



SIGMET Workshop

**6-8 December 2010
Dakar, Senegal**

Issuance of SIGMET Messages



SIGMET Overview

Definition & Documents

Use

MWO function

Dissemination

Type

Validity

Update/Cancel

Format

Issuance

SIGMET DEFINITION

- * Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations

Excerpt from WMO Technical Regulations [C3.1.]1.1



SIGMET DOCUMENTS

- * Annex 3 – Meteorological Service for International Air Navigation, Part I, Chapter 3, 3.4-3.7, Chapter 7, 7.1, and Part II, Appendix 6
- * AFI Basic ANP, Part VI, and AFI FASID Table MET 1B, MET 3A and MET 3B
- * Annex 11 – Air Traffic Services, Chapter 4, 4.2.1 and Chapter 7, 7.1
- * PANS – Air Traffic Management, Doc 4444, Chapter 9, 9.1.3.2
- * Regional Supplementary Procedures, Doc 7030, Part 1, 11.2
- * Manual of Aeronautical Meteorological Practice (Doc 8896)
- * Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377)
- * AFI Regional SIGMET Guide

SIGMET USE

- * In-flight re-planning

SIGMET information is the highest priority MET information sent to aviation users

Hazards avoided

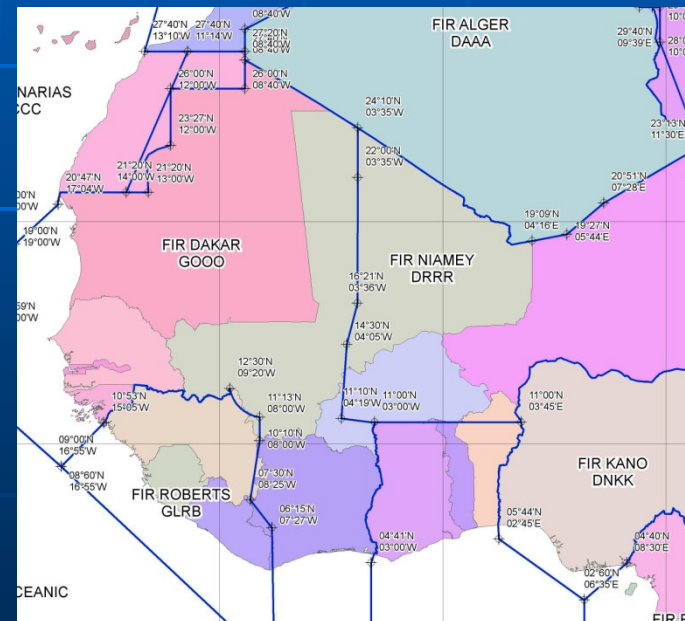
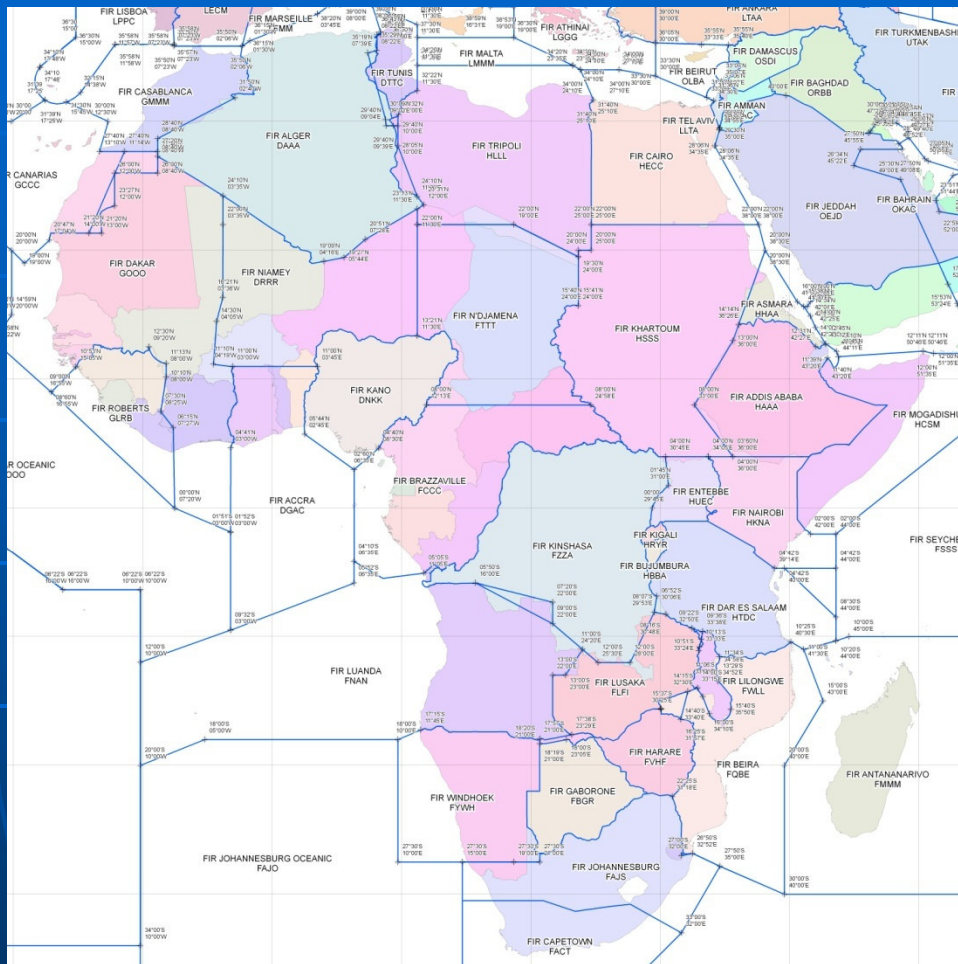
- * Pre-flight planning

Optimize flight route with weather hazards considered

MWO FUNCTION

- * Prepare SIGMET for area of responsibility
Usually FIR
Supply ATS with SIGMET information
- * Disseminate SIGMET

FIRs



MWO FUNCTION

* State's Aeronautical Information Publication

Include information about the provision of SIGMET service [including details of the designated MWO(s)]

Annex 15, AIS, App 1, GEN 3.5.8

MWO FUNCTION

- * If State can not establish MWO(s) [and thus the provision of SIGMET for FIR(s)]

another MWO should take over responsibility

notify by NOTAM and letter to RO

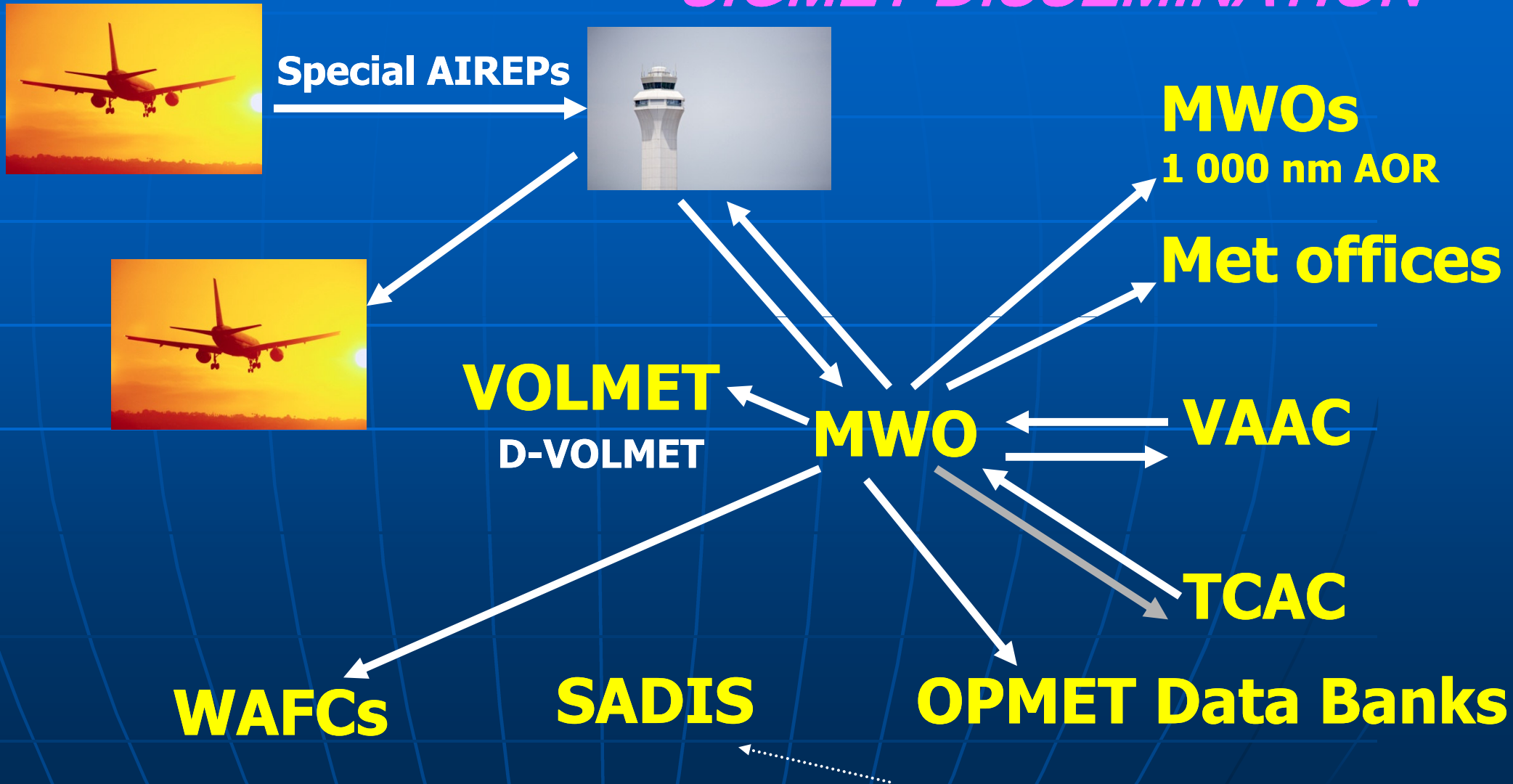
SIGMET DISSEMINATION

- * SIGMET messages shall be sent to (ANNEX 3, Appendix 6, 1.2.1, 1.2.2)

