

List of pages in this Trip Kit

Trip Kit Index

Airport Information For UUBC

Terminal Charts For UUBC

Revision Letter For Cycle 09-2019

Change Notices

Notebook

General Information

Location: KALUGA RUS
ICAO/IATA: UUBC / KLF
Lat/Long: N54° 32.9', E036° 22.3'
Elevation: 666 ft

Airport Use: Public
Daylight Savings: Not Observed
UTC Conversion: -3:00 = UTC
Magnetic Variation: 10.0° E

Fuel Types: Jet A-1
Customs: No
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0139 Z
Sunset: 1723 Z

Runway Information

Runway: 13
Length x Width: 7218 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 666 ft
Lighting: Edge, ALS

Runway: 31
Length x Width: 7218 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 620 ft
Lighting: Edge, ALS

Communication Information

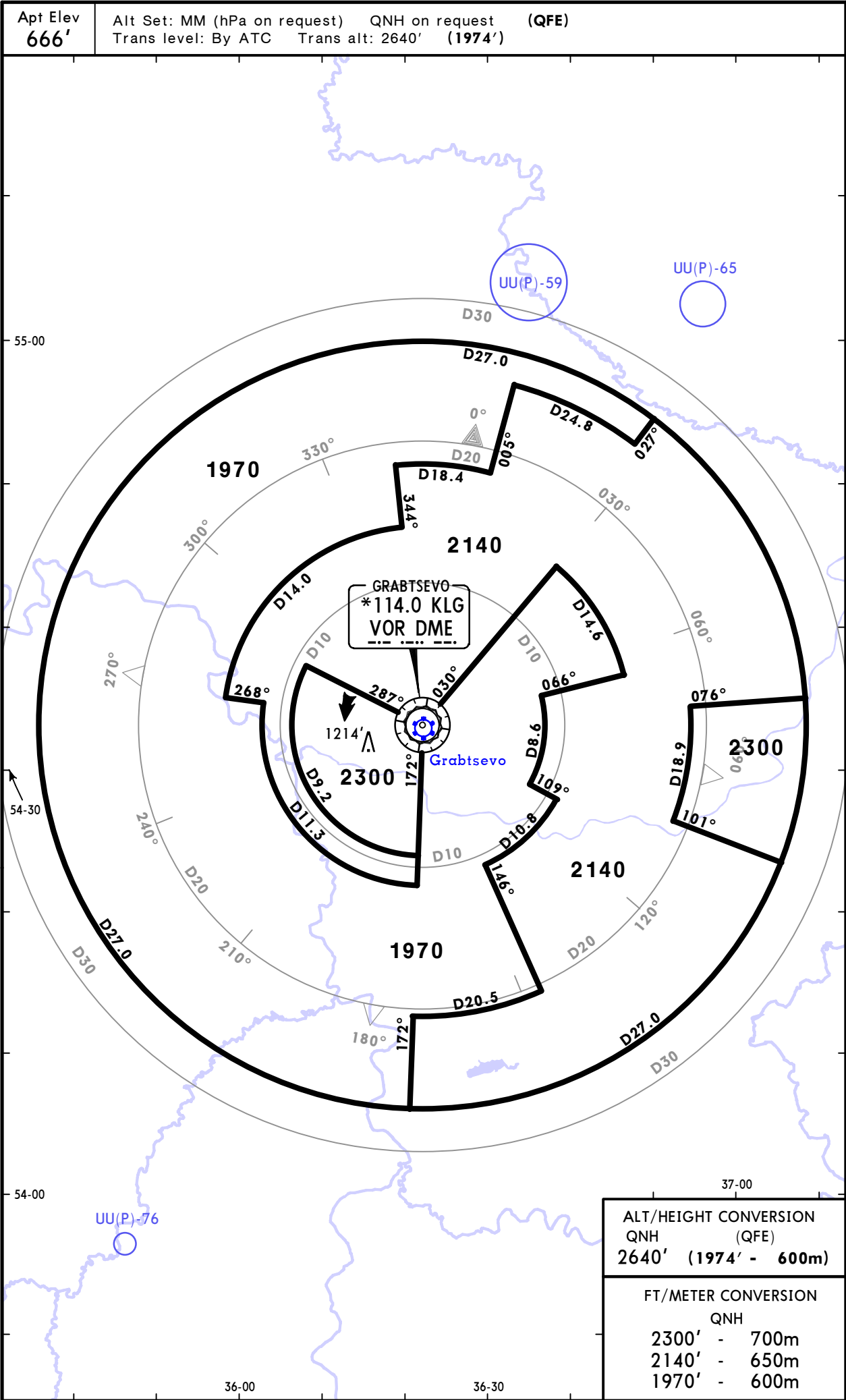
ATIS: 126.800
Kaluga Tower: 120.300
Kaluga Tower: 129.000 Secondary
Kaluga Transit Operations: 131.950

