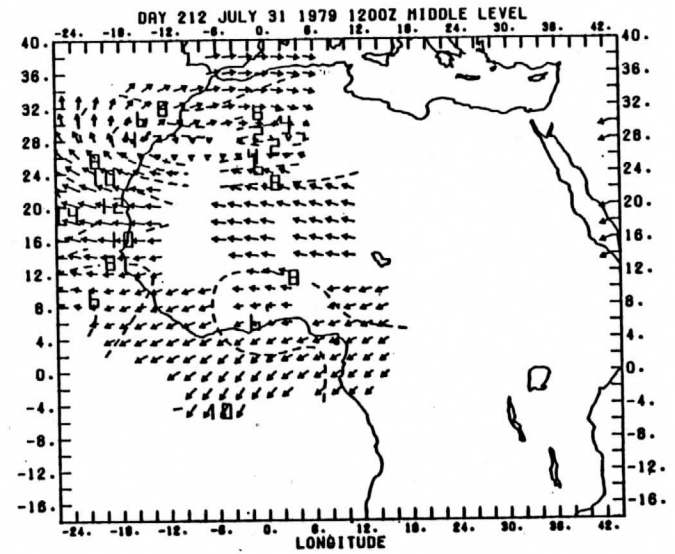
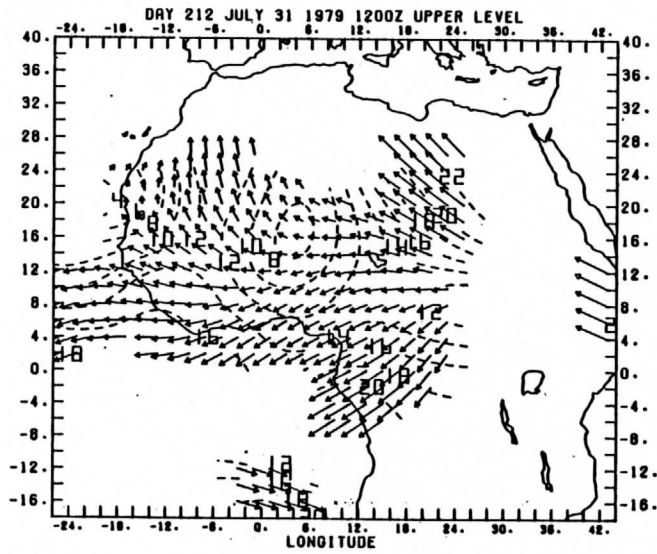
DAY 211 JULY 30, 1979 1200Z



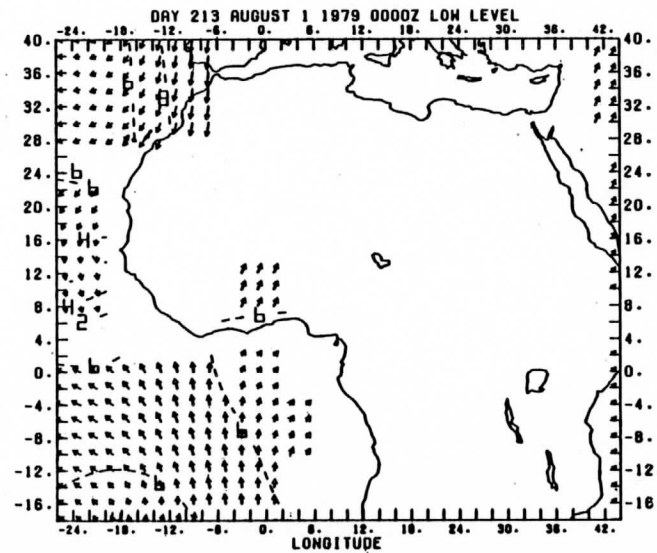
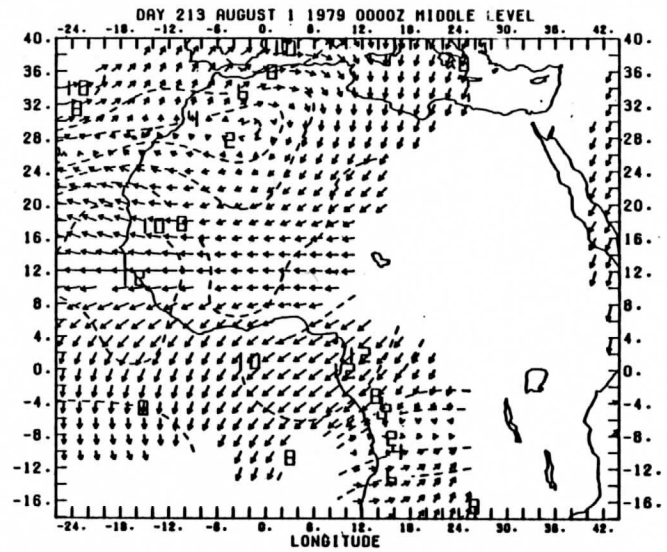
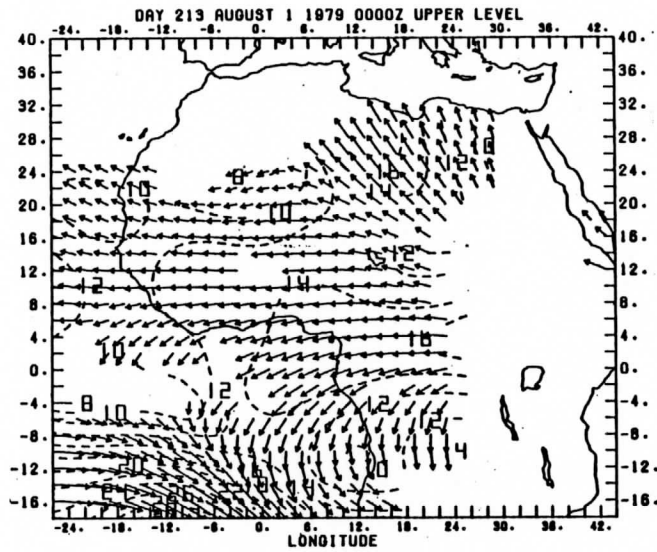
DAY 212 JULY 31, 1979 0000Z



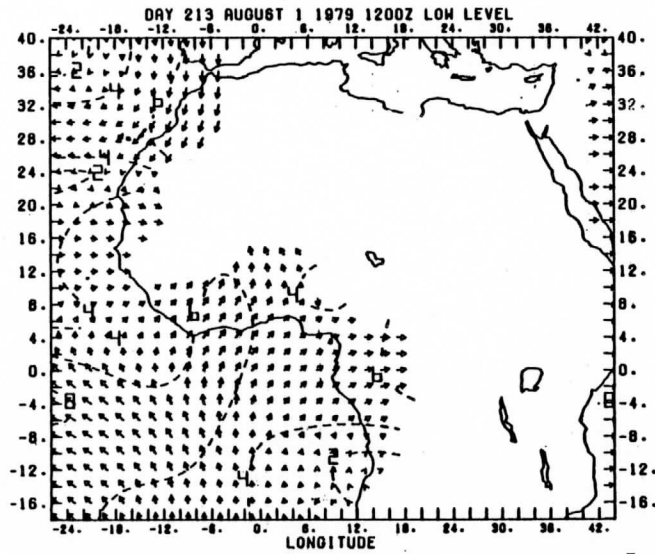
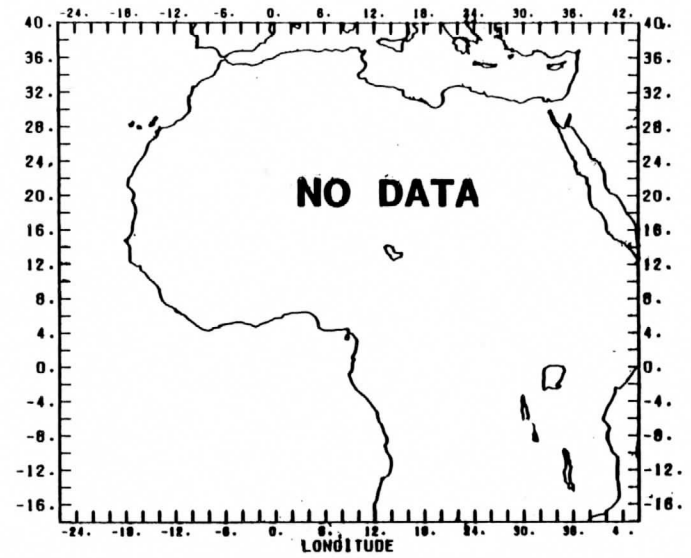
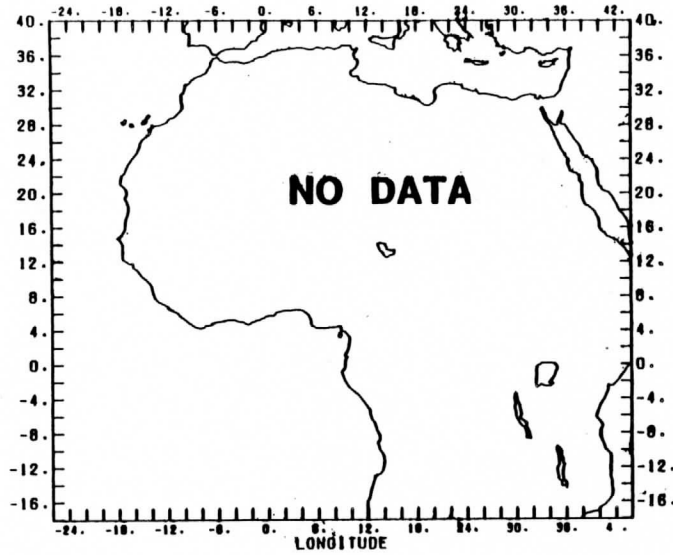
DAY 212 JULY 31, 1979 1200Z



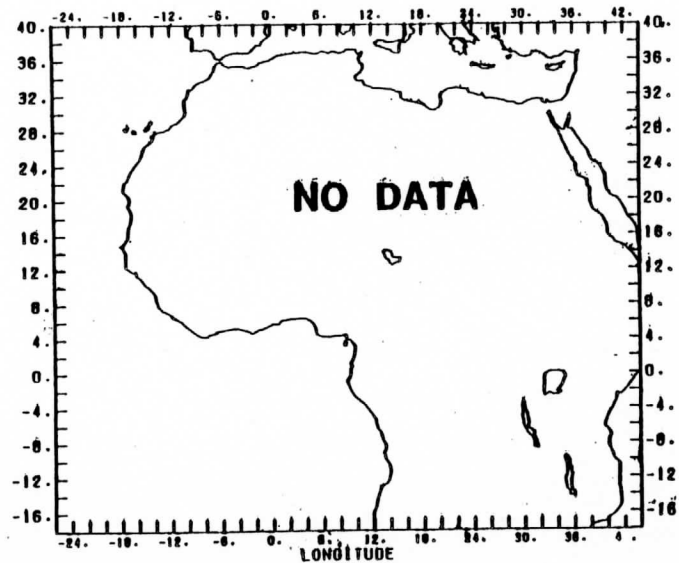
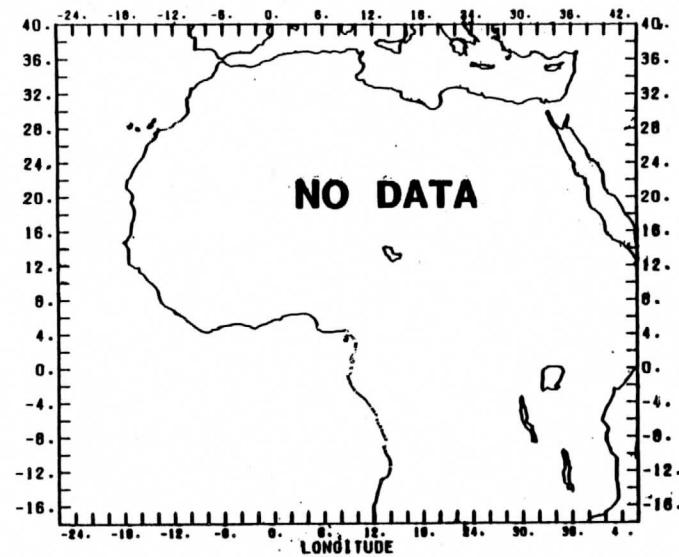
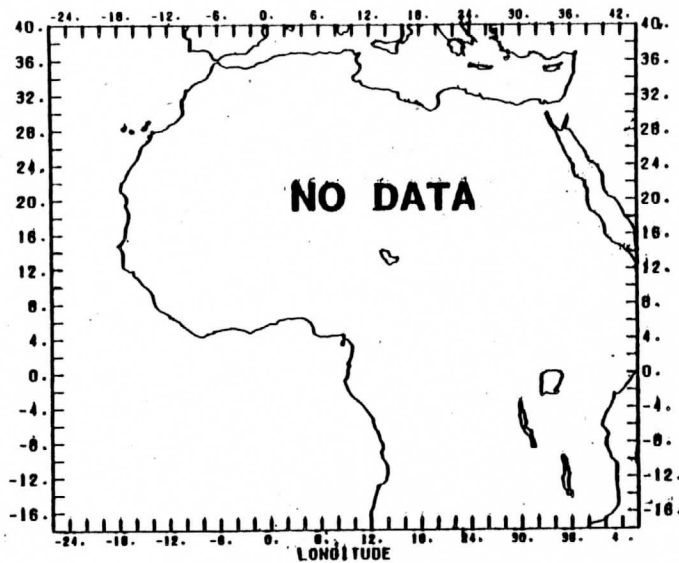
DAY 213 AUGUST 1, 1979 0000Z



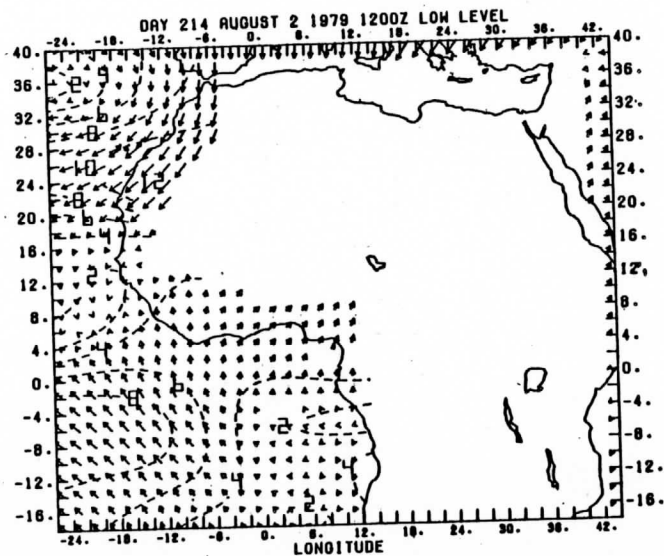
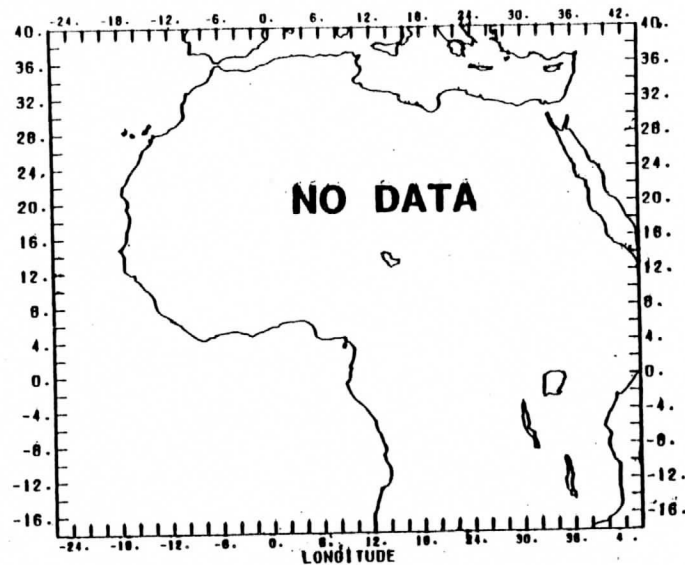
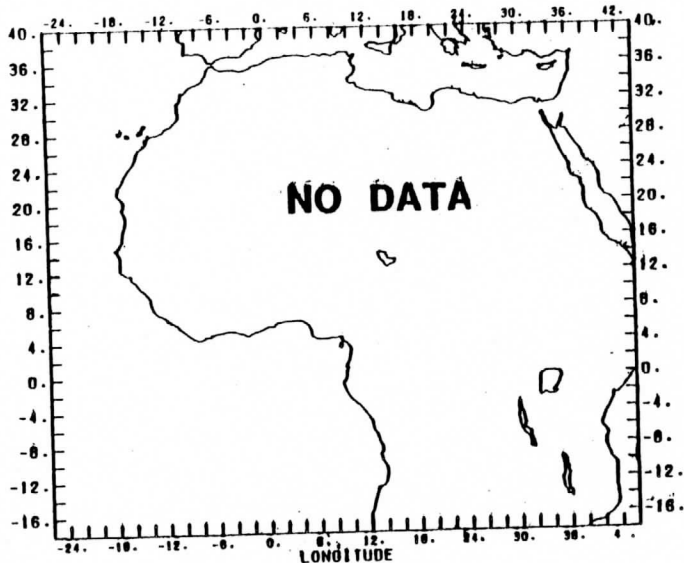
DAY 213 AUGUST 1, 1979 1200Z



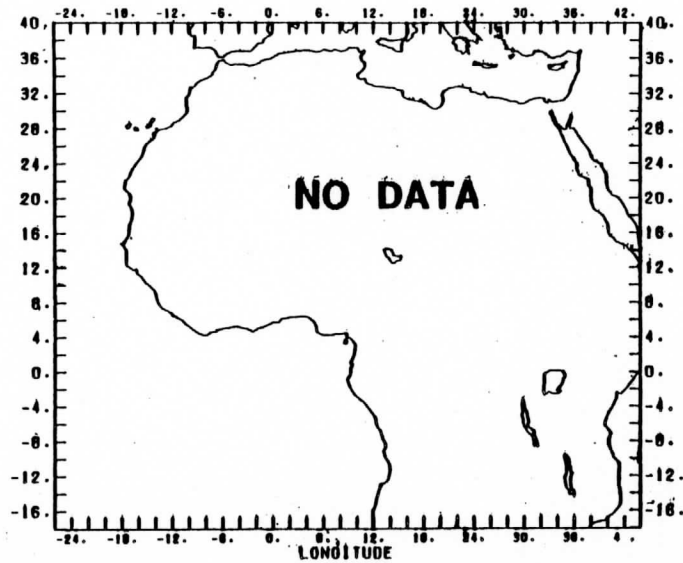
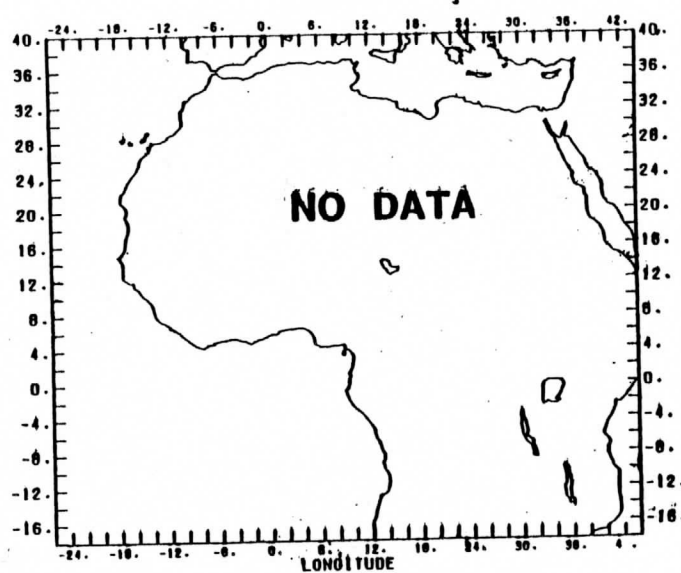
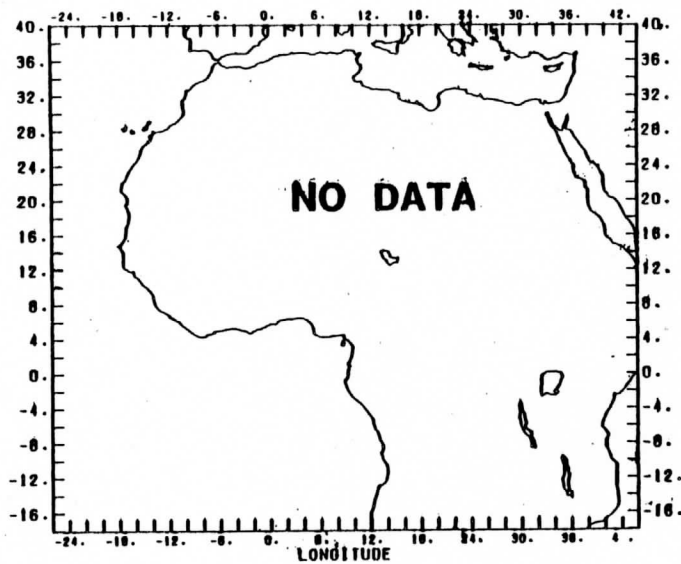
DAY 214 AUGUST 2, 1979 0000Z



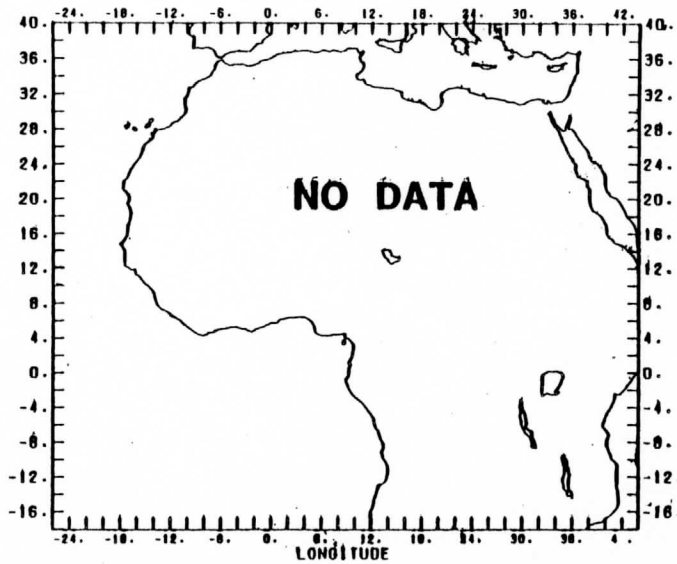
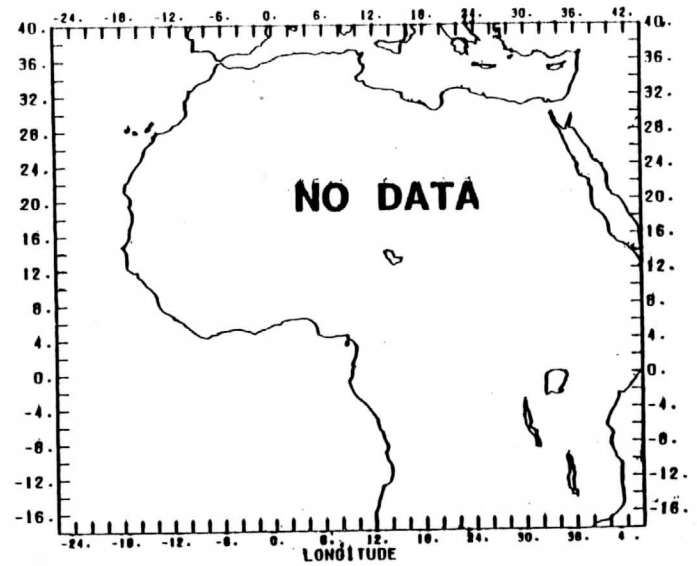
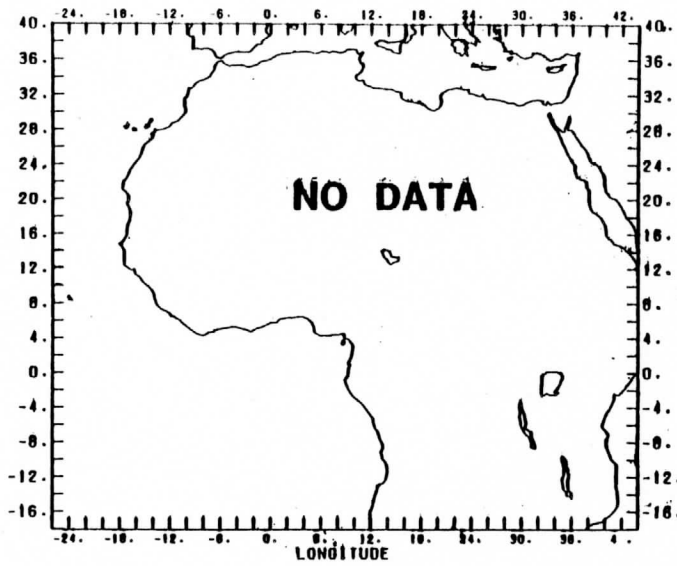
DAY 214 AUGUST 2, 1979 1200Z



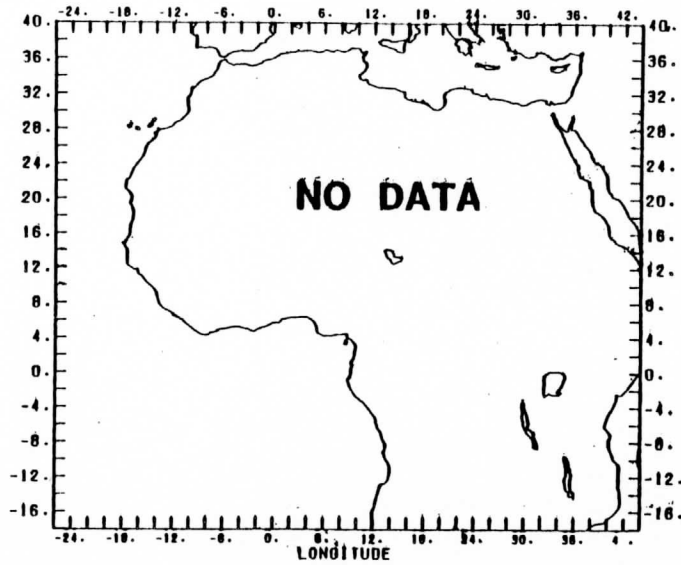
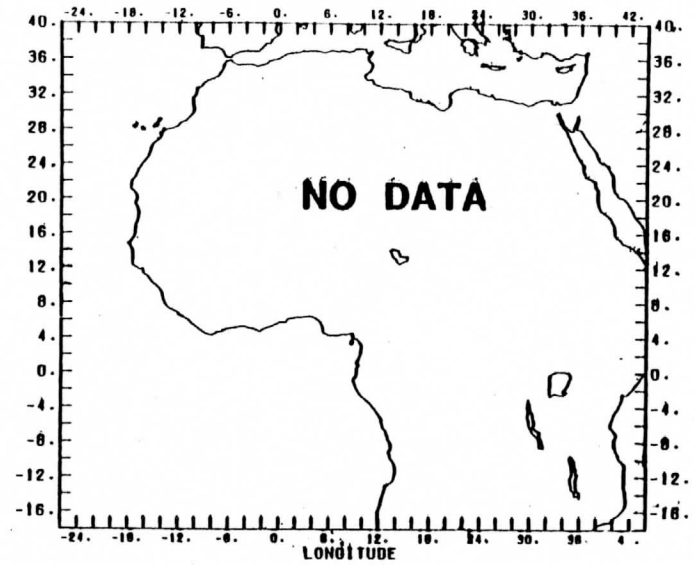
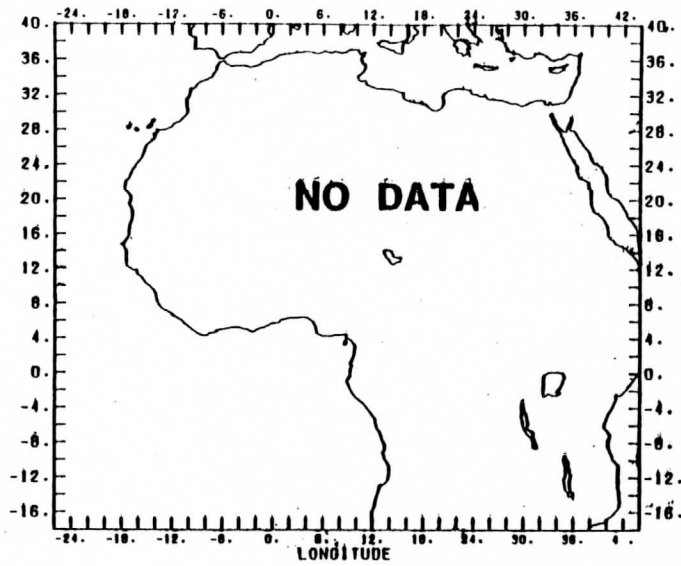
DAY 215 AUGUST 3, 1979 0000Z



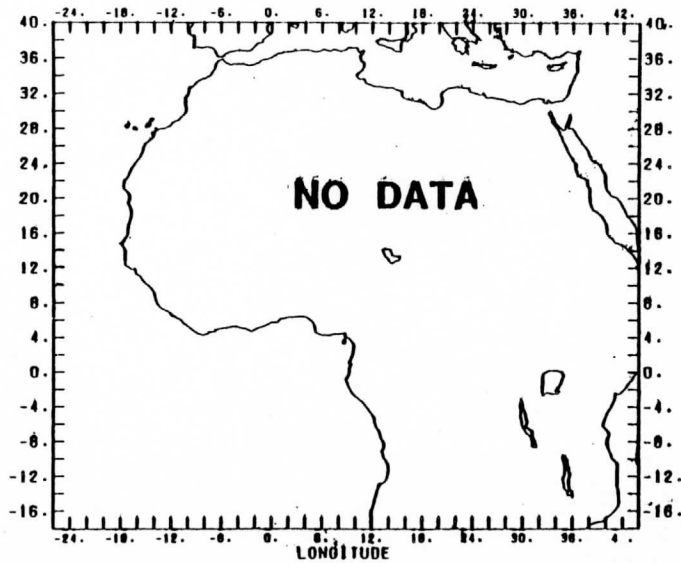
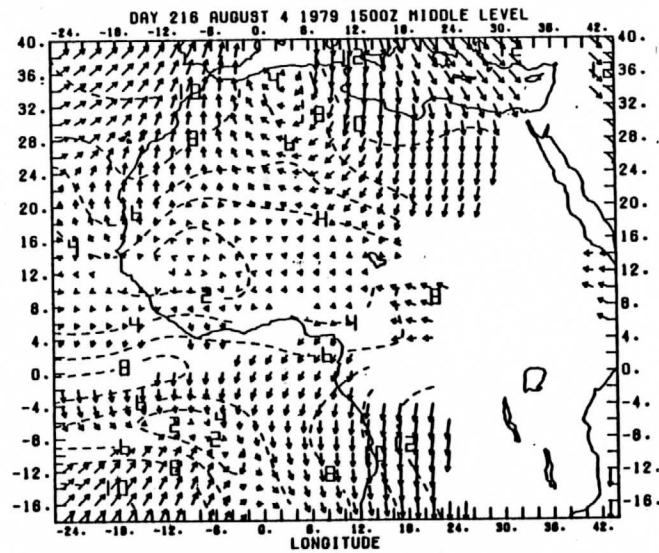
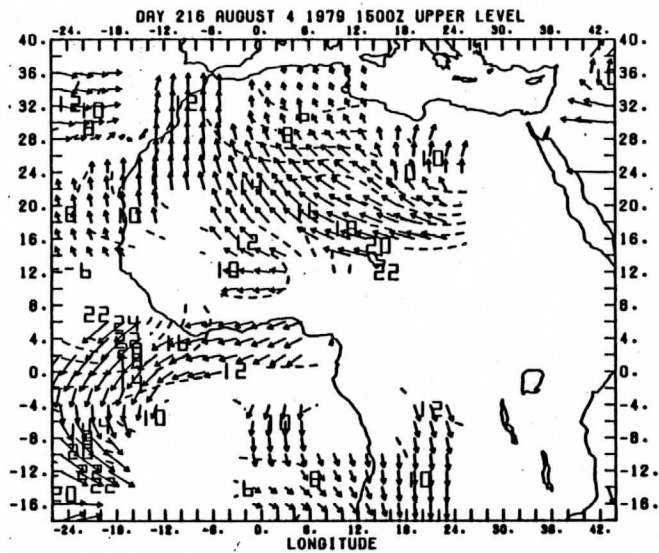
DAY 215 AUGUST 3, 1979 1200Z



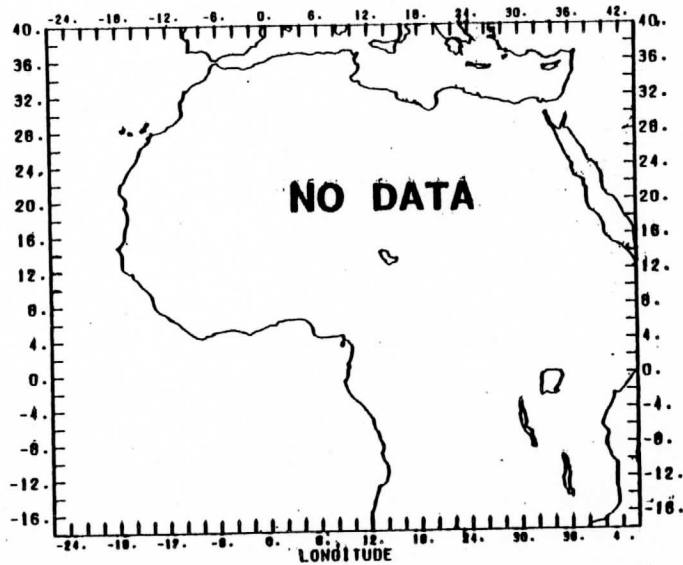
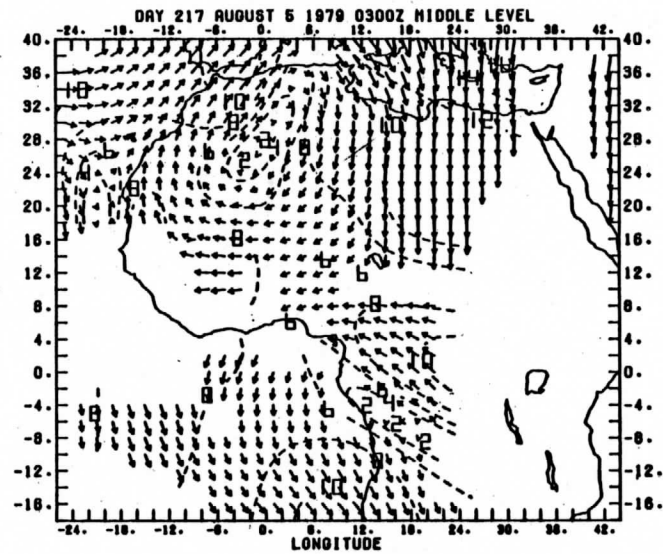
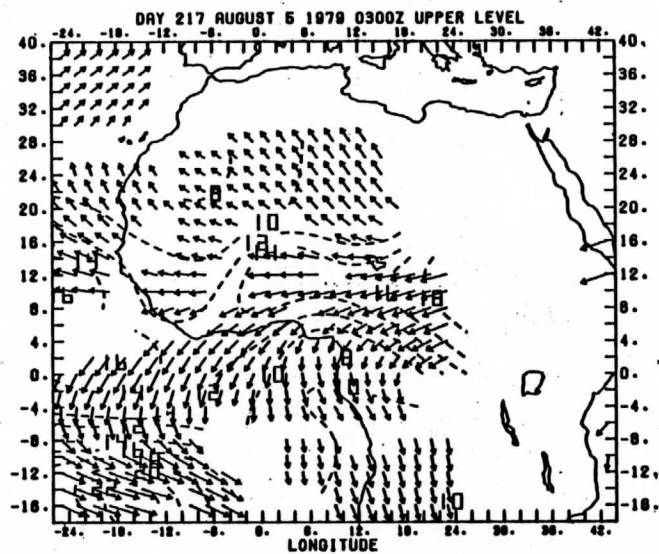
DAY 216 AUGUST 4, 1979 0000Z



