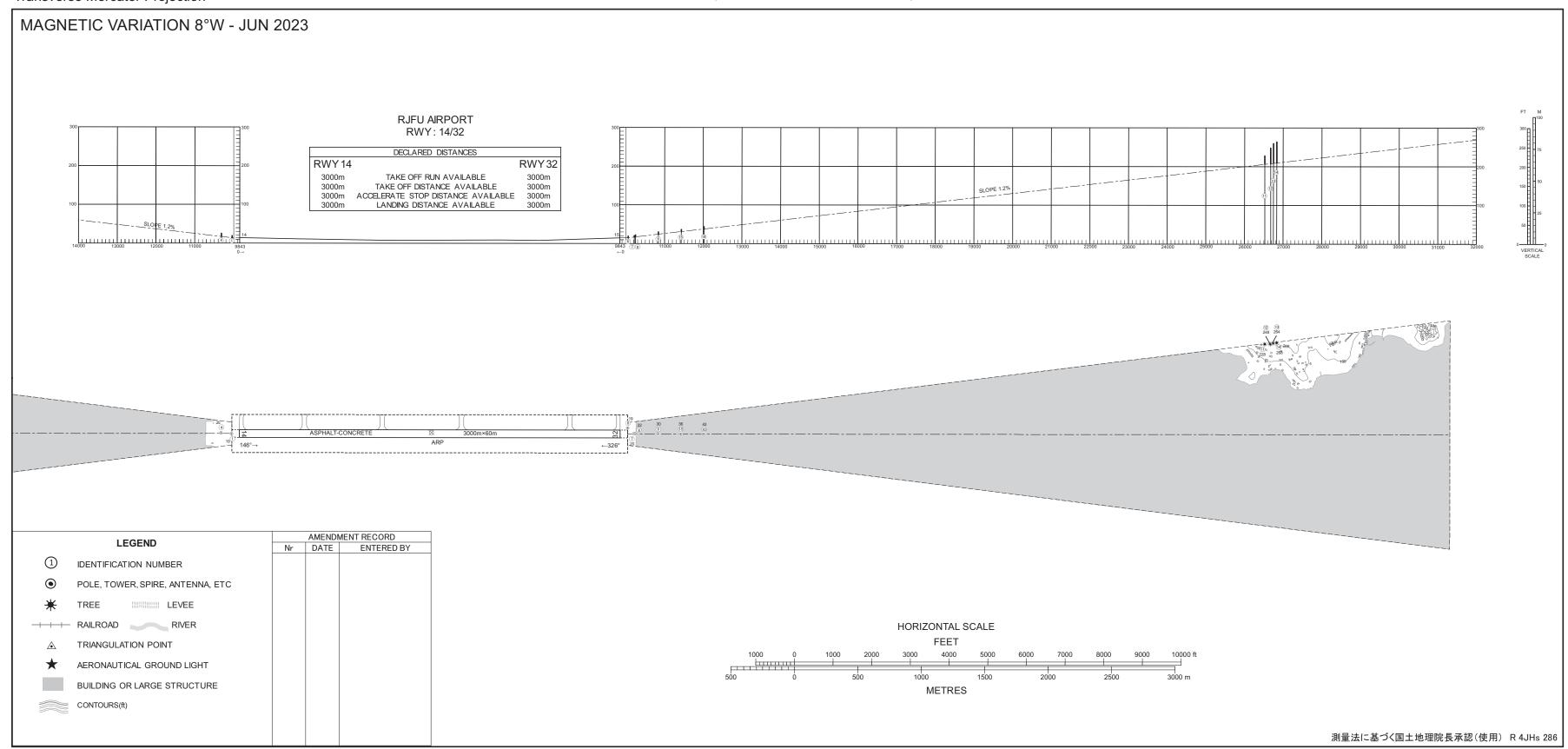




# DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC Transverse Mercator Projection

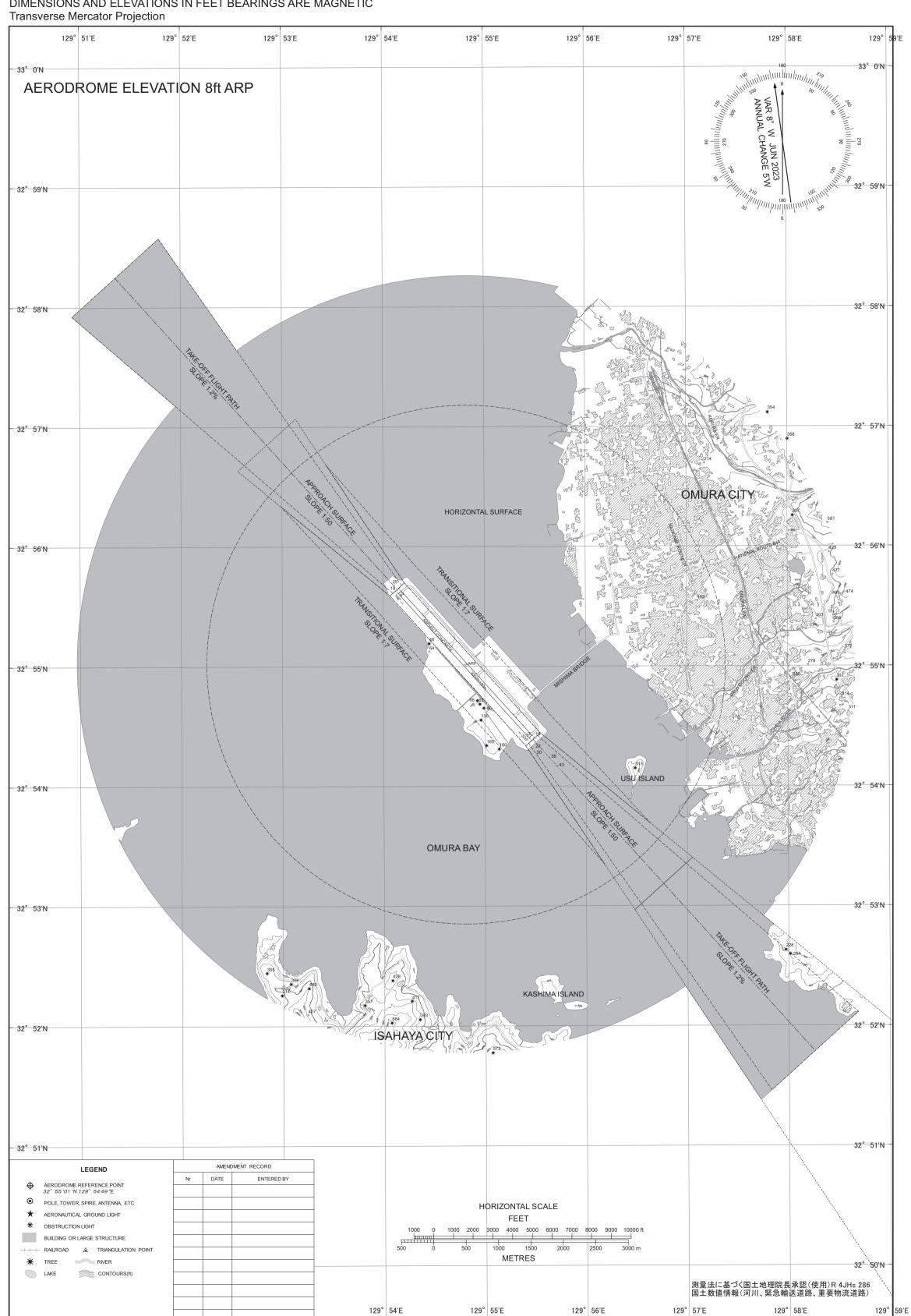
# AERDROME OBSTACLE CHART - ICAO TYPE A (OPERATING LIMITATIONS)



Civil Aviation Bureau, Japan (EFF:15 JUN 2023)

# AERDROME OBSTACLE CHART - ICAO TYPE B

DIMENSIONS AND ELEVATIONS IN FEET BEARINGS ARE MAGNETIC



RJFU / NAGASAKI SID

# NORTH ONE DEPARTURE

RWY 14: Climb RWY HDG to 500FT, via OLE R144 to 6.0 DME, turn right HDG324° until crossing OLE R258, turn right HDG016° to intercept and proceed via OLE R331 to PEARL....

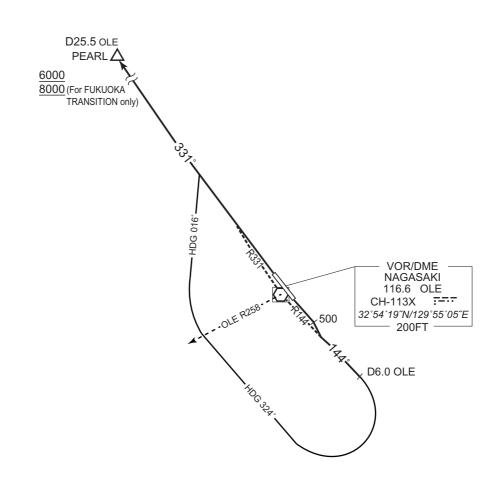
RWY 32: Climb via OLE R331 to PEARL....

... Cross PEARL at or above 6000FT(\*).