UUBC
GRABTSEVO

JEPPESSEN
6 NOV 15 (10-1R)

KALUGA, RUSSIA

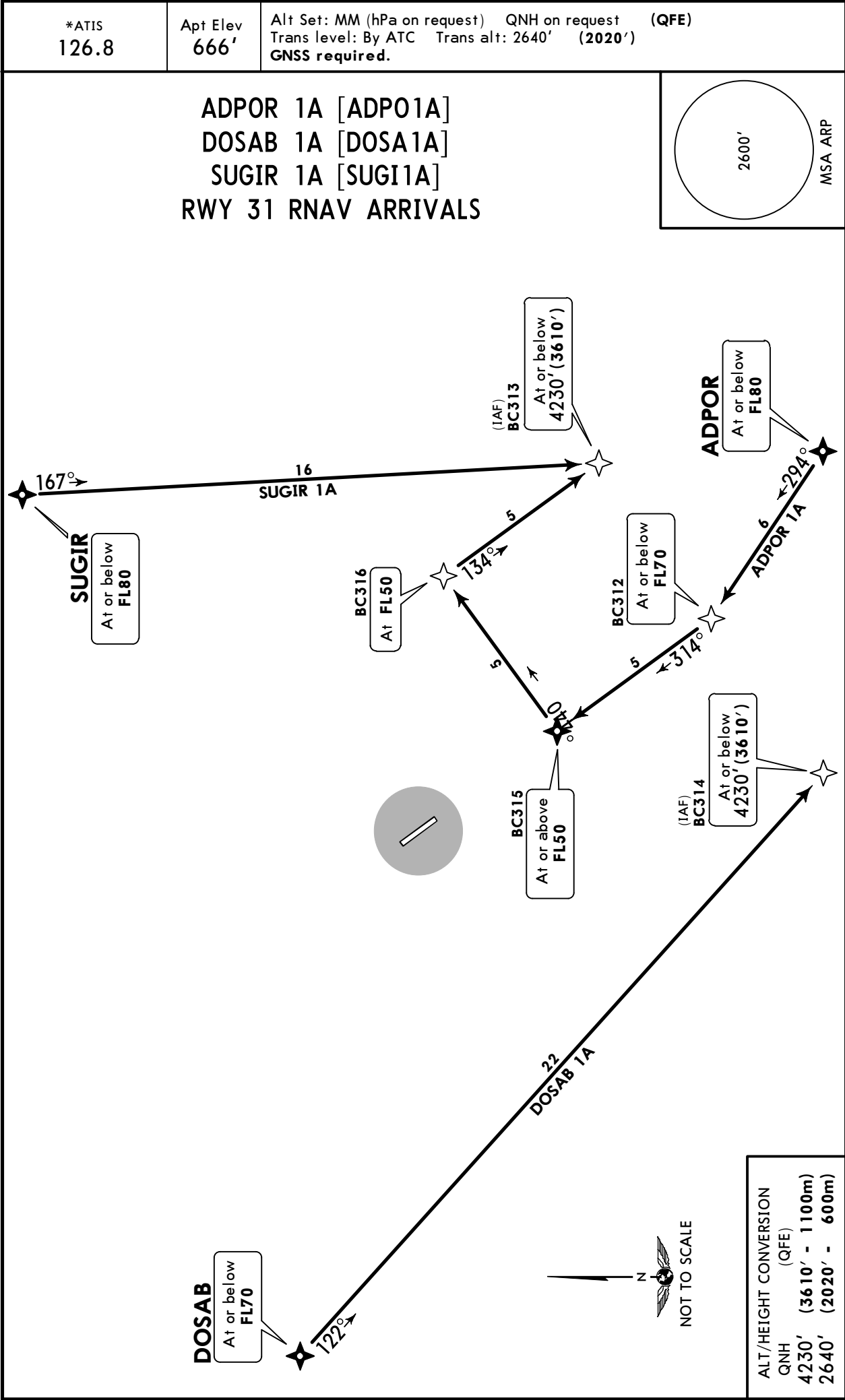
Eff 12 Nov RADAR MINIMUM ALTITUDES



UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 10-2 Eff 17 Aug