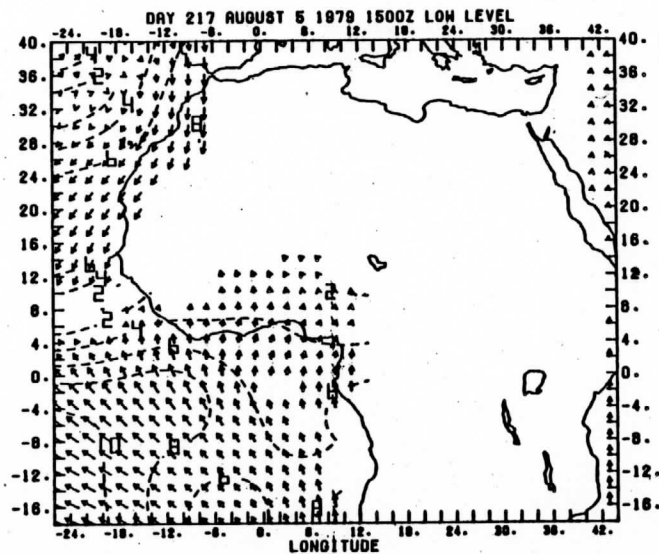
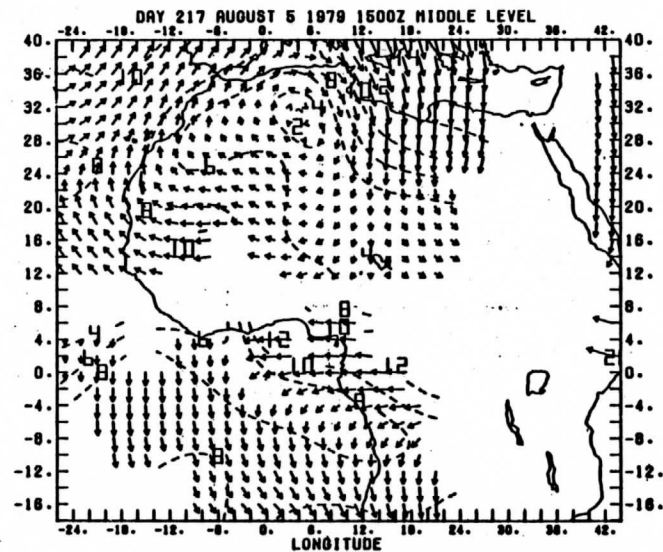
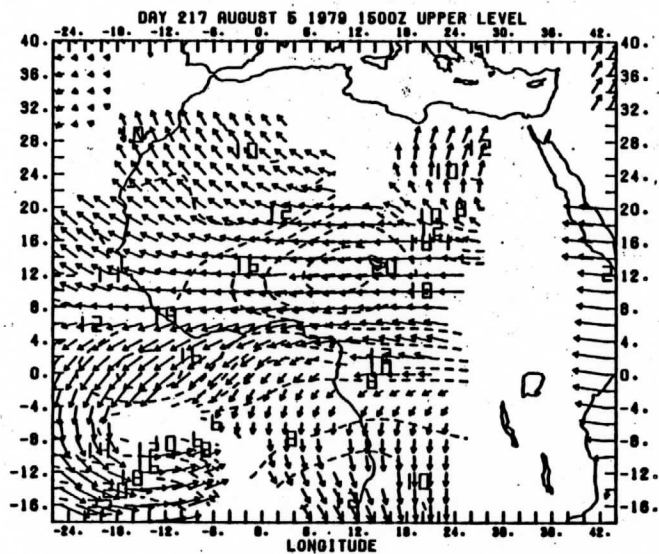
DAY 216 AUGUST 4, 1979 1500Z



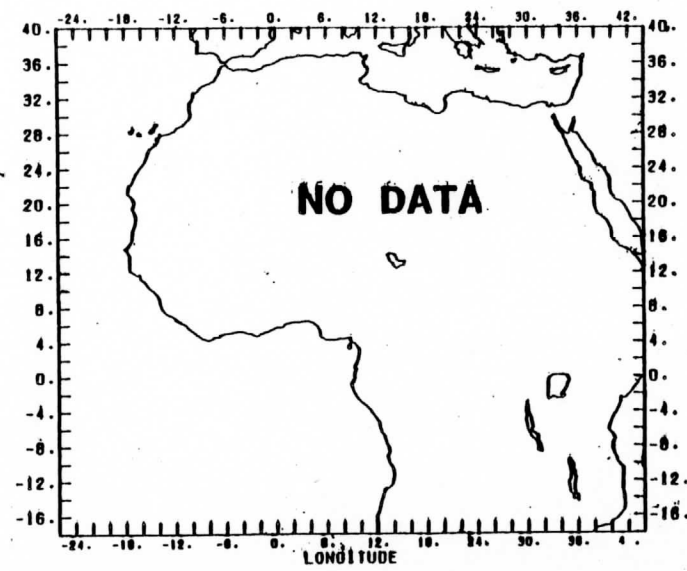
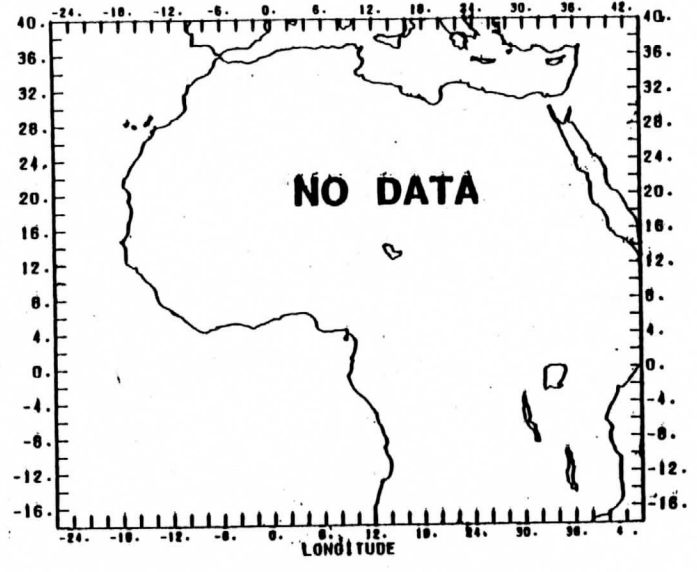
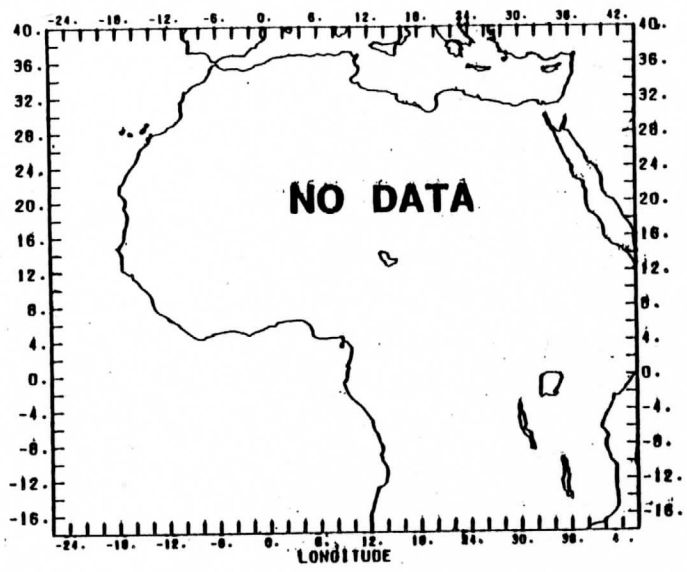
DAY 217 AUGUST 5, 1979 0300Z



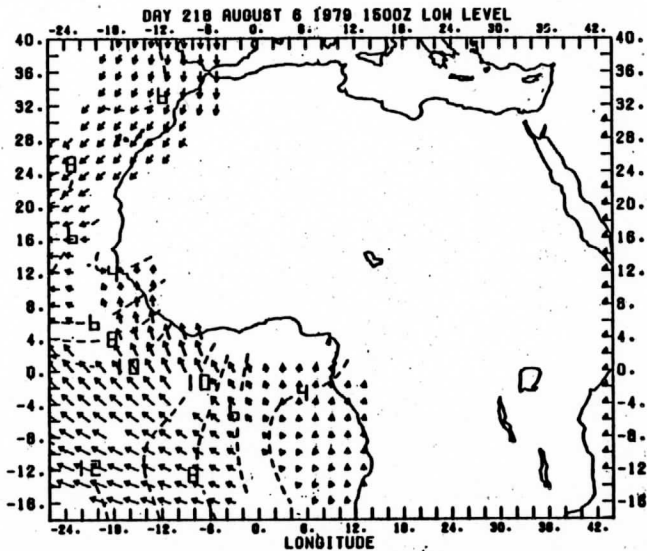
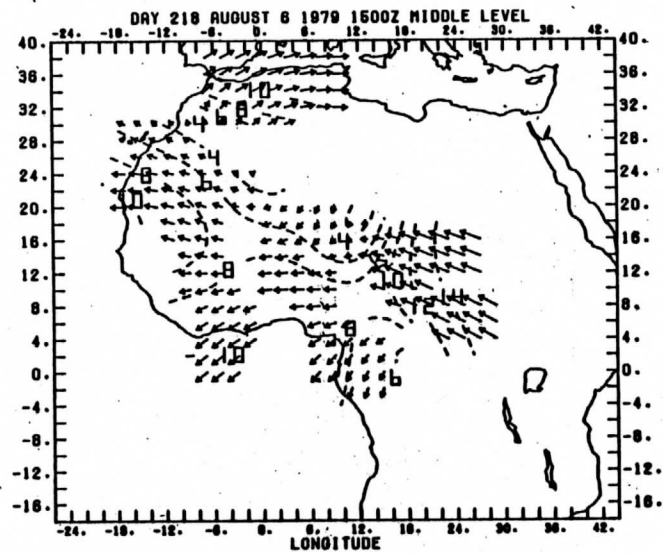
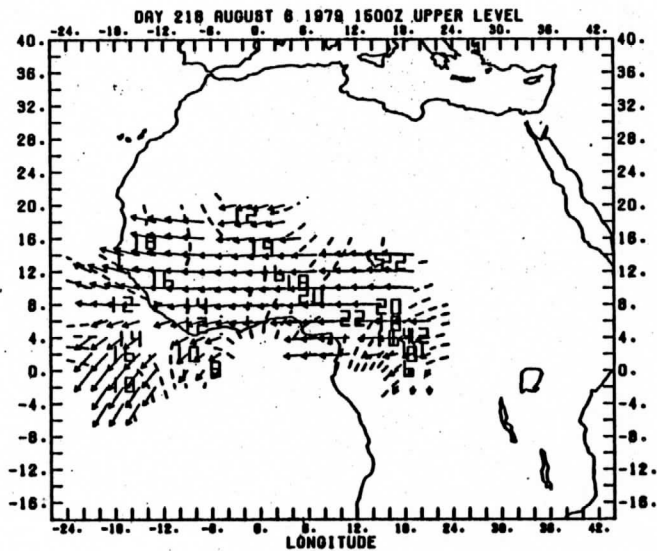
DAY 217 AUGUST 5, 1979 1500Z



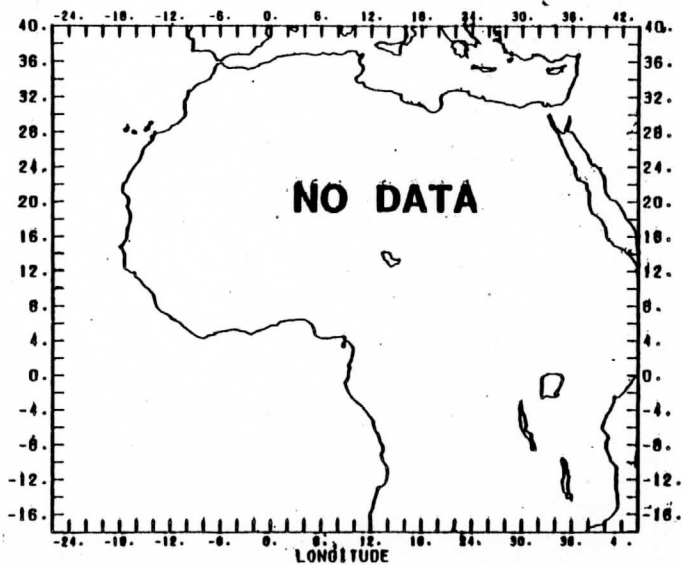
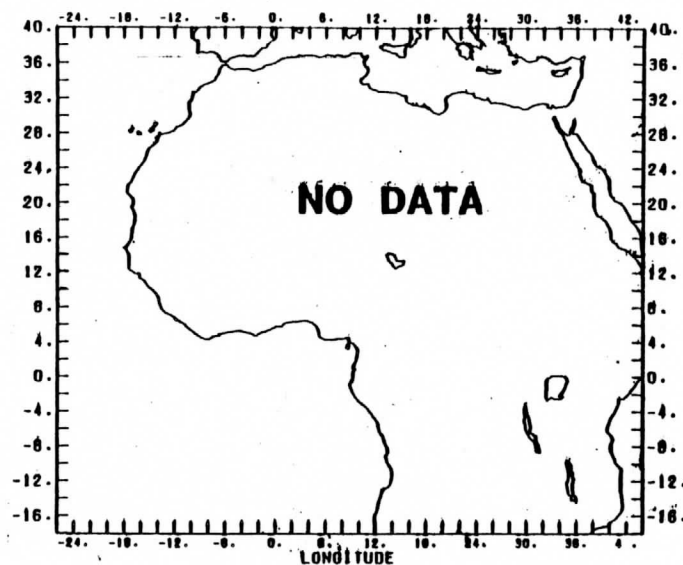
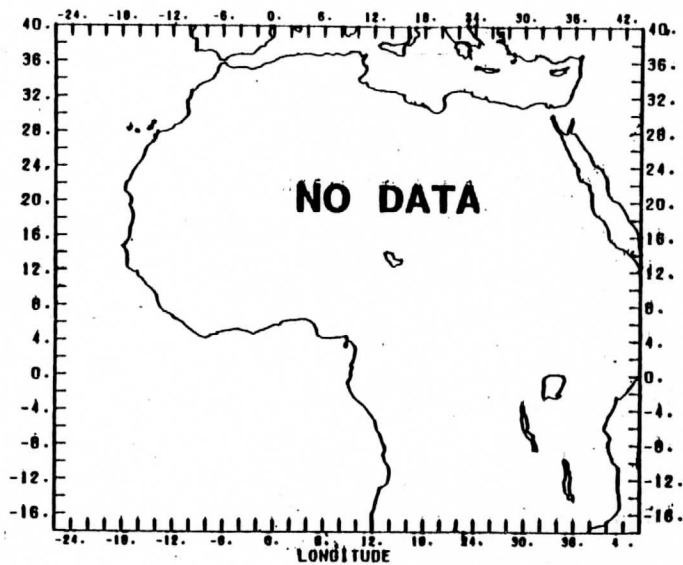
DAY 218 AUGUST 6, 1979 0300Z



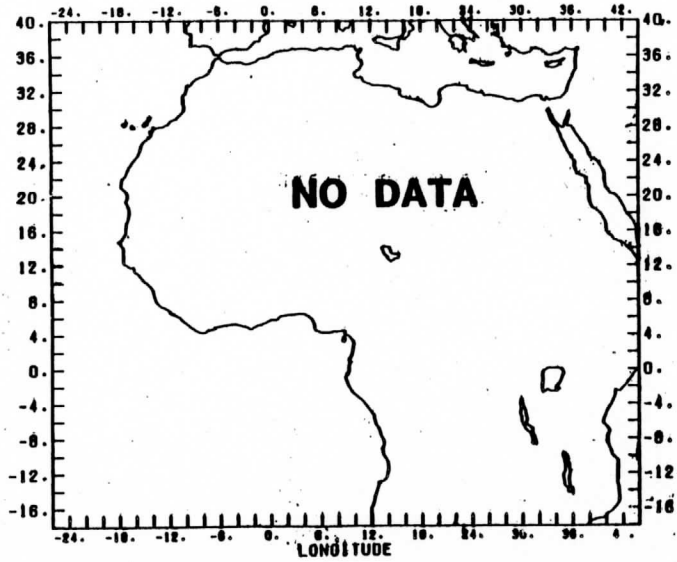
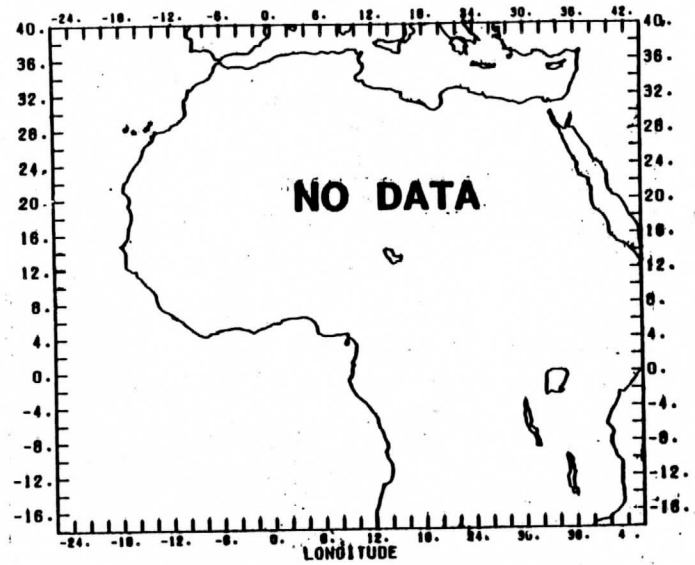
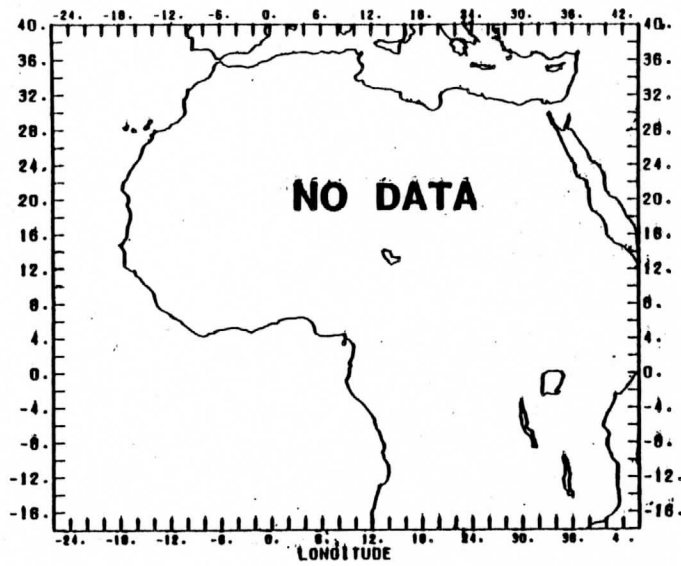
DAY 218 AUGUST 6, 1979 1500Z



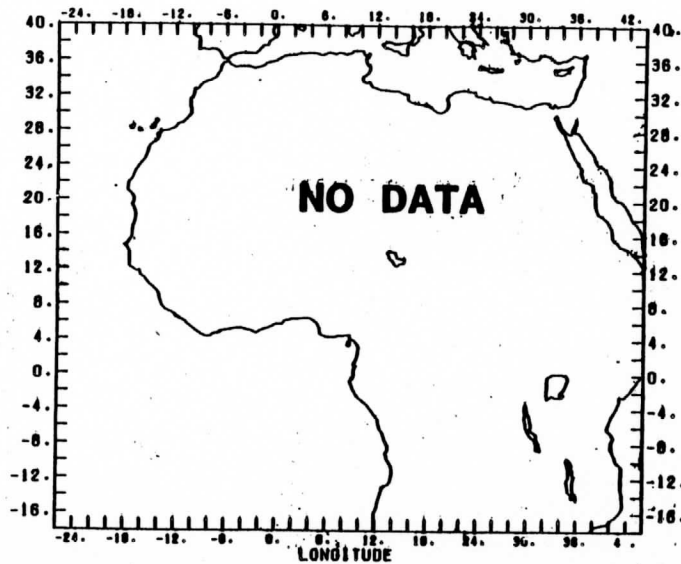
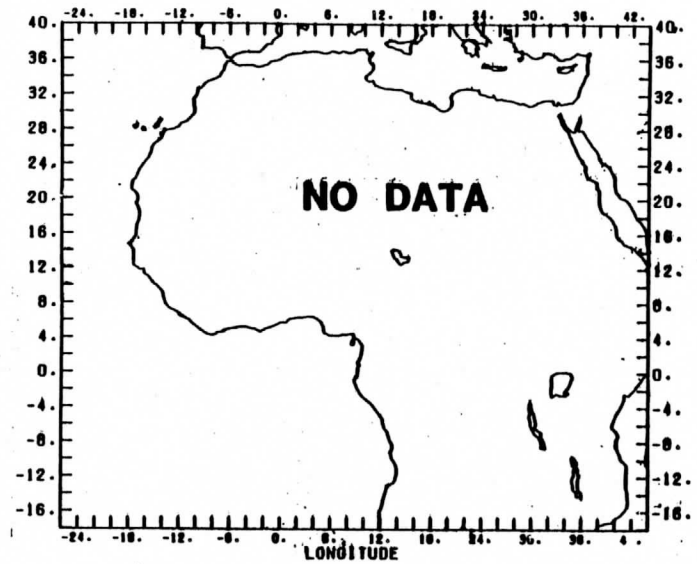
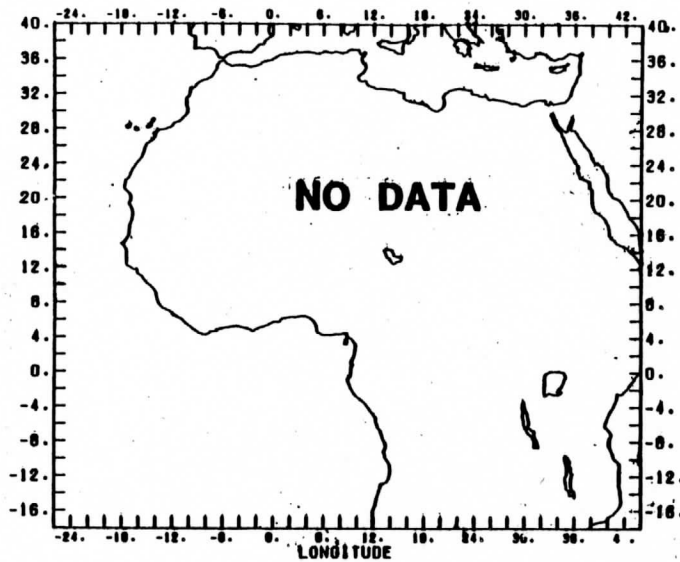
DAY 219 AUGUST 7, 1979 0000Z



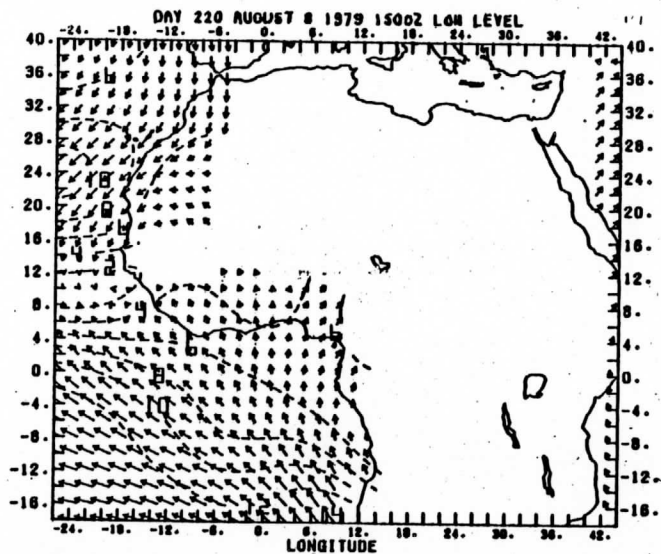
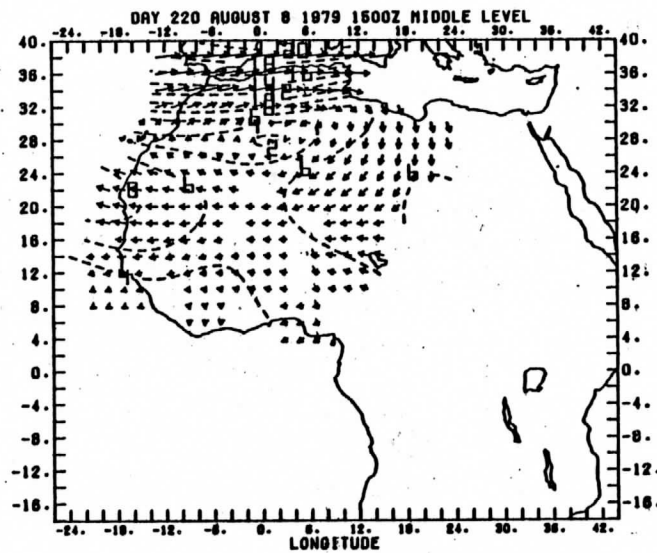
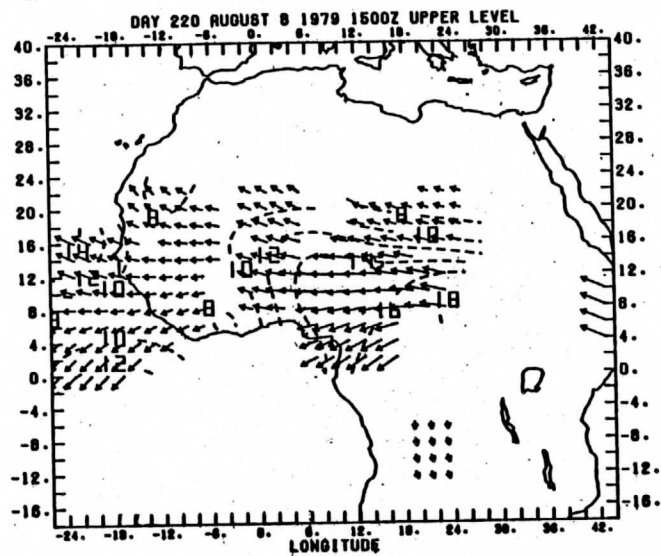
DAY 219 AUGUST 7, 1979 1200Z



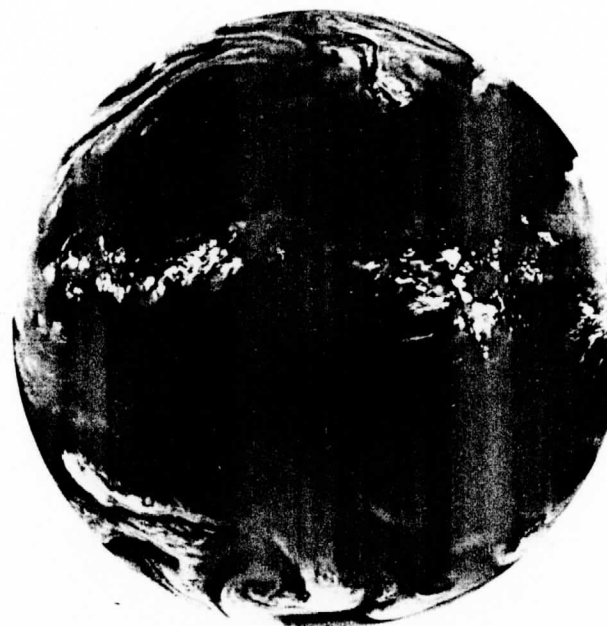
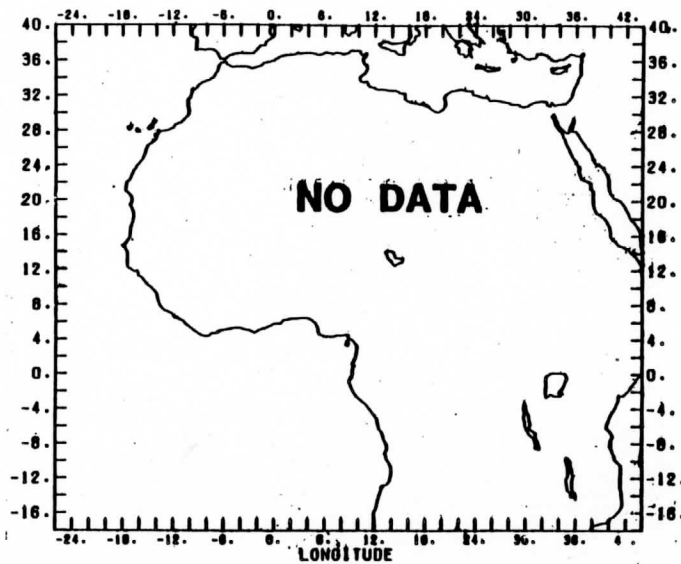
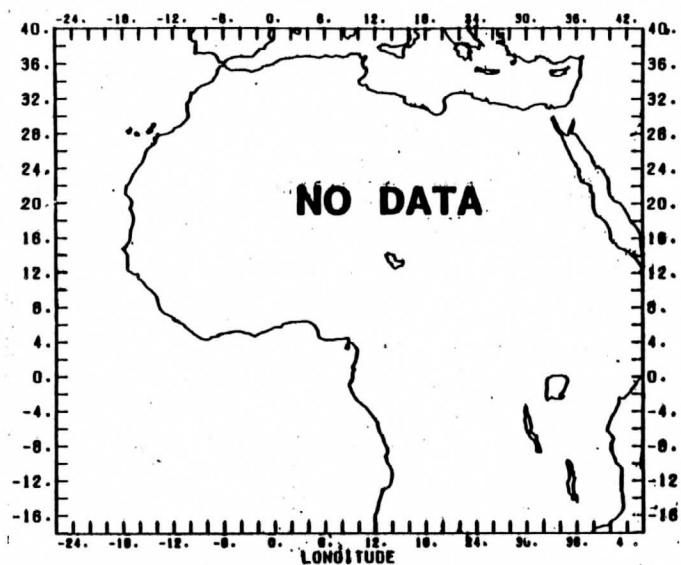
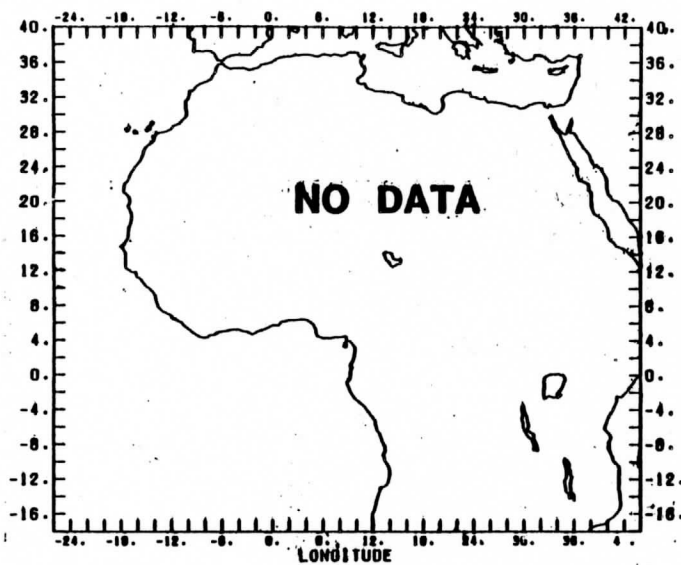
DAY 220 AUGUST 8, 1979 0000Z



