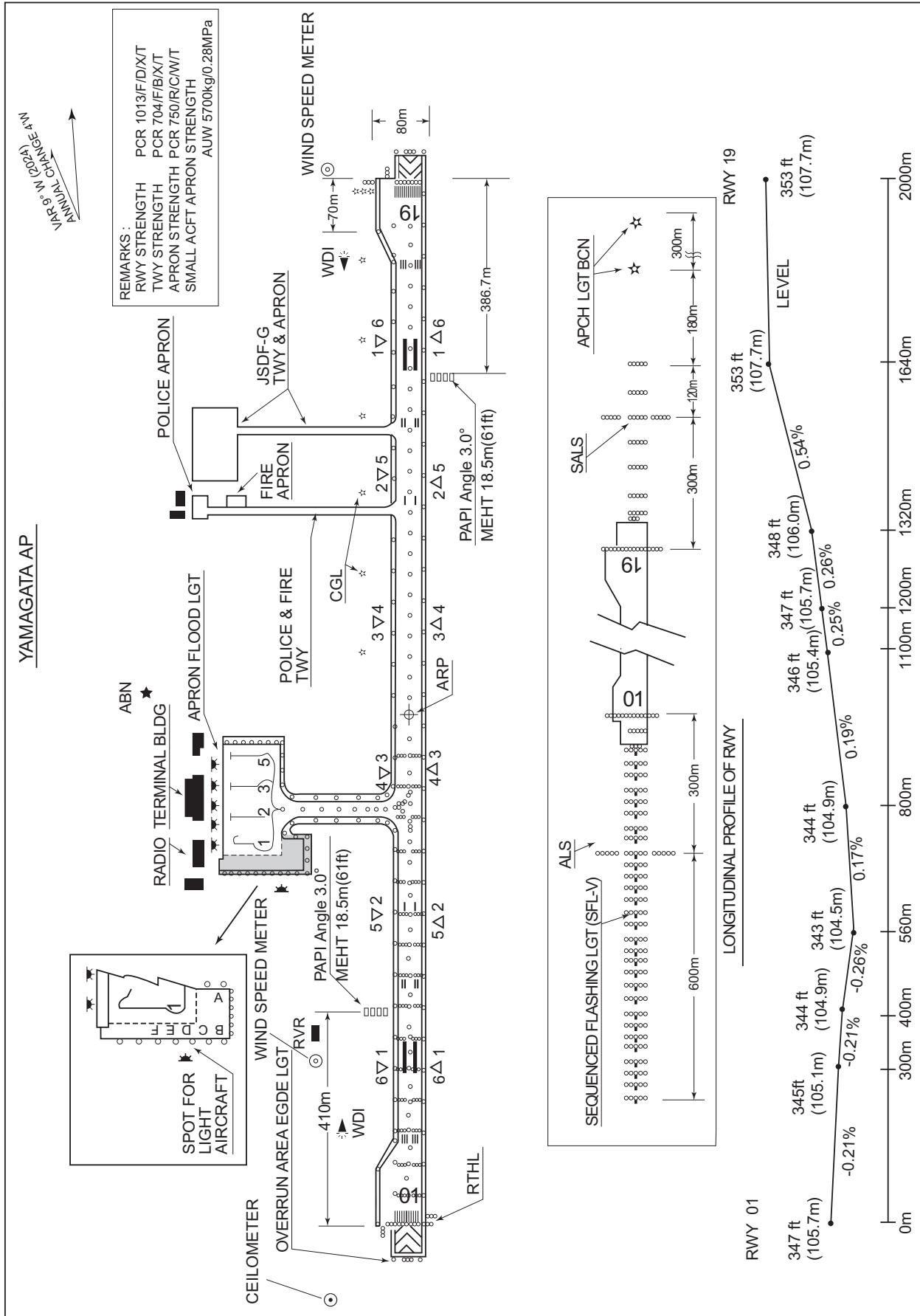


RJSC / YAMAGATA

AD CHART



STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

SID

YAMAGATA FOUR DEPARTURE

RWY01 : Climb RWY HDG to 2000FT, via YTE R017 to 22.0DME, turn left, via YTE R003 to YTE VOR/DME.

RWY19 : Climb RWY HDG to 2000FT, turn right, direct to YTE VOR/DME, cross YTE VOR/DME at or above 4000FT, via YTE R017 to 15.0DME, turn left, via YTE R354 to YTE VOR/DME.

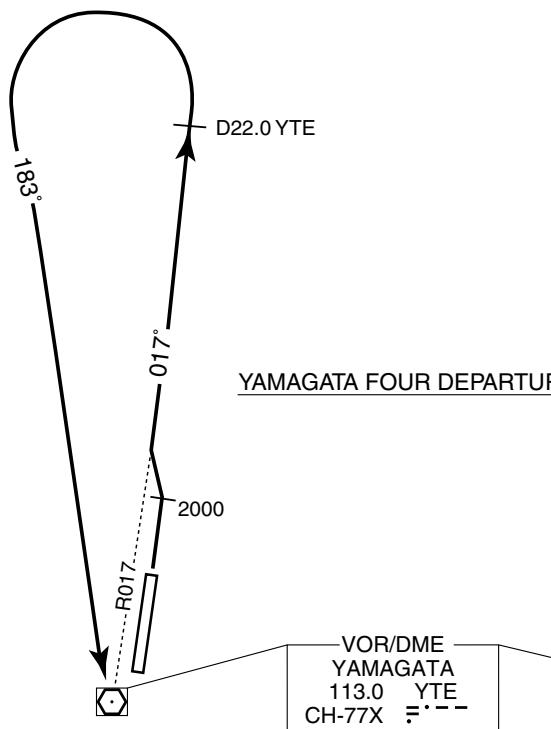
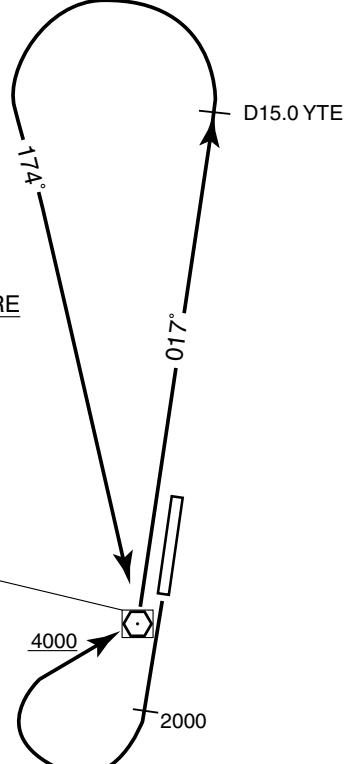
Note RWY01: 5.0% climb gradient required up to 2000FT.

OBST ALT 1182FT located at 4.2NM 033° FM end of RWY01.

RWY19: 5.0% climb gradient required up to 2000FT.

OBST ALT 788FT located at 3.1NM 181° FM end of RWY19.

Note No turn before DER.

For RWY01For RWY19

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA	RNAV SID
RUBIS ONE DEPARTURE	RNP1
Note GNSS required.	
RUBIS ONE DEPARTURE <p>RWY01 : Climb on HDG015° at or above 800FT, direct to SC101, to SC102 at or above 7000FT,...</p> <p>RWY19 : Climb on HDG195° at or above 1300FT, direct to SC903, to SC904, to SC905, to SC906, ... to ZUNDA at or above FL170, to RUBIS at or above FL200.</p> <p>Note RWY01 : 5.0% climb gradient required up to 2000FT. OBST ALT 3609FT located at 16.0NM 039° FM end of RWY01.</p> <p>RWY19 : 4.0% climb gradient required up to 1300FT. OBST ALT 919FT located at 3.2NM 181° FM end of RWY19.</p>	