- MWOs
- WAFCs
- other meteorological offices
- VAACs for volcanic ash SIGMETs
- OPMET data banks

Note: SIGMET is issued for any cruising level

Special AIREPs



SIGMET TYPE

* SIGMET Type

Thunderstorm

OBSC TS / EMBD TS / FRQ TS / SQL TS / OBSC TSGR / EMBD TSGR / FRQ TSGR / SQL TSGR

Turbulence

SEV TURB

Icing

SEV ICE / SEV ICE (FZRA)

Mountain Wave

SEV MTW

Duststorm

HVY DS

Sandstorm

HVY SS

Volcanic Ash

VA (+ volcano name if known)

Tropical Cyclone

TC (+cyclone name) – 10: mean sfc wind $\geq$ 63 km/h(34 kt)

Radioactive Cloud

RDOACT CLD

Note – only 1 SIGMET type per SIGMET

SIGMET VALIDITY

- * Up to 4 hours
TS, TURB, ICE, MTW, DS, SS, CB, GR
(lead time of issuance for expected event up to 4 hours)
- * Up to 6 hours
TC, VA
(lead time of issuance for expected event up to 12 hours)

SIGMET UPDATE/CANCEL

- * **UPDATE**

SIGMET phenomena is growing and intensifying

- * **CANCELLATION**

SIGMET phenomena no longer occurring nor expected to occur

SIGMET FORMAT

- * SIGMET format is described in Annex 3, Appendix 6, Table A6-1

SIGMET ISSUANCE – phenomena other than VA/TC (Thunderstorm)

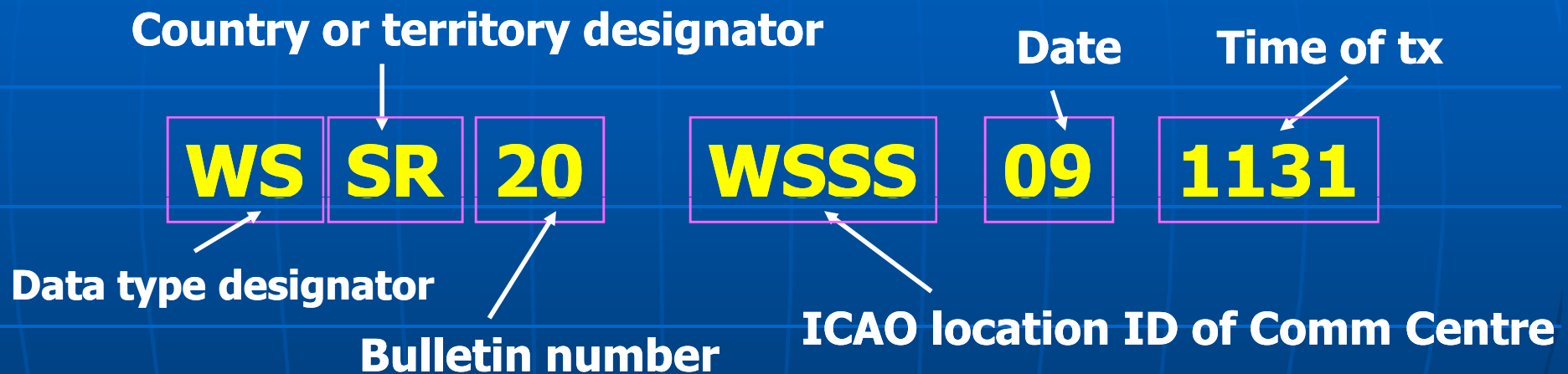
WSSR20 WSSS 091131

WSJC SIGMET 3 VALID 091140/091540 WSSS-

WSJC SINGAPORE FIR EMBD TS OBS AT 1130Z N OF N01 E OF E106 W OF E114
STNR NC=



SIGMET ISSUANCE – phenomena other than VA/TC (Thunderstorm)



WMO Header

WSSR20 WSSS 091131

WSJC SIGMET 3 VALID 091140/091540 WSSS-

**WSJC SINGAPORE FIR EMBD TS OBS AT 1130Z N OF N01 E OF E106 W OF
E114 STNR NC=**



SIGMET ISSUANCE – phenomena other than VA/TC - Exercise

Prepare WMO Header for SIGMET using the following parameters:

Phenomenon: Severe Turbulence

Issuing Comm Centre: VHHH

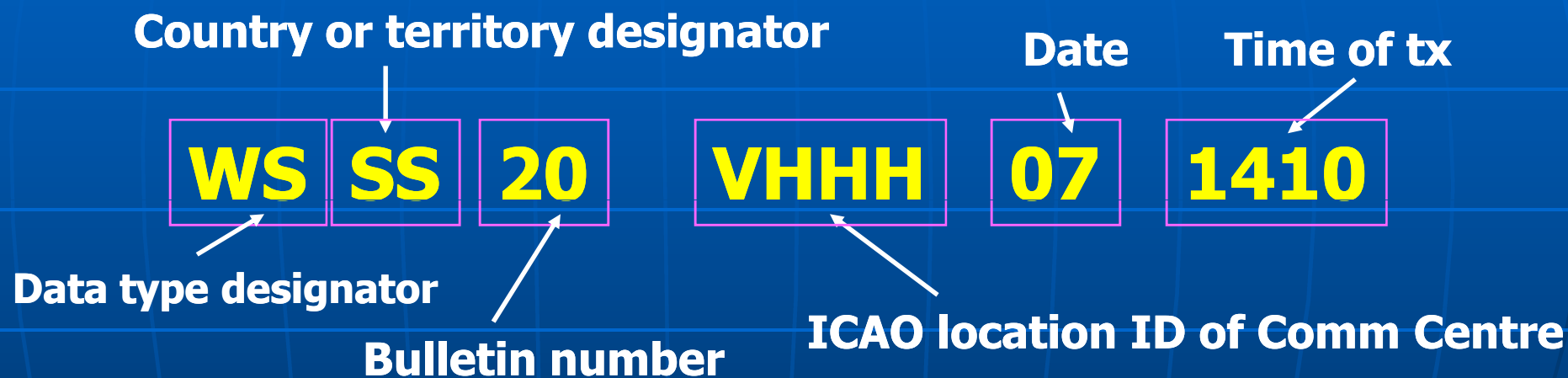
Country/territory code SS

Bulletin number 20

Time of issuance: 1410 UTC

Day of month: 7

SIGMET ISSUANCE – phenomena other than VA/TC - Exercise



WSSS20 VHHH 071410



SIGMET ISSUANCE – phenomena other than VA/TC (Thunderstorm)

ICAO location ID of ATS unit
serving FIR or CTA

ICAO ID of MWO

Validity period

WSJC	SIGMET	3	VALID	091140/091540	WSSS-
-------------	---------------	----------	--------------	----------------------	--------------

Message identifier

Daily sequence #

Period of validity indicator

hyphen

WSSR20 WSSS 091131

WSJC SIGMET 3 VALID 091140/091540 WSSS-

**WSJC SINGAPORE FIR EMBD TS OBS AT 1130Z N OF N01 E OF E106 W OF
E114 STNR NC=**



SIGMET ISSUANCE – phenomena other than VA/TC - Exercise

Prepare first line of SIGMET message using the following parameters:

Phenomenon: Severe Turbulence

ICAO ID of ATS unit serving FIR: VHHK

ICAO ID of MWO: VHHH

1st SIGMET of the day

Validity period: 1410-1800 UTC

7th day of month

Active runways 19L and 19R



SIGMET ISSUANCE – phenomena other than VA/TC - Exercise

ICAO location ID of ATS unit
serving FIR or CTA

ICAO ID of MWO

Validity period

VHHK	SIGMET	1	VALID	071410/071800	VHHH-
------	--------	---	-------	---------------	-------

Message identifier

Daily sequence #

Period of validity indicator

hyphen

VHHK SIGMET 1 VALID 071410/071800 VHHH-



SIGMET ISSUANCE – phenomena other than VA/TC - Exercise

**WSSS20 VHHH 071410
VHHK SIGMET 1 VALID 071410/071800 VHHH-**



SIGMET ISSUANCE – phenomena other than VA/TC (Thunderstorm)

ICAO location ID & FIR/UIR or CTA name

WSJC SINGAPORE FIR EMBD TS OBS AT 1130Z

Phenomenon

Indication of observed or forecast

N OF N01 E OF E106 W OF E114 STNR NC=

Location

Movement or expected movement

Change in intensity

WSSR20 WSSS 091131

WSJC SIGMET 3 VALID 091140/091540 WSSS-

WSJC SINGAPORE FIR EMBD TS OBS AT 1130Z N OF N01 E OF E106 W OF E114 STNR NC=



SIGMET ISSUANCE – phenomena other than VA/TC - Exercise

Prepare second line of SIGMET message using the following parameters:

Phenomenon: Severe Turbulence

ICAO location ID & FIR/UIR or CTA name: VHHK Hong Kong FIR

Forecast location: N of N2200, E of E11330 between FL300/400

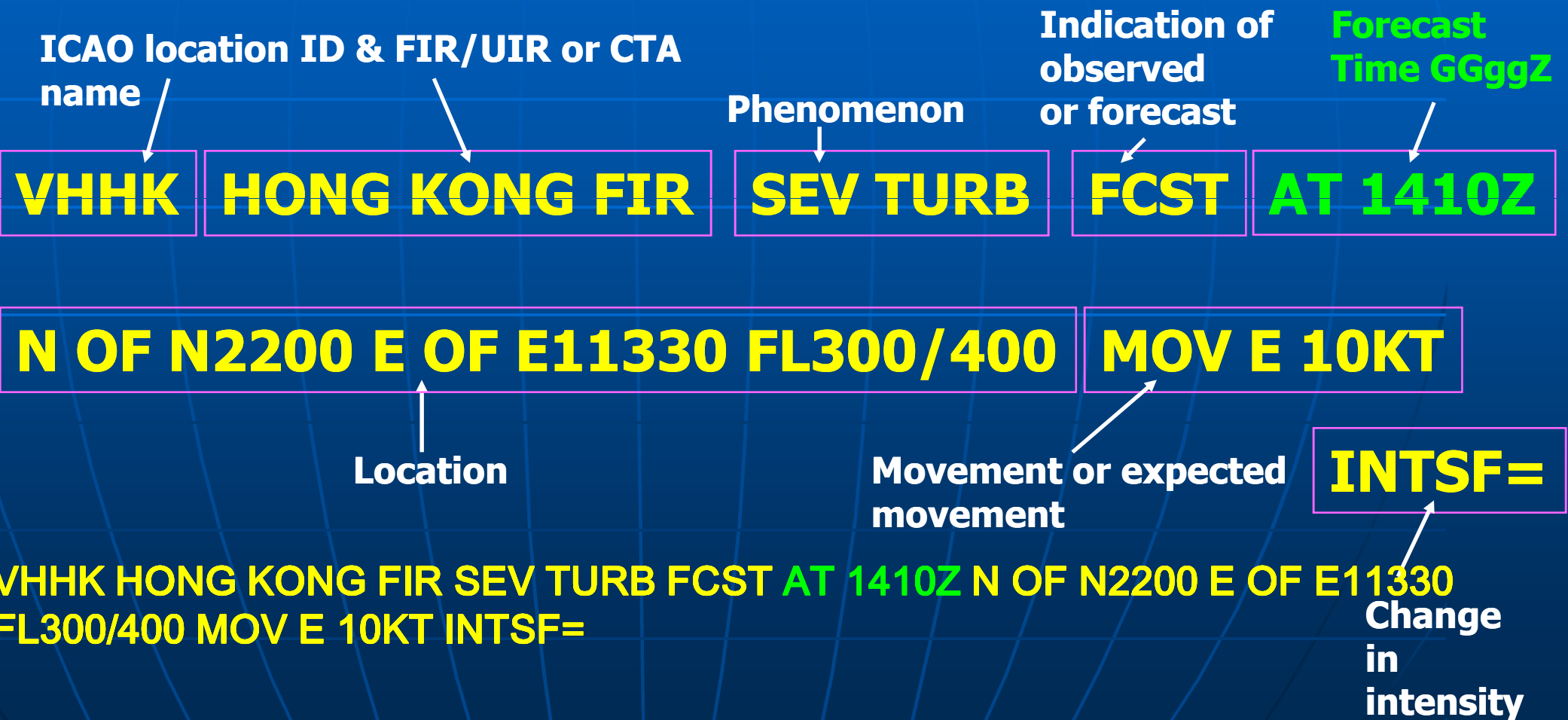
Forecast time: 1410Z

Movement E 10KT and intensifying

Note – can use 16 compass points since beginning 18 November 2010 (e.g. ENE)



SIGMET ISSUANCE – phenomena other than VA/TC - Exercise





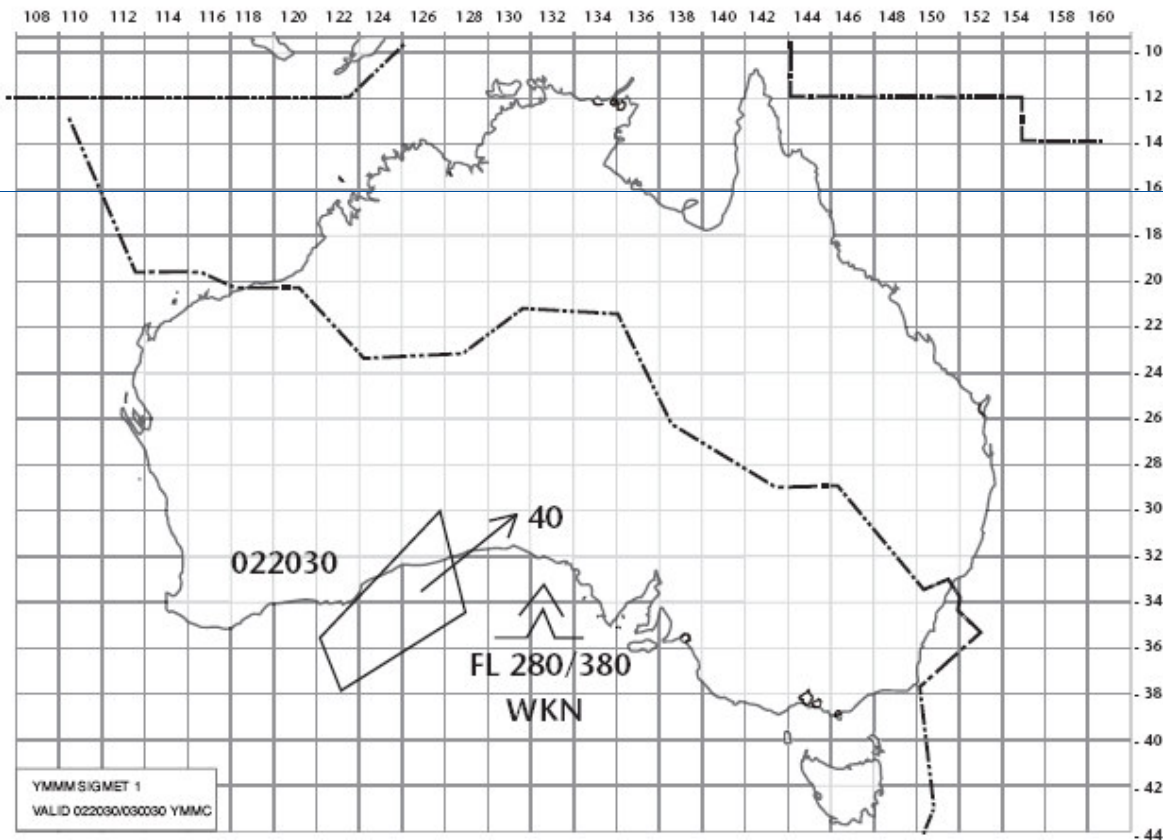
SIGMET ISSUANCE – phenomena other than VA/TC - Exercise

WSSS20 VHHH 071410
VHHK SIGMET 1 VALID 071410/071800 VHHH-
VHHK HONG KONG FIR SEV TURB FCST AT 1410Z N OF N2200 E
OF E11330
FL300/400 MOV E 10KT INTSF=

SIGMET Graphic—phenomena other than VA/TC

SIGMET FOR PHENOMENA OTHER THAN TROPICAL CYCLONE AND VOLCANIC ASH IN GRAPHICAL FORMAT MODEL SGE

Appendix 1



APP 1-11

7/11/07

Annex 3 — Meteorological Service for International Air Navigation

SIGMET ISSUANCE – phenomena other than VA/TC (SEV TURB)

WSAU21 AMMC 280546

YBBB SIGMET BS02 VALID 280600/281000 YMMC-

**YBBB BRISBANE FIR SEV TURB FCST AT 0600 WI S3900 E15100 – S4300 E15000
– S4300 E16000 –S4100 E16300 – S3700 E16300 – S3900 E16000 FL260/370 MOV E
20 KT NC=**



Oklahoman - Southerland

SIGMET ISSUANCE – phenomena other than VA/TC (SEV ICING)



**WSFR31 LFPW 280400
LFMM SIGMET 2 VALID 280500/280900 LFMM-
LFMM FIR MARSEILLE SEV ICE OBS AT 0400Z LION GULF FL040/100 STNR NC=**

SIGMET ISSUANCE – phenomena other than VA/TC (HEAVY DUSTSTORM)

WSAW31 LOWM 160530

OEJD SIGMET 4 VALID 160600/161000 OEJN-

**OEJD JEDDAH FIR HVY DS OBS N OF N2200 S OF N3100 E OF E04440 W OF
E04800 MOV E 10KMH NC=**



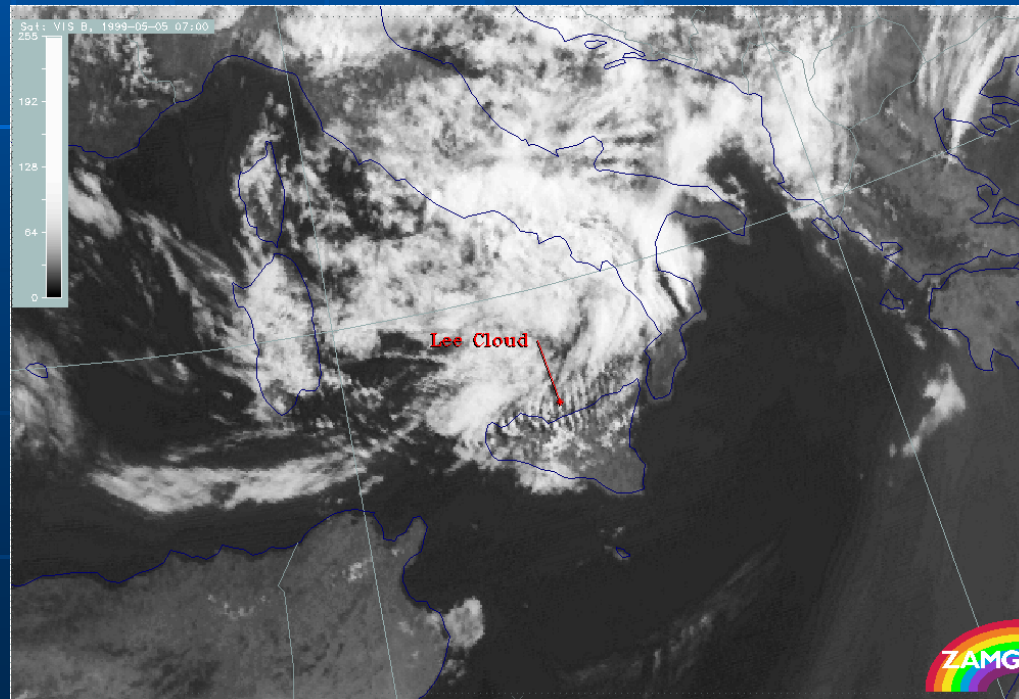
SIGMET ISSUANCE – phenomena other than VA/TC (SEV MTN WAVE)