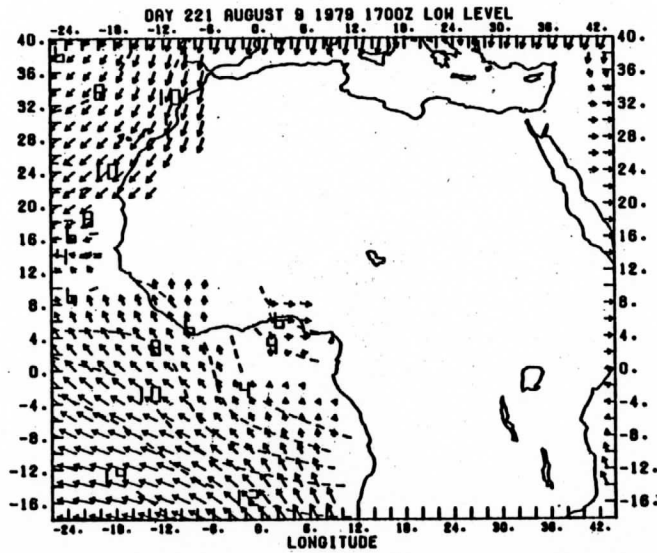
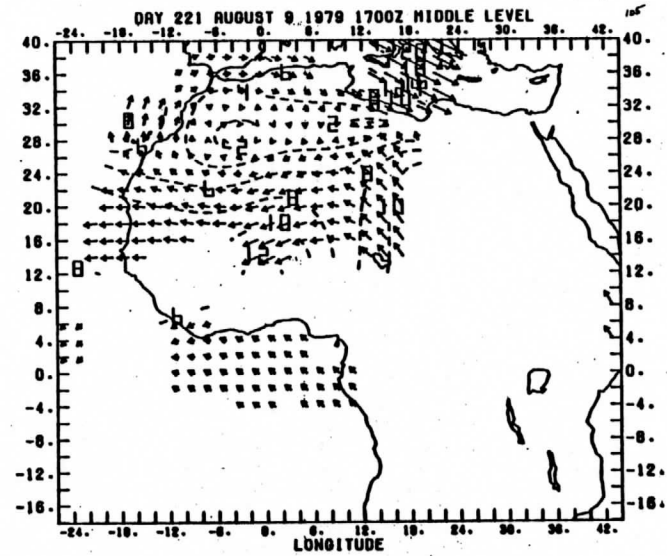
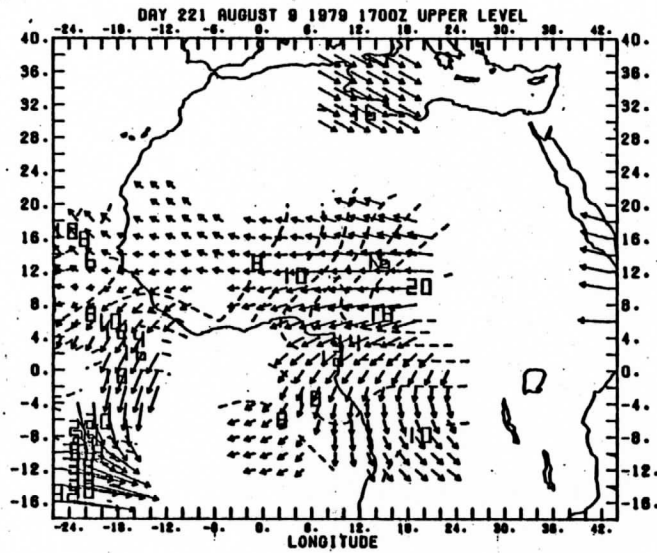
DAY 220 AUGUST 8, 1979 1500Z



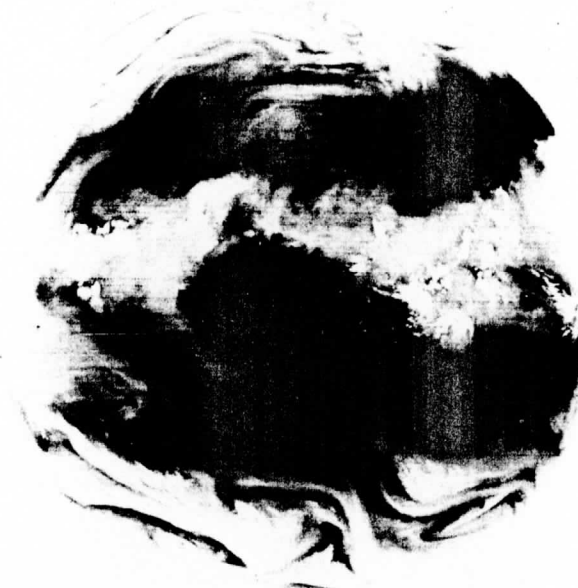
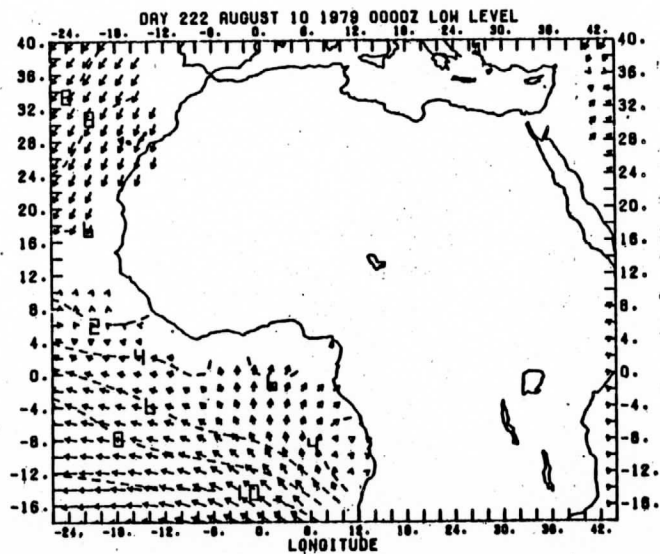
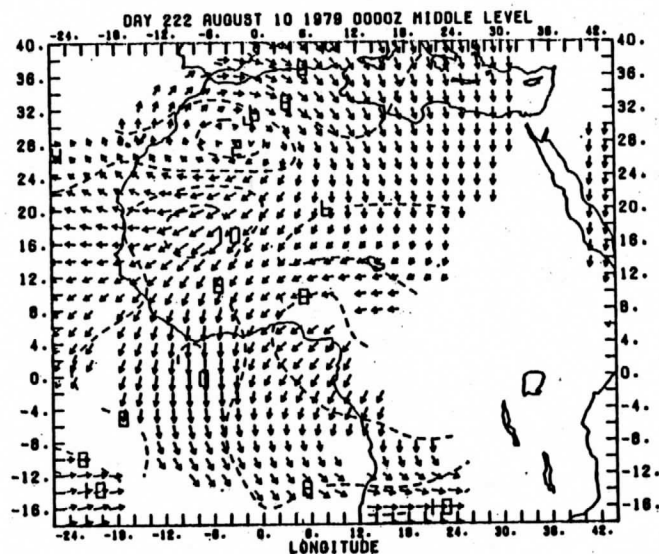
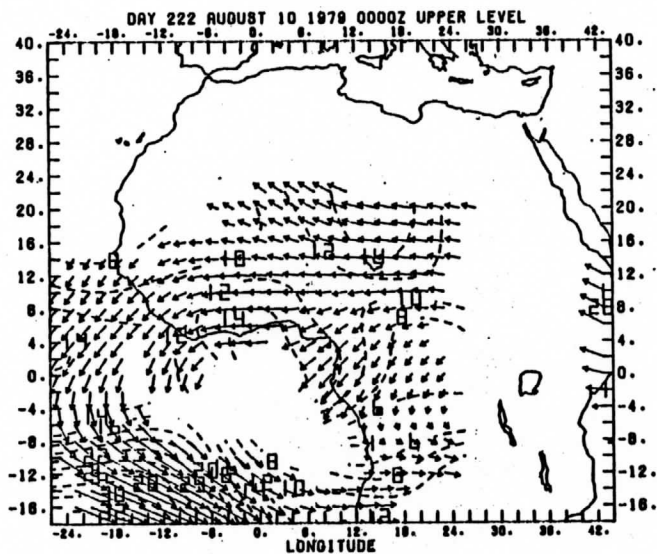
DAY 221 AUGUST 9, 1979 0000Z



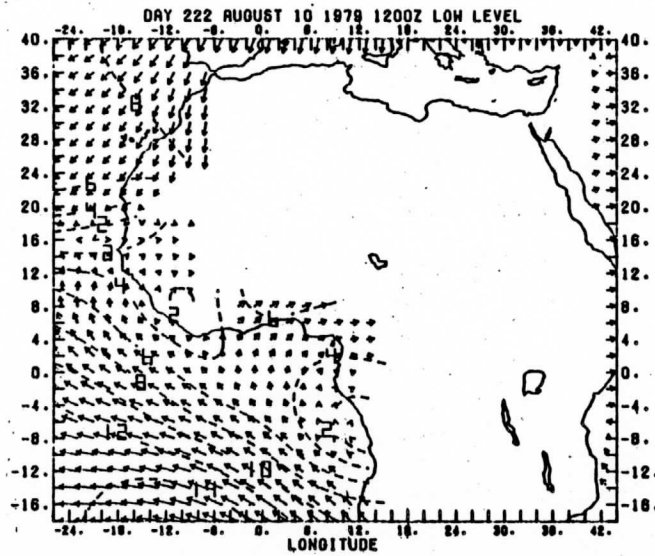
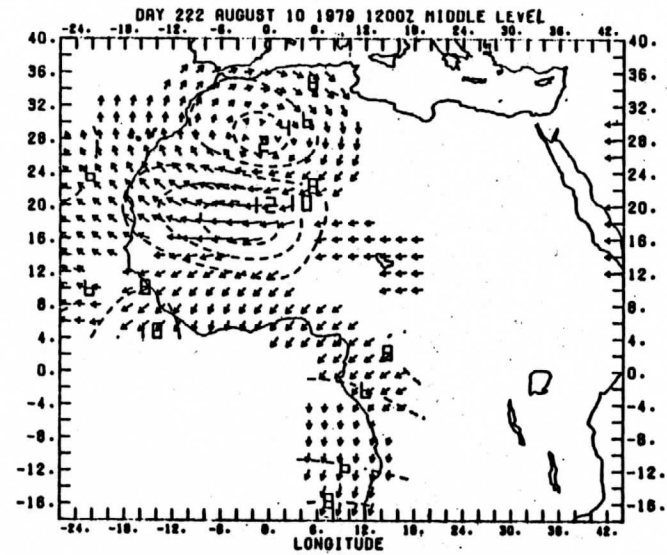
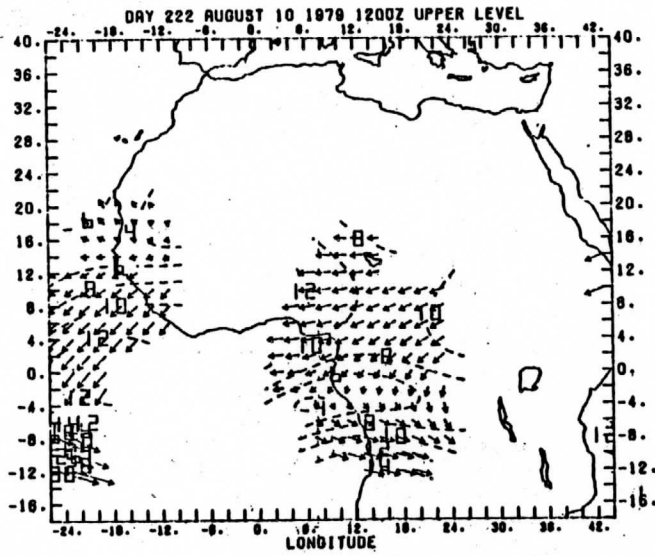
DAY 221 AUGUST 9, 1979 1700Z



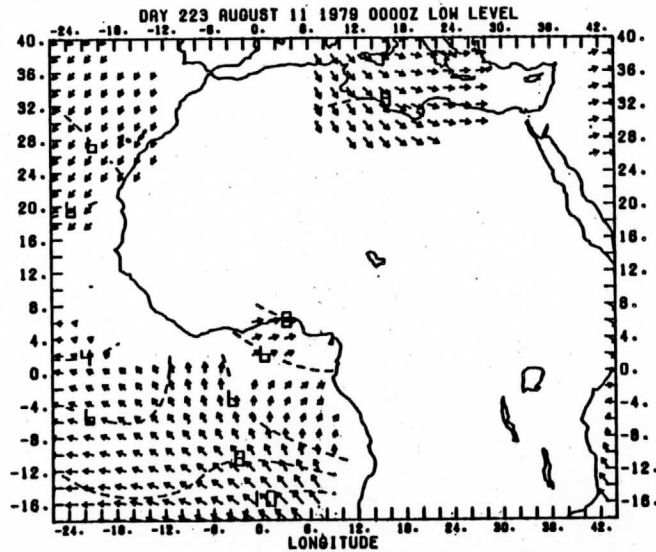
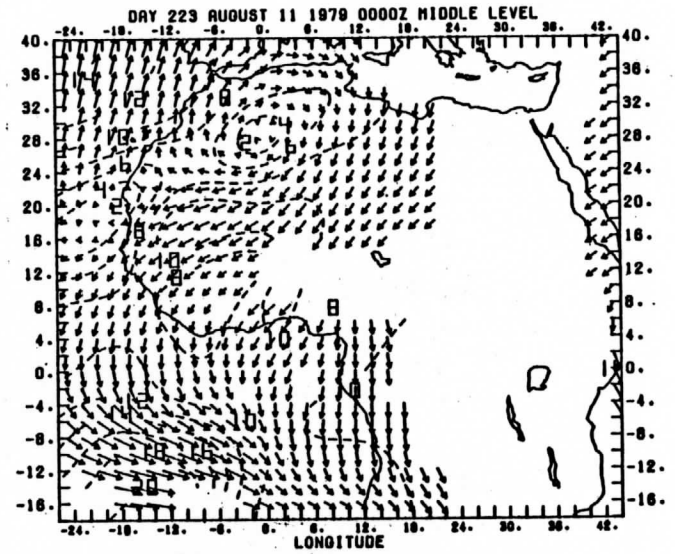
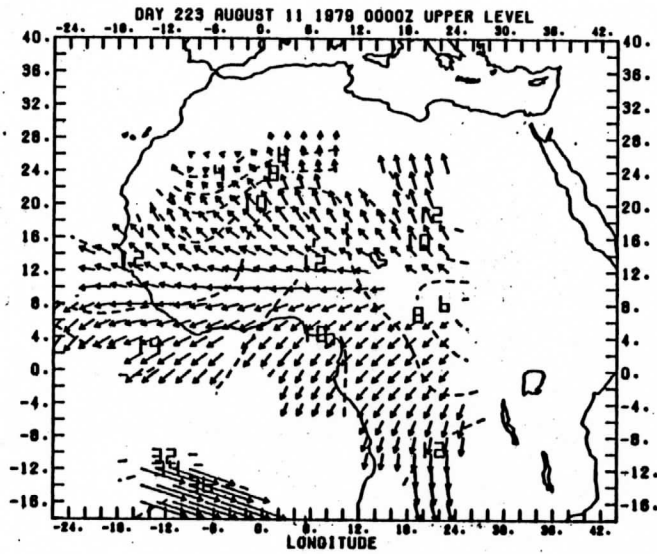
DAY 222 AUGUST 10, 1979 0000Z



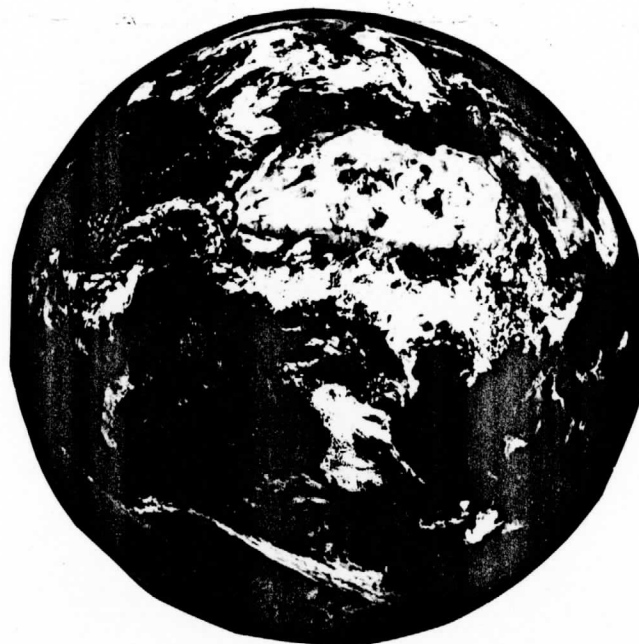
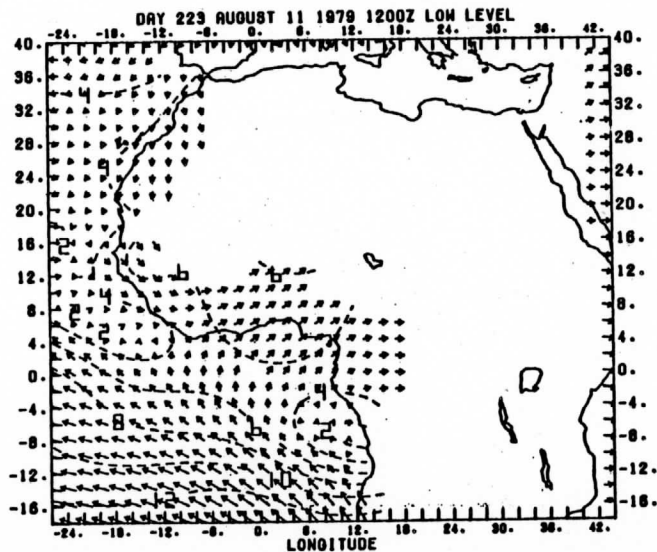
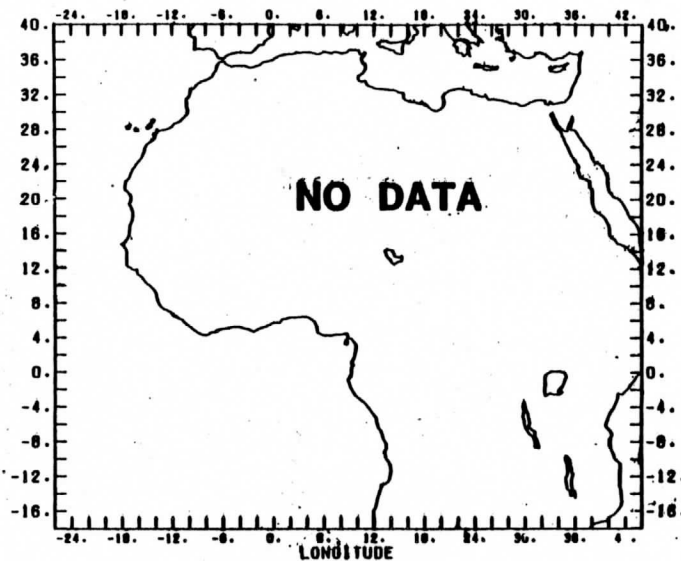
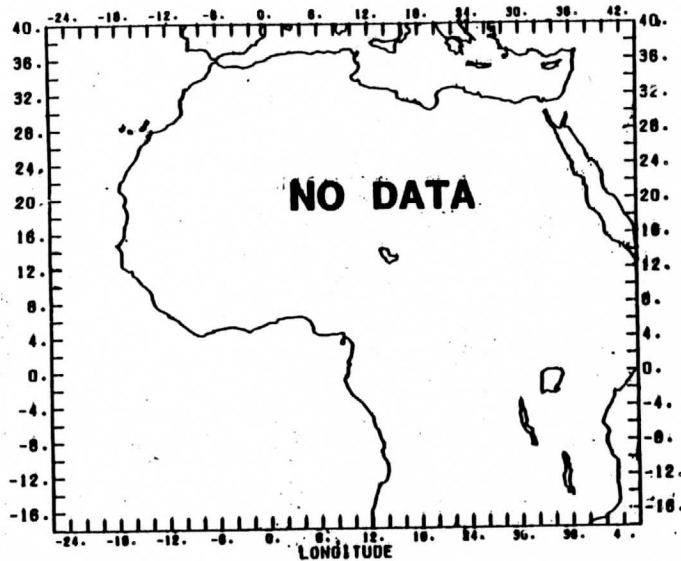
DAY 222 AUGUST 10, 1979 1200Z



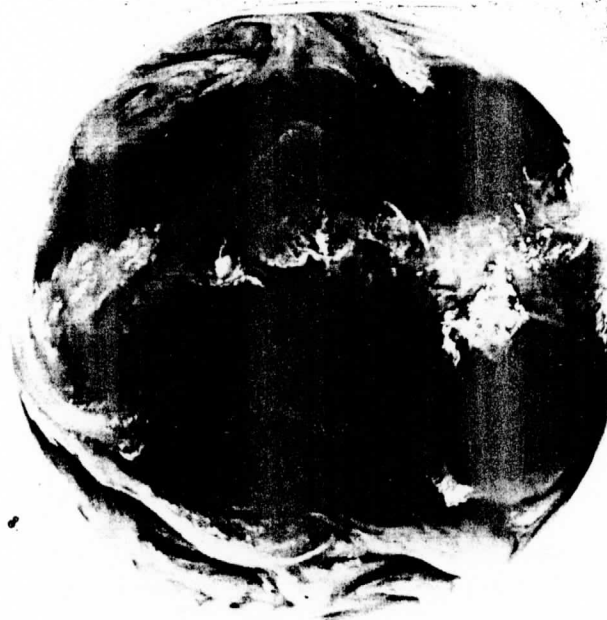
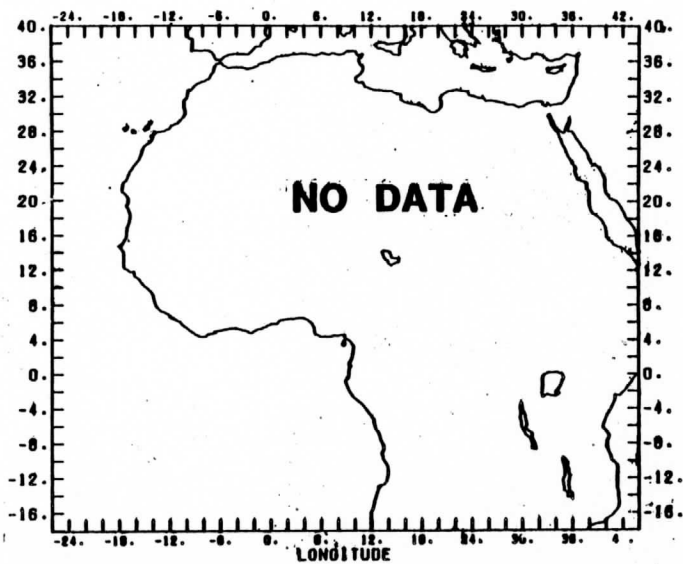
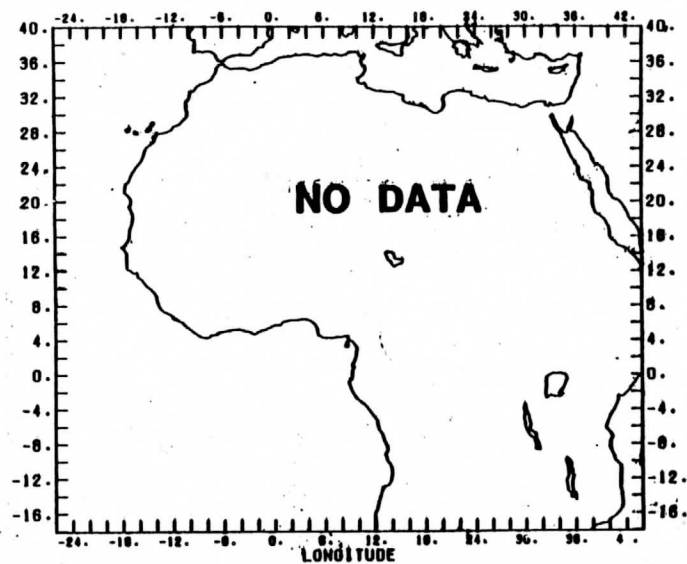
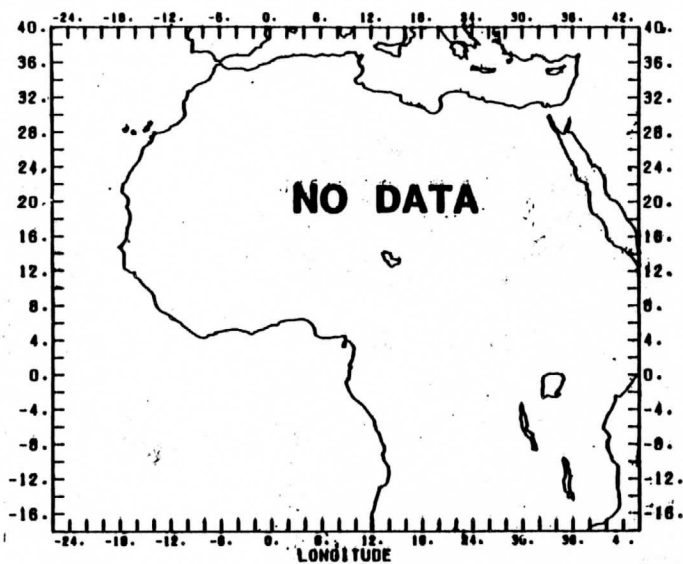
DAY 223 AUGUST 11, 1979 0000Z



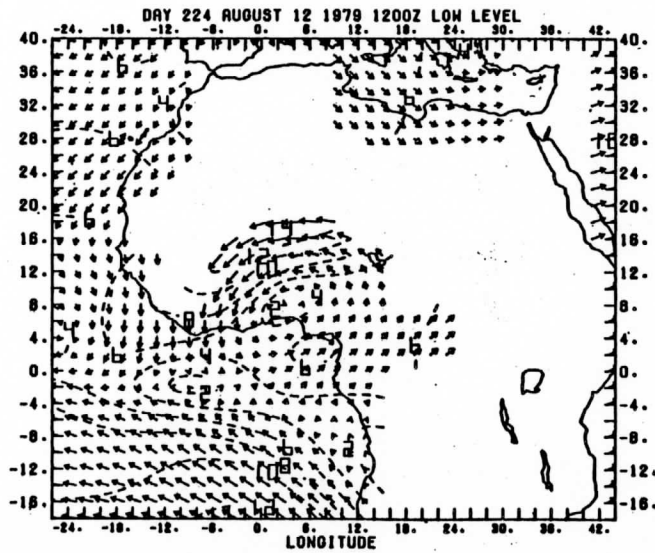
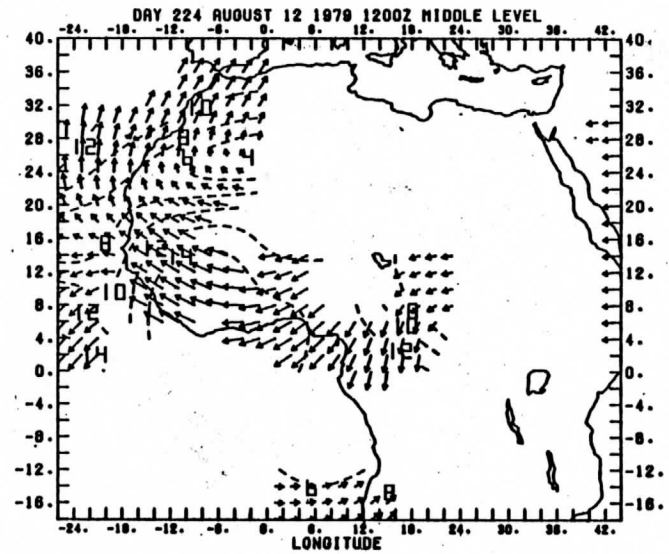
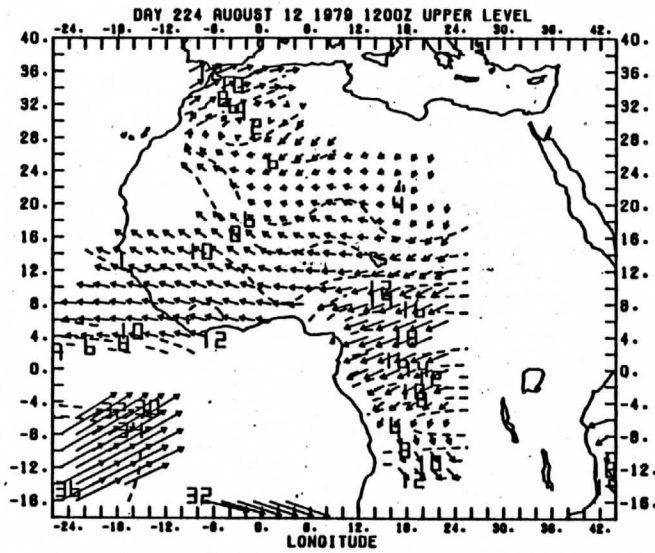
DAY 223 AUGUST 11, 1979 1200Z



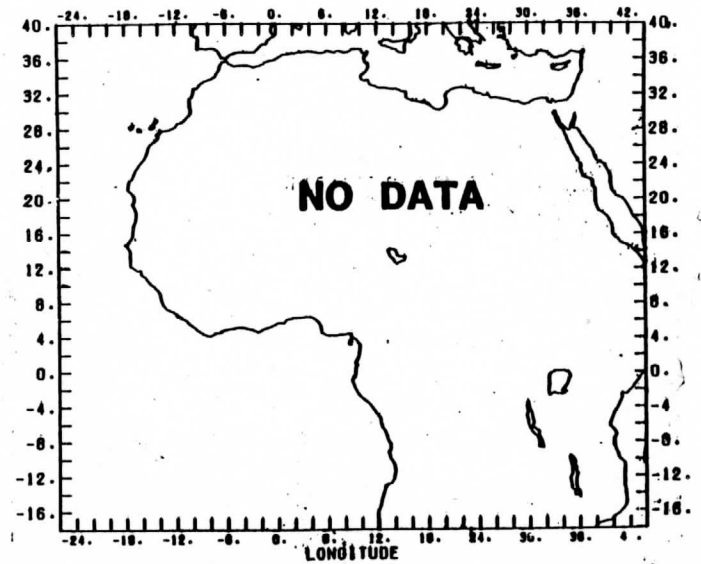
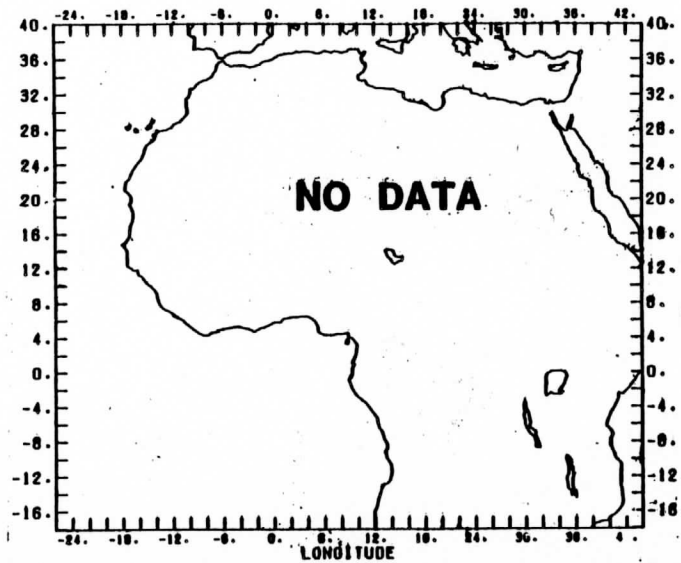
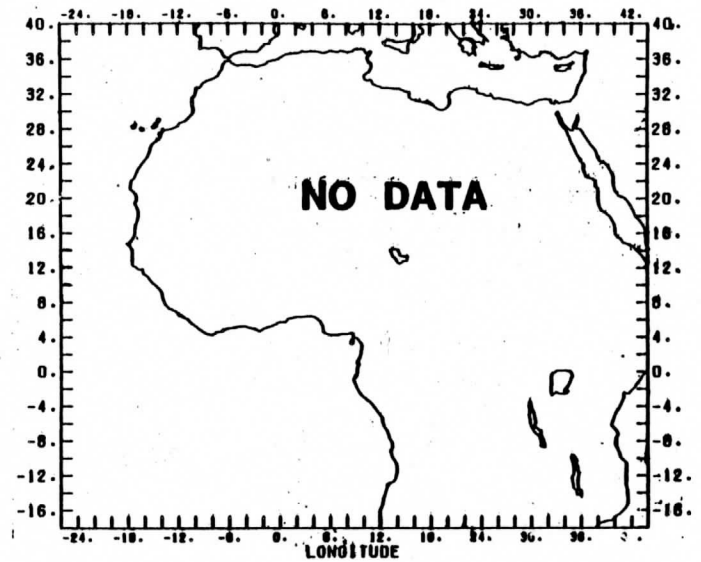
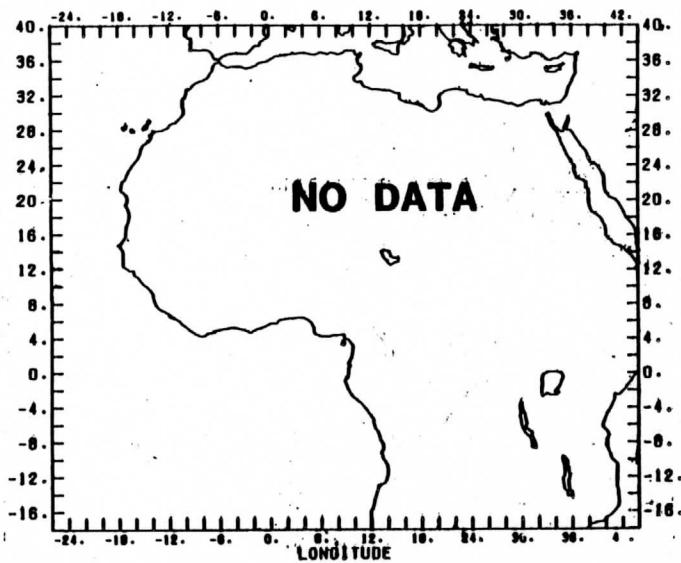
DAY 224 AUGUST 12, 1979 0000Z



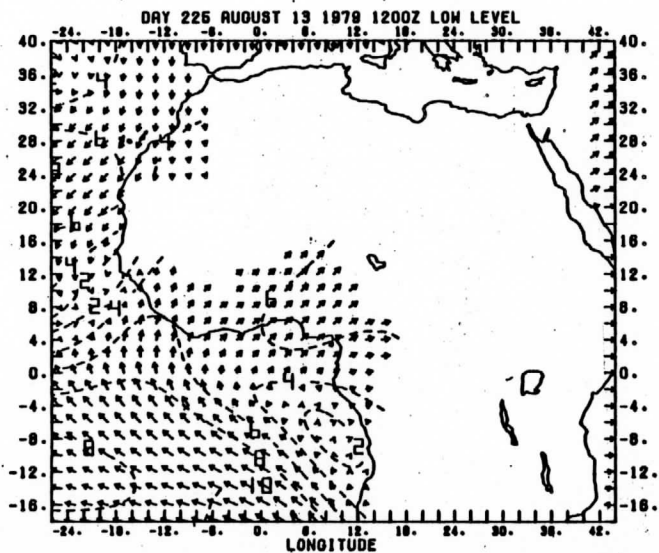
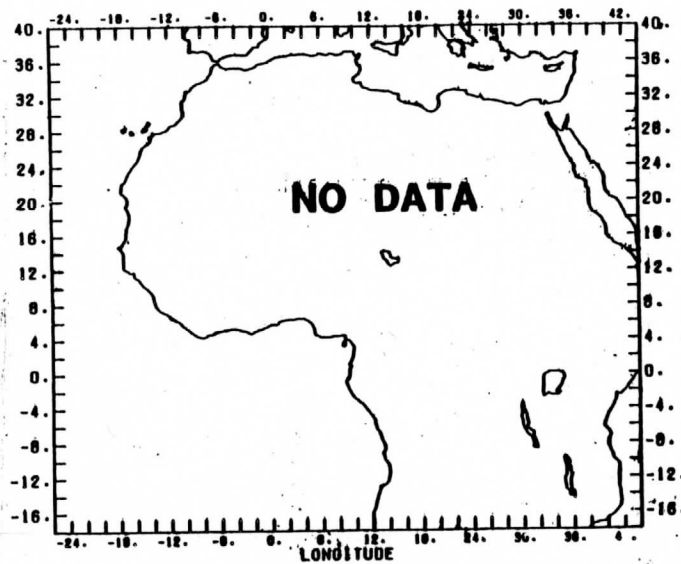
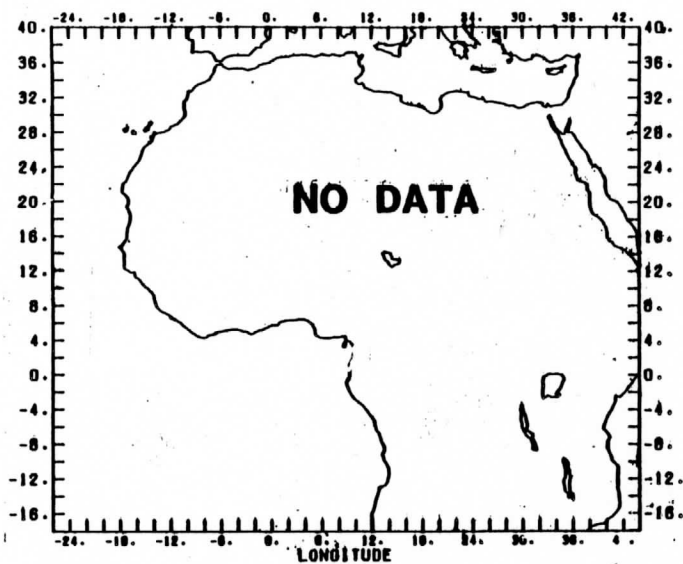
DAY 224 AUGUST 12, 1979 1200Z