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

RUBIS ONE DEPARTURE

RWY01

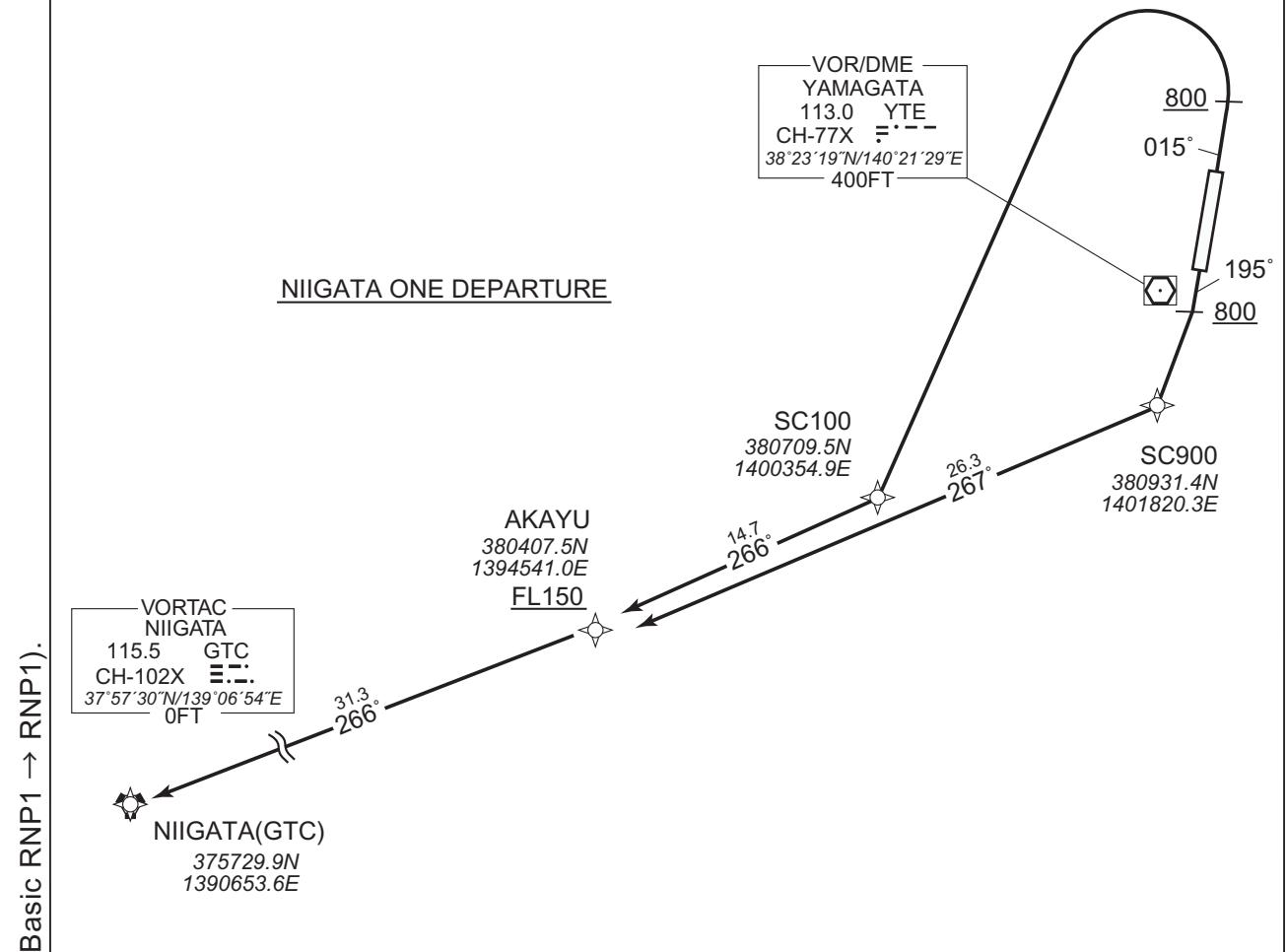
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	015 (006.6)	-8.2	-	-	+800	-	-	RNP1
002	DF	SC101	-	-	-8.2	-	-	-	-	-	RNP1
003	TF	SC102	-	105 (096.6)	-8.2	8.4	-	+7000	-	-	RNP1
004	TF	ZUNDA	-	200 (192.2)	-8.2	31.2	-	+FL170	-	-	RNP1
005	TF	RUBIS	-	169 (161.2)	-8.2	26.9	-	+FL200	-	-	RNP1

RWY19

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	-	-	195 (186.6)	-8.2	-	-	+1300	-	-	RNP1
002	DF	SC903	-	-	-8.2	-	-	-	-	-	RNP1
003	TF	SC904	-	285 (276.6)	-8.2	9.4	-	-	-	-	RNP1
004	TF	SC905	-	015 (006.4)	-8.2	10.5	-	-	-	-	RNP1
005	TF	SC906	-	105 (096.5)	-8.2	10.6	-	-	-	-	RNP1
006	TF	ZUNDA	-	179 (171.0)	-8.2	15.7	-	+FL170	-	-	RNP1
007	TF	RUBIS	-	169 (161.2)	-8.2	26.9	-	+FL200	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA	RNAV SID
NIIGATA ONE DEPARTURE	RNP1
Note GNSS required.	
VAR 8°W (2017)	
 <p>NIIGATA ONE DEPARTURE</p> <p>VOR/DME YAMAGATA 113.0 YTE CH-77X F--- 38°23'19"N/140°21'29"E 400FT</p> <p>VORTAC NIIGATA 115.5 GTC CH-102X E--- 37°57'30"N/139°06'54"E 0FT</p> <p>NIIGATA(GTC) 37°57'29.9"N 139°06'53.6"E</p> <p>AKAYU 380407.5N 1394541.0E FL150</p> <p>SC100 380709.5N 1400354.9E</p> <p>SC900 380931.4N 1401820.3E</p> <p>HDG 015° at or above 800FT, turn left direct to SC100, ... HDG 195° at or above 800FT, direct to SC900, to AKAYU at or above FL150, to GTC.</p>	
<p>CHANGE : Navigation Specification(Basic RNP1 → RNP1).</p> <p>NIIGATA ONE DEPARTURE</p> <p>RWY01 : Climb on HDG015° at or above 800FT, turn left direct to SC100, ... RWY19 : Climb on HDG195° at or above 800FT, direct to SC900, to AKAYU at or above FL150, to GTC.</p> <p>Note RWY01 : 5.5% climb gradient required up to 2500FT. OBST ALT 2198FT located at 6.3NM 321° FM end of RWY01.</p> <p>RWY19 : 4.3% climb gradient required up to 800FT. OBST ALT 722FT located at 2.8NM 182° FM end of RWY19.</p>	