\* For FUKUOKA TRANSITION: Cross PEARL at or above 8000FT.

Note RWY 14: 5.0% climb gradient required up to 1200FT.

OBST ALT 1411FT located at 6.9NM 158° FM end of RWY14. OBST ALT 1575FT located at 7.7NM 165° FM end of RWY14.



RJFU / NAGASAKI TRANSITION

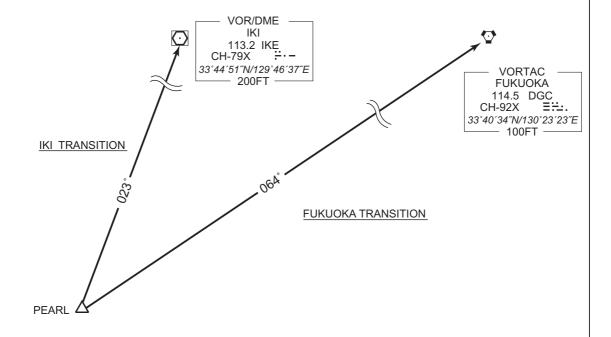
# **FUKUOKA TRANSITION**

From over PEARL, via DGC R244 to DGC VORTAC.

Note: Not applicable for aircraft equipped with TACAN only.

# IKI TRANSITION

From over PEARL, via IKE R203 to IKE VOR/DME.



RJFU / NAGASAKI SID

# WEST SEVEN DEPARTURE

RWY 14: Climb RWY HDG to 500FT, climb via OLE R144 to 1800FT, turn right HDG292° to intercept and proceed via OLE R247...

RWY 32: Climb RWY HDG 1500FT, turn left HDG202° to intercept and proceed via OLE R247...

... to SUMOU.