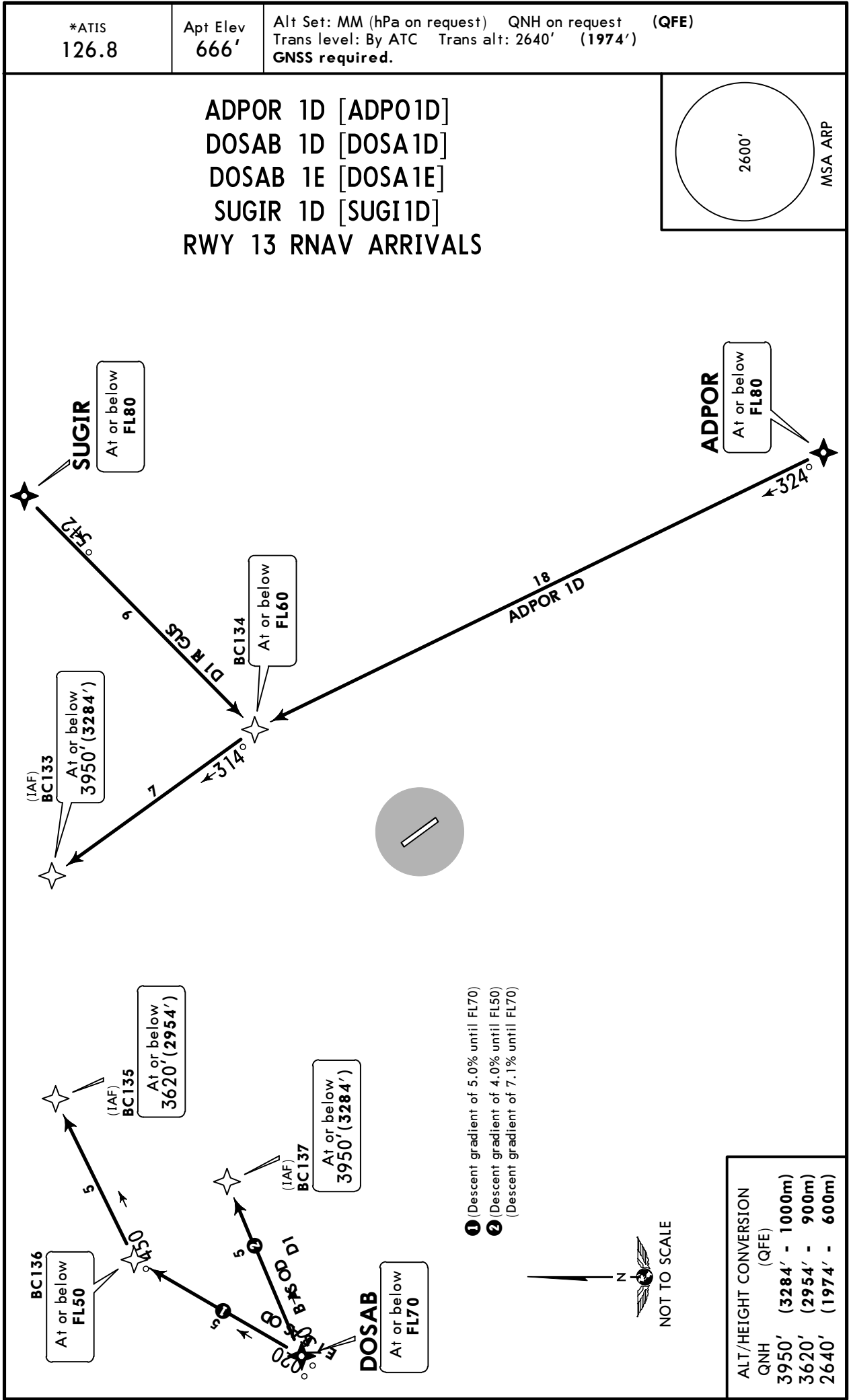
KALUGA, RUSSIA
RNAV STAR



UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 (10-2A) Eff 17 Aug

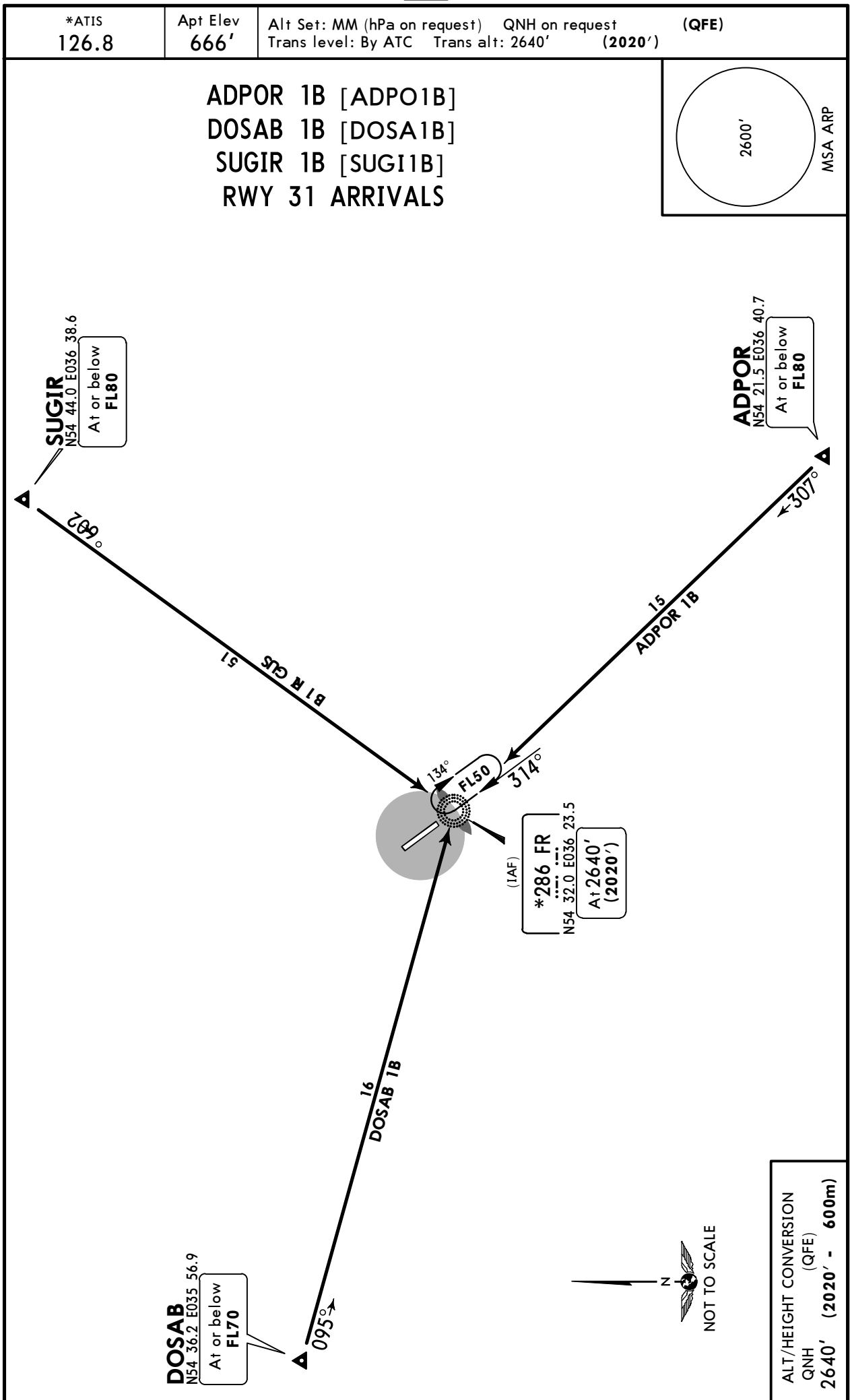