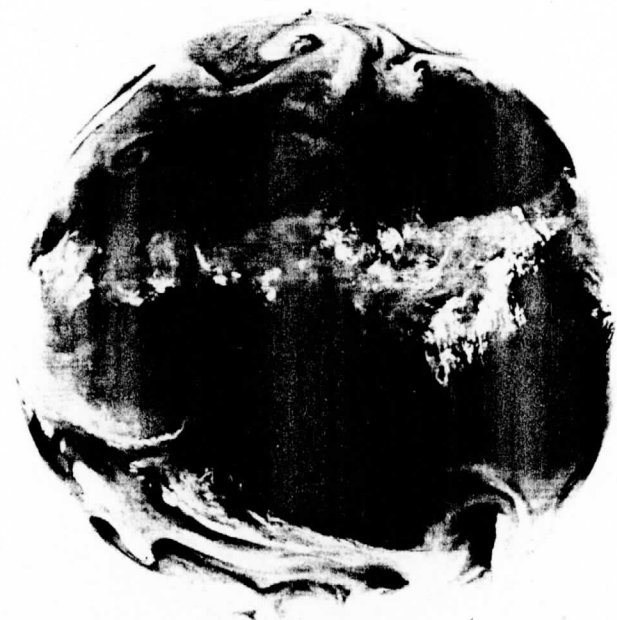
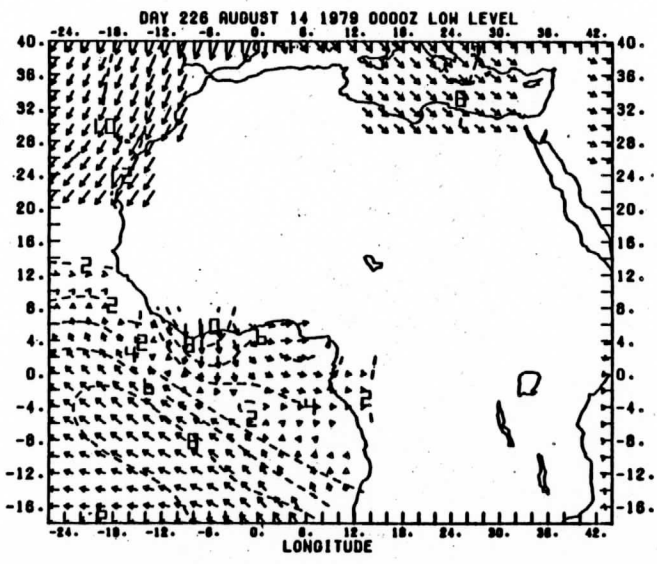
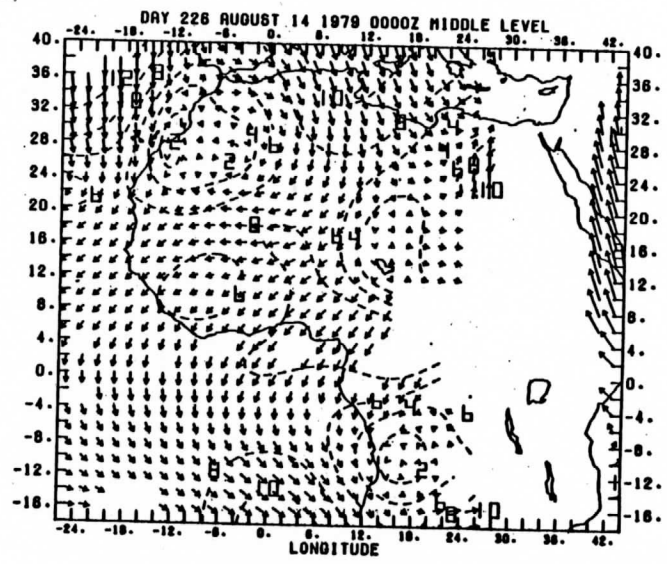
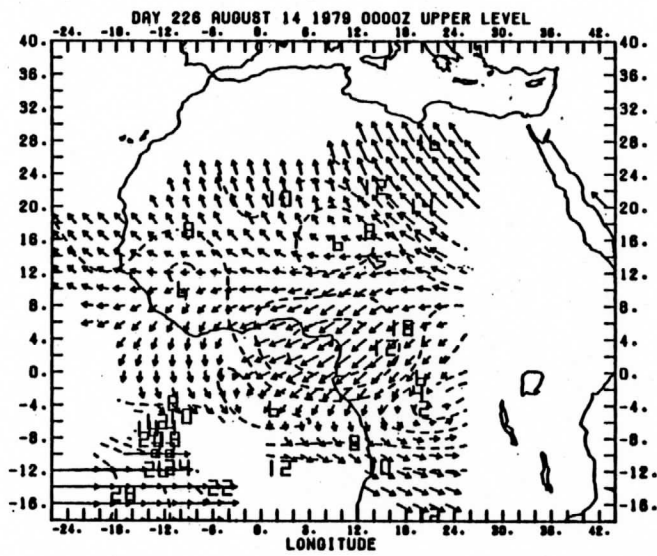
DAY 225 AUGUST 13, 1979 0000Z



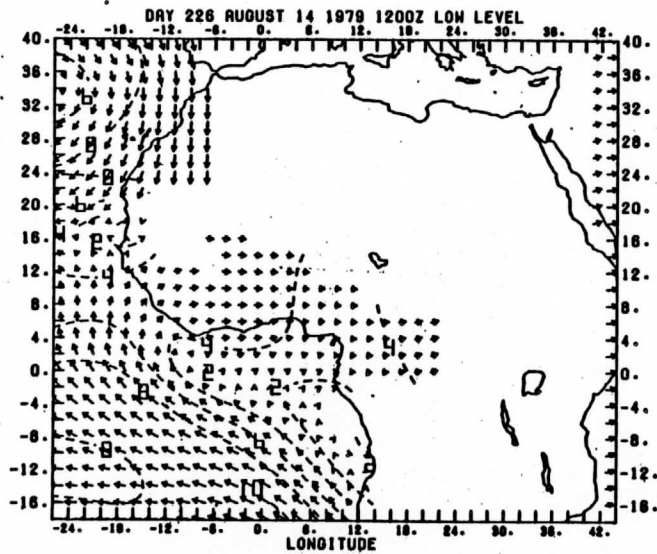
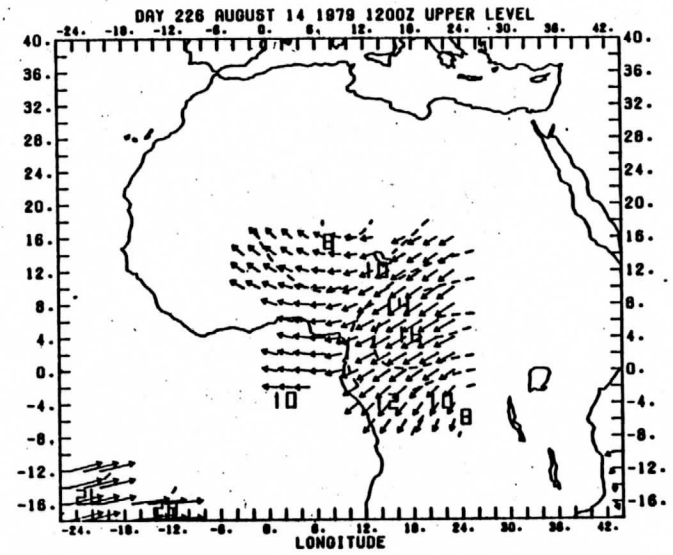
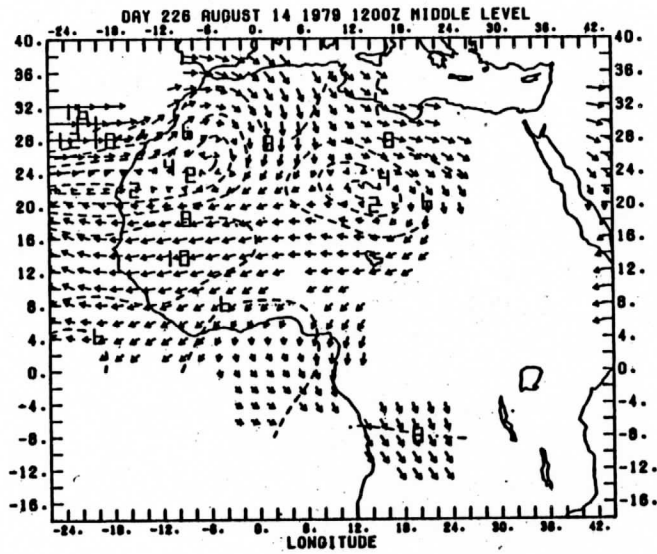
DAY 225 AUGUST 13, 1979 1200Z



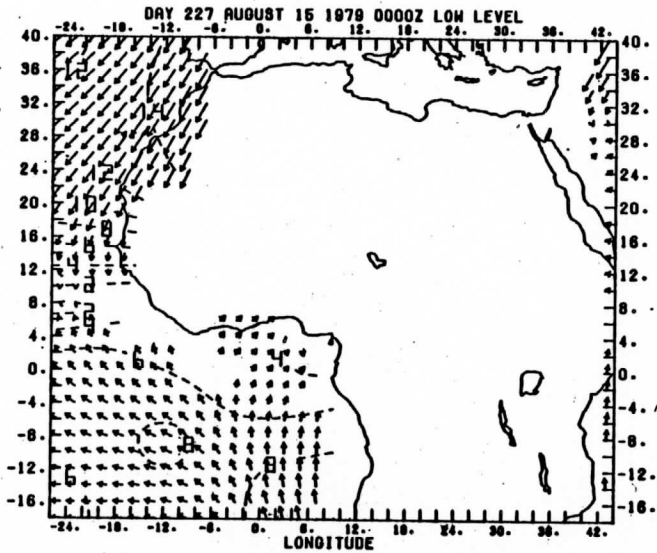
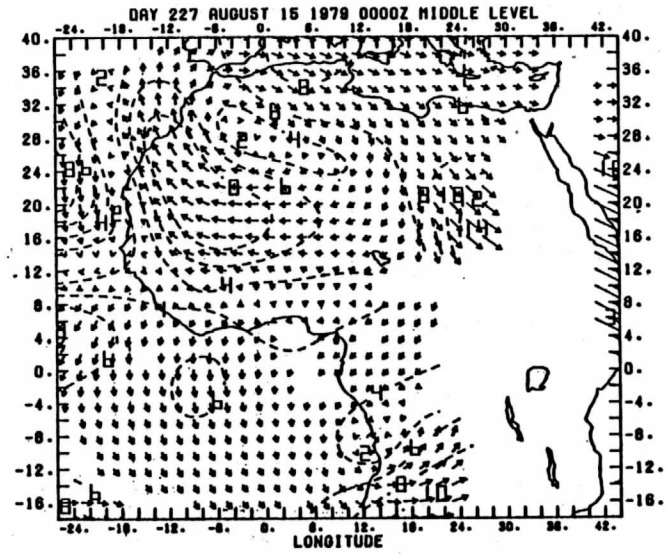
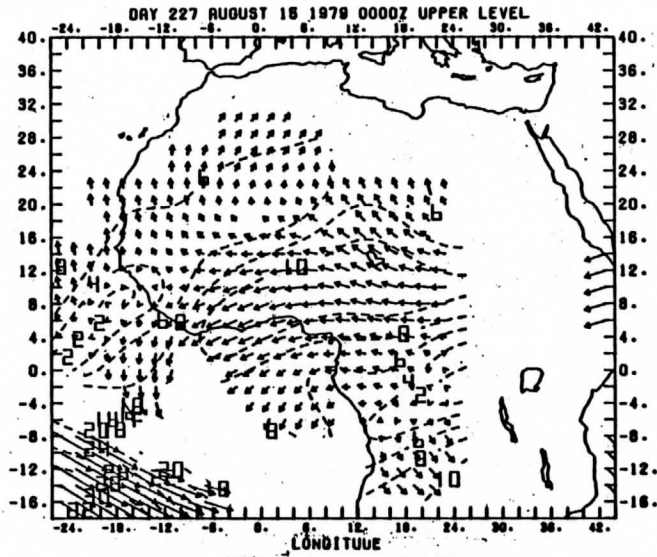
DAY 226 AUGUST 14, 1979 0000Z



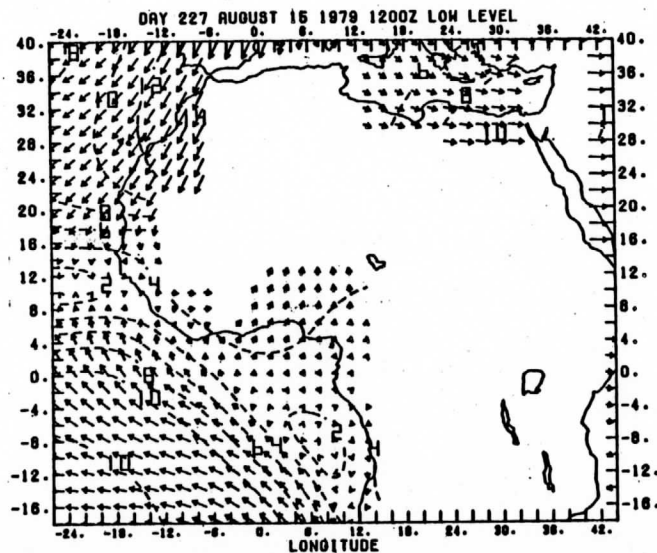
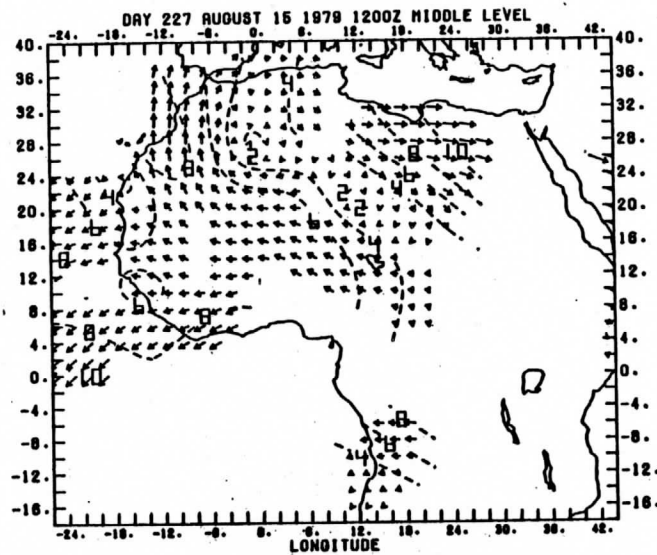
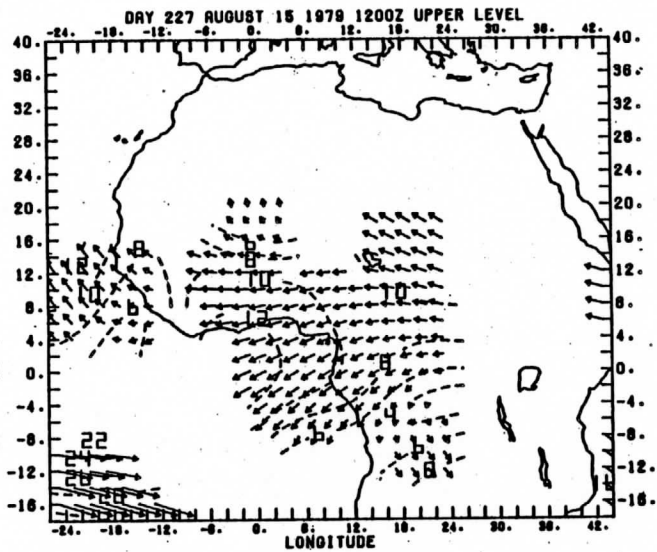
DAY 226 AUGUST 14, 1979 1200Z



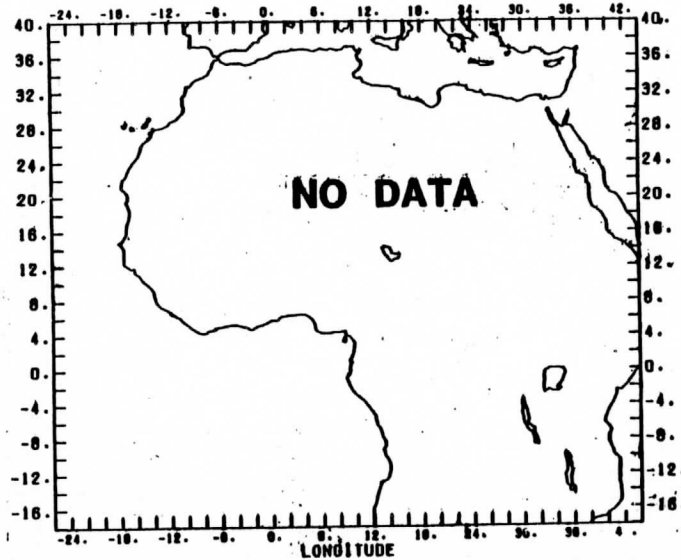
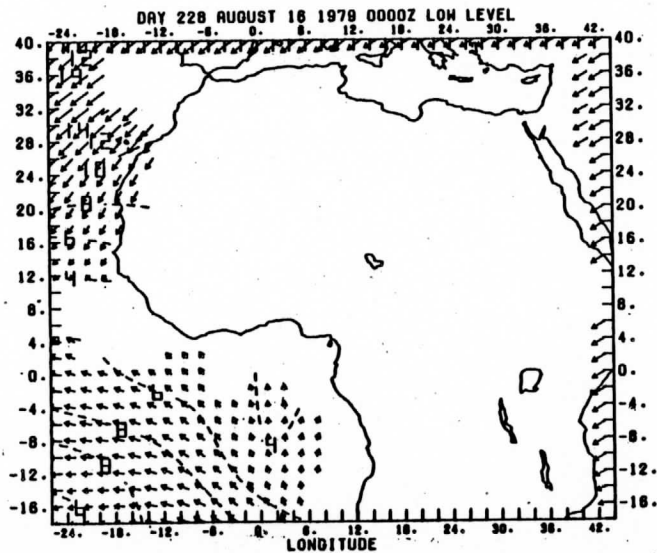
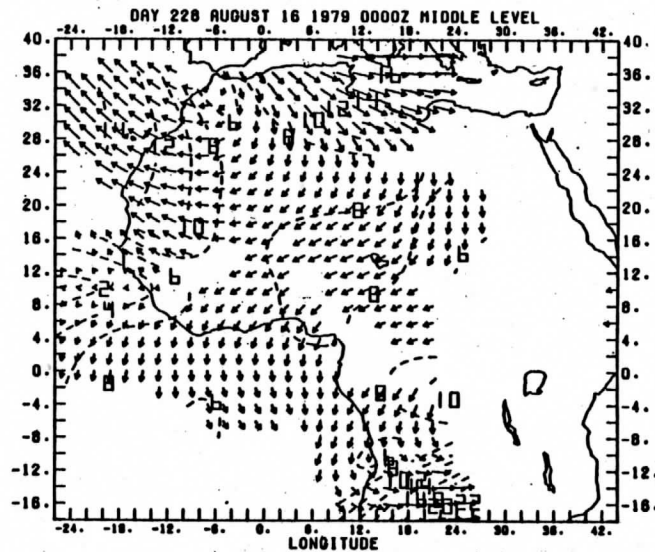
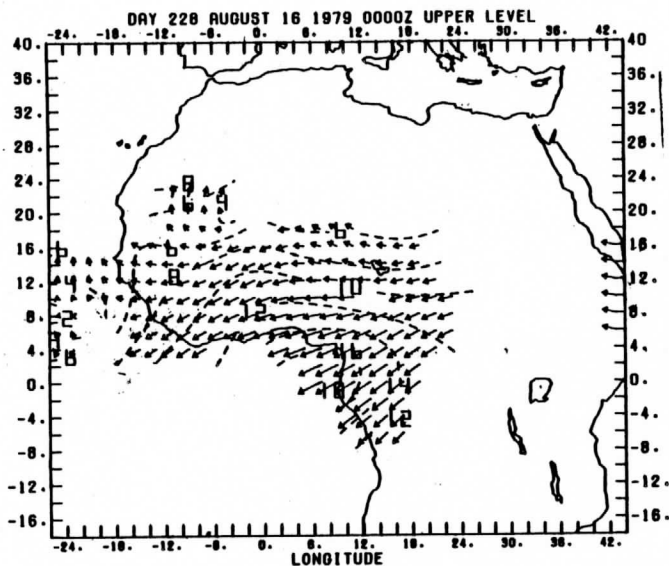
DAY 227 AUGUST 15, 1979 0000Z



DAY 227 AUGUST 15, 1979 1200Z



DAY 228 AUGUST 16, 1979 0000Z



APPENDIX I

UPPER AIR DATA

FROM SELECTED STATIONS

OVER WAMEX AREA

STATION : 62271 LAT : 24.22 LONG : 336.70W 1200Z

TEMPERATURE

DATE	1000	050	700	500	400	300	250	200	150	100
790714	99999.9	295.2	266.2	271.1	261.1	245.5	235.1	223.1	209.7	197.3
790715	99999.9	302.3	266.6	273.8	263.1	246.7	238.3	225.7	211.5	205.2
790716	99999.9	297.0	265.0	270.3	260.3	245.7	235.1	223.3	210.7	197.7
790718	99999.9	285.2	262.2	269.1	261.5	243.1	234.1	221.3	206.1	194.7
790719	99999.9	293.6	261.0	275.4	262.1	244.9	234.7	221.9	209.2	206.4
790721	99999.9	296.5	261.2	271.9	262.7	244.9	235.3	223.3	210.5	197.1
790722	99999.9	293.8	264.8	270.3	261.5	244.3	233.1	225.9	216.2	197.3
790724	99999.9	296.8	262.4	269.3	260.3	243.3	232.7	223.9	212.9	197.3
790725	99999.9	299.6	265.0	273.6	260.9	245.7	236.5	227.5	216.1	197.7
790726	99999.9	295.0	261.6	263.3	253.9	238.7	231.1	223.9	204.9	198.9
790728	99999.9	296.0	266.2	271.7	260.5	245.3	235.4	223.1	209.5	195.1
790729	99999.9	298.2	293.6	271.9	259.7	241.9	232.7	220.5	209.1	197.3
790730	99999.9	293.8	265.0	270.5	260.3	244.5	234.3	223.1	209.7	199.3
790731	99999.9	295.8	263.6	269.5	258.5	243.1	234.7	222.1	207.9	199.5
790801	99999.9	293.0	263.2	270.1	257.3	242.9	232.5	221.1	207.1	192.9
790802	99999.9	294.4	263.8	272.5	258.6	244.5	234.9	224.6	208.9	196.3
790804	99999.9	294.2	264.4	270.7	256.6	240.6	232.2	223.1	207.5	194.7
790806	99999.9	295.6	279.8	270.3	259.7	244.5	234.3	222.7	208.3	195.1
790811	259.2	292.4	263.0	266.5	256.1	242.3	232.3	221.3	209.9	199.1
790812	99999.9	296.0	263.6	267.9	248.4	239.5	235.7	226.5	211.5	202.3
790814	99999.9	295.0	300.2	299.8	278.1	250.2	236.9	224.3	211.5	200.7
790815	99999.9	295.2	262.0	271.3	259.5	245.5	236.7	222.1	208.5	196.9

MISSING VALUE IS 99999.9

STATION : 62271 LAT : 24.22 LONG : 336.70W 1200Z

DEW POINT

DATE	1000	050	700	500	400	300	250	200	150	100
790714	99999.9	274.2	261.5	242.5	232.1	216.5	209.1	196.1	99999.9	99999.9
790715	99999.9	269.1	255.1	229.8	230.1	217.7	211.3	99999.9	99999.9	202.2
790716	99999.9	273.0	265.2	243.3	235.3	221.7	213.1	99999.9	99999.9	99999.9
790718	99999.9	252.0	257.2	235.1	229.5	214.1	227.1	99999.9	99999.9	99999.9
790719	99999.9	274.0	265.0	252.4	240.0	227.9	232.0	99999.9	99999.9	99999.9
790722	99999.9	274.6	272.6	244.3	234.6	222.3	213.1	99999.9	99999.9	99999.9
790724	99999.9	274.6	272.4	243.1	235.3	221.3	212.7	99999.9	99999.9	99999.9
790725	99999.9	274.6	263.4	243.6	233.9	221.7	213.5	99999.9	99999.9	99999.9
790726	99999.9	272.7	256.6	242.3	223.9	220.7	214.1	99999.9	99999.9	99999.9
790728	99999.9	277.0	264.2	245.7	227.5	224.3	216.4	99999.9	99999.9	99999.9
790729	99999.9	281.0	279.4	254.5	242.0	232.9	224.7	99999.9	99999.9	99999.9
790730	99999.9	270.6	259.0	236.5	226.3	99999.9	99999.9	99999.9	99999.9	99999.9
790731	99999.9	277.0	263.6	251.5	241.5	227.1	219.7	99999.9	99999.9	99999.9
790801	99999.9	272.0	259.3	243.1	232.3	227.1	227.5	99999.9	99999.9	99999.9
790802	99999.9	269.4	253.9	240.5	230.6	216.5	206.9	99999.9	99999.9	99999.9
790804	99999.9	274.2	259.4	239.7	227.6	215.6	209.2	99999.9	99999.9	99999.9
790806	99999.9	274.6	269.8	238.6	228.0	216.6	206.3	99999.9	99999.9	99999.9
790811	207.0	286.4	274.0	266.2	255.9	240.6	99999.9	99999.9	99999.9	99999.9
790812	99999.9	289.0	267.6	250.9	230.4	223.5	220.7	99999.9	99999.9	99999.9
790814	99999.9	270.0	270.1	264.7	266.7	250.7	214.9	99999.9	99999.9	99999.9
790815	99999.9	262.3	271.0	251.3	239.2	223.5	215.7	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : F2271 LAT : 24.22 LONG : 126.70 1200Z

U COMPONENT

DATE	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000
792714	999	1	-73	-46	-69	-7	-5	-51	-79	-17	
792715	999	0	-5	-1	-1	-26	-7	-12	-21	-13	
792716	999	-9	-71	-6	-3	-5	-7	-4	-77	-17	
792717	999	-13	5	32	3	-24	-11	-15	-23	-7	
792718	999	-1	64	73	0	-1	-86	999	999	999	
792721	999	-13	0	-72	-75	-9	-21	-4	-15	-29	
792722	999	13	-37	-49	-67	-7	-F	-10	-75	-24	
792724	999	2	3	-3	-25	999	999	999	999	999	
792725	999	-6	-6	-74	-13	-12	-41	-11	-40	-25	
792726	999	0	-1	-3	-5	-8	-6	-15	-6	-3	
792729	999	-60	73	0	-1	0	0	12	999	999	
792730	999	2	4	40	0	57	-6	-4	-13	-54	
792731	999	-25	-2	-4	46	999	999	0	-6	-22	
792731	999	-14	0	-55	63	40	-10	-3	-30	-20	
792731	999	2	64	0	-1	-73	-75	0	999	-15	
792732	999	1	-1	-2	-55	0	3	999	999	999	
792734	999	0	-2	-57	999	-60	-76	7	-75	-21	
792736	999	20	13	73	3	3	36	13	-7	-20	
792737	999	2	-10	-8	-1	-1	-2	3	3	-16	
792738	999	-1	1	-66	0	3	-4	-25	-4	-74	
792739	999	1	7	0	2	-2	-26	-37	-28	-54	
792740	999	0	-14	-4	1	-12	0	-3	-7	-12	

MISSING VALUE IS 999

STATION : F2271 LAT : 24.22 LONG : 126.70 1200Z

V COMPONENT

DATE	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000
792714	999	-3	-26	55	25	0	2	61	59	6	
792715	999	-79	-6	-2	0	-72	0	2	3	6	
792716	999	-8	-25	0	0	0	1	3	45	14	
792716	999	-70	-6	-89	-2	67	-4	5	4	-2	
792716	999	-1	-36	12	-11	4	15	999	999	999	
792721	999	-75	-4	0	0	6	12	1	5	5	
792722	999	-74	-64	-58	-39	-1	-3	1	43	48	
792724	999	1	0	-2	71	999	999	999	999	999	
792725	999	-3	-7	13	76	77	71	16	85	15	
792726	999	-4	-3	3	4	1	1	5	-5	0	
792726	999	-25	0	-3	-1	73	3	71	999	999	
792726	999	-2	7	-70	13	46	11	0	74	65	
792727	999	-72	-4	-2	55	999	999	63	-12	3	
792731	999	-60	-5	-46	36	-57	12	10	0	7	
792731	999	-5	36	-3	-5	26	27	1	999	0	
792732	999	-7	-6	-1	46	7	5	999	999	999	
792734	999	-1	-1	-48	999	-29	-27	0	43	3	
792736	999	-72	-73	-26	0	4	65	5	0	3	
792737	999	0	6	3	2	2	-1	3	-8	2	
792738	999	-2	0	-24	1	3	2	70	0	27	
792739	999	-5	-13	5	-1	3	-73	64	77	65	
792740	999	-4	-81	-1	-2	72	7	3	4	2	

MISSING VALUE IS 999

STATION : E1452 LAT : 13.48 LONG : 357.83W 1200Z

TEMPERATURE

DATE	1000	850	700	500	400	300	250	200	150	100
790714	99999.9	293.2	282.3	264.7	254.5	240.1	229.7	217.9	205.3	191.9
790715	99999.9	288.6	279.9	261.9	252.1	237.9	227.3	215.3	204.7	190.5
790716	99999.9	295.0	285.4	267.7	256.7	243.3	233.5	220.7	210.1	194.1
790717	99999.9	293.6	281.6	265.7	255.5	242.3	232.3	221.3	206.8	190.9
790718	99999.9	290.8	281.6	264.9	254.5	239.7	229.9	218.1	206.1	197.5
790719	99999.9	293.6	283.4	264.9	254.7	241.3	231.5	219.1	205.1	190.3
790720	99999.9	295.2	282.9	263.7	254.5	239.3	229.7	218.3	203.9	190.5
790721	99999.9	295.6	282.9	267.7	257.5	243.5	233.7	221.3	206.9	192.3
790722	99999.9	292.4	279.4	264.3	252.3	238.7	227.3	216.3	202.2	190.1
790723	99999.9	293.4	282.6	264.7	255.5	241.5	232.3	221.1	204.9	190.5
790724	99999.9	292.8	281.6	266.7	256.1	241.7	232.1	220.3	206.7	190.3
790725	99999.9	292.4	282.9	263.1	254.9	239.3	229.3	217.1	204.7	190.5
790726	99999.9	293.6	282.8	264.5	255.7	240.9	230.7	219.3	205.3	190.9
790727	99999.9	293.2	283.4	264.9	256.5	240.3	230.1	218.9	202.5	190.3
790728	99999.9	294.4	281.2	268.5	256.9	243.3	233.1	220.9	206.5	193.3
790729	99999.9	293.0	283.6	265.1	255.1	239.9	230.7	220.5	204.9	190.5
790730	99999.9	294.6	283.2	266.9	256.1	240.5	231.1	219.3	206.5	193.1
790731	99999.9	296.9	284.9	267.3	258.3	246.2	236.8	221.3	205.9	192.5
790801	99999.9	289.8	283.9	266.1	255.7	242.3	232.3	219.1	207.7	197.9
790802	99999.9	294.9	283.6	267.9	257.0	243.7	233.1	222.1	209.1	192.3
790803	99999.9	293.8	283.2	267.1	256.1	241.9	232.5	219.9	206.7	190.7
790804	99999.9	295.4	284.4	268.1	258.7	244.3	234.3	222.9	207.1	191.5
790805	99999.9	294.6	283.9	269.9	259.5	244.7	235.3	222.5	208.7	191.7
790806	99999.9	290.8	283.2	266.9	258.1	242.5	232.5	220.9	210.7	190.7
790807	99999.9	296.0	284.6	266.9	258.3	242.9	232.5	223.3	210.7	195.0
790808	99999.9	294.0	282.8	268.5	258.1	243.3	232.9	221.5	208.9	195.9
790809	99999.9	293.4	283.6	268.1	259.1	244.5	234.1	222.9	208.1	197.1
790810	299.5	291.6	282.8	267.7	261.4	248.3	231.9	220.3	207.1	195.1
790811	99999.9	295.5	285.0	268.5	258.1	243.1	233.7	223.8	209.7	196.5
790812	99999.9	295.8	283.2	269.7	257.7	242.9	233.7	221.7	209.3	193.7
790813	99999.9	294.2	285.4	266.9	259.5	244.1	233.9	223.7	208.1	194.3
790814	99999.9	295.0	284.6	266.9	259.1	247.7	241.4	226.2	206.1	197.5
790815	99999.9	293.2	284.2	266.9	259.3	242.3	233.3	220.5	206.5	196.3

