

Page 1

Changed chart(s) since Disc 10-2010

ADD = Added chart, REV = Revised chart, DEL = Deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
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Minsk, (Minsk-2 - UMMS)

DEL	GOVIK & KOLOS 1A, KI 1A & 1B ...	10-2D	21 май 2010	03 июн 2010
ADD	GOVIK & KOLOS 1A, OSMUS 1A...	10-2D	21 май 2010	03 июн 2010
DEL	GOVIK & KOLOS 2A, KI 2A, 2B &...	10-2E	21 май 2010	03 июн 2010
ADD	GOVIK & KOLOS 2A, OSMUS 2A...	10-2E	21 май 2010	03 июн 2010
DEL	KI 3A & 3B DEPS	10-3F	21 май 2010	03 июн 2010
ADD	OSMUS 3A & 3B DEPS	10-3F	21 май 2010	03 июн 2010
DEL	KI 4A DEP	10-3G	21 май 2010	03 июн 2010
ADD	OSMUS 4A DEP	10-3G	21 май 2010	03 июн 2010

TERMINAL CHART NOTAMs

No Chart NOTAMs for Airport UMMS

General Info

Minsk, BLR

N 53° 52.9' E 28° 01.8' Mag Var: 5.7°E

Elevation: 670'

Public, IFR, Control Tower, Customs, Landing Fee,

Jet Starting Unit available

Fuel: Jet A-1

Repairs: Minor Airframe, Minor Engine

Time Zone Info: GMT+2:00 uses DST

Runway Info

Runway 13-31 11946' x 197' concrete

Runway 13 (132.0°M) TDZE 639'

Lights: Edge, ALS, Centerline

Runway 31 (312.0°M) TDZE 670'

Lights: Edge, ALS, Centerline, TDZ

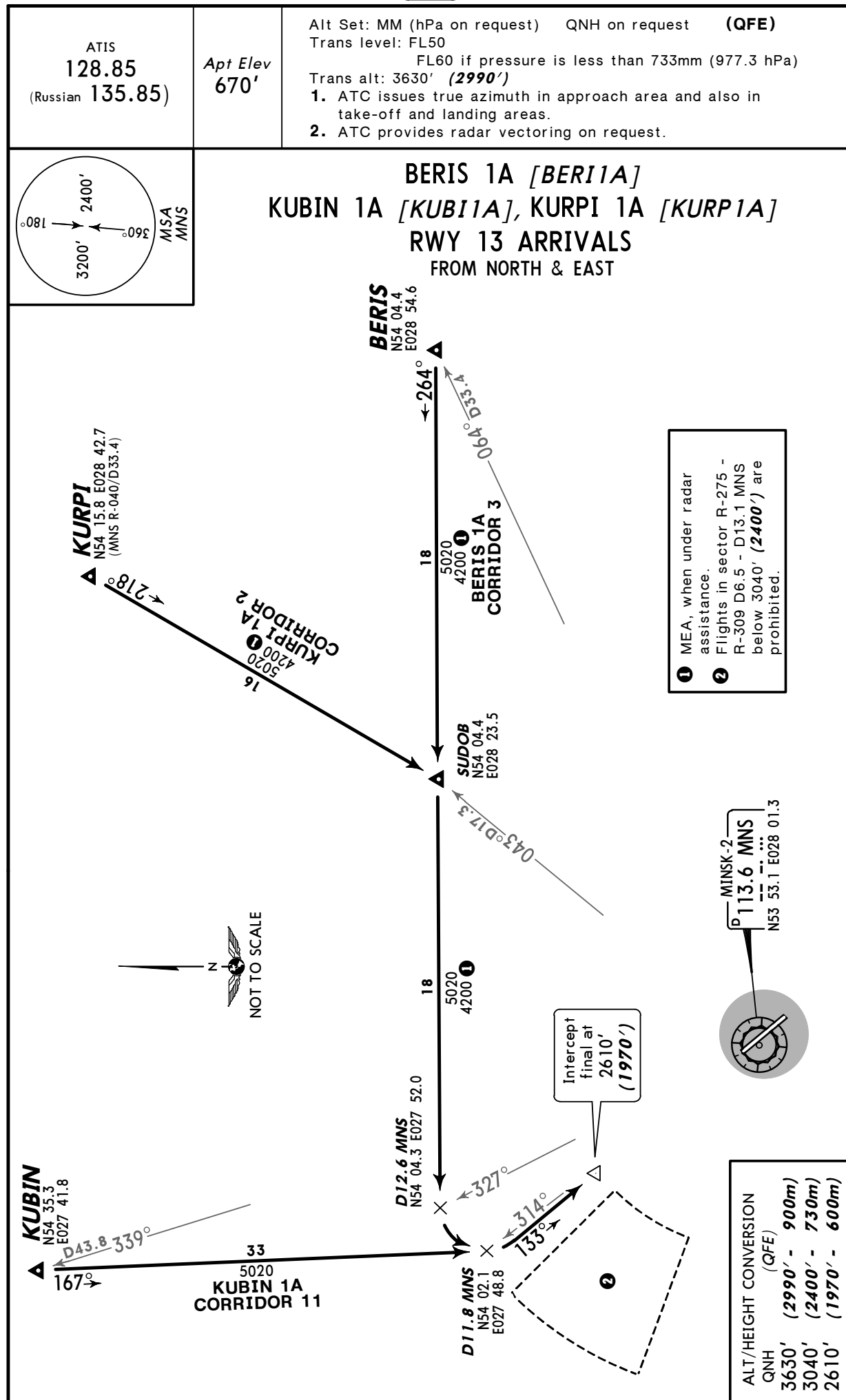
Communications InfoATIS **135.85** Non-EnglishATIS **128.85**Minsk-2 Tower **118.3**Minsk-2 Ground Control **129.95**Minsk Approach Control **125.9**Minsk Radar **125.25****Notebook Info**

UMMS/MSQ
MINSK-2

JEPPESSEN
3 APR 09 **10-2** Eff 9 Apr

MINSK, BELARUS

STAR

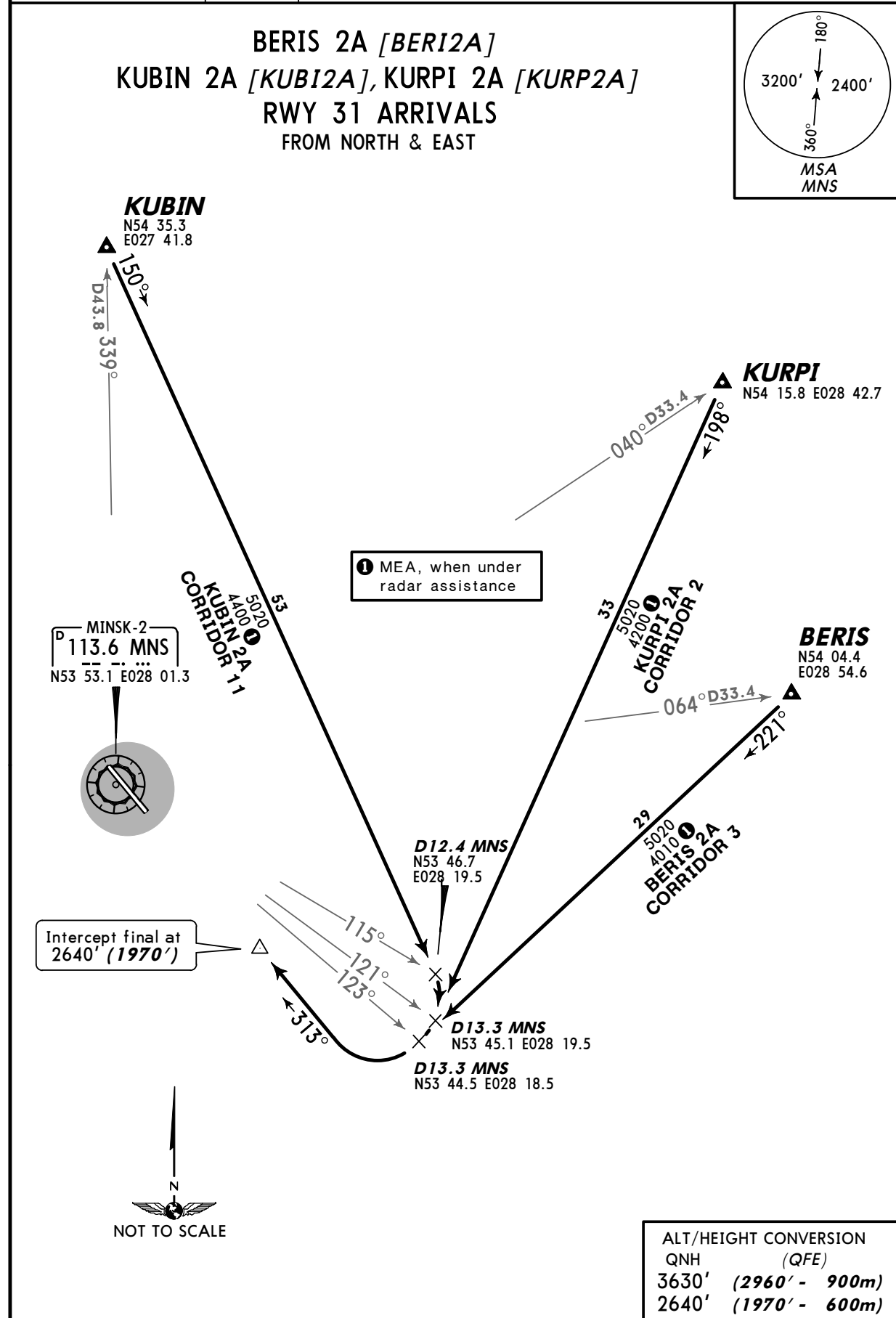


UMMS/MSQ
MINSK-2

JEPPESEN
3 APR 09 **(10-2A)** **Eff 9 Apr**

MINSK, BELARUS
STAR

ATIS 128.85 (Russian 135.85)	<i>Apt Elev</i> 670'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: FL50 FL60 if pressure is less than 733mm (977.3 hPa) Trans alt: 3630' (2960') 1. ATC issues true azimuth in approach area and also in take-off and landing areas. 2. ATC provides radar vectoring on request.
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UMMS/MSQ
MINSK-2

JEPPESSEN
3 APR 09 **(10-2B)** **Eff 9 Apr**

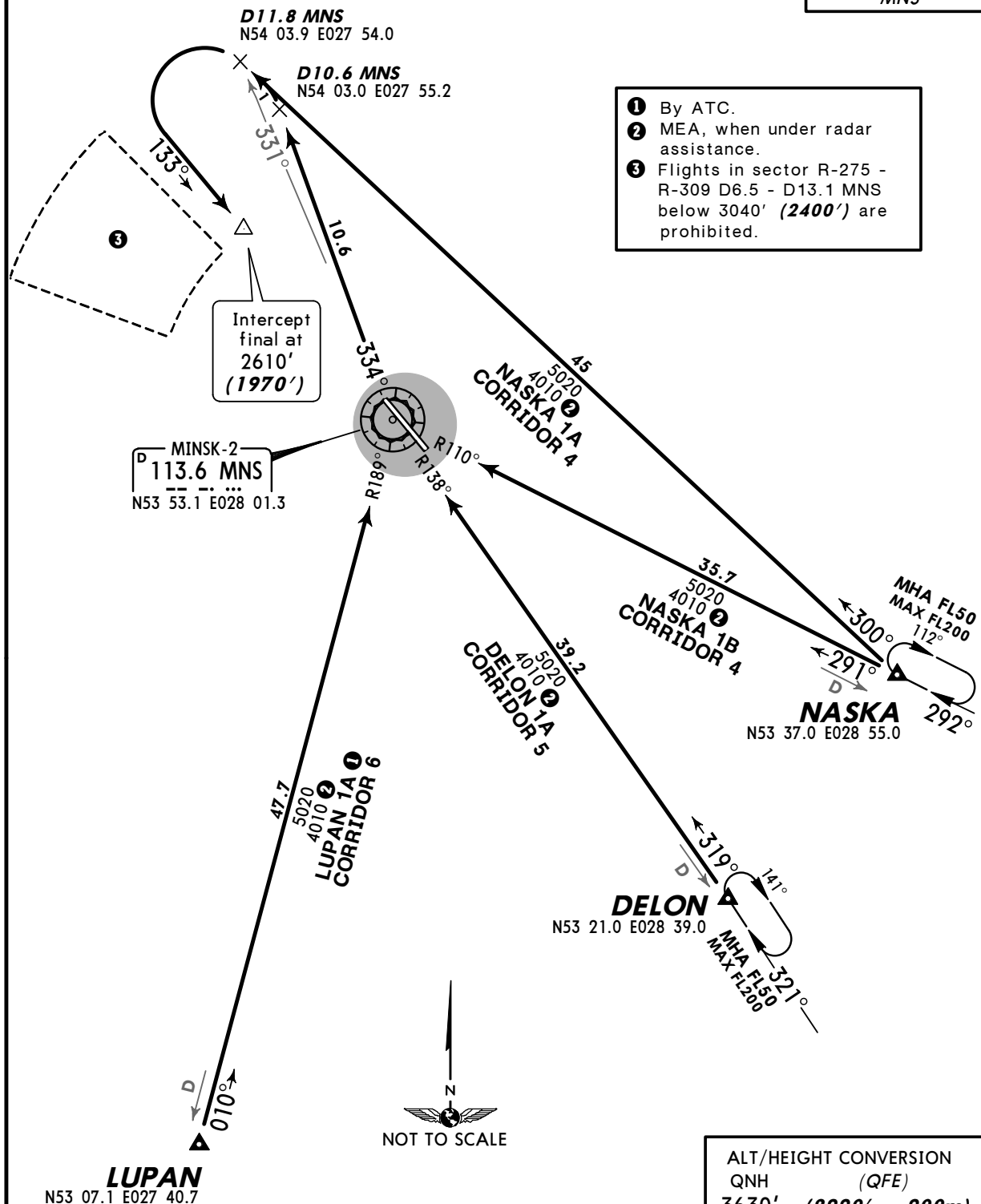
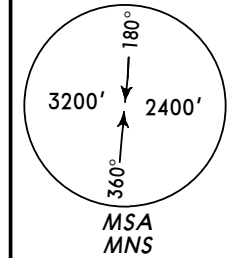
MINSK, BELARUS
STAR

ATIS
128.85
(Russian **135.85**)

Apt Elev
670'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: FL50
FL60 if pressure is less than 733mm (977.3 hPa)
Trans alt: 3630' **(2990')**
1. ATC issues true azimuth in approach area and also in take-off and landing areas. 2. ATC provides radar vectoring on request.