KALUGA, RUSSIA
RNAV STAR



UUBC/KLF
GRABTSEVO

1 JUL 16 **10-2B**

KALUGA, RUSSIA
STAR

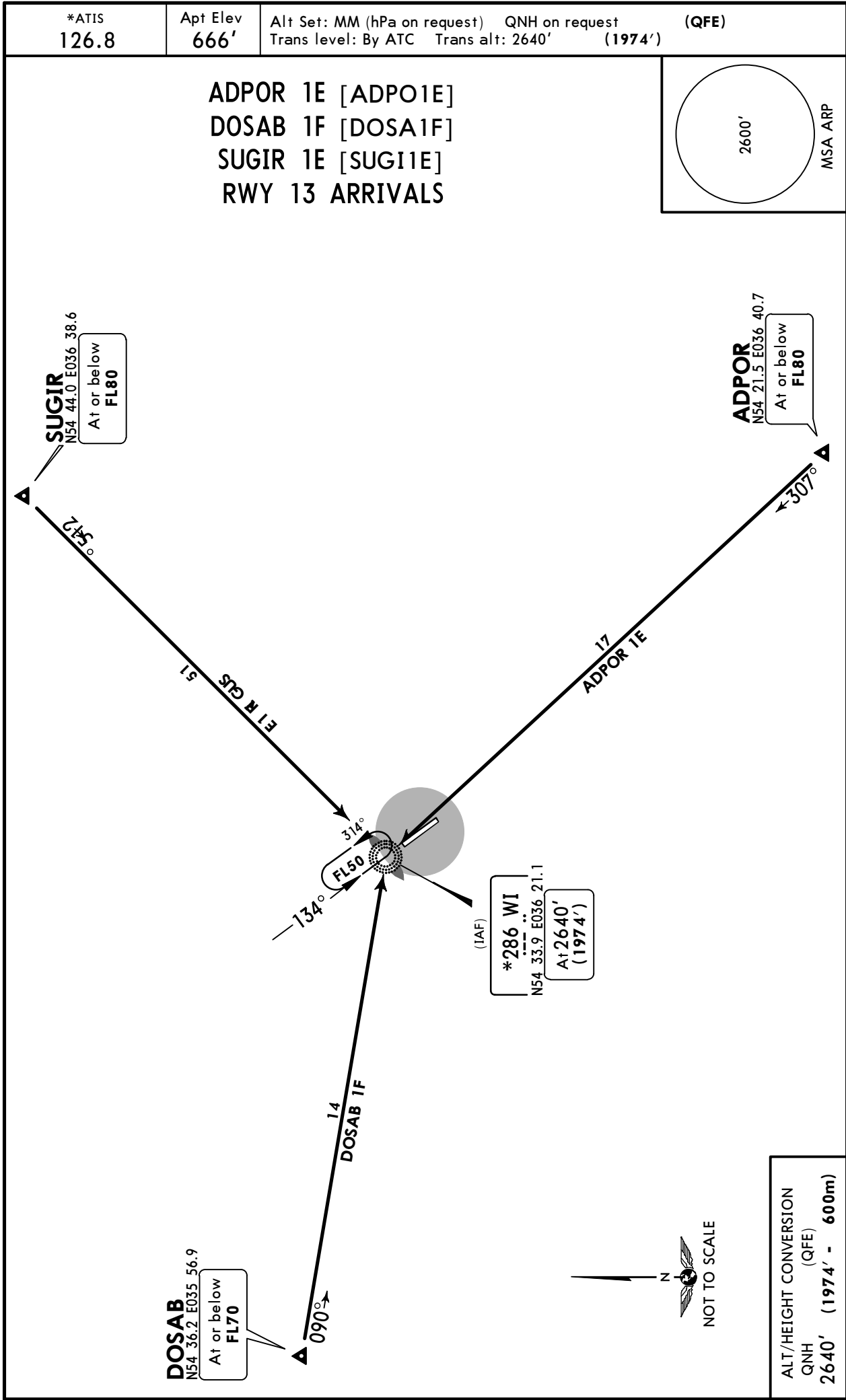


UUBC/KLF
GRABTSEVO

1 JUL 16 **10-2C**

KALUGA, RUSSIA

STAR

