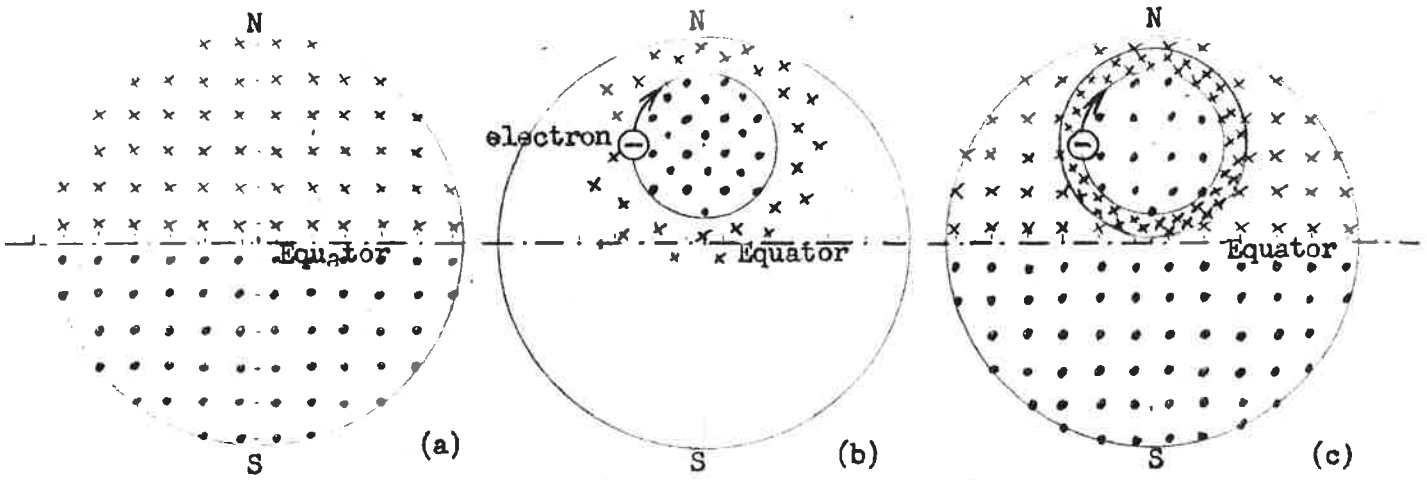

Figure 12-3

Figure 12-4

thus they also approach the ring (Figure 12-4).

In the Southern Hemisphere a symmetrically opposite rotation takes place. Figure 12-5 summarizes the rotations and the magnetic polari-

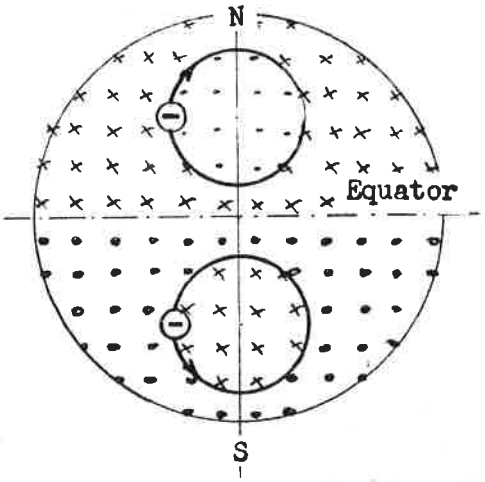

Figure 12-5

ties for both hemispheres.

The low pressure upward flowing interior air of the anticyclone clears away all positively charged clouds and deposits them outside the

ring in a mushroom-type flow. Inside the system the upward flow of electrons are deflected only around the horizontal axis, always and everywhere towards the east. All anticyclones drift towards the east on both hemispheres.

The clearing of the anticyclone's interior from positive charges and the concentration of emission electrons in the ring eventually causes the death of the system. AS it becomes more and more negatively charged the system attracts the external positive ly charged clouds more and more. This attraction is the Coulomb force between opposite charges. Positive ions rotate in the opposite direction to the ring's electros in the same magnetic field, and they encounter both mechanically and in electrically in a head-on collision in the form of storms breaking out along the ring. In these storms the electron ring is destroyed and the anticyclone ceases to exist.

