

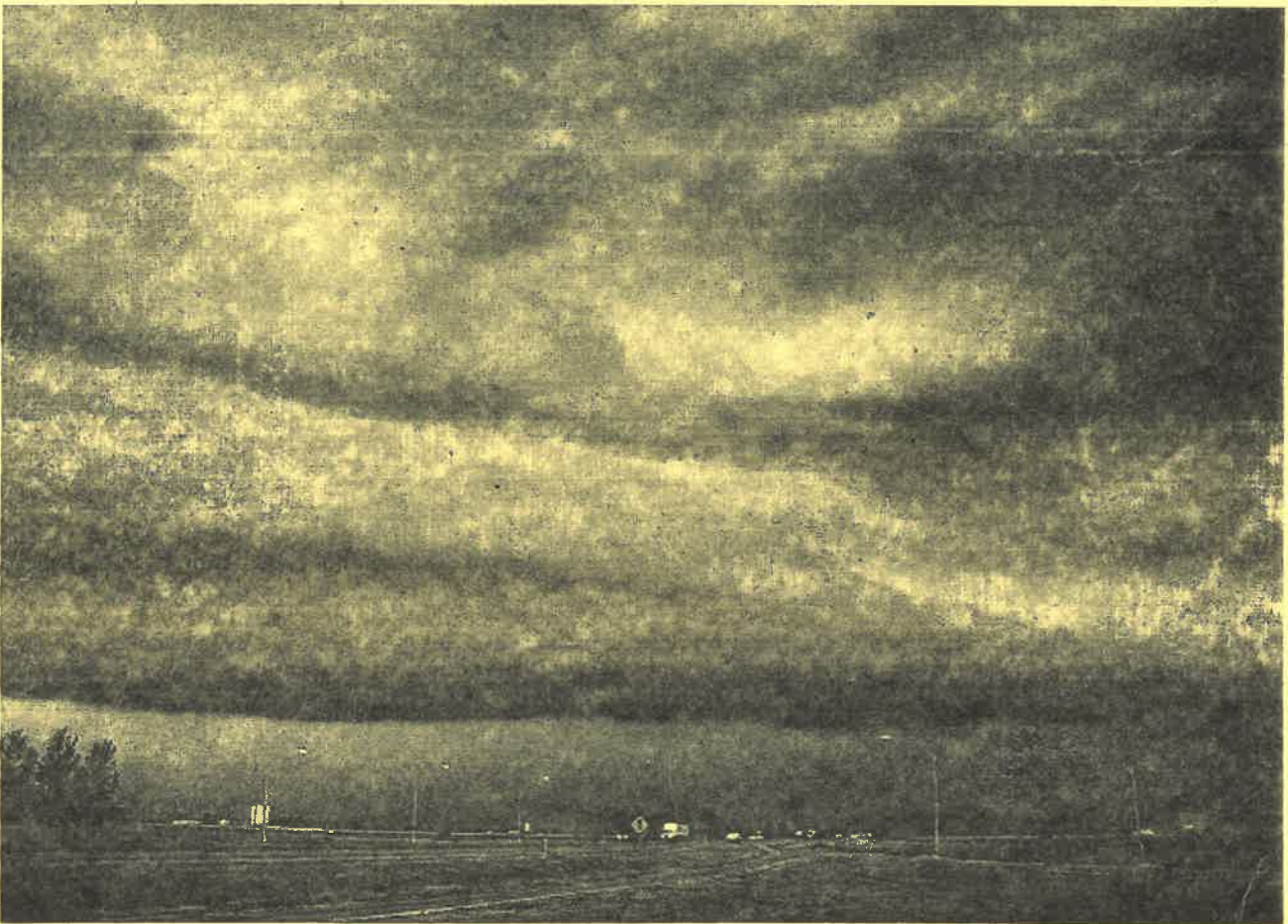
SOUTH AFRICAN



**METEOROLOGY MANUAL (ATP)
FOR EXAMINATION PURPOSES ONLY**

Revision Date: April 1999

WRITTEN EXAMS



FOR THE USE OF AIRLINE TRANSPORT AND COMMERCIAL PILOT EXAMS

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SOUTH AFRICAN

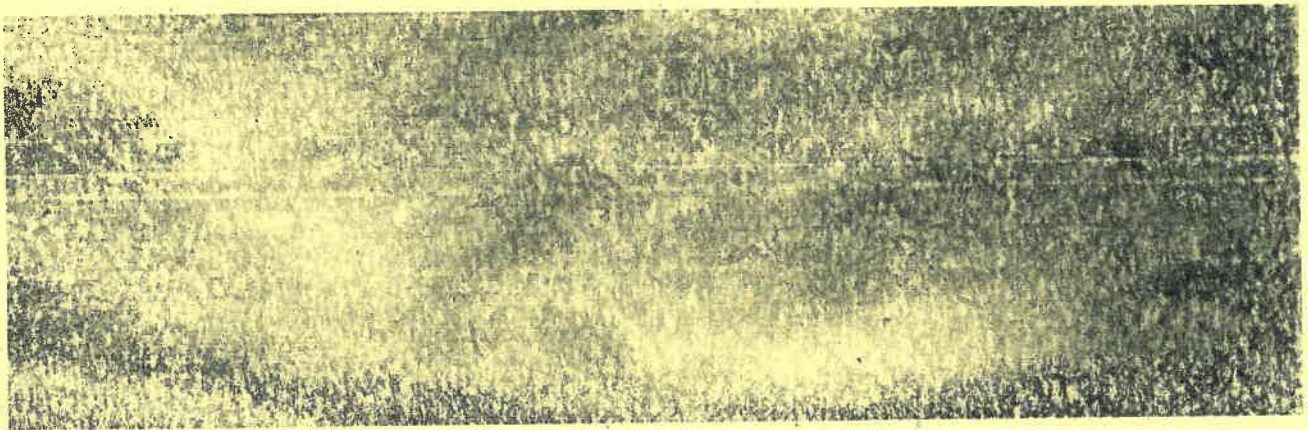


**CIVIL AVIATION
AUTHORITY**

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METEOROLOGY

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SYNOPTIC SYMBOLS

| C _L | LOW CLOUD | C _M | MEDIUM CLOUD | C _H | HIGH CLOUD |
|----------------|--------------------------------------|----------------|---|----------------|--|
| | Cu Small fairweather | | As Thin | | Ci Strands "mares tails" not increasing |
| | Cu Moderate or large towering Cu | | As Thick or Ns | | Ci Dense in patches |
| | Cb Without anvil | | Ac Thin single level | | Ci Dense anvil shaped from Cb |
| | Sc Formed by spreading out of Cu | | Ac Thin in patches | | Ci Hook shaped often thickening |
| | Sc Not formed by spreading out of Cu | | Ac Thin in bands usually thickening | | Ci and/or Cs below 45° thickening |
| | St or Fs or both not bad weather | | Ac Formed by spreading out of Cu | | Ci and/or Cs above 45° thickening |
| | Fs and/or Fc Bad weather (scud) | | Ac Double layered or with As and/or Ns | | Cs Veil covering entire sky |
| | Cu and Sc bases at different levels | | Ac Castellanus Turreted | | Cs Not covering entire sky |
| | Cb With anvil | | Ac of chaotic sky several layers | | Cc Alone or with some C _i or C _s |

VV Visibility Code

| | | |
|-------|---|----------|
| 00 | = | < 0.1 km |
| 01 | = | 0.1 km |
| 02 | = | 0.2 km |
| | | |
| 10 | = | 1.0 km |
| | | |
| 49 | = | 4.9 km |
| 50 | = | 5.0 km |
| 51-55 | = | not used |
| 56 | = | 6 km |
| 57 | = | 7 km |
| 58 | = | 8 km |
| 59 | = | 9 km |
| 60 | = | 10 km |
| 61 | = | 11 km |
| | | |
| 79 | = | 29 km |
| 80 | = | 30 km |
| 81 | = | 35 km |
| 82 | = | 40 km |
| 83 | = | 45 km |
| | | |
| 87 | = | 65 km |
| 88 | = | 70 km |
| 89 | > | 70 km |

| h | HEIGHT IN FEET (Rounded off) | N | SKY COVERAGE (Total amount) |
|---|------------------------------|---|--------------------------------------|
| 0 | 0 - 149 | | No clouds |
| 1 | 150 - 299 | | One okta or less |
| 2 | 300 - 599 | | Two oktas |
| 3 | 600 - 999 | | Three oktas |
| 4 | 1 000 - 1 999 | | Four oktas |
| 5 | 2 000 - 3 499 | | Five oktas |
| 6 | 3 500 - 4 999 | | Six oktas |
| 7 | 5 000 - 6 499 | | Seven oktas or more but not overcast |
| 8 | 6 500 - 7 999 | | Completely overcast |
| 9 | 8 000 or more or no clouds | | Sky obscured |

| Code Number | d | BAROMETRIC TENDENCY |
|-------------|---|---|
| 0 | | Rising, then falling |
| 1 | | Rising, then steady; or rising, then rising more slowly |
| 2 | | Rising steadily, or unsteadily |
| 3 | | Falling or steady, then rising; or rising, then rising more quickly |
| 4 | | Steady, same as 3 hours ago |
| 5 | | Falling, then rising, same or lower than 3 hours ago |
| 6 | | Falling, then steady; or falling, then falling more slowly |
| 7 | | Falling steadily, or unsteadily |
| 8 | | Steady or rising, then falling; or falling, then falling more quickly |

} Barometer now higher than 3 hours ago

} Barometer now lower than 3 hours ago

PAST WEATHER

| | | | |
|--|---------------------|--|------------------------|
| | Duststorm/Sandstorm | | Storm of drifting snow |
| | Fog | | Drizzle |
| | Rain | | Snow |
| | Shower(s) | | Thunderstorms |

PRESENT WEATHER

SYNOPTIC SYMBOLS

| | | | |
|--|---|--|--|
| | Cloud development not observed | | Clouds dissolving during past hour |
| | State of sky unchanged during past hour | | Clouds developing during past hour |
| | Smoke | | Haze |
| | Dust in suspension not raised by wind | | Duststorm/sandstorm |
| | Fog within sight but not at station | | Fog in patches |
| | Fog, sky discernable | | Has become thinner during preceding hour |
| | Fog, sky not discernable | | Has become thinner during preceding hour |
| | Fog, sky discernable | | No appreciable change during preceding hour |
| | Fog, sky not discernable | | No appreciable change during preceding hour |
| | Fog, sky discernable | | Has begun, or has become thicker during preceding hour |
| | Fog, sky not discernable | | Has begun, or has become thicker during preceding hour |
| | Fog depositing rime, sky discernable | | Fog depositing rime, sky not discernable |
| | Drizzle, intermittent Slight | | Drizzle, continuous Slight |
| | Drizzle, intermittent Moderate | | Drizzle, continuous Moderate |
| | Drizzle, intermittent Heavy | | Drizzle, continuous Heavy |
| | Rain, intermittent Slight | | Rain, continuous Slight |
| | Rain, intermittent Moderate | | Rain, continuous Moderate |
| | Rain, intermittent Heavy | | Rain, continuous Heavy |
| | Rain, freezing Slight | | Rain, freezing Heavy |
| | Drizzle, freezing Slight | | Drizzle, freezing Heavy |

| | | | |
|--|----------------------------------|--|--|
| | Snow, intermittent Slight | | Snow, continuous Slight |
| | Snow, intermittent Moderate | | Snow, continuous Moderate |
| | Snow, intermittent Heavy | | Snow, continuous Heavy |
| | Rain, shower(s) Slight | | Rain, shower(s) Heavy |
| | Showers of rain and snow Slight | | Showers of rain and snow Heavy |
| | Snow showers Slight | | Snow showers Heavy |
| | Showers of hail Slight | | Showers of hail Heavy |
| | Thunderstorm with rain Slight | | Thunderstorm with rain Heavy |
| | Thunderstorm with hail Slight | | Thunderstorm with hail Heavy |
| | Thunderstorm with snow Slight | | Thunderstorm with snow Heavy |
| | Drizzle in the last hour | | Rain and snow in the last hour |
| | Rain in the last hour | | Freezing rain or drizzle in the last hour |
| | Snow in the last hour | | Showers of rain in the last hour |
| | Showers of snow in the last hour | | Showers of hail in the last hour |
| | Fog in the last hour | | Thunderstorm in the last hour Rain at time of observation |