WSUK31 EGGY 150550

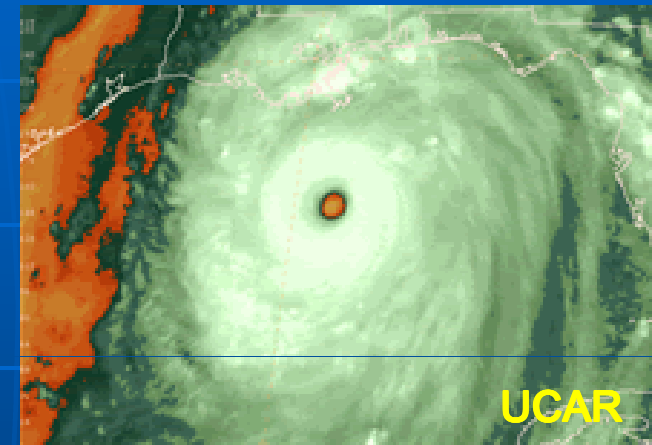
EGTT SIGMET 03 VALID 150600/151000 EGRR-

EGTT LONDON FIR SEV MTW FCST AT 0600Z N OF N5100 FL090/140 STNR

WKN=



SIGMET ISSUANCE – Tropical Cyclone

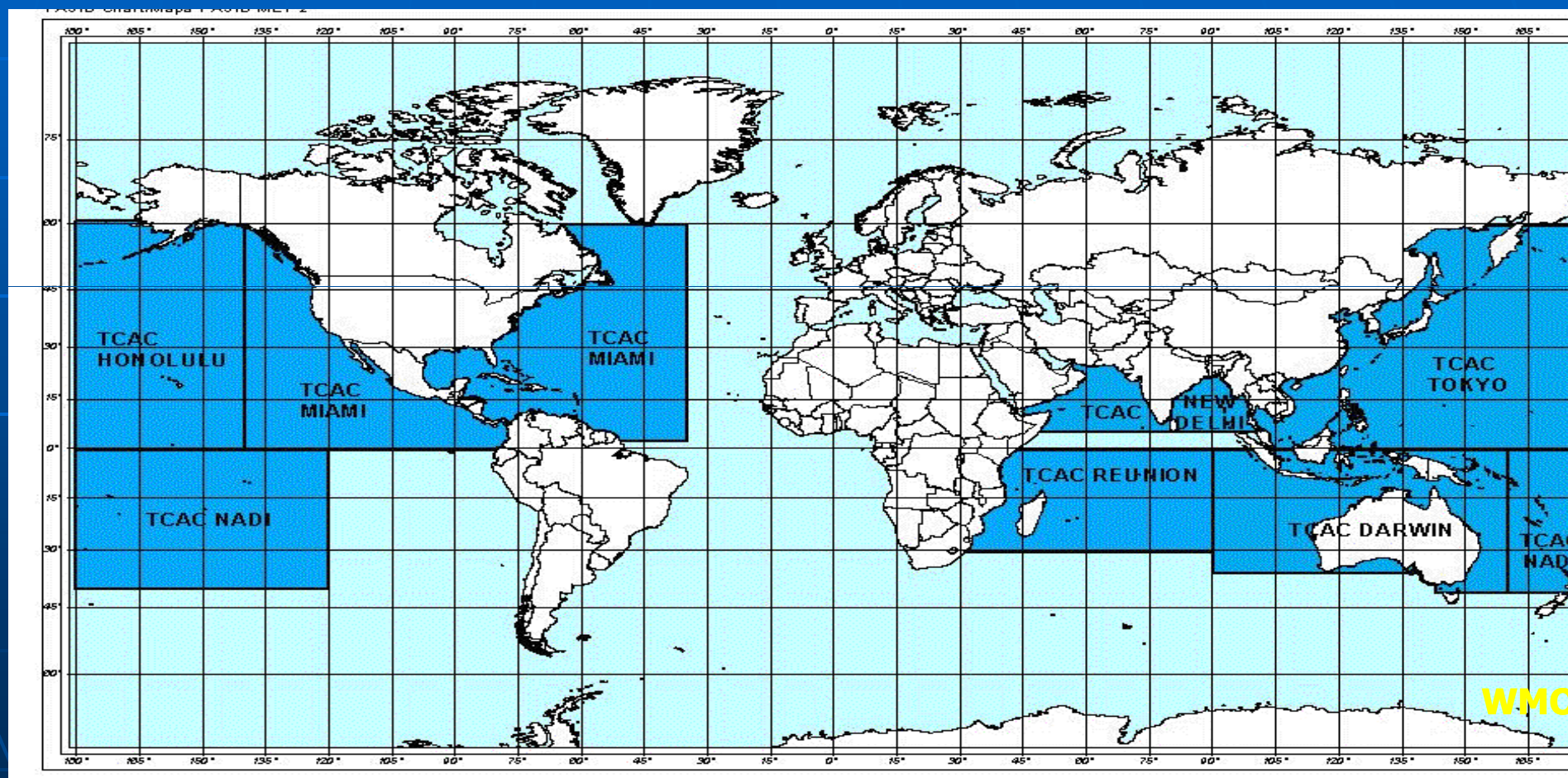


**WCSS20 VHHH 200240
VHHK SIGMET 2 VALID 200900/201500 VHHH-
VHHK HONG KONG CTA TC KONI OBS AT 0000Z N1618 E11506 CB TOP FL500 WI
90NM OF CENTRE MOV NW 8KT NC FCST 1500Z TC CENTRE N1749
E11347=**

*Note: This SIGMET is issued before the TC Koni started affecting the Hong Kong CTA,
as seen by the issuing time and the start of validity time*



Tropical Cyclone Advisory Centres



SIGMET ISSUANCE – Tropical Cyclone



WCSS20 VHHH 200240

VHHK SIGMET 2 VALID 200900/201500 VHHH-

VHHK HONG KONG CTA TC KONI OBS AT 0000Z N1618 E11506 CB TOP FL500

WI 90NM OF CENTRE MOV NW 8KT NC FCST 1500Z TC CENTRE N1749

E11347=



SIGMET ISSUANCE – Tropical Cyclone

Exercise

Prepare WMO Header for SIGMET using the following parameters:

Phenomenon: Tropical Cyclone

Issuing Comm Centre: VHHH

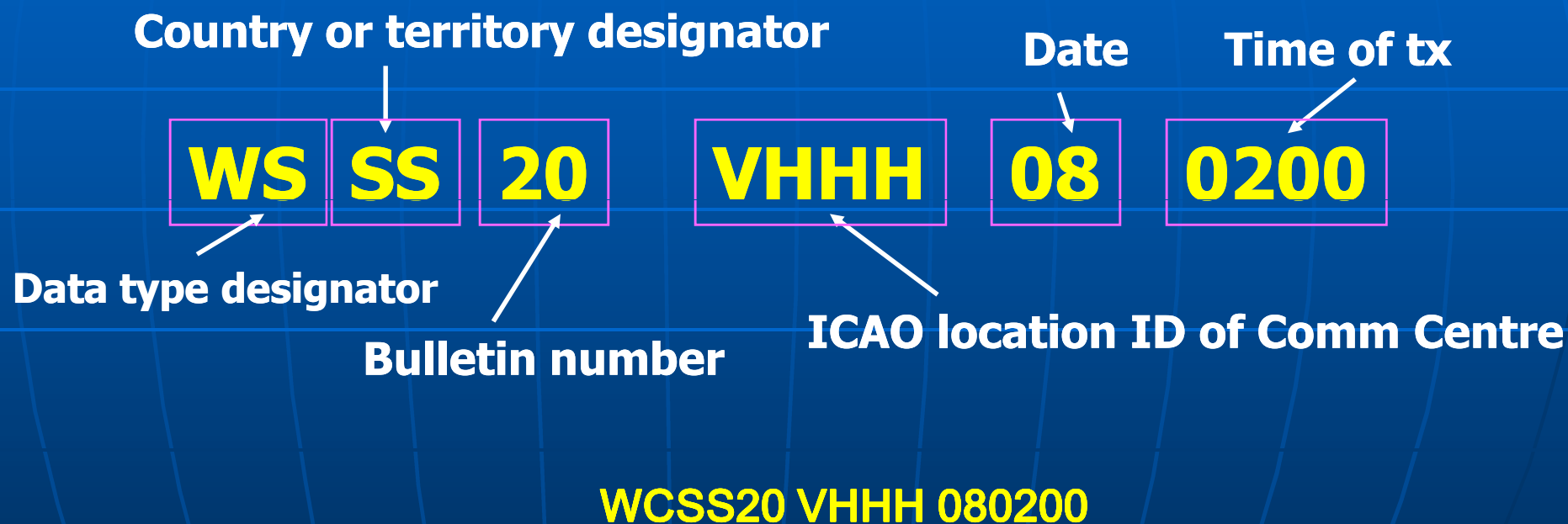
Country/territory code SS

Bulletin number 20

Time of issuance: 0200 UTC

Day of month: 8

SIGMET ISSUANCE – Tropical Cyclone Exercise



SIGMET ISSUANCE – Tropical Cyclone

ICAO location ID of ATS unit
serving FIR or CTA

ICAO ID of MWO

Validity period

VHHK SIGMET 2 VALID 200900/201500 VHHH-

Message identifier

Daily sequence #

Period of validity indicator

hyphen

WCSS20 VHHH 200240

VHHK SIGMET 2 VALID 200900/201500 VHHH-

VHHK HONG KONG CTA TC KONI OBS AT 0000Z N1618 E11506 CB TOP FL500

WI 90NM OF CENTRE MOV NW 8KT NC FCST 1500Z TC CENTRE N1749

E11347=



SIGMET ISSUANCE – Tropical Cyclone

Exercise

Prepare 1st line of SIGMET message using the following parameters:

Phenomenon: Tropical Cyclone

ICAO ID of ATS unit serving FIR: VHHK

ICAO ID of MWO: VHHH

3rd SIGMET of the day

Validity period: 0400-1000 UTC

8th day of month

Birds in the vicinity of runway



SIGMET ISSUANCE – Tropical Cyclone

Exercise

ICAO location ID of ATS unit
serving FIR or CTA

ICAO ID of MWO

Validity period

VHHK	SIGMET	3	VALID	080400/081000	VHHH-
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Message identifier

Daily sequence #

Period of validity indicator

hyphen

VHHK SIGMET 3 VALID 080400/081000 VHHH-



SIGMET ISSUANCE – Tropical Cyclone

ICAO location ID & FIR/UIR or CTA
name

TC name

Observed
or forecast

VHHK HONG KONG CTA TC KONI OBS AT 0000Z

N1618 E11506 CB TOP FL500 WI 90NM OF CENTRE

Location of TC centre

Extent

WCSS20 VHHH 200240
VHHK SIGMET 2 VALID 200900/201500 VHHH-
VHHK HONG KONG CTA TC KONI OBS AT 0000Z N1618 E11506 CB TOP FL500
WI 90NM OF CENTRE MOV NW 8KT NC FCST 1500Z TC CENTRE N1749
E11347=



SIGMET ISSUANCE – Tropical Cyclone

Exercise

Prepare second line of SIGMET message using the following parameters:

Phenomenon: Tropical Cyclone

ICAO location ID & FIR/UIR or CTA name: VHHK Hong Kong FIR

Forecast location of TC centre: N2224 E11730

Forecast time: 0400Z

Note that if disturbance forecasted to be TC but not named yet, use NN instead of NIL

Height of CB within 240 NM of centre: FL450

Palm trees bending at 45 degree angle



SIGMET ISSUANCE – Tropical Cyclone Exercise

ICAO location ID & FIR/UIR or CTA
name

TC name

Observed
or forecast

Forecast time
GGggZ

VHHK HONG KONG FIR TC PABUK FCST AT 0400Z

N2224 E11730 CB TOP FL450 WI 240NM OF CENTRE

Location of TC centre

Extent

**VHHK HONG KONG FIR TC PABUK FCST AT 0400Z N2224 E11730
CB TOP FL450 WI 240 NM OF CENTRE**



SIGMET ISSUANCE – Tropical Cyclone

Exercise

WCSS20 VHHH 080200
VHHK SIGMET 3 VALID 080400/081000 VHHH-
VHHK HONG KONG FIR TC PABUK FCST AT 0400Z N2224 E11730
CB TOP FL450 WI 240 NM OF CENTRE

SIGMET ISSUANCE – Tropical Cyclone

Expected movement

MOV NW 8KT

Intensity change

NC

FCST 1500Z TC Centre

N1749 E11347=

Location of TC Centre

Forecast of the centre position at
the end of the validity period

WCSS20 VHHH 200240
VHHK SIGMET 2 VALID 200900/201500 VHHH-
VHHK HONG KONG CTA TC KONI OBS AT 0000Z N1618 E11506 CB TOP FL500
WI 90NM OF CENTRE MOV NW 8KT NC FCST 1500Z TC CENTRE N1749
E11347=



SIGMET ISSUANCE – Tropical Cyclone

Exercise

Prepare second line of SIGMET message using the following parameters:

Phenomenon: Tropical Cyclone

Expected movement of TC: W 15 KT

No change in intensity expected

Forecast location of TC Centre at 1000Z: N2224 E11600

Storm surge 4.5 metres

Kiwis falling on beach

SIGMET ISSUANCE – Tropical Cyclone

Exercise

Expected movement

MOV W 15KT

Intensity change

NC

FCST 1000Z TC Centre

N2224 E11600=

Forecast of the centre position at
the end of the validity period

Location of TC Centre

MOV W 15KT NC
FCST 1000Z TC CENTRE N2224 E11600=



SIGMET ISSUANCE – Tropical Cyclone

Exercise

WCSS20 VHHH 080200
VHHK SIGMET 3 VALID 080400/081000 VHHH-
VHHK HONG KONG FIR TC PABUK FCST AT 0400Z N2224 E11730
CB TOP FL450 WI 240 NM OF CENTRE MOV W 15KT NC
FCST 1000Z TC CENTRE N2224 E11600=



SIGMET for TC

Exercise

Parameters (taken from example given by Hong Kong Observatory to be included in SIGMET guide)

At 0200 UTC, TC Pabuk (with 10-minute mean surface wind speed of 34 knots or more) is observed by VHHH. The centre of Pabuk is observed outside the HONG KONG FIR but is expected to enter the HONG KONG FIR at 0400 UTC. As the TC has not yet been observed in the HONG KONG FIR, “FCST” should be used instead of “OBS”. A TC SIGMET with a period of validity commencing at 0400 UTC for a maximum period of 6 hours, and providing two forecast locations of the TC centre (at 4 and 10 UTC the centre is forecast at 2224N, 11730E and 2224N 11600E, pertaining to the beginning and end of the validity period respectively, is to be issued.

Other information includes: 3rd SIGMET of the day, VHHH MWO issues the SIGMET for the VHHK HONG KONG FIR, the ATS unit serving the FIR is VHHK, the country/territory code is and bulletin number is SS20, CB tops to FL450 within 240 nm of the centre, movement is to the N at 15 kt, and the intensity is not changing.



SIGMET for TC

Exercise

WCSS20 VHHH 080200
VHHK SIGMET 3 VALID 080400/081000 VHHH-
VHHK HONG KONG FIR TC PABUK FCST AT 0400Z N2224 E11730
CB TOP FL450 WI 240 NM OF CENTRE MOV W 15KT NC
FCST 1000Z TC CENTRE N2224 E11600=