MISSING VALUE IS 99999.9

STATION : 61052 LAT : 13.49 LONG : 357.83W 1200Z

Dew Point

DATE	1000	850	700	500	400	300	250	200	150	100
790714	99999.9	292.7	278.2	264.7	245.5	233.1	99999.9	99999.9	99999.9	99999.9
790715	99999.9	283.6	275.2	261.4	250.0	234.7	99999.9	99999.9	99999.9	99999.9
790716	99999.9	295.9	285.4	266.3	253.9	238.3	231.2	99999.9	99999.9	99999.9
790717	99999.9	291.2	281.6	265.7	255.5	241.8	99999.9	99999.9	99999.9	99999.9
790718	99999.9	290.3	280.5	263.9	253.3	238.2	99999.9	99999.9	99999.9	99999.9
790719	99999.9	293.6	281.4	264.9	256.7	239.9	99999.9	99999.9	99999.9	99999.9
790720	99999.9	299.3	278.9	263.6	253.0	237.3	99999.9	99999.9	99999.9	99999.9
790721	99999.9	291.1	281.2	267.7	257.4	242.7	232.5	99999.9	99999.9	99999.9
790722	99999.9	286.4	279.4	264.3	249.3	236.8	99999.9	99999.9	99999.9	99999.9
790723	99999.9	290.6	281.6	264.7	255.5	240.8	99999.9	99999.9	99999.9	99999.9
790724	99999.9	288.5	279.1	265.6	254.3	240.2	99999.9	99999.9	99999.9	99999.9
790725	99999.9	289.7	279.5	263.1	251.6	235.1	99999.9	99999.9	99999.9	99999.9
790726	99999.9	293.1	279.9	264.5	254.8	238.8	99999.9	99999.9	99999.9	99999.9
790727	99999.9	289.5	279.1	261.2	251.5	238.2	99999.9	99999.9	99999.9	99999.9
790728	99999.9	294.4	281.2	269.5	249.9	239.7	99999.9	99999.9	99999.9	99999.9
790729	99999.9	289.9	279.0	264.4	252.7	237.0	99999.9	99999.9	99999.9	99999.9
790730	99999.9	288.6	278.7	264.7	253.8	236.5	99999.9	99999.9	99999.9	99999.9
790731	99999.9	293.8	283.1	267.3	257.3	245.9	236.1	99999.9	99999.9	99999.9
790801	99999.9	289.4	277.8	263.0	249.7	239.3	99999.9	99999.9	99999.9	99999.9
790802	99999.9	294.0	283.6	264.4	257.1	243.7	233.1	99999.9	99999.9	99999.9
790803	99999.9	289.8	281.2	268.1	244.1	233.9	99999.9	99999.9	99999.9	99999.9
790804	99999.9	293.4	277.4	266.2	256.2	240.6	229.3	99999.9	99999.9	99999.9
790805	99999.9	292.8	283.3	269.8	258.0	240.5	230.9	99999.9	99999.9	99999.9
790806	99999.9	290.8	283.0	266.3	255.6	239.6	99999.9	99999.9	99999.9	99999.9
790807	99999.9	286.0	279.7	264.4	255.1	240.8	99999.9	99999.9	99999.9	99999.9
790808	99999.9	287.3	276.9	266.1	252.6	236.3	99999.9	99999.9	99999.9	99999.9
790809	99999.9	288.4	275.4	262.5	251.1	237.5	227.1	99999.9	99999.9	99999.9
790810	293.5	271.6	274.8	263.7	255.4	224.3	99999.9	99999.9	99999.9	99999.9
790811	99999.9	290.2	278.0	259.5	253.1	234.1	229.7	99999.9	99999.9	99999.9
790812	99999.9	281.0	280.6	263.7	256.2	240.6	230.8	99999.9	99999.9	99999.9
790813	99999.9	289.4	275.3	265.6	254.7	237.1	227.9	99999.9	99999.9	99999.9
790814	99999.9	291.4	279.6	263.1	252.1	239.7	234.4	211.2	99999.9	99999.9
790815	99999.9	290.5	276.2	265.0	253.3	239.6	230.1	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 61052 LAT : 13.48 LONG : 357.83W 1200Z U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	0	-14	999	999	999	999	999	999	999
790715	999	0	-12	999	999	999	999	999	999	999
790716	999	3	999	999	999	999	999	999	999	999
790717	999	-9	-15	-15	-10	-6	0	-11	-15	-25
790718	999	-3	-21	-11	-6	-8	-12	-13	-9	-10
790719	999	-5	-15	-10	-8	-9	-1	-3	-16	-6
790720	999	-6	-15	-6	-8	-5	-4	-2	-10	-22
790721	999	-9	-4	-6	-10	-1	-7	-1	-1	-19
790722	999	-14	-17	-13	-9	-12	-8	-7	999	-12
790723	999	-8	-14	-16	-10	-9	-6	-10	-12	-22
790724	999	-6	-14	999	999	999	999	999	999	999
790725	999	-5	-3	999	999	999	999	999	999	999
790726	999	-4	-6	999	999	999	999	999	999	999
790727	999	-1	-17	999	999	999	999	999	999	999
790728	999	2	-2	-8	999	999	999	999	999	999
790729	999	0	-10	-11	-8	-7	-7	-8	-11	-14
790730	999	-5	-15	-5	999	999	999	999	999	999
790731	999	999	999	999	999	999	999	999	999	999
790801	999	-7	-4	-3	-6	-13	-9	-9	-2	-17
790802	999	0	999	999	999	999	999	999	999	999
790803	999	1	-12	-13	-6	-4	-2	-7	-9	-21
790804	999	-8	-18	-8	-5	-8	1	-7	-15	-21
790805	999	-3	-8	-9	-8	999	999	-18	-30	-24
790806	999	-2	-6	-14	-7	-7	-3	-12	-29	-8
790807	999	-4	-9	-4	1	-4	-3	999	999	999
790808	999	2	-13	1	0	-3	-2	-5	-14	-22
790809	999	-11	-5	-1	-4	-2	-1	-9	-7	-11
790810	-3	-3	-9	-7	-11	-8	-3	-2	-10	-12
790811	999	6	-6	-7	-3	-3	-3	-9	-9	-27
790812	999	-4	-16	-10	-5	-7	-4	0	5	999
790813	999	-5	-11	-4	-3	-3	-9	-13	-9	-28
790814	999	-1	-8	-4	-4	-1	-1	-5	-11	-24
790815	999	-1	-11	-6	-6	-1	-3	-7	-13	-17

MISSING VALUE IS 999

STATION : 61052 LAT : 13.48 LONG : 357.83W 1200Z V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	-1	5	999	999	999	999	999	999	999
790715	999	3	2	999	999	999	999	999	999	999
790716	999	-1	999	999	999	999	999	999	999	999
790717	999	8	2	0	1	-7	-7	-6	-2	0
790718	999	8	4	0	-1	3	7	11	0	1
790719	999	2	0	6	0	-3	-7	-1	2	5
790720	999	-2	2	-1	-1	1	3	-1	3	-8
790721	999	8	8	-7	0	3	6	9	6	4
790722	999	0	-5	-2	-3	2	0	-6	999	-4
790723	999	0	5	6	6	0	7	-3	7	0
790724	999	-2	-1	999	999	999	999	999	999	999
790725	999	2	3	999	999	999	999	999	999	999
790726	999	3	-3	999	999	999	999	999	999	999
790727	999	3	0	999	999	999	999	999	999	999
790728	999	5	4	-1	999	999	999	999	999	999
790729	999	4	1	4	3	1	-1	-3	0	-2
790730	999	-3	2	3	999	999	999	999	999	999
790731	999	999	999	999	999	999	3	3	-2	1
790801	999	6	0	-3	2	4	-1	5	-7	0
790802	999	-3	999	999	999	999	999	999	999	999
790803	999	-9	0	0	-1	-2	5	2	2	0
790804	999	-3	-3	-1	-2	5	8	8	9	0
790805	999	1	-1	3	1	999	999	3	5	0
790806	999	-1	1	0	0	-1	1	0	-10	7
790807	999	-3	-3	0	2	-1	-2	999	999	999
790808	999	5	0	0	1	0	7	9	-2	0
790809	999	2	-6	-2	-1	0	1	0	2	0
790810	-2	3	0	4	2	-1	0	1	28	4
790811	999	-2	-5	-1	2	2	0	3	0	4
790812	999	3	-9	-3	0	0	0	1	2	999
790813	999	1	0	0	0	-2	0	2	1	5
790814	999	-1	-1	3	1	0	2	2	4	14
790815	999	2	4	5	-5	-2	-3	0	10	6

MISSING VALUE IS 999

STATION : 61291 LAT : 12.53 LONG : 7.95W 1200Z

TEMPERATURE

DATE	1000	850	700	500	400	300	250	200	150	100
790714	99999.9	290.6	290.3	267.1	257.7	243.7	232.1	220.3	208.6	197.7
790715	99999.9	292.4	283.3	267.6	258.7	244.9	234.3	222.3	208.5	197.3
790716	99999.9	292.0	293.6	267.7	257.7	242.7	234.5	221.9	208.3	199.7
790717	99999.9	293.6	284.3	266.7	259.5	243.3	233.9	221.3	208.3	199.1
790718	99999.9	293.7	282.6	268.1	258.3	243.5	233.9	221.5	208.3	199.7
790719	99999.9	292.6	282.4	267.1	258.1	242.7	233.1	220.5	208.5	199.9
790720	99999.9	292.0	292.2	267.7	254.8	242.3	232.7	220.5	207.9	199.5
790721	99999.9	290.8	288.4	264.7	257.1	240.3	230.7	219.1	207.5	196.7
790722	99999.9	293.0	233.6	267.7	257.1	243.3	233.7	221.5	207.5	199.9
790723	99999.9	292.6	282.8	269.0	256.3	240.9	231.9	220.1	205.5	198.1
790724	99999.9	294.4	234.0	268.5	259.3	243.5	233.7	222.1	209.1	201.6
790725	99999.9	295.2	284.2	267.9	259.3	244.5	233.9	224.3	210.1	204.1
790726	99999.9	292.6	298.8	263.3	252.7	244.7	229.7	217.7	203.9	197.7
790727	99999.9	293.2	283.4	264.9	256.5	240.3	230.1	216.9	202.5	199.7
790728	99999.9	293.2	283.6	266.7	257.9	242.5	232.9	221.7	209.7	201.7
790729	99999.9	293.8	282.0	265.7	255.5	241.3	231.1	219.3	205.1	204.5
790730	99999.9	291.2	283.3	266.5	256.7	241.7	231.5	221.6	206.7	201.5
790731	99999.9	292.8	283.2	264.5	257.5	241.7	232.7	220.9	206.7	201.9
790801	99999.9	294.2	281.8	265.9	256.5	243.9	233.5	221.1	208.1	198.3
790802	99999.9	294.0	283.6	265.3	256.1	242.1	231.7	220.1	204.9	199.9
790803	99999.9	291.4	282.6	265.7	255.7	241.9	231.3	219.3	206.3	201.7
790804	99999.9	293.2	283.0	267.5	257.9	243.1	232.7	219.1	206.1	199.7
790805	99999.9	293.6	284.0	267.7	257.9	242.7	233.3	221.9	210.1	199.9
790807	99999.9	293.0	292.2	266.3	257.7	242.3	232.9	220.9	208.1	199.9
790808	99999.9	290.6	282.6	268.9	258.1	244.9	234.5	221.5	206.5	201.9
790809	99999.9	292.0	282.2	266.7	257.9	242.9	232.5	222.1	211.3	194.3
790810	99999.9	292.8	284.6	265.7	256.5	243.1	232.9	221.7	207.9	193.3
790811	99999.9	293.4	284.4	267.9	256.5	242.3	232.7	220.7	206.5	195.1
790812	99999.9	289.0	278.3	262.3	251.9	236.0	226.9	214.1	201.5	196.9
790813	99999.9	291.2	283.6	267.1	260.1	245.7	234.7	223.5	207.9	197.7
790814	99999.9	292.4	283.0	267.9	258.1	242.3	232.2	220.9	206.7	194.9

MISSING VALUE IS 99999.9

STATION : 61291 LAT : 12.53 LONG : 7.95W 1200Z

DEW POINT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	99999.9	290.6	288.8	267.1	265.5	236.7	99999.9	99999.9	99999.9	99999.9
790715	99999.9	290.0	288.2	265.2	248.5	236.9	227.3	99999.9	99999.9	99999.9
790716	99999.9	288.4	275.9	263.2	249.7	235.7	227.5	99999.9	99999.9	99999.9
790717	99999.9	287.6	274.0	258.7	245.5	232.3	225.9	99999.9	99999.9	99999.9
790718	99999.9	292.0	288.7	265.9	253.8	239.3	227.9	99999.9	99999.9	99999.9
790719	99999.9	289.7	281.4	265.0	254.7	236.7	227.9	99999.9	99999.9	99999.9
790720	99999.9	292.0	280.5	265.8	254.8	240.6	229.0	99999.9	99999.9	99999.9
790721	99999.9	290.8	280.4	264.7	252.7	239.0	229.0	99999.9	99999.9	99999.9
790722	99999.9	288.5	279.6	267.7	256.2	240.8	229.9	99999.9	99999.9	99999.9
790723	99999.9	288.8	279.1	254.3	248.3	237.8	229.0	99999.9	99999.9	99999.9
790724	99999.9	291.0	283.2	266.8	253.3	240.6	231.9	99999.9	99999.9	99999.9
790725	99999.9	293.7	284.2	267.0	255.7	243.3	233.9	99999.9	99999.9	99999.9
790726	99999.9	286.6	278.6	263.0	252.4	236.6	229.0	99999.9	99999.9	99999.9
790727	99999.9	289.5	279.1	261.2	251.5	234.2	229.0	99999.9	99999.9	99999.9
790728	99999.9	291.1	281.3	259.4	250.8	235.5	229.0	99999.9	99999.9	99999.9
790729	99999.9	286.8	278.9	265.7	255.5	241.3	229.0	99999.9	99999.9	99999.9
790730	99999.9	285.2	279.2	266.5	256.7	241.4	229.0	99999.9	99999.9	99999.9
790731	99999.9	291.6	279.9	263.5	248.5	235.7	229.0	99999.9	99999.9	99999.9
790801	99999.9	286.2	278.6	264.9	254.1	236.9	229.0	99999.9	99999.9	99999.9
790802	99999.9	289.1	279.0	263.1	251.5	237.4	229.0	99999.9	99999.9	99999.9
790803	99999.9	288.0	275.6	262.1	247.7	237.2	229.0	99999.9	99999.9	99999.9
790804	99999.9	291.9	280.2	264.5	256.3	242.3	229.0	99999.9	99999.9	99999.9
790805	99999.9	286.6	276.0	256.7	251.9	236.4	229.0	99999.9	99999.9	99999.9
790807	99999.9	290.3	280.9	264.4	252.7	238.9	229.0	99999.9	99999.9	99999.9
790808	99999.9	290.6	281.4	267.5	254.4	239.9	230.0	99999.9	99999.9	99999.9
790809	99999.9	289.6	281.2	266.1	256.9	235.5	229.0	99999.9	99999.9	99999.9
790810	99999.9	292.0	279.2	265.0	252.5	237.1	229.0	99999.9	99999.9	99999.9
790811	99999.9	293.4	278.4	256.6	238.5	237.5	229.0	99999.9	99999.9	99999.9
790812	99999.9	243.0	269.3	257.3	245.9	228.9	229.0	99999.9	99999.9	99999.9
790813	99999.9	291.0	283.4	268.8	255.1	242.1	231.2	99999.9	99999.9	99999.9
790814	99999.9	292.4	283.3	267.9	258.1	240.5	229.0	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 61291 LAT : 12.53 LONG : 7.95W 1200Z

U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	-1	-10	-12	-10	-12	-15	-11	999	999
790715	999	-1	999	999	999	999	999	999	999	999
790716	999	-2	-12	-11	-4	-5	-12	999	999	999
790717	999	1	-9	-9	-6	-4	-10	999	999	999
790718	999	-5	-16	999	999	999	999	999	999	999
790719	999	3	-1	999	999	999	999	999	999	999
790720	999	-3	-8	-14	999	999	999	999	999	999
790721	999	-3	-11	-8	-8	-9	-8	-8	-11	-12
790722	999	-7	-11	-18	-7	-7	1	-4	-15	-11
790723	999	-4	-7	-9	-7	-7	-8	-8	-5	-17
790724	999	999	999	999	999	999	999	999	999	999
790725	999	-7	-10	-10	-4	-3	-2	-7	-12	-17
790726	999	-2	-10	-9	-5	-6	-7	-7	-8	-16
790727	999	-1	-17	999	999	999	999	999	999	999
790728	999	-2	-12	-15	-11	-11	-13	-17	-14	-17
790729	999	-8	-7	-10	-15	-6	-6	-6	-5	-16
790730	999	-3	-7	0	0	5	-2	-7	-6	-6
790731	999	-1	-8	-15	-13	-6	-9	-15	-16	-1
790801	999	-3	-12	-12	-9	-8	-9	-5	-6	-7
790802	999	-4	-7	-9	-9	-8	-9	-8	-10	-9
790803	999	4	-6	-14	-6	-7	-4	-4	-9	-15
790804	999	-3	-5	-10	-14	-11	-10	-9	-14	-16
790805	999	-4	-7	-11	-6	-4	-6	-14	-14	-16
790807	999	-3	-7	-9	-7	-12	-12	-19	-21	-12
790808	999	-1	-9	-4	-5	-8	-8	-11	-13	-16
790809	999	1	-8	-6	-8	-6	-9	-14	-8	-9
790810	999	0	-10	-8	-8	-9	-10	-7	-7	-15
790811	999	1	999	999	999	999	999	999	999	999
790812	999	-2	-4	-2	-2	-2	-1	-3	-7	-8
790813	999	-4	-5	-6	-6	-7	-5	-5	-6	-8
790814	999	-2	-7	-5	-5	-6	-7	-9	-10	-10

MISSING VALUE IS 999

STATION : 61291 LAT : 12.53 LONG : 7.95W 1200Z

V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	2	-3	0	0	-4	-5	-4	999	999
790715	999	0	999	999	999	999	999	999	999	999
790716	999	1	2	2	1	4	4	999	999	999
790717	999	0	3	-5	-3	-3	-6	999	999	999
790718	999	-1	2	999	999	999	999	999	999	999
790719	999	3	0	999	999	999	999	999	999	999
790720	999	-3	0	0	999	999	999	999	999	999
790721	999	-2	-8	-3	0	-3	0	1	0	-7
790722	999	-1	2	0	4	-8	-10	-5	-2	-4
790723	999	0	-2	-5	-2	-1	0	0	0	-8
790724	999	999	999	999	999	999	999	999	999	999
790725	999	-1	-1	-8	-1	-3	-6	-8	-10	-6
790726	999	6	-1	1	2	-4	-6	-9	-7	-2
790727	999	3	0	999	999	999	999	999	999	999
790729	999	1	-7	-5	-4	-4	-8	-3	2	-7
790729	999	1	0	0	2	-5	-5	-4	-3	0
790730	999	2	4	-3	-2	-2	-7	0	-3	-1
790731	999	-3	1	-5	-4	-4	0	5	6	-1
790801	999	0	-4	0	-5	-5	-7	-7	-10	-7
790802	999	0	-4	-1	0	0	-1	-1	-3	-2
790803	999	-5	-1	-2	-5	-1	-5	-5	-5	-7
790804	999	-2	1	0	-5	-2	-6	-5	-2	0
790805	999	3	-8	-6	-5	-1	4	0	0	-7
790807	999	-1	-4	-5	-1	-2	-2	-7	0	0
790808	999	2	-1	0	-7	-1	-7	-7	0	0
790809	999	2	0	-1	3	2	-3	0	0	0
790810	999	-2	-3	-7	-3	0	0	0	0	-2
790811	999	-2	999	999	999	999	999	999	999	999
790812	999	1	0	1	0	0	0	0	1	0
790813	999	-3	-6	0	2	0	0	0	-4	-1
790814	999	-1	-6	0	-3	-4	-2	-2	-1	1

MISSING VALUE IS 999

STATION : 8594 LAT : 16.73 LONG : 22.95E 12002

TEMPERATURE

DATE	1000	850	700	500	400	300	250	200	150	100
790821	301.0	293.6	286.0	267.1	256.7	242.7	232.7	221.1	207.7	197.9
790823	300.2	295.2	285.0	265.7	256.3	242.3	231.8	220.3	207.7	199.3
790804	298.6	295.5	284.8	263.9	256.3	241.3	231.9	219.9	206.1	192.7
790805	296.2	294.2	286.2	266.9	256.7	242.9	232.9	223.1	206.1	201.1
790806	298.2	293.0	284.0	266.9	257.0	241.5	231.7	219.9	205.3	187.9
790807	296.0	284.2	283.0	267.9	256.7	243.3	233.1	221.1	207.1	197.3
790808	297.9	299.2	289.8	267.5	259.1	242.5	232.3	221.1	209.3	195.1
790809	296.6	295.6	284.8	268.0	276.7	272.4	233.1	220.7	207.5	201.2
790810	299.5	291.6	282.9	267.7	281.4	248.3	231.9	220.7	207.1	195.1
790811	299.0	291.4	283.4	266.5	256.7	241.7	231.9	220.7	207.7	187.6
790812	298.0	291.8	285.4	265.7	256.1	241.7	231.3	221.0	208.5	197.1
790813	299.4	302.2	286.6	269.7	256.9	242.7	232.3	222.1	210.3	187.1
790814	300.4	297.2	287.2	265.1	258.1	242.9	232.5	221.1	207.3	191.9
790815	299.2	286.8	287.4	262.7	258.5	242.7	232.9	221.7	208.1	187.3

MISSING VALUE IS 99999.9

STATION : 8594 LAT : 16.73 LONG : 22.95E 12002

DEW POINT

DATE	1000	850	700	500	400	300	250	200	150	100
790801	293.0	282.6	265.0	259.4	235.7	223.7	99999.9	99999.9	99999.9	99999.9
790803	283.2	279.2	272.0	258.7	242.3	223.3	99999.9	99999.9	99999.9	99999.9
790804	292.6	266.5	268.8	244.9	230.3	99999.9	99999.9	99999.9	99999.9	99999.9
790805	290.2	268.2	257.2	242.9	234.7	99999.9	99999.9	99999.9	99999.9	99999.9
790806	291.2	283.0	267.6	258.2	99999.9	99999.9	99999.9	99999.9	99999.9	99999.9
790807	282.8	278.1	269.0	239.9	235.7	223.3	99999.9	99999.9	99999.9	99999.9
790808	291.5	268.2	263.8	245.5	235.1	222.5	99999.9	99999.9	99999.9	99999.9
790809	292.9	265.3	256.8	257.3	257.5	257.7	99999.9	99999.9	99999.9	198.8
790810	293.5	271.6	274.8	260.7	255.4	224.3	99999.9	99999.9	99999.9	99999.9
790811	293.0	276.4	278.2	264.2	244.6	99999.9	99999.9	99999.9	99999.9	99999.9
790812	291.0	281.8	267.7	265.7	248.4	237.0	99999.9	99999.9	99999.9	99999.9
790813	294.3	278.2	261.6	246.4	235.9	224.7	99999.9	99999.9	99999.9	99999.9
790814	294.4	266.2	257.2	250.1	232.1	99999.9	99999.9	99999.9	99999.9	99999.9
790815	293.2	278.0	261.4	258.1	235.5	224.7	99999.9	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 8594 LAT : 16.73 LONG : 22.95W 1200Z

U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790801	2	-3	-20	-3	0	5	2	-7	-3	-4
790803	-2	-8	-16	-14	-3	-3	-5	-6	-8	-11
790804	-1	-15	-16	-8	-1	-1	-3	-6	-7	-9
790805	-3	-2	-5	-3	-9	-3	-2	-4	-9	-9
790806	-4	26	999	999	999	999	-3	-6	-13	-11
790807	-2	-0	-12	-11	-12	-9	-11	-7	-12	-11
790808	999	-10	-19	-7	-6	-16	-13	-7	-15	-12
790809	-6	-10	-14	-9	-12	-10	-14	-13	-11	999
790810	-3	-3	-9	-7	-11	-6	-3	-2	-10	-12
790811	-1	-1	-11	-6	-3	1	2	-1	0	-9
790812	1	0	-11	-5	0	0	2	999	-1	-12
790813	1	-12	-17	-15	-4	-3	0	-4	-5	-12
790814	-2	-6	-22	-15	-6	-3	0	-2	-10	-13
790815	-1	-12	-20	-13	-1	1	0	-1	-6	-15

MISSING VALUE IS 999

STATION : 8594 LAT : 16.73 LONG : 22.95W 1200Z

V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790801	0	-1	-7	-3	-7	6	14	20	4	2
790803	-3	-1	-6	-2	3	-8	-3	-5	-5	2
790804	-5	-5	-6	-3	1	-2	-3	-5	2	0
790805	-4	-1	-3	0	3	2	1	2	-1	0
790806	-7	-23	999	999	999	999	4	3	8	4
790807	-5	-5	-4	4	7	8	6	0	7	13
790808	999	-8	-7	-2	1	-3	-2	0	5	4
790809	-7	0	-2	-1	-4	1	-2	-4	2	999
790810	-2	3	0	4	2	-1	0	1	26	4
790811	-4	-1	0	5	3	-2	0	2	7	1
790812	-0	-4	0	3	0	0	4	999	1	0
790813	-0	-10	0	0	3	3	3	11	6	7
790814	-3	4	-3	5	4	2	0	5	6	4
790815	-5	-7	-7	-4	-1	0	3	0	4	5

MISSING VALUE IS 999

STATION : 61415 IAT : 20.93 LONG : 17.07 12002

U COMPONENT

DATE	1200	1500	700	500	400	300	250	200	150	100
790714	-4	-1	-2	-3	-2	-2	1	-2	-3	-11
790715	-1	-3	-7	-4	0	0	0	0	-2	-13
790716	1	1	-0	-9	-9	-7	0	-4	-13	-10
790717	0	-6	-5	-8	-2	-10	-10	-9	-11	000
790718	-3	-14	-12	-14	-14	-6	1	2	-2	-17
790719	0	-1	-6	-16	-3	-5	-1	1	4	-7
790720	0	2	-4	-4	-2	-3	-1	0	0	-3
790721	2	-5	-5	-13	-7	-7	-1	0	0	-14
790722	0	-0	-9	-10	-9	-2	-2	0	0	-10
790723	-5	-15	-11	-12	-10	-4	-3	0	3	-1
790724	-0	-13	-13	-12	-8	-5	-1	2	2	-1
790725	-4	-1	5	0	-7	1	1	0	-5	-6
790726	-3	-2	-7	-12	-7	-2	-5	-9	-10	-11
790727	-1	-4	-7	-10	-9	-2	-3	-10	-11	-22
790728	3	-3	-7	-19	-12	-7	-5	-7	-6	-14
790729	0	-5	-7	-9	-11	-9	-5	-2	0	-12
790730	0	2	999	999	999	-10	-8	-1	-3	-4
790731	4	5	-7	-21	-9	-1	-6	-4	-2	-6
790801	1	-3	-12	-16	-8	1	0	0	0	-5
790802	0	-5	-9	-14	0	5	10	7	7	-4
790803	-2	-12	-9	-9	-3	4	12	9	9	-10
790804	-0	0	5	1	1	2	3	1	2	-7
790805	-3	-3	-3	-5	-3	-5	1	1	-2	-12
790806	-3	-3	-1	-12	-3	-7	-4	-4	-6	-12
790807	4	-14	-7	-12	-6	-9	-9	-13	-10	-12
790808	-1	-10	-10	-11	-6	-6	-10	5	0	-14
790809	-1	-1	-4	-9	-6	-5	-4	-4	-9	-17
790810	-4	2	0	-7	-4	-1	0	0	1	-3
790811	0	0	-5	-6	0	1	3	4	1	-4
790812	999	999	999	999	999	1	4	0	5	-7
790813	-7	-15	-12	-10	-4	4	3	6	5	-4
790814	-1	-0	-7	-5	-2	9	11	10	0	-2
790815	-2	-5	2	0	-1	5	7	5	5	-2

STATION : 61415 IAT : 20.93 LONG : 17.03 12002

V COMPONENT

DATE	1000	1500	700	500	400	300	250	200	150	100
790714	-11	-10	-3	2	0	3	0	1	2	5
790715	-10	0	-1	7	6	0	0	0	0	7
790716	-1	3	3	5	3	-6	-4	-5	4	5
790717	-7	-5	-8	-5	-7	-6	-3	-3	4	000
790718	0	-9	-9	-8	-5	-5	-2	0	0	0
790719	-1	1	4	0	0	-1	3	0	0	0
790720	-4	-1	-1	1	0	3	0	0	-4	0
790721	-3	-1	4	13	7	2	2	0	4	10
790722	-8	-11	-5	3	8	-1	-1	1	4	5
790723	-9	-2	-4	2	-3	-2	-5	1	9	0
790724	-1	-8	-10	-1	-3	-3	-1	-1	4	4
790725	-12	-8	-9	4	-2	0	0	3	0	3
790726	-0	2	2	4	2	1	-2	0	3	2
790727	-5	-3	2	0	-6	-4	-3	-1	-4	3
790728	-6	-3	-4	7	2	6	9	6	5	5
790729	5	6	-1	-3	2	0	3	4	14	4
790730	0	0	999	999	999	3	1	-3	-9	0
790731	-2	1	-4	3	3	-1	0	0	-3	5
790801	-4	-4	-4	-6	-3	0	3	11	7	1
790802	0	-3	-1	2	1	2	1	6	6	5
790803	-4	-11	-3	0	0	3	4	5	1	0
790804	-7	-2	-2	2	0	7	5	4	11	3
790805	-10	0	3	9	8	6	7	7	7	9
790806	-8	-6	-1	7	0	-1	2	3	12	10
790807	-12	-12	-2	-2	0	3	3	6	3	7
790808	-10	-1	-6	-4	-4	-5	-1	3	6	5
790809	-4	3	2	0	-4	-1	-2	1	7	0
790810	-7	-3	0	1	0	0	1	0	1	5
790811	-6	-1	6	15	3	0	0	2	3	7
790812	999	999	999	999	999	-1	0	5	0	2
790813	-6	-5	0	1	3	1	4	7	6	6
790814	-5	-6	-8	1	1	-2	-2	1	5	2
790815	-10	-15	-15	-0	-4	-6	-1	0	2	4

STATION : 61641 LAT : 14.73 LONG : 17.54W 12007

TEMPERATURE

DATE	1000	850	700	500	400	300	250	200	150	100
790714	299.0	296.8	285.9	265.7	258.9	243.7	233.3	228.7	226.5	197.7
790715	299.2	294.9	293.9	269.5	257.3	242.9	232.3	229.7	226.3	197.9
790716	299.8	291.0	283.0	266.9	259.3	243.7	231.1	219.1	205.5	197.5
790717	299.8	293.4	284.0	266.3	258.5	243.1	232.9	228.9	229.1	197.5
790718	299.4	294.6	287.0	270.1	256.3	243.7	234.1	221.3	206.1	194.7
790719	299.8	291.8	282.2	269.1	258.5	243.7	233.5	219.9	207.3	198.9
790720	321.3	299.4	290.6	272.7	262.5	247.1	237.9	224.7	209.1	199.7
790721	299.2	292.4	283.4	268.3	256.5	239.3	232.1	220.1	206.9	199.3
790722	298.8	292.0	283.0	266.3	257.1	242.9	232.9	221.3	207.7	197.5
790723	299.4	295.4	286.2	266.5	255.1	242.7	233.3	219.1	205.9	197.3
790724	303.0	291.8	284.6	265.3	257.9	244.9	234.7	221.5	207.5	196.7
790725	299.4	292.6	283.0	267.7	257.5	242.9	232.5	221.5	207.5	196.7
790726	298.2	292.6	281.4	268.7	257.3	242.5	232.9	220.5	207.1	200.1
790727	299.8	293.8	282.6	267.3	257.3	242.7	232.9	219.7	204.9	198.9
790728	300.8	294.8	285.2	265.7	256.5	241.9	231.9	220.3	207.5	200.1
790729	321.4	297.0	286.0	267.3	257.1	245.3	233.1	219.3	205.9	198.9
790730	299.6	293.6	284.0	267.5	257.1	243.5	233.5	221.1	207.1	201.9
790731	300.8	293.4	281.9	262.6	254.1	240.5	231.3	220.3	208.1	197.1
790801	300.4	292.8	284.2	270.1	259.5	246.1	236.7	225.1	210.1	200.4
790802	299.8	293.2	284.4	265.7	256.9	246.1	238.5	229.2	215.6	197.7
790803	299.4	293.8	284.8	265.7	256.1	241.3	232.3	219.7	201.8	200.7
790804	300.4	292.6	283.4	267.5	256.3	243.1	233.1	221.7	209.2	200.1
790806	300.0	294.8	283.0	267.5	256.1	242.3	233.7	221.1	207.5	197.0
790807	299.6	295.0	285.0	269.1	258.5	243.9	233.1	221.5	208.3	198.3
790808	300.0	295.9	287.0	267.9	259.1	243.7	233.5	222.9	208.5	197.0
790809	308.4	292.2	282.2	268.7	258.7	244.1	233.7	221.5	209.9	195.7
790810	297.3	289.0	288.0	268.5	258.7	244.5	234.1	221.9	208.3	194.9
790811	299.2	292.4	283.0	266.5	256.1	242.3	232.3	221.3	209.9	199.1
790812	299.4	296.2	286.8	265.5	259.1	245.1	236.1	226.7	210.9	200.1
790813	300.2	296.8	285.4	265.1	258.9	242.3	232.3	222.1	208.1	196.5
790814	300.4	294.6	285.6	265.3	258.5	243.5	233.3	223.3	207.7	197.1
790815	321.2	295.8	287.2	266.1	258.7	244.7	234.3	222.1	208.5	196.9