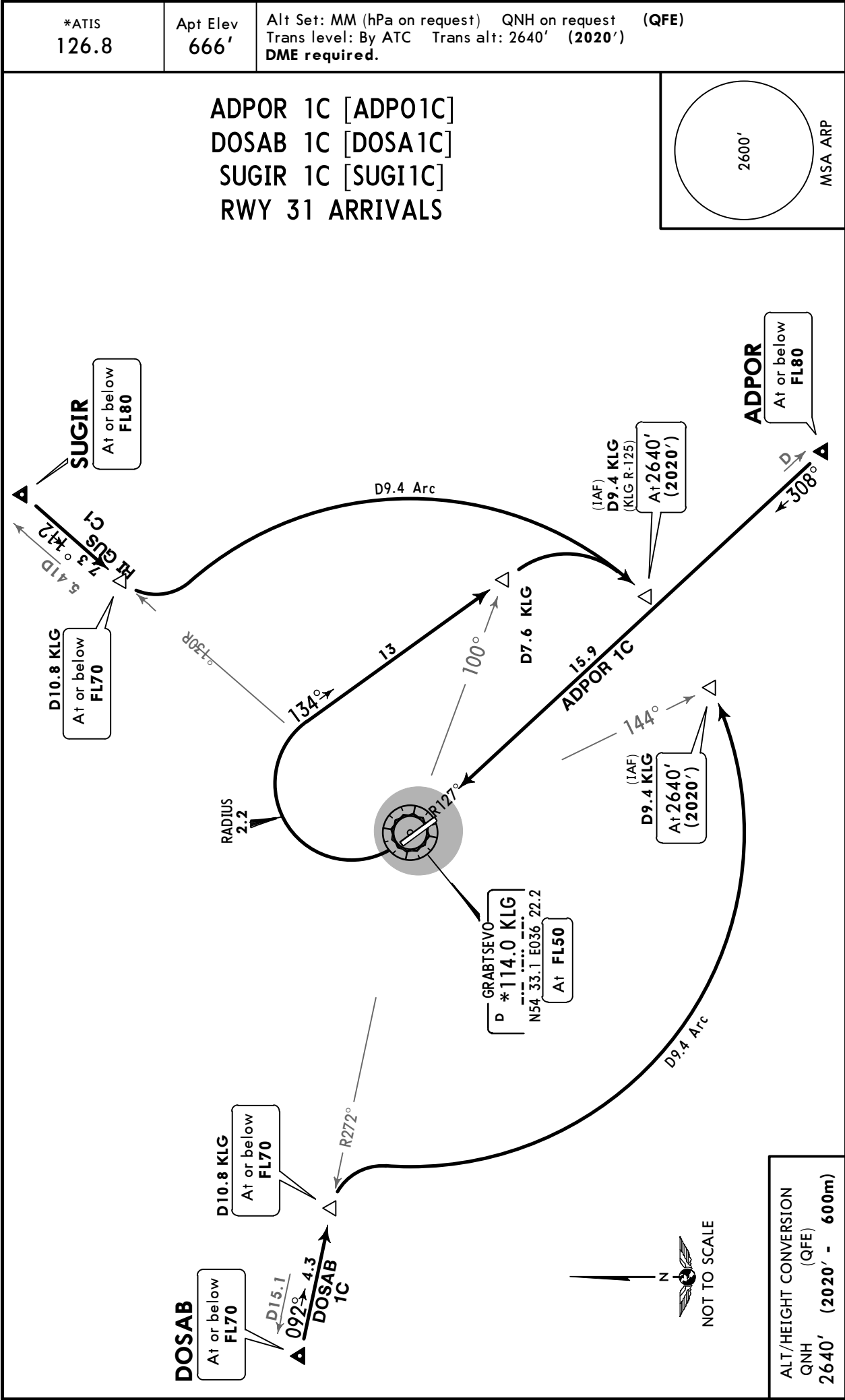


UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 10-2D Eff 17 Aug

KALUGA, RUSSIA

STAR



STAR

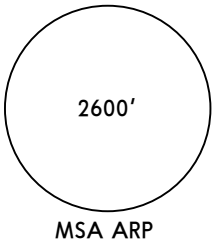
UUBC/KLF
GRABTSEVO

11 AUG 17 **10-3** Eff 17 Aug

KALUGA, RUSSIA
RNAV SID

Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (2020')
1. GNSS required.
2. All turns shall be carried out with bank of 25°.