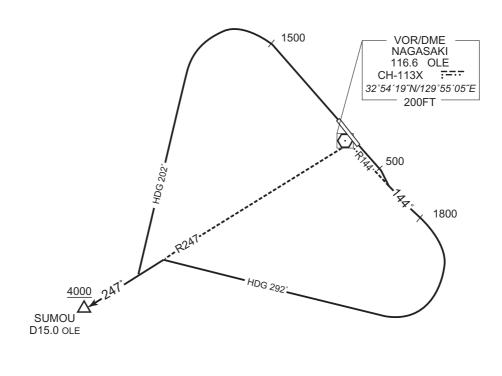
Cross SUMOU at or above 4000FT.

Note RWY 14: 5.0% climb gradient required up to 1800FT.

OBST ALT 854FT located at 3.4NM 170° FM end of RWY14.

RWY 32: 5.0% climb gradient required up to 1500FT.

OBST ALT 1969FT located at 8.0NM 272° FM end of RWY32.



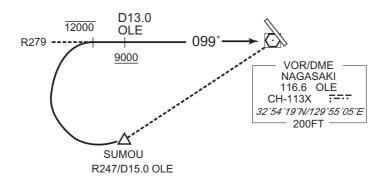
RJFU / NAGASAKI TRANSITION

# OMURA TRANSITION

From over SUMOU, turn right to intercept and proceed via OLE R279 to OLE VOR/DME.

Maintain 12000FT or below until intercepting OLE R279.

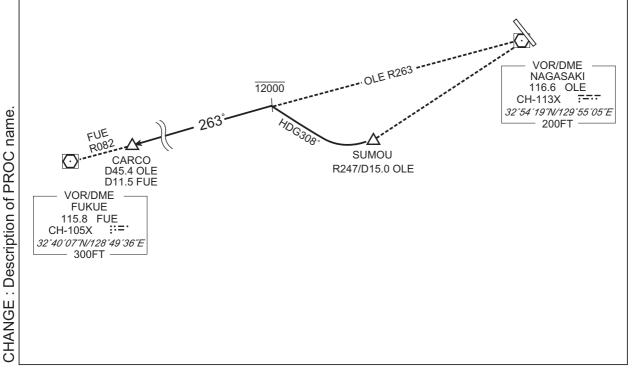
Cross OLE R279/13.0DME at or above 9000FT.



# CARCO TRANSITION

From over SUMOU, turn right HDG308° to intercept and proceed via OLE R263 /FUE R082 to CARCO.

Maintain 12000FT or below until intercepting OLE R263.



RJFU / NAGASAKI SID

# NAGASAKI REVERSAL FIVE DEPARTURE

RWY 14: Climb RWY HDG to 500FT, climb via OLE R144 to 6.0DME, turn right, direct to OLE VOR/DME.

Cross OLE VOR/DME at or above 5000FT.

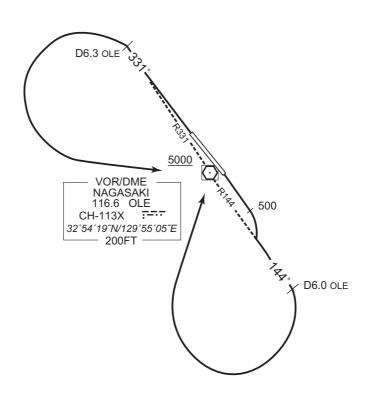
RWY 32: Climb via OLE R331 to 6.3DME, turn left, direct to OLE VOR/DME. Cross OLE VOR/DME at or above 5000FT.

Note RWY 14: 5.0% climb gradient required up to 1800FT.

OBST ALT 1575FT located at 7.7NM 165° FM end of RWY14.

RWY 32: 5.0% climb gradient required up to 1600FT.

OBST ALT 1969FT located at 8.0NM 272° FM end of RWY32.



RJFU / NAGASAKI **RNAV SID** CHIKUGO FIVE DEPARTURE Basic RNP1 Note GNSS required. VAR 8° W TOHKI 330937.2N 1295823.9E HIZEN 330552.5N 1300503.7E 12.000 13000 **MUTUU** FU200 330129.4N 330134.6N 1294747.6E <u>500</u> -GOROH 325837.5N 1301754.5E FL170 ω. WARAS 325037.5N 1301553.8E FL170 UNZEN 1301451.1E FU401 323918.7N 1301130.5E

RWY14: Climb on HDG146° at or above 500FT, direct to FU401, to UNZEN, to WARAS at or below FL170, to GOROH at or above FL170.

RWY32: Climb on HDG326° at or above 500FT, direct to FU200, to TOHKI, to HIZEN at or above 13000FT, to MUTUU at or below FL170, to GOROH at or above FL170.

NOTE RWY14: 5.0% climb gradient required up to 4700FT.

OBST ALT 4954FT located at 20.8NM 122° FM end of RWY14.

RWY32: 5.0% climb gradient required up to 500FT.

OBST ALT 2067FT located at 9.8NM 013° FM end of RWY32.