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

NIIGATA ONE DEPARTURE

RWY01

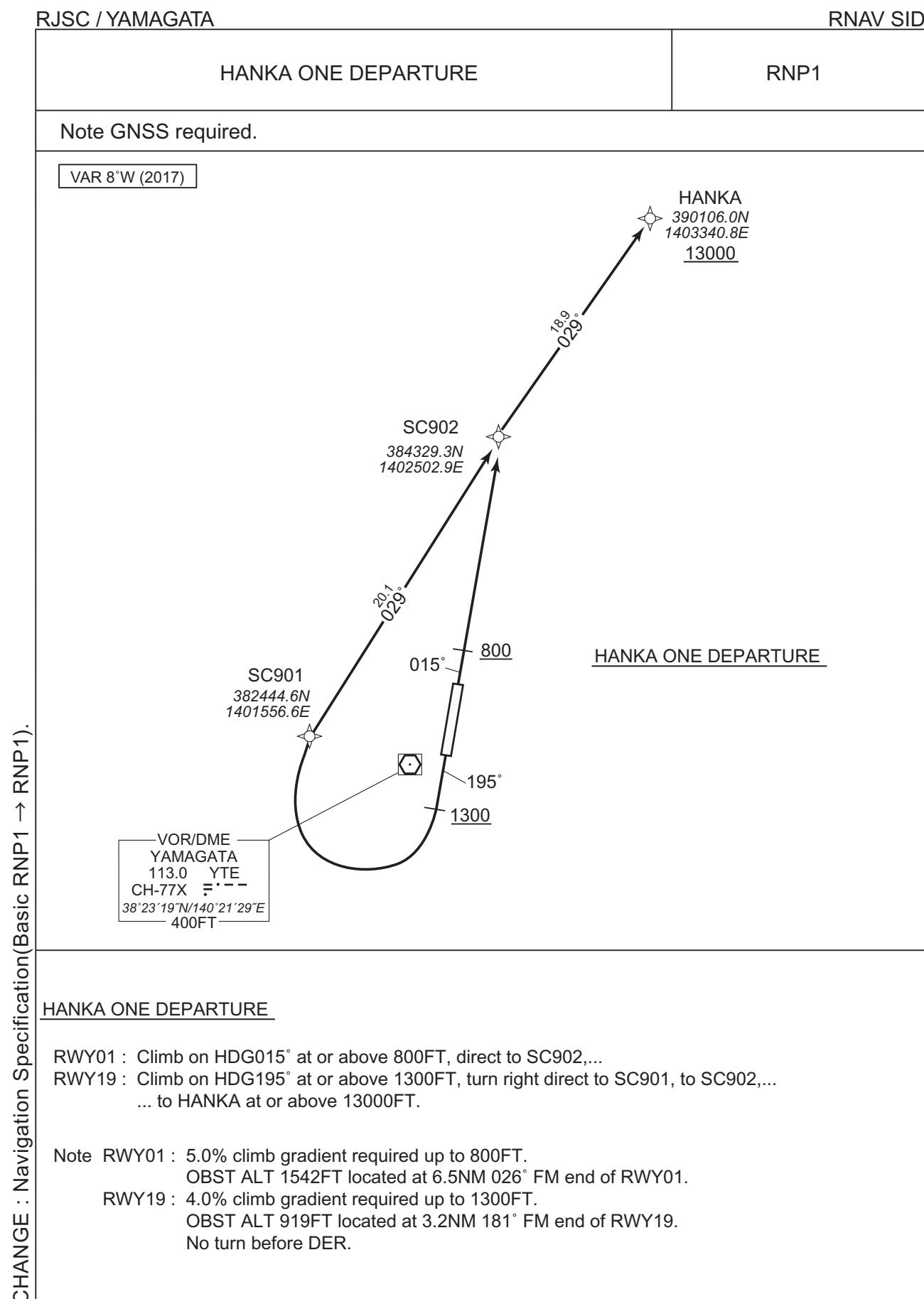
Serial Number	Path Descriptor	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	-	-	015 (006.6)	-8.2	-	-	+800	-	-	RNP1
002	DF	SC100	-	-	-8.2	-	L	-	-	-	RNP1
003	TF	AKAYU	-	266 (258.2)	-8.2	14.7	-	+FL150	-	-	RNP1
004	TF	GTC	-	266 (258.0)	-8.2	31.3	-	-	-	-	RNP1

RWY19

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	-	-	195 (186.6)	-8.2	-	-	+800	-	-	RNP1
002	DF	SC900	-	-	-8.2	-	-	-	-	-	RNP1
003	TF	AKAYU	-	267 (258.3)	-8.2	26.3	-	+FL150	-	-	RNP1
004	TF	GTC	-	266 (258.0)	-8.2	31.3	-	-	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART-INSTRUMENT



CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD DEPARTURE CHART-INSTRUMENT

RJSC / YAMAGATA

RNAV SID

HANKA ONE DEPARTURE

RWY01

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	-	-	015 (006.6)	-8.2	-	-	+800	-	-	RNP1
002	DF	SC902	-	-	-8.2	-	-	-	-	-	RNP1
003	TF	HANKA	-	029 (020.8)	-8.2	18.9	-	+13000	-	-	RNP1

RWY19

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	-	-	195 (186.6)	-8.2	-	-	+1300	-	-	RNP1
002	DF	SC901	-	-	-8.2	-	R	-	-	-	RNP1
003	TF	SC902	-	029 (020.7)	-8.2	20.1	-	-	-	-	RNP1
004	TF	HANKA	-	029 (020.8)	-8.2	18.9	-	+13000	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

RNAV STAR RWY01

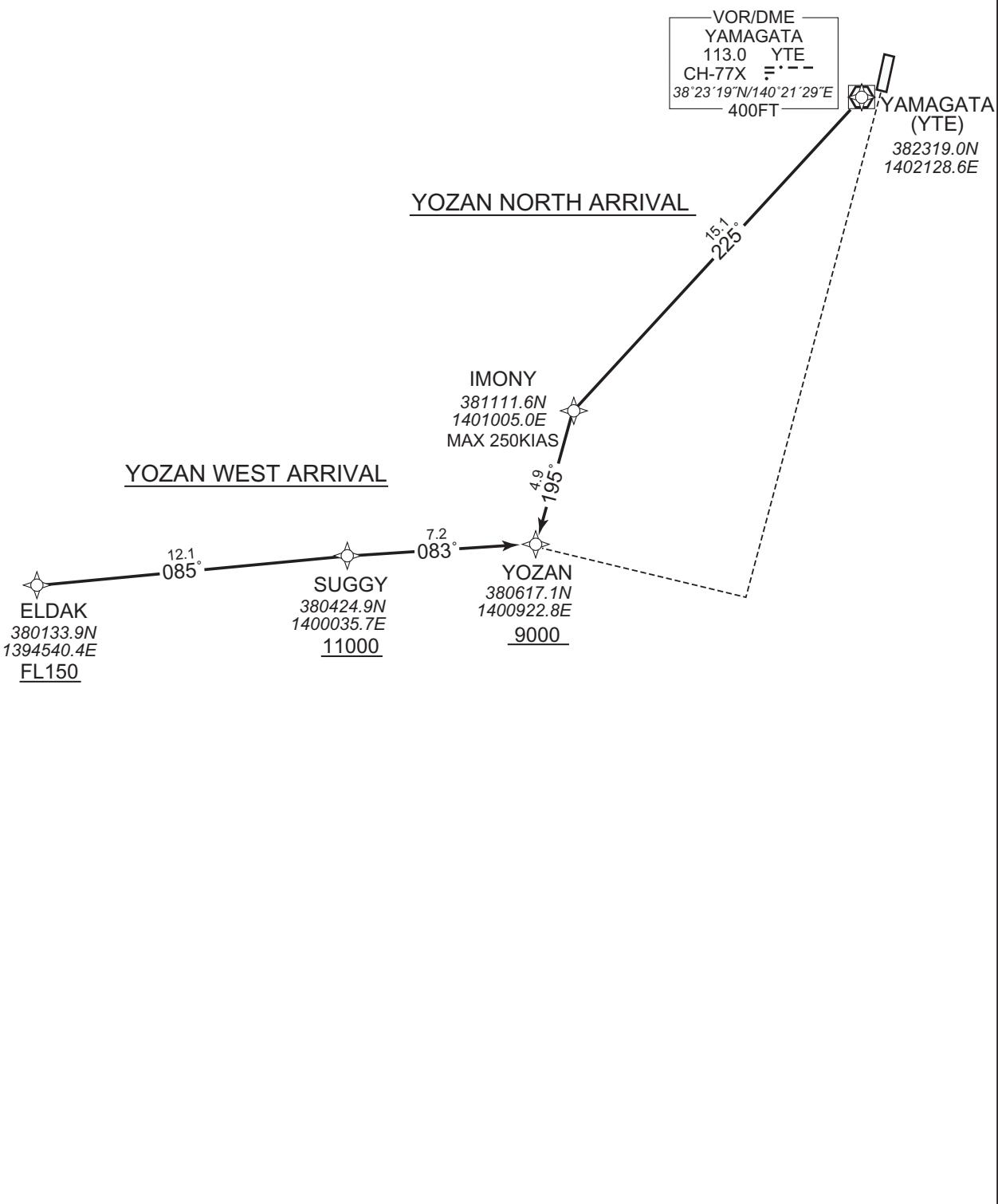
YOZAN WEST ARRIVAL / YOZAN NORTH ARRIVAL

RNP1

Note GNSS required.

VAR 8°W (2017)

CHANGE : Navigation Specification(Basic RNP1 → RNP1).



STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

RNAV STAR RWY01

YOZAN WEST ARRIVAL

From ELDAK at or above FL150, to SUGGY at or above 11000FT,
to YOZAN at or above 9000FT.

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	IF	ELDAK	-	-	-8.2	-	-	+FL150	-	-	RNP1
002	TF	SUGGY	-	085 (076.3)	-8.2	12.1	-	+11000	-	-	RNP1
003	TF	YOZAN	-	083 (074.8)	-8.2	7.2	-	+9000	-	-	RNP1

YOZAN NORTH ARRIVAL

From YTE, to IMONY, to YOZAN at or above 9000FT.