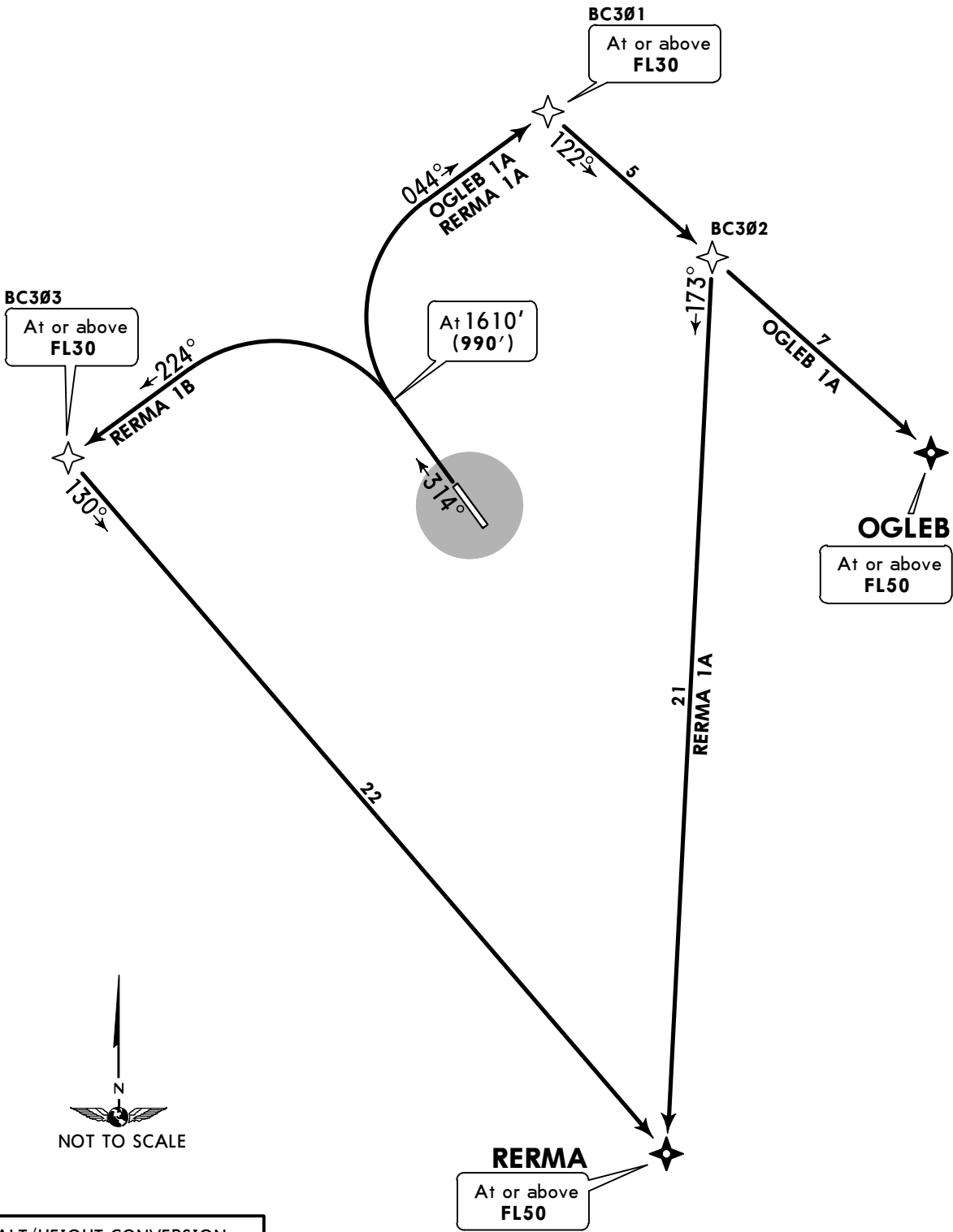


OGLEB 1A [OGLE1A]
RERMA 1A [RERM1A]

RERMA 1B [RERM1B]
BY ATC

RWY 31 RNAV DEPARTURES

SPEED: MAX 230 KT



ALT/HEIGHT CONVERSION
QNH (QFE)
1610' (990' - 300m)
2640' (2020' - 600m)