SIGMET ISSUANCE – Volcanic Ash

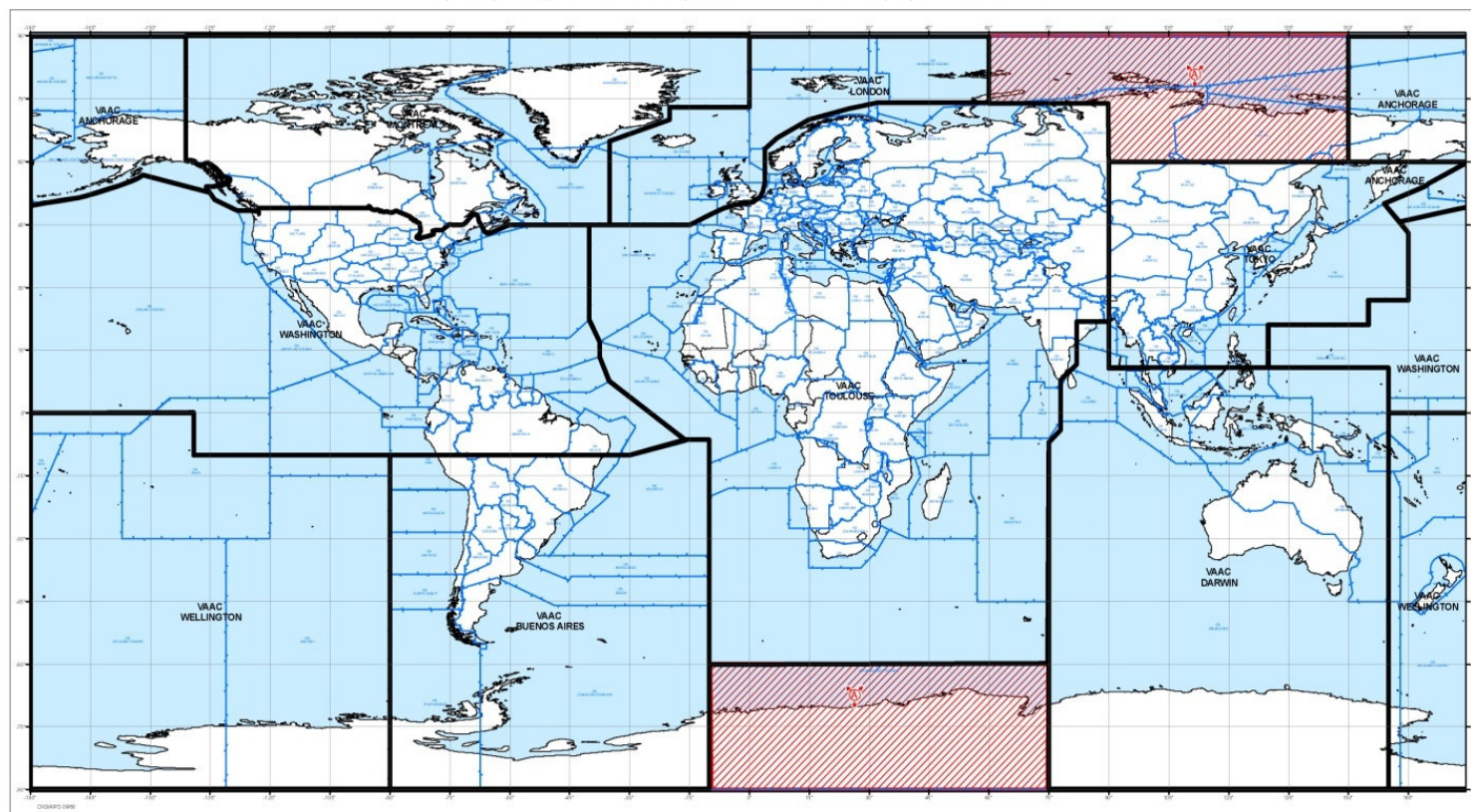


WVPH01 RPLL 211110
RPHI SIGMET 2 VALID 211100/211700 RPLL-
RPHI MANILA FIR VA ERUPTION MT PINATUBO ~~LOG~~ PSN S1500 E07348
VA CLD OBS AT 1100Z FL310/450 APRX 220KM BY 35KM S1500 E07348 – S1530
E07642 MOV SE 65KMH FCST 1700Z VA CLD APRX S1506 E07500 – S1518
E08112 – S1712 E08330 – S1824 E07826=

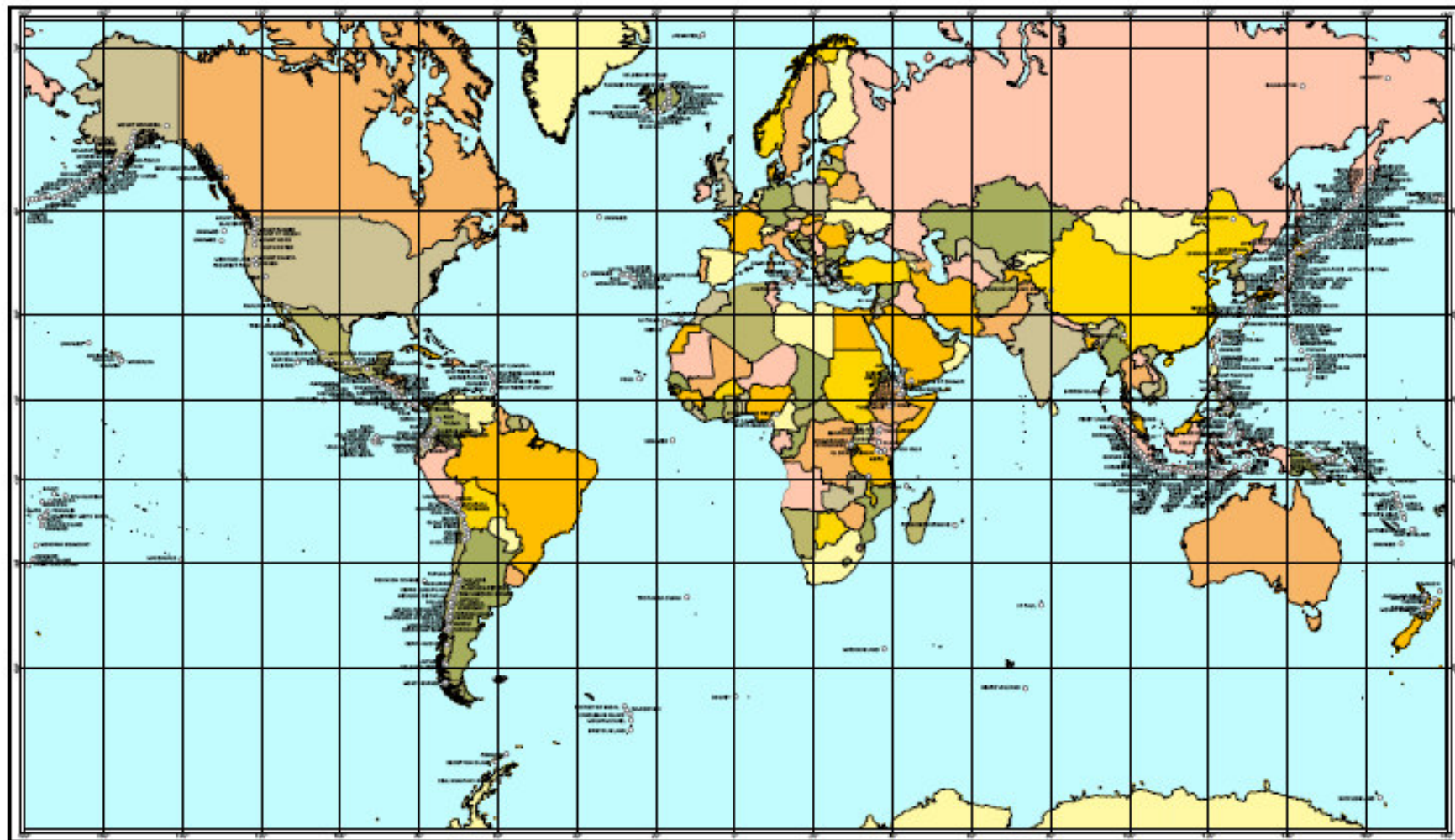
Note: The coordinates used in describing the VA cloud are fictitious



Volcanic Ash Advisory Centres



Volcanoes of the World

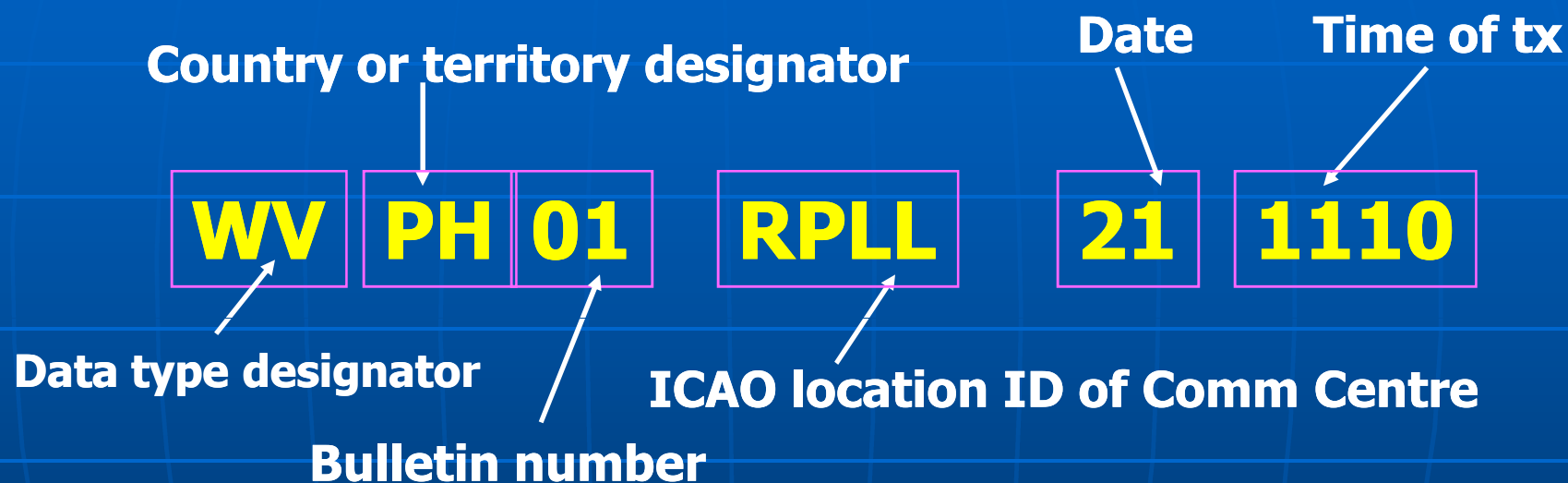


Volcanoes with Eruptions During the Last 10,000 Years
Prepared in 1995 by Roland Pool, Smithsonian Institution,
Global Volcanism Program, NHB MRC 115, Washington, DC 20560

VOLCANOES OF THE WORLD
3000 0 3000 Km
Mercator Projection

A 101x147 cm map, This Dynamic Planet, showing these volcanoes, earthquake epicenters, impact craters, plus tectonic and physiographic data is available from: US Geological Survey, Map Distribution Center, Box 25256, Federal Center, Denver, CO 80025 (800) USA-MAPS