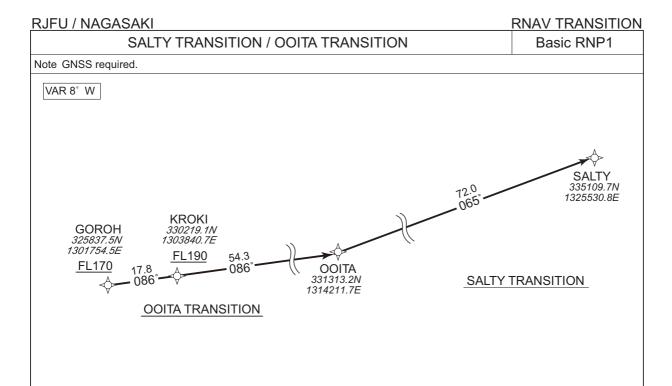
RJFU / NAGASAKI RNAV SID

# CHIKUGO FIVE DEPARTURE

# RWY14

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	146 (138.1)	-7.6	_	-	+500	_	_	Basic RNP1
002	DF	FU401	_	_	-7.6	_	_	_	_	_	Basic RNP1
003	TF	UNZEN	_	029 (021.5)	-7.6	7.7	1	_	_	_	Basic RNP1
004	TF	WARAS	_	019 (011.9)	-7.6	4.3	_	-FL170	_	_	Basic RNP1
005	TF	GOROH	_	019 (011.9)	-7.6	8.2	_	+FL170	_	_	Basic RNP1

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	VA	_	_	326 (318.1)	-7.6	_	_	+500	_	_	Basic RNP1
002	DF	FU200	_	_	-7.6	_	_	_	_	_	Basic RNP1
003	TF	тонкі	_	055 (047.8)	-7.6	12.0	_	_	_	_	Basic RNP1
004	TF	HIZEN	_	131 (123.8)	-7.6	6.7	_	+13000	_	_	Basic RNP1
005	TF	MUTUU	_	131 (123.9)	-7.6	7.9	_	-FL170	_	_	Basic RNP1
006	TF	GOROH	_	132 (124.0)	-7.6	5.1	_	+FL170	_	_	Basic RNP1



#### SALTY TRANSITION

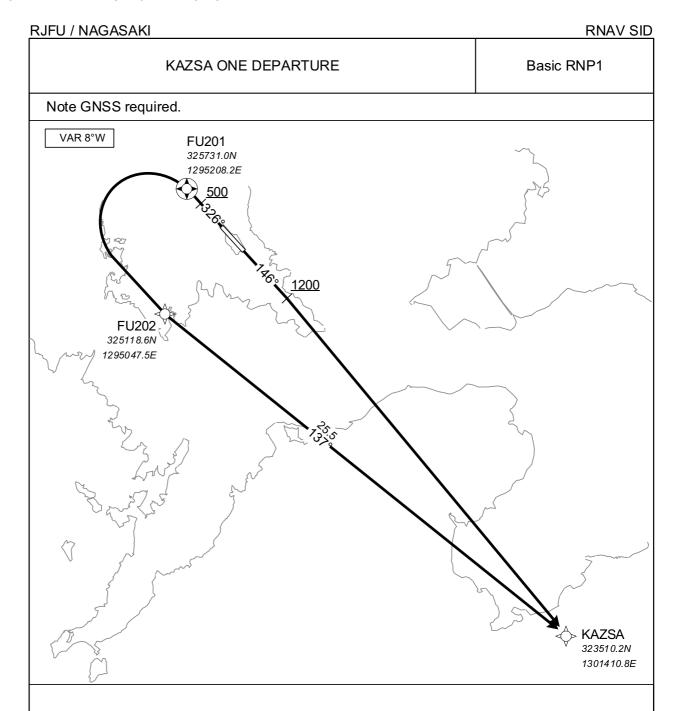
From GOROH at or above FL170, to KROKI at or above FL190, to OOITA, to SALTY.

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	GOROH	_	_	-7.6	_	_	+FL170	_	_	Basic RNP1
002	TF	KROKI	_	086 (077.9)	-7.6	17.8	_	+FL190	ı	_	Basic RNP1
003	TF	OOITA	_	086 (078.1)	-7.6	54.3	_	_	-	_	Basic RNP1
004	TF	SALTY	_	065 (057.8)	-7.6	72.0	_	_	_	_	Basic RNP1

#### **OOITA TRANSITION**

From GOROH at or above FL170, to KROKI at or above FL190, to OOITA.

	Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
1	Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
	001	IF	GOROH	_	1	-7.6	_	-	+FL170	-	_	Basic RNP1
	002	TF	KROKI	_	086 (077.9)	-7.6	17.8	_	+FL190	_	_	Basic RNP1
	003	TF	OOITA	_	086 (078.1)	-7.6	54.3	_	_	_	_	Basic RNP1



RWY14: Climb on HDG146° at or above 1200FT, direct to KAZSA

RWY32 : Climb on HDG326° at or above 500FT, direct to FU201, turn left direct to FU202,

to KAZSA.

Note RWY14: 5.0% climb gradient required up to 1200FT.

OBST ALT 892FT located at 4.1NM 130° FM end of RWY14. OBST ALT 1050FT located at 4.6NM 165° FM end of RWY14.

RWY32: 5.0% climb gradient required up to 1900FT.

OBST ALT 1936FT located at 8.0NM 272° FM end of RWY32.

RJFU / NAGASAKI RNAV SID

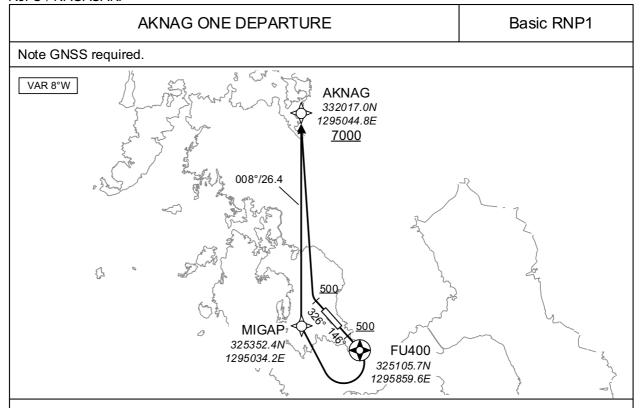
# KAZSA ONE DEPARTURE

# RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over		Magnetic Variation		Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	_	_	146 (138.1)	-7.6	_	_	+1200	_	_	Basic RNP1
002	DF	KAZSA	_	_	-7.6	_	_	_	_	_	Basic RNP1