13 CYCLONES

From Equation (12-1) it can be predicted that the cyclonic rotation is caused by the deflection of positive charges in the vertical component of the Earth's magnetic field. It is only the sign of the electric charge which changes in the anticyclonic equation to yield the cyclonic equation:

$$F_m = +q\left[V_h \times B_v\right] \qquad (13\text{-}1)$$

This change of sign results in the reversal of the rotation: cyclones rotate counterclockwise in the Northern, and clockwise in the Southern

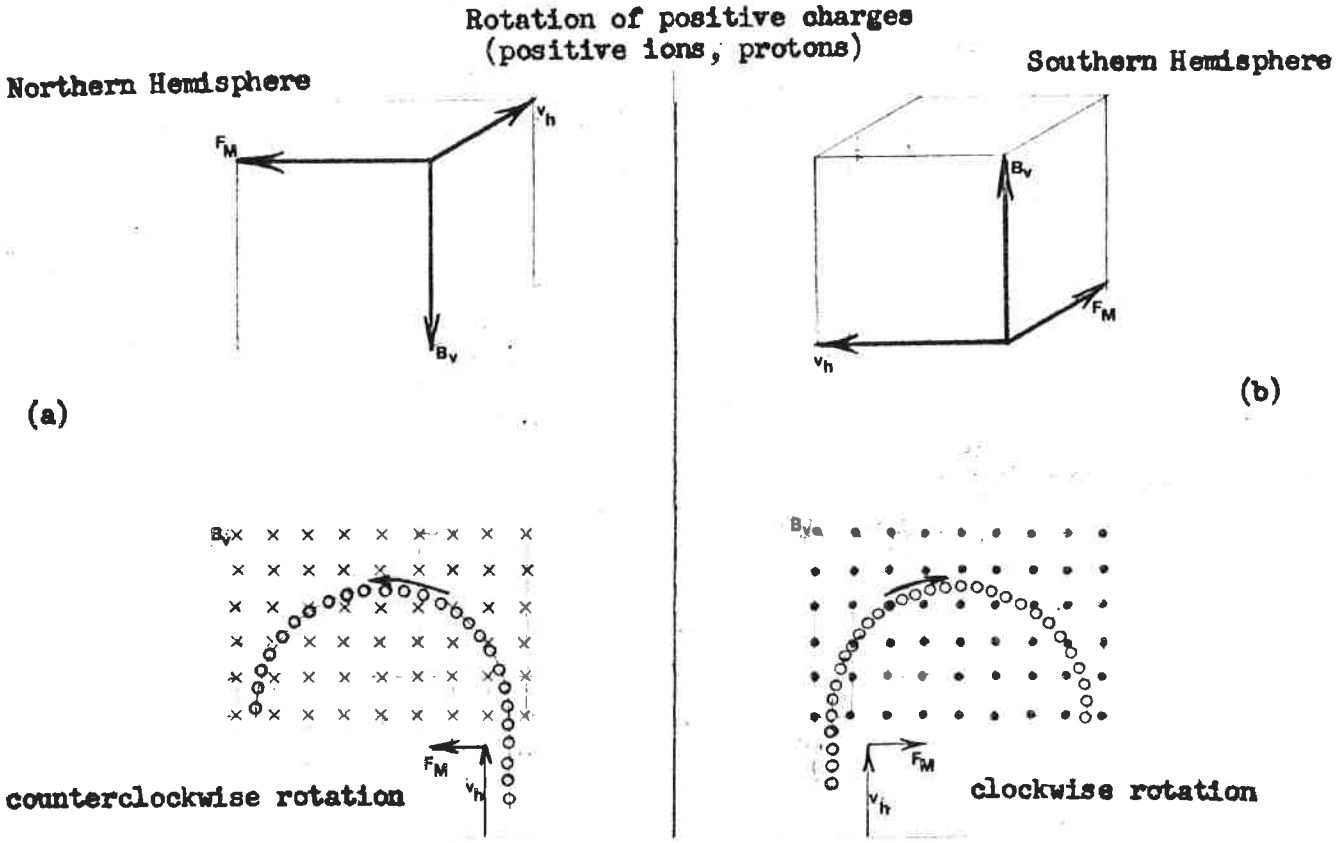

Figure 13-1

Hemisphere (Figure 13-1). Thus, cyclones are caused by the movements of positive charges (positive ions) in the atmosphere.