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	IF	YTE	-	-	-8.2	-	-	-	-	-	RNP1
002	TF	IMONY	-	225 (216.5)	-8.2	15.1	-	-	-250	-	RNP1
003	TF	YOZAN	-	195 (186.4)	-8.2	4.9	-	+9000	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

RNAV STAR RWY19

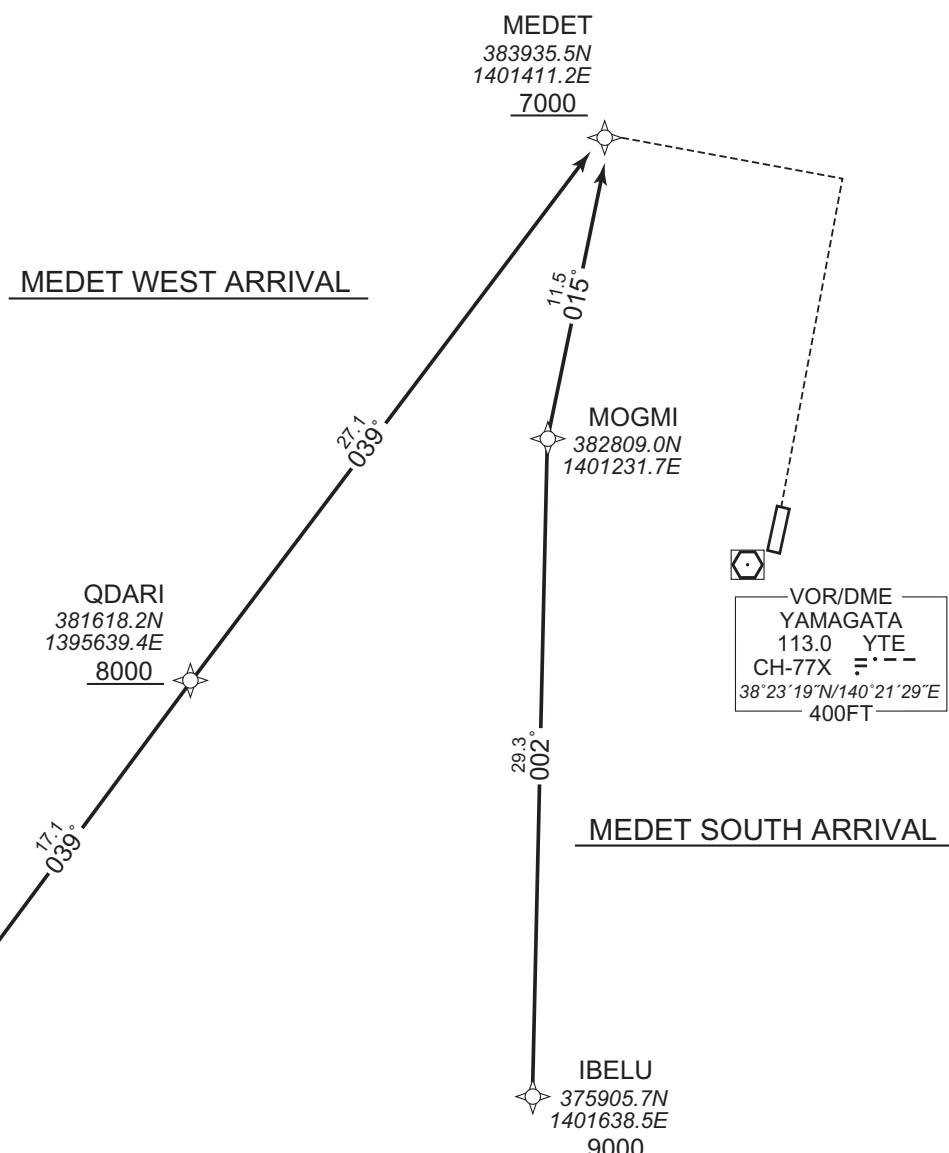
MEDET WEST ARRIVAL / MEDET SOUTH ARRIVAL

RNP1

Note GNSS required.

VAR 8°W (2017)

CHANGE : Navigation Specification(Basic RNP1 → RNP1).



STANDARD ARRIVAL CHART - INSTRUMENT

RJSC / YAMAGATA

RNAV STAR RWY19

MEDET WEST ARRIVAL

From ELDAK at or above FL150, to QDARI at or above 8000FT,
to MEDET at or above 7000FT.

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	IF	ELDAK	-	-	-8.2	-	-	+FL150	-	-	RNP1
002	TF	QDARI	-	039 (030.3)	-8.2	17.1	-	+8000	-	-	RNP1
003	TF	MEDET	-	039 (030.4)	-8.2	27.1	-	+7000	-	-	RNP1

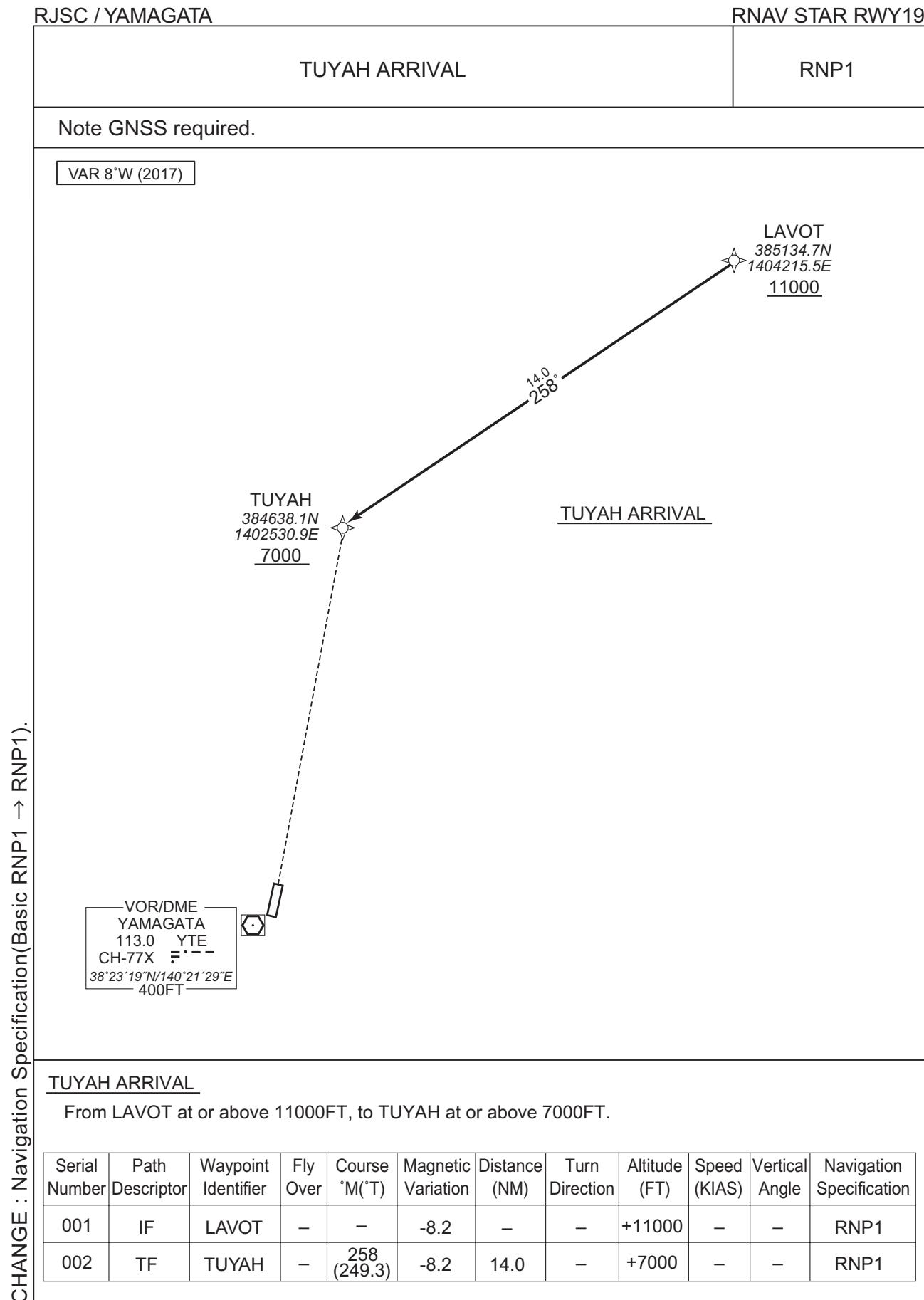
MEDET SOUTH ARRIVAL

From IBELU at or above 9000FT, to MOGMI, to MEDET at or above 7000FT.