1 1 1 1 0 2											
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	_	_	326 (318.1)	-7.6	_	_	+500	_	-	Basic RNP1
002	DF	FU201	Υ	1	-7.6	_	-	_	ı	1	Basic RNP1
003	DF	FU202	_	_	-7.6	_	L	_	1	_	Basic RNP1
004	TF	KAZSA	_	137 (129.3)	-7.6	25.5	_	_	_	_	Basic RNP1

RJFU / NAGASAKI RNAV SID



RWY14 : Climb on HDG146° at or above 500FT, direct to <u>FU400</u>, turn right direct to MIGAP,

to AKNAG at or above 7000FT.

RWY32 : Climb on HDG326° at or above 500FT, turn right direct to AKNAG at or above 7000FT.

Note RWY14: 5.0% climb gradient required up to 1800FT.

OBST ALT 1247FT located at 4.2NM 177° FM end of RWY14. OBST ALT 1634FT located at 3.6NM 211° FM end of RWY14.

RWY32: 5.0% climb gradient required up to 1200FT.

OBST ALT 1739FT located at 8.7NM 010° FM end of RWY32.

#### RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	146 (138.1)	-7.7	-	-	+500	-	-	Basic RNP1
002	DF	FU400	Υ	-	-7.7	-	-	-	-	-	Basic RNP1
003	DF	MIGAP	-	-	-7.7	-	R	-	-	-	Basic RNP1
004	TF	AKNAG	-	008 (000.3)	-7.7	26.4	-	+7000	-	-	Basic RNP1

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	326 (318.1)	-7.7	-	-	+500	-	-	Basic RNP1
002	DF	AKNAG	1	-	-7.7	-	R	+7000	-	-	Basic RNP1

RJFU / NAGASAKI RNAV SID

# CARCO ONE DEPARTURE Basic RNP1 Note GNSS required. VAR 8°W 1500 FU400 325105.7N 1295859.6E 325133.9N 1294209.8E CARCO 324301.7N 1290247.7E

 $RWY14: Climb \ on \ HDG146° \ at \ or \ above \ 500FT, \ direct \ to \ \underline{FU400}, \ turn \ right \ direct \ to \ AKMEP,$ 

to CARCO.

RWY32 : Climb on HDG326° at or above 1500FT, turn left direct to AKMEP, to CARCO.

Note RWY14: 5.0% climb gradient required up to 1800FT.

OBST ALT 1247FT located at 4.2NM 177° FM end of RWY14. OBST ALT 1634FT located at 3.6NM 211° FM end of RWY14.

RWY32: 5.0% climb gradient required up to 1500FT.

OBST ALT 1969FT located at 8.0NM 272° FM end of RWY32.

#### RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	ı	1	146 (138.1)	-7.7	ı	ı	+500	1	1	Basic RNP1
002	DF	FU400	Υ	-	-7.7	-	-	-	-	-	Basic RNP1
003	DF	AKMEP	1		-7.7	-	R	-	-	-	Basic RNP1
004	TF	CARCO	-	263 (255.7)	-7.7	34.2	-	-	-	-	Basic RNP1

Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	1	326 (318.1)	-7.7	1	-	+1500	1	ı	Basic RNP1
002	DF	AKMEP	ı	i	-7.7	ı	L	-	ı	ı	Basic RNP1
003	TF	CARCO	-	263 (255.7)	-7.7	34.2	-	-	-	-	Basic RNP1

#### STANDARD ARRIVAL CHART-INSTRUMENT

RJFU / NAGASAKI **RNAV STAR** SARUKU ARRIVAL / FUBUKI ARRIVAL Basic RNP1 Note GNSS required. VAR 8°W **OHGIE** 331952.9N 1301041.7E 11000 6.8 SARUKU ARRIVAL **GLOVR** 331352.9N **PADDY** 1300221.4E 331305.6N 1301015.7E 7000 OTAXA 330952.4N 1295648.2E 0.0 4000 SARUK 330550.7N 1295114.3E 3700 **TARAH** 330210.0N 1300934.0E 7000 9.0 FUBUKI ARRIVAL VOR/DME NAGASAKI 116.6 OLE H-113X :---TAKAK CH-113X 325411.3N 1300903.6E 32°54′19″N/129°55′05″E 9.7 5000 200FT OBAMA *324806.4N* CHANGE: Description of HLDG 296°/2.7 FUBKI 1300840.9E 324707.9N 1300312.8E MAX 230KIAS 2600 HONÍA 324617.1N 1300616.8E 1MIN (at or below FL140) MAX 210KIAS 1.5MIN (above FL140) NOT TO SCALE MHA 5000 MAX 210KIAS (at or below FL140) MAX 240KIAS (above FL140)

#### STANDARD ARRIVAL CHART-INSTRUMENT

RJFU / NAGASAKI RNAV STAR

# SARUKU ARRIVAL

From OHGIE at or above 11000FT, to GLOVR at or above 7000FT, to OTAXA at or above 4000FT, to SARUK at or above 3700FT.