MISSING VALUE IS 99999.9

STATION : 61641 LAT : 14.73 LONG : 17.50W 12002

DEW POINT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	295.4	261.8	271.8	256.7	251.9	232.7	99999.9	99999.9	99999.9	99999.9
790715	294.3	279.0	276.9	264.6	254.4	239.8	99999.9	99999.9	99999.9	99999.9
790716	296.2	280.3	276.6	265.1	254.3	239.4	99999.9	99999.9	99999.9	99999.9
790717	297.8	292.6	281.6	259.3	246.1	234.1	99999.9	99999.9	99999.9	99999.9
790718	295.0	283.6	274.0	254.1	241.3	232.5	99999.9	99999.9	99999.9	99999.9
790719	295.2	286.9	279.0	264.4	255.3	238.7	99999.9	99999.9	99999.9	99999.9
790720	298.6	296.0	286.9	272.7	262.5	245.2	99999.9	99999.9	99999.9	99999.9
790721	296.3	298.4	278.3	265.3	248.9	234.4	99999.9	99999.9	99999.9	99999.9
790722	295.9	287.1	278.7	264.2	251.1	238.5	99999.9	99999.9	99999.9	99999.9
790723	296.6	286.4	276.2	264.1	251.8	236.7	99999.9	99999.9	99999.9	99999.9
790724	295.1	288.3	275.6	255.3	245.9	234.0	99999.9	99999.9	99999.9	99999.9
790725	297.5	287.6	278.1	261.7	251.5	236.9	99999.9	99999.9	99999.9	99999.9
790726	295.3	284.6	280.0	257.9	253.8	237.6	99999.9	99999.9	99999.9	99999.9
790727	297.2	280.4	280.4	267.2	254.6	236.7	99999.9	99999.9	99999.9	99999.9
790728	297.1	285.8	276.6	260.1	251.1	234.9	99999.9	99999.9	99999.9	99999.9
790729	300.6	291.1	277.0	255.3	247.1	240.6	99999.9	99999.9	99999.9	99999.9
790730	297.3	286.6	280.0	266.8	255.8	248.8	99999.9	99999.9	99999.9	99999.9
790731	298.1	287.4	277.6	260.0	248.6	235.5	99999.9	99999.9	99999.9	99999.9
790801	297.6	288.8	278.2	266.8	256.0	235.2	99999.9	99999.9	99999.9	99999.9
790802	296.9	280.5	278.4	263.6	248.9	238.1	99999.9	99999.9	99999.9	99999.9
790803	297.3	288.0	274.8	260.7	249.1	234.3	99999.9	99999.9	99999.9	99999.9
790804	299.8	291.8	278.8	260.5	250.3	238.2	99999.9	99999.9	99999.9	99999.9
790806	298.8	286.8	279.1	258.8	248.1	233.3	99999.9	99999.9	99999.9	99999.9
790807	296.7	279.1	273.0	263.1	252.5	237.9	99999.9	99999.9	99999.9	99999.9
790808	297.4	271.1	275.0	254.2	239.8	232.0	99999.9	99999.9	99999.9	99999.9
790809	294.4	287.2	278.0	264.8	252.2	236.1	99999.9	99999.9	99999.9	99999.9
790810	296.1	289.0	280.0	268.5	257.7	241.8	99999.9	99999.9	99999.9	99999.9
790811	297.9	286.4	274.0	266.2	255.9	240.6	99999.9	99999.9	99999.9	99999.9
790812	295.7	285.2	273.8	260.5	253.1	235.1	99999.9	99999.9	99999.9	99999.9
790813	296.3	280.0	275.4	268.2	242.9	233.3	99999.9	99999.9	99999.9	99999.9
790814	298.7	299.6	275.2	261.3	245.5	232.5	99999.9	99999.9	99999.9	99999.9
790815	296.2	278.8	269.2	251.1	242.7	230.7	99999.9	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 61641 LAT : 14.73 LONG : 17.50W 1200Z

U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	5	-4	-11	-12	-5	-7	-9	-11	-11	-21
790715	-2	3	-14	-13	-7	-14	-3	-6	-14	-15
790716	0	-3	-10	-14	-11	-10	0	-9	-12	-16
790717	3	-4	-11	-15	-5	-8	-8	-7	-18	-17
790718	-3	-1	-11	-13	-12	-12	-11	-15	-23	-7
790719	-5	-12	-15	-9	-21	3	0	-6	-17	-10
790720	3	0	-9	-5	0	-3	-5	3	-15	-6
790721	3	-3	-6	-5	1	-13	-9	-8	-8	-10
790722	4	0	-15	-13	-11	-10	-7	-9	-8	-16
790723	5	-15	-9	-9	-20	-13	-9	-12	-13	-13
790724	-1	-3	-9	-14	-10	-10	-2	-2	-23	-3
790725	2	-2	-11	-11	-8	-8	-1	-9	-8	-11
790726	1	-5	-10	-7	-12	-6	-1	-1	-6	-3
790727	-1	-8	-15	-17	-10	-6	-3	-5	-7	-12
790728	-1	-1	-17	-10	-10	-8	-7	-11	-9	-21
790729	2	-1	-9	-9	-9	-7	-6	-6	-16	-15
790730	-2	-7	-17	-10	-10	-7	-1	-6	-15	-8
790731	-2	0	-1	-5	-3	-2	-2	-7	-9	-3
790801	-2	-3	-1	-5	-3	-2	-3	-12	-10	999
790802	0	999	-15	-16	-8	-5	-9	-9	-16	-9
790803	-1	-3	-10	-10	-6	-1	-3	-7	-13	-5
790804	3	1	-14	-7	-5	-5	-3	-7	-13	-8
790806	0	-2	-10	-8	-10	-9	-8	-8	-15	-14
790807	5	4	-9	-8	-8	-10	-26	-10	-15	-12
790808	2	2	-3	-5	-9	-12	-10	-15	-7	-16
790809	3	-11	-13	-5	-4	-6	-2	-6	-9	-13
790810	0	-1	3	-2	-4	-5	-1	-2	0	-11
790811	3	1	-14	-6	-1	-1	-2	-3	0	-16
790812	5	0	-7	-10	-3	-3	-3	-2	-4	-9
790813	2	-3	-14	-10	-7	-3	-5	-7	-9	-12
790814	4	-2	-15	-12	-9	-5	0	-5	-9	-15
790815	5	-2	-13	-11	-1	-2	-2	-3	-7	-12

MISSING VALUE IS 999

STATION : 61641 LAT : 14.73 LONG : 17.50W 1200Z

V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	-2	-6	-13	-4	2	1	3	6	2	0
790715	1	9	2	0	1	16	-4	-4	2	5
790716	0	1	3	0	-2	1	-4	-5	4	0
790717	-4	-3	-4	5	1	1	1	4	-3	0
790718	0	5	0	-8	-4	-4	-4	5	4	2
790719	2	2	0	1	3	1	1	1	-6	-3
790720	9	25	16	6	4	8	-6	-20	-9	-11
790721	0	0	-4	-9	0	-8	-11	-7	-7	0
790722	-3	-7	-9	2	0	1	4	1	5	0
790723	-2	5	-5	5	7	0	1	2	0	0
790724	2	6	-0	-5	-3	0	0	1	0	4
790725	-4	-4	-4	0	0	3	-1	3	-1	0
790726	-4	2	3	0	-2	-5	0	-3	-5	0
790727	1	7	5	3	3	5	1	0	-1	4
790728	0	-2	-3	0	1	-7	-2	2	0	0
790729	-1	1	-5	-1	-1	4	5	12	13	5
790730	5	6	6	0	3	-4	-9	-7	-9	0
790731	5	1	0	-1	1	7	5	6	7	6
790801	-4	0	-2	-6	-3	-4	0	7	13	999
790802	-4	999	5	-2	-1	-3	0	-3	0	1
790803	-1	1	0	3	5	2	0	-6	-2	3
790804	1	-1	-5	-3	-3	-2	-1	0	0	1
790806	-2	-1	1	1	1	1	5	5	2	5
790807	-1	-7	-3	0	-1	-1	0	0	5	0
790808	1	7	-1	-3	-3	0	1	5	6	-2
790809	-1	4	2	0	3	0	1	0	3	4
790810	-4	-3	1	3	5	3	3	3	5	4
790811	-2	0	6	3	2	2	-1	3	-8	2
790812	-4	-8	-9	-7	-3	3	4	3	1	5
790813	4	0	4	1	1	3	6	6	3	0
790814	1	1	-2	0	0	-3	-3	-3	-1	5
790815	-2	-7	-6	-2	-8	-4	-3	3	4	2

MISSING VALUE IS 999

*** H C I D A S

STATION : 64660 LAT : 4.47 LONG : 341.487 1200Z

TEMPERATURE

DATE	1000	0500	0800	1100	1400	1700	2000	2300	0200	0500	0800
790714	250.6	280.0	264.9	255.1	240.1	228.7	219.1	210.3	199.1		
790715	259.6	279.0	265.1	254.1	238.3	226.5	214.7	202.5	189.3		
790716	290.2	280.4	265.5	256.3	241.5	231.7	218.7	204.9	190.0		
790717	280.2	281.2	265.7	254.5	239.9	229.7	216.9	202.7	188.6		
790718	280.6	280.4	266.1	254.7	241.3	231.7	219.1	207.7	193.9		
790719	280.4	280.4	265.5	255.3	241.3	230.1	217.3	203.5	189.1		
790720	280.6	281.0	267.3	255.3	240.5	229.7	218.5	207.9	194.1		
790721	280.0	281.4	264.9	252.3	235.1	224.3	213.3	202.1	187.7		
790722	280.0	284.0	270.3	251.5	244.3	233.1	225.9	216.2	197.7		
790723	287.4	284.1	266.5	255.1	242.7	233.3	219.1	205.9	187.3		
790724	280.4	280.2	264.5	254.9	239.5	229.1	218.7	207.7	189.1		
790725	280.0	279.6	265.1	252.3	237.7	226.7	214.1	204.1	185.9		
790726	287.6	278.4	262.7	250.1	237.9	223.9	216.3	205.5	187.7		
790727	280.6	278.0	265.7	255.1	242.7	231.7	220.3	207.5	188.1		
790728	280.6	286.2	271.7	260.5	245.3	235.4	223.1	209.5	185.1		
790729	280.4	283.6	271.9	259.7	241.9	232.7	220.5	208.1	187.3		
790730	281.4	282.2	267.0	265.5	244.5	234.3	223.1	209.7	188.7		
790731	285.0	283.6	269.5	258.5	243.1	234.7	222.1	207.9	189.5		
790801	291.4	287.4	264.7	257.3	242.0	232.5	221.1	207.1	187.0		

MISSING VALUE IS 99999.9

*** H C I D A S *** CPUID. DAT PROGRAM: DYCBL TERMINAL: 021 PROJECT: 1650 DATE: 82110 TIME: 174720

STATION : 64660 LAT : 4.47 LONG : 341.487 1200Z

DEW POINT

DATE	1000	0500	0800	1100	1400	1700	2000	2300	0200	0500	0800
790714	280.1	279.1	254.4	250.5	227.3	99999.9	99999.9	99999.9	99999.9		
790715	287.2	277.3	255.1	248.1	231.3	99999.9	99999.9	99999.9	99999.9		
790716	280.9	279.3	251.1	252.3	230.5	99999.9	99999.9	99999.9	99999.9		
790717	280.7	279.3	261.2	240.5	227.9	99999.9	99999.9	99999.9	99999.9		
790718	280.6	274.2	250.6	240.6	226.7	99999.9	99999.9	99999.9	99999.9		
790719	280.0	274.1	255.3	244.3	232.0	99999.9	99999.9	99999.9	99999.9		
790720	280.6	277.2	255.3	251.5	235.5	99999.9	99999.9	99999.9	99999.9		
790721	280.6	276.6	255.3	252.6	233.2	99999.9	99999.9	99999.9	99999.9		
790722	274.8	274.3	244.3	234.6	222.3	213.1	99999.9	99999.9	99999.9		
790723	284.6	99999.9	264.1	251.6	236.7	99999.9	99999.9	99999.9	99999.9		
790724	280.2	279.9	263.2	252.7	234.6	99999.9	99999.9	99999.9	99999.9		
790725	281.0	278.3	256.1	257.5	234.7	99999.9	99999.9	99999.9	99999.9		
790726	281.2	274.8	256.7	247.1	223.1	99999.9	99999.9	99999.9	99999.9		
790727	287.6	276.7	264.5	253.4	236.7	99999.9	99999.9	99999.9	99999.9		
790728	277.0	274.2	245.7	237.5	224.3	216.4	99999.9	99999.9	99999.9		
790729	281.3	279.4	254.5	242.0	232.9	224.7	99999.9	99999.9	99999.9		
790730	280.7	277.2	257.9	251.9	241.9	99999.9	99999.9	99999.9	99999.9		
790731	287.3	283.6	251.5	241.5	227.1	219.7	99999.9	99999.9	99999.9		
790801	280.4	277.9	250.7	232.3	220.9	227.5	99999.9	99999.9	99999.9		

MISSING VALUE IS 99999.9

*** M C I D A S ***

STATION : 64650 LAT : 4.40 LONG : 341.4E 1203Z

U COMPONENT

DATE	1300	1500	1700	1900	2100	2300	2500	2700	1500	1000
790714	999	999	999	999	999	999	999	999	999	999
790715	999	999	-11	9	999	999	999	999	999	999
790716	999	999	999	999	999	999	999	999	999	999
790717	999	5	-2	999	999	999	999	999	999	999
790718	999	999	999	999	999	999	999	999	999	999
790719	999	999	999	999	999	999	999	999	999	999
790720	999	999	999	999	999	999	999	999	999	999
790721	999	999	999	999	999	999	999	999	999	999
790722	999	13	-37	-49	-67	-7	-8	-10	-75	-64
790723	999	999	999	-9	-20	-13	-9	-12	-13	-17
790724	999	999	999	999	999	999	999	999	999	999
790725	999	-1	999	999	999	999	999	999	999	999
790726	999	3	0	999	999	999	999	999	999	999
790727	999	999	999	999	999	-6	-3	-5	-7	-12
790728	999	-69	73	0	-1	0	0	12	999	999
790729	999	-1	4	4	0	57	-6	4	-13	-14
790730	999	999	999	999	999	999	999	0	-6	-22
790731	999	-14	0	-55	63	48	-10	-3	-20	-27
790821	999	999	999	999	-1	-73	-75	-9	999	-15

MISSING VALUE IS 999

*** M C I D A S *** CPUID: DAE PROGRAM: DTCBL TERMINAL: 021 PROJECT: 1650 DATE: 82117 TIME: 153223

STATION : 64650 LAT : 4.40 LONG : 341.4E 1203Z

V COMPONENT

DATE	1700	1900	2100	2300	2500	2700	2900	3100	1500	1000
790714	999	999	999	999	999	999	999	999	999	999
790715	999	37	-19	16	999	999	999	999	999	999
790716	999	999	999	999	999	999	999	999	999	999
790717	999	-2	-14	999	999	999	999	999	999	999
790718	999	999	999	999	999	999	999	999	999	999
790719	999	999	999	999	999	999	999	999	999	999
790720	999	999	999	999	999	999	999	999	999	999
790721	999	999	999	999	999	999	999	999	999	999
790722	999	-74	-64	-54	-39	-1	-3	1	43	4E
790723	999	999	999	5	7	0	1	2	0	0
790724	999	999	999	999	999	999	999	999	999	999
790725	999	-1	999	999	999	999	999	999	999	999
790726	999	5	0	999	999	999	999	999	999	999
790727	999	999	999	999	999	5	1	0	-1	4
790728	999	-25	2	-3	-1	73	3	71	999	999
790729	999	5	-7	-70	13	48	11	0	74	65
790730	999	999	999	999	999	999	999	63	12	3
790731	999	-80	-5	-46	36	-57	12	10	63	7
790801	999	999	999	999	-5	26	27	1	999	3

MISSING VALUE IS 999

STATION : 64910 LAT : 4.42 LONG : 356.306 12002

TEMPERATURE

DATE	1000	850	700	500	400	300	250	200	150	100
790714	208.6	200.0	202.1	207.3	207.5	241.9	231.5	217.9	211.6	196.0
790715	207.9	200.4	202.5	207.1	206.9	242.3	242.1	242.1	242.1	242.1
790716	206.6	200.3	200.9	216.1	206.5	242.3	231.5	219.7	204.7	195.0
790717	208.2	200.0	202.4	207.5	207.7	241.1	230.7	217.5	204.5	196.0
790718	204.6	200.0	202.1	206.9	207.3	242.9	232.9	219.5	207.7	196.0
790719	208.0	201.0	202.2	208.1	207.1	241.9	231.7	219.7	209.7	197.7
790720	207.2	200.0	201.6	207.7	206.7	242.1	231.5	219.9	213.2	196.7
790721	207.4	200.0	202.7	206.5	205.9	241.9	231.3	220.5	208.1	197.7
790722	208.4	200.1	202.0	208.3	207.5	243.1	232.9	220.3	209.4	201.7
790723	206.4	200.0	202.0	206.5	205.7	240.9	231.1	219.1	206.1	197.7
790724	207.4	200.0	202.2	206.9	207.3	241.9	232.5	220.3	206.1	201.0
790725	208.0	200.0	201.9	208.7	205.9	240.7	229.9	218.5	209.5	197.0
790726	207.8	200.0	202.0	207.9	207.7	242.3	231.7	220.7	209.5	197.0
790727	207.2	200.0	201.8	206.5	205.5	240.7	230.5	219.9	206.5	197.7
790728	206.2	200.6	202.3	207.1	206.3	241.5	243.5	243.5	193.8	201.0
790729	206.0	200.6	203.6	208.3	206.7	300.5	229.7	218.5	207.7	198.0
790730	205.8	200.9	201.4	208.7	205.9	243.5	232.7	220.7	208.7	198.3
790731	206.0	200.9	201.8	208.5	206.9	241.9	231.5	221.3	208.1	199.1
790801	204.8	200.6	201.0	204.3	205.3	240.5	230.1	218.7	227.9	175.7
790802	205.0	200.2	201.8	207.0	206.5	241.7	232.7	219.9	208.3	192.5
790803	205.4	200.8	204.4	206.7	208.3	242.0	233.3	221.1	209.7	201.0
790804	207.6	200.8	202.2	207.1	207.0	242.5	232.5	219.1	205.5	201.1
790805	206.4	200.4	201.8	205.0	206.7	241.5	232.3	220.1	207.1	199.1
790806	207.0	200.4	203.6	206.1	205.3	242.9	231.9	220.3	206.1	202.0
790807	207.4	200.0	203.2	209.1	207.3	241.3	233.7	222.3	206.9	200.3
790808	208.2	200.4	202.4	208.0	209.3	242.5	232.9	219.7	205.7	200.5
790809	206.2	200.6	202.0	208.5	206.1	242.7	232.5	220.7	206.7	200.5
790810	206.8	200.6	202.6	208.7	206.1	242.3	232.7	220.7	209.3	197.5
790811	206.8	200.8	201.6	207.7	206.3	242.3	231.3	219.7	207.5	196.1
790812	205.9	200.6	203.6	207.9	206.9	240.9	225.8	216.6	206.1	196.5
790813	206.4	200.0	202.4	207.5	207.1	241.5	232.3	220.3	205.5	195.7
790814	207.2	200.6	203.2	207.5	205.5	241.3	234.1	223.5	205.3	195.7
790815	208.8	200.6	203.2	207.7	209.7	244.1	234.7	222.3	212.1	197.7

MISSING VALUE IS 99990.9

STATION : 64910 LAT : 4.42 LONG : 356.306 12002

DEW POINT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	206.3	207.0	207.5	204.4	204.3	240.0	99990.9	99990.9	99990.9	99990.9
790715	206.0	208.3	208.0	205.2	205.0	239.3	137.5	237.0	237.0	99990.9
790716	206.6	208.0	208.4	207.7	207.5	237.7	99990.9	99990.9	99990.9	99990.9
790717	208.0	209.9	209.2	204.0	204.2	235.1	99990.9	99990.9	99990.9	99990.9
790718	204.6	200.0	200.7	205.7	205.6	240.4	99990.9	99990.9	99990.9	99990.9
790719	205.0	200.1	200.6	203.3	203.0	235.9	99990.9	99990.9	99990.9	99990.9
790720	206.2	200.5	201.1	207.7	207.7	274.1	99990.9	99990.9	99990.9	99990.9
790721	206.8	200.0	200.9	200.0	200.9	235.9	99990.9	99990.9	99990.9	99990.9
790722	205.0	200.4	200.2	200.0	200.3	240.1	99990.9	99990.9	99990.9	99990.9
790723	204.3	207.1	208.3	205.2	205.0	237.6	99990.9	99990.9	99990.9	99990.9
790724	206.2	200.5	200.5	200.8	200.4	236.3	99990.9	99990.9	99990.9	99990.9
790725	206.0	200.0	200.9	202.7	202.7	235.7	99990.9	99990.9	99990.9	99990.9
790726	207.8	200.0	200.2	201.2	201.7	235.3	99990.9	99990.9	99990.9	99990.9
790727	205.4	200.0	200.3	202.7	202.7	235.7	99990.9	99990.9	99990.9	99990.9
790728	206.2	200.6	200.2	204.0	204.3	235.5	99990.9	99990.9	99990.9	99990.9
790729	205.0	200.0	200.4	204.3	204.7	302.7	99990.9	99990.9	99990.9	99990.9
790730	205.3	200.9	201.1	203.4	203.9	237.5	99990.9	99990.9	99990.9	99990.9
790731	206.0	200.2	201.1	202.5	202.9	236.9	99990.9	99990.9	99990.9	99990.9
790801	206.7	206.6	207.3	201.3	201.3	244.3	99990.9	99990.9	99990.9	99990.9
790802	206.0	206.2	201.1	200.5	200.5	223.7	99990.9	99990.9	99990.9	99990.9
790803	209.4	200.8	200.6	200.0	200.9	232.9	99990.9	99990.9	99990.9	99990.9
790804	206.2	200.1	201.4	202.1	202.9	224.1	99990.9	99990.9	99990.9	99990.9
790805	206.4	200.4	200.3	203.7	204.7	232.5	99990.9	99990.9	99990.9	99990.9
790806	206.6	200.4	200.7	203.1	203.9	220.9	99990.9	99990.9	99990.9	99990.9
790807	205.0	200.2	201.6	203.1	203.3	226.3	99990.9	99990.9	99990.9	99990.9
790808	205.4	200.0	200.3	202.9	203.3	226.5	99990.9	99990.9	99990.9	99990.9
790809	205.4	200.6	200.0	204.5	204.3	221.7	99990.9	99990.9	99990.9	99990.9
790810	206.7	200.6	200.8	205.4	203.3	223.3	99990.9	99990.9	99990.9	99990.9
790811	206.9	200.7	203.5	200.0	200.3	99990.9	99990.9	99990.9	99990.9	99990.9
790812	205.3	200.8	200.6	200.9	202.9	227.1	99990.9	99990.9	99990.9	99990.9
790813	205.0	200.6	200.4	204.0	204.7	230.5	99990.9	99990.9	99990.9	99990.9
790814	206.3	200.6	200.8	200.5	200.5	224.3	99990.9	99990.9	99990.9	99990.9
790815	205.9	200.2	200.2	200.7	203.0	240.7	99990.9	99990.9	99990.9	99990.9

MISSING VALUE IS 99990.9

STATION : 64913 LAT : 4.02 LONG : 35J.334 12.07

U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	2	3	0	-3	-12	-8	-9	-9	-20	-1
790715	2	3	-4	-1	3	-3	-15	-17	-6	-10
790716	1	-1	-1	-2	-4	-1	-11	-18	-21	-11
790717	2	3	-4	-1	-1	-7	-5	-12	-19	-2
790718	0	-1	-4	-3	-4	-1	7	-7	-15	999
790719	0	0	-6	1	-2	-6	-9	-20	-15	3
790720	4	0	-9	2	-4	-3	-5	-12	-2	-7
790721	3	2	-2	-4	-3	-8	-12	-21	1	-7
790722	2	0	-5	-7	-2	-7	-10	-19	-19	4
790723	0	3	3	-3	-3	-4	-5	-10	-33	0
790724	4	1	-3	-1	-2	-4	-9	-10	-11	0
790725	2	12	-5	-9	-3	-4	-2	-10	-1	3
790726	1	0	-2	-2	0	-9	-18	-17	5	-2
790727	1	1	-3	-3	-1	-12	-11	-12	-5	-6
790728	0	9	2	-2	-9	-6	-11	-19	-13	-9
790729	3	4	-2	-9	-13	-12	999	999	-16	-4
790730	1	999	-6	-1	-5	-9	-4	-17	-10	-7
790731	2	2	-3	-6	-9	-8	-14	-2	-4	-7
790801	3	3	3	-7	-13	-12	-21	-24	-9	1
790802	2	5	3	-4	-6	-5	-16	-8	2	-6
790803	1	3	3	0	-1	-6	-15	-4	5	999
790804	1	2	0	-5	-6	-15	-4	1	-5	-24
790805	3	4	-10	-10	-8	-11	-9	-5	-8	-14
790806	999	999	999	999	999	999	999	999	999	999
790807	0	4	-1	999	999	3	-7	-4	-6	-22
790808	2	3	-1	-4	5	5	6	-2	-5	-15
790809	0	3	1	-1	2	1	-5	-10	-24	-12
790810	1	3	5	2	2	-12	-6	-4	-2	-15
790811	2	5	5	-3	2	-8	-11	-9	-5	-5
790812	1	2	1	-5	6	-11	-15	-5	-7	-9
790813	2	1	-1	-5	-3	-8	-13	-5	-5	-25
790814	2	3	6	-1	-3	-3	-6	-10	-20	-11
790815	1	2	3	2	-3	-9	-7	-11	-4	-11

MISSING VALUE IS 999

STATION : 64913 LAT : 4.02 LONG : 35J.334 12.07

V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	3	0	0	0	7	0	-1	-1	12	7
790715	3	-3	-1	1	-1	0	0	-1	-1	-2
790716	4	3	0	0	7	-5	-9	-15	-3	0
790717	4	3	0	0	4	-8	-15	-14	0	0
790718	-1	0	-1	1	0	0	-1	-9	-12	999
790719	0	-1	-4	-4	-1	-5	-9	-12	5	1
790720	1	0	1	0	-2	-2	-1	2	7	-1
790721	3	-1	3	1	2	-1	-2	-3	1	0
790722	5	0	-4	-2	-1	-9	-6	-11	-7	2
790723	3	0	-2	3	-1	-3	-6	-12	-10	11
790724	2	-2	2	2	3	-3	-7	-13	4	2
790725	5	-4	-4	3	6	-1	7	5	4	3
790726	0	0	1	-1	2	-5	-6	-6	2	0
790727	0	2	-2	-2	-2	-4	-6	-6	3	1
790728	1	0	6	0	3	-3	-1	-6	0	5
790729	3	3	4	1	11	0	999	999	13	23
790730	0	999	3	3	2	-1	-3	-3	9	-5
790731	3	3	3	-4	5	-9	-7	-6	1	2
790801	0	-3	3	0	4	-7	-7	-14	3	7
790802	3	-4	-3	7	5	6	5	5	6	5
790803	1	0	3	-1	-9	1	-7	9	0	999
790804	1	0	5	1	-5	5	0	0	-2	4
790805	3	1	16	-2	-5	0	4	-3	-1	2
790806	999	999	999	999	999	999	999	999	999	999
790807	2	1	-2	1	999	999	4	7	3	7
790808	4	0	-2	2	2	6	-7	10	5	5
790809	0	1	-2	0	-1	-2	-6	-6	0	2
790810	2	1	-6	-6	1	15	-4	-1	4	1
790811	4	2	-1	-11	11	-3	-5	0	0	0
790812	2	-1	7	7	7	-2	-2	7	0	5
790813	3	-1	-1	-4	0	-3	-2	4	10	-4
790814	1	-3	0	-2	2	-1	-2	-7	2	7
790815	3	0	0	4	0	-1	-7	-4	11	4

MISSING VALUE IS 999

STATION : 65046 LAT : 12.05 LONG : 351.47W 1200Z

TEMPERATURE

DATE	1000	050	700	500	400	300	250	200	150	100
790714	99999.9	295.2	290.5	268.9	287.7	286.2	285.2	284.0	210.6	194.1
790715	99999.9	294.0	288.2	271.3	266.9	245.3	234.1	223.1	211.5	198.5
790716	99999.9	294.0	282.2	265.5	256.9	241.5	230.5	219.3	204.1	194.7
790717	99999.9	294.2	284.6	266.5	257.3	242.1	231.9	220.1	208.9	198.1
790718	99999.9	294.0	283.2	265.5	255.3	242.1	230.5	218.5	208.9	201.1
790719	99999.9	298.6	287.2	268.1	253.5	242.9	230.7	221.3	209.3	199.9
790720	99999.9	293.6	284.6	265.1	256.9	241.1	231.5	219.5	204.7	197.5
790721	99999.9	295.4	285.0	266.3	256.6	243.1	232.5	219.1	205.7	196.5
790722	99999.9	295.6	285.0	268.1	257.7	241.7	238.1	206.1	208.1	201.9
790723	99999.9	292.2	294.2	264.5	256.3	241.3	229.9	217.9	202.5	200.1
790724	99999.9	296.4	289.2	280.2	257.9	242.3	232.7	220.3	207.1	201.1
790725	99999.9	292.0	282.3	265.1	254.9	241.5	232.3	220.9	207.9	198.9
790726	99999.9	293.0	283.8	266.9	253.1	241.3	229.9	217.3	205.3	197.3
790727	99999.9	296.2	284.9	264.9	256.7	240.9	230.9	219.3	204.7	199.9
790801	99999.9	292.6	283.2	268.1	256.5	241.1	230.7	218.5	207.1	197.1
790802	99999.9	295.4	284.2	266.5	255.5	241.1	229.7	218.0	209.7	200.1
790803	99999.9	292.0	282.9	268.5	257.9	241.7	234.9	223.9	207.3	195.7
790804	99999.9	292.2	282.2	268.1	258.1	242.7	232.9	219.1	206.7	196.3
790805	99999.9	294.8	285.2	270.5	259.7	244.5	233.9	221.1	207.4	197.7
790806	99999.9	292.4	282.4	266.7	255.1	241.6	228.2	217.7	206.1	202.9
790807	99999.9	295.2	286.4	268.3	259.9	245.3	234.7	222.5	211.0	197.7
790808	99999.9	293.9	286.0	270.1	258.7	244.1	226.6	222.5	207.5	199.3
790809	99999.9	293.6	284.8	269.5	259.5	244.5	232.7	220.5	207.1	199.7
790810	286.8	289.6	282.6	268.7	258.1	242.3	232.7	220.7	209.3	197.5
790811	99999.9	294.6	283.4	268.9	257.7	243.1	232.3	219.9	207.5	196.1
790812	99999.9	293.2	284.4	268.1	259.9	251.4	249.0	222.1	214.1	196.5
790813	99999.9	293.0	283.2	267.1	256.7	241.1	231.1	219.9	206.7	191.5
790814	287.2	289.6	283.2	267.5	259.5	241.3	234.1	223.5	205.3	195.7
790815	99999.9	295.6	286.2	268.9	258.3	243.3	234.7	222.3	212.1	197.7

MISSING VALUE IS 99999.9

STATION : 65046 LAT : 12.05 LONG : 351.47W 1200Z

DRY POINT

DATE	1000	050	700	500	400	300	250	200	150	100
790714	99999.9	257.2	274.5	272.1	270.4	268.4	267.0	265.4	99999.9	99999.9
790715	99999.9	294.0	285.3	267.5	250.9	233.3	223.1	99999.9	99999.9	99999.9
790716	99999.9	280.8	279.7	265.2	250.5	234.5	99999.9	99999.9	99999.9	99999.9
790717	99999.9	285.2	274.5	262.9	252.4	235.1	99999.9	99999.9	99999.9	99999.9
790718	99999.9	288.0	280.4	265.5	254.9	240.0	99999.9	99999.9	99999.9	99999.9
790719	99999.9	266.6	276.2	261.1	254.0	230.1	99999.9	99999.9	99999.9	99999.9
790720	99999.9	287.6	278.6	262.9	244.9	228.1	99999.9	99999.9	99999.9	99999.9
790721	99999.9	290.1	277.0	259.3	249.6	227.1	99999.9	99999.9	99999.9	99999.9
790722	99999.9	288.6	278.6	263.1	249.7	233.7	263.1	301.4	263.1	99999.9
790723	99999.9	291.1	276.2	262.3	249.3	228.3	99999.9	99999.9	99999.9	99999.9
790724	99999.9	284.4	280.2	280.2	256.1	239.5	99999.9	99999.9	99999.9	99999.9
790725	99999.9	287.0	277.5	262.3	250.6	234.5	99999.9	99999.9	99999.9	99999.9
790726	99999.9	292.6	278.8	258.9	245.1	227.3	99999.9	99999.9	99999.9	99999.9
790727	99999.9	290.2	277.8	264.6	249.7	232.8	99999.9	99999.9	99999.9	99999.9
790801	99999.9	285.6	275.2	265.1	254.7	238.7	99999.9	99999.9	99999.9	99999.9
790802	99999.9	284.5	282.1	265.1	246.8	236.6	99999.9	99999.9	99999.9	99999.9
790803	99999.9	288.1	274.8	242.5	232.9	222.7	161.0	99999.9	99999.9	99999.9
790804	99999.9	291.3	275.2	263.5	249.1	238.0	227.9	99999.9	99999.9	99999.9
790805	99999.9	294.0	283.8	263.5	250.7	239.7	229.0	99999.9	99999.9	99999.9
790806	99999.9	291.8	277.9	262.9	253.4	238.4	224.6	99999.9	99999.9	99999.9
790807	99999.9	292.7	278.4	262.3	249.9	229.3	219.7	99999.9	99999.9	99999.9
790808	99999.9	290.1	268.7	257.1	243.7	235.1	197.6	99999.9	99999.9	99999.9
790809	99999.9	291.5	281.7	260.5	242.5	233.5	222.7	99999.9	99999.9	99999.9
790810	286.7	289.6	282.6	265.8	254.0	233.3	99999.9	99999.9	99999.9	99999.9
790811	99999.9	288.9	279.9	251.9	250.7	234.1	99999.9	99999.9	99999.9	99999.9
790812	99999.9	289.8	277.4	264.2	242.9	238.4	236.8	99999.9	99999.9	99999.9
790813	99999.9	291.9	275.2	257.1	235.7	225.1	99999.9	99999.9	99999.9	99999.9
790814	296.3	289.6	279.8	265.5	247.5	234.3	228.0	99999.9	99999.9	99999.9
790815	99999.9	288.6	281.8	267.5	257.5	238.3	229.7	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 65046 LAT : 12.05 LONG : 351.47V 12007