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	IF	IBELU	-	-	-8.2	-	-	+9000	-	-	RNP1
002	TF	MOGMI	-	002 (353.7)	-8.2	29.3	-	-	-	-	RNP1
003	TF	MEDET	-	015 (006.5)	-8.2	11.5	-	+7000	-	-	RNP1

CHANGE : Navigation Specification(Basic RNP1 → RNP1).

STANDARD ARRIVAL CHART - INSTRUMENT



INSTRUMENT APPROACH CHART

RJSC / YAMAGATA

TOKYO CONTROL
132.3 - 300.2
122.7 - 126.2
127.65 - 303.4

YAMAGATA RADIO
122.7 - 126.2

NO RADAR

VAR 9°W (2021)

MSA 25NM

VOR/DME YAMAGATA
113.0 YTE
CH-77X 38°23'19"N/140°21'29"E

EQPT REQUIRED
DME
VOR

Using NAVAID

NOTE: For Initial approach segment
(1) RNP1.
(2) GNSS required.

YOTATE (IAF)
D19.5 YTE
380617.11N
1400922.81E
9000

KAJYO(FAF)
D14.1 IYT
381021.06N/1402010.69E

LAFRA(IF)
380522.60N
1401927.16E
D19.1 IYT

IBELU(IAF)
375905.65N
1401638.49E
9000

MISSING APPROACH
Climb to 2000FT on HDG015°,
via YTE R017 to 5000FT,
turn left, via YTE R003 to YTE
VOR/DME and hold at 7000FT.
Contact YAMAGATA RADIO.

MINIMA
THR elev. 347 AD elev. 345

CAT	CAT I		CIRCLING	
	DA(H)	RVR/ CMV	MDA(H)	VIS
A	547 (200)	550	790 (445)	1600
B			800 (455)	2400
C			900 (555)	3200
D				

MINIMA with Missing APCH climb gradient of 2.5% are not established.
Circling to WEST side of RWY only.

INSTRUMENT APPROACH CHART

RJSC / YAMAGATA

TOKYO CONTROL
132.3 - 300.2
127.65 - 303.4

ILS LOC
110.1 IYT \equiv
ILS-DME CH-38X

YAMAGATA RADIO
122.7 - 126.2

NO RADAR

VAR 9°W (2021)

MSA 25NM

VOR/DME YAMAGATA
113.0 YTE
CH-77X \equiv
 $38^{\circ}23'19''N/140^{\circ}21'29''E$

MAPt D0.8 IYT

EQPT REQUIRED DME VOR

Using NAVAID

D25.0 YTE
MHA 9000 MAX 230KIAS

NOTE: For Initial approach segment
(1) RNP1.
(2) GNSS required.

YOTAN (IAF)
D19.5 YTE
 $38^{\circ}06'17.11''N$
 $140^{\circ}09'22.81''E$
9000

KAJYO(FAF)
D14.1 IYT

LAFRA(IF)
 $38^{\circ}05'22.60''N$
 $140^{\circ}19'27.16''E$
D19.1 IYT

IBELU(IAF)
 $37^{\circ}59'05.65''N$
 $140^{\circ}16'38.49''E$
9000

KAJYO(FAF) : $38^{\circ}01'21.06''N/140^{\circ}20'10.69''E$

Using NAVAID

YOTAN (IAF)
D19.5 YTE
 $38^{\circ}06'17.11''N$
 $140^{\circ}09'22.81''E$
9000

IBELU(IAF)
D24.5 YTE
MHA 9000 MAX 230KIAS

Missed Approach

Climb to 2000FT on HDG015°, via YTE R017 to 5000FT, turn left, via YTE R003 to YTE VOR/DME and hold at 7000FT. Contact YAMAGATA RADIO.

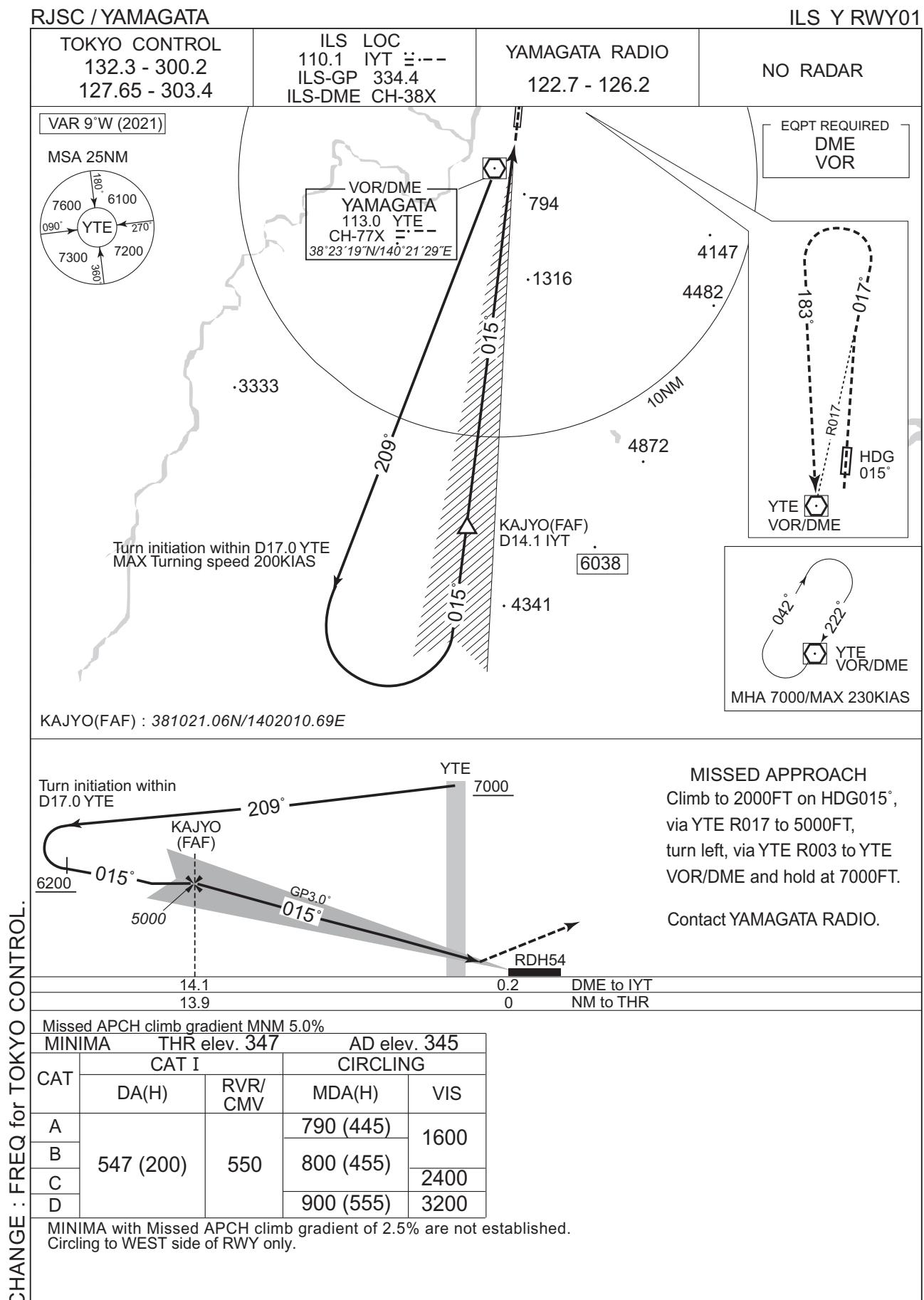
PAPI and descent angles not coincident. Timing not authorized for defining the MAPt.