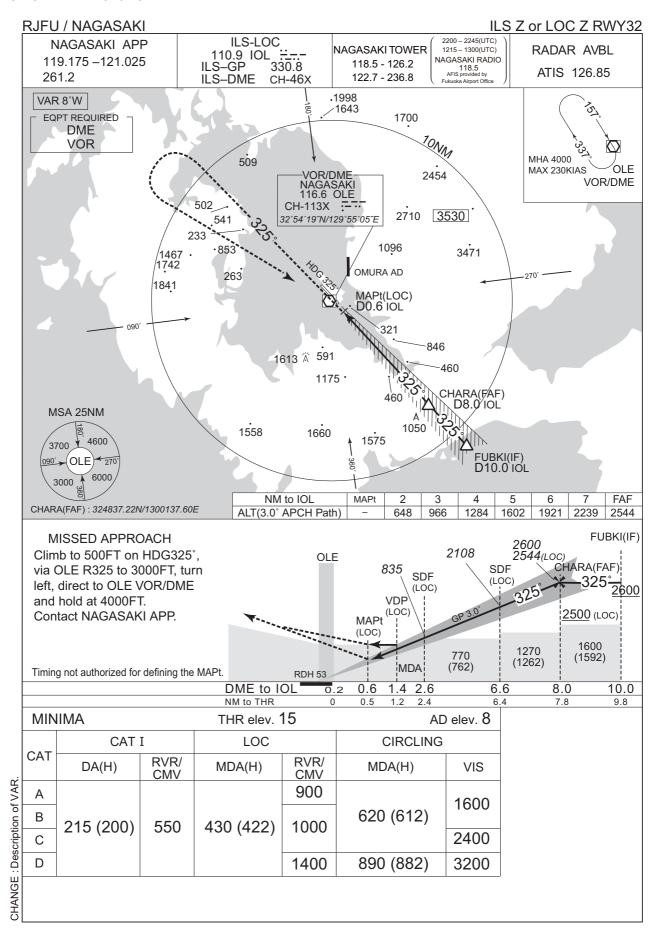
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	l	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	IF	OHGIE	_	_	-7.6	_	_	+11000	_	_	Basic RNP1
002	TF	GLOVR	_	237 (229.3)	-7.6	9.2	_	+7000	_	_	Basic RNP1
003	TF	OTAXA	_	237 (229.2)	-7.6	6.1	_	+4000	_	_	Basic RNP1
004	TF	SARUK	_	237 (229.2)	-7.6	6.2	_	+3700	_	_	Basic RNP1

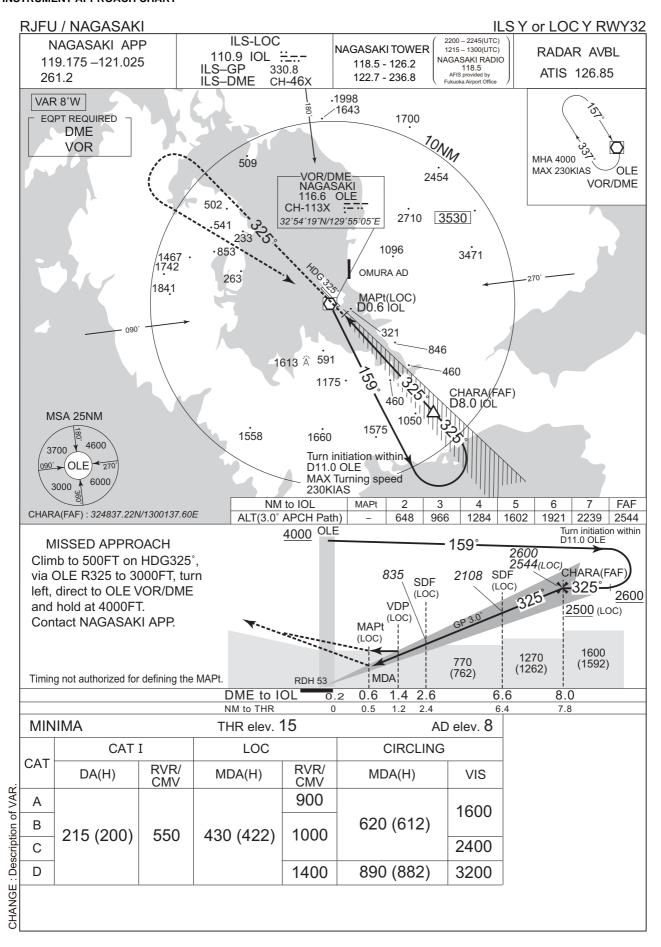
# FUBUKI ARRIVAL

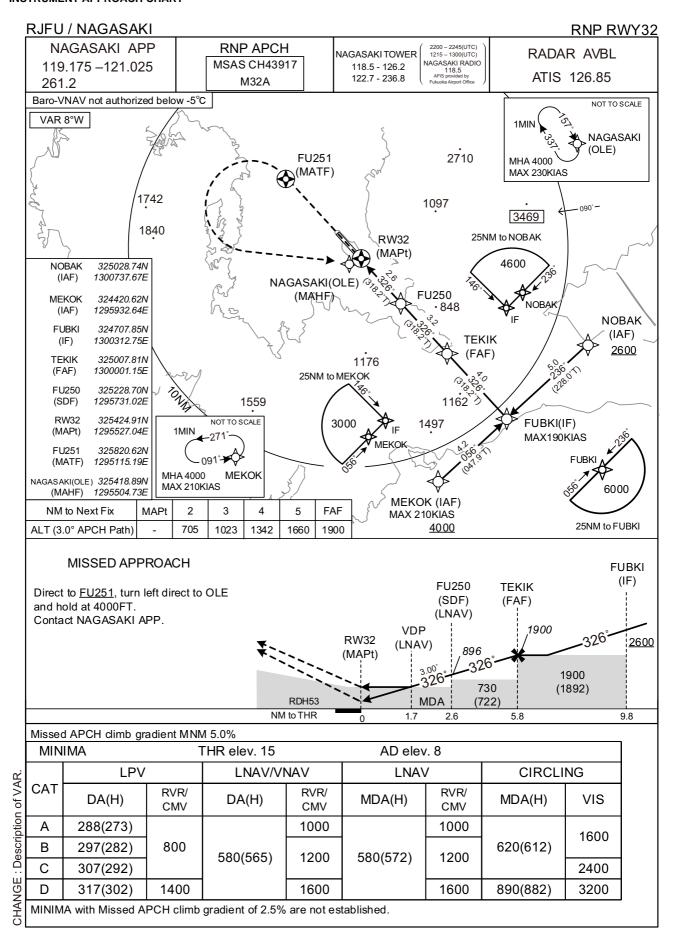
From OHGIE at or above 11000FT, to PADDY, to TARAH at or above 7000FT, to TAKAK at or above 5000FT, to OBAMA, to AINOH, to FUBKI at or above 2600FT.