DELON 1A [DELO1A], LUPAN 1A [LUPA1A] ①
NASKA 1A [NASK1A], NASKA 1B [NASK1B]
RWY 13 ARRIVALS
FROM SOUTH

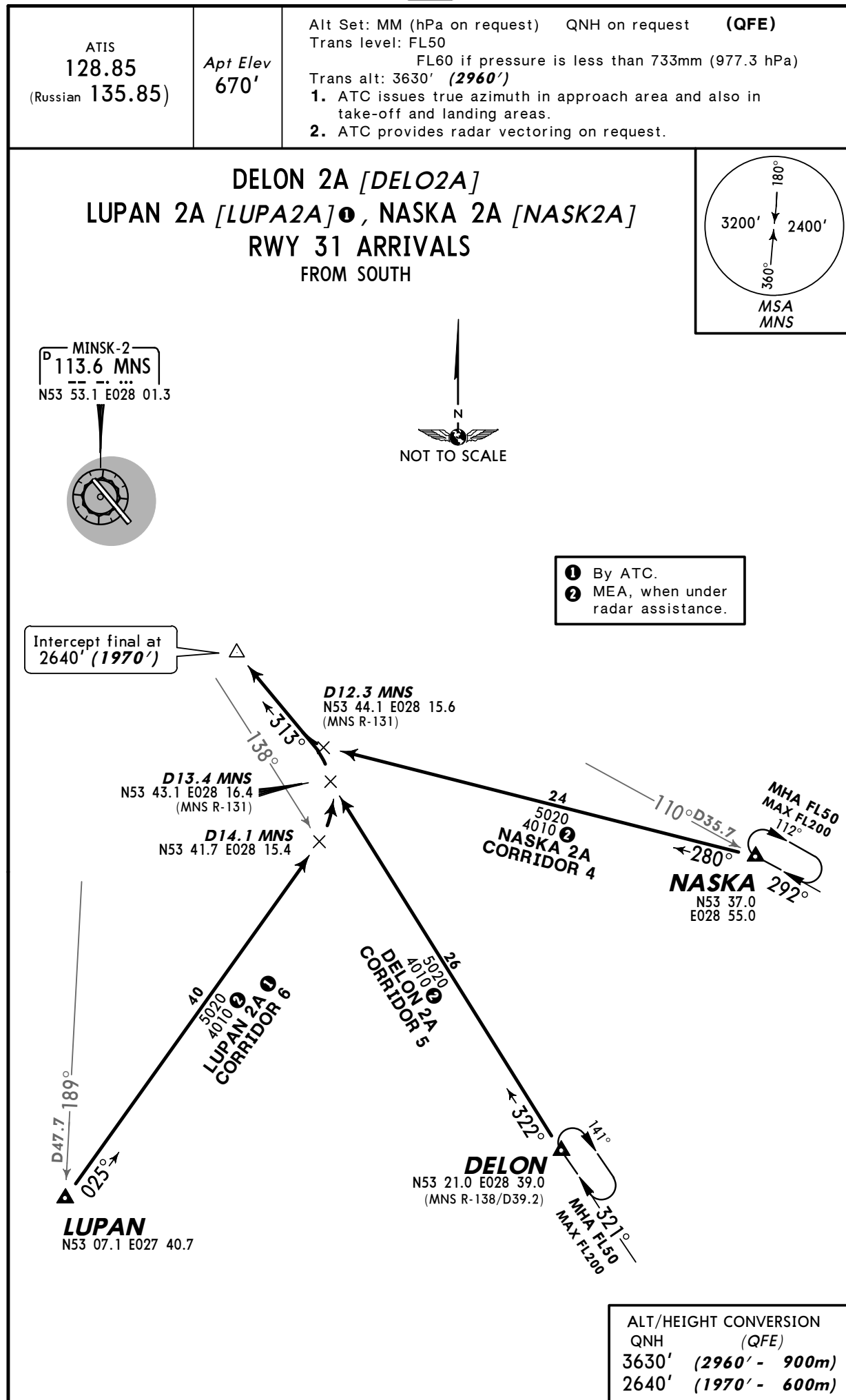


ALT/HEIGHT CONVERSION	
QNH	(QFE)
3630'	(2990' - 900m)
3040'	(2400' - 730m)
2610'	(1970' - 600m)

UMMS/MSQ
MINSK-2

JEPPESEN
3 APR 09 **(10-2C)** **Eff 9 Apr**

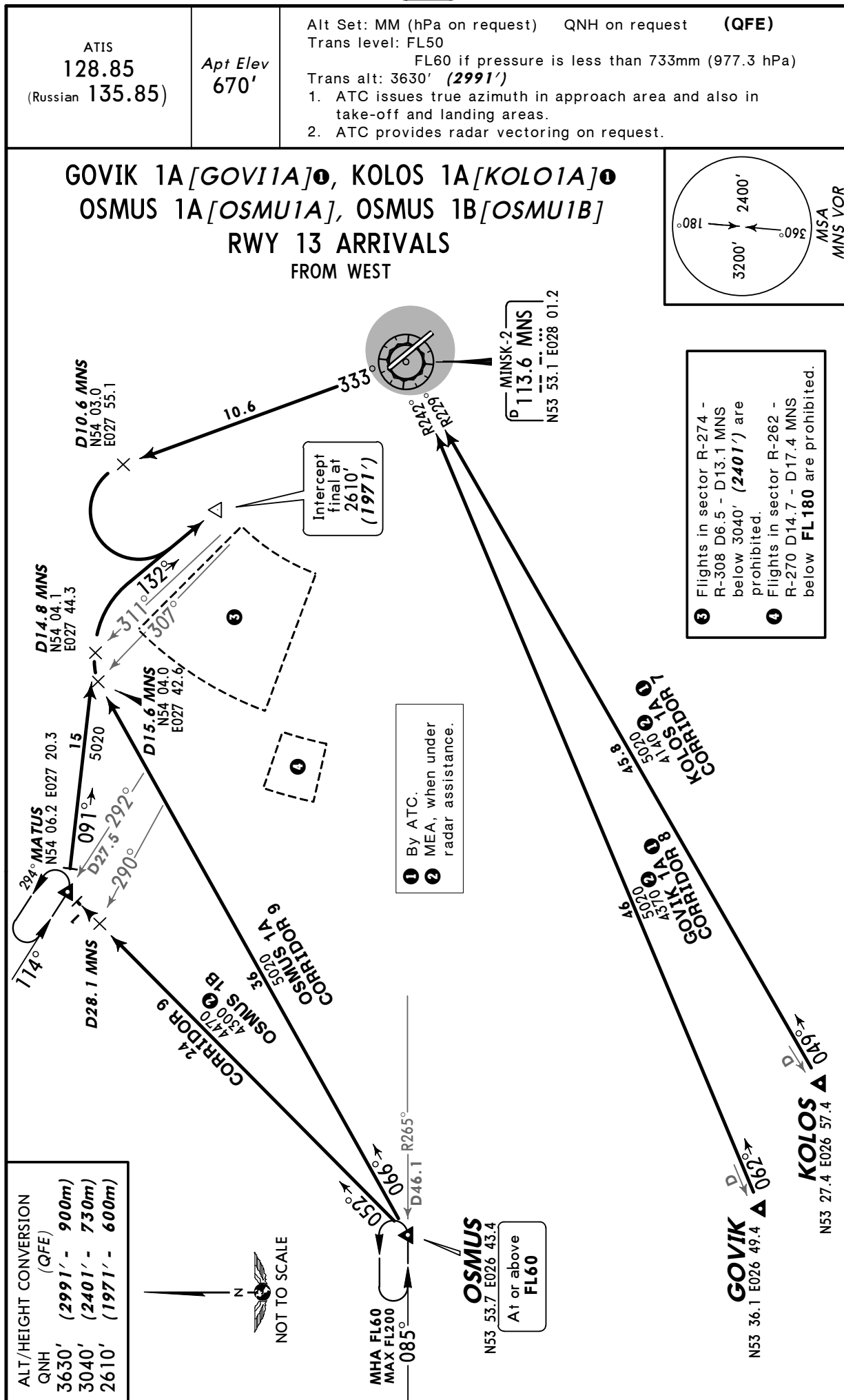
MINSK, BELARUS
STAR



UMMS/MSQ
MINSK-2

JEPPesen
21 MAY 10 **(10-2D)** **Eff 3 Jun**

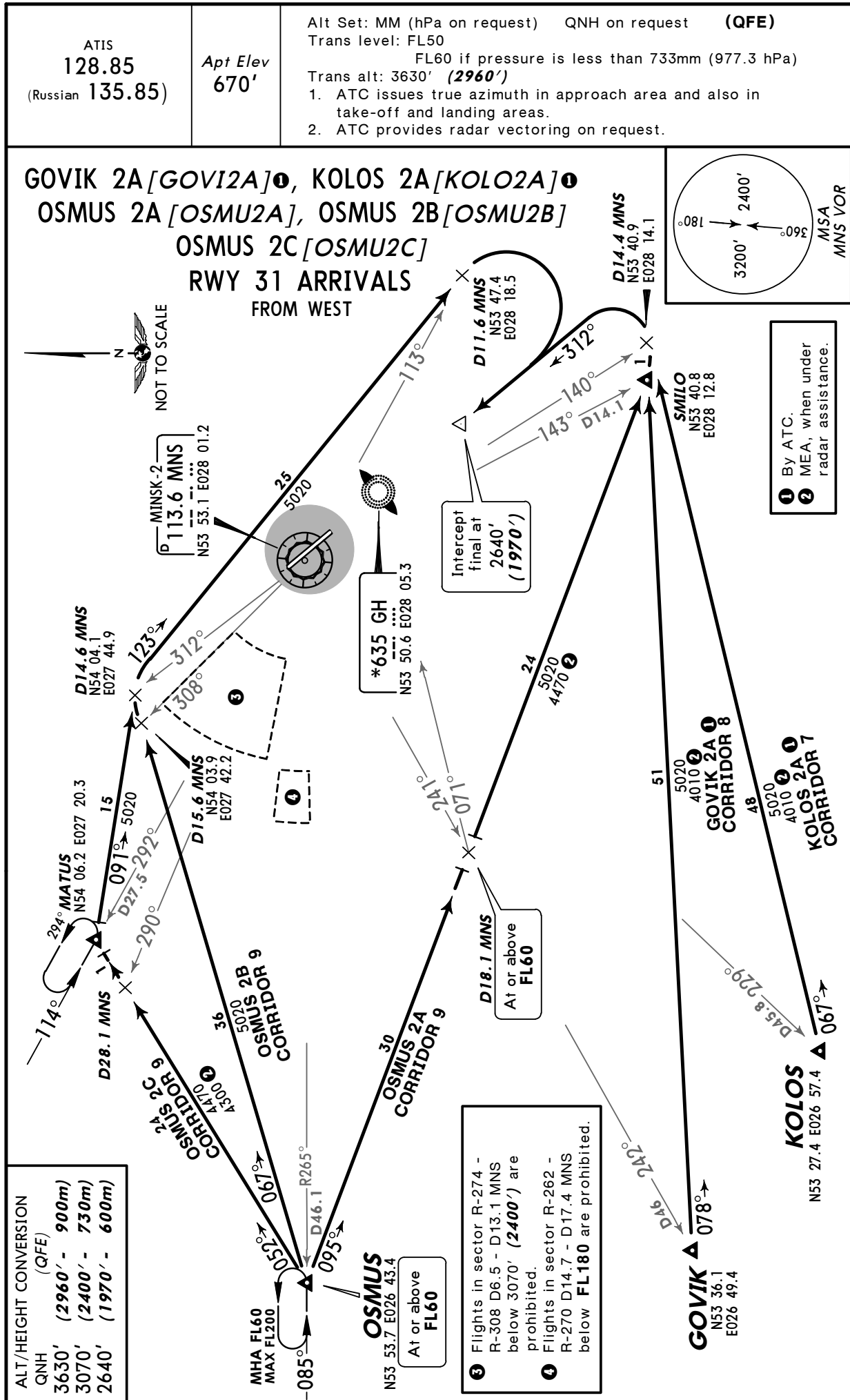
MINSK, BELARUS
STAR



UMMS/MSQ
MINSK-2

JEPPESSEN
21 MAY 10 **10-2E** **Eff 3 Jun**

MINSK, BELARUS
STAR



UMMS/MSQ
MINSK-2

JEPPESEN
3 APR 09 **10-3** **Eff 9 Apr**

MINSK, BELARUS
SID

Apt Elev
670'

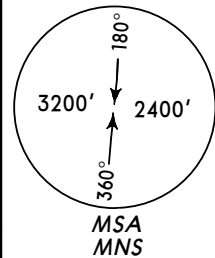
QNH on request **(QFE)**

Trans level: FL50

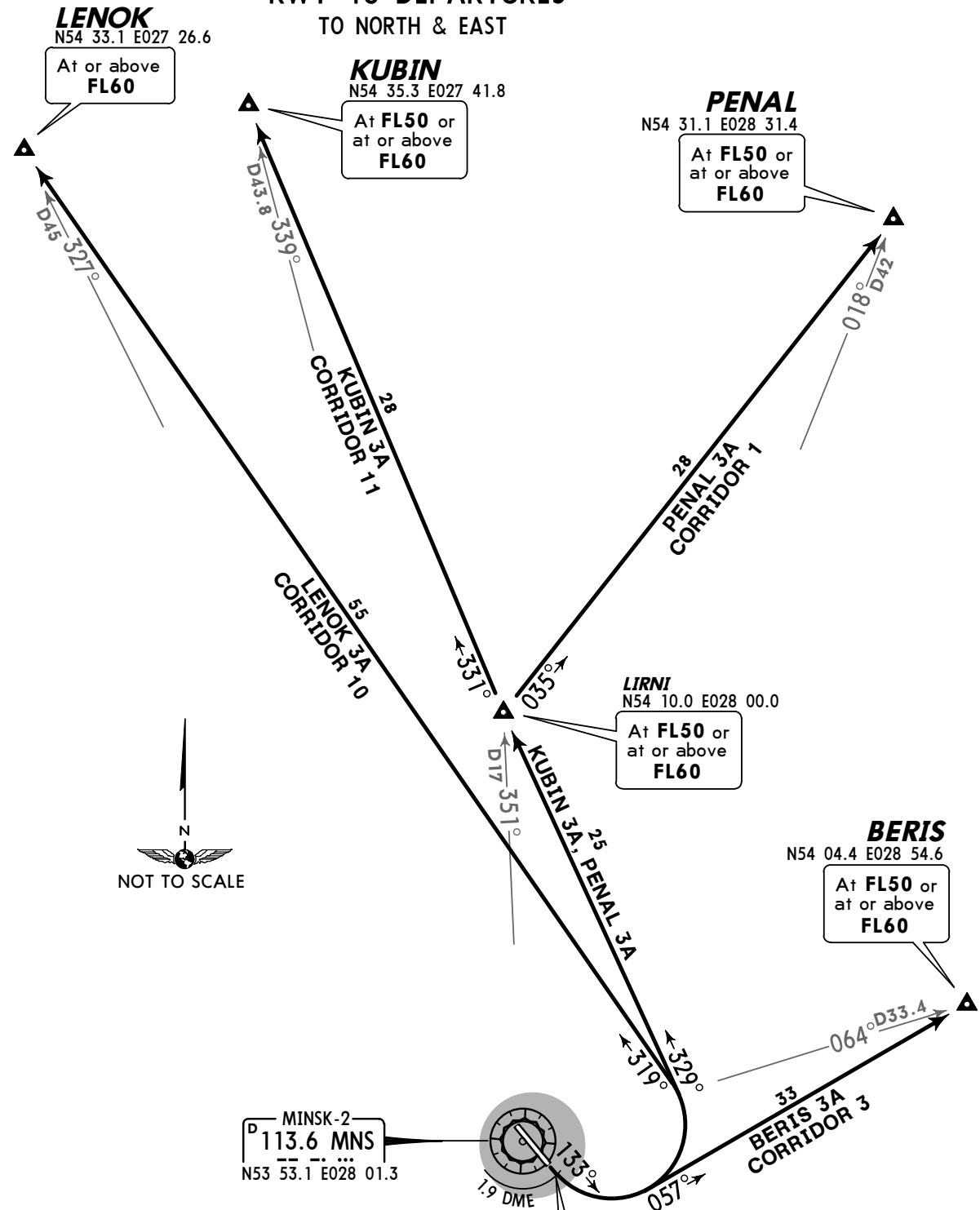
FL60 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3630' **(2990')**

1. ATC issues true azimuth in approach area and also in take-off and landing areas.
2. ATC provides radar vectoring on request.
3. Initial turn MAX 225 KT.



**BERIS 3A [BERI3A], KUBIN 3A [KUBI3A]
LENOK 3A [LENO3A], PENAL 3A [PENA3A]
RWY 13 DEPARTURES
TO NORTH & EAST**



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300'	(660' - 200m)
3630'	(2990' - 900m)

At or above
1300' **(660')**
but not before
MNS 1.9 DME

UMMS/MSQ
MINSK-2

JEPPESSEN
3 APR 09 **10-3A** Eff 9 Apr

MINSK, BELARUS
SID

Apt Elev
670'

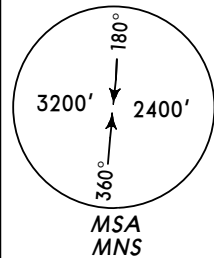
QNH on request **(QFE)**

Trans level: FL50

FL60 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3630' **(2960')**

1. ATC issues true azimuth in approach area and also in take-off and landing areas.
2. ATC provides radar vectoring on request.
3. Initial turn MAX 225 KT.