MINIMA THR elev. 347 AD elev. 345

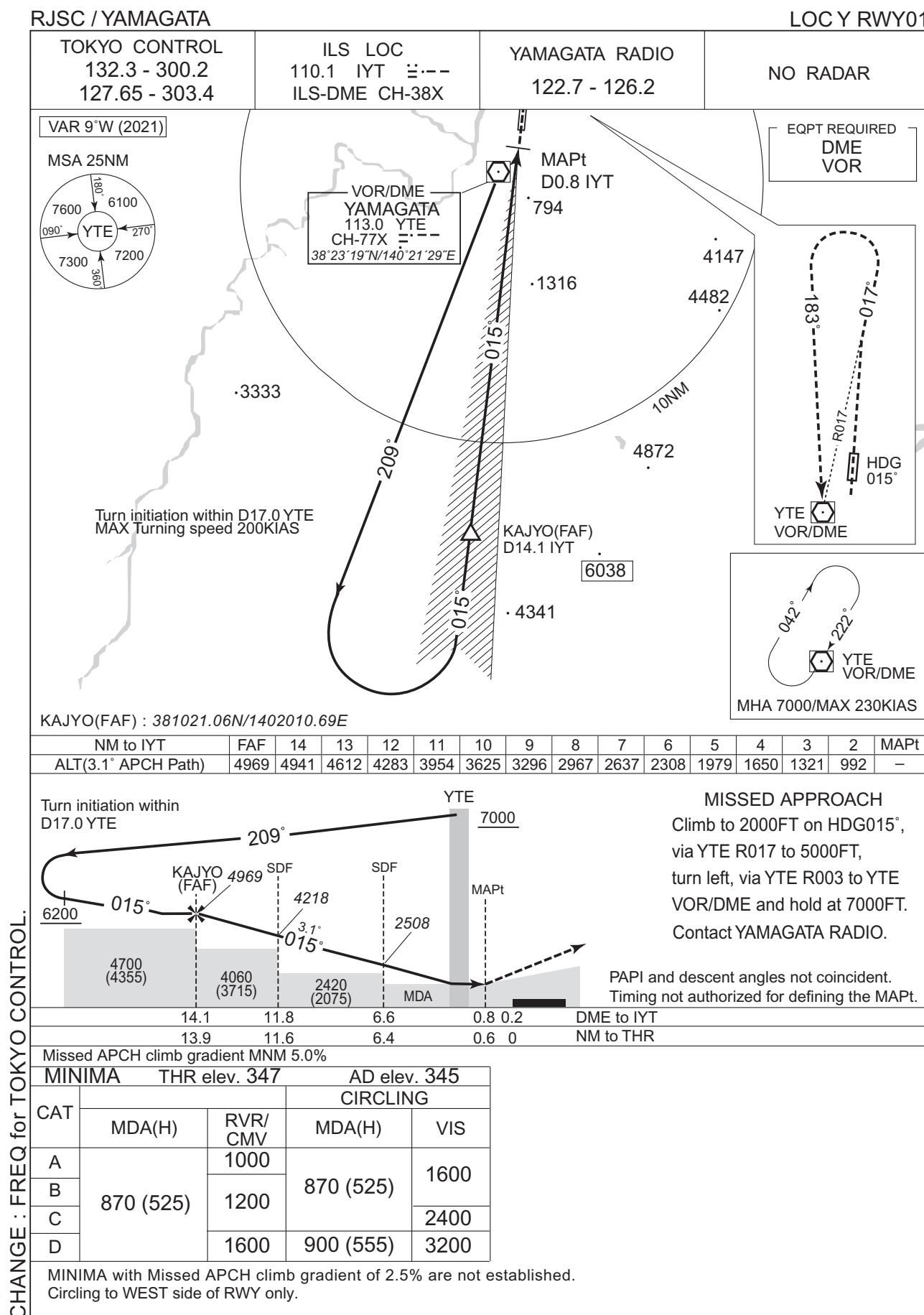
CAT	CIRCLING		VIS
	MDA(H)	RVR/CMV	
A	1000		1600
B	870 (525)	1200	2400
C			
D	1600	900 (555)	3200

MINIMA with Missed APCH climb gradient of 2.5% are not established. Circling to WEST side of RWY only.