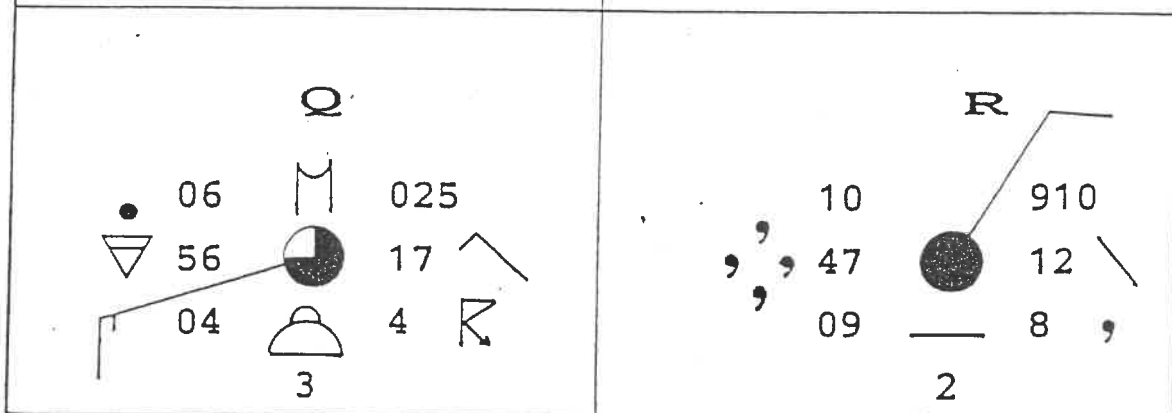
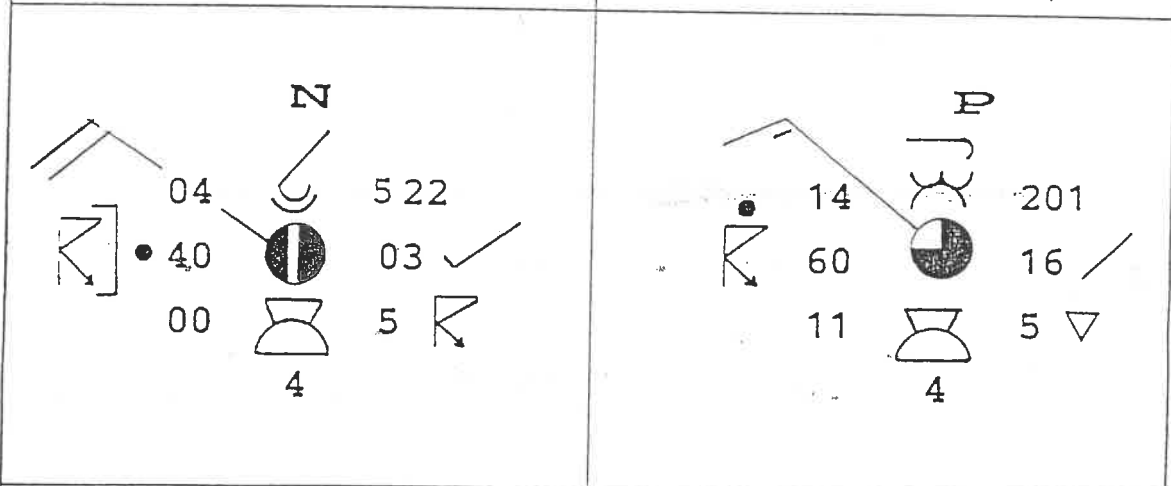
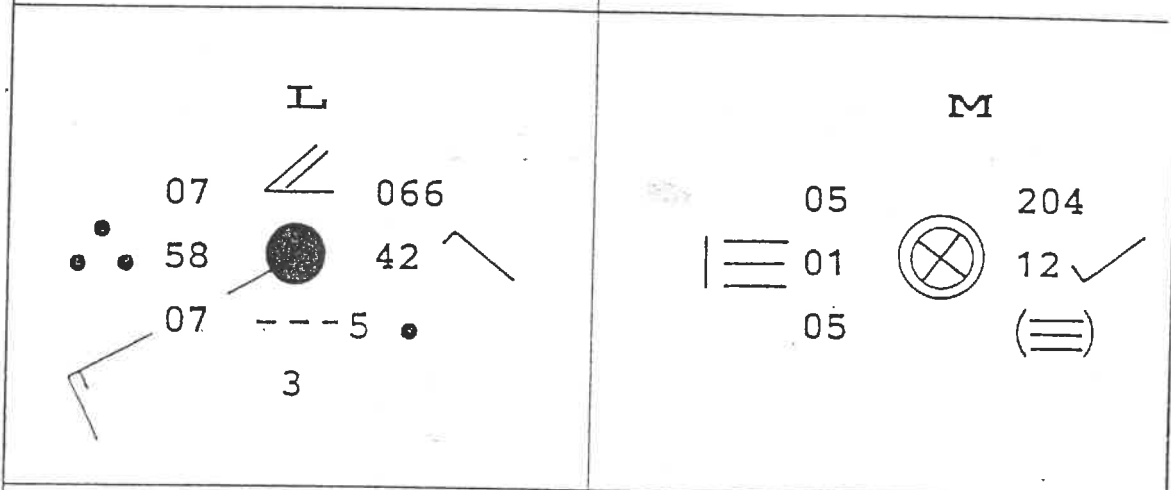
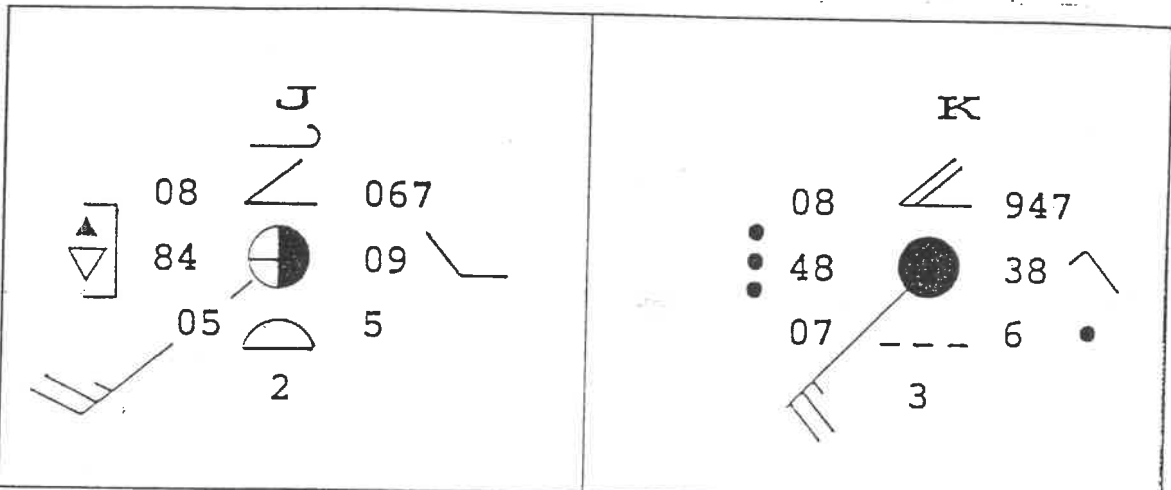
03
PLOTTED SYNOPTIC REPORTS

STATION MODEL I

| | |
|---|---|
| <p style="text-align: center;">A</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>10 039</p> <p>• 56 05 ✓</p> <p>9 4</p> <p>4</p> </div> <div style="text-align: center;"> <p> 17</p> <p>▽ 45 138</p> <p>12 06 ✓</p> <p> 3</p> <p>4</p> </div> </div> | <p style="text-align: center;">B</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>12 998</p> <p>≡ 10 02 ✓</p> <p>11 8 ;</p> <p>0</p> </div> <div style="text-align: center;"> <p>D</p> <p>20 002</p> <p>§ 05 22 </p> <p>11 6</p> <p>5</p> </div> </div> |
| <p style="text-align: center;">C</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>-02 025</p> <p>* 12 03 ✓</p> <p>-03 6 * 2</p> </div> <div style="text-align: center;"> <p>E</p> <p> 28 022</p> <p> 20 20 </p> <p> 21 4 ▽</p> <p>4</p> </div> </div> | <p style="text-align: center;">D</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>25 025</p> <p>∞ 58 13 </p> <p>6 2 2 </p> <p>9</p> </div> <div style="text-align: center;"> <p>H</p> <p>06 083</p> <p>• 35 19 </p> <p>05 4 •</p> <p>7</p> </div> </div> |
| <p style="text-align: center;">E</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>12 998</p> <p>≡ 10 02 ✓</p> <p>11 8 ;</p> <p>0</p> </div> <div style="text-align: center;"> <p>D</p> <p>20 002</p> <p>§ 05 22 </p> <p>11 6</p> <p>5</p> </div> </div> | <p style="text-align: center;">F</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>-02 025</p> <p>* 12 03 ✓</p> <p>-03 6 * 2</p> </div> <div style="text-align: center;"> <p>E</p> <p> 28 022</p> <p> 20 20 </p> <p> 21 4 ▽</p> <p>4</p> </div> </div> |
| <p style="text-align: center;">G</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>25 025</p> <p>∞ 58 13 </p> <p>6 2 2 </p> <p>9</p> </div> <div style="text-align: center;"> <p>H</p> <p>06 083</p> <p>• 35 19 </p> <p>05 4 •</p> <p>7</p> </div> </div> | <p style="text-align: center;">H</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>06 083</p> <p>• 35 19 </p> <p>05 4 •</p> <p>7</p> </div> </div> |


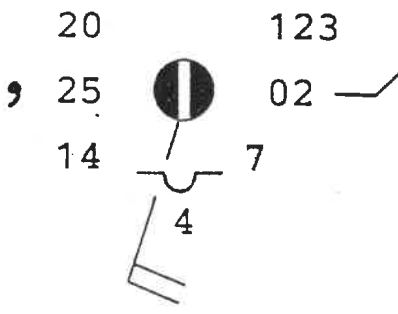

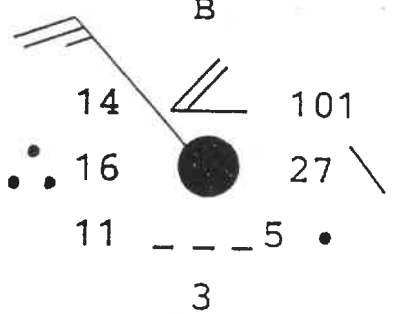

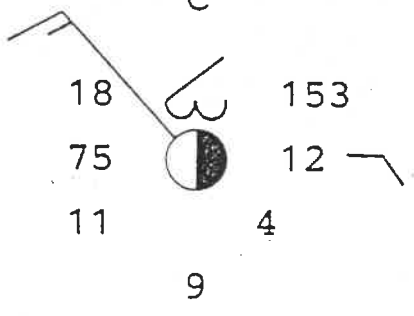

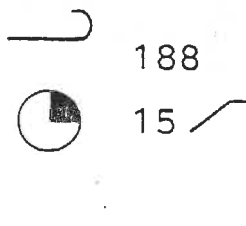


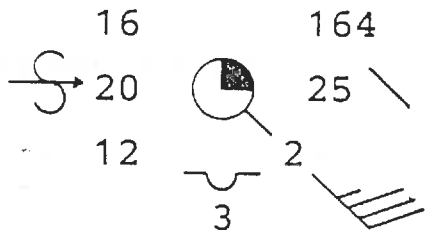

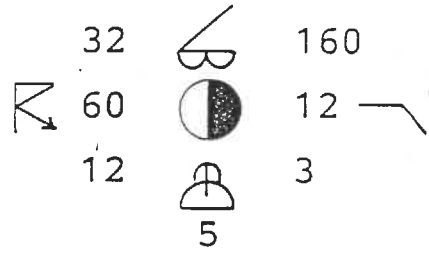

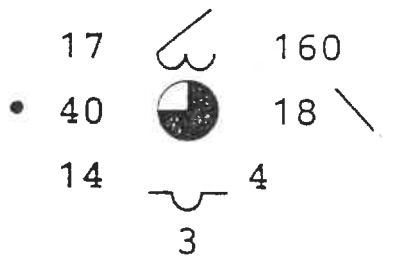

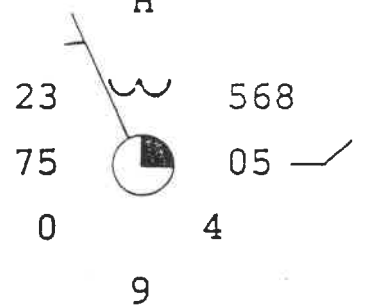
PLOTTED SYNOPTIC REPORTS

STATION MODEL 1



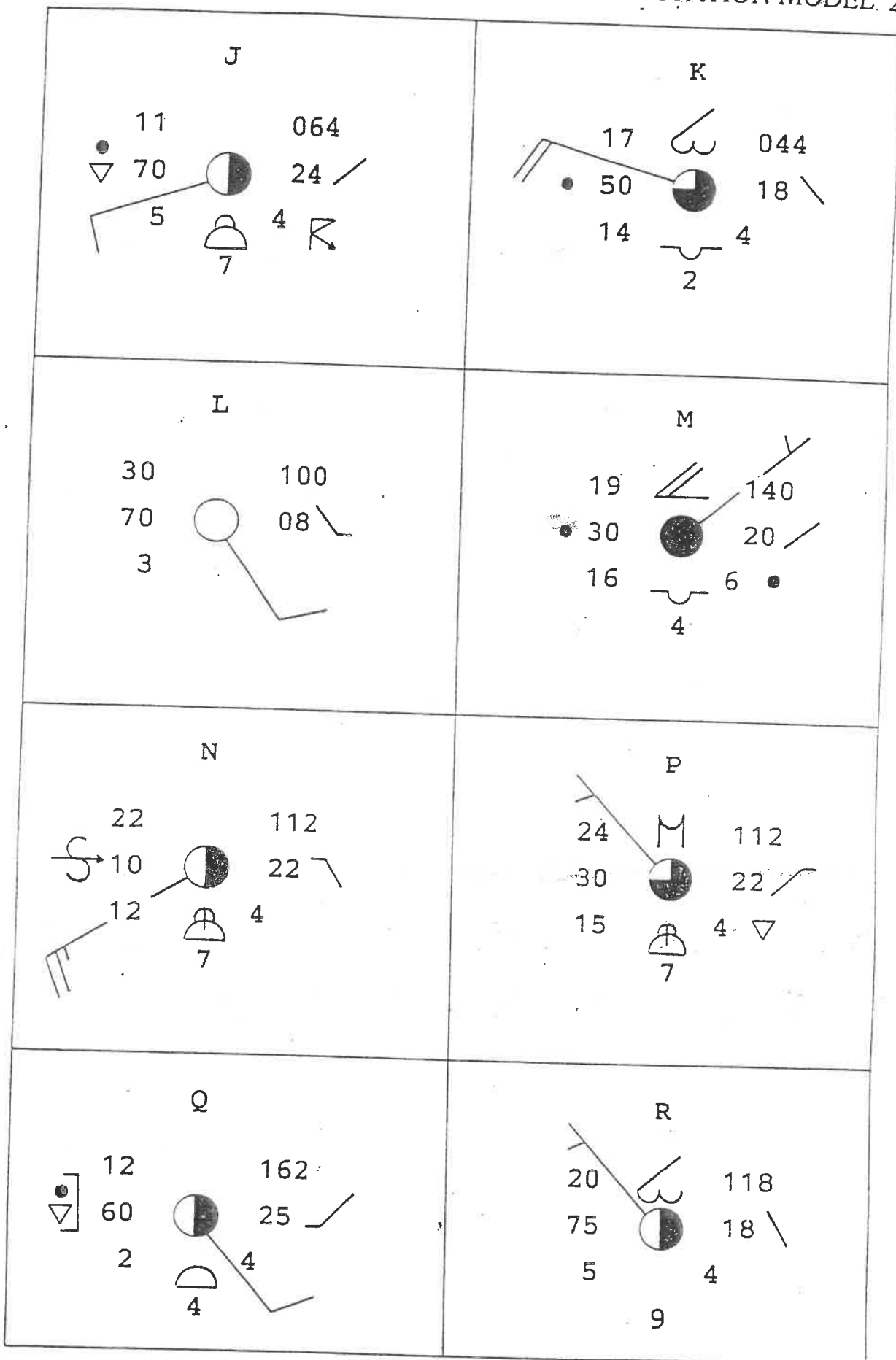
PLOTTED SYNOPTIC REPORTS

STATION MODEL 2

| | |
|---|--|
| <p style="text-align: center;">A</p> <p>20 123</p> <p>25 02 </p> <p>14 7</p> <p style="text-align: center;">4</p>  | <p style="text-align: center;">B</p> <p>14 101</p> <p>16 27 </p> <p>11 5 •</p> <p style="text-align: center;">3</p>  |
| <p style="text-align: center;">C</p> <p>18 153</p> <p>75 12 </p> <p>11 4</p> <p style="text-align: center;">9</p>  | <p style="text-align: center;">D</p> <p>27 188</p> <p>70 15 </p> <p>08</p>  |
| <p style="text-align: center;">E</p> <p>16 164</p> <p>20 25 </p> <p>12 2 </p> <p style="text-align: center;">3</p>  | <p style="text-align: center;">F</p> <p>32 160</p> <p>60 12 </p> <p>12 3</p> <p style="text-align: center;">5</p>  |
| <p style="text-align: center;">G</p> <p>17 160</p> <p>40 18 </p> <p>14 4</p> <p style="text-align: center;">3</p>  | <p style="text-align: center;">H</p> <p>23 568</p> <p>75 05 </p> <p>0 4</p> <p style="text-align: center;">9</p>  |