Serial	Path	Waypoint	Fly	Course	Magnetic	Distance	Turn	Altitude	Speed	Vertical	Navigation
Number	Descriptor	Identifier	Over	°M(°T)	Variation	(NM)	Direction	(FT)	(KIAS)	Angle	Specification
001	IF	OHGIE	_	_	-7.6	_	_	+11000	_	_	Basic RNP1
002	TF	PADDY	_	191 (183.1)	-7.6	6.8	_	_	_	_	Basic RNP1
003	TF	TARAH	_	191 (183.1)	-7.6	10.9	_	+7000	-	_	Basic RNP1
004	TF	TAKAK	_	191 (183.0)	-7.6	8.0	_	+5000	-	_	Basic RNP1
005	TF	OBAMA	_	191 (183.0)	-7.6	6.1	_	-	-230	_	Basic RNP1
006	TF	AINOH	_	236 (228.0)	-7.6	2.7	-	ı	-210	_	Basic RNP1
007	TF	FUBKI	_	296 (288.2)	-7.6	2.7	_	+2600	_	_	Basic RNP1

Path	Waypoint Identifier	Inbound Course °M(°T)	Magnetic Variation	Outbound Time (MIN)	Turn Direction	Minimum Altitude (FT)	Maximum Altitude (FT)	Speed (KIAS)	Navigation Specification
Hold	TAKAK	191 (183.0)	-7.6	1.0(-14000) 1.5(+14001)	R	5000	-	-210(-14000) -240(+14001)	Basic RNP1







# RJFU / NAGASAKI

LTP/FTP longitude

CRC remainder

RNP RWY32

50.0

FAS DATA BLOCK					
Operation type	0	LTP/FTP ellipsoidal height	+00370		
SBAS service provider identifier	2	FPAP latitude	325537.2480N		
Airport identifier	RJFU	FPAP longitude	1295409.7775E		
Runway	32	Threshold crossing height	00016.2		
Approach performance designator	0	TCH units selector	1		
Route indicator		Glide path angle	03.00		
Reference path data selector	0	Course width at threshold	105.00		
Reference path ID	M32A		0000		
LTP/FTP latitude	325424.8850N	HAL	40.0		