U COMPONENT

DATE	1000	950	700	500	400	300	250	200	150	100
790714	999	0	-04	-27	-37	-11	-8	999	999	-10
790715	999	-74	-78	-6	-60	-8	-14	-74	-90	-75
790716	999	-64	-4	-73	-2	-3	-3	-12	-73	-71
790717	999	-5	-79	8	-11	-75	-70	0	-8	-07
790718	999	-65	-15	-71	-58	-39	-74	-04	14	-10
790719	999	0	-14	-10	-8	0	-0	-60	-23	-75
790720	999	3	-83	-75	-77	-3	-72	-15	-15	-14
790721	999	0	-12	-79	-12	-9	-70	-14	-10	-30
790722	999	13	-72	-02	-7	-11	-07	-12	-10	-24
790723	999	16	-13	-17	-5	-81	-00	-20	-80	-17
790724	999	76	-3	-42	0	-6	-7	-21	-04	0
790725	999	0	-71	-7	-13	-9	-00	-71	-70	-31
790726	999	-69	-83	-7	-5	-75	-62	-8	-9	-70
790727	999	-1	-30	-0	-7	-5	-73	-81	-12	-77
790728	999	5	-12	-77	-8	-71	-02	-71	-24	-07
790729	999	40	-33	0	999	999	-72	-3	-4	4
790730	999	80	-72	-5	0	0	-40	-77	-64	-7
790731	999	990	-47	-7	-71	-9	-70	-70	37	-00
790732	999	-25	-4	-02	-64	-52	-2	-8	-00	999
790733	999	0	-73	0	-2	-70	-51	999	999	999
790734	999	2	-9	13	999	-10	-0	-72	999	-7
790735	999	65	-77	-3	-24	-71	-12	-75	-70	-4
790736	999	7	-5	02	-72	74	-70	-76	-81	999
790737	1	3	0	1	2	-12	-12	-4	-2	-15
790738	999	2	-75	-71	-2	-3	-27	-74	-05	-00
790739	999	-12	-73	-07	2	-13	-02	-50	-57	-0
790740	999	5	-3	-10	1	-75	-72	-70	-04	-30
790741	2	3	0	-1	-5	-3	-0	-10	-20	-11
790742	999	25	-7	-74	-04	999	-6	-11	-4	-11

MISSING VALUE IS 999

STATION : 65046 LAT : 12.05 LONG : 351.47W 12002

V COMPONENT

DATE	1000	950	700	500	400	300	250	200	150	100
790714	999	4	14	75	65	6	5	999	999	0
790715	999	13	13	0	14	-1	53	43	0	43
790716	999	37	-1	-13	-4	-3	-5	-72	13	25
790717	999	2	28	5	4	-27	27	-78	0	14
790718	999	38	2	41	49	69	43	0	-5	10
790719	999	0	0	0	1	0	0	14	-4	27
790720	999	0	14	27	0	0	26	5	0	0
790721	999	0	2	29	02	1	0	-2	6	31
790722	999	74	42	52	1	0	0	4	3	0
790723	999	-13	-2	8	2	14	20	44	40	0
790724	999	0	3	57	0	-2	-7	-41	0	0
790725	999	0	41	-2	73	3	39	41	40	20
790726	999	25	14	2	3	27	-14	3	-3	44
790727	999	2	14	0	2	0	26	14	2	29
790728	999	6	-4	28	5	-25	-52	-41	0	0
790729	999	-71	-65	0	999	999	12	1	8	1
790730	999	-14	26	-4	-74	0	70	13	37	0
790731	999	999	50	-4	-25	-11	-46	-50	64	30
790732	999	-69	-9	-48	-13	-62	-1	0	0	999
790733	999	0	13	0	1	13	14	999	999	999
790734	999	3	-1	73	999	6	7	26	999	44
790735	999	37	-13	7	-68	41	4	43	27	27
790736	999	-2	-3	36	0	-13	0	27	29	999
790737	2	1	3	-0	1	15	-4	-1	4	5
790738	999	0	13	25	0	3	64	27	15	46
790739	999	-71	4	-56	1	-74	-52	-48	-48	5
790740	999	-2	0	-68	-8	-27	-42	40	37	-15
790741	1	-3	4	-2	2	-1	-2	-3	3	2
790742	999	69	2	0	37	999	-3	-4	11	4

MISSING VALUE IS 999

(5) DATA QUALITY SUSPECT

STATION : F5123 LAT : 9.62 LONG : 353.47 1206Z

TEMPERATURE

DATE	1000	050	700	500	400	300	250	200	150	100
790714	99999.9	290.2	282.8	266.1	256.1	239.5	220.5	219.7	200.1	197.7
790715	99999.9	291.0	284.0	266.9	255.9	240.3	230.1	218.3	200.3	197.7
790716	99999.9	291.2	283.0	268.1	260.1	241.5	227.5	219.3	204.1	194.7
790717	99999.9	292.4	285.2	269.3	258.7	246.6	236.2	222.4	209.1	196.1
790718	99999.9	291.4	284.0	266.9	256.1	241.5	231.7	217.9	201.1	190.1
790720	99999.9	292.2	283.4	265.1	254.3	240.1	229.1	217.1	206.1	193.1
790721	99999.9	291.0	282.2	265.7	254.3	240.5	229.1	217.1	205.1	192.1
790722	99999.9	291.0	281.6	266.1	253.9	239.5	228.7	218.1	204.7	195.9
790724	99999.9	291.4	281.9	265.9	255.1	239.0	236.6	216.0	200.9	200.3
790727	99999.9	291.0	283.0	265.7	255.3	238.1	228.9	217.1	204.3	197.3
790804	99999.9	290.4	282.6	266.3	257.1	243.7	239.9	226.0	207.6	197.7
790806	99999.9	290.9	299.4	299.4	297.8	297.8	299.5	229.5	217.1	205.3
790809	99999.9	292.2	283.0	266.3	257.1	243.0	229.1	217.9	203.1	192.9
790810	99999.9	291.0	282.2	267.1	255.3	239.3	227.7	217.3	207.9	197.5
790811	99999.9	292.2	283.0	267.5	257.1	239.9	228.5	216.0	209.1	196.1
790812	99999.9	291.0	282.0	267.1	257.1	242.7	230.1	217.9	205.5	191.9
790813	99999.9	290.6	283.6	266.1	256.3	241.9	230.1	219.1	207.3	193.3
790814	237.2	289.6	283.2	267.5	259.5	241.3	230.1	220.5	205.3	195.7
790815	99999.9	292.8	284.4	266.5	256.7	241.1	229.9	217.1	205.1	195.0

MISSING VALUE IS 99999.9

STATION : F5123 LAT : 9.62 LONG : 353.47 1206Z

DEW POINT

DATE	1000	050	700	500	400	300	250	200	150	100
790714	99999.9	267.6	273.8	263.0	248.1	230.5	99999.9	99999.9	99999.9	99999.9
790715	99999.9	267.3	277.9	262.4	247.9	233.7	99999.9	99999.9	99999.9	99999.9
790716	99999.9	269.3	282.4	264.7	257.3	234.5	99999.9	99999.9	99999.9	99999.9
790717	99999.9	267.4	275.2	261.7	252.7	230.6	99999.9	99999.9	99999.9	99999.9
790718	99999.9	269.9	281.3	263.7	258.1	237.8	99999.9	99999.9	99999.9	99999.9
790720	99999.9	269.6	272.4	262.2	249.6	232.1	99999.9	99999.9	99999.9	99999.9
790721	99999.9	266.2	273.2	256.7	247.3	226.5	99999.9	99999.9	99999.9	99999.9
790722	99999.9	267.5	277.4	261.9	252.6	236.2	99999.9	99999.9	99999.9	99999.9
790724	99999.9	266.7	270.4	257.2	244.1	233.8	99999.9	99999.9	99999.9	99999.9
790727	99999.9	269.7	270.0	259.7	242.3	222.1	99999.9	99999.9	99999.9	99999.9
790804	99999.9	266.2	270.6	263.5	243.4	227.7	99999.9	99999.9	99999.9	99999.9
790806	99999.9	269.4	267.8	296.6	294.8	263.7	99999.9	99999.9	99999.9	99999.9
790809	99999.9	291.3	283.0	261.7	244.9	233.0	99999.9	99999.9	99999.9	99999.9
790810	99999.9	268.4	271.2	262.1	248.3	232.3	99999.9	99999.9	99999.9	99999.9
790811	99999.9	269.3	275.0	257.5	241.1	231.6	99999.9	99999.9	99999.9	99999.9
790812	99999.9	269.3	279.4	260.1	226.1	225.3	99999.9	99999.9	99999.9	99999.9
790813	99999.9	269.7	277.6	261.1	244.3	229.9	99999.9	99999.9	99999.9	99999.9
790814	230.3	269.6	279.8	265.5	247.5	234.3	228.8	99999.9	99999.9	99999.9
790815	99999.9	268.9	279.5	265.1	253.4	229.1	99999.9	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

*** M C I D A S *** CPUID: DAD PROGRAM: DYOTBL TERMINAL: 021 PROJECT: 1650 DATE: 82113 TIME: 221407

STATION : 65123 LAT : 9.62 LONG : 353.47W 1200Z

U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	999	999	999	999	999	999	999	999	999
790715	999	999	999	999	999	999	999	999	999	999
790716	999	999	999	999	999	-3	-3	-12	-73	-71
790717	999	999	999	999	999	999	999	999	999	999
790718	999	999	999	999	999	999	999	999	999	999
790720	999	999	999	999	999	999	999	999	999	999
790721	999	999	999	999	999	999	999	999	999	999
790722	999	999	999	999	999	999	999	999	999	999
790724	999	999	999	999	999	999	999	999	999	999
790727	999	999	999	999	999	999	999	999	999	999
790804	999	999	999	999	999	999	999	999	999	999
790806	999	999	999	999	999	999	999	999	999	999
790809	999	999	999	999	999	999	999	999	999	999
790810	999	999	999	999	999	999	999	999	999	-15
790811	999	999	999	999	999	999	999	999	999	-82
790812	999	999	999	999	999	999	999	999	999	999
790813	999	999	999	999	999	999	999	999	999	999
790814	2	3	0	-1	-5	-3	-6	-10	-20	-11
790815	999	999	999	999	999	999	999	999	999	999

MISSING VALUE IS 999

*** M C I D A S *** CPUID: DAD PROGRAM: DYOTBL TERMINAL: 021 PROJECT: 1650 DATE: 82113 TIME: 221558

STATION : 65123 LAT : 9.62 LONG : 353.47W 1200Z

V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	999	999	999	999	999	999	999	999	999
790715	999	999	999	999	999	999	999	999	999	999
790716	999	999	999	999	999	-3	-5	-72	13	25
790717	999	999	999	999	999	999	999	999	999	999
790718	999	999	999	999	999	999	999	999	999	999
790720	999	999	999	999	999	999	999	999	999	999
790721	999	999	999	999	999	999	999	999	999	999
790722	999	999	999	999	999	999	999	999	999	999
790724	999	999	999	999	999	999	999	999	999	999
790727	999	999	999	999	999	999	999	999	999	999
790804	999	999	999	999	999	999	999	999	999	999
790806	999	999	999	999	999	999	999	999	999	999
790809	999	999	999	999	999	999	999	999	999	999
790810	999	999	999	999	999	999	999	999	999	5
790811	999	999	999	999	999	999	999	999	999	46
790812	999	999	999	999	999	999	999	999	999	999
790813	999	999	999	999	999	999	999	999	999	999
790814	1	-3	0	-2	2	-1	-2	-3	3	2
790815	999	999	999	999	999	999	999	999	999	999

MISSING VALUE IS 999

STATION : 65202 LAT : 6.55 LONG : 35E.65W 12002

TEMPERATURE

DATE	1000	050	700	500	400	300	250	210	150	100
790716	299.0	286.2	261.2	263.1	249.7	241.5	230.5	219.7	204.1	194.7
790717	298.0	291.2	262.4	267.1	257.9	243.1	237.1	219.5	206.3	190.1
790718	296.0	289.2	261.2	266.7	256.1	241.5	231.7	217.9	206.1	190.1
790719	298.2	297.2	262.0	266.1	256.1	238.2	229.1	218.5	201.3	202.5
790803	299.2	298.2	263.6	266.7	256.3	241.1	231.5	217.5	202.7	197.7
790804	296.2	297.0	262.6	266.3	257.1	247.7	239.9	230.9	207.6	197.7
790805	296.2	298.4	278.8	263.2	252.7	235.3	235.6	210.5	199.1	197.7
790806	301.6	298.4	284.4	265.7	255.9	248.0	230.1	224.8	205.3	190.1
790807	298.2	298.2	284.8	269.1	255.9	240.7	232.0	222.7	211.0	197.7
790808	301.2	290.2	284.6	267.3	258.1	242.7	231.7	218.0	206.7	196.3
790809	299.8	291.2	284.2	269.1	258.1	244.5	235.6	223.0	206.7	190.1
790810	298.6	289.2	281.6	276.3	289.2	305.7	307.1	219.1	207.3	193.0
790811	299.2	289.8	283.2	268.7	256.7	238.3	234.1	223.5	205.7	197.7
790812	299.2	289.8	283.2	268.7	256.7	238.3	234.1	223.5	205.7	197.7
790813	299.2	289.8	283.2	268.7	256.7	238.3	234.1	223.5	205.7	197.7
790814	299.2	289.8	283.2	268.7	256.7	238.3	234.1	223.5	205.7	197.7
790815	299.4	290.2	284.2	268.5	256.9	242.5	229.9	217.1	205.1	195.6

MISSING VALUE IS 99999.9

STATION : 65202 LAT : 6.55 LONG : 35E.65W 12032

TEMPERATURE

DATE	1000	050	700	500	400	300	250	210	150	100
790716	296.1	266.2	272.2	256.1	246.2	234.1	99999.9	99999.9	99999.9	99999.9
790717	296.7	230.7	279.7	264.6	254.4	237.1	99999.9	99999.9	99999.9	99999.9
790718	295.2	286.5	275.2	264.6	250.1	237.0	99999.9	99999.9	99999.9	99999.9
790719	295.7	288.0	278.5	253.1	241.1	216.3	99999.9	99999.9	99999.9	99999.9
790803	295.1	286.7	271.9	262.2	241.1	222.1	99999.9	99999.9	99999.9	99999.9
790804	295.6	289.7	276.6	263.5	243.4	227.7	227.1	226.2	226.1	99999.9
790805	295.4	287.5	276.6	254.5	244.7	226.3	99999.9	99999.9	99999.9	99999.9
790806	295.4	287.6	268.4	259.7	243.0	223.5	99999.9	99999.9	99999.9	99999.9
790807	295.6	286.5	273.2	237.1	222.3	203.3	99999.9	99999.9	217.4	99999.9
790808	297.5	287.7	258.5	257.5	217.2	225.7	99999.9	99999.9	99999.9	99999.9
790809	297.0	286.5	261.2	227.1	213.1	221.5	202.5	99999.9	99999.9	99999.9
790810	296.1	286.6	269.6	272.6	244.2	266.7	99999.9	99999.9	99999.9	99999.9
790811	294.9	285.0	275.2	253.7	239.7	224.3	226.0	99999.9	99999.9	99999.9
790812	294.9	285.0	275.2	253.7	239.7	224.3	226.0	99999.9	99999.9	99999.9
790813	294.9	285.0	275.2	253.7	239.7	224.3	226.0	99999.9	99999.9	99999.9
790814	294.9	285.0	275.2	253.7	239.7	224.3	226.0	99999.9	99999.9	99999.9
790815	296.4	285.6	272.2	247.5	225.9	213.6	99999.9	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 65202 LAT : 6.55 LONG : 356.65W 1200Z

U COMPONENT

DATE	1000	0500	0700	0900	1200	1500	2000	2500	3000	1500	1000
790716	999	999	999	999	999	-3	-3	-12	-73	-71	
790717	999	999	999	999	999	999	999	999	999	999	
790718	999	999	999	999	999	999	999	999	999	999	
790719	999	999	999	999	999	999	999	999	999	999	
790803	999	999	999	999	999	999	999	999	999	999	
790804	999	999	999	999	999	999	999	999	999	999	
790805	999	999	999	999	999	999	999	999	999	999	
790806	999	999	999	999	999	999	999	999	999	999	
790807	999	999	999	999	999	999	999	999	999	999	
790808	999	999	999	999	999	999	999	999	999	999	
790809	999	999	999	999	999	999	999	999	999	999	
790813	999	999	999	999	999	999	999	999	999	999	
790814	999	999	999	999	999	999	999	999	999	999	
790815	999	999	999	999	4	999	999	999	999	999	

MISSING VALUE IS 999

STATION : 65202 LAT : 6.55 LONG : 356.65W 1200Z

V COMPONENT

DATE	1000	0500	0700	0900	1200	1500	2000	2500	3000	1500	1000
790716	999	999	999	999	999	-3	-5	-72	13	25	
790717	999	999	999	999	999	999	999	999	999	999	
790718	999	999	999	999	999	999	999	999	999	999	
790719	999	999	999	999	999	999	999	999	999	999	
790803	999	999	999	999	999	999	999	999	999	999	
790804	999	999	999	999	999	999	999	999	999	999	
790805	999	999	999	999	999	999	999	999	999	999	
790806	999	999	999	999	999	999	999	999	999	999	
790807	999	999	999	999	999	999	999	999	999	999	
790808	999	999	999	999	999	999	999	999	999	999	
790809	999	999	999	999	999	999	999	999	999	999	
790813	999	999	999	999	999	999	999	999	999	999	
790814	999	999	999	999	999	999	-2	-3	3	2	
790815	999	999	999	999	-25	999	999	999	999	999	

MISSING VALUE IS 999

STATION : 65578 LAT : 5.25 LONG : 3.93W 1200Z

TEMPERATURE

DATE	1000	850	700	500	400	300	250	200	150	100
790714	296.6	289.4	280.8	267.7	256.5	242.3	231.9	219.9	207.5	201.1
790715	298.2	289.0	282.1	268.7	257.5	243.1	231.7	220.5	208.9	205.7
790716	295.6	288.4	281.8	266.9	255.9	239.1	230.5	219.5	205.3	202.9
790717	296.0	289.0	281.2	269.3	257.1	242.1	232.5	221.1	205.5	201.7
790718	297.8	290.2	284.0	267.1	259.3	242.9	231.9	221.1	208.5	207.7
790719	297.0	288.2	282.0	269.3	258.1	242.5	231.9	221.5	208.5	201.1
790720	295.6	287.2	279.9	267.3	256.1	241.3	233.1	221.5	207.5	198.5
790721	294.2	287.2	279.2	266.5	257.5	241.5	231.5	220.9	205.3	195.7
790722	295.4	288.0	281.8	267.1	256.9	241.1	231.5	219.9	206.7	196.3
790723	297.0	289.6	283.8	268.3	260.5	245.3	233.7	221.7	211.3	196.5
790724	295.8	288.6	280.9	260.1	289.7	304.7	314.7	326.5	338.3	343.5
790725	295.8	288.6	282.9	266.7	256.5	241.7	231.7	221.1	209.1	203.7
790726	296.3	289.2	281.3	267.3	256.9	240.1	230.3	219.7	206.1	199.7
790727	296.8	288.8	281.0	265.3	258.3	240.3	231.7	220.1	206.1	204.1
790728	297.8	290.4	283.4	266.3	259.1	241.1	231.5	221.3	209.5	199.5
790729	296.0	289.2	281.0	275.4	275.1	274.7	274.5	274.2	273.8	199.7
790730	295.4	288.0	280.8	264.5	254.7	239.5	228.5	216.7	203.7	201.3
790731	296.6	289.6	280.4	266.9	255.9	243.1	232.3	221.3	207.7	201.7
790801	296.0	289.4	282.8	267.3	256.5	243.3	235.3	223.5	209.9	197.3
790802	297.0	290.6	284.4	267.9	258.7	243.7	234.9	224.9	211.1	198.7
790803	297.6	289.4	283.3	266.1	258.5	242.1	233.1	220.5	206.1	199.5
790804	296.2	289.0	281.2	265.7	258.1	242.1	230.7	219.9	205.9	197.3
790805	297.4	289.2	281.0	266.9	256.5	241.9	232.3	219.5	207.3	197.7
790806	296.6	288.7	281.6	267.3	256.1	240.3	229.9	219.5	205.5	199.1
790807	295.6	289.0	281.0	266.9	256.3	239.7	230.7	221.9	207.9	198.7
790808	295.8	289.6	282.8	267.9	258.1	241.9	234.3	222.9	208.5	196.9
790809	296.9	289.4	282.8	268.7	256.7	245.5	235.7	224.3	207.5	198.7
790810	296.6	288.6	282.4	268.9	256.5	242.9	233.1	222.5	209.1	197.1
790811	296.4	288.8	284.9	269.3	256.3	241.3	232.3	220.9	206.3	194.9
790812	297.0	289.4	283.6	269.7	256.5	244.7	234.9	221.3	206.7	193.3
790813	297.0	290.4	285.8	266.9	258.9	246.7	234.5	222.9	208.9	201.5
790814	295.4	289.6	282.8	267.7	256.7	240.9	231.5	219.7	204.9	194.1
790815	295.8	289.8	283.6	268.7	258.0	241.5	232.7	221.7	209.7	194.3

MISSING VALUE IS 99999.9

STATION : 65578 LAT : 5.25 LONG : 3.93W 1200Z

LEW POINT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	296.6	289.4	280.8	264.2	251.8	235.3	99990.9	99990.9	99990.9	99990.9
790715	296.3	288.2	274.4	259.7	252.5	238.8	99990.9	99990.9	99990.9	99990.9
790716	295.6	288.3	278.2	257.2	243.5	232.1	99990.9	99990.9	99990.9	99990.9
790717	296.5	288.8	279.3	260.3	241.1	234.1	99990.9	99990.9	99990.9	99990.9
790718	296.8	290.2	279.5	266.3	244.3	239.3	99990.9	99990.9	99990.9	99990.9
790719	296.8	288.2	277.0	257.1	245.4	235.5	99990.9	99990.9	99990.9	99990.9
790720	293.4	285.5	276.3	263.1	246.1	237.2	99990.9	99990.9	99990.9	99990.9
790721	293.6	287.2	278.4	262.7	244.5	232.3	99990.9	99990.9	99990.9	99990.9
790722	295.1	288.0	278.2	261.7	238.9	221.8	99990.9	99990.9	99990.9	99990.9
790723	296.3	289.6	279.4	266.4	248.7	235.3	227.7	99990.9	99990.9	99990.9
790724	295.8	288.6	280.9	260.1	287.8	301.3	99990.9	99990.9	99990.9	99990.9
790725	294.0	287.2	275.0	263.5	249.5	236.7	99990.9	99990.9	99990.9	99990.9
790726	295.3	287.6	274.6	260.7	238.4	226.6	99990.9	99990.9	99990.9	99990.9
790727	296.0	288.8	274.6	263.4	247.9	232.3	99990.9	99990.9	99990.9	99990.9
790728	297.8	290.4	283.4	266.3	250.1	241.1	99990.9	99990.9	99990.9	99990.9
790729	296.0	289.2	279.9	271.6	271.8	272.8	272.1	272.3	272.5	99990.9
790730	295.4	288.0	277.5	258.5	243.7	230.5	99990.9	99990.9	99990.9	99990.9
790731	295.3	288.8	278.5	263.6	247.9	238.7	99990.9	99990.9	99990.9	99990.9
790801	295.0	289.0	275.8	266.3	234.8	237.3	228.3	99990.9	99990.9	99990.9
790802	295.2	288.5	274.0	264.9	240.7	237.7	228.0	99990.9	99990.9	99990.9
790803	295.4	288.4	275.8	263.1	249.1	234.2	99990.9	99990.9	99990.9	99990.9
790804	295.4	286.2	278.6	262.7	242.1	229.7	99990.9	99990.9	99990.9	99990.9
790805	297.2	289.2	278.4	263.7	252.5	237.7	99990.9	99990.9	99990.9	99990.9
790806	295.1	287.6	279.4	260.3	250.1	236.0	99990.9	99990.9	99990.9	99990.9
790807	295.1	288.6	280.2	259.9	247.3	231.7	99990.9	99990.9	99990.9	99990.9
790808	295.2	288.6	278.1	252.7	242.1	226.9	221.3	99990.9	99990.9	99990.9
790809	294.7	287.3	275.1	248.7	235.7	227.5	218.7	99990.9	99990.9	99990.9
790810	296.2	288.4	273.4	250.9	239.5	229.9	99990.9	99990.9	99990.9	99990.9
790811	294.9	288.6	279.9	251.3	251.6	230.4	99990.9	99990.9	99990.9	99990.9
790812	297.0	289.4	269.0	251.4	236.5	228.7	220.9	99990.9	99990.9	99990.9
790813	296.0	289.5	272.8	242.0	238.9	231.7	222.5	99990.9	99990.9	99990.9
790814	293.7	287.1	277.8	249.7	240.6	231.9	99990.9	99990.9	99990.9	99990.9
790815	295.8	289.8	279.7	266.3	246.8	234.5	99990.9	99990.9	99990.9	99990.9

MISSING VALUE IS 99990.9

STATION : 65578 LAT : 5.25 LONG : 3.93W 1200Z

U COMPONENT

DATE	1000	0500	0700	0500	0400	3000	2500	2000	1500	1000
790714	3	2	-1	0	0	-7	-11	-16	5	-8
790715	4	3	-3	-8	-2	-4	-3	-4	6	-9
790716	5	-3	-6	-4	-4	-11	-10	-1	-3	-12
790717	4	3	-5	-3	0	-7	-19	-20	-14	-10
790718	0	-1	-4	-7	-3	-3	-7	-10	-8	-5
790719	3	1	-7	-8	-3	-7	0	-10	-9	0
790720	4	1	-2	-4	-3	-10	-9	-9	-11	-11
790721	4	4	-5	-4	1	-8	-12	-14	-10	-6
790722	2	-11	1	-8	0	-9	-16	-21	-22	-5
790723	3	2	1	-2	0	0	-5	-4	-5	7
790724	7	2	-4	2	0	5	-13	-23	-22	-2
790725	5	3	-4	-2	1	-2	-2	-10	-6	-4
790726	999	0	0	-2	-3	-8	-17	-17	-9	-9
790727	4	2	-1	-7	0	-8	-12	-11	-12	-6
790728	4	1	-2	-2	2	5	-15	-24	-11	-9
790729	2	1	-2	-2	-4	-21	-21	-14	-10	-9
790730	3	2	-3	-4	-9	-20	-27	-14	-7	-8
790731	8	2	1	-6	-6	-15	-19	-14	-12	-11
790901	4	0	-2	-4	-5	0	-6	-7	1	-18
790902	9	5	-1	3	-10	-11	-19	-15	-5	-10
790903	7	1	-1	-5	0	-11	-14	-6	-7	-17
790904	4	2	-6	-9	-8	-12	-10	-14	-12	-15
790905	-4	1	-3	1	-5	-7	-12	-10	-11	-21
790906	3	999	0	0	-10	-12	-17	-20	0	-0
790907	6	3	-4	-12	-26	-12	-21	-14	1	-2
790908	2	1	-7	-8	3	-7	-1	7	0	-10
790909	2	0	-1	-4	0	-9	-7	-6	-7	-12
790910	3	2	-1	-1	-1	-11	-17	-10	-7	-15
790911	3	-3	-2	1	1	-11	-16	-5	-1	-22
790912	3	2	2	-2	-1	-12	2	0	-6	-10
790913	4	4	2	-3	-5	-6	-3	-8	-15	-20
790914	4	6	-2	-1	-4	-6	-10	-10	-15	-14
790915	2	2	-1	0	-12	-12	-19	-8	-0	-11

MISSING VALUE IS 999

STATION : 65578 LAT : 5.25 LONG : 3.93W 1200Z

V COMPONENT

DATE	1000	0500	0700	0500	0400	3000	2500	2000	1500	1000
790714	0	3	2	-1	0	-2	-4	-6	2	1
790715	2	-1	0	15	4	-2	-4	0	0	1
790716	1	-2	-5	-1	1	4	3	5	4	2
790717	3	0	-1	-4	4	1	-7	-7	0	0
790718	6	4	7	-2	2	-4	-8	-6	-5	6
790719	3	0	4	1	-2	-0	-11	-0	-7	5
790720	2	-3	-3	-2	-2	-0	-8	-5	-2	-2
790721	1	-1	3	-1	0	0	-2	0	6	0
790722	2	13	3	0	1	-1	-9	-7	0	2
790723	3	3	4	1	-3	0	-6	-5	1	3
790724	2	3	1	0	-1	2	-10	-8	0	5
790725	2	-1	2	-5	-2	-1	-5	-8	3	0
790726	999	-3	0	1	-1	-1	-3	3	1	3
790727	1	-1	-2	-2	0	-3	-7	-2	-2	3
790728	2	-2	1	0	3	1	2	0	2	0
790729	3	2	3	1	0	-3	-3	-2	0	-11
790730	3	0	0	-3	-3	4	2	2	4	-7
790731	1	-1	-3	-3	2	-5	-16	-2	4	2
790901	7	4	-1	-3	-6	-8	0	1	9	3
790902	0	4	2	-4	0	-2	-3	2	2	-2
790903	1	0	-2	-6	10	-2	0	5	-1	3
790904	2	0	-5	-3	-1	7	1	-5	4	-5
790905	3	0	0	-1	-1	-1	-2	-10	-4	3
790906	5	999	0	7	-1	-4	-6	-5	-2	2
790907	3	0	-1	-4	-15	-4	-7	5	2	0
790908	4	1	-4	1	4	6	3	4	1	2
790909	1	3	2	2	1	0	7	7	0	4
790910	3	-4	-3	-1	0	2	0	0	-1	-2
790911	4	0	0	0	2	-4	2	4	2	3
790912	3	-1	1	-3	3	4	4	2	4	3
790913	5	-2	4	0	2	2	3	-5	0	7
790914	2	-5	1	-4	-2	-5	-6	-1	2	5
790915	1	-3	-1	-4	-2	-2	11	10	3	0

MISSING VALUE IS 999

APPENDIX II

METEOSTAT DATA LOG

PART I ----- DATA ON TAPES

PART II ----- MISSING DATA

STATION : 65510 LAT : 11.17 LONG : 4.300 12007

TEMPERATURE

DATE	1300	1500	1700	1900	2100	2300	2500	2700	2900	3100
790714	99999.9	290.2	280.3	266.1	256.1	229.5	230.5	219.3	208.1	197.7
790715	99999.9	291.0	284.1	266.9	255.9	240.3	230.1	218.3	209.3	197.7
790716	299.6	288.2	281.2	263.1	249.7	241.5	232.4	219.3	204.1	194.7
790717	298.0	291.2	282.4	267.1	257.9	243.1	232.1	219.5	206.3	199.1
790718	296.0	289.2	281.2	266.7	256.1	241.5	231.7	217.9	206.1	196.1
790719	299.2	290.2	282.0	268.1	256.1	239.3	228.1	216.5	201.3	202.5
790720	99999.9	292.2	283.4	265.1	254.3	240.1	229.1	217.1	206.1	197.1
790721	99999.9	291.4	282.2	265.7	254.3	240.5	229.1	217.1	205.1	198.1
790722	99999.9	291.0	281.6	266.1	253.9	239.5	228.7	216.1	204.7	199.9
790723	99999.9	292.2	284.2	264.5	256.3	241.3	229.9	217.9	202.5	202.1
790724	99999.9	291.4	281.9	265.9	255.1	239.8	226.6	216.9	206.9	197.7
790725	99999.9	292.4	282.4	265.1	254.9	241.5	232.3	220.6	209.9	199.9
790726	99999.9	293.0	283.8	266.9	253.1	241.3	229.4	217.3	205.3	197.7
790727	99999.9	293.8	283.4	265.7	253.3	238.9	228.9	217.1	204.3	197.7
790728	296.2	290.6	282.4	267.1	256.3	241.5	231.5	217.5	202.7	201.3
790729	299.8	290.6	283.5	268.3	256.7	239.5	229.7	216.5	207.7	197.7
790730	295.8	289.9	281.1	269.7	255.9	243.5	232.7	220.7	209.7	197.7
790731	296.8	289.2	281.9	268.5	256.9	241.9	231.5	221.3	209.1	199.1
790801	99999.9	292.6	283.2	269.1	256.5	241.1	230.7	218.5	207.1	197.1
790802	99999.9	295.4	284.2	266.5	255.5	241.1	229.7	218.6	209.7	200.1
790803	298.2	293.2	283.6	266.7	256.3	241.1	231.5	217.5	202.7	197.7
790804	296.2	290.4	282.6	266.3	257.1	240.7	229.9	218.9	207.6	197.7
790805	296.2	289.4	279.9	262.2	252.7	235.3	225.0	211.5	199.1	197.7
790806	291.6	290.4	284.4	265.7	251.9	240.9	230.1	218.9	205.3	196.1
790807	301.2	290.2	281.6	267.3	259.1	244.7	231.7	218.9	204.1	196.1
790810	99999.9	291.8	282.2	267.1	251.3	239.3	227.7	217.2	203.9	197.7
790812	99999.9	291.8	282.3	267.1	251.1	239.3	227.1	217.9	205.5	191.9
790813	298.8	289.2	284.6	267.3	260.2	246.7	230.1	219.1	207.3	197.7
790814	299.2	289.9	283.2	269.7	256.7	239.3	234.1	222.5	205.3	197.7
790815	299.4	290.2	284.2	269.5	256.9	242.5	229.9	217.1	205.1	197.9