BERIS 4A [BERI4A], KUBIN 4A [KUBI4A]
LENOK 4A [LENO4A], PENAL 4A [PENA4A]
RWY 31 DEPARTURES
TO NORTH & EAST

LENOK

N54 33.1 E027 26.6
(MNS R-327/D45)

At or above
FL60

KUBIN

N54 35.3 E027 41.8
(MNS R-339/D43.8)

At FL50 or
at or above
FL60

PENAL

N54 31.1 E028 31.4

At FL50 or
at or above
FL60

LIRNI

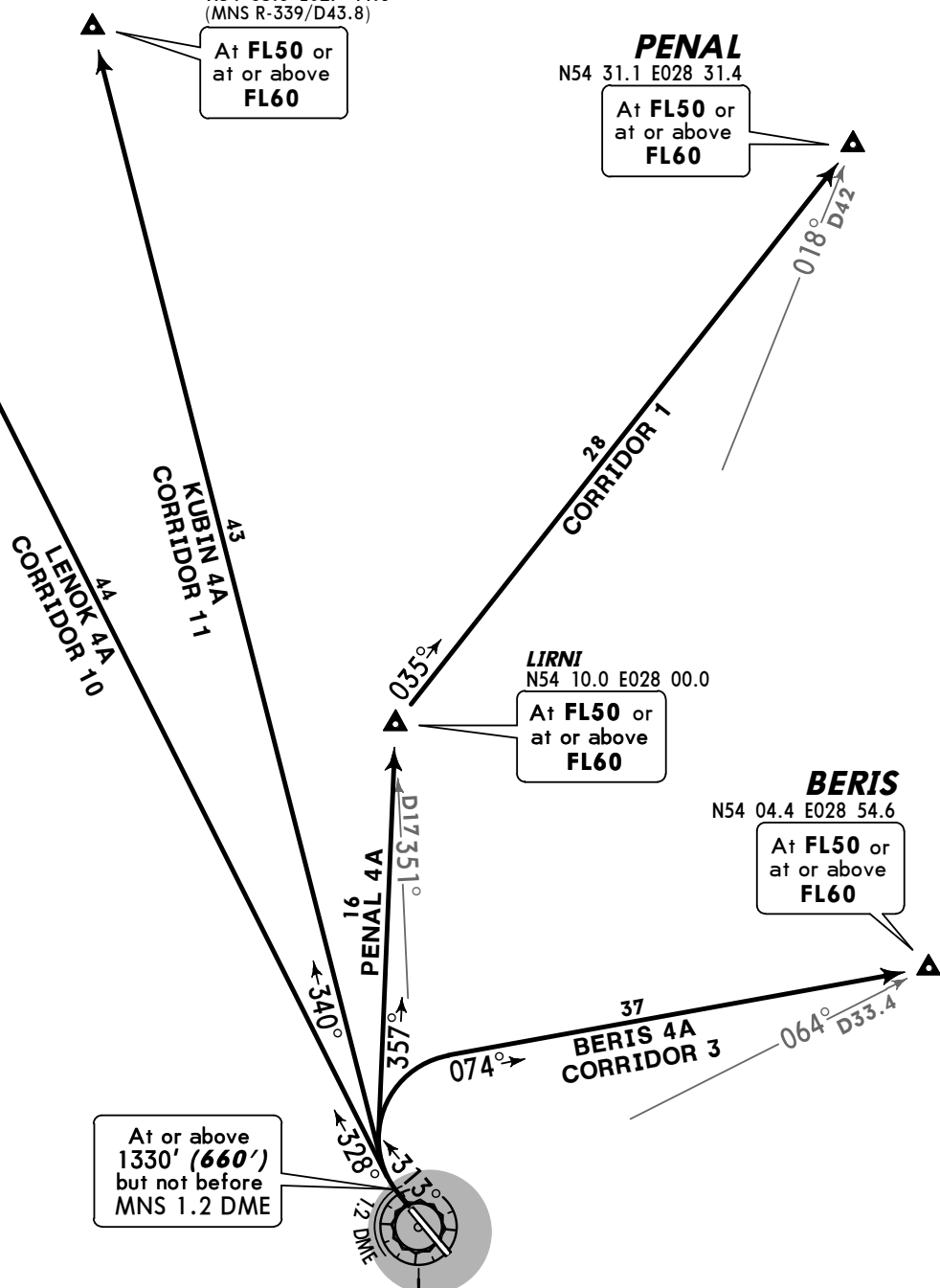
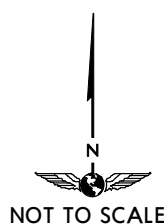
N54 10.0 E028 00.0

At FL50 or
at or above
FL60

BERIS

N54 04.4 E028 54.6

At FL50 or
at or above
FL60



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1330'	(660' - 200m)
3630'	(2960' - 900m)

MINSK-2
113.6 MNS
N53 53.1 E028 01.3

UMMS/MSQ
MINSK-2

JEPPESEN
3 APR 09 **(10-3B)** **Eff 9 Apr**

MINSK, BELARUS
SID

Apt Elev
670'

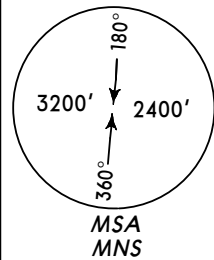
QNH on request **(QFE)**

Trans level: FL50

FL60 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3630' **(2990')**

1. ATC issues true azimuth in approach area and also in take-off and landing areas.
2. ATC provides radar vectoring on request.
3. Initial turn MAX 225 KT.



DELON 3A [DELO3A]
LUPAN 3A [LUPA3A] ●, NASKA 3A [NASK3A]
RWY 13 DEPARTURES
TO SOUTHEAST & SOUTH

MINSK-2
113.6 MNS
N53 53.1 E028 01.3

① By ATC.

DELON 3A
LUPAN 3A
Turn **RIGHT**
at or above
1300' **(660')**

NASKA 3A
Turn **LEFT**
at or above
1300' **(660')**
but not before
MNS 1.9 DME

NASKA
N53 37.0 E028 55.0
(MNS R-110/D35.7)

At **FL50** or
at or above
FL60

34
NASKA 3A
CORRIDOR 4

37
DELON 3A
CORRIDOR 5

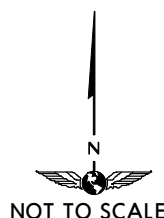
47
LUPAN 3A
CORRIDOR 6

DELON
N53 21.0 E028 39.0
(MNS R-138/D39.2)

At **FL50** or
at or above
FL60

LUPAN
N53 07.1 E027 40.7

At **FL50** or
at or above
FL60



ALT/HEIGHT CONVERSION

QNH	(QFE)
1300'	(660' - 200m)
3630'	(2990' - 900m)

UMMS/MSQ
MINSK-2

JEPPESEN
3 APR 09 **(10-3C)** **Eff 9 Apr**

MINSK, BELARUS
SID

Apt Elev
670'

QNH on request **(QFE)**

Trans level: FL50

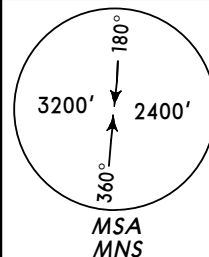
FL60 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3630' **(2960')**

1. ATC issues true azimuth in approach area and also in take-off and landing areas.

2. ATC provides radar vectoring on request.

3. Initial turn MAX 225 KT.



DELON 4A
LUPAN 4A, NASKA 4A

Turn **RIGHT**
at or above
1330' (660')
but not before
MNS 1.2 DME

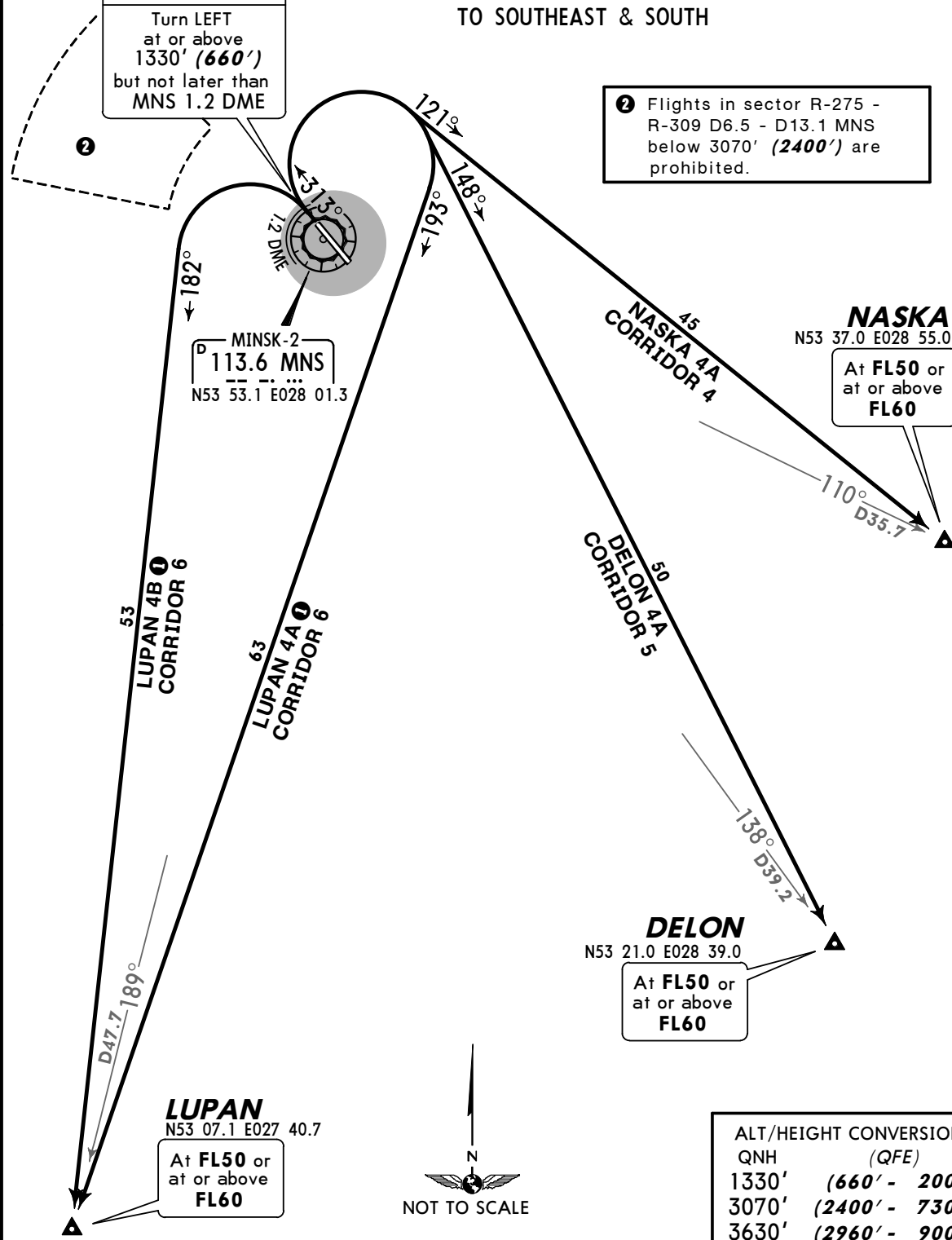
DELON 4A [DELO4A]
LUPAN 4A [LUPA4A] ①
LUPAN 4B [LUPA4B] ①
NASKA 4A [NASK4A]
RWY 31 DEPARTURES
TO SOUTHEAST & SOUTH

① By ATC.

LUPAN 4B

Turn **LEFT**
at or above
1330' (660')
but not later than
MNS 1.2 DME

② Flights in sector R-275 - R-309 D6.5 - D13.1 MNS below 3070' **(2400')** are prohibited.



MINSK-2
113.6 MNS
N53 53.1 E028 01.3

NASKA
N53 37.0 E028 55.0

At **FL50** or
at or above
FL60

DELON
N53 21.0 E028 39.0

At **FL50** or
at or above
FL60

LUPAN
N53 07.1 E027 40.7

At **FL50** or
at or above
FL60

ALT/HEIGHT CONVERSION		
QNH	(QFE)	
1330'	(660' -	200m)
3070'	(2400' -	730m)
3630'	(2960' -	900m)

UMMS/MSQ
MINSK-2

JEPPESSEN
3 APR 09 **10-3D** **Eff 9 Apr**

MINSK, BELARUS
SID

Apt Elev
670'

QNH on request (QFE)

Trans level: FL50

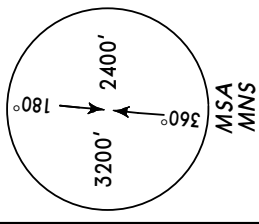
FL60 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3630' (**2990'**)

1. ATC issues true azimuth in approach area and also in take-off and landing areas.

2. ATC provides radar vectoring on request.

3. Initial turn MAX 225 KT.

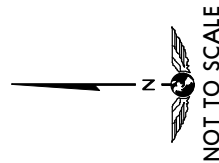


At or above
1300' (660')



MINSK-2
113.6 MNS
N53 53.1 E028 01.3

GOVIK 3A [GOVI3A]
KOLOS 3A [KOLO3A]
RWY 13 DEPARTURES
TO SOUTHWEST
BY ATC



49
GOVIK 3A
CORRIDOR 8

48
KOLOS 3A
CORRIDOR 1

GOVIK

N53 36.1 E026 49.5

At FL50 or
at or above
FL60

KOLOS

N53 27.4 E026 57.5

At FL50 or
at or above
FL60

ALT/HEIGHT CONVERSION

QNH (QFE)

1300' (660' - 200m)

3630' (2990' - 900m)

UMMS/MSQ
MINSK-2

JEPPESSEN
3 APR 09 10-3E Eff 9 Apr

MINSK, BELARUS

SID

Apt Elev
670'

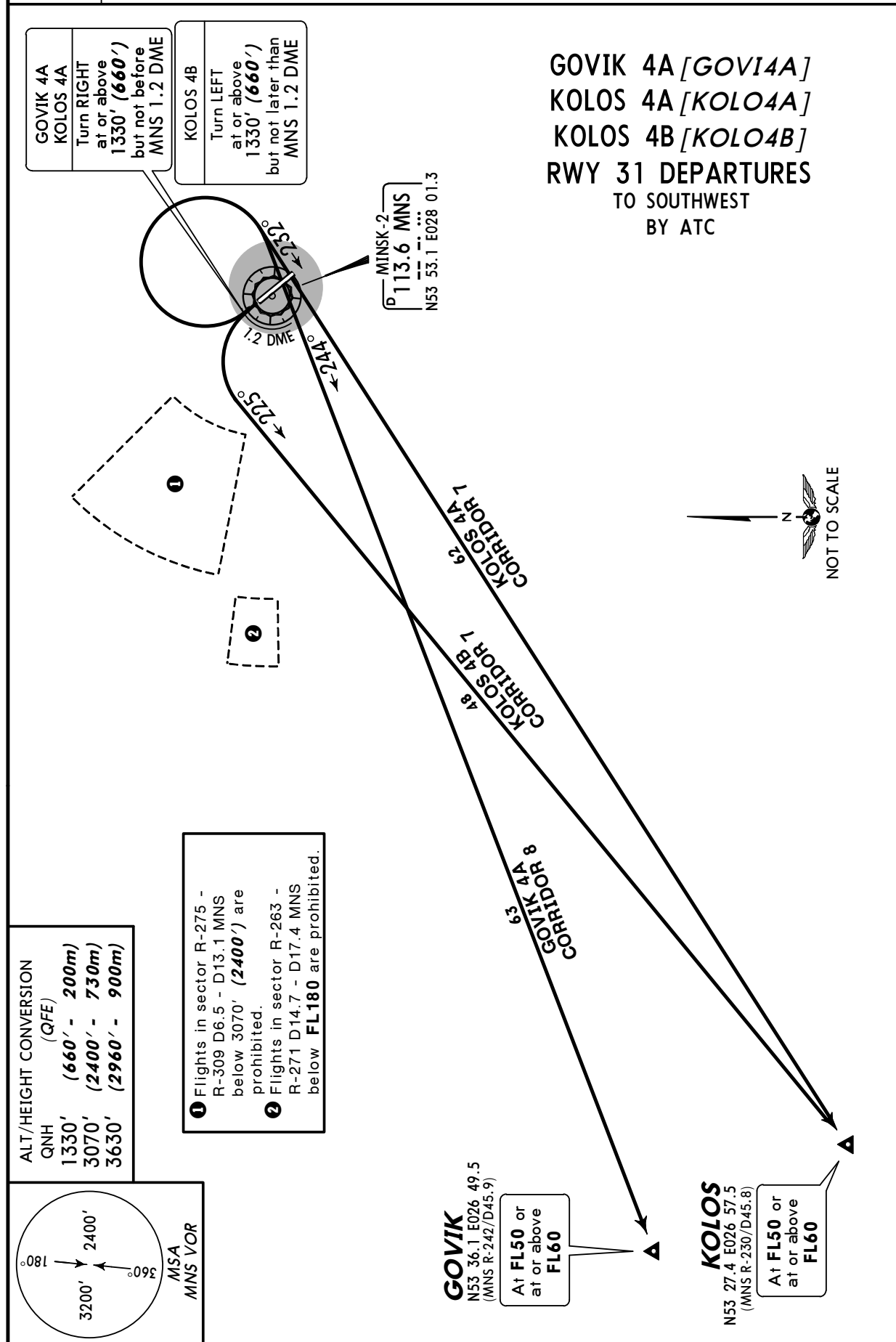
QNH on request **(QFE)**

Trans level: FL50

FL60 if pressure is less than 733mm (977.3 hPa)

Trans alt: 3630' (**2960'**)

1. ATC issues true azimuth in approach area and also in take-off and landing areas.
2. ATC provides radar vectoring on request.
3. Initial turn MAX 225 KT.