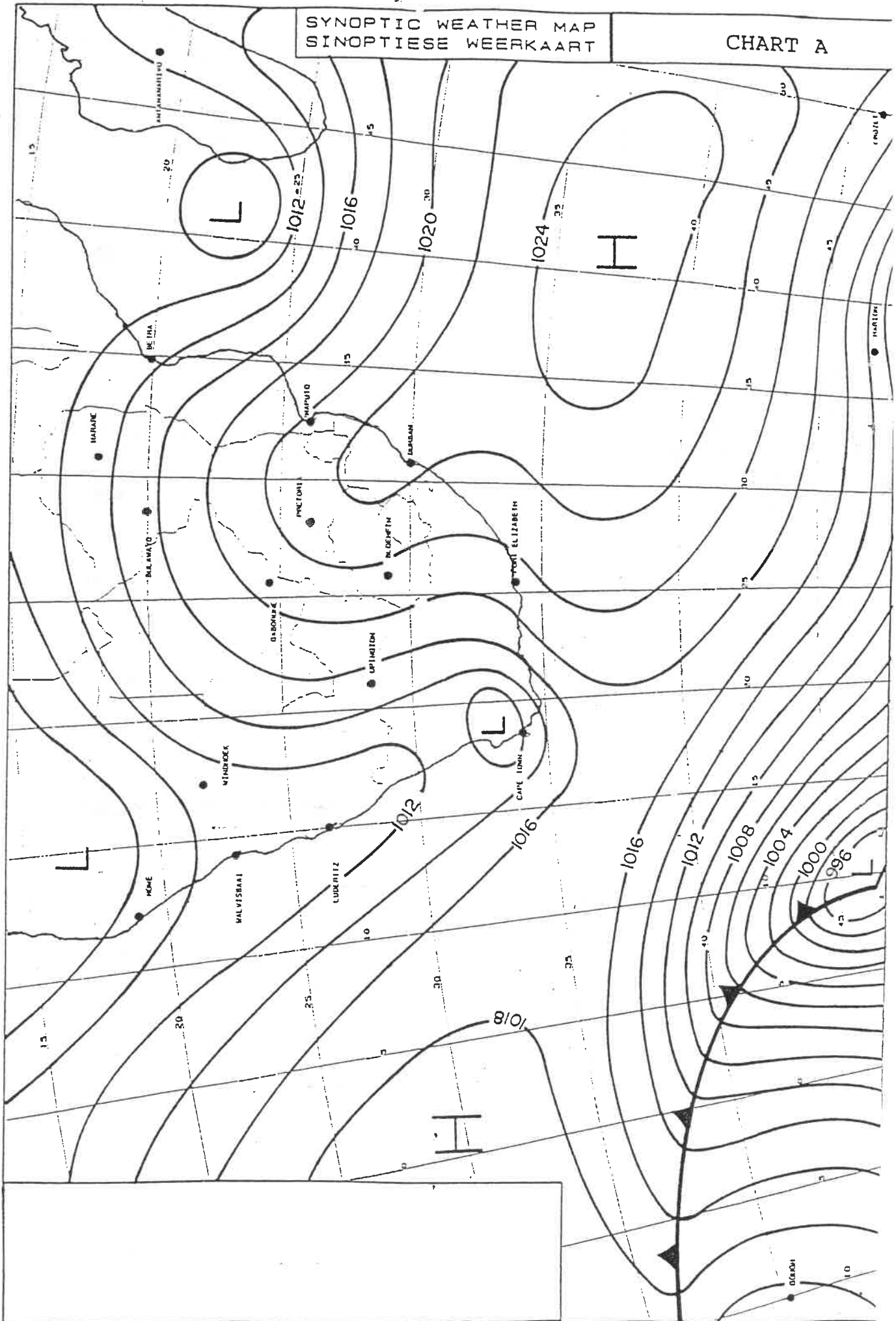
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STATION MODEL. 2



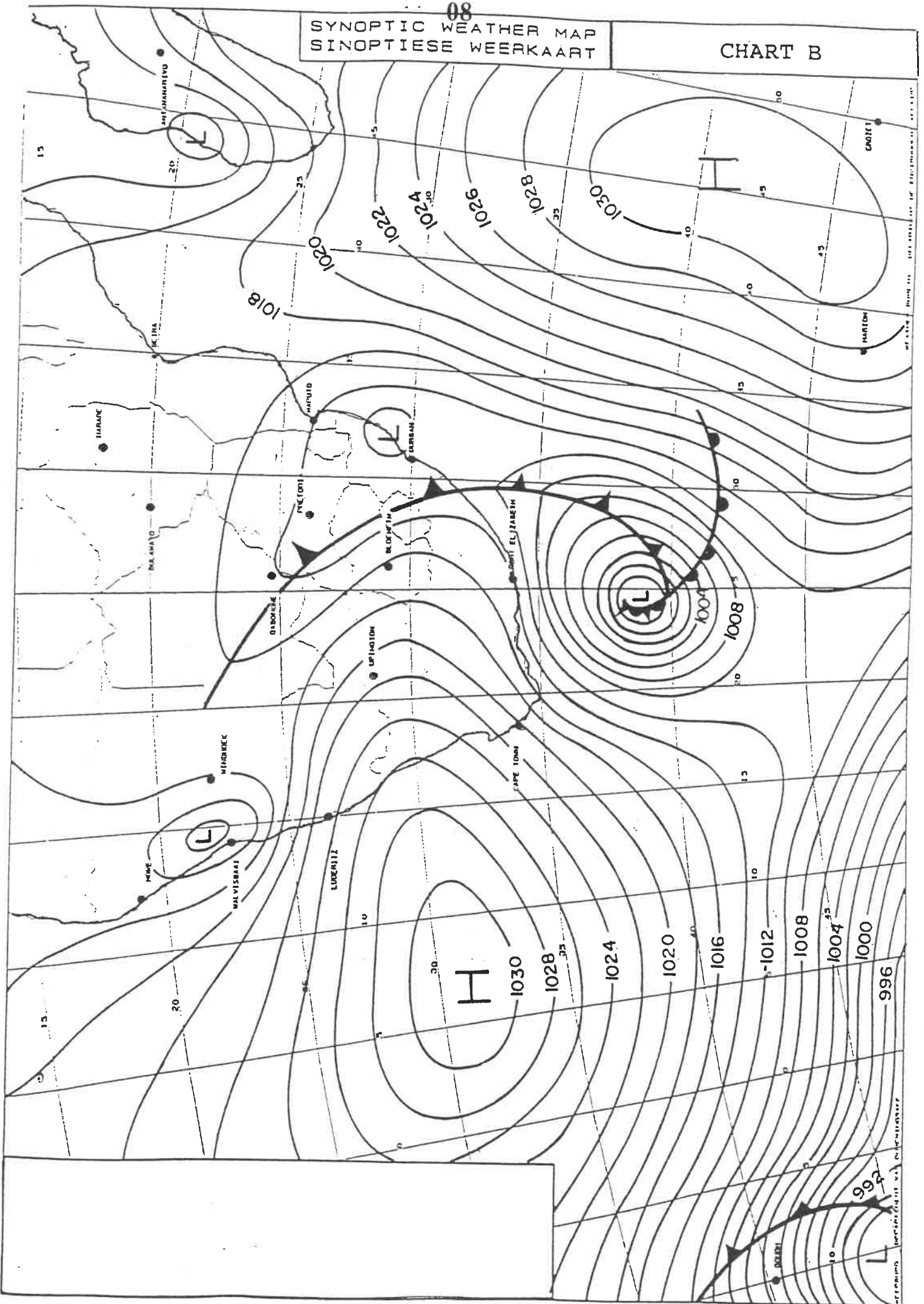
SYNOPTIC WEATHER MAP
SINOPTIESE WEEERKAART

CHART A



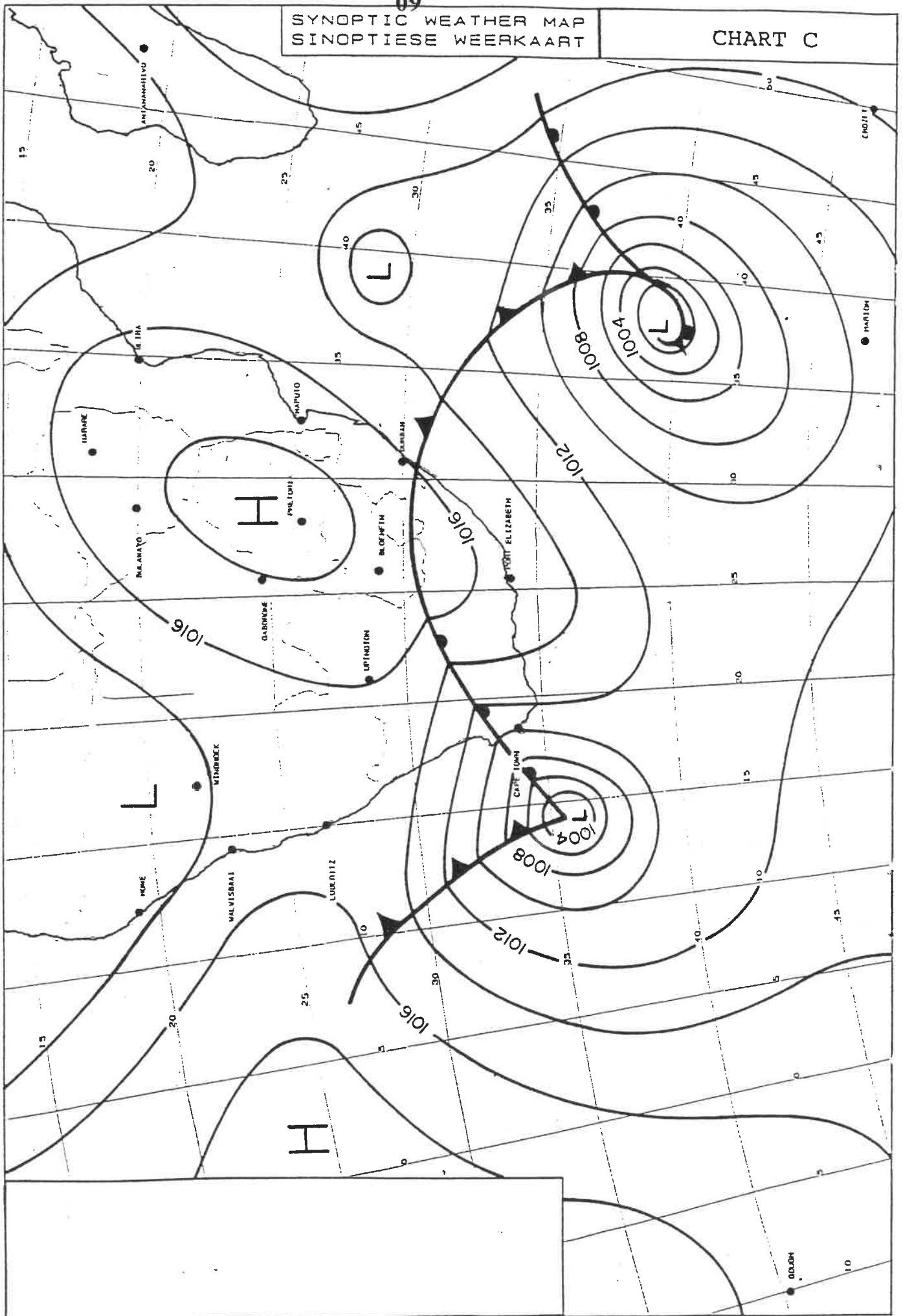
08
SYNOPTIC WEATHER MAP
SINOPTIESE WEERKAART

CHART B



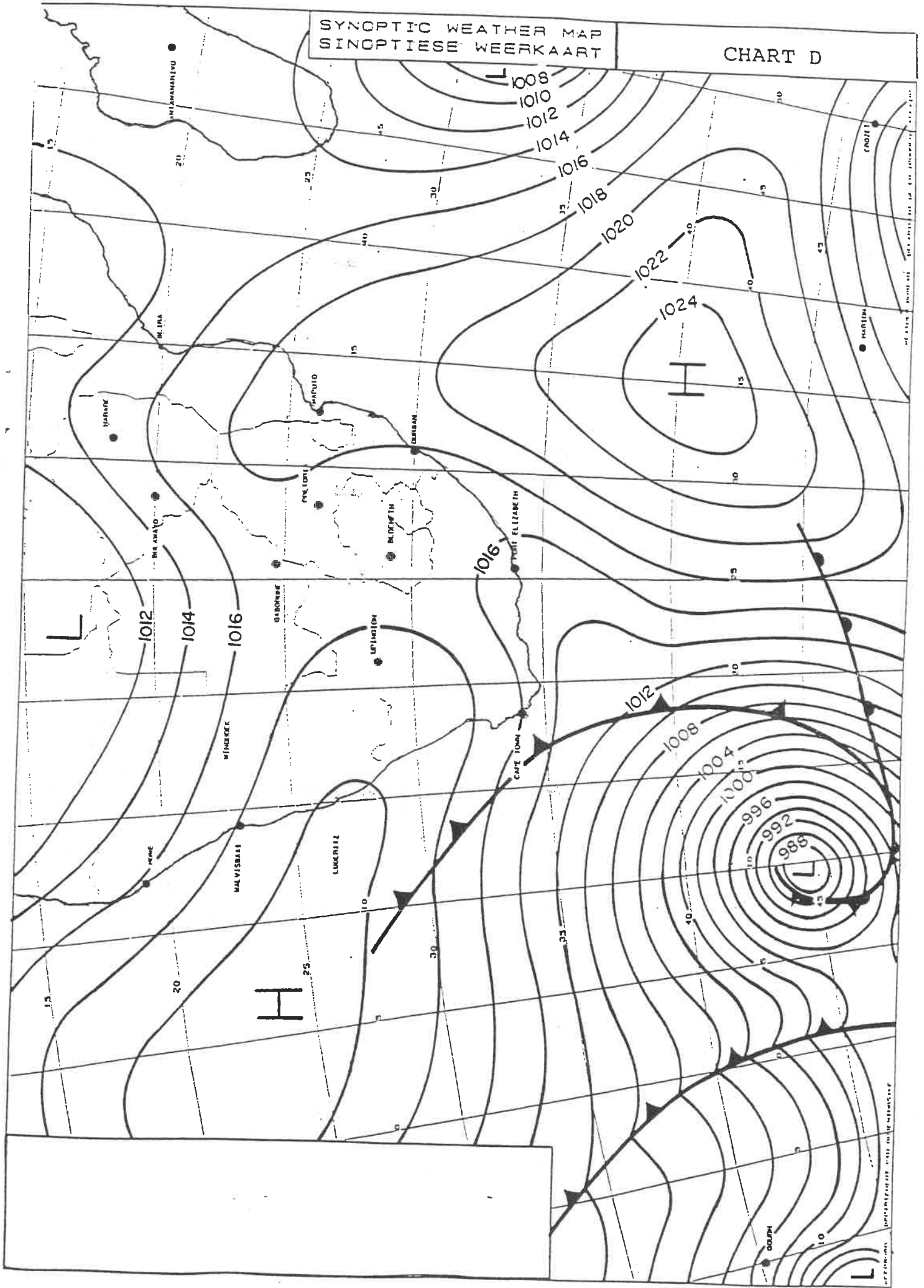
SYNOPTIC WEATHER MAP
SINOPTIESE WEERKAART

CHART C



SYNOPTIC WEATHER MAP
SINOPTIESE WEEKKAART

CHART D



W¹W¹-SIGNIFICANT PRESENT WEATHER

| QUALIFIER | | WEATHER PHENOMENA | | |
|--|---|-----------------------------------|--------------------|---|
| Intensity of Proximity 1 | Descriptor 2 | Precipitation 3 | Obscuration 4 | Other 5 |
| - Light | MI Shallow | DZ Drizzle | BR Mist | PO Well-developed dust/sand whirls |
| Moderate (no qualifier) | BC Patches | RA Rain | FG Fog | SQ Squalls |
| + Heavy | DR Drifting | SN Snow | FU Smoke | FC Funnel cloud (tornado or waterspout) |
| [well-developed in the case of dust/sand whirls (dust devils) and funnel clouds] | BL Blowing | SG Snow grains | VA Volcanic ash | |
| | SH Shower(s) | IC Diamond dust Ice crystals | DU Widespread dust | SS Sandstorm |
| | TS Thunderstorm | PE Ice Pellets | SA Sand | DS Duststorm |
| | FZ Supercooled | GR Hail | HZ Haze | |
| VC in the vicinity | PR Partial [covering part of the aerodrome] | GS Small hail and/or snow pellets | | |

The significant present and forecast weather groups are constructed by considering columns 1 to 5 in the table above in sequence, that is intensity, followed by description, followed by weather phenomena. An example could be : +SHRA (heavy shower(s) of rain).

SYMBOLS FOR SIGNIFICANT WEATHER

| | | | |
|--|-------------------------|--------------|-----------------------------------|
| | Thunderstorms | ☉ | Drizzle |
| | Tropical cyclone | //// //// | Rain |
| | Severe line squall * | ✱ | Snow |
| | Moderate turbulence | ▽ | Shower |
| | Severe turbulence | ↑ | Widespread blowing snow |
| | Mountain waves | S | Severe sand or dust haze |
| | Slight aircraft icing | S | Widespread sandstorm or duststorm |
| | Moderate aircraft icing | ∞ | Widespread haze |
| | Severe aircraft icing | == | Widespread mist |
| | Widespread fog | ~ | Widespread smoke |
| | Hail | ☉ | Freezing precipitation ** |

* In flight documentation for flights operating up to FL100, this symbol refers to "line squall".