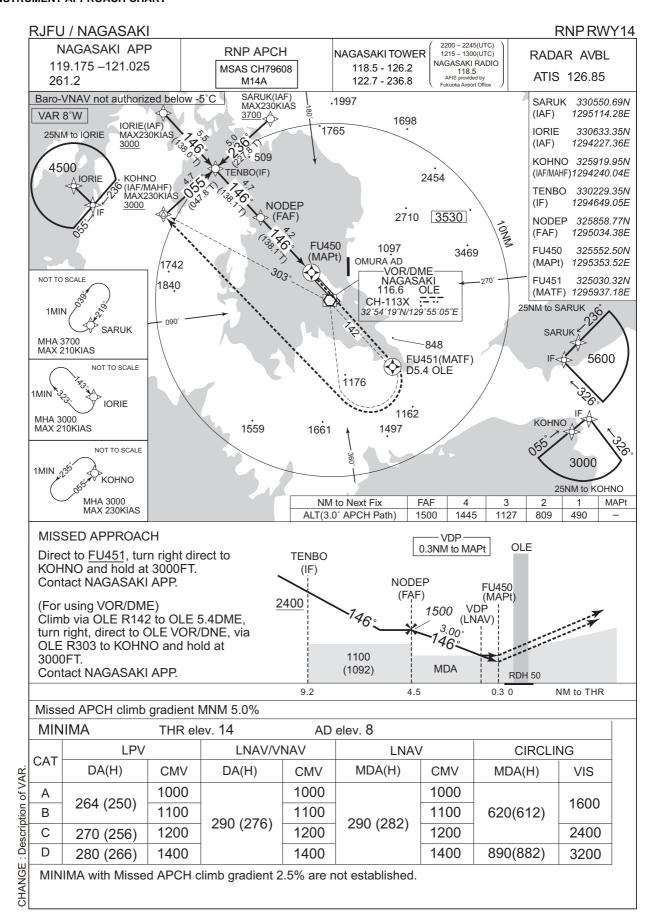
# Required additional data

١.	1 to a a a a a a a a a a a a a a a a a a				
	LTP/FTP orthometric height	4.8			

VAL

1295527.0410E

10898D02



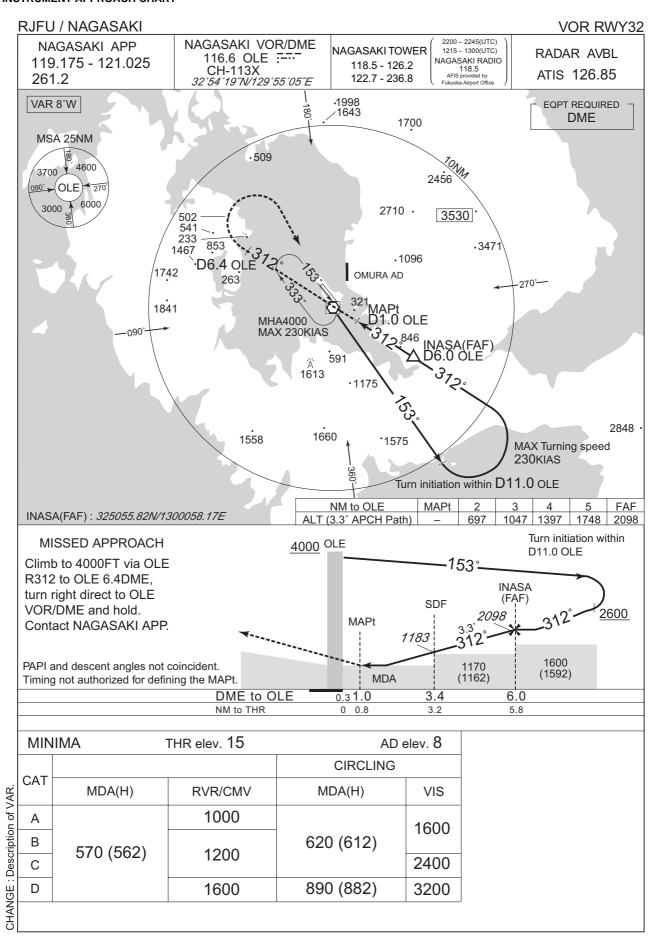
RJFU / NAGASAKI RNP RWY14

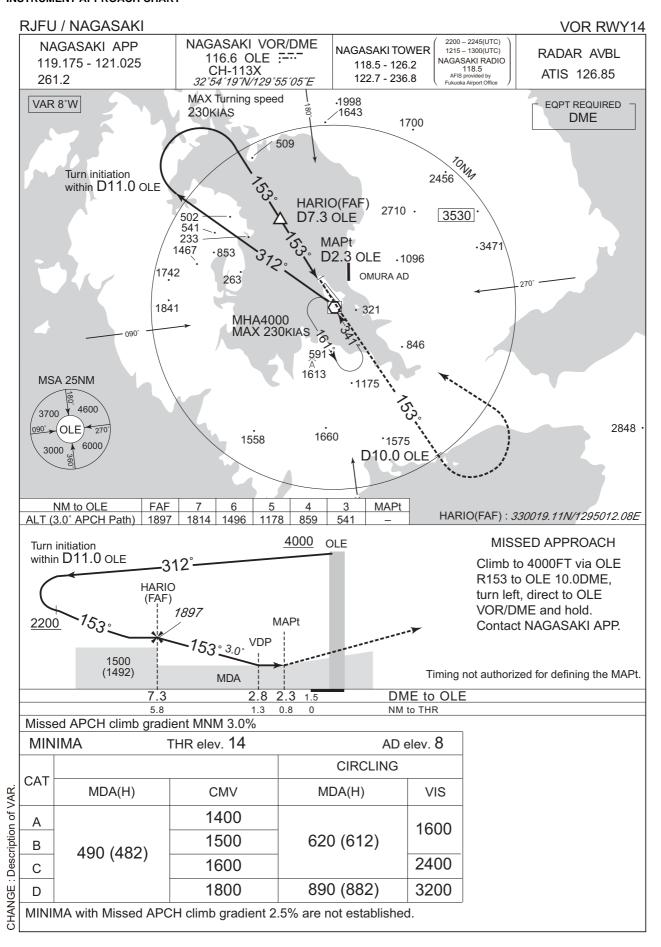
# **FAS DATA BLOCK**

Operation type	0	LTP/FTP ellipsoidal height	+00367
SBAS service provider identifier	2	FPAP latitude	325424.8850N
Airport identifier	RJFU	FPAP longitude	1295527.0410E
Runway	14	Threshold crossing height	00015.0
Approach performance designator	0	TCH units selector	1
Route indicator		Glide path angle	03.00
Reference path data selector	0	Course width at threshold	105.00
Reference path ID	M14A	∠ length offset	0000
LTP/FTP latitude	325537.2480N	HAL	40.0
LTP/FTP longitude	1295409.7775E	VAL	50.0
CRC remainder	B756639A		

# Required additional data

rtoquii ou uuditionui uutu			
LTP/FTP orthometric height	4.5		







※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

	Call sign	BRG / DIST from ARP	Remarks
from ARP.	川棚 Kawatana	345°T / 9.4NM	JR駅 JR Station
	彼杵 Sonogi	360°T / 7.4NM	JR駅 JR Station
	鈴田 Suzuta	113°T / 4.3NM	長崎自動車道と国道34号線の交点 Intersection
	長田 Nagata	112°T / 9.4NM	不知火橋 Bridge
3/DIST	西彼 Seihi	301°T / 9.2NM	オランダ村 Windmill
: Map updated. BRG/DIST from ARP	二島 Futashima	244°T / 3.1NM	二島 Island
	堂崎 Dozaki	217°T / 2.7NM	堂崎鼻 A point of land
Мар и	鷹島 Takashima	237°T / 5.4NM	鷹島 Island
IGE:	時津 Tokitsu	213°T / 6.0NM	時津港 Harbor
CHANGE	三重 Mie	233°T / 11.1NM	三重崎 A point of land