INSTRUMENT APPROACH CHART



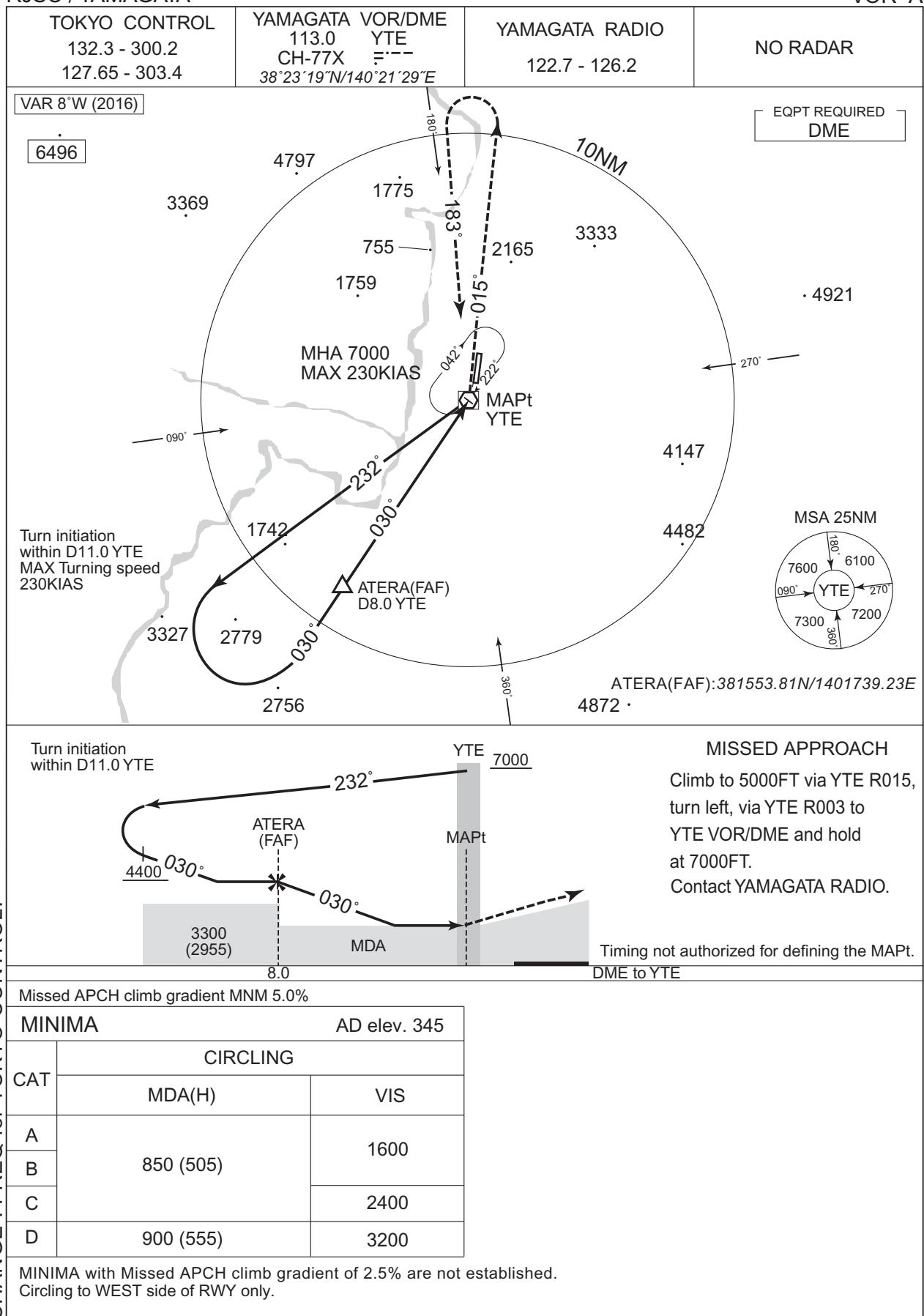
INSTRUMENT APPROACH CHART



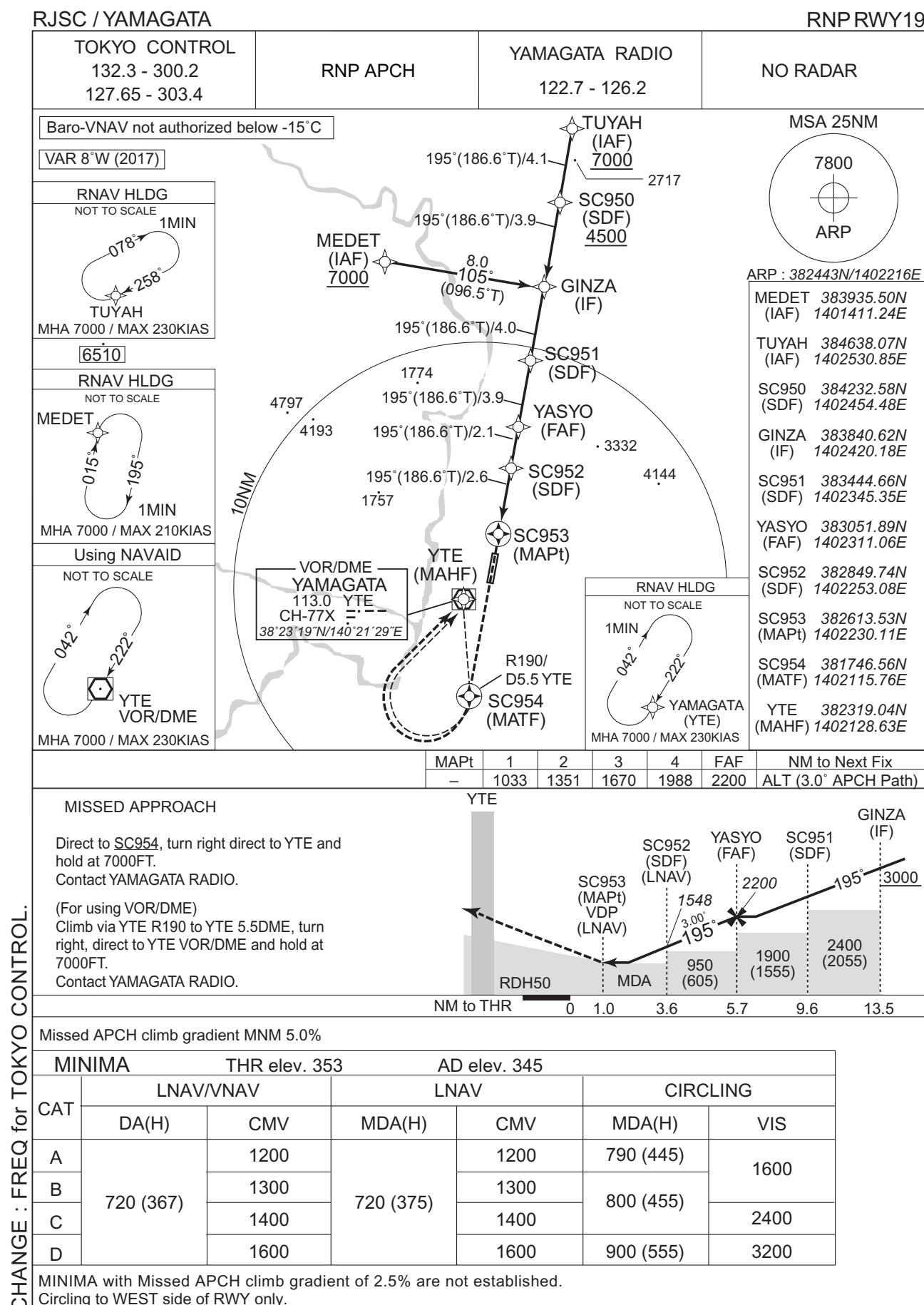
INSTRUMENT APPROACH CHART

RJSC / YAMAGATA

VOR A

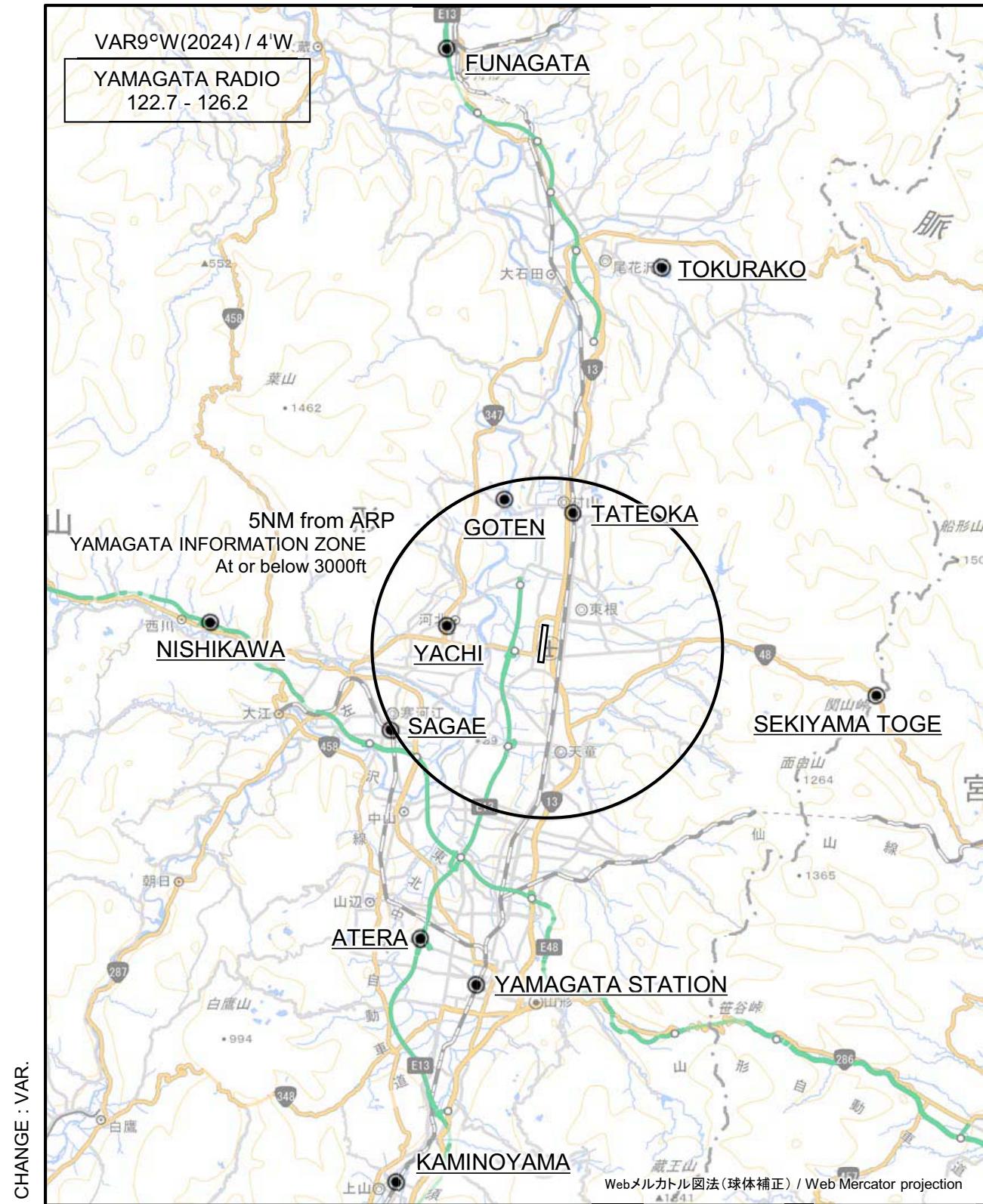


INSTRUMENT APPROACH CHART



RJSC / YAMAGATA

Visual REP



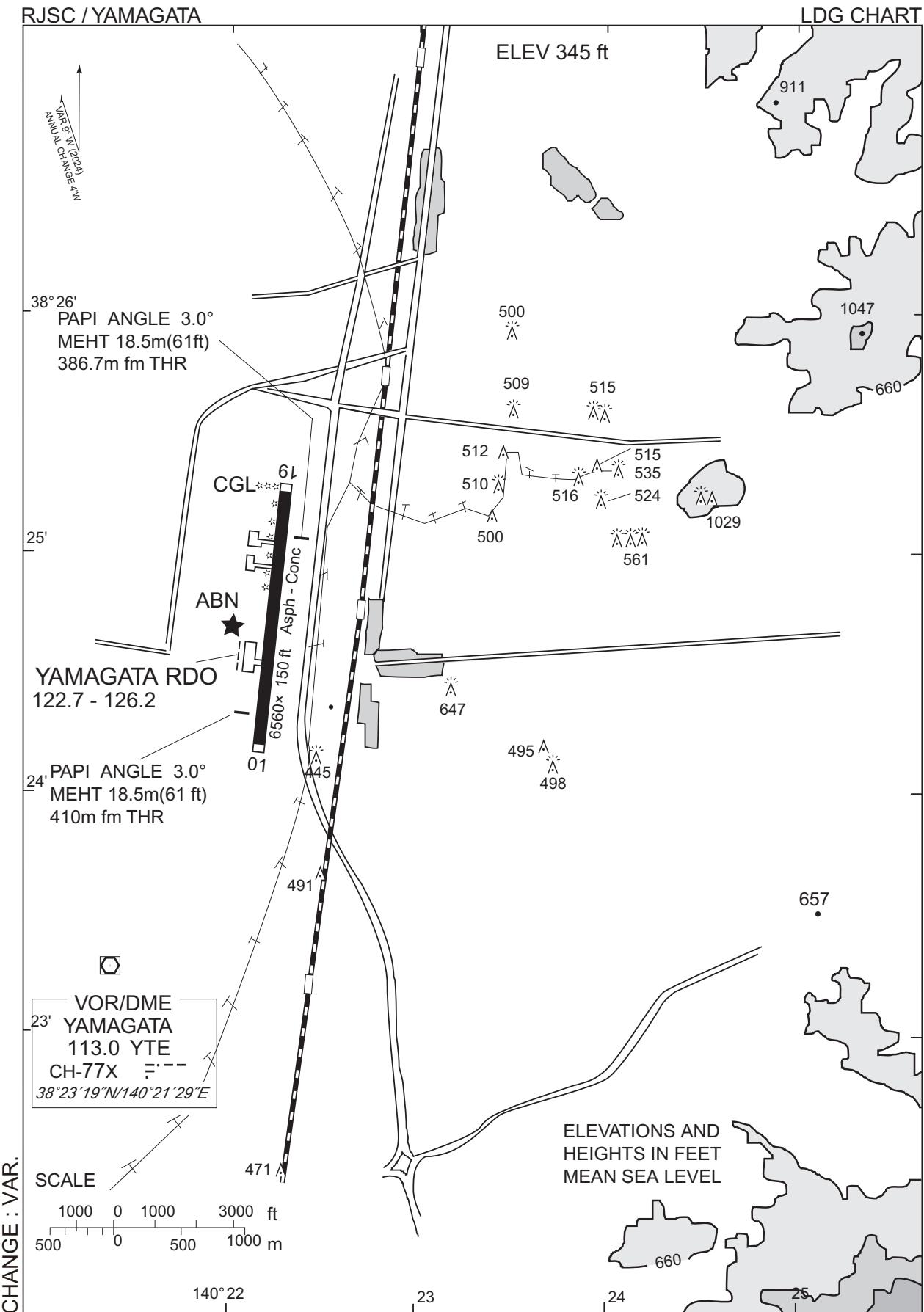
※図中に標高を示す数字がある場合、単位はメートル(m)である。The unit of measurement used to express elevation is meter(m).

RJSC / YAMAGATA

Visual REP

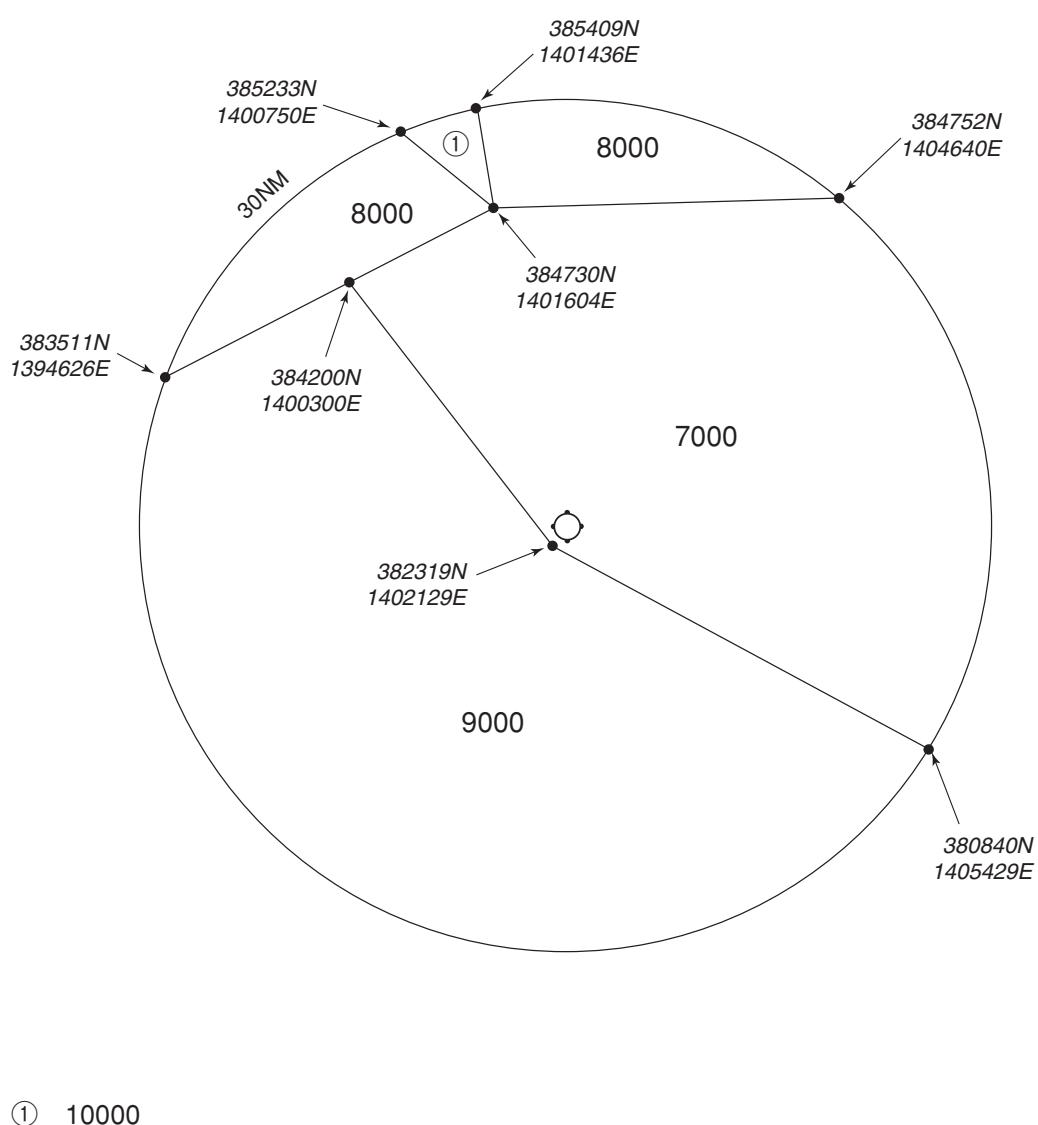
Call sign	BRG / DIST from ARP	Remarks
舟形 Funagata	351°T / 17.7NM	舟形インターチェンジ Interchange
徳良湖 Tokurako	017°T / 11.5NM	徳良湖 Lake
碁点 Goten	344°T / 4.5NM	村山市民体育館 Gymnasium
楯岡 Tateoka	010°T / 4.0NM	村山駅(旧楯岡駅) JR station
西川 Nishikawa	274°T / 9.8NM	西川インターチェンジ Interchange
谷地 Yachi	282°T / 3.0NM	谷地高校 School
関山峠 Sekiyama Toge	100°T / 9.5NM	関山トンネル Tunnel
寒河江 Saga	242°T / 5.1NM	寒河江駅 JR station
アテラ Atera	203°T / 9.3NM	山形中央インターチェンジ Interchange
山形ステーション Yamagata Station	192°T / 10.0NM	山形駅 JR station
上山 Kaminoyama	196°T / 16.2NM	かみのやま温泉駅 JR station

CHANGE : Kaminoyama(Remarks).



RJSC / YAMAGATA

Minimum Vectoring Altitude CHART



CENTER : 382443N/1402216E (ARP)