SIGMET ISSUANCE – Volcanic Ash



WVPH01 RPLL 211110

RPHI SIGMET 2 VALID 211100/211700 RPLL-

RPHI MANILA FIR VA ERUPTION MT PINATUBO ~~LOC~~ PSN S1500 E07348

VA CLD OBS AT 1100Z FL310/450 APRX 220KM BY 35KM S1500 E07348 – S1530

E07642 MOV SE 65KMH FCST 1700Z VA CLD APRX S1506 E07500 – S1518

E08112 – S1712 E08330 – S1824 E07826=



SIGMET ISSUANCE – Volcanic Ash

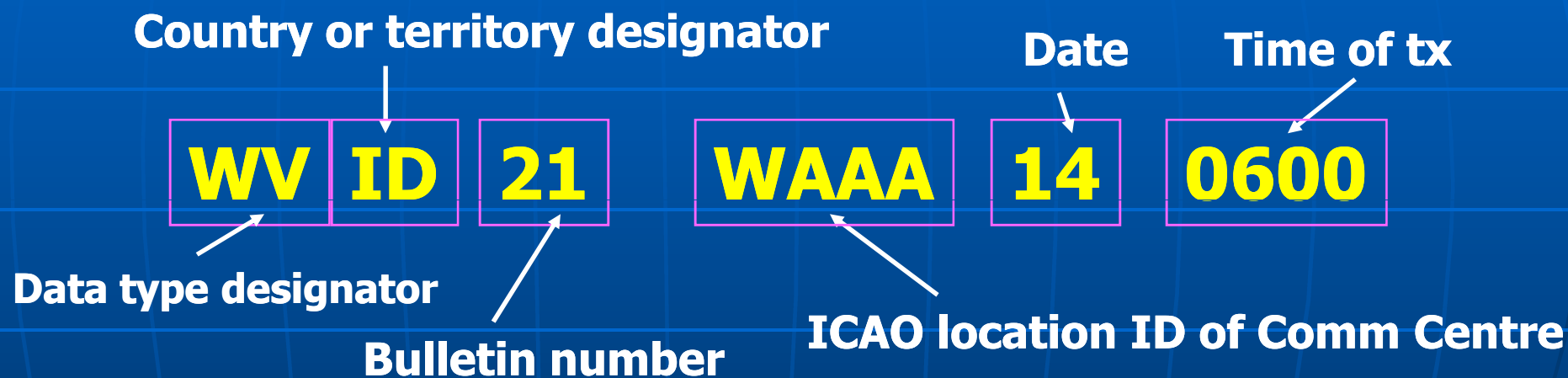
Exercise

Prepare WMO Header for SIGMET using the following parameters:

Phenomenon: Volcanic Ash
Issuing Comm Centre: WAAA
Country/territory code ID
Bulletin number 21
Time of issuance: 0600 UTC
Day of month: 14

SIGMET ISSUANCE – Volcanic Ash

Exercise



WVID21 WAAA 140600



SIGMET ISSUANCE – Volcanic Ash

ICAO location ID of ATS unit
serving FIR or CTA

ICAO ID of MWO

Validity period

RPHI SIGMET 2 VALID 211100/211700 RPLL-

Message identifier

Daily sequence #

Period of validity indicator

hyphen

WVPH01 RPLL 211110

RPHI SIGMET 2 VALID 211100/211700 RPLL-

RPHI MANILA FIR VA ERUPTION MT PINATUBO L0C PSN S1500 E07348

VA CLD OBS AT 1100Z FL310/450 APRX 220KM BY 35KM S1500 E07348 – S1530

E07642 MOV SE 65KMH FCST 1700Z VA CLD APRX S1506 E07500 – S1518

E08112 – S1712 E08330 – S1824 E07826=



SIGMET ISSUANCE – Volcanic Ash

Exercise

Prepare 1st line of SIGMET message using the following parameters:

Phenomenon: Volcanic Ash

ICAO ID of ATS unit serving FIR: WAAZ

ICAO ID of MWO: WAAA

1st SIGMET of the day

Validity period: 0600-1200 UTC

14th day of month



SIGMET ISSUANCE – Volcanic Ash

Exercise

ICAO location ID of ATS unit
serving FIR or CTA

ICAO ID of MWO

Validity period

WAAZ SIGMET A01 VALID 140600/141200 WAAA-

Message identifier

Daily sequence #

Period of validity indicator

hyphen

WAAZ SIGMET A01 VALID 140600/141200 WAAA-



SIGMET ISSUANCE – Volcanic Ash

ICAO location ID & FIR/UIR or CTA
name

Phenomenon

RPHI **MANILA FIR** **VA**

Volcano name and location

ERUPTION MT PINATUBO ~~**LOG**~~ **PSN S1500 E07348**

WVPH01 RPLL 211110

RPHI SIGMET 2 VALID 211100/211700 RPLL-

RPHI MANILA FIR VA ERUPTION MT PINATUBO ~~**LOG**~~ **PSN S1500 E07348**

VA CLD OBS AT 1100Z FL310/450 APRX 220KM BY 35KM S1500 E07348 – S1530

E07642 MOV SE 65KMH FCST 1700Z VA CLD APRX S1506 E07500 – S1518

E08112 – S1712 E08330 – S1824 E07826=



SIGMET ISSUANCE – Volcanic Ash

Exercise

Prepare 2nd line of SIGMET message using the following parameters:

Phenomenon: Volcanic Ash

ICAO location ID & FIR/UIR or CTA name: WAAZ UJUNG
PANDANG FIR

Volcano name and location: Eruption MT Soputan (N0107 E12443)
Crater size is 300m in diameter



SIGMET ISSUANCE – Volcanic Ash

Exercise

ICAO location ID & FIR/UIR or CTA
name

Phenomenon

WAAZ UJUNG PANDANG FIR VA

Volcano name and location

ERUPTION MT SOPUTAN ~~LOC~~ PSN N0107 E12443

**WAAZ UJUNG PANDANG FIR VA ERUPTION MT SOPUTAN ~~LOC~~ PSN N0107
E12443**



SIGMET ISSUANCE – Volcanic Ash

Exercise

WVID21 WAAA 140600
WAAZ SIGMET A01 VALID 140600/141200 WAAA-
WAAZ UJUNG PANDANG FIR VA ERUPTION MT SOPUTAN **LOG** **PSN** N0107
E12443



SIGMET ISSUANCE – Volcanic Ash

Volcanic ash cloud observed or forecast

Vertical extent

VA CLD OBS AT 1100Z FL310/450

APRX 220KM BY 35KM S1500 E07348 – S1530 E07642

Horizontal extent

MOV SE 65KMH

Position

Expected movement

WVPH01 RPLL 211110
RPHI SIGMET 2 VALID 211100/211700 RPLL-
RPHI MANILA FIR VA ERUPTION MT PINATUBO ~~LOC~~ PSN S1500 E07348
VA CLD OBS AT 1100Z FL310/450 APRX 220KM BY 35KM S1500 E07348 – S1530
E07642 MOV SE 65KMH FCST 1700Z VA CLD APRX S1506 E07500 – S1518
E08112 – S1712 E08330 – S1824 E07826=

SIGMET ISSUANCE – Volcanic Ash

Exercise

Prepare 2nd line of SIGMET message using the following parameters:

Phenomenon: Volcanic Ash

Volcanic ash cloud observed at 0600 UTC

Approximate location of cloud: surface to FL200 and horizontally bounded by N0110 E12440, N0155 E12455, N0130 E12530, N0110 E12440

Ash cloud is stationary

Ash is detected on vehicles



SIGMET ISSUANCE – Volcanic Ash

Exercise

Volcanic ash cloud observed or forecast

Vertical extent

VA CLD OBS AT 0600Z | APRX SFC/FL200

**N0110 E12440 – N0155 E12455 – N0130 E12530 –
N0110 E12440**

Position

MOV SE 65KMH

Expected movement

**VA CLD OBS AT 0600Z APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440 STNR**



SIGMET ISSUANCE – Volcanic Ash

Exercise

WVID21 WAAA 140600
WAAZ SIGMET A01 VALID 140600/141200 WAAA-
WAAZ UJUNG PANDANG FIR VA ERUPTION MT SOPUTAN **LOG** **PSN** N0107
E12443
VA CLD OBS AT 0600Z APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440 STNR



SIGMET ISSUANCE – Volcanic Ash

VA cloud forecast at end of period of validity

FCST 1700Z

**VA CLD APRX S1506 E07500 – S1518 E08112 –
S1712 E08330 – S1824 E07826=**

Position

WVPH01 RPLL 211110

RPHI SIGMET 2 VALID 211100/211700 RPLL-

RPHI MANILA FIR VA ERUPTION MT PINATUBO ~~LOC~~ PSN S1500 E07348

**VA CLD OBS AT 1100Z FL310/450 APRX 220KM BY 35KM S1500 E07348 – S1530
E07642 MOV SE 65KMH FCST 1700Z VA CLD APRX S1506 E07500 – S1518
E08112 – S1712 E08330 – S1824 E07826=**

SIGMET ISSUANCE – Volcanic Ash

Exercise

Prepare 2nd line of SIGMET message using the following parameters:

Phenomenon: Volcanic Ash

Volcanic ash cloud forecast at 1200 UTC is approximated to be the same location as the observed location: surface to FL200 and horizontally bounded by N0110 E12440, N0155 E12455, N0130 E12530, N0110 E12440

Lava reaches sea



SIGMET ISSUANCE – Volcanic Ash

Exercise

VA cloud forecast at end of period of validity

FCST 1200Z

**VA CLD APRX SFC/FL200 N0110 E12440 –
N0155 E12455 – N0130 E12530 – N0110 E12440=**

Position

**FCST 1200Z VA CLD APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440=**



SIGMET for VA

Exercise

WVID21 WAAA 140600
WAAZ SIGMET A01 VALID 140600/141200 WAAA-
WAAZ UJUNG PANDANG FIR VA ERUPTION MT SOPUTAN **LOG** **PSN** N0107
E12443
VA CLD OBS AT 0600Z APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440 STNR
FCST 1200Z VA CLD APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440=



SIGMET for VA

Exercise

Parameters (taken from example given by Bureau of Australia to be included in SIGMET guide)

On the 14th day of the month at 0600 UTC, Mount Soputan (N0107, E12443) erupted. The associated volcanic ash cloud extended from the surface to FL200 and is approximately bounded by the points N0110 E12440 – N0155 E12455 – N0130 E12530 – N0110, E12440. The cloud is stationary at the time of observation, but its forecast location 6 hours after the eruption the volcanic ash cloud is expected to be bounded by the same points given. The extend at the forecast time is still from the surface to FL200.

This is the first SIGMET of the day, the communication center disseminating the message is WAAA, which is also the MWO that issues the SIGMET for the WAAZ UJUNG PANDANG FIR, the country/territory code and bulletin number is ID21.

Construct a VA SIGMET with the information given.