** This symbol does not refer to icing due to precipitation coming into contact with an aircraft which is at a very low temperature.

NOTE : Height indications between which phenomena are expected, top above base, as per chart legend.

| | | | |
|--|---------------------------------------|--|--|
| | Cold front at the surface | | Tropopause level |
| | Warm front at the surface | | Position, speed, and level of maximum wind |
| | Occluded front at the surface | | Convergence line |
| | Quasi-stationary front at the surface | | Freezing level |
| | Tropopause high | | Intertropical convergence zone |
| | Tropopause low | | Volcanic eruption |

The double bar denotes changes of level by 3 000 FT or less and/or wind speeds by 37 KM/H - 20 KTS. In the example, at the double bar the wind speed is 225 KM/H - 120 KTS.

The heavy line delineating the jet axis begins/ends at the points where a wind speed of 150 KM/H - 80 KTS is forecast.



ISOL CB: Individual Cells OCNL CB: Well Separated Cells FRQ CB: Little or No Separation
 EMBD: Embedded in Cloud and Haze LVR: Layered Cloud NSC: No Sig Cloud NSH: No Sig Weather

MON = Mountains VCFG = Vicinity Fog PRFG = Partial Fog
 ESC = Escarpment BCFG = Fog Patches MIFG = Shallow Fog
 CIT = Urban Areas BLSN = Blowing Snow RA = Rain Shower
 VAL = Valleys BR = Mist SHRA = Rain Shower
 LOV = Lowlevel FU = Smoke TS = Thunderstorm
 COI = Coastal HZ = Haze GR/GS = Hail
 DU = Dust SA = Sand

FEW = 1 - 2 Octas
 SCT = 3 - 4 Octas
 BKN = 5 - 7 Octas
 OVC = 8 Octas

DEPICTING OF LINES AND FIGURES ON SPECIFIC SIG WX CHARTS.**1. SIGNIFICANT WEATHER HIGH (>FL250)**

- Scalloped line = demarcation of areas of significant weather.
- Heavy solid line interrupted by wind arrow and flight level = Position of jet stream axis.
- Numbers in small squares or circles = Areas of CAT according to the corresponding number in the legend.

2. SIGNIFICANT WEATHER LOW AND MEDIUM

- Scalloped lines = demarcation of sig. cloud boundaries.
- X = position of pressure centres given in hPa.
- XXX
XXX = indicates cloud base and/or tops are outside parameters of specific SIG WX chart.

| | | | |
|--|--|------|---|
| | Cold front at the surface Kouefront aan die oppervlak | | Occluded front above the surface Okklusie bo die oppervlak |
| | Cold front above the surface Kouefront bo die oppervlak | | Quasi-stationary front at the surface Kwasi-stasionêre front aan die oppervlak |
| | Warm front at the surface Warmfront aan die oppervlak | | Quasi-stationary front above the surface Kwasi-stasionêre front bo die oppervlak |
| | Warm front above the surface Warmfront bo die oppervlak | | Convergence line Konvergensielyn |
| | Occluded front at the surface Okklusie aan die oppervlak | | Inter-tropical convergence zone Inter-tropiese konvergensiesone |
| | Freezing level [x 100 feet] Vriesvlak [x 100 voet] | | Tropopause level [x 100 feet] Tropopause vlak [x 100 voet] |
| | Pressure isohypse (altitude in metres) Drukisohips (hoogte in meter) | | Tropopause level High Tropopause vlak Hoog |
| | Isotherm (degrees Celsius) Isoterm (grade Celsius) | | Tropopause level Low Tropopause vlak Laag |
| | Temperature at selected points (degrees Celsius) Temperatuur by gegewe punte (grade Celsius) | | |
| | Wind at selected points (half a barb=5 knots and a triangle 50 knots) Wind by gegewe punte (halwe veer=5 knope, hele veer=10 knope en 'n driehoek 50 knope) | | |
| | Zone of maximum wind Maksimumwindsone | | Cloud border Wolk grens |
| | Centre of high altitude of the isobaric surface Sentrum van hoë hoogte van die isobariese vlak | | Cloud tops/Wolk kruine Cloud base/Wolk basis |
| | Centre of low altitude of the isobaric surface Sentrum van lae hoogte van die isobariese vlak | | Volcanic eruption |

AERODROME FORECASTS

Compiled by: CFS Langebaanweg Weather Office

Date: 1998-03-27 Time: 04:00UT

Western Cape

FACT 270300Z 270615 20010KT 9999 SCT025 BKN090 BECMG 0609 16020KT TEMPO
0815 5000 -SHRA PROB30 TEMPO 1015 -TSRA FEW080CB T23/12Z=
FAGG 270300Z 270615 10015KT 9999 SCT020 BKN100 TEMPO 0615 5000 -RA SCT005
PROB30 TEMPO 0615 5000 -TSRA FEW060CB BKN080 T20/12Z=
FALW 270300Z 270615 14010KT 9999 FEW020 BKN090 TEMPO 0715 5000 -SHRA
PROB30 TEMPO 1015 -TSRA FEW080CB T24/12Z=

Eastern Cape

FAEL 270300Z 270615 07010KT 9999 SCT008 OVC025 TEMPO 3000 RA BKN003 OVC020
T22/12Z=
FAUT 270300Z 270615 28008KT 9999 OVC014 TEMPO 2000 RASH OVC002 T19/12Z=
FAPE 270300Z 270615 10016G30KT 9999 FEW008 BKN020 OVC035 TEMPO 3000 RA
BKN004 OVC020 T21/12Z=

Kwazulu-Natal

FADN 270300Z 270615 18008KT 9999 SCT015 BKN020 BKN120 PROB30 TEMPO 0608
3000 RA BKN008 BECMG 0810 10012KT SCT020 BECMG 1012 04015KT T27/12Z=
FAMG 270300Z 270615 12008KT 9999 SCT015 BKN020 BKN120 PROB30 TEMPO 0607
4000 -RA BKN008 BECMG 0810 04012KT SCT020 BKN120 T23/06Z T26/11Z=
FAPM 270300Z 270615 12005KT 9999 SCT005 BKN010 BKN120 TEMPO 0608 3000 DZ
BKN006 BECMG 0810 BKN018 TEMPO 1215 3000 TSRA SCT030CB T28/12Z=

Northern Cape

FAKM 270300Z 270615 02010KT 9999 SCT040 TEMPO 0612 4000 TSRA BKN015CB=
FAAB 270300Z 270615 30008KT 9999 BKN020 BKN080 PROB40 TEMPO 0615 5000
-SHRA T22/12Z=

Freestate

FABL 270300Z 270615 04008KT 9999 SCT030 TEMPO 0615 4000 TSRA BKN010CB=

North West Province

FAMM 270300Z 270615 35008KT 9999 SCT030 BKN080 PROB30 0607 4000 -SHRA
SCT008 FEW040CB FM0800 34015KT 9999 SCT040 BKN080 BECMG 1012
SCT040CB PROB40 TEMPO 1215 4000 TSRA=

Gauteng

FAJS 270300Z 270615 03008KT 9999 BKN015 BKN080 PROB30 0607 -RA BKN005
FM0800 35015KT 9999 SCT020 BKN070 BECMG 1012 SCT040CB PROB40 TEMPO
1315 5000 TSRA T14/03Z T23/12Z=
FAWK 270000Z 270615 05010KT 9999 SCT015 BKN100 BECMG 1214 SCT035 T25/12Z=

Northern Province

FAGB 270300Z 270615 06008KT 9999 SCT015 PROB40 0607 4000 HZ BKN005 FM0700
03013KT 9999 BKN030 BECMG 1315 FEW040CB=
FAHS 270300Z 270615 14006KT 9999 BKN015 BKN080 PROB30 TEMPO 0607 4000 -RA
BKN005 PROB30 TEMPO 1315 4000 RA BKN008 OVC030=

Mpumalanga

FANS 270300Z 270615 14006KT 9999 BKN010 BKN080 PROB30 TEMPO 0607 4000 -RA
BKN005 PROB30 TEMPO 1215 4000 RA BKN008 OVC020=

Namibia

FYWH 270300Z 270615 08005KT 9999 SCT030 BKN120 BECMG 0810 SCT050TCU
PROB40 TEMPO 1315 7000 TSRA SCT040CB BKN100 T29/14Z=
FYWB 270300Z 270615 35005KT 0300 FG OVC002 BKN090 FM0700 9999 BKN015
BECMG 0911 24010KT SCT020 T22/14Z=
FYGF 270300Z 270615 14005KT CAVOK BECMG 0911 SCT060TCU PROB30 TEMPO
1415 7000 TSRA FEW050CB T33/14Z=

Botswana

FBSK 270300Z 270615 05010KT 9999 BKN020 BKN090 BECMG 0607 FEW030CB TEMPO
0915 8000 TSRA FEW010 BKN020 FEW030CB BKN090=
FBFT 270300Z 270615 36010KT CAVOK BECMG 0405 BKN020 BKN090 BECMG 0607
FEW030CB TEMPO 0911 8000 TSRA FEW010 BKN020 FEW030CB BKN090=

AERODROME ACTUALS

Compiled by: CFS Langebaanweg Weather Office

Date: 1998-03-27 Time: 04:00UT

Western Cape

FACT 270330Z 23008KT 1000SE 9999N R19/0490V1500U MIFG SKC
06/05 Q1018 TEMPO 0600 MIFG=

FAGG 270300Z 25002KT 6000 -RA OVC004 18/17 Q1017 RETS=

FALW 270300Z 16003KT 9999 FEW020 SCT100 23/16 Q1012=

FAOB 270300Z 13012KT 8000 OVC010 19/18 Q1019=

Eastern Cape

FAEL 270330Z 05005KT 9999 SCT018 BKN030 19/19 Q1018=

FAPE 270330Z 10013KT 9999 SCT005 OVC012 19/18 Q1017 NOSIG=

Kwazulu-Natal

FADN 270330Z 27003KT 9999 FEW008 BKN020 BKN100 21/21 Q1018

NOSIG=

FARB 270300Z AUTO 26002KT //// // // //// 00/// Q1017=

FAMG 270300Z AUTO 04004KT //// // -RA // //// 22/22 Q1018 RERA=

FAPM 270300Z AUTO 17001KT //// // // //// 19/18 Q1020=

Northern Cape

FAUP 270300Z 20004KT CAVOK 17/16 Q1016=

FAKM 270300Z 01007KT 9999 VCFG SCT030 BKN100 15/15 Q1020=

FASB 270300Z 05010G21KT CAVOK 19/13 Q1015=

Freestate

FABL 270300Z 11002KT 9999 RA SCT010 OVC080 14/13 Q1021

NOSIG=

North West Province

FAMM 270300Z 03007KT 9999 BKN020 SCT080 18/15 Q1019=

Gauteng

FAJS 270330Z 02012KT 0800 R03L/0700V1500D -DZ FG VV001

10/10 Q1028 NOSIG=

Northern Province

FAGB 270300Z 06009KT 9999 FEW015 18/16 Q1021=

FAHS 270300Z AUTO 15004KT //// // // //// 21/21 Q1019=

Mpumalanga

FANS 270300Z AUTO 31002KT //// // // //// 19/17 Q1022=

Namibia

FYWB 270300Z 29005KT 0800 FG VV/// 15/14 Q1012=

FYGF 270300Z 19005KT CAVOK 21/14 Q1016=

Zimbabwe

FVHA 270300Z 06004KT 9999 FEW040 16/15 Q1022 NOSIG=

FVBU 270300Z 09005KT CAVOK 18/16 Q1020 NOSIG=

Botswana

FBSK 270300Z 07008G20KT 9999 -DZ FEW025 SCT070 23/16 Q1018 TEMPO 8000
TSRA SCT015=

FBFT 270300Z 10009KT CAVOK 21/17 Q1019=

FBMN 270300Z 08006KT 9999 -TSRA SCT030 FEW035CB SCT075 22/21 Q1016=

Mozambique

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FQBR 261500Z 12011KT 9999 SCT020CB 30/25 Q1012 CB TO E/N=

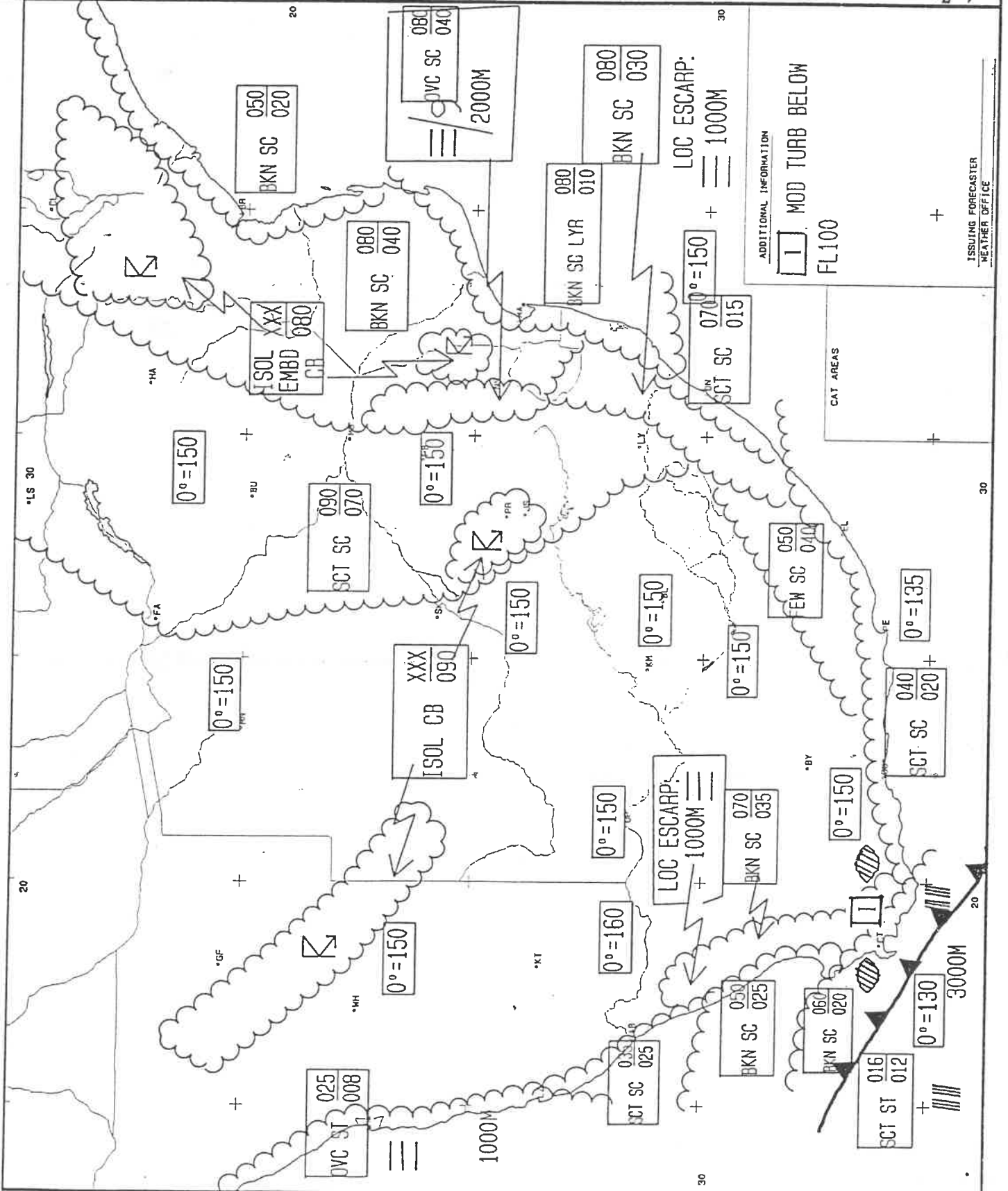
SIGNIFICANT WX LOW (MSL - FL100)

LEVEL SOUTH AFRICAN WEATHER BUREAU

FIXED TIME PROGNOSTIC CHART VALID- 06H00 UT 1998/03/11

COMPILED BY KJR - ISSUED AT 02H00 UT 1998/03/11

Symbols \square and CB imply moderate or severe turbulence, icing and hail.