UMMS/MSQ
MINSK-2

JEPPESSEN
21 MAY 10 **10-3F** **Eff 3 Jun**

MINSK, BELARUS

SID

Apt Elev
670'

QNH on request **(QFE)**

Trans level: FL50

FL60 if pressure is less than 733mm (977.3 hPa)

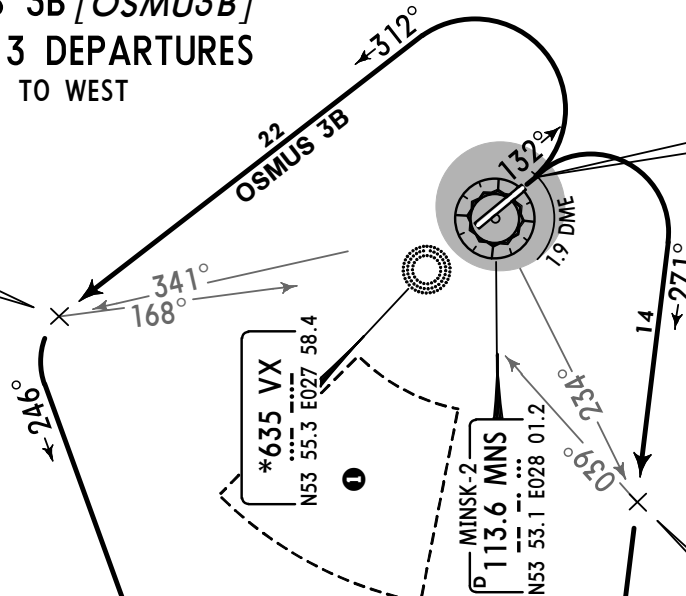
Trans alt: 3630' **(2991')**

1. ATC issues true azimuth in approach area and also in take-off and landing areas.
2. ATC provides radar vectoring on request.
3. Initial turn MAX 225 KT.

OSMUS 3A [OSMU3A]
OSMUS 3B [OSMU3B]
RWY 13 DEPARTURES
TO WEST

D12.4 MNS
N54 05.2 E027 56.8

At or above
FL60



OSMUS 3A
Turn RIGHT
at or above
1300' **(661')**

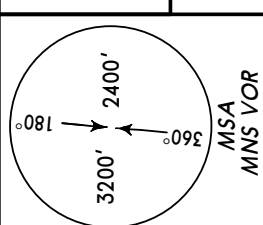
OSMUS 3B
Turn LEFT
at or above
1300' **(661')**
but not before
MNS 1.9 DME

D10.5 MNS
At or above
FL60

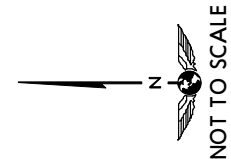
OSMUS 3A
CORRIDOR 9

OSMUS 3A
CORRIDOR 9

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300'	(661' - 200m)
3040'	(2401' - 730m)
3630'	(2991' - 900m)



- 1 Flights in sector R-274 - R-308 D6.5 - D13.1 MNS below 3040' **(2401')** are prohibited.
- 2 Flights in sector R-262 - R-270 D14.7 - D17.4 MNS below **FL180** are prohibited.



UMMS/MSQ
MINSK-2

JEPPESSEN
21 MAY 10 **10-3G** **Eff 3 Jun**

MINSK, BELARUS
SID

Apt Elev
670'

QNH on request **(QFE)**

Trans level: FL50

FL60 if pressure is less than 733mm (977.3 hPa)

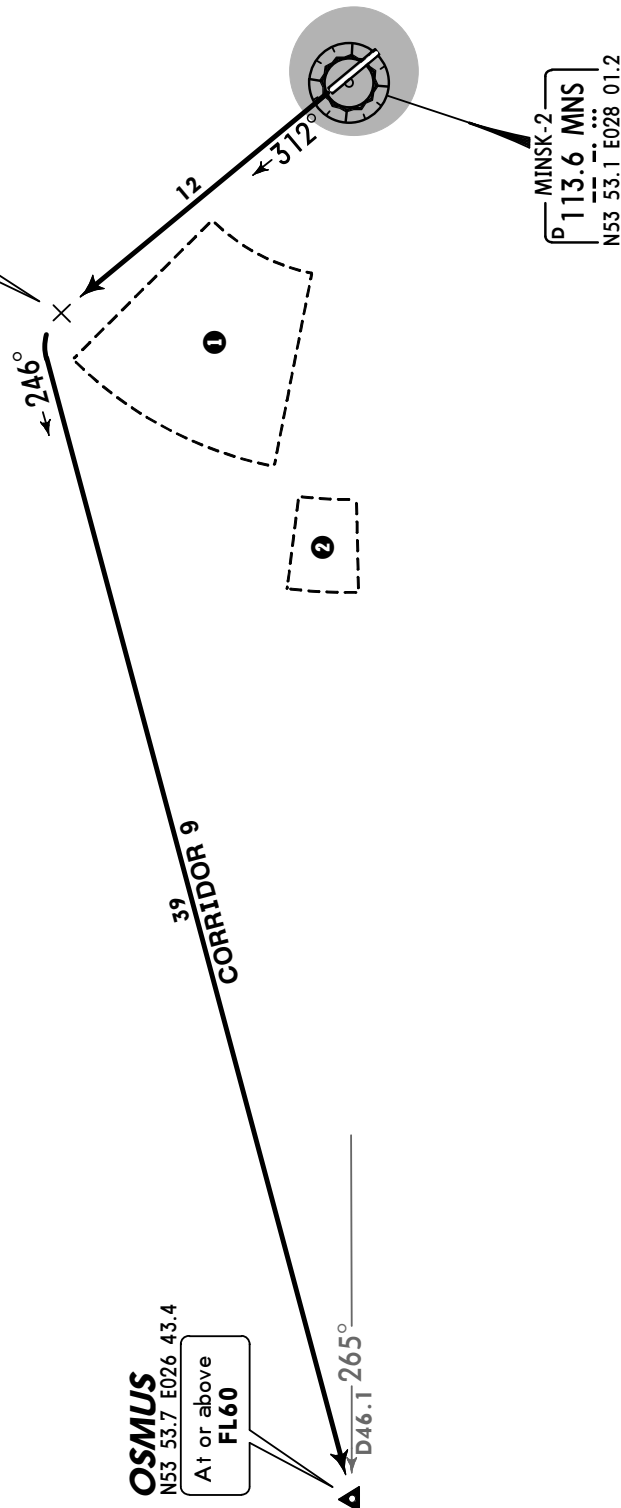
Trans alt: 3630' **(2960')**

1. ATC issues true azimuth in approach area and also in take-off and landing areas.
2. ATC provides radar vectoring on request.
3. Initial turn MAX 225 KT.

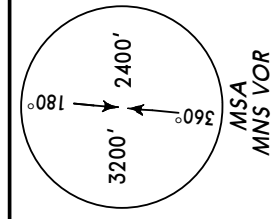
OSMUS 4A[OSMU4A]
RWY 31 DEPARTURE
TO WEST

D13.5 MNS
N54 03.3 E027 46.2
(MNS R-312)

At or above
FL60

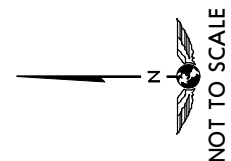


MINSK-2
113.6 MNS
N53 53.1 E028 01.2



ALT/HEIGHT CONVERSION
(QFE)
QNH
3070' (2400' - 730m)
3630' (2960' - 900m)

- 1 Flights in sector R-274 - R-308 D6.5 - D13.1 MNS below 3070' **(2400')** are prohibited.
- 2 Flights in sector R-262 - R-270 D14.7 - D17.4 MNS below **FL180** are prohibited.



UMMS/MSQ

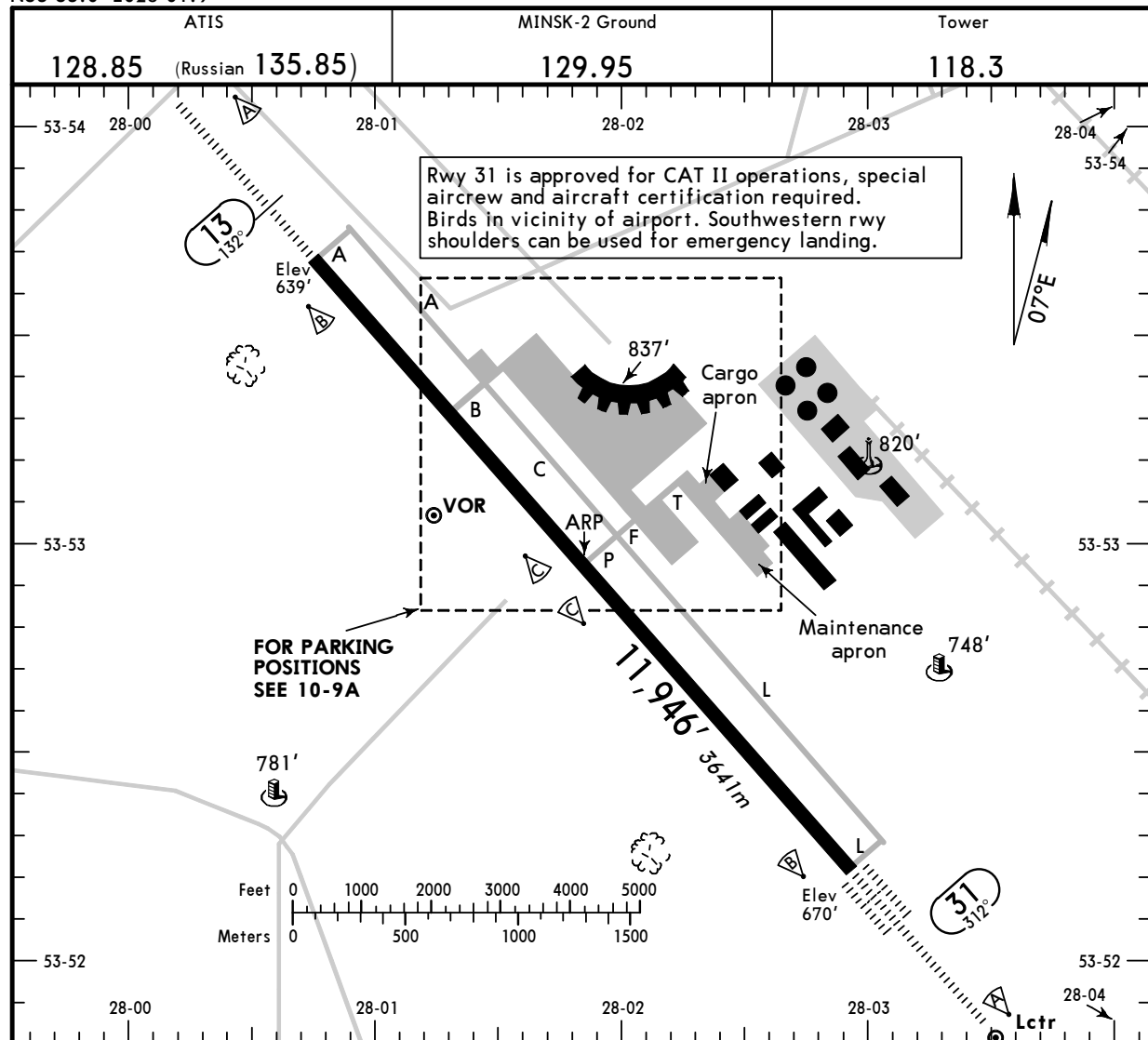
Apt Elev **670'**
N53 53.0 E028 01.9

JEPPesen

4 DEC 09 **(10-9)** Eff 17 Dec

MINSK, BELARUS

MINSK-2



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS		TAKE-OFF	WIDTH
		Threshold	Landing Beyond		
13	HIRL (60m) CL (15m) HIALS PAPI-L ① RVR		10,974' 3345m		197'
31	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L ① RVR		10,852' 3308m		60m

① angle 3.0°.

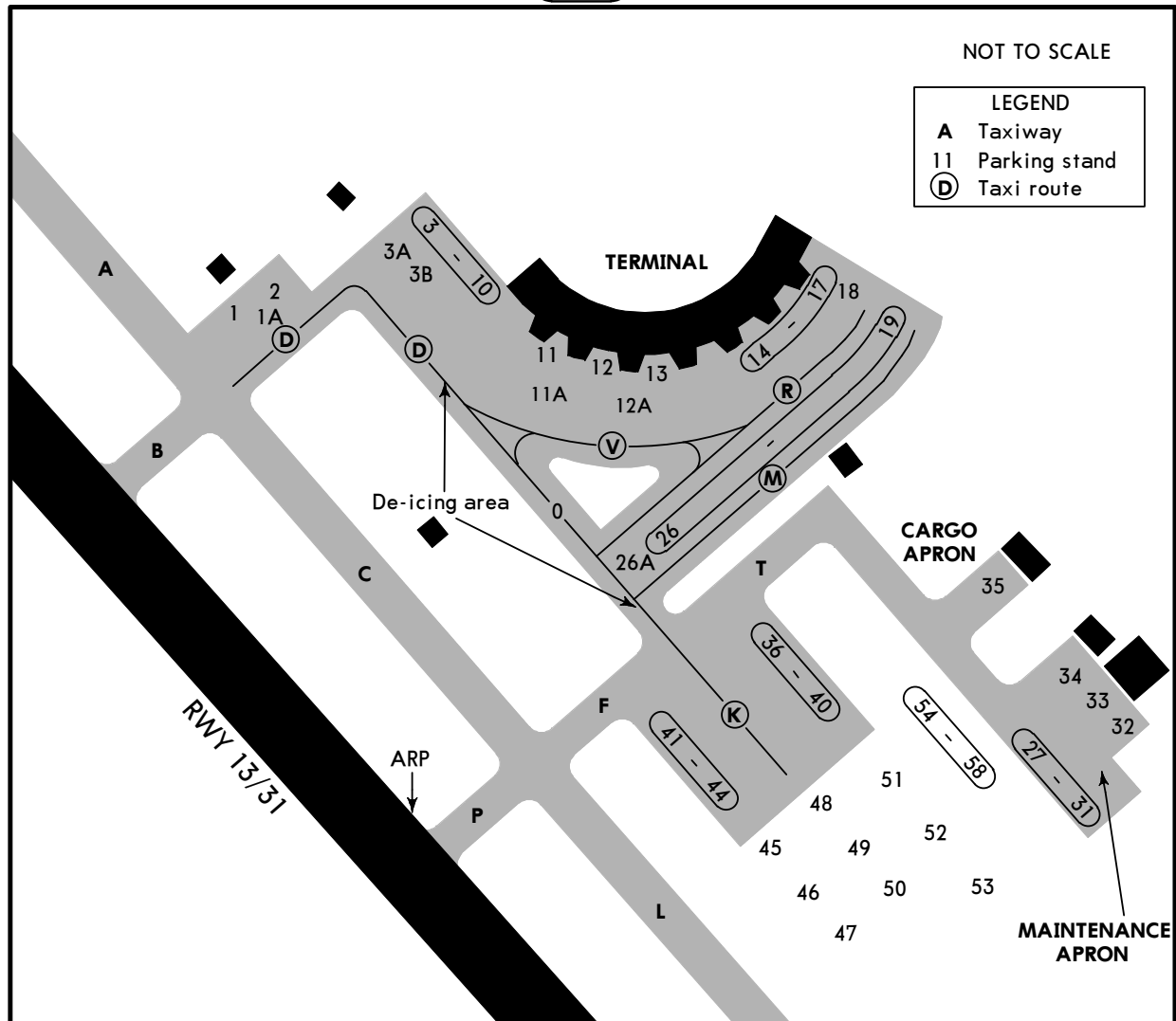
TAKE-OFF

AIR CARRIER (JAA)
All Rwys

LVP must be in force

	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL
A			
B	200m (150m)	250m	400m
C			
D	250m (200m)	300m	

UMMS/MSQ

JEPPESEN
4 DEC 09 **(10-9A)** Eff 17 Dec**MINSK, BELARUS**
MINSK-2

Taxi route D in front of stands 1 and 2 MAX wingspan 228'/69m.

Taxi route V MAX wingspan 166'/50m.

Taxi route D abeam stand 26 available for acft with a wingspan exceeding 187'/57m only when stand is vacant.

Use of stand 18 with follow-me car only.

Taxi route A abeam stand 1 available for acft with a wingspan exceeding 240'/73m only when stand is vacant.

INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1	N53 53.4 E028 01.4	23	N53 53.3 E028 02.1
2	N53 53.5 E028 01.5	24, 25	N53 53.2 E028 02.1
3	N53 53.5 E028 01.7	26, 26A, 26B	N53 53.2 E028 02.0
3A, 3B	N53 53.5 E028 01.6	35	N53 53.1 E028 02.5
4, 5	N53 53.5 E028 01.7	36, 37	N53 53.1 E028 02.2
6	N53 53.4 E028 01.7	38, 39	N53 53.1 E028 02.3
7 thru 9	N53 53.4 E028 01.8	40	N53 53.0 E028 02.3
10	N53 53.4 E028 01.9	41, 42	N53 53.0 E028 02.1
11 thru 12A	N53 53.3 E028 01.9	43, 44	N53 53.0 E028 02.2
13, 14	N53 53.3 E028 02.0	45	N53 53.0 E028 02.3
15	N53 53.3 E028 02.1	46, 47	N53 52.9 E028 02.3
16	N53 53.4 E028 02.1	48, 49	N53 53.0 E028 02.3
17	N53 53.4 E028 02.2	50	N53 52.9 E028 02.4
19	N53 53.3 E028 02.3	51, 52	N53 53.0 E028 02.3
20 thru 22	N53 53.3 E028 02.2	53	N53 52.9 E028 02.6

UMMS/MSQ


JEPPESEN
15 JAN 10 **10-9S**
Standard
MINSK, BELARUS
MINSK-2

STRAIGHT-IN RWY		A	B	C	D
13	ILS	839' (200')	839' (200')	839' (200')	839' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	VOR ❶	1300' (661')	1300' (661')	1630' (991')	1630' (991')
31	<i>ALS out</i>	R1500m	R1500m	C2400m	C2400m
	NDB ❶	990' (351')	990' (351')	990' (351')	990' (351')
	<i>ALS out</i>	R1500m	R1500m	R1600m	R1600m
	CAT 2 ILS	770' (100')	770' (100')	770' (100')	770' (100')
		RA97' R350m	RA97' R350m	RA97' R350m	RA97' R350m
	ILS	870' (200')	870' (200')	870' (200')	870' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	VOR ❶	1330' (660')	1330' (660')	1660' (990')	1660' (990')
	<i>ALS out</i>	R1500m	R1500m	C2400m	C2400m
	NDB ❶	1010' (340')	1010' (340')	1010' (340')	1010' (340')
	<i>ALS out</i>	R1500m	R1500m	R1500m	R1500m

❶ Continuous Descent Final Approach

CIRCLE-TO-LAND ❷	100 KT	135 KT	180 KT	205 KT
	1530' (860')	1530' (860')	1530' (860') ❸	1530' (860') ❸
	ceil1020' V3000m	ceil1020' V3000m	ceil1190' V3000m	ceil1190' V4000m

❷ NIGHT not authorized.

❸ wide bodied acft: 1660'(990'), ceil 1320'-V5000m.

TAKE-OFF RWY 13, 31

Approved Operators HIRL, CL & mult. RVR req		LVP must be in Force			RCLM (DAY only) or RL	NIL (DAY only)
		RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL		
A	125m	150m	200m	250m	400m	500m
B						
C						
D	150m	200m	250m	300m		

UMMS/MSQ

JEPPESEN

4 DEC 09

10-9X

Eff 17 Dec

JAA MINIMUMS

MINSK, BELARUS

MINSK-2

STRAIGHT-IN RWY		A	B	C	D
13	ILS	839' (200')	839' (200')	839' (200')	839' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
	VOR	1300' (661')	1300' (661')	1630' (991')	1630' (991')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
	NDB	990' (351')	990' (351')	990' (351')	990' (351')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m
31	CAT 2 ILS	770' (100')	770' (100')	770' (100')	770' (100')
		RA97' - R350m	RA97' - R350m	RA97' - R350m	RA97' - R350m
	ILS	870' (200')	870' (200')	870' (200')	870' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
	VOR	1330' (660')	1330' (660')	1660' (990')	1660' (990')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
	NDB	1010' (340')	1010' (340')	1010' (340')	1010' (340')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m

CIRCLE-TO-LAND	100 KT	135 KT	180 KT	205 KT
NIGHT not authorized	1530' (860')	1530' (860')	1530' (860') ❶	1530' (860') ❶
	CEIL1020'-V3000m	CEIL1020'-V3000m	CEIL1190'-V3000m	CEIL1190'-V4000m

❶ Wide bodied acft: **1660'**(990'), ceil-vis 1320'-V5000m.

TAKE-OFF RWY 13, 31

LVP must be in Force						
Approved Operators						
HIRL, CL & mult. RVR req		RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	NIL (DAY only)
A						
B	125m	150m	200m	250m	400m	500m
C						
D	150m	200m	250m	300m		

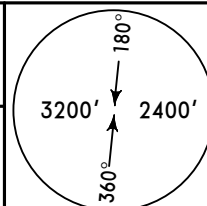
UMMS/MSQ
MINSK-2

JEPPESSEN
4 DEC 09 **(11-1)** **Eff 17 Dec**

MINSK, BELARUS
ILS-Alpha Rwy 13

BRIEFING STRIP

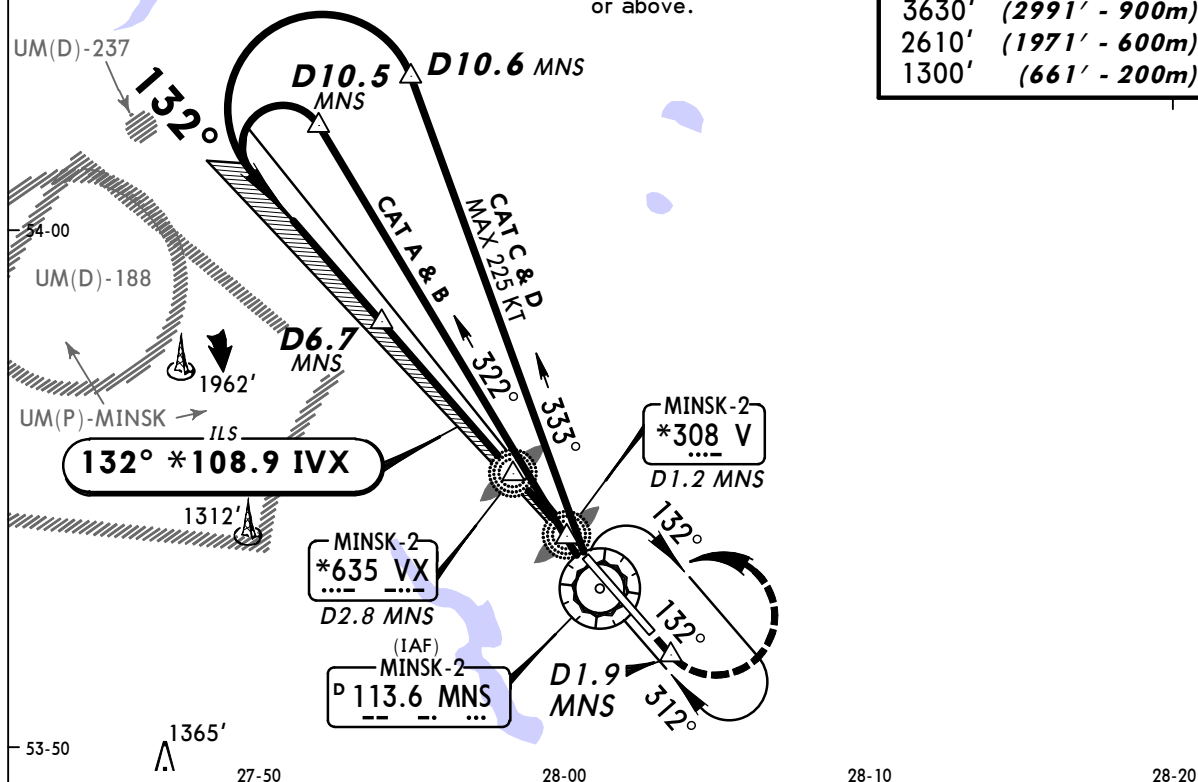
ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R)	*MINSK Radar	MINSK-2 Tower	Ground
	125.9	125.25	118.3	129.95
LOC IVX *108.9	Final Apch Crs 132°	GS LOM 1378' (739')	ILS DA(H) 839' (200')	Apt Elev 670' RWY 639'
MISSED APCH: Climb on 132° to 1300' (661') or above. Not before D1.9 MNS turn LEFT (MAX 225 KT) to VOR climbing to 2610' (1971') , then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 3630' (2991') ATC issues true azimuth in landing area.				



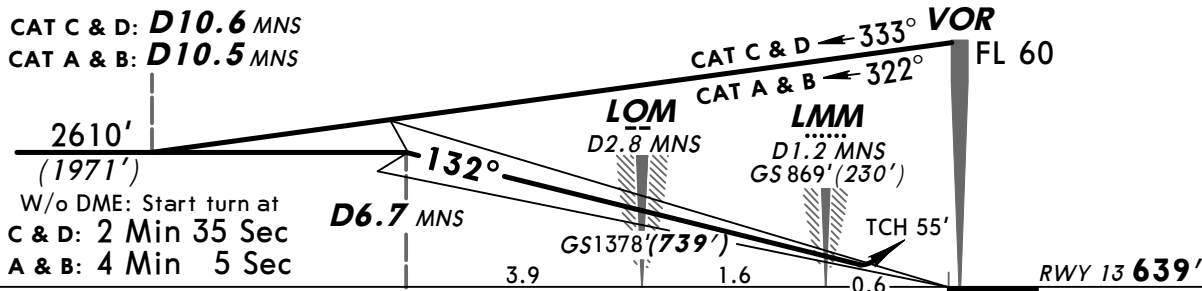
MSA
MNS VOR

1 FL 50, if pressure is 733mm (977.3 hPa) or above.

ALT/HEIGHT CONVERSION	(QFE)
QNH	
3630'	(2991' - 900m)
2610'	(1971' - 600m)
1300'	(661' - 200m)



CAT C & D: **D10.6 MNS**
CAT A & B: **D10.5 MNS**



W/o DME: Start turn at
C & D: 2 Min 35 Sec
A & B: 4 Min 5 Sec

Gnd speed-Kts	70	90	100	120	140	160
ILS GS 3.00°	377	484	538	646	753	861

STRAIGHT-IN LANDING RWY 13				CEILING REQUIRED		CIRCLE-TO-LAND			
ILS			LOC (GS out)		NIGHT not authorized				
DA(H) 839'(200')									
FULL		ALS out							
A	RVR 720m VIS 800m		1200m		NOT AUTHORIZED		Max Kts	MDA(H) _____ CEIL-VIS _____	
100							1530'(860')	1020'- 3000m	
135							1530'(860') 1	1190'- 3000m	
180							1530'(860') 1	1190'- 4000m	
D					205	1530'(860') 1	1190'- 4000m		

1 Wide bodied acft: MDA(H) 1660' (990'), CEIL-VIS 1320' - 5.0 km.

CHANGES: Rwy elev. Bearings.

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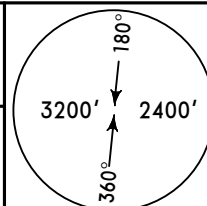
UMMS/MSQ
MINSK-2

JEPPESEN
4 DEC 09 **(11-2)** **Eff 17 Dec**

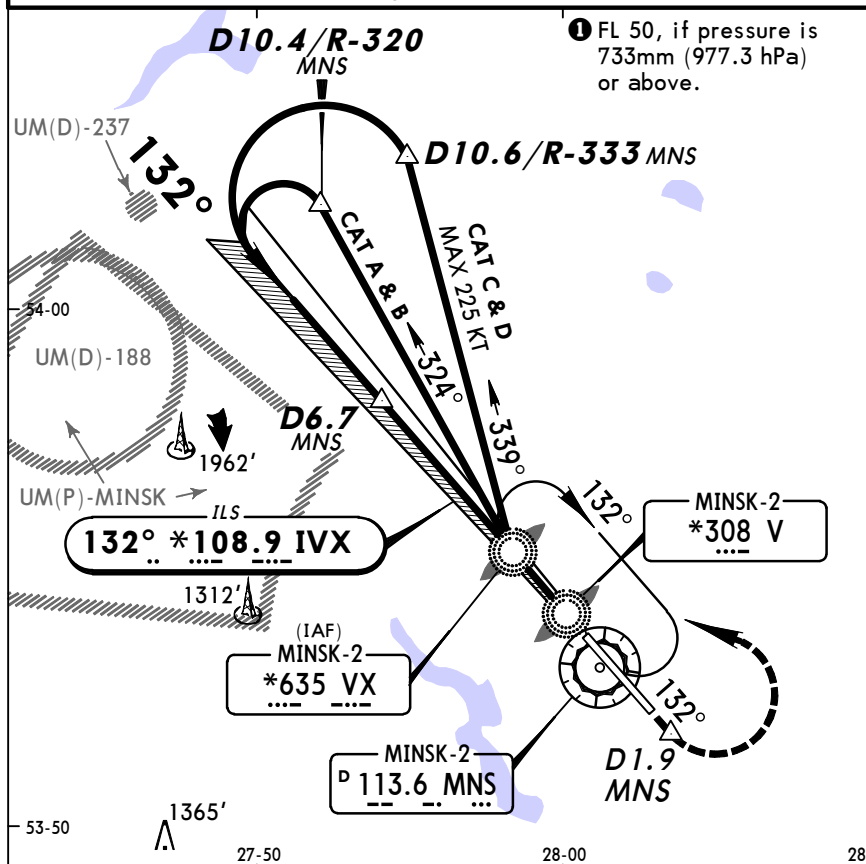
MINSK, BELARUS
ILS-Bravo Rwy 13

BRIEFING STRIP

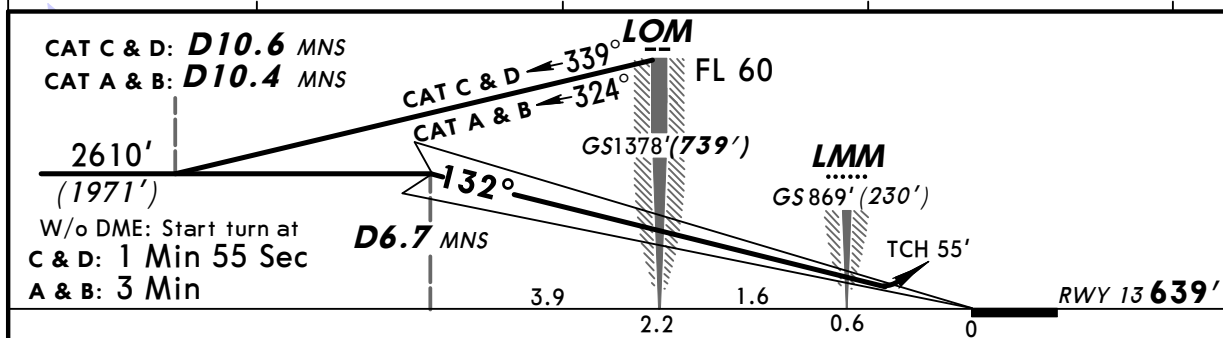
ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R) 125.9	*MINSK Radar 125.25	MINSK-2 Tower 118.3	Ground 129.95
LOC IVX *108.9	Final Apch Crs 132°	GS LOM 1378' (739')	ILS DA(H) 839' (200')	Apt Elev 670' RWY 639'
MISSED APCH: Climb on 132° to 1300' (661') or above. Not before D1.9 MNS turn LEFT (MAX 225 KT) to VX NDB climbing to 2610' (1971') , then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 3630' (2991') ATC issues true azimuth in landing area.				



MSA
MNS VOR



ALT/HEIGHT CONVERSION	(QFE)
QNH	
3630'	(2991' - 900m)
2610'	(1971' - 600m)
1300'	(661' - 200m)



Gnd speed-Kts	70	90	100	120	140	160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														</
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STRAIGHT-IN LANDING RWY 13			CEILING REQUIRED		CIRCLE-TO-LAND	
ILS			LOC (GS out)		NIGHT not authorized	
DA(H) 839' (200')						
FULL			ALS out			
A					Max Kts	
B					100	1530' (860')
C					135	1020' - 3000m
D					180	1530' (860') 1 1190' - 3000m
					205	1530' (860') 1 1190' - 4000m

1 Wide bodied acft: MDA(H) 1660' (990'), CEIL-VIS 1320' - 5.0 km.

CHANGES: Rwy elev. Bearings.