UUBC/KLF
GRABTSEVO

JEPPesen
11 AUG 17 10-3A Eff 17 Aug

KALUGA, RUSSIA
RNAV SID

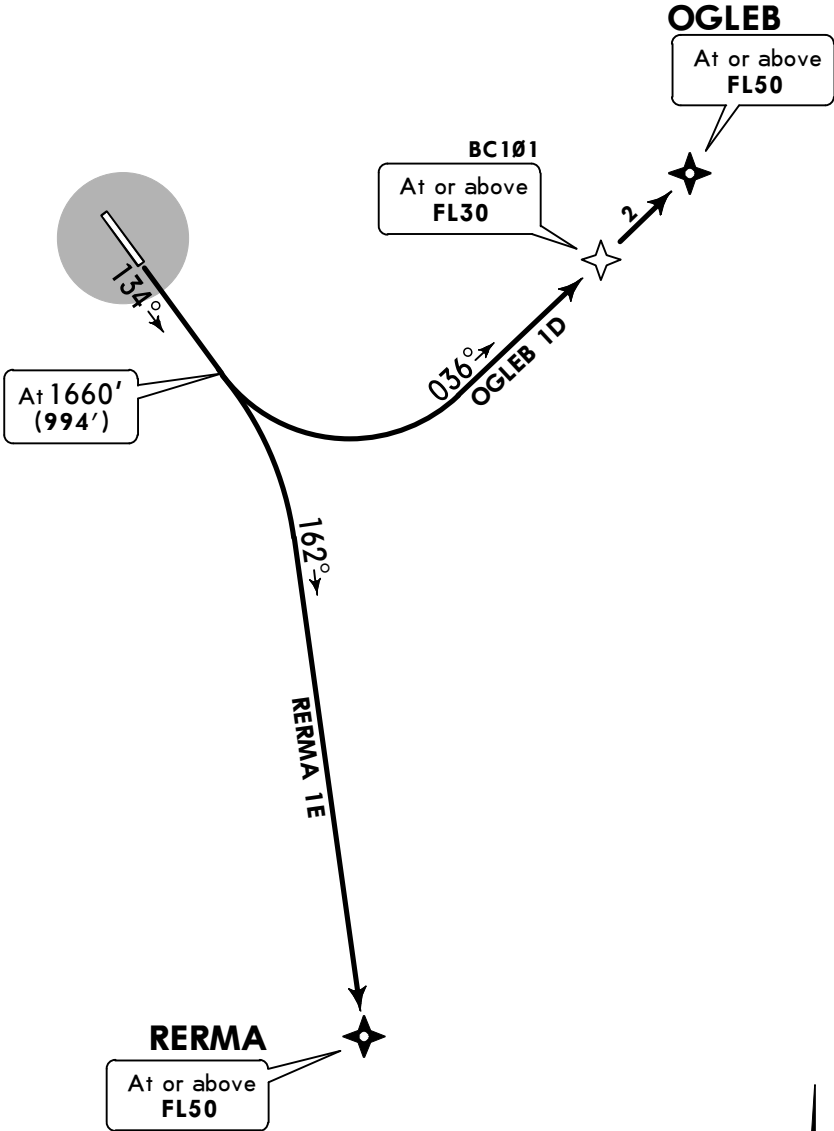
Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (1974')
1. GNSS required.
2. All turns shall be carried out with bank of 25°.

2600'

MSA ARP

OGLEB 1D [OGLE1D]
RERMA 1E [RERM1E]
RWY 13 RNAV DEPARTUES
SPEED: MAX 230 KT



These SIDs require minimum climb gradients of
OGLEB 1D: 5.2%.
RERMA 1E: 4.5%.

Gnd speed-KT	75	100	150	200	250	300
4.5% V/V (fpm)	342	456	684	911	1139	1367
5.2% V/V (fpm)	395	527	790	1053	1316	1580

ALT/HEIGHT CONVERSION		
QNH (QFE)		
1660'	(994' -	300m)
2640'	(1974' -	600m)

UUBC/KLF
GRABTSEVO

JEPPesen
11 AUG 17 10-3B Eff 17 Aug

KALUGA, RUSSIA
RNAV SID