SIGNIFICANT WX MEDIUM (FL100 - FL250)

LEVEL SOUTH AFRICAN WEATHER BUREAU

FIXED TIME PROGNOSTIC CHART VALID- 06H00 UT 1998/03/11

COMPILED BY KJR - ISSUED AT 02H00 UT 1998/03/11

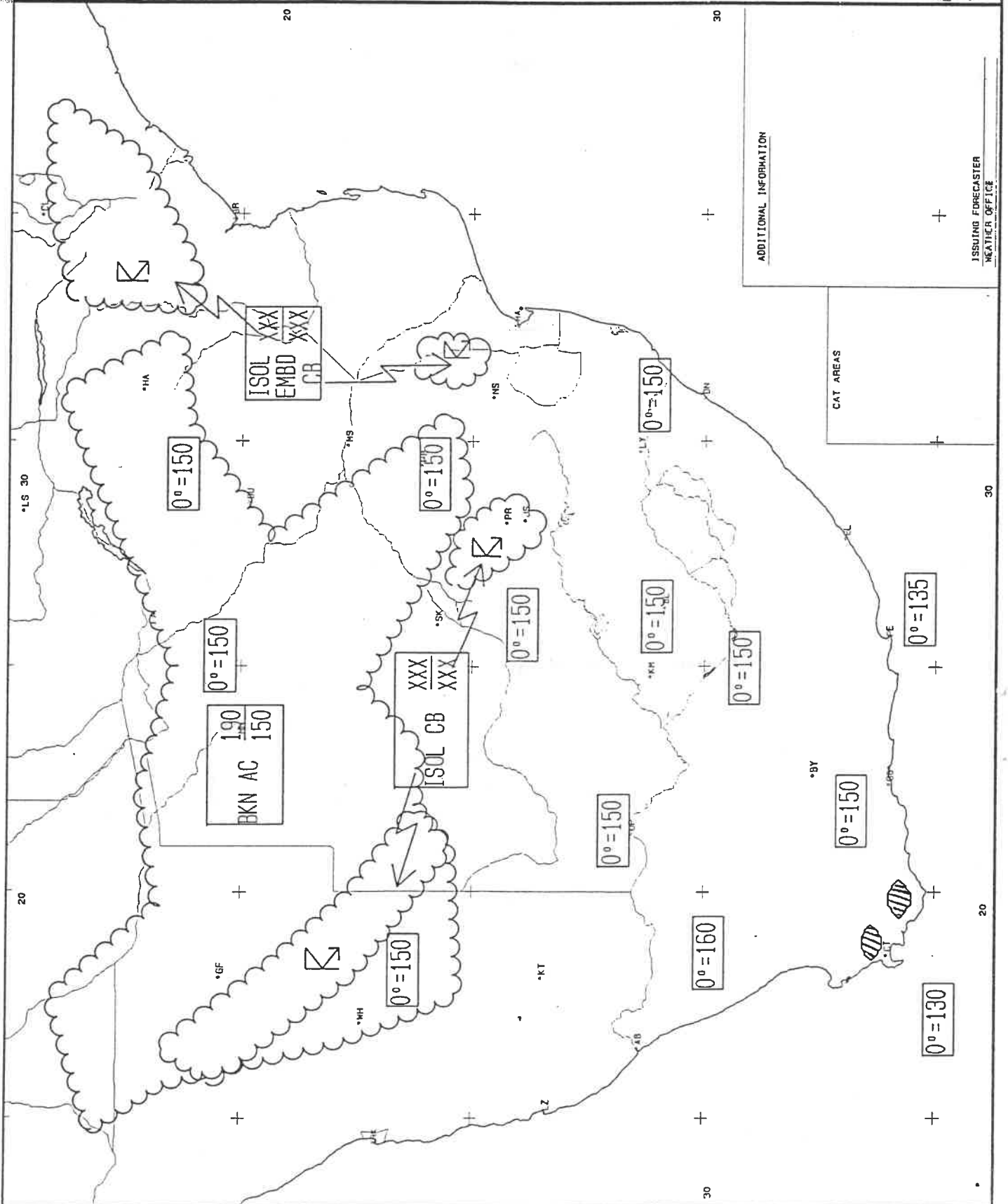
Symbols  and CB imply moderate or severe turbulence, icing and hail.



ADDITIONAL INFORMATION

ISSUING FORECASTER
WEATHER OFFICE

CAT AREAS




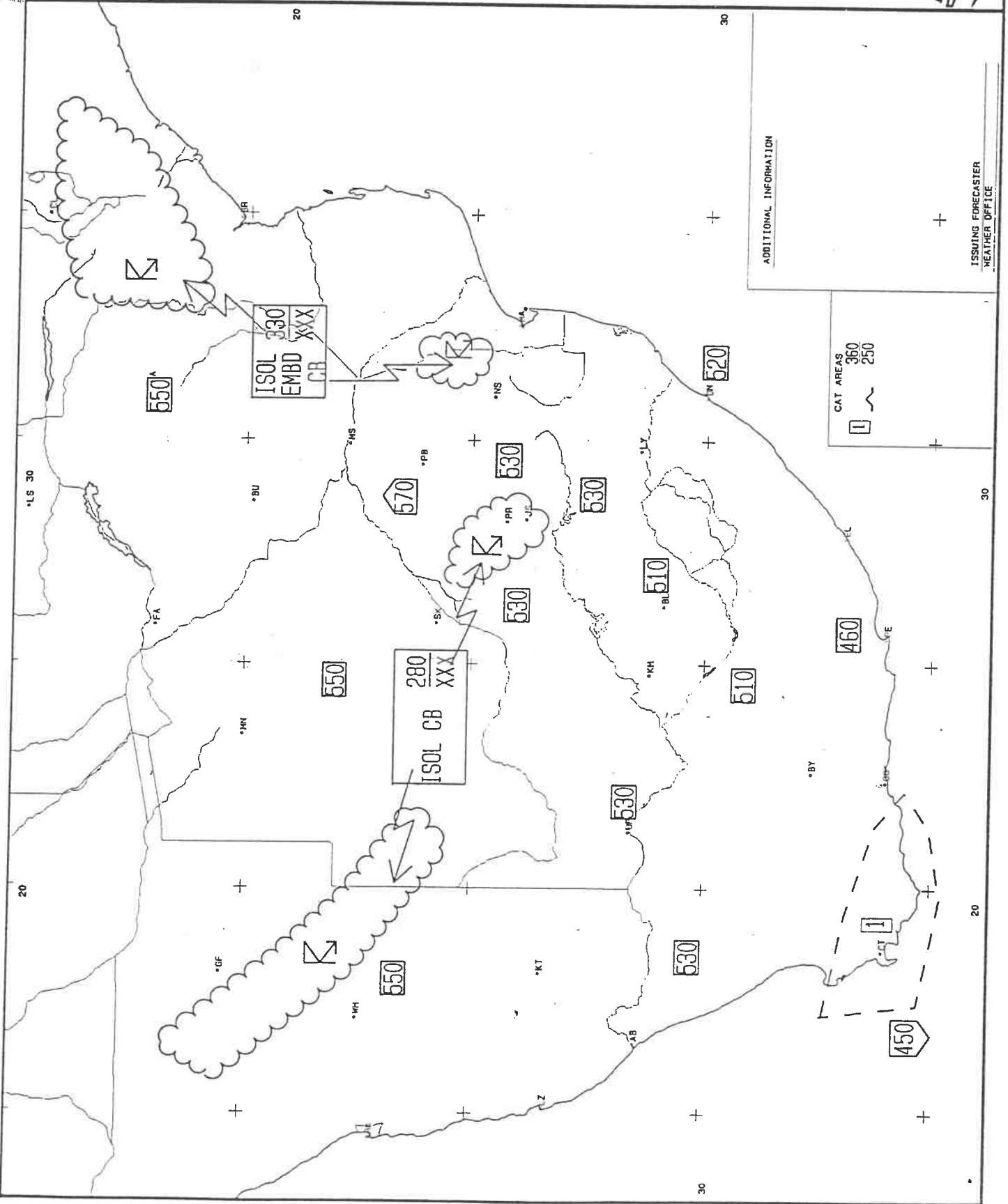
SIGNIFICANT WX HIGH (ABOVE FL250)

LEVEL SOUTH AFRICAN WEATHER BUREAU

FIXED TIME PROGNOSTIC CHART VALID- 06H00 UT 1998/03/11

COMPILED BY KJR - ISSUED AT 02H00 UT 1998/03/11

Symbols  and CB imply moderate or severe turbulence, icing and hail.



ADDITIONAL INFORMATION

ISSUING FORECASTER WEATHER OFFICE

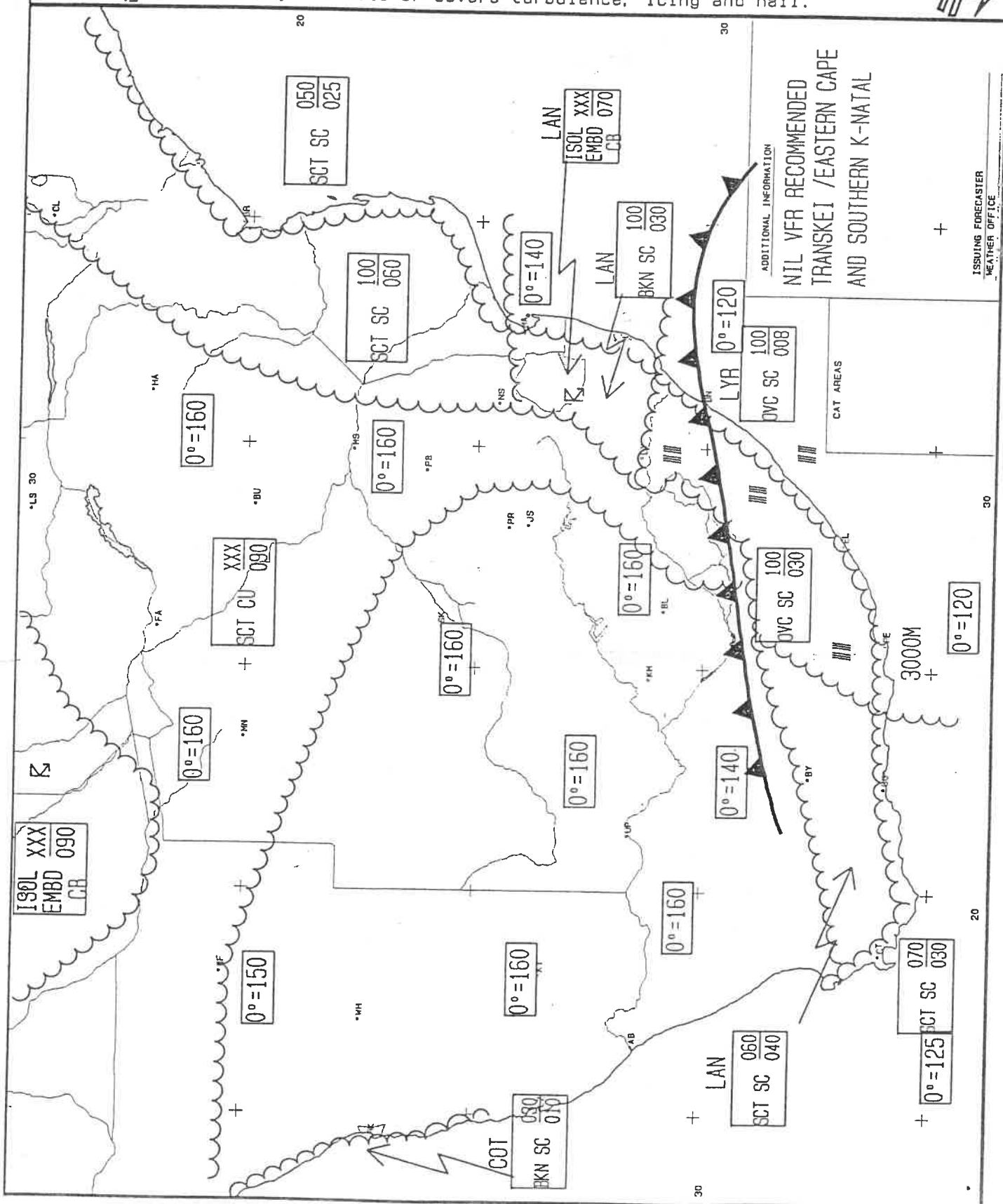
SIGNIFICANT WX LOW (MSL - FL100).

LEVELSOUTH AFRICAN WEATHER BUREAU

FIXED TIME PROGNOSTIC CHART VALID- 12H00 UT 1998/03/18

COMPILED BY sjq - ISSUED AT 08H00 UT 1998/03/18

Symbols \boxtimes and CB imply moderate or severe turbulence, icing and hail.