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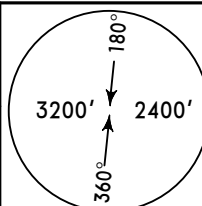
UMMS/MSQ
MINSK-2

JEPPESSEN
4 DEC 09 **(11-3)** **Eff 17 Dec**

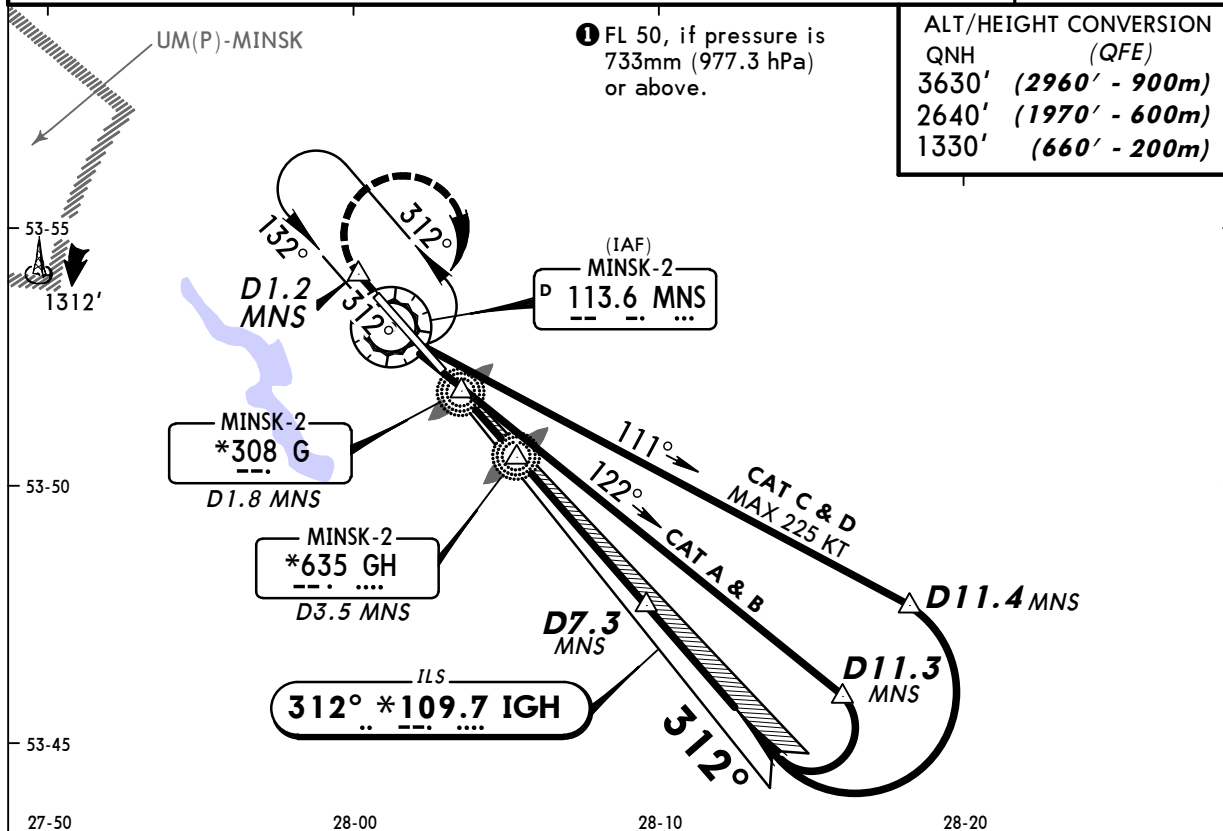
MINSK, BELARUS
ILS-Charlie Rwy 31

BRIEFING STRIP

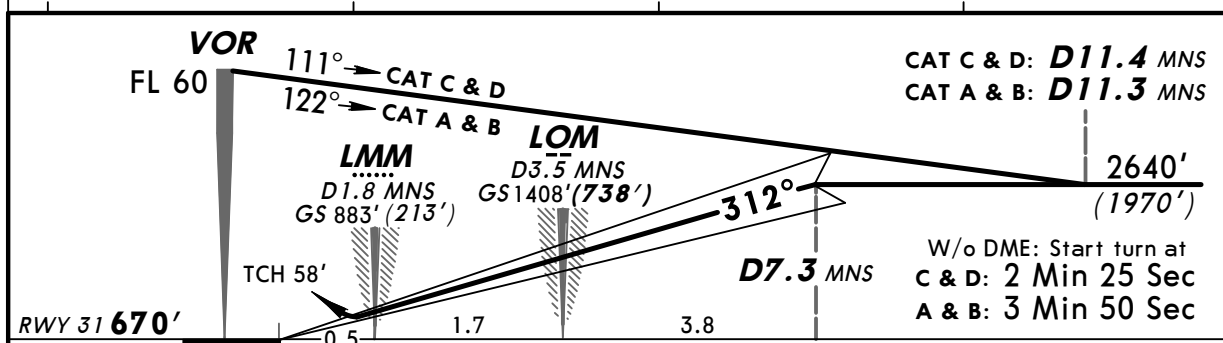
ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R)	*MINSK Radar	MINSK-2 Tower	Ground
	125.9	125.25	118.3	129.95
LOC IGH *109.7	Final Apch Crs 312°	GS LOM 1408' (738')	ILS DA(H) 870' (200')	Apt Elev 670' RWY 670'
MISSED APCH: Climb on 312° to 1330' (660') or above. Not before D1.2 MNS turn RIGHT (MAX 225 KT) to VOR climbing to 2640' (1970') , then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 3630' (2960') ATC issues true azimuth in landing area.				



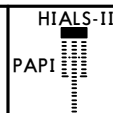
MSA
MNS VOR



ALT/HEIGHT CONVERSION	
QNH	(QFE)
3630'	(2960' - 900m)
2640'	(1970' - 600m)
1330'	(660' - 200m)



Gnd speed-Kts	70	90	100	120	140	160
ILS GS	3.00°	377	484	538	646	753



1330' (660')
or above on **312°**

STRAIGHT-IN LANDING RWY 31					CEILING REQUIRED		CIRCLE-TO-LAND	
ILS <i>DA(H)</i> 870'(200')				LOC (GS out)		NIGHT not authorized		
FULL		TDZ or CL out	ALS out			Max Kts	<i>MDA(H)</i>	<i>CEIL-VIS</i>
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED		100	1530'(860')	1020'- 3000m
B						135		
C						180	1530'(860') 1	1190'- 3000m
D						205		

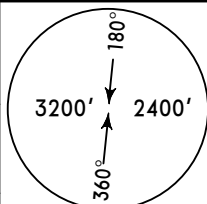
1 Wide bodied acft: MDA(H) 1660' (990'), CEIL-VIS 1320' - 5.0 km.

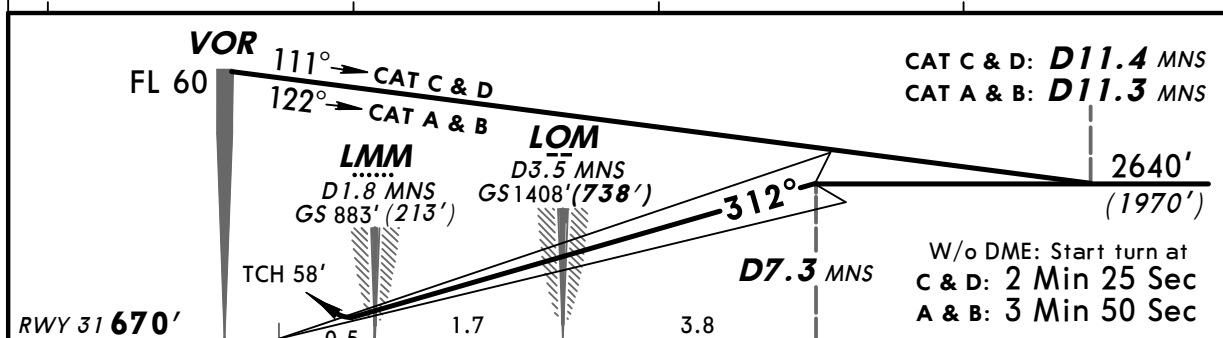
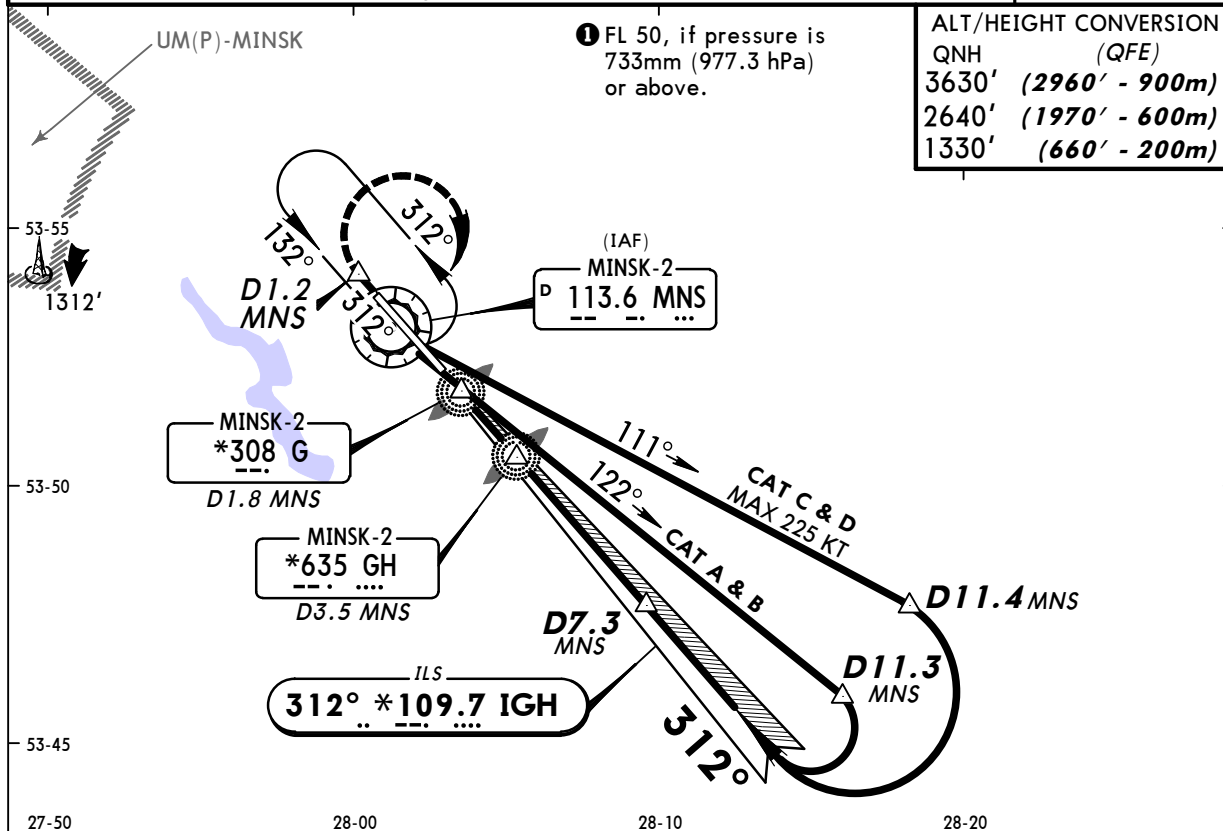
UMMS/MSQ
MINSK-2

JEPPESSEN
4 DEC 09
Eff 17 Dec **(11-3A)**

MINSK, BELARUS
CAT II ILS-Charlie Rwy 31

BRIEFING STRIP

ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R)	*MINSK Radar	MINSK-2 Tower	Ground
	125.9	125.25	118.3	129.95
LOC IGH *109.7	Final Apch Crs 312°	GS LOM 1408' (738')	CAT II ILS RA 97' DA(H) 770' (100')	Apt Elev 670' RWY 670'
MISSED APCH: Climb on 312° to 1330' (660') or above. Not before D1.2 MNS turn RIGHT (MAX 225 KT) to VOR climbing to 2640' (1970') , then as directed.				 MSA MNS VOR
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 3630' (2960') 1. Special Aircrew & Acft Certification Required. 2. ATC issues true azimuth in landing area.				



Gnd speed-Kts	70	90	100	120	140	160
GS	3.00°	377	484	538	646	753

STRAIGHT-IN LANDING RWY 31
CAT II ILS
ABCD
RA 97'
DA(H) **770' (100')**

RVR 350m

PANS OPS

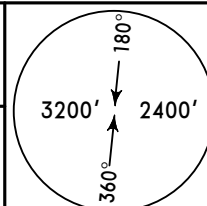
UMMS/MSQ MINSK-2

JEPPESEN
4 DEC 09 **(11-4)** **Eff 17 Dec**

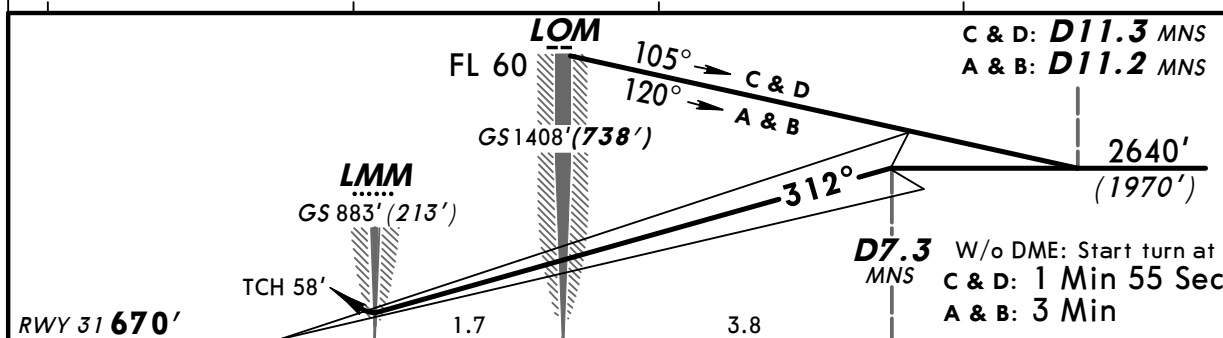
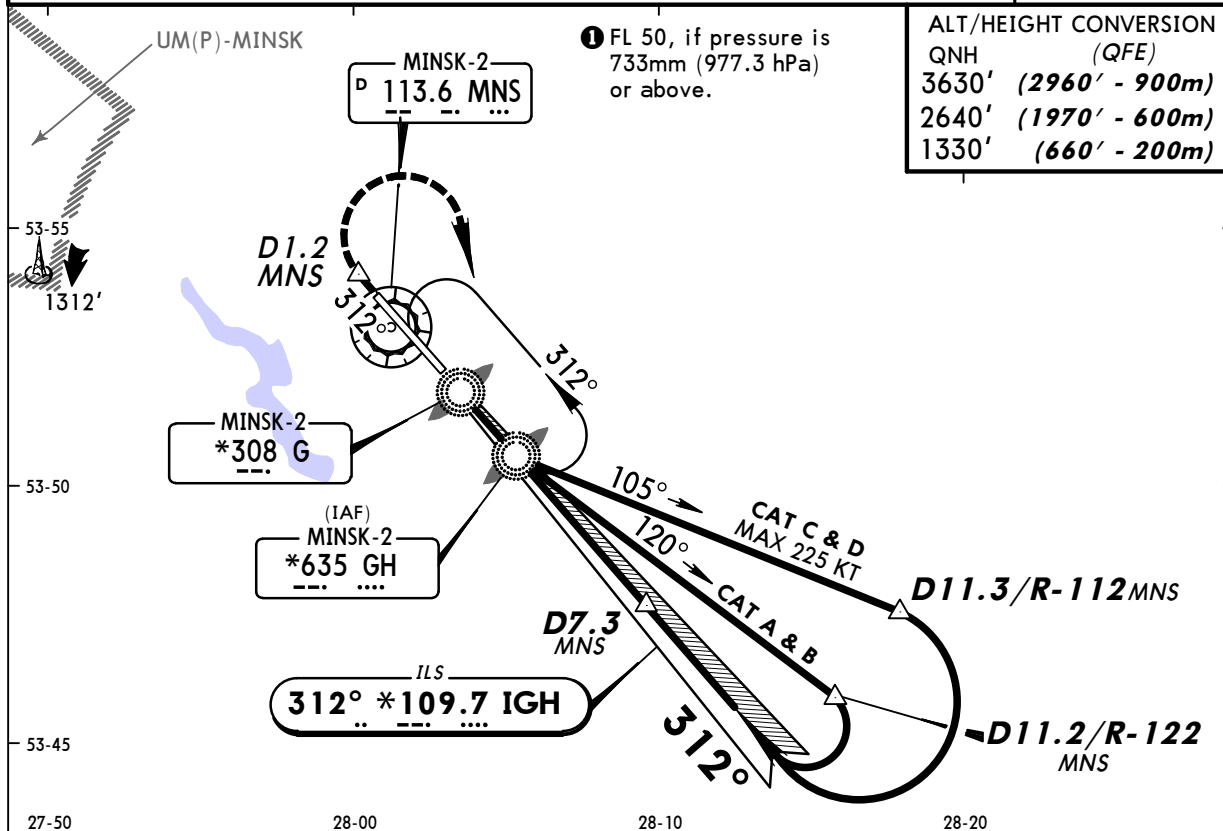
MINSK, BELARUS ILS-Delta Rwy 31

BRIEFING STRIP

ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R) 125.9	*MINSK Radar 125.25	MINSK-2 Tower 118.3	Ground 129.95
LOC IGH *109.7	Final Apch Crs 312°	GS LOM 1408' (738')	ILS DA(H) 870' (200')	Apt Elev 670' RWY 670'
MISSED APCH: Climb on 312° to 1330' (660') or above. Not before D1.2 MNS turn RIGHT (MAX 225 KT) to GH NDB climbing to 2640' (1970') , then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 1 Trans alt: 3630' (2960') ATC issues true azimuth in landing area.				