A significant planetary confirmation exists for this electric nature of the cyclone: Jupiter's Great Red Spot. According to measurements by the space probes Pioneer 10 and 11 (Ref. 13-1), Jupiter's magnetic

field is of reversed polarity: its North Magnetic Pole is in its Southern Hemisphere. Thus, in a reversed magnetic field the rotation of a cyclone should be reversed. Indeed, its cyclonic Great Red Spot is located in its Southern Hemisphere and it does rotate counterclockwise. On the Earth cyclones rotate clockwise in the Southern Hemisphere.

Figure 13-2 summarizes the correspondence between hemispheres, sign of charges, and direction of rotations: (a) and (b) refer to the Earth-type systems, (c) is of general validity regardless of the magnetic polarity.

Type of System	Direction of Rotation	
	Northern Hemisphere	Southern Hemisphere
Cyclone	counterclockwise	clockwise
Anticyclone	clockwise	counterclockwise

(a)

Type of Charge	Direction of Rotation	
	Northern Hemisphere	Southern Hemisphere
Positive	counterclockwise	clockwise
Negative	clockwise	counterclockwise

(b)

Rotation	Charge
Cyclonic	Positive
Anticyclonic	Negative

(c)

Figure 13- 2

14. THE SOURCE OF THE POSITIVE CHARGES

I found the source of the positive charges through the cyclonic rotation of certain cloud formations in the atmosphere. Several papers were published on the observations during the GARP Atlantic Tropical Experiment (GATE), in 1974, which were focused on the tropical cloud systems, especially on the sudden appearance and rapid development of cold clouds of about 100 - 200 km diameter.

A geostationary satellite was positioned over the Equator, near 45 degrees west, which regularly (hourly) produced infrared photographs of that area of the ocean. A large number of the observed cloud structures exhibited the following behaviour (Ref. 14-1):

1. Rapid growth of cold cloud in region where little or no cold cloud had existed. Typical growth period was 2-5 hours

2. Bright mushroom or oval appearance in the growing stage. This is a signature for developing cumulonimbus clouds

3. Mature stage with horizontal dimensions 50-200 km latitude

One observer noted (Ref. 14-2) that "(the infrared pictures) revealed that convection began during the night hours and that the anvil once discovered as a bright dot on the picture would develop exposively like a 'super nova' within the following 2 to 3 hours into a huge storm whose anvil area enlarged by orders of magnitude to thousands of nautical square miles. The decaying state of these storms usually set in during the noon hours." I emphasise here that these sudden storms arise and develop independently on the ambient weather conditions: according to the infrared pictures they frequently emerge under perfectly clear skies, expand upward, and move always westward. Thus their linear longitudinal drift is exactly opposite to that of the electrons.

Even the location of storm outbreaks moves weather-independently and highly regularly. One study (Ref. 14-1) lists locations of 92 systems during the early stages of development (Figure 14-1). I applied the process of linear regression to these figures to see the trend in them and I found two periodicities:

A.) The location of storm outbreaks moves monotonously towards the north during the observation between July 17 and September 6 (Figure 14-2a)