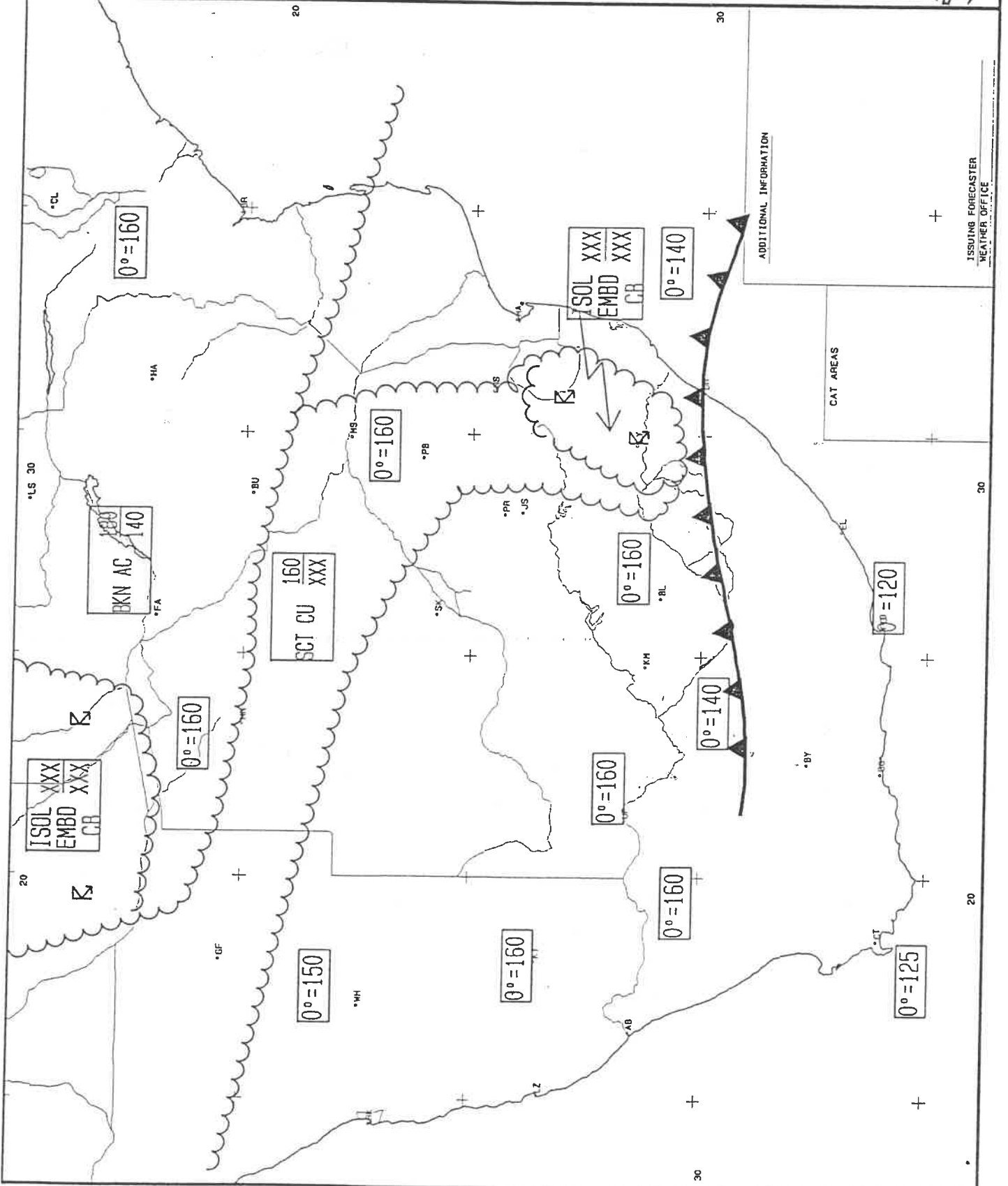
ISSUING FORECASTER WEATHER OFFICE

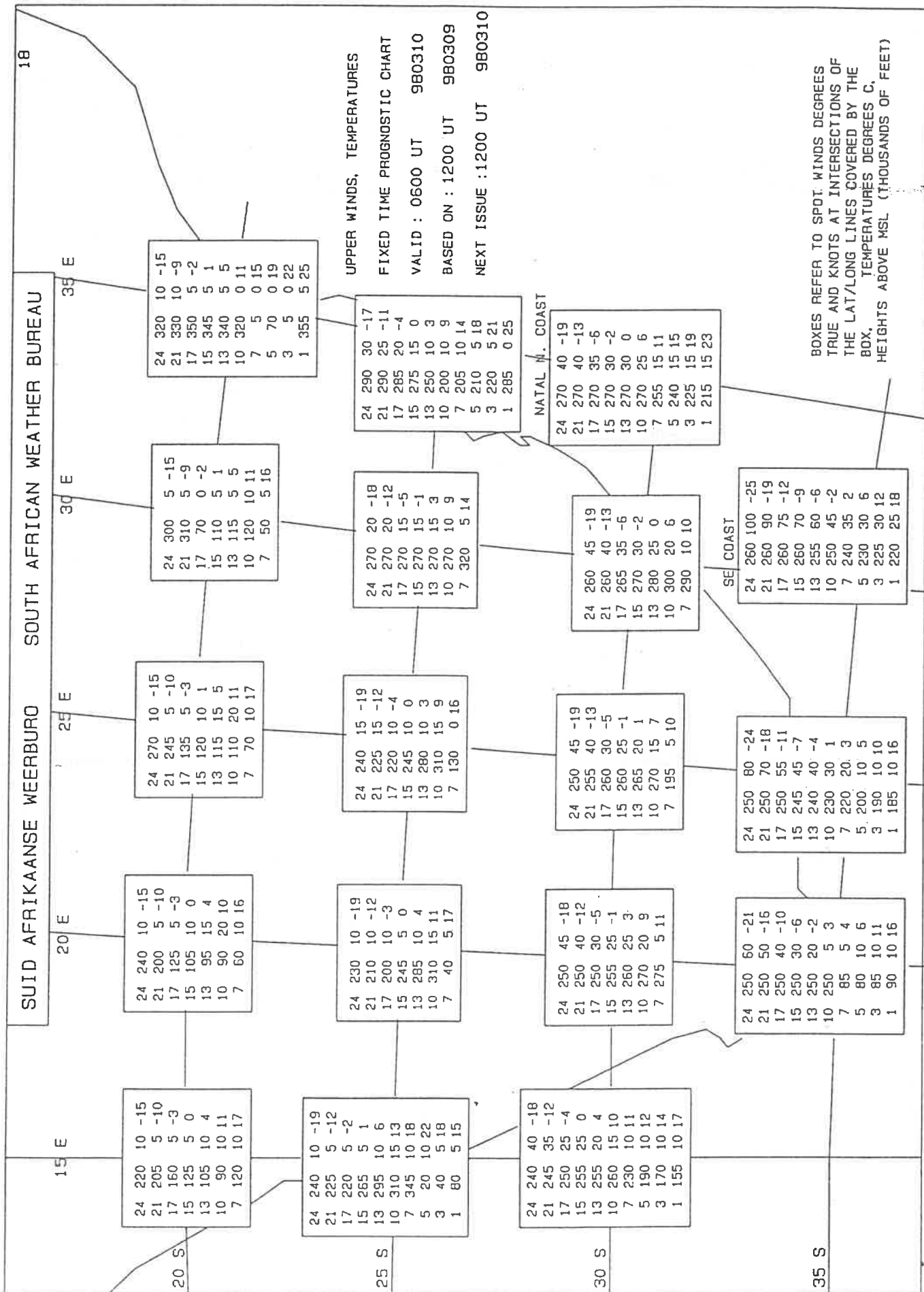
SIGNIFICANT WX MEDIUM (FL100 - FL250)
 FIXED TIME PROGNOSTIC CHART VALID- 12H00 UT 1998/03/18
 COMPILED BY sjq - ISSUED AT 08H00 UT 1998/03/18

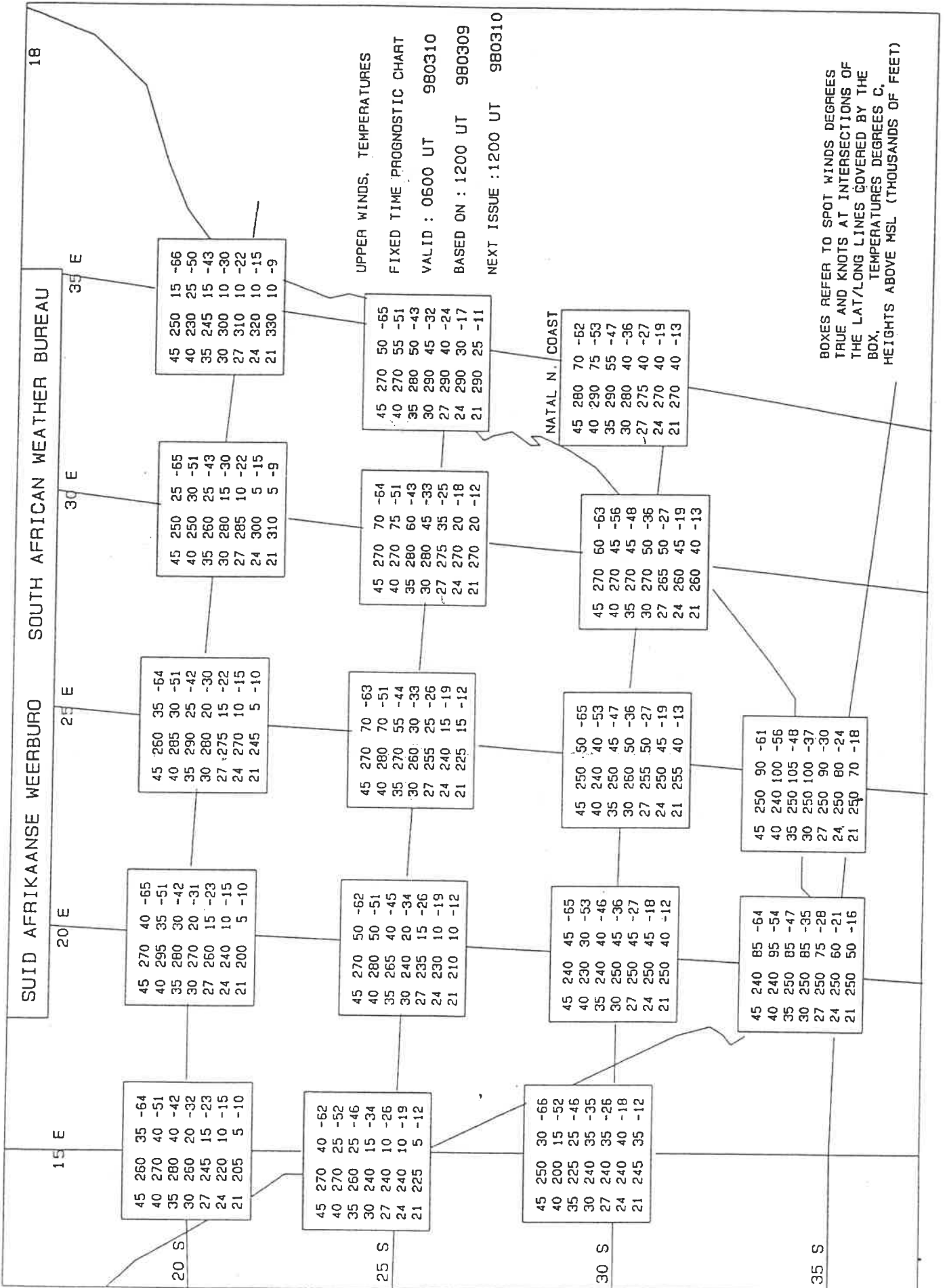
LEVEL SOUTH AFRICAN
 WEATHER BUREAU



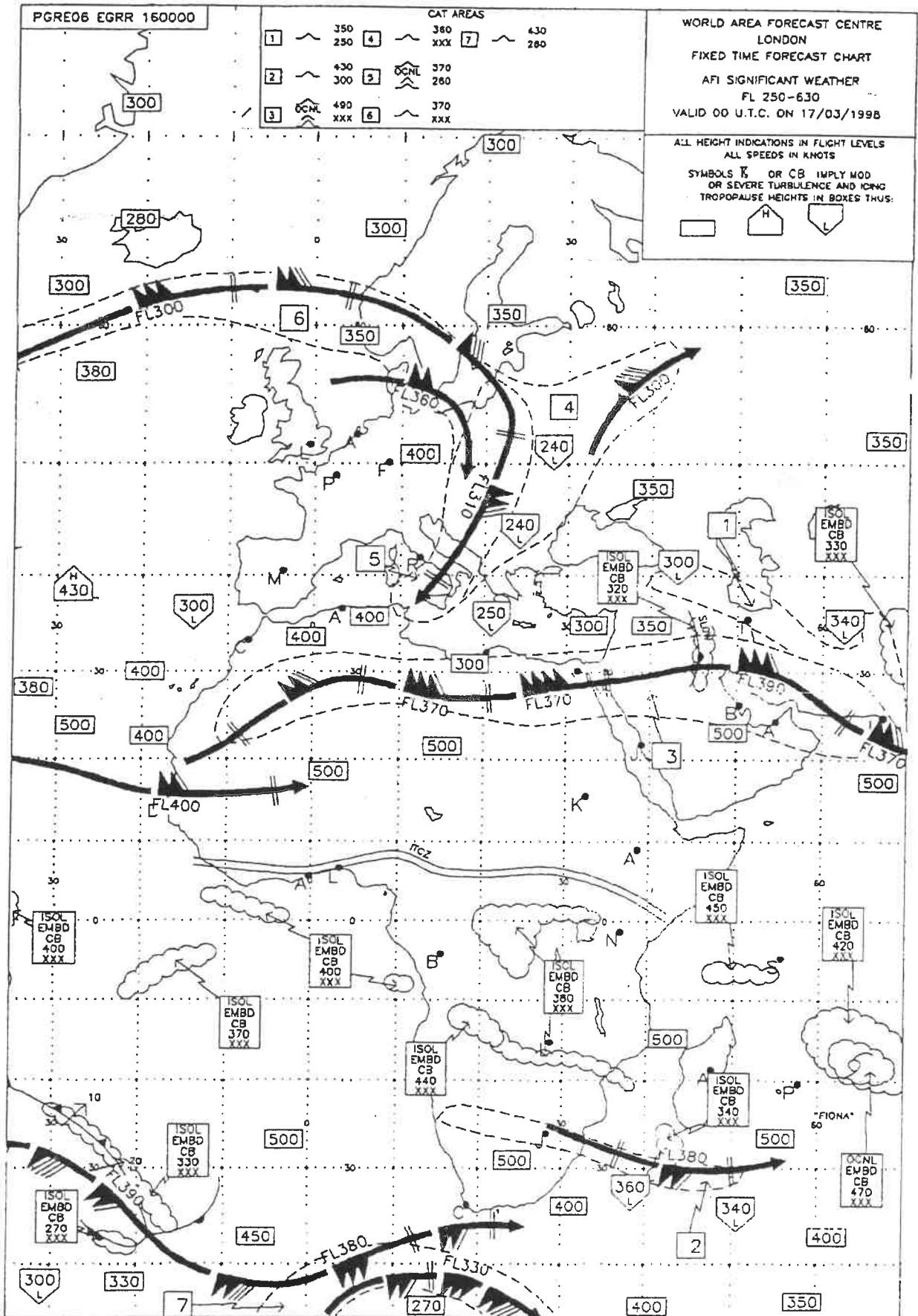
Symbols \square and CB imply moderate or severe turbulence, icing and hail.