MISSING VALUE IS 99999.9

STATION : 65510 LAT : 11.17 LONG : 4.300 12007

LEW POINT

DATE	1000	1500	1700	1900	2100	2300	2500	2700	2900	3100
790714	99999.9	287.8	273.8	263.4	248.1	230.5	99999.9	99999.9	99999.9	99999.9
790715	99999.9	287.3	277.9	272.4	247.9	230.7	99999.9	99999.9	99999.9	99999.9
790716	296.5	286.2	272.2	256.1	246.2	234.5	99999.9	99999.9	99999.9	99999.9
790717	296.7	290.0	279.7	264.6	254.4	237.1	99999.9	99999.9	99999.9	99999.9
790718	295.3	286.5	275.2	264.6	256.1	237.8	99999.9	99999.9	99999.9	99999.9
790719	295.7	288.6	278.5	263.1	241.1	219.3	99999.9	99999.9	99999.9	99999.9
790720	99999.9	289.6	273.4	262.3	249.6	232.1	99999.9	99999.9	99999.9	99999.9
790721	99999.9	288.2	273.2	261.7	247.3	228.5	99999.9	99999.9	99999.9	99999.9
790722	99999.9	290.5	277.4	261.8	252.6	236.3	99999.9	99999.9	99999.9	99999.9
790723	99999.9	291.1	276.2	262.3	249.3	229.3	99999.9	99999.9	99999.9	99999.9
790724	99999.9	288.7	276.4	257.2	244.1	233.8	99999.9	99999.9	99999.9	99999.9
790725	99999.9	287.0	277.5	262.3	250.6	234.5	99999.9	99999.9	99999.9	99999.9
790726	99999.9	292.6	274.8	258.9	245.1	227.3	99999.9	99999.9	99999.9	99999.9
790727	99999.9	288.7	276.0	269.7	242.3	222.1	99999.9	99999.9	99999.9	99999.9
790728	296.2	289.6	280.3	264.4	249.3	235.5	232.1	220.5	199.8	99999.9
790729	295.8	289.9	279.1	263.3	247.7	227.7	99999.9	99999.9	99999.9	99999.9
790730	295.8	288.8	281.4	269.4	256.9	237.5	99999.9	99999.9	99999.9	99999.9
790731	296.8	289.2	281.1	262.5	245.0	226.9	99999.9	99999.9	99999.9	99999.9
790801	99999.9	285.6	275.2	265.1	238.7	228.1	99999.9	99999.9	99999.9	99999.9
790802	99999.9	284.5	282.1	265.1	246.9	226.6	99999.9	99999.9	99999.9	99999.9
790803	295.1	286.7	271.4	262.2	241.1	222.1	99999.9	99999.9	99999.9	99999.9
790804	295.8	289.7	276.6	263.5	243.4	227.7	227.1	222.1	225.1	99999.9
790805	295.4	287.5	276.6	265.5	244.7	229.3	99999.9	99999.9	99999.9	99999.9
790806	295.4	287.8	268.1	259.7	243.9	223.5	99999.9	99999.9	99999.9	99999.9
790807	296.8	286.7	268.5	267.8	247.2	225.7	99999.9	99999.9	99999.9	99999.9
790810	99999.9	288.4	271.2	262.1	248.3	232.3	99999.9	99999.9	99999.9	99999.9
790812	99999.9	296.3	279.4	267.1	241.1	225.3	99999.9	99999.9	99999.9	99999.9
790813	296.1	286.0	269.2	262.6	244.2	226.7	99999.9	99999.9	99999.9	99999.9
790814	294.9	289.0	275.2	263.7	248.7	224.3	218.9	99999.9	99999.9	99999.9
790815	296.4	288.6	272.2	247.5	225.9	223.8	99999.9	99999.9	99999.9	99999.9

MISSING VALUE IS 99999.9

STATION : 65510 LAT : 11.17 LONG : 4.30 12007

U COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	999	999	999	999	999	999	999	999	999
790715	999	999	999	999	999	999	999	999	999	999
790716	999	999	999	999	999	999	-3	-12	-73	-71
790717	999	999	999	999	999	999	999	999	999	999
790718	999	999	999	999	999	999	999	999	999	999
790719	999	999	999	999	999	999	999	999	999	999
790720	999	999	999	999	999	999	999	999	999	999
790721	999	999	999	999	999	999	999	999	999	999
790722	999	999	999	999	999	999	999	999	999	999
790723	999	16	-13	-17	-5	-31	-80	-70	-80	-17
790724	999	999	999	999	999	999	999	999	999	999
790725	999	0	-71	-7	-13	-8	-8	-8	-8	-70
790726	999	-69	-83	-7	-9	-75	-82	-8	-8	-70
790727	999	999	999	999	999	999	999	999	999	999
790728	0	0	2	2	-9	-12	-11	-10	-13	-9
790729	3	4	-2	-9	-12	-12	999	999	-10	-4
790730	1	999	-5	1	-5	-9	-4	-4	-10	-7
790731	2	2	-3	-0	-9	-8	-14	-71	-24	-37
790901	999	5	-12	-77	-8	-71	-82	-3	-4	-4
790902	999	40	-33	0	999	999	-72	999	999	-7
790903	999	999	999	999	999	999	999	999	999	999
790904	999	999	999	999	999	999	999	999	999	999
790905	999	999	999	999	999	999	999	999	999	999
790906	999	999	999	999	999	999	999	999	999	999
790907	999	999	999	999	999	999	999	999	999	999
790908	999	999	999	999	999	999	999	999	999	999
790909	999	999	999	999	999	999	999	999	999	999
790910	999	999	999	999	999	999	999	999	999	999
790911	999	999	999	999	999	999	999	999	999	999
790912	999	999	999	999	999	999	999	999	999	999
790913	999	999	999	999	999	999	999	999	999	999
790914	999	999	999	999	999	999	999	-10	-20	-11
790915	999	999	999	999	4	999	999	999	999	999

MISSING VALUE IS 999

STATION : 65510 LAT : 11.17 LONG : 4.30 12008

V COMPONENT

DATE	1000	850	700	500	400	300	250	200	150	100
790714	999	999	999	999	999	999	999	999	999	999
790715	999	999	999	999	999	999	999	999	999	999
790716	999	999	999	999	999	999	-3	-5	-72	13
790717	999	999	999	999	999	999	999	999	999	999
790718	999	999	999	999	999	999	999	999	999	999
790719	999	999	999	999	999	999	999	999	999	999
790720	999	999	999	999	999	999	999	999	999	999
790721	999	999	999	999	999	999	999	999	999	999
790722	999	999	999	999	999	999	999	999	999	999
790723	999	-13	-2	0	2	14	29	44	40	7
790724	999	999	999	999	999	999	999	999	999	999
790725	999	0	41	-2	73	3	39	41	40	70
790726	999	25	14	2	3	27	-14	3	-3	44
790727	999	999	999	999	999	999	999	999	999	999
790728	1	0	6	0	8	-3	-2	-6	8	5
790729	2	0	4	1	11	0	999	999	13	27
790730	0	999	3	3	2	-1	-3	-3	8	-2
790731	3	3	3	-4	5	-9	-8	-6	1	2
790901	999	6	-4	20	5	-25	-52	-41	0	0
790902	999	-71	-05	0	999	999	12	1	8	1
790903	999	999	999	999	999	999	999	999	999	999
790904	999	999	999	999	999	999	999	999	999	999
790905	999	999	999	999	999	999	999	999	999	999
790906	999	999	999	999	999	999	999	999	999	999
790907	999	999	999	999	999	999	999	999	999	999
790908	999	999	999	999	999	999	999	999	999	999
790909	999	999	999	999	999	999	999	999	999	999
790910	999	999	999	999	999	999	999	999	999	999
790911	999	999	999	999	999	999	999	999	999	999
790912	999	999	999	999	999	999	999	999	999	999
790913	999	999	999	999	999	999	999	999	999	999
790914	999	999	999	999	999	999	-2	-3	3	2
790915	999	999	999	999	-25	999	999	999	999	999

MISSING VALUE IS 999

METEOSTAT DATA TAPES

FSYDDN	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE	FSYDDN	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE			
0391951	832628	14 JUL 79	48/2330Z	IR 2	1585x1500	0392011	832639	20 JUL 79	02/0030Z	WV	1585x1500			
			48/2330Z	WV					24/1130Z	VIS 2	1585x3000			
		15 JUL 79	01/0000Z	IR 2				24/1130Z	IR 2	1585x1500				
			01/0000Z	WV	(S)1585x1500			24/1130Z	WV					
			02/0030Z	IR 2	1585x1500			25/1200Z	VIS 1	1170x3000				
			02/0030Z	WV										
0391961	832629	15 JUL 79	24/1130Z	WV	1585x1500	0392012	832640	20 JUL 79	25/1200Z	IR 2	1585x1500			
			25/1200Z	VIS 3	3170x3000				26/1230Z	VIS 2	1585x3000			
		26/1230Z	25/1200Z	IR 2	1585x1500			26/1230Z	IR 2	1585x1500				
			26/1230Z	VIS 2	1585x3000			26/1230Z	WV					
			26/1230Z	IR 2	1585x1500			48/2330Z	IR 2					
			26/1230Z	IR 2	1585x1500			48/2330Z	WV					
0391962	832630	15 JUL 79	26/1230Z	WV	1585x1500	0392021	832641	21 JUL 79	08/0330Z	IR 2	1585x1500			
			48/2330Z	IR 2					08/0330Z	WV				
		16 JUL 79	48/2330Z	WV				09/0400Z	IR 2					
	01/0000Z		IR 2		09/0400Z			WV						
	0391971	832631	16 JUL 79	01/0000Z	WV				22 JUL 79	35/1700Z	VIS 2	35/1700Z	VIS 2	1585x3000
				02/0030Z	IR 2							35/1700Z	IR 2	1585x1500
02/0030Z				WV		21 JUL 79	48/2330Z	IR 2	2500x2500	35/1700Z	WV			
24/1130Z				VIS 2	1585x3000					48/2330Z	WV			
0391972	832632	16 JUL 79	24/1130Z	IR 2	1585x1500	0392022	832380	22 JUL 79	48/2330Z	IR 2	2500x2500			
			24/1130Z	WV					48/2330Z	WV				
		17 JUL 79	25/1200Z	VIS 3	3170x3000			01/0000Z	IR 2					
			25/1200Z	IR 2	1585x1500			01/0000Z	WV					
			26/1230Z	VIS 2	1585x3000			02/0030Z	IR 2	2500x2500				
			26/1230Z	IR 2	1585x1500			02/0030Z	WV					
0391981	832633	17 JUL 79	26/1230Z	IR 2	1585x1500	0392031	832381	22 JUL 79	02/0030Z	IR 2	2500x2500			
			26/1230Z	WV					02/0030Z	WV				
		17 JUL 79	11/0500Z	IR 2				24/1130Z	VIS 2	2500x5000				
			12/0530Z	IR 2				24/1130Z	WV					
			12/0530Z	WV				26/1230Z	VIS 2	2500x5000				
			13/0600Z	IR 2				26/1230Z	IR 2	2500x2500				
0391982	832634	17 JUL 79	24/1130Z	VIS 2	1585x3000	0392032	832382	22 JUL 79	26/1230Z	IR 2	2500x2500			
			24/1130Z	IR 2	1585x1500				26/1230Z	WV				
		18 JUL 79	24/1130Z	WV	1585x1500			48/2330Z	IR 2					
			25/1200Z	VIS 3	3170x3000			48/2330Z	WV					
			25/1200Z	IR 2	1585x1500			48/2330Z	IR 2	2500x2500				
			26/1230Z	VIS 2	(S)1585x3000			48/2330Z	WV					
0391982	832634	17 JUL 79	26/1230Z	IR 2	(S)1585x1500	0392034	832642	22 JUL 79	36/1730Z	VIS 2	1585x3000			
			48/2330Z	IR 2	1585x1500				36/1730Z	IR 2	1585x1500			
		18 JUL 79	48/2330Z	WV				36/1730Z	WV					
			01/0000Z	IR 2				48/2330Z	IR 2					
			01/0000Z	WV				48/2330Z	WV					
			02/0030Z	IR 2				01/0000Z	IR 2					
0391991	832635	18 JUL 79	02/0030Z	WV		0392041	832384	23 JUL 79	01/0000Z	IR 2	2500x2500			
			02/0030Z	IR 2					01/0000Z	WV				
		18 JUL 79	24/1130Z	VIS 2	1585x3000			02/0030Z	IR 2					
			24/1130Z	IR 2	(S)1585x1500			02/0030Z	WV					
			24/1130Z	WV	1585x1500			24/1130Z	VIS 2	2500x5000				
			25/1200Z	VIS 3	3170x3000			24/1130Z	IR 2	2500x2500				
0391992	832636	18 JUL 79	25/1200Z	IR 2	1585x1500	0392042	832385	23 JUL 79	24/1130Z	VIS 2	2500x5000			
			26/1230Z	WV					24/1130Z	IR 2	2500x2500			
		19 JUL 79	26/1230Z	IR 2				24/1130Z	WV					
			48/2330Z	IR 2				25/1200Z	VIS 3	5000x5000				
			48/2330Z	WV				25/1200Z	IR 2	2500x2500				
			01/0000Z	IR 2				26/1230Z	VIS 2	2500x5000				
0392001	832637	19 JUL 79	01/0000Z	WV		0392043	832386	23 JUL 79	26/1230Z	IR 2	2500x2500			
			02/0030Z	IR 2					26/1230Z	VIS 2	2500x5000			
		19 JUL 79	02/0030Z	WV				26/1230Z	IR 2	2500x2500				
			24/1130Z	VIS 2	(S)1585x3000			01/0000Z	IR 2					
			24/1130Z	IR 2	(S)1585x1500			01/0000Z	WV					
			24/1130Z	WV	(S)1585x1500			02/0030Z	IR 2	2500x2500				
0392002	832638	19 JUL 79	25/1200Z	VIS 3	3170x3000	0392044	832387	23 JUL 79	02/0030Z	WV				
			25/1200Z	IR 2	1585x1500				02/0030Z	IR 2				
		20 JUL 79	26/1230Z	IR 2	1585x1500			25/1200Z	VIS 3	5000x5000				
			26/1230Z	WV				25/1200Z	IR 2	2500x2500				
			48/2330Z	IR 2				26/1230Z	VIS 2	2500x5000				
			48/2330Z	WV				26/1230Z	IR 2	2500x2500				
0392001	832637	19 JUL 79	01/0000Z	IR 2		0392045	832388	23 JUL 79	01/0000Z	IR 2				
			01/0000Z	WV					01/0000Z	WV				
		19 JUL 79	02/0030Z	IR 2				02/0030Z	IR 2					
			02/0030Z	WV				02/0030Z	WV					
			24/1130Z	VIS 2	(S)1585x3000			24/1130Z	VIS 2	2500x5000				
			24/1130Z	IR 2	(S)1585x1500			24/1130Z	IR 2	2500x2500				
0392002	832638	19 JUL 79	24/1130Z	WV		0392051	832389	24 JUL 79	01/0000Z	IR 2				
			24/1130Z	IR 2	(S)1585x1500				01/0000Z	WV				
		19 JUL 79	25/1200Z	VIS 3	3170x3000			02/0030Z	IR 2	2500x2500				
			25/1200Z	IR 2	1585x1500			02/0030Z	WV					
			26/1230Z	IR 2	1585x1500			24/1130Z	VIS 2	2500x5000				
			26/1230Z	WV				24/1130Z	IR 2	2500x2500				
0392002	832638	19 JUL 79	48/2330Z	IR 2		0392052	832390	24 JUL 79	24/1130Z	VIS 2	2500x5000			
			48/2330Z	WV					24/1130Z	IR 2	2500x2500			
		20 JUL 79	01/0000Z	IR 2				24/1130Z	WV					
			01/0000Z	WV				25/1200Z	VIS 3	5000x5000				
			02/0030Z	IR 2				25/1200Z	IR 2	2500x2500				
			02/0030Z	IR 2				26/1230Z	VIS 2	2500x5000				

METEOSTAT DATA TAPES

FSYDDHH	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE	FSYDDHH	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE
0192055	832393	24 JULY 79	26/1230Z 48/2330Z 48/2330Z	WV IR 2 WV	2500x2500	0192102	832644	29 JULY 79	25/1200Z 26/1230Z 26/1230Z	IR 2 VIS 2 IR 2	1585x1500 1585x3000 1585x1500
		25 JULY 79	01/0000Z	IR 2					26/1230Z 48/2330Z 48/2330Z	WV IR 2 WV	
0192061	832394	25 JULY 79	01/0000Z 02/0030Z 02/0030Z	WV IR 2 WV	2500x2500			30 JULY 79	01/0000Z 01/0000Z	IR 2 WV	(S)1585x1500 1585x1500
0192062	832395	25 JULY 79	24/1130Z 24/1130Z 24/1130Z	VIS 2 IR 2 WV	2500x5000 2500x2500	0192111	832645	30 JULY 79	02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	1585x1500 1585x3000
0192063	832396	25 JULY 79	25/1200	VIS 3	5000x5000				24/1130Z 24/1130Z	IR 2 WV	(S)1585x1500 1585x1500
0192064	832397	25 JULY 79	25/1200Z 26/1230Z 26/1230Z	IR 2 VIS 2 IR 2	2500x2500 2500x5000 2500x2500	0192112	832646	30 JULY 79	25/1200Z 25/1200Z 26/1230Z	VIS 1 IR 2 VIS 2	3170x3000 1585x1500 1585x3000
									26/1230Z 26/1230Z	IR 2 WV	(S)1585x1500 1585x1500
0192065	832398	25 JULY 79	26/1230Z 48/2330Z 48/2330Z	WV IR 2 WV	2500x2500	0192113	832647	30 JULY 79	48/2330Z 48/2330Z	IR 2 WV	1585x1500
		26 JULY 79	01/0000Z	IR 2				31 JULY 79	01/0000Z 01/0000Z	IR 2 WV	(R)1585x1500 (R)1585x1500
0192071	832399	26 JULY 79	02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	2500x2500 2500x5000				02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	1585x1500 1585x3000 1585x1500
0192072	832400	26 JULY 79	24/1130Z 24/1130Z	IR 2 WV	2500x2500	0192121	832648	31 JULY 79	24/1130Z 25/1200Z 25/1200Z	WV VIS 1 IR 2	1585x1500 3170x3000 1585x1500
0192073	832401	26 JULY 79	25/1200Z	VIS 3	5000x5000				26/1230Z 26/1230Z	VIS 2 IR 2	1585x3000 1585x1500
0192074	832402	26 JULY 79	25/1200Z 26/1230Z 26/1230Z	IR 2 VIS 2 IR 2	2500x2500 2500x5000 2500x2500				26/1230Z	VIS 2 IR 2	1585x3000 1585x1500
0192075	832403	26 JULY 79	26/1230Z 48/2330Z	WV IR 2	2500x2500	0192122	832649	31 JULY 79	26/1230Z 48/2330Z 48/2330Z	WV IR 2 WV	1585x1500
		27 JULY 79	01/0000Z 01/0000Z	IR 2 WV				01 AUG 79	01/0000Z 01/0000Z	IR 2 WV	
0192081	832404	27 JULY 79	02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	2500x2500 2500x5000				02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	1585x3000
0192082	832405	27 JULY 79	24/1130Z 24/1130Z	IR 2 WV	2500x2500	0192131	832650	01 AUG 79	24/1130Z 24/1130Z	IR 2 WV	1585x1500
0192083	832406	27 JULY 79	25/1200Z	VIS 3	5000x5000				25/1200Z 25/1200Z 26/1230Z	VIS 1 IR 2 VIS 2	3170x3000 1585x1500 1585x3000
0192084	832407	27 JULY 79	25/1200Z 26/1230Z 26/1230Z	IR 2 VIS 2 IR 2	2500x2500 2500x5000 2500x2500	0192132	832651	01 AUG 79	26/1230Z 48/2330Z 48/2330Z	WV IR 2 WV	1585x1500
								02 AUG 79	01/0000Z 01/0000Z	IR 2 WV	
0192085	832408	27 JULY 79	26/1230Z 48/2330Z	WV IR 2	2500x2500				02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	1585x3000
		28 JULY 79	01/0000Z 01/0000Z	IR 2 WV							
0192091	832409	28 JULY 79	02/0030Z 02/0030Z 24/1130Z	IR 2 WV VIS 2	2500x2500 2500x5000	0192141	832652	02 AUG 79	24/1130Z 24/1130Z	IR 2 WV	1585x1500
0192092	832410	28 JULY 79	24/1130Z 24/1130Z	IR 2 WV	2500x2500				25/1200Z 25/1200Z 26/1230Z	VIS 1 IR 2 VIS 2	3170x3000 1585x1500 1585x3000
0192093	832411	28 JULY 79	25/1200Z	VIS 3	5000x5000	0192142	832653	02 AUG 79	26/1230Z 26/1230Z 48/2330Z	IR 2 WV IR 2	1585x1500
0192094	832412	28 JULY 79	25/1200Z 26/1230Z 26/1230Z	IR 2 VIS 2 IR 2	2500x2500 2500x5000 2500x2500				48/2330Z 01/0000Z 01/0000Z	WV IR 2 WV	
0192095	832413	28 JULY 79	26/1230Z	WV	2500x2500				02/0030Z 02/0030Z	IR 2 WV	
0192101	832643	29 JULY 79	02/0030Z 24/1130Z 24/1130Z 24/1130Z 24/1130Z 25/1200Z	WV VIS 2 IR 2 WV VIS 3	1585x1500 1585x3000 1585x1500 1585x1500 3170x3000	0192151	832654	03 AUG 79	24/1130Z 24/1130Z 24/1130Z 26/1230Z 26/1230Z 26/1230Z	VIS 2 IR 2 WV VIS 2 IR 2 WV	1585x3000 (S)1585x1500 1585x1500 1585x3000 1585x1500

METEOSTAT DATA TAPES

FSYDDN	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE	FSYDDN	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE				
0392301	832679	18 AUG 79	09/0400Z	IR 2	1585x1500	0392222	832665	10 AUG 79	48/2330Z	IR 2	1585x1500				
			09/0400Z	WV					48/2330Z	WV					
			10/0430Z	IR 2					01/0000Z	IR 2					
			10/0430Z	WV					01/0000Z	WV					
			11/0500Z	IR 2					02/0030Z	IR 2					
			23/1100Z	VIS 3	3170x3000				02/0030Z	WV					
0392152	832655	03 AUG 79	48/2330Z	IR 2	1585x1500	0392211	832666	11 AUG 79	24/1130Z	VIS 2	1585x3000				
			48/2330Z	WV					24/1130Z	IR 2	1585x1500				
		04 AUG 79	01/0000Z	WV					25/1200Z	VIS 3	1585x1500				
		02/0030Z	WV		25/1200Z				IR 2	1585x1500					
		31/1500Z	VIS 2	1585x3000	26/1230Z				VIS 2	1585x3000					
			31/1500Z	IR 2	1585x1500				26/1230Z	WV	1585x1500				
0392161	832656	04 AUG 79	31/1500Z	WV	1585x1500	0392212	832667	11 AUG 79	48/2330Z	IR 2	1585x1500				
			32/1530Z	VIS 2	1585x3000				48/2330Z	WV					
			32/1530Z	IR 2	1585x1500				01/0000Z	IR 2					
			32/1530Z	WV					01/0000Z	WV					
			33/1600Z	VIS 2	1585x3000				02/0030Z	IR 2					
			33/1600Z	IR 2	1585x1500				24/1130Z	VIS 2	1585x3000				
			33/1600Z	WV					24/1130Z	IR 2	1585x1500				
0392171	832657	05 AUG 79	07/0300Z	IR 2	1585x1500	0392241	832668	12 AUG 79	25/1200Z	VIS 3	3170x3000				
			07/0300Z	WV					25/1200Z	IR 2	1585x1500				
			08/0330Z	IR 2					26/1230Z	VIS 2	1585x3000				
			08/0330Z	WV					26/1230Z	IR 2	1585x1500				
			09/0400Z	IR 2					07/0300Z	WV					
			09/0400Z	WV					13 AUG 79	0392251	832669	13 AUG 79	09/0400Z	WV	1585x1500
			31/1500Z	VIS 2	1585x3000								24/1130Z	VIS 2	1585x3000
			31/1500Z	IR 2	1585x1500								24/1130Z	IR 2	1585x1500
			32/1530Z	VIS 2	1585x1500								24/1130Z	WV	
			32/1530Z	IR 2	1585x1500								25/1200Z	VIS 3	3170x3000
32/1530Z	WV		0392252	832670	13 AUG 79	14 AUG 79	25/1200Z	IR 2	1585x1500						
33/1600Z	VIS 2	1585x3000					26/1230Z	VIS 2	1585x3000						
33/1600Z	IR 2	1585x1500					24/1130Z	VIS 2	1585x1500						
33/1600Z	WV						24/1130Z	IR 2	1585x1500						
33/1600Z	WV						24/1130Z	WV							
0392181	832659	06 AUG 79	31/1500Z	VIS 2	1585x3000	0392261	832671	14 AUG 79	25/1200Z	VIS 3	3170x3000				
			32/1530Z	VIS 2					25/1200Z	IR 2	1585x1500				
			33/1600Z	VIS 2					26/1230Z	VIS 2	1585x3000				
			33/1600Z	IR 2	1585x1500				26/1230Z	IR 2	1585x1500				
			33/1600Z	WV					26/1230Z	WV					
0392191	832622	07 AUG 79	09/0400Z	WV	1585x1500	0392262	832672	14 AUG 79	48/2330Z	IR 2	1585x1500				
			31/1500Z	VIS 2	1585x3000				48/2330Z	WV					
			32/1530Z	VIS 2					01/0000Z	IR 2					
			32/1530Z	IR 2	1585x1500				01/0000Z	WV					
			32/1530Z	WV					02/0030Z	IR 2					
0392192	832661	07 AUG 79	33/1600Z	IR 2	1585x1500	0392271	832673	15 AUG 79	24/1130Z	WV	1585x1500				
			33/1600Z	WV					25/1200Z	VIS 3	3170x3000				
		08 AUG 79	31/1500Z	VIS 2	1585x3000				25/1200Z	IR 2	1585x1500				
		32/1530Z	VIS 2		26/1230Z				VIS 2	1585x3000					
		32/1530Z	WV	1585x1500	26/1230Z				IR 2	1585x1500					
			33/1600Z	VIS 2	1585x3000										
0392211	832662	09 AUG 79	07/0300Z	WV	1585x1500	0392272	832674	15 AUG 79	26/1230Z	WV	1585x1500				
			08/0330Z	IR 2					48/2330Z	IR 2					
			08/0330Z	WV					48/2330Z	WV					
			34/1630Z	VIS 2	1585x3000				01/0000Z	IR 2					
			34/1630Z	IR 2	1585x1500				01/0000Z	WV					
			35/1700Z	VIS 2	1585x3000				02/0030Z	IR 2					
			35/1700Z	IR 2	1585x1500				02/0030Z	WV					
0392212	832663	09 AUG 79	35/1700Z	WV	1585x1500	0392281	832675	16 AUG 79	24/1130Z	IR 2	1585x1500				
			36/1730Z	VIS 2	1585x3000				24/1130Z	WV					
		36/1730Z	IR 2	1585x1500	25/1200Z				VIS 3	3170x3000					
		07/0300Z	WV		25/1200Z				IR 2	1585x1500					
		24/1130Z	VIS 2	1585x3000	26/1230Z				VIS 2	1585x3000					
			24/1130Z	IR 2	1585x1500										
0392221	832664	10 AUG 79	25/1200Z	VIS 3	3170x3000										
			25/1200Z	IR 2	1585x1500										
			26/1230Z	VIS 2	1585x3000										
			26/1230Z	IR 2	1585x1500										
			26/1230Z	WV											

METEOSTAT DATA TAPES

(PART I CONCLUDED)

FSYDDHH	ESA NO.	DATE	SLOT/TIME	DATA CHANNEL	SIZE				
0392282	832676	16 AUG 79	26/1230Z	IR 2	1585x1500				
			26/1230Z	WV					
		17 AUG 79	48/2330Z	IR 2					
			01/0000Z	IR 2					
			02/0030Z	IR 2					
			02/0030Z	WV					
			24/1130Z	VIS 2		1585x3000			
			24/1130Z	IR 2		1585x1500			
			0392291	832677		17 AUG 79	24/1130Z	WV	1585x1500
							25/1200Z	VIS 3	3170x3000
25/1200Z	IR 2	1585x1500							
26/1230Z	VIS 2	1585x3000							
0392292	832678	17 AUG 79	26/1230Z	IR 2	1585x1500				
			26/1230Z	WV	1585x1500				
0392302	832680	18 AUG 79	23/1100Z	IR 2	1585x1500				
			24/1130Z	VIS 2	1585x3000				
			24/1130Z	IR 2	1585x1500				
			24/1130Z	WV					
			25/1200Z	VIS 3	3170x3000				
0392303	832681	18 AUG 79	25/1200Z	IR 2	1585x1500				
			33/1600Z	VIS 2	1585x3000				
			33/1600Z	IR 2	1585x1500				
			33/1600Z	WV					
			34/1630Z	WV					
			35/1700Z	VIS 2	1585x3000				
			35/1700Z	IR 2	1585x1500				
0392304	832682	18 AUG 79	35/1700Z	WV	1585x1500				
			34/1630Z	VIS 2	1585x3000				
		02 SEP 79	34/1630Z	WV	1585x1500				
			35/1700Z	VIS 2	1585x3000				
			35/1700Z	WV	1585x1500				
			36/1730Z	VIS 2	1585x3000				
			36/1730Z	VIS 2	1585x3000				
0392451	832683	02 SEP 79	36/1730Z	WV	1585x1500				
			21/1000Z	VIS 3	3170x3000				
		04 SEP 79	21/1000Z	IR 2	1585x1500				
			22/1030Z	VIS 2	(S) 1585x3000				
			22/1030Z	IR 2	1585x1500				
0392471	832684	04 SEP 79	22/1030Z	WV	1585x1500				
			23/1100Z	VIS 3	3170x3000				
			23/1100Z	IR 2	1585x1500				

(S) - DATA QUALITY SUSPECT

(R) - DATA QUALITY BAD

METEOSTAT DATA TAPES

PART II

MISSING DATA

KEY

ABBREVIATION

MEANING

AORF	-	-	-	-	-	data is <u>Archived Only in Raw Form</u>
DQU	-	-	-	-	-	<u>Data Quality is Unacceptable</u>
FN	-	-	-	-	-	<u>File Nonexistent</u>
NA	-	-	-	-	-	<u>Not Archived</u>
PLI	-	-	-	-	-	<u>Processing Level Insufficient</u>

METEOSTAT DATA TAPES

FSYDDN	ESA NO.	DATE	SLOT/TIME	DATA	CHARFL	REASON	FSYDDN	ESA NO.	DATE	SLOT/TIME	DATA	CHARFL	REASON
0191961	832629	15 JUL 79	25/1200Z	WV		NA	0192192	832661	08 AUG 79	07/0300Z	IR 2		DOU
0191971	832631	16 JUL 79	25/1200Z	WV		NA				07/0300Z	WV		DOU
0191972	832632	16 JUL 79	48/2330Z	IR 2		PL1				08/0330Z	IR 2		DOU
		17 JUL 79	48/2330Z	WV		PL1				08/0330Z	WV		DOU
			11/0500Z	WV		NA				09/0400Z	IR 2		DOU
			13/0600Z	WV		NA				09/0400Z	WV		DOU
0191981	832633	17 JUL 79	25/1200Z	WV		NA			09 AUG 79	11/1500Z	IR 2		DOU
0191991	832635	18 JUL 79	25/1200Z	WV		NA				11/1500Z	WV		DOU
0192001	832637	19 JUL 79	25/1200Z	WV		NA	0192211	832662	09 AUG 79	16/1630Z	WV		DOU
0192012	832640	20 JUL 79	25/1200Z	WV		NA	0192212	832663	09 AUG 79	36/1730Z	WV		DOU
0192021	832641	22 JUL 79	34/1630Z	VIS 2		DOU			10 AUG 79	07/0300Z	IR 2		DOU
			34/1630Z	TR 2		DOU				08/0330Z	IR 2		DOU
			34/1630Z	WV		DOU				08/0330Z	WV		DOU
0192032	832642	22 JUL 79	25/1200Z	VIS 2		AORF	0192221	832664	10 AUG 79	25/1200Z	WV		NA
			25/1200Z	TR		AORF				26/1230Z	IR 2		DOU
			25/1200Z	WV		AORF	0192231	832666	11 AUG 79	25/1200Z	WV		NA
0192044	832647	23 JUL 79	25/1200Z	WV		AORF	0192232	832667	12 AUG 79	02/0030Z	WV		DOU
0192054	832649	24 JUL 79	25/1200Z	WV		NA	0192241	832668	12 AUG 79	25/1200Z	WV		NA
0192064	832647	25 JUL 79	25/1200Z	WV		NA			13 AUG 79	26/1230Z	WV		DOU
0192065	932398	26 JUL 79	01/0000Z	WV		DOU				07/0300Z	IR 2		DOU
0192074	832402	26 JUL 79	25/1200Z	WV		NA				08/0330Z	IR 2		DOU
0192075	832403	26 JUL 79	48/2330Z	WV		DOU				08/0330Z	WV		DOU
0192084	832407	27 JUL 79	25/1200Z	WV		NA	0192252	832670	13 AUG 79	25/1200Z	WV		NA
0192085	832408	27 JUL 79	48/2330Z	WV		DOU			14 AUG 79	26/1230Z	IR 2		DOU
0192094	832412	28 JUL 79	25/1200Z	WV		NA				26/1230Z	WV		DOU
0192102	832644	29 JUL 79	25/1200Z	WV		NA				07/0300Z	IR 2		DOU
0192112	832646	30 JUL 79	25/1200Z	WV		NA				07/0300Z	WV		DOU
0192121	832648	31 JUL 79	25/1200Z	WV		NA	0192261	832671	14 AUG 79	25/1200Z	WV		NA
0192131	832650	01 AUG 79	25/1200Z	WV		NA	0192271	832673	15 AUG 79	25/1200Z	WV		NA
			26/1230Z	IR 2		DOU	0192281	832675	16 AUG 79	25/1200Z	WV		NA
0192141	832652	02 AUG 79	25/1200Z	WV		NA	0192282	832676	16 AUG 79	48/2330Z	WV		DOU
0192151	832654	03 AUG 79	25/1200Z	VIS 1		DOU			17 AUG 79	01/0000Z	WV		DOU
			25/1200Z	IR 2		FN	0192291	832677	17 AUG 79	25/1200Z	WV		NA
			25/1200Z	WV		AORF	0192301	832679	18 AUG 79	11/0500Z	WV		NA
0192152	832655	04 AUG 79	01/0000Z	IR 2		FN	0192302	832680	18 AUG 79	23/1100Z	WV		AORF
			02/0030Z	IR 2		FN	0192303	832681	18 AUG 79	25/1200Z	WV		NA
0192172	832658	06 AUG 79	07/0300Z	IR 2		DOU				34/1630Z	VIS 2		DOU
			07/0300Z	WV		DOU				34/1630Z	IR 2		DOU
			08/0330Z	IR 2		DOU				34/1630Z	IR 2		DOU
			08/0330Z	WV		DOU	0192304	832682	02 SEP 79	34/1630Z	IR 2		DOU
			09/0400Z	IR 2		DOU				35/1700Z	IR 2		DOU
			09/0400Z	WV		DOU				36/1730Z	IR 2		DOU
0192181	832659	06 AUG 79	31/1500Z	IR 2		DOU	0192451	832683	03 SEP 79	09/0400Z	IR 2		DOU
			31/1500Z	WV		DOU				09/0400Z	WV		DOU
			32/1530Z	IR 2		DOU				10/0430Z	IR 2		DOU
			32/1530Z	WV		DOU				10/0430Z	WV		DOU
			33/1600Z	WV		DOU				11/0500Z	IR 2		DOU
		07 AUG 79	07/0300Z	IR 2		DOU			04 SEP 79	11/0500Z	WV		DOU
			08/0330Z	IR 2		DOU				21/1000Z	WV		NA
			09/0400Z	IR 2		DOU	0192471	832684	04 SEP 79	23/1100Z	WV		NA
0192191	832672	07 AUG 79	31/1500Z	IR 2		DOU							
			31/1500Z	WV		DOU							