System Number	Date	Time (GMT)	Location
1	July 17–18	2230–0100	30°W– 5°N
2	July 19	0900–1030	33°W– 9°N
3	July 21	0900–1100	26°W– 11°N
4	July 21	1800–2330	28°W– 11°N
5	July 22	0300–0800	26.5°W– 10.5°N
6	July 23	1930–2200	33°W– 3°N
7	July 24	0100–0300	37°W– 8°N
8	July 24	1200–1600	29°W– 7°N
9	July 24	2200–2330	24°W– 9°N
10	July 25	2100–2300	28°W– 12°N
11	July 26	0900–1200	38°W– 11°N
12	July 26	1500–1800	36°W– 11°N
13	July 27	0000–0300	29°W– 8°N
14	July 27	0000–0300	28°W– 9°N
15	July 27	0100–0700	39.5°W– 9.5°N
16	July 28	0000–0500	35°W– 5°N
17	July 29	0500–0730	21°W– 17°N
18	July 29	0500–0730	22°W– 18°N
19	July 29–30	2330–0500	27°W– 8°N
20	July 30	1730–2300	29°W– 7°N
21	July 31	0300–0700	21.5°W– 9.5°N
22	July 31	1530–1830	36°W– 9°N
23	Aug. 1–2	2130–0300	38°W– 7°N
24	Aug. 5	0400–0800	38°W– 8°N
25	Aug. 5	1330–1800	34°W– 8°N
26	Aug. 6	0300–0600	28°W– 10°N
27	Aug. 7	0930–1230	30.5°W– 10°N
28	Aug. 7	1830–2300	27°W– 10°N
29	Aug. 8	0230–0830	28°W– 10°N
30	Aug. 10	0430–0900	26°W– 9.5°N
31	Aug. 10	0430–0900	23.5°W– 9°N
32	Aug. 10	0500–0900	22.5°W– 10°N
33	Aug. 10	0600–1000	23°W– 7°N
34	Aug. 10	0700–1030	30°W– 14°N
35	Aug. 10	0730–1200	25°W– 12°N
36	Aug. 10	0900–1200	26.5°W– 13°N
37	Aug. 10	1800–2200	34°W– 13°N
38	Aug. 12	0000–0500	35°W– 1°N
39	Aug. 12	0000–0500	35°W– 3°N
40	Aug. 12	1400–1800	39°W– 6°N
41	Aug. 14	0330–0900	23°W– 13°N
42	Aug. 14	0500–0900	30°W– 9°N
43	Aug. 14	1730–2330	31°W– 12°N
44	Aug. 15	0100–0400	28°W– 12.5°N
45	Aug. 15	0600–0900	26°W– 12.5°N
46	Aug. 16	0000–0500	39°W– 9°N
47	Aug. 16	0400–0900	20°W– 10°N
48	Aug. 17	0000–0730	30°W– 9°N

Figure 14-1a

System Number	Date	Time (GMT)	Location
49	Aug. 17	0100–0600	36°W– 7°N
50	Aug. 17	0300–0730	27.5°W– 10°N
51	Aug. 18	0100–1000	29.5°W– 8°N
52	Aug. 18	0200–1000	28°W– 9°N
53	Aug. 18	0400–1100	37.5°W– 7.5°N
54	Aug. 18	0600–0900	32.5°W– 8°N
55	Aug. 18	1200–1800	25°W– 10°N
56	Aug. 18	1300–1600	33°W– 8.5°N
57	Aug. 18	1500–2000	27°W– 11°N
58	Aug. 18	2000–2300	30°W– 8°N
59	Aug. 18	2000–2300	36°W– 7°N
60	Aug. 19	0100–0700	30°W– 8°N
61	Aug. 19	0100–0700	34°W– 8°N
62	Aug. 19	0830–1100	22°W– 11°N
63	Aug. 20	0400–0700	25°W– 12°N
64	Aug. 20	0500–0900	31°W– 10°N
65	Aug. 21	2100–2330	27°W– 12°N
66	Aug. 28	0000–0600	27°W– 9.5°N
67	Aug. 28	1300–1800	38°W– 12°N
68	Aug. 28	2130–2330	36°W– 11°N
69	Aug. 29	0200–0800	40°W– 6°N
70	Aug. 29	2030–2230	40°W– 9°N
71	Aug. 30	0100–0600	32°W– 7.5°N
72	Aug. 30	0100–0600	21°W– 14°N
73	Aug. 30	1930–2230	30°W– 11°N
74	Aug. 30	1900–2300	24°W– 12°N
75	Aug. 31	0600–0900	31°W– 12°N
76	Aug. 31	1000–1600	28°W– 4°N
77	Aug. 31	1100–1500	30°W– 12°N
78	Sept. 1	0100–0400	38°W– 8°N
79	Sept. 1	0300–0500	34°W– 10°N
80	Sept. 1	0300–0630	26°W– 5°N
81	Sept. 1	1230–1500	32°W– 13°N
82	Sept. 1	1500–1830	39°W– 9°N
83	Sept. 1	1800–2000	33°W– 7°N
84	Sept. 1	1830–2300	37°W– 11°N
85	Sept. 2	0100–0600	24°W– 7°N
86	Sept. 2	0200–0600	25°W– 11°N
87	Sept. 3	1900–2300	22°W– 7°N
88	Sept. 4	0000–0400	23°W– 8°N
89	Sept. 5	1700–2000	31°W– 11°N
90	Sept. 6	0100–0600	24°W– 12°N
91	Sept. 6	0430–0700	22°W– 8°N
92	Sept. 6	2000–2300	37°W– 9°N