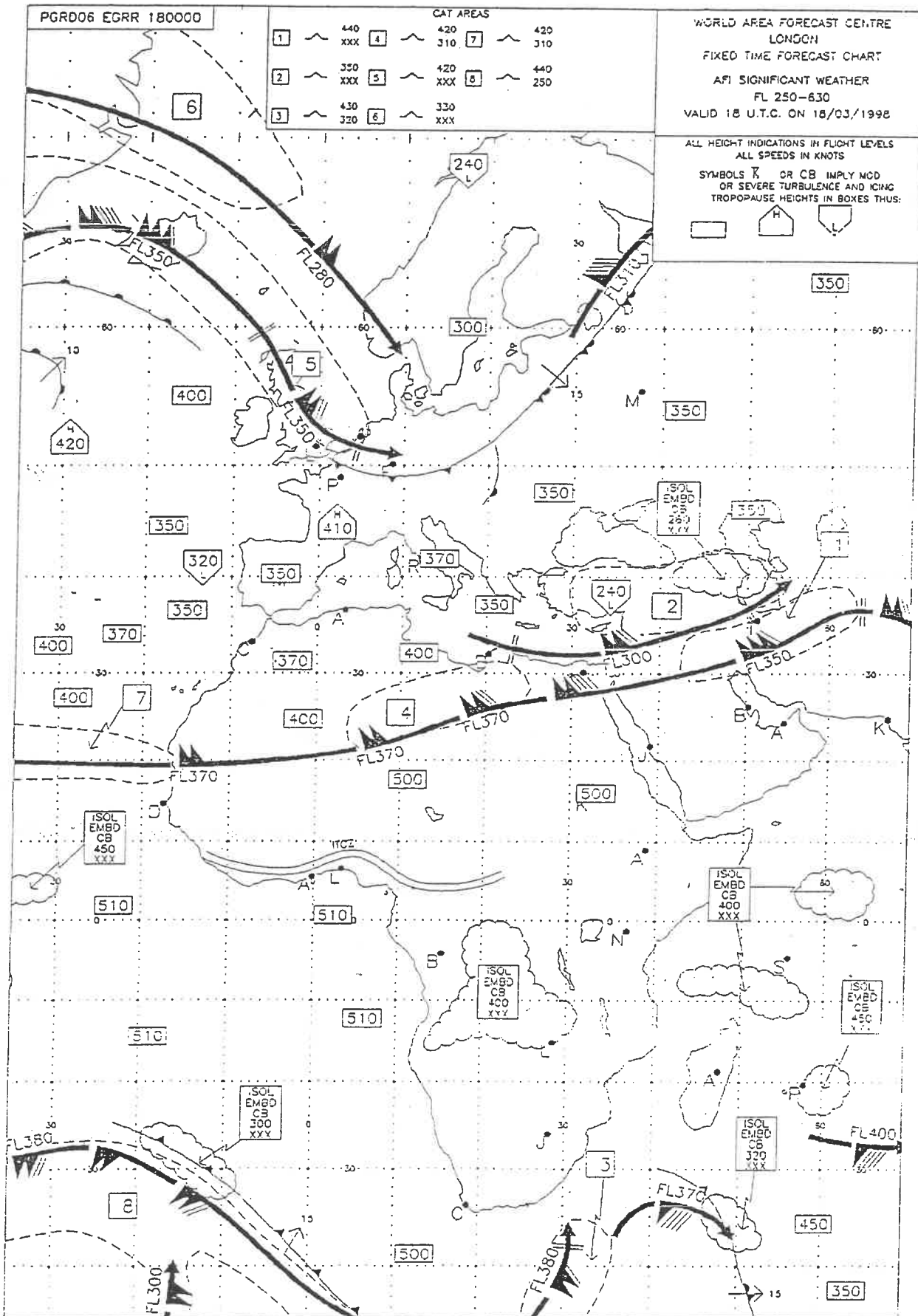


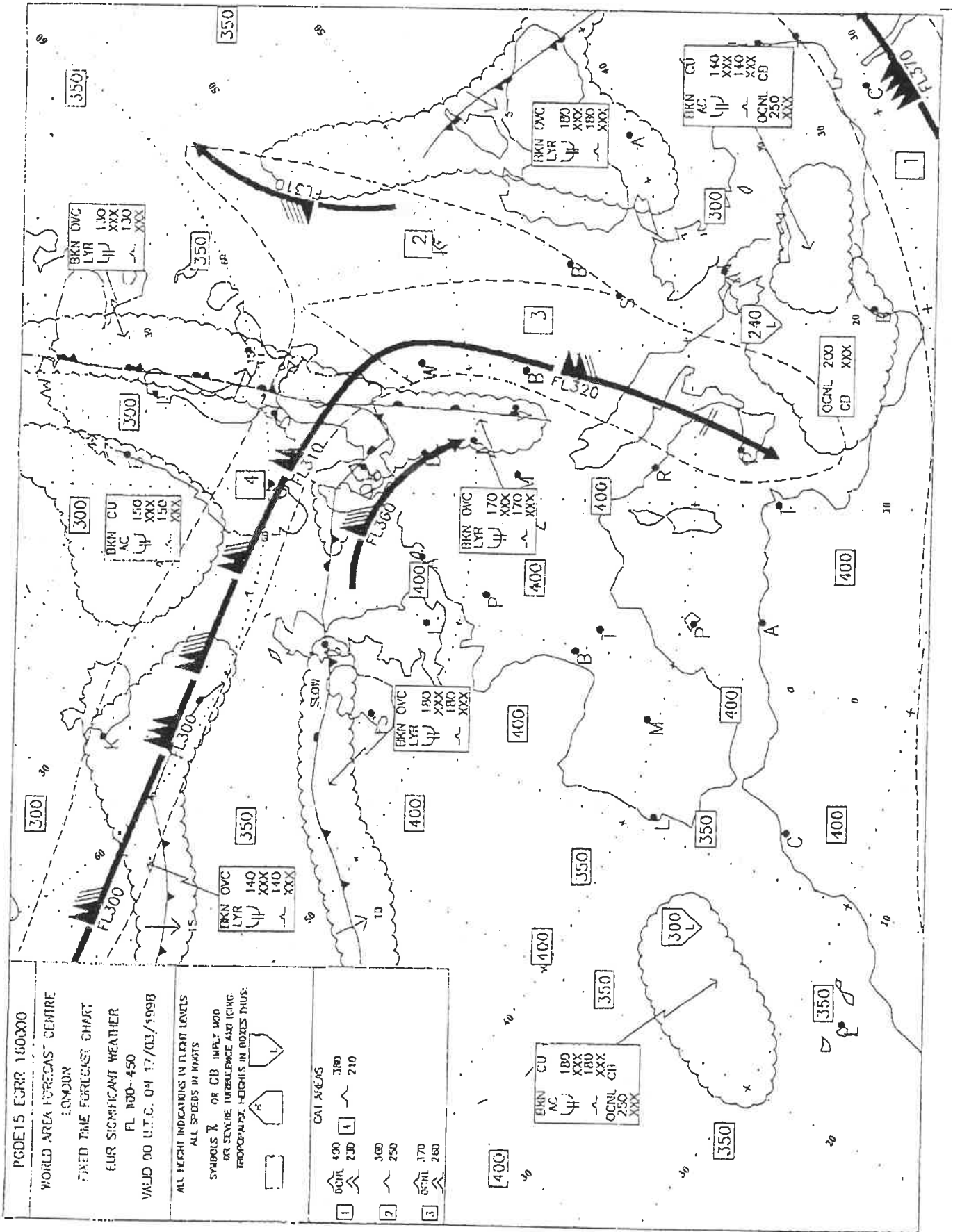


SIG WX CHART - AFRICA G



SIG WX CHART - AFRICA H





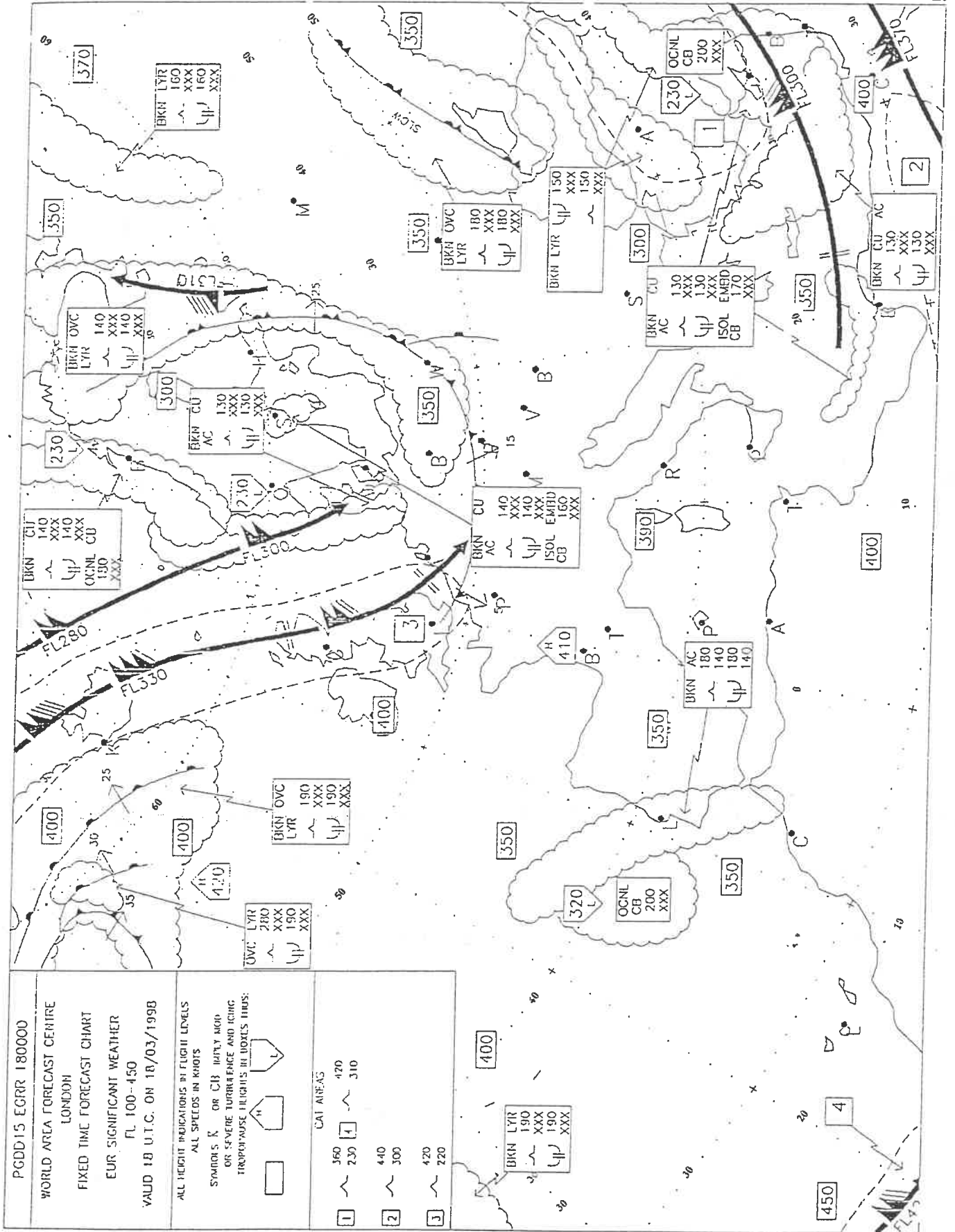
PGDE15 ESRR 160000
 WORLD AREA FORECAST - CENTRE
 LONDON
 FIXED TIME FORECAST CHART
 EUR SIGNIFICANT WEATHER
 FL 100-450
 VALD 00 U.T.C. 04 17/03/1998

ALL HEIGHT INDICATIONS IN FEET LEVELS
 ALL SPEEDS IN KNOTS

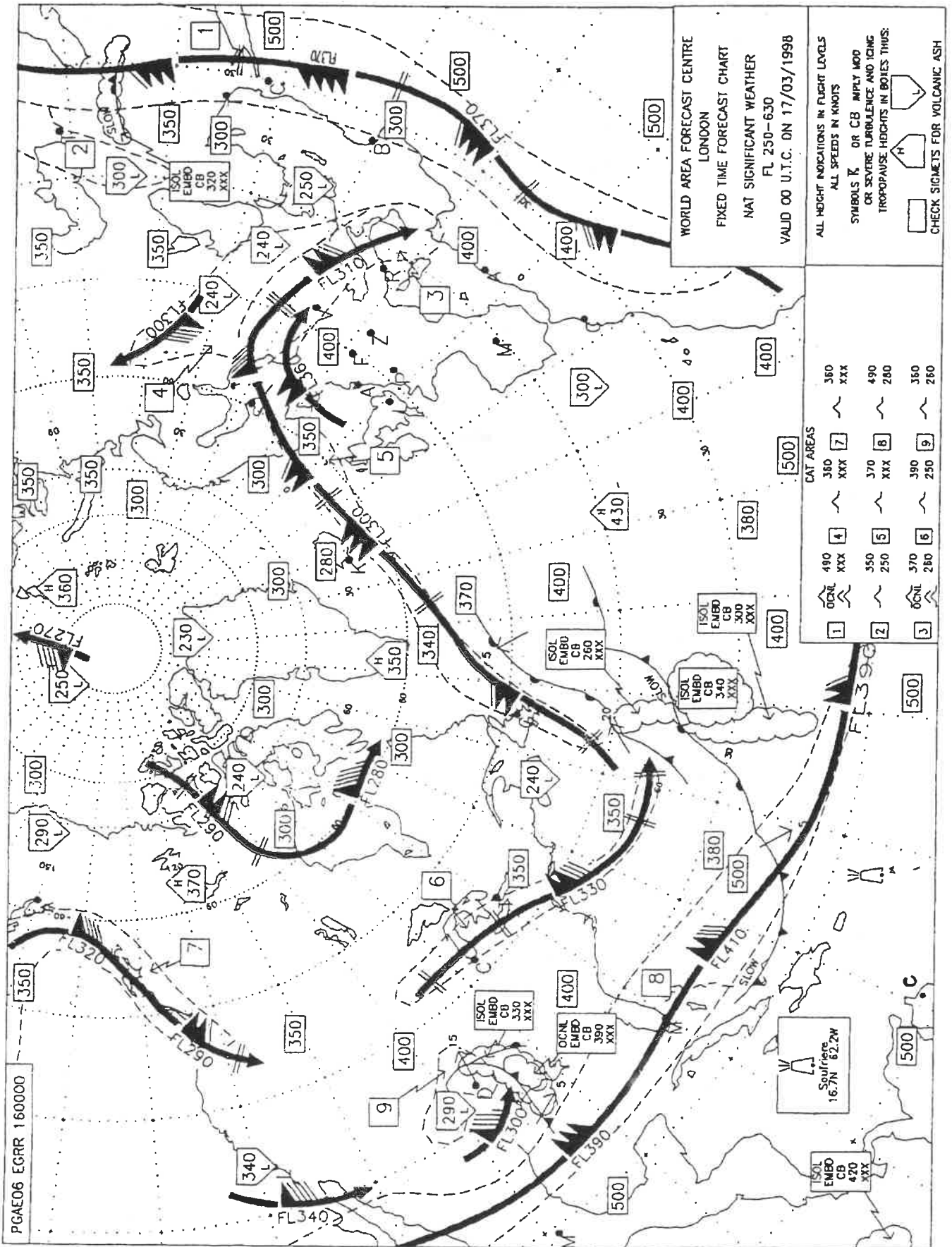
SYMBOLS $\bar{\wedge}$ OR CB IMPLY WOP
 OR SEVERE TURBULENCE AND ICING
 TROPOPAUSE HEIGHTS IN BOXES THUS:

CAV AREAS

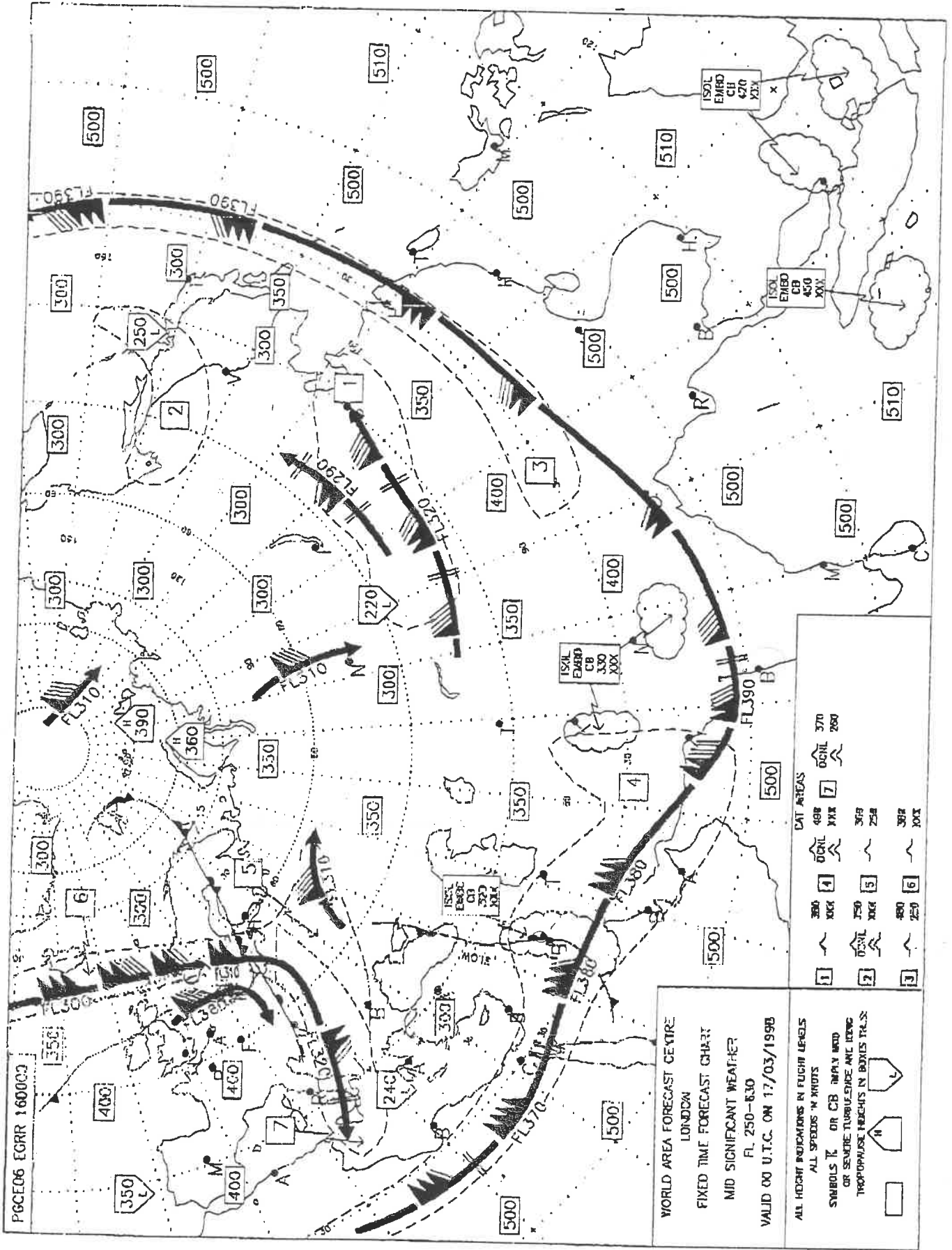
| | |
|--------------------|-----|
| $\bar{\wedge}$ 400 | 380 |
| $\bar{\wedge}$ 230 | 210 |
| $\bar{\wedge}$ 300 | 250 |
| $\bar{\wedge}$ 170 | 280 |