SIGMET for VA

Exercise

WVID21 WAAA 140600
WAAZ SIGMET A01 VALID 140600/141200 WAAA-
WAAZ UJUNG PANDANG FIR VA ERUPTION MT SOPUTAN **LOG** **PSN** N0107
E12443
VA CLD OBS AT 0600Z APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440 STNR
FCST 1200Z VA CLD APRX SFC/FL200 N0110 E12440 – N0155 E12455 – N0130
E12530 – N0110 E12440=



- Normal Advice
VA ADVISORY
DTG: 20020925/0458Z
VAAC: DARWIN

Volcanic Ash Advisory

VOLCANO: RUANG 0607-01
PSN: N0217 E12525
AREA: SANGIHE_IS INDONESIA
SUMMIT ELEV: 725M

ADVISORY NR: 2
INFO SOURCE: GMS IMAGERY, CVGHM
AVIATION COLOUR CODE: RED
ERUPTION DETAILS: CVGHM ADVISE RUANG BEGAN ERUPTING AT 25/0100 LOCAL

OBS VA DTG: 25/0332Z
OBS VA CLD: SFC/FL250 N0210 E12515 - N0305 E12400 - N0200 E12400 - N0210 E12515 MOV
WNW 15KT
FCST VA CLD +6 HR: 25/1000Z SFC/FL250 N0210 E12515 - N0400 E12220 - N0105 E12220 -
N0210 E12515
FCST VA CLD +12 HR: 25/1600Z SFC/FL250 N0210 E12515 - N0505 E12100 - N0005 E12100 -
N0210 E12515
FCST VA CLD +18 HR: 25/2200Z SFC/FL250 N0210 E12515 - N0600 E11920 - S0100 E11915 -
N0210 E12515

NXT ADVISORY: NO LATER THAN 20020925/1100Z.
RMK: PLUME HEIGHT ESTIMATED FROM GMS IR IMAGERY TO FL250.

DARWIN VAAC.

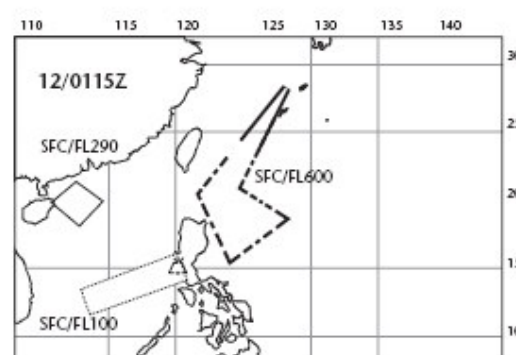
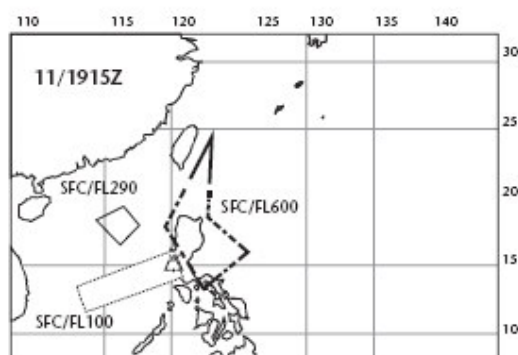
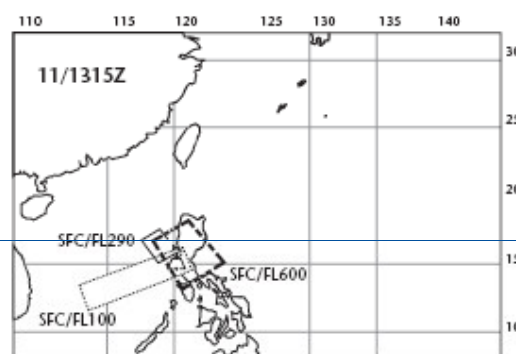
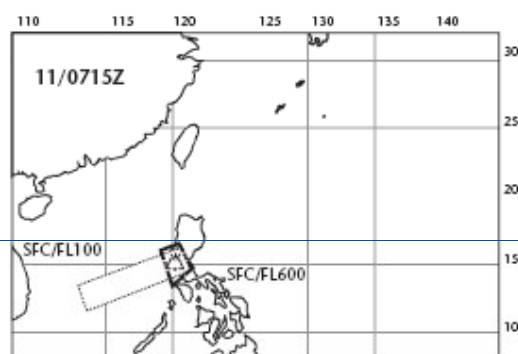
Volcanic Ash Graphic

APP I-9

7/11/07

VOLCANIC ASH ADVISORY INFORMATION IN GRAPHICAL FORMAT

MODEL VAG



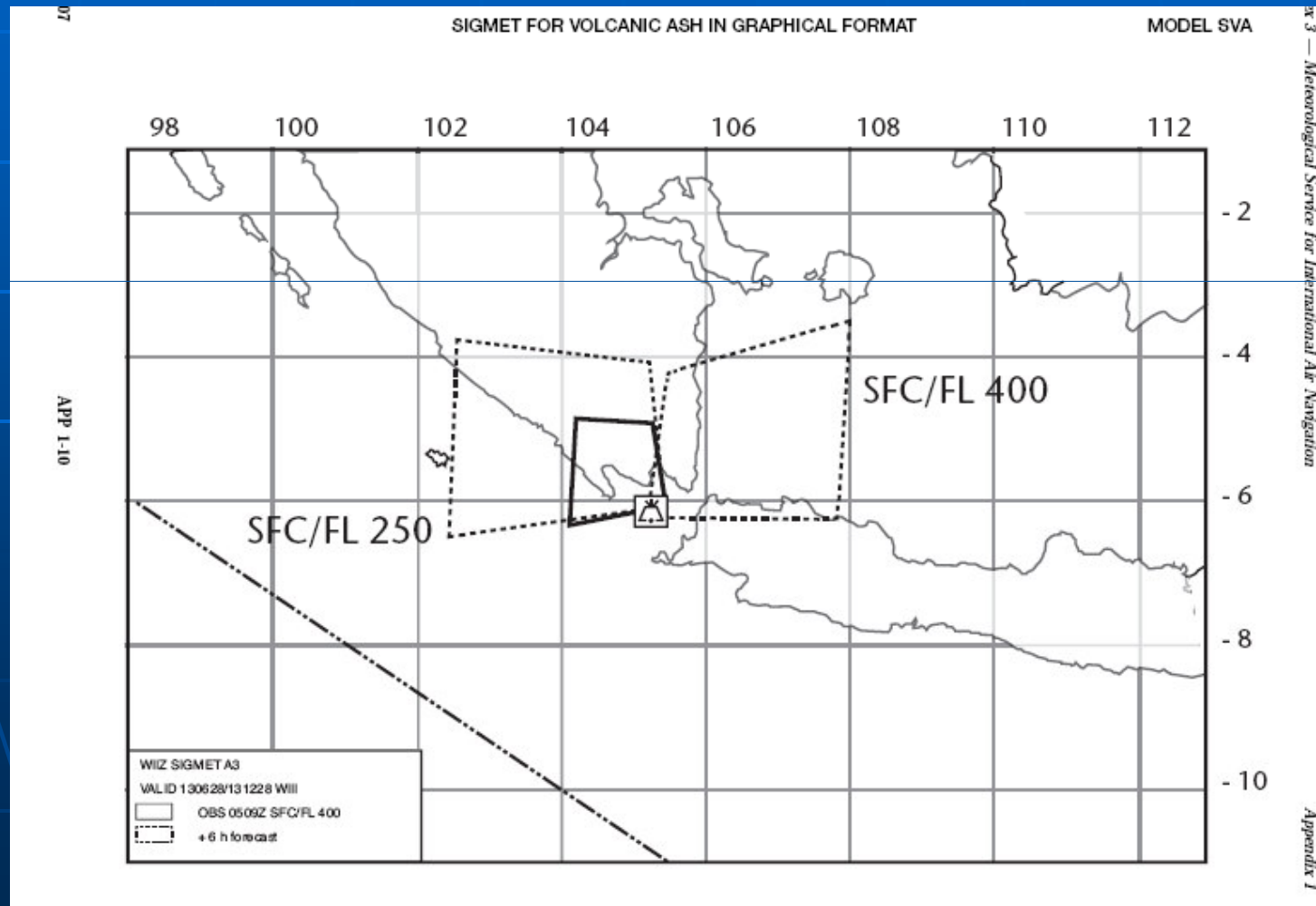
VOLCANIC ASH ADVISORY
DTG: 20050711/0728Z
VAAC: TOKYO
VOLCANO: PINATUBO 0703-083
AREA: LUZON PHILIPPINES
SUMMIT ELEV: 1486M
ADVISORY NR: 2005/1

INFO SOURCE: MTSAT-1R, AIREP
AVIATION COLOUR CODE: RED
ERUPTION DETAILS: ERUPTED AT 20050711/0532Z
RMK: NIL
NXT ADVISORY: NO LATER THAN 20050711/1315Z

Appendix I

Annex 3 — Meteorological Service for International Air Navigation

Volcanic Ash Graphic





SIGMET CANCELLATION

WSXY31 YUSO 101200
YUDD SIGMET 5 VALID 101200/101600 YUSO-
YUDD SHANLON FIR

WSXY31 YUSO 101430
YUDD SIGMET 6 VALID 101430/101600 YUSO-
YUDD SHANLON FIR CNL SIGMET 5 101200/101600=

SIGMET GUIDANCE

* Further Guidance on SIGMET

AFI Regional SIGMET Guide

SIGMET Posters

**[http://www.icao.int/anb/SG/METWSG/Posters_
SIGMET.htm](http://www.icao.int/anb/SG/METWSG/Posters_SIGMET.htm)**

SIGMET Recap

Definition & Documents

Use

MWO function

Dissemination

Type

Validity

Update/Cancel

Format

Issuance