MSA
MNS VOR



Gnd speed-Kts	70	90	100	120	140	160
ILS GS	3.00°	377	484	538	646	753

STRAIGHT-IN LANDING RWY 31					CEILING REQUIRED		CIRCLE-TO-LAND	
ILS <i>DA(H)</i> 870'(200')				LOC (GS out)		NIGHT not authorized		
FULL		TDZ or CL out	ALS out			Max Kts	<i>MDA(H)</i>	<i>CEIL-VIS</i>
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED		100	1530'(860')	1020'- 3000m
B						135		
C						180	1530'(860') 1	1190'- 3000m
D						205	1530'(860') 1	1190'- 4000m

1 Wide bodied acft: MDA(H) 1660' (990'), CEIL-VIS 1320' - 5.0 km.

CHANGES: Bearings.

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UMMS/MSQ
MINSK-2

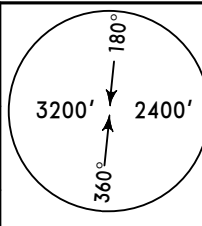
4 DEC 09
Eff 17 Dec

JEPPESEN
11-4A

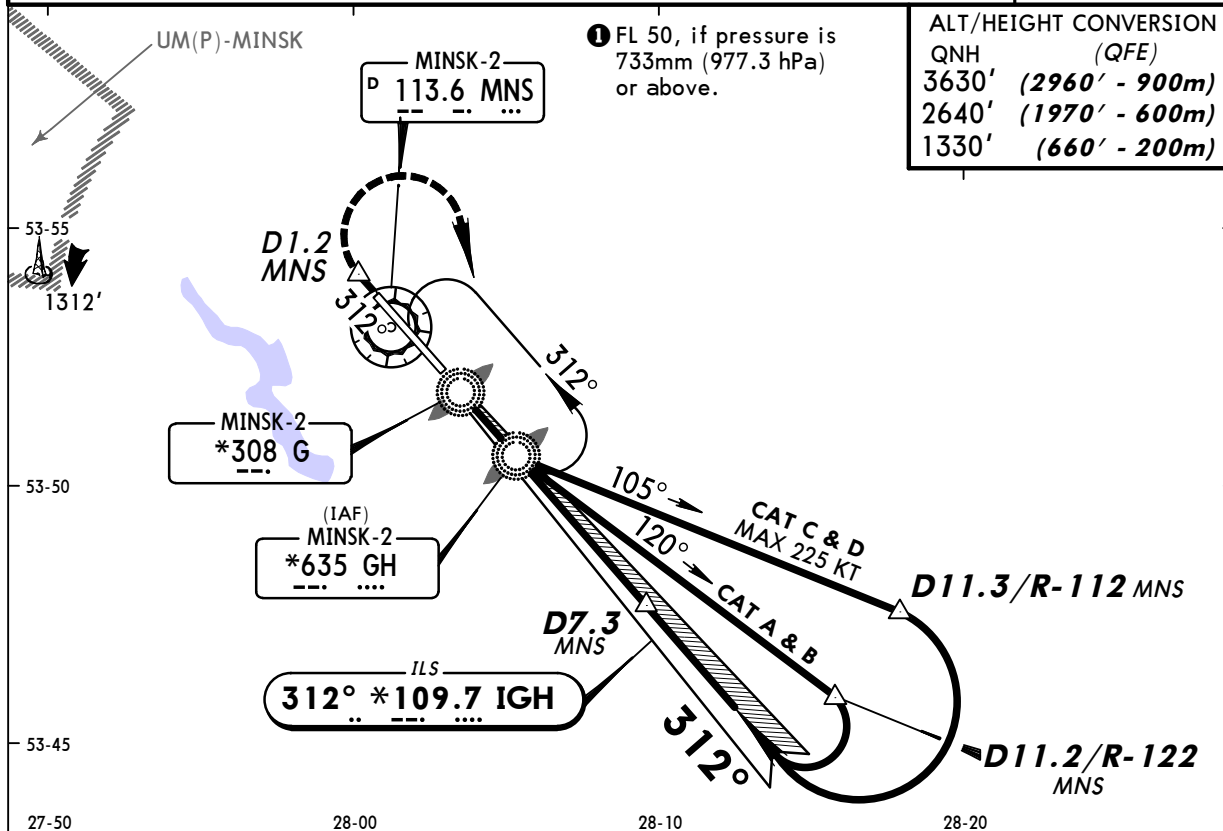
MINSK, BELARUS
CAT II ILS-Delta Rwy 31

BRIEFING STRIP

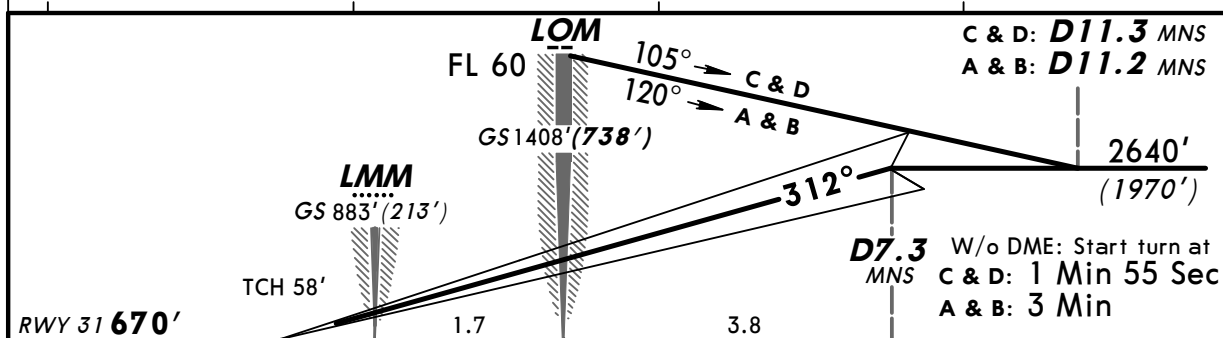
ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R) 125.9	*MINSK Radar 125.25	MINSK-2 Tower 118.3	Ground 129.95
LOC IGH *109.7	Final Apch Crs 312°	GS LOM 1408' (738')	CAT II ILS RA 97' DA(H) 770' (100')	Apt Elev 670' RWY 670'
MISSED APCH: Climb on 312° to 1330' (660') or above. Not before D1.2 MNS turn RIGHT (MAX 225 KT) to GH NDB climbing to 2640' (1970'), then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 60 ① Trans alt: 3630' (2960') 1. Special Aircrew & Acft Certification Required. 2. ATC issues true azimuth in landing area.				



MSA
MNS VOR



ALT/HEIGHT CONVERSION	QNH (QFE)
3630'	(2960' - 900m)
2640'	(1970' - 600m)
1330'	(660' - 200m)

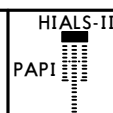


0 0.5 2.2							
Gnd speed-Kts	70	90	100	120	140	160	
GS	3.00°	377	484	538	646	753	861

HIALS-II

PAPI

<



1330' (660') or above on 312°

STRAIGHT-IN LANDING RWY 31
CAT II ILS
ABCD
RA 97'
DA(H) 770' (100')

RVR 350m

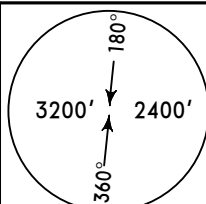
PANS OPS

UMMS/MSQ
MINSK-2

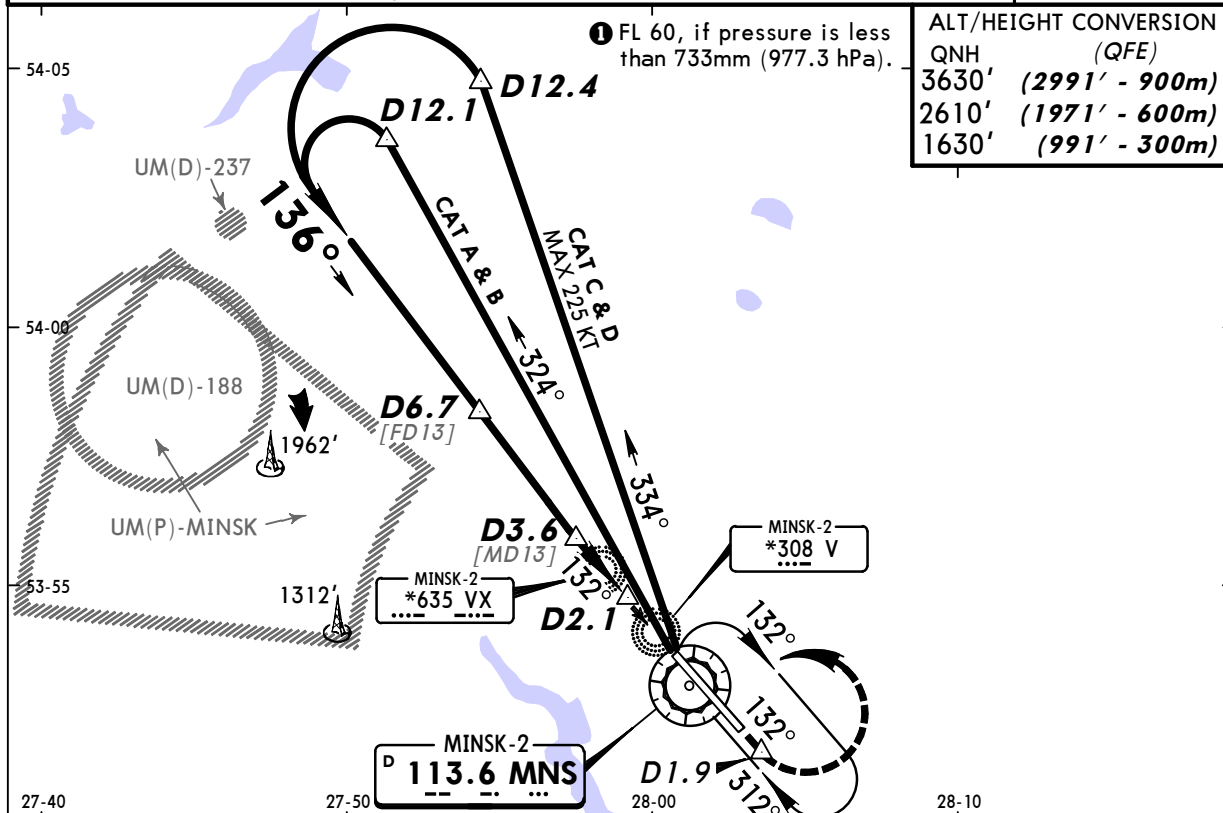
JEPPesen
4 DEC 09 **(13-1)** **Eff 17 Dec**

MINSK, BELARUS
VOR DME Rwy 13

BRIEFING STRIP

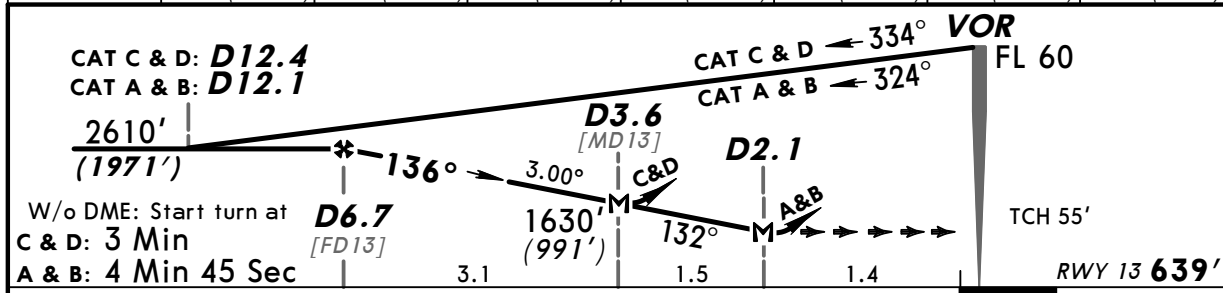
ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R)	*MINSK Radar	MINSK-2 Tower	Ground
	125.9	125.25	118.3	129.95
VOR MNS 113.6	Final Apch Crs 136°	Minimum Alt D6.7 2610'(1971')	MDA(H) Refer to Minimums Apt Elev 670' RWY 639'	
MISSED APCH: Climb on 132° to 2610'(1971')not above. Not before D1.9 after crossing rwy, turn LEFT (MAX 225 KT) to VOR, then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 50 ❶ Trans alt: 3630(2991') ATC issues true azimuth in landing area.				

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MNS VOR



ALT/HEIGHT CONVERSION (QFE)
3630' (2991' - 900m)
2610' (1971' - 600m)
1630' (991' - 300m)

MNS DME	6.6	6.1	5.6	5.0	4.5	3.9	3.4
ALTITUDE	2600' (1961')	2420' (1781')	2250' (1611')	2070' (1431')	1910' (1271')	1730' (1091')	1560' (921')



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.24% or Descent Angle 3.00°	372	478	531	637	743	849
CAT C & D: MAP at D3.6	CAT A & B: MAP at D2.1					

STRAIGHT-IN LANDING RWY 13			CEILING REQUIRED		CIRCLE-TO-LAND	
MDA(H) AB: 1300'(661') CD: 1630'(991')			NIGHT not authorized			
ALS out			Max Kts	MDA(H)	CEIL-VIS	
A	1800m		100	1530'(860')	1020' - 3000m	
B	2600m		135			
C	4000m		180	1530'(860) 1	1190' - 4800m	
D	4800m		205			

1 Wide bodied acft: MDA(H) 1660'(990'), CEIL-VIS 1320' - 5.0 km.

CHANGES: Rwy elev. Bearings. Descent angle.

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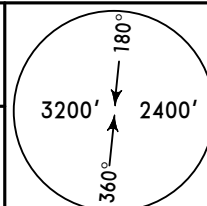
UMMS/MSQ
MINSK-2

JEPPesen
4 DEC 09 **(13-2)** Eff 17 Dec

MINSK, BELARUS
VOR DME Rwy 31

BRIEFING STRIP

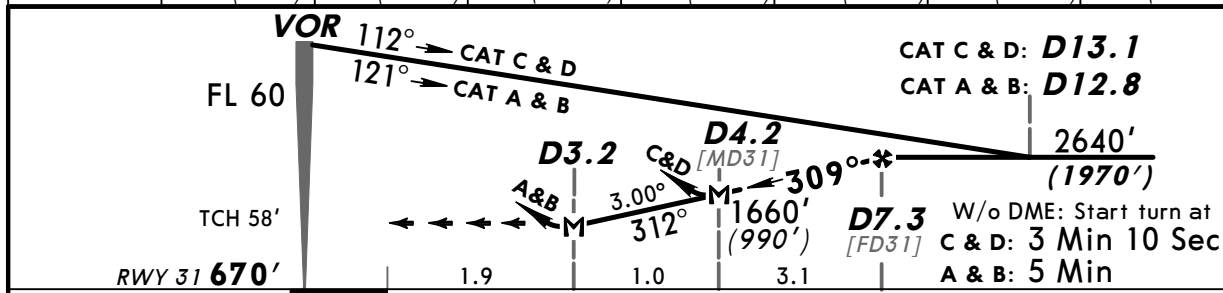
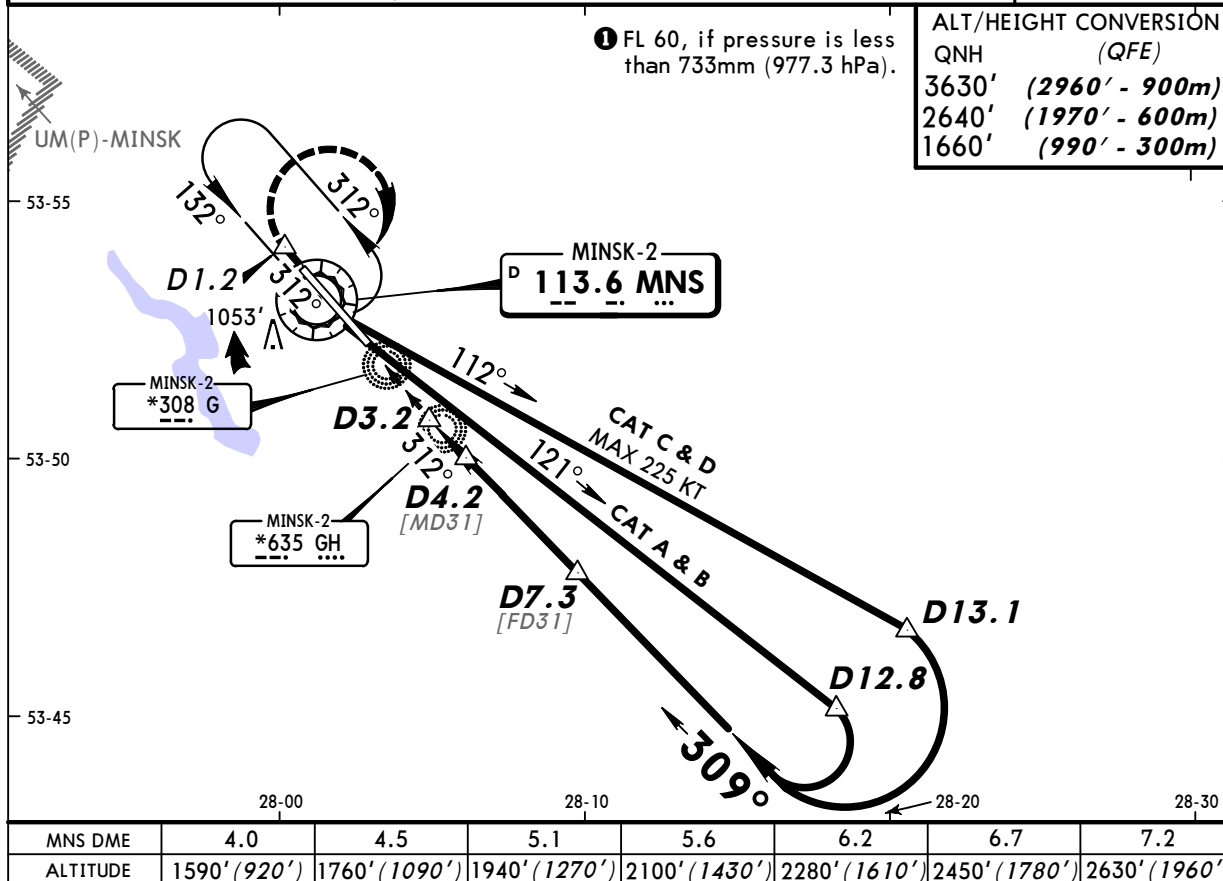
ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R)	*MINSK Radar	MINSK-2 Tower	Ground
	125.9	125.25	118.3	129.95
VOR MNS 113.6	Final Apch Crs 309°	Minimum Alt D7.3 2640' (1970')	MDA(H) Refer to Minimums	Apt Elev 670' RWY 670'
MISSED APCH: Climb on 312° to 2640' (1970') not above. Not before D1.2 after crossing rwy, turn RIGHT (MAX 225 KT) to VOR, then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 50 ① Trans alt: 3630' (2960') ATC issues true azimuth in landing area.				