SIG WX CHART - NORTH ATLANTIC K



SIG WX CHART - MIDDLE EAST L



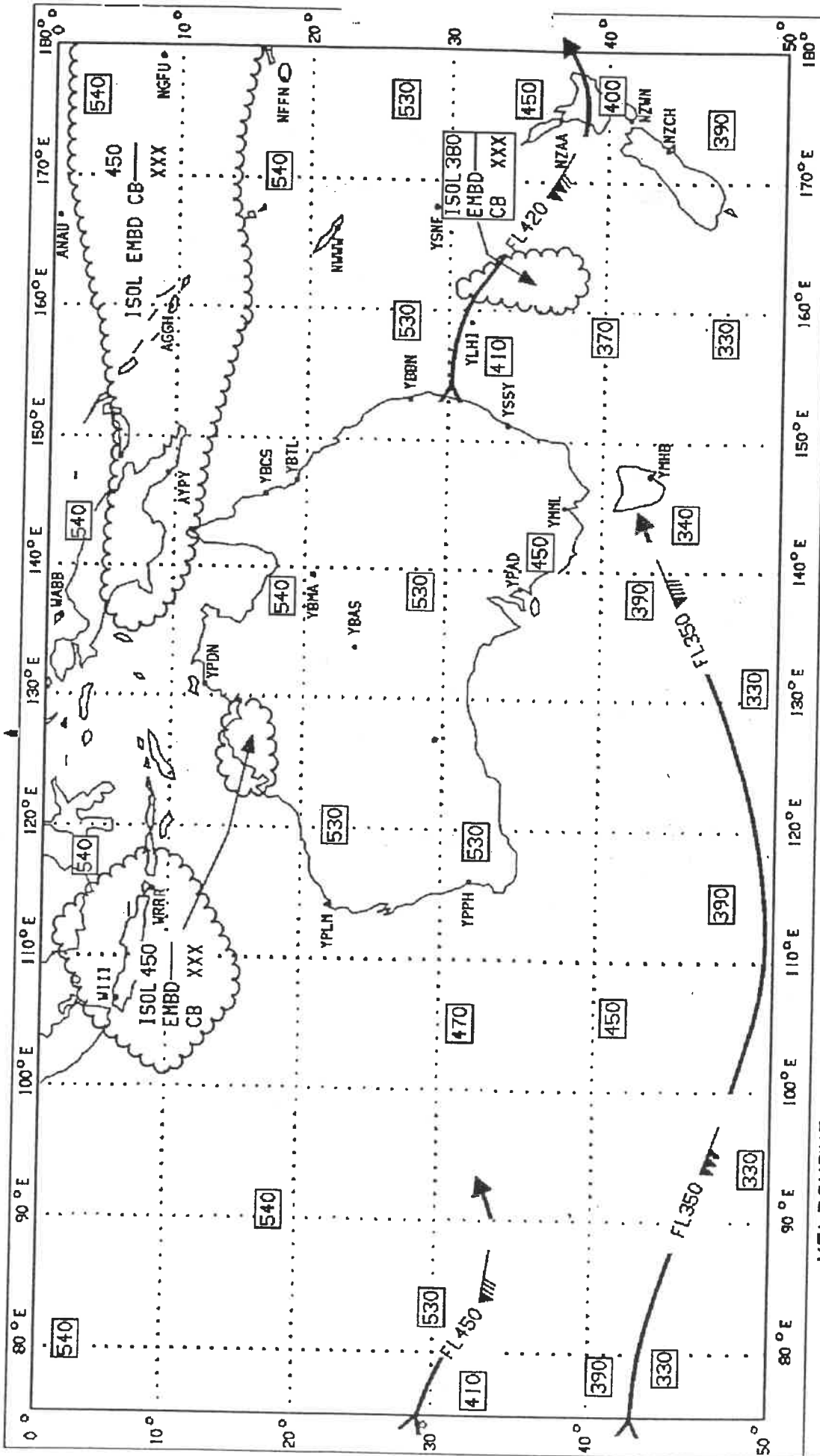
PGCE06 EGRR 160000Z

WORLD AREA FORECAST CENTRE
LONDON
FIXED TIME FORECAST CHART
MID SIGNIFICANT WEATHER
FL 250-630
VALID 00 U.T.C. ON 17/03/1998

ALL HEIGHT INDICATIONS IN FLIGHT LEVELS
ALL SPEEDS IN KNOTS
SYMBOLS T₁ OR CB IMPLY MID OR SEVERE TURBULENCE AND ICEING
TROPopause INDICES IN BOXES T₁-S

| CAT AREAS | |
|-----------|-------|
| 300 | 400 |
| 500 | 600 |
| 700 | 800 |
| 900 | 1000 |
| 1100 | 1200 |
| 1300 | 1400 |
| 1500 | 1600 |
| 1700 | 1800 |
| 1900 | 2000 |
| 2100 | 2200 |
| 2300 | 2400 |
| 2500 | 2600 |
| 2700 | 2800 |
| 2900 | 3000 |
| 3100 | 3200 |
| 3300 | 3400 |
| 3500 | 3600 |
| 3700 | 3800 |
| 3900 | 4000 |
| 4100 | 4200 |
| 4300 | 4400 |
| 4500 | 4600 |
| 4700 | 4800 |
| 4900 | 5000 |
| 5100 | 5200 |
| 5300 | 5400 |
| 5500 | 5600 |
| 5700 | 5800 |
| 5900 | 6000 |
| 6100 | 6200 |
| 6300 | 6400 |
| 6500 | 6600 |
| 6700 | 6800 |
| 6900 | 7000 |
| 7100 | 7200 |
| 7300 | 7400 |
| 7500 | 7600 |
| 7700 | 7800 |
| 7900 | 8000 |
| 8100 | 8200 |
| 8300 | 8400 |
| 8500 | 8600 |
| 8700 | 8800 |
| 8900 | 9000 |
| 9100 | 9200 |
| 9300 | 9400 |
| 9500 | 9600 |
| 9700 | 9800 |
| 9900 | 10000 |

SIG WX CHART - AUSTRALASIA M



BUREAU OF

MELBOURNE RAFC

SIGWX PROG

CAT AREA



VALID : 17 MAR 1998 0000 UTC
 ISSUED: 16 MAR 1998 0530 UTC

NOTE: USE OF CB IMPLIES ASSOCIATED THUNDERSTORMS AND THE OCCURRENCE OF SEVERE ICING, SEVERE TURBULENCE AND HAIL

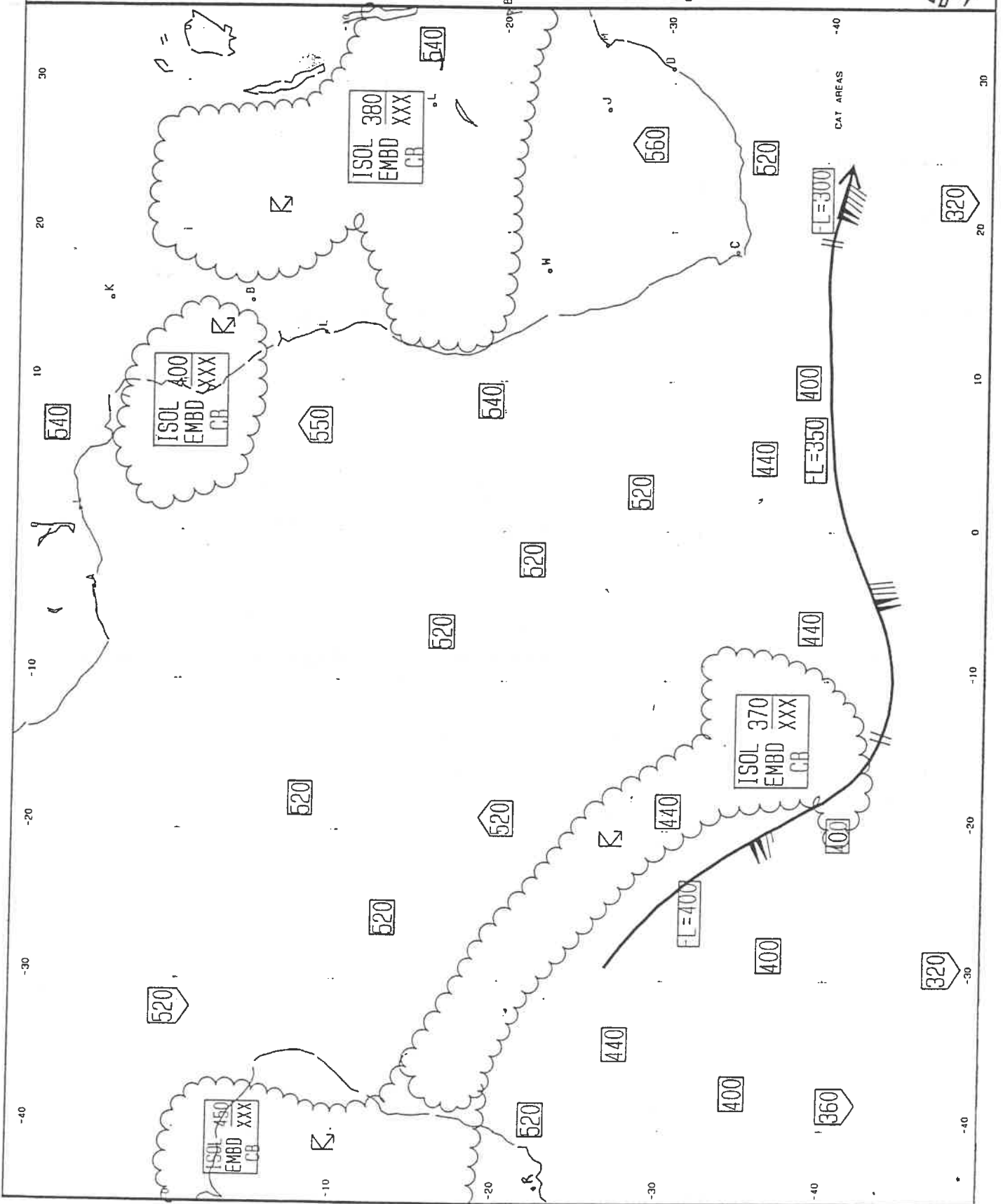
METEOROLOGY

- (1)
- (2)
- (3)
- (4)
- (5)

SIG WX CHART - SOUTH ATLANTIC N

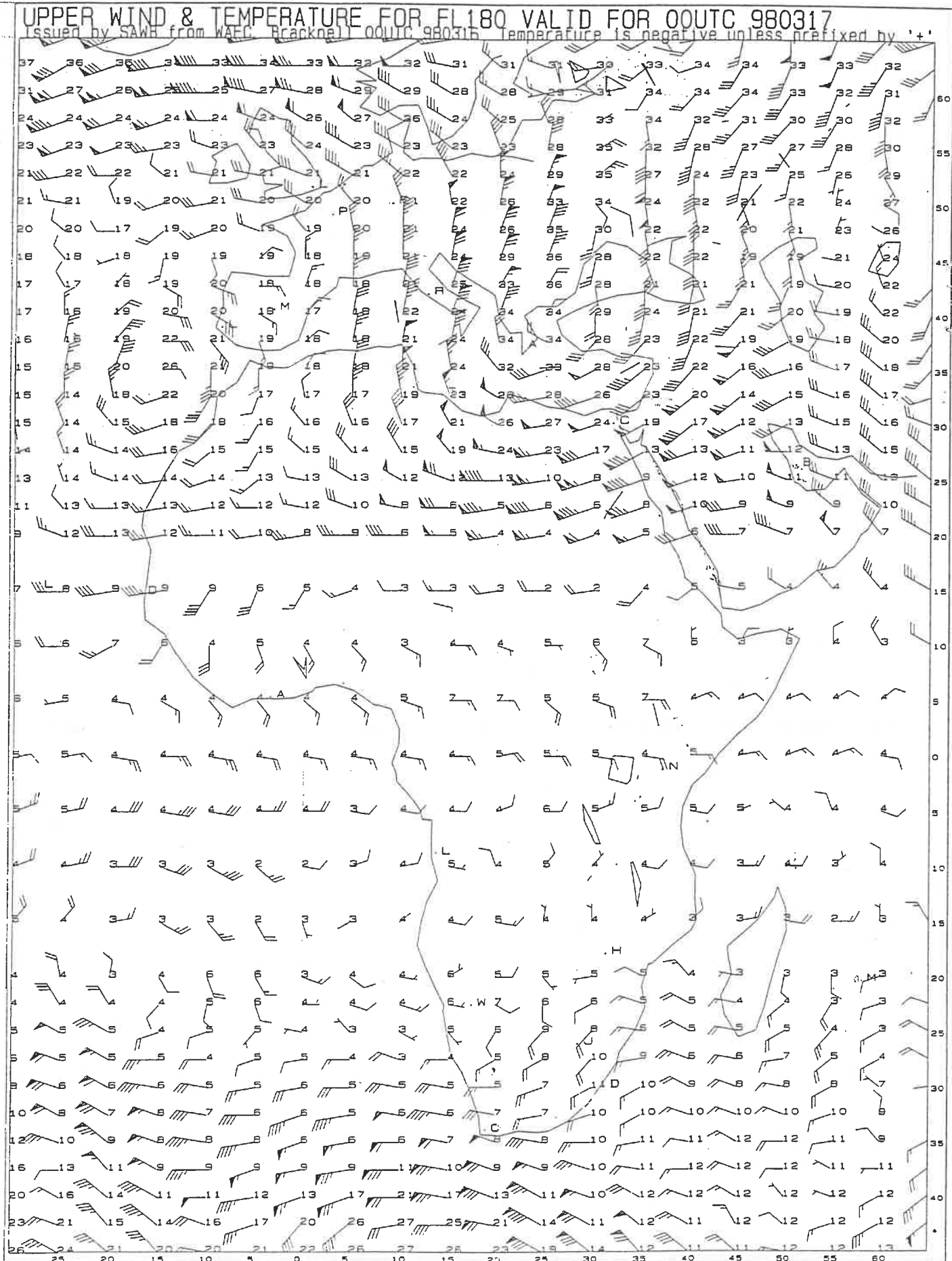
SIGNIFICANT WX HIGH (FL250 - FL630)
FIXED TIME PROGNOSTIC CHART VALID- 00H00 UT 1998/03/17
COMPILED BY LB - ISSUED AT 12H00 UT 1998/03/16
Symbols \square and CB imply moderate or severe turbulence, icing and hail.

SOUTH AFRICAN WEATHER BUREAU



UPPER WIND/TEMP CHART SOUTH AFRICA/EUROPE

O



UPPER WIND/TEMP CHART SOUTH AFRICA/EUROPE P