Figure 14-1b

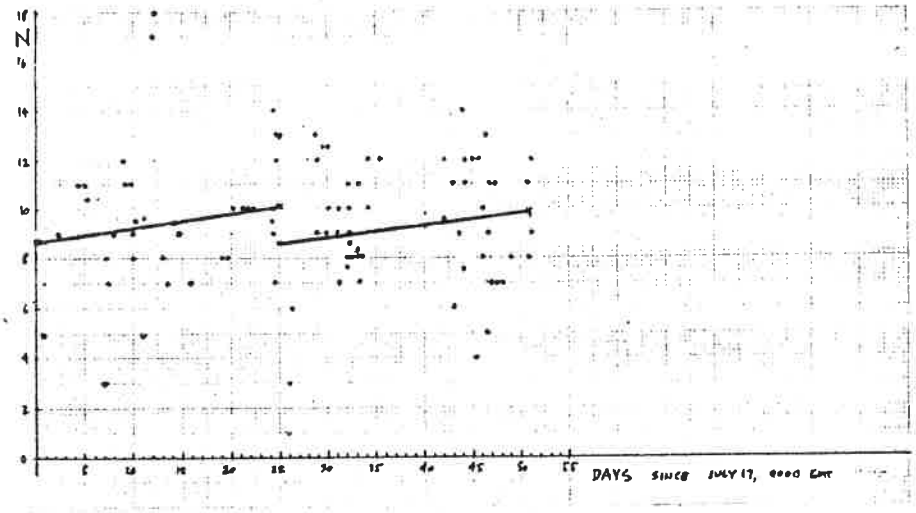

Figure 14-2a

B.) The location of storm outbreaks moves towards the west between midnight and noon, and towards the east between noon and midnight (Figure 14-2b).

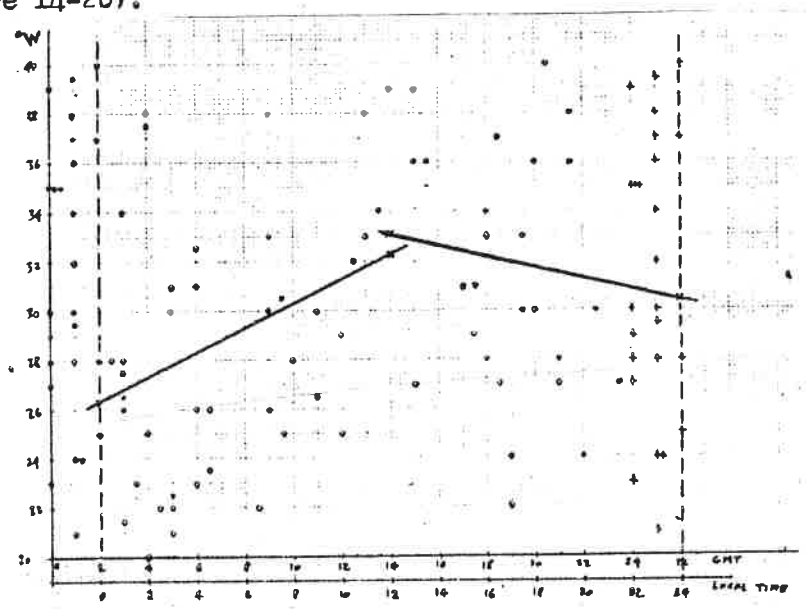

Figure 14-2b

These movements are coincident with the movements of "earth currents" (Chapter &w100) of which I pointed out that their driving force is an electric repulsion force from the direction of the Sun. This repulsion force results in an electron concentration in the night side of the Earth's crust with its maximum at the midnight meridian. This charge concentration is directly involved in the fostering of the storm outbreaks. According to Figures 14-2 the location of storm outbreaks follows the movement of the solar antipode both latitudinally and longitudinally: the shift in the east-west direction is diurnal and in the north-south direction it is seasonal (from June 21 till Decem-

ber 21 it moves northward).

According to the above observations I find the mechanism which gives birth to these storms as follows:

(A) The solid crust acts as a charge separator of charges: it lets the electrons passing through but retains the positive charges as these are located in the protons of the atomic nuclei which can not penetrate the crust because of their size.

(B) Frequent breakup of the ocean floor releases the accumulated positive charges (ions) into the water of the ocean either directly,or by a charge exchange: when the water contacts the molten lava water molecules break up through thermal ionization, and electrons move into the solidifying lava which has been in the state of positive ionization. Thereby the water molecules become positively charged.

(C) The positively charged water moves up in the water of the ocean which acts as an electrolyte, thus positive ions propagate in it. This positively charged water bursts into the atmosphere from the ocean under the driving force of the local electric field. Thus the formation of the cloud at this place is independent of the local weather.

(D) The upward moving positive water-ions drag a large amount of neutral water into the atmosphere. The development of the cloud proceeds from the water surface upward, in the form of a cumulonimbus cloud. "Bright mushroom or oval appearance in the growing stage. This is a signature for cumulonimbus clouds" as I quoted above. As it will be seen later the entire energy of a future hurricane enters into tha atmosphere at this stage.

(E) The lifetime of a fissure on the ocean floor is directly related to the length of the developing phase of these clouds. "Typical growth period was 2-5 hours". In the presence of the water the fissure seals off in a few hours, therefore only a fixed amount of positive charge enters the ocean and eventually into the atmosphere like a great bubble. This develops into a fixed volume of cloud with a sharp cutoff at the bottom. After the cutoff the cloud moves further up into the atmosphere under the electric driving force and a gap develops towards the ocean surface which increases as the bubble moves upward.

(F) The driving force of the cloud in the vertically upward direction is the Coulomb repulsion force

between the locally positively charged surface area of the magma cathode and the similarly positively charged ions in the cumulonimbus cloud. The fast upward driven charged particles transfer a kinetic energy to the neutral molecules through flexible collisions, thus the entire group moves upward. I show later that in a powerful hurricane one charged particle for each million neutral molecules can provide the driving force.

(G) The friction between the driving and the driven molecules develop into a temperature increase inside the cloud. This phenomenon is identical to the Joule heat in a resistive wire when electric current flows in it. The flow of positive ions in the cloud also constitutes an electric current and the neutral water and air molecules represent the resistive medium in this atmospheric conductor. Thus, the temperature gradient inside the cloud is the result, and not the reason, of the drive.

This release of positive ions from the Earth's magma cathode compliments the electron release through the crust, thus the average charge balance of the Earth remains unchanged. I refer here to Figure 1-1 where the "vacuum deposition chamber" is illustrated. Here a thermionic cathode releases both positive ions and negative electrons into the surrounding space. Obviously this cathode would continue releasing particles even if a very thin filmlike layer of broken wet stone was spread over its surface. The only difference would be that the emission would become intermittent, it would be concentrated into packets of bubbles, but the overall emission would continue. These bubbles of packeted charges are the sudden tropical storms on the Earth. The 5 km thick ocean floor on the 12700 km diameter Earth is of the same ratio as 0.0005 centimeter (1/6000-th inch) thick layer on a 1 centimeter (0.4 inch) diameter cathode in the vacuum chamber.