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① FL 60, if pressure is less than 733mm (977.3 hPa).

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3630'	(2960' - 900m)
2640'	(1970' - 600m)
1660'	(990' - 300m)



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI 2640' (1970') not above on 312°
Descent Gradient 5.24% or Descent Angle 3.00°	372	478	531	637	743	849	
CAT C & D: MAP at D4.2	CAT A & B: MAP at D3.2						

STRAIGHT-IN LANDING RWY 31			CEILING REQUIRED		CIRCLE-TO-LAND	
MDA(H) AB: 1330' (660') CD: 1660' (990')			NIGHT not authorized			
ALS out			Max Kts	MDA(H)	CEIL-VIS	
A	2400m	3200m	100	1530' (860')	1020' - 3200m	
B			135			
C	4000m	4800m	180	1530' (860) ①	1190' - 4800m	
D			205			

① Wide bodied acft: MDA(H) 1660' (990'), CEIL-VIS 1320' - 5.0 km.

CHANGES: Bearings. Descent angle.

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UMMS/MSQ
MINSK-2

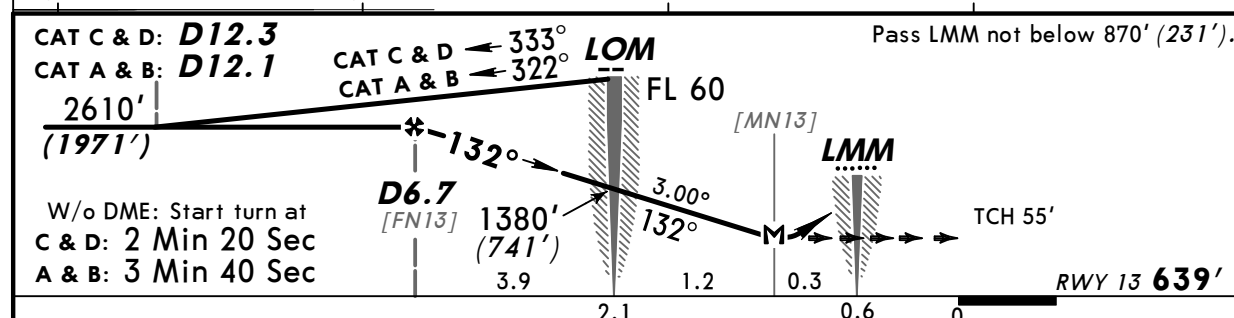
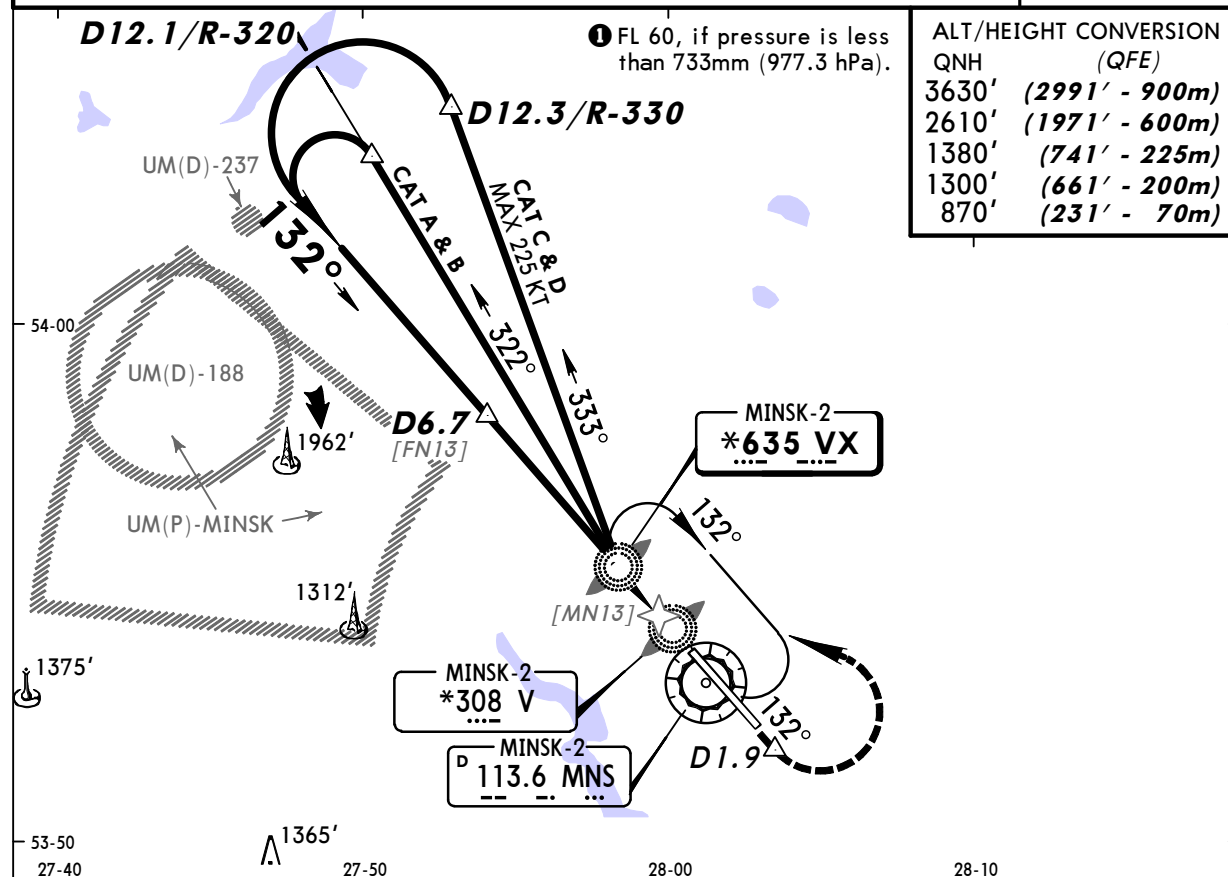
JEPPESEN
4 DEC 09 (16-1) Eff 17 Dec

MINSK, BELARUS
2 NDB Rwy 13

ATIS 128.85 (Russian 135.85)		MINSK Approach (Radar/R) 125.9		*MINSK Radar 125.25		MINSK-2 Tower 118.3		Ground 129.95	
NDB VX *635		Final Apch Crs 132°		Minimum Alt D6.7 2610' (1971')		MDA(H) 990' (351')		Apt Elev 670' RWY 639'	
MISSED APCH: Climb on 132° to 1300' (661') or above. Not before D1.9 turn LEFT (MAX 225 KT) to VX NDB climbing to 2610' (1971'), then as directed.									
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 50 1 Trans alt: 3630 (2991') 1. ATC issues true azimuth in landing area. 2. Acft w/o VOR DME descend by ATC.									



MSA
MNS VOR



<i>Gnd speed-Kts</i>	70	90	100	120	140	160
<i>Descent Gradient 5.24% or Descent Angle 3.00°</i>	372	478	531	637	743	849
<i>D6.7 to MAP 5.1</i>	4:22	3:24	3:04	2:33	2:11	1:55

STRAIGHT-IN LANDING RWY 13			CEILING REQUIRED		CIRCLE-TO-LAND
MDA(H) 990'(351')			NIGHT not authorized		
		ALS out	Max Kts	MDA(H)	CEIL-VIS
A	1200m	RVR 1500m VIS 1600m	100	1530'(860')	1020'- 3000m
B			135		
C			180	1530'(860') I	1190'- 3000m
D	RVR 1500m VIS 1600m	2000m	205	1530'(860') I	1190'- 4000m

1 Wide bodied acft: MDA(H) 1660'(990'), CEIL-VIS 1320' - 5.0 km.

CHANGES: Rwy elev. Bearings.

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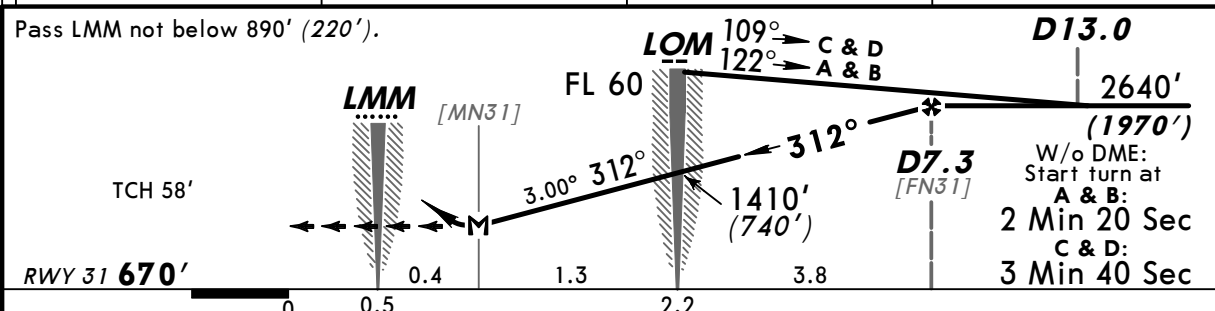
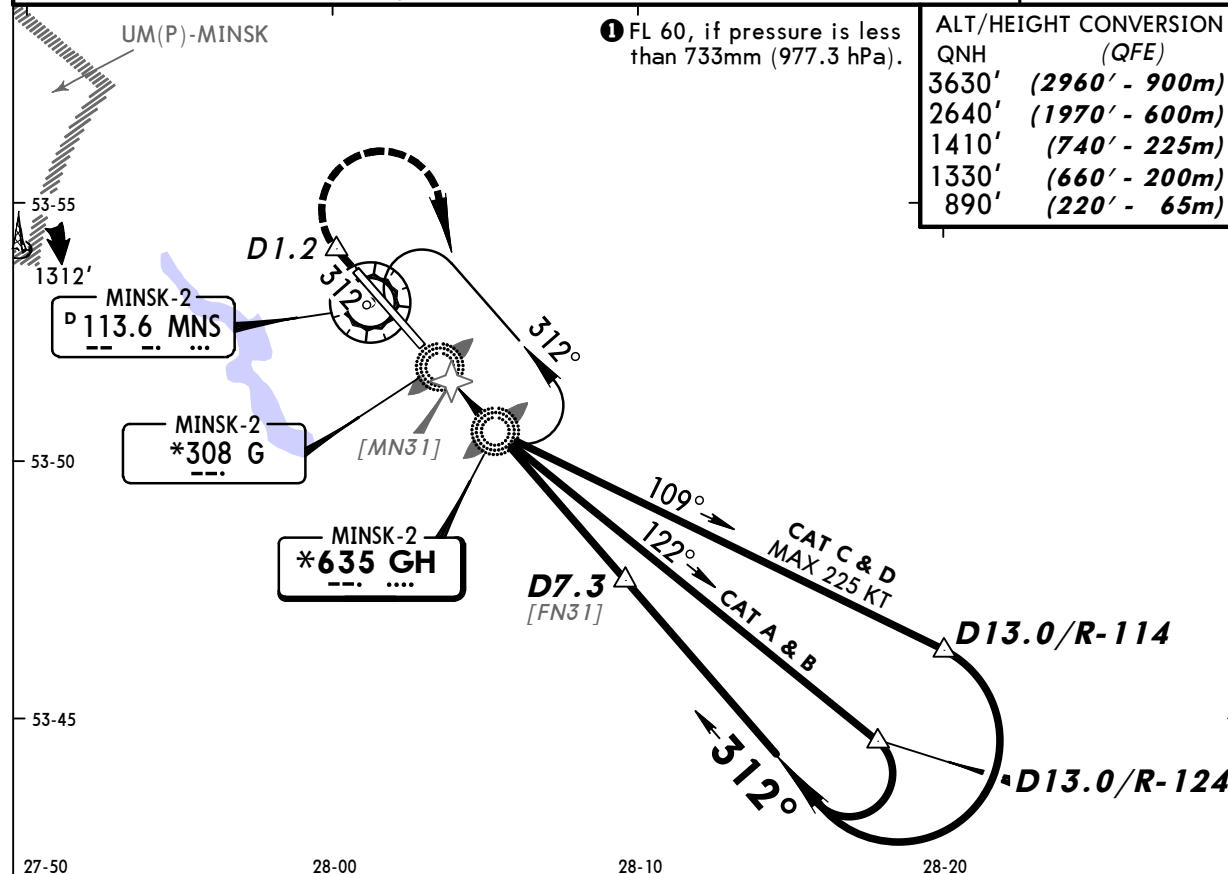
UMMS/MSQ
MINSK-2

JEPPESSEN
4 DEC 09 (16-2) Eff 17 Dec

MINSK, BELARUS
2 NDB Rwy 31

ATIS 128.85 (Russian 135.85)	MINSK Approach (Radar/R) 125.9	*MINSK Radar 125.25	MINSK-2 Tower 118.3	Ground 129.95
NDB GH *635	Final Apch Crs 312°	Minimum Alt D7.3 2640' (1970')	MDA(H) 1010' (340')	Apt Elev 670' RWY 670'
MISSED APCH: Climb on 312° to 1330' (660') or above. Not before D1.2 turn RIGHT (MAX 225 KT) to GH NDB climbing to 2640' (1970'), then as directed.				
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: FL 50 ❶ Trans alt: 3630 (2960')				
ATC issues true azimuth in landing area.				

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3630'	(2960' - 900m)
2640'	(1970' - 600m)
1410'	(740' - 225m)
1330'	(660' - 200m)
890'	(220' - 65m)



<i>Gnd speed-Kts</i>	70	90	100	120	140	160
<i>Descent Gradient 5.24% or Descent Angle 3.00°</i>	372	478	531	637	743	849
<i>DZ-3 to MAP</i>	5.1	4:22	3:24	3:04	2:33	2:11
		1:55				

1330'
(660')
or above on 312°

STRAIGHT-IN LANDING RWY 31			CEILING REQUIRED		CIRCLE-TO-LAND	
MDA(H) 1010' (340')			NIGHT not authorized			
		ALS out	Max Kts.	MDA(H) _____ CEIL-VIS _____		
A	1200m	RVR 1500m VIS 1600m	100	1530' (860') 1020' - 3000m		
B			135	1530' (860') 1190' - 3000m		
C			180	1530' (860') 1190' - 3000m		
D	RVR 1500m VIS 1600m		205	1530' (860') 1190' - 4000m		

1 Wide bodied acft: MDA(H) 1660' (990'), CEIL-VIS 1320' - 5.0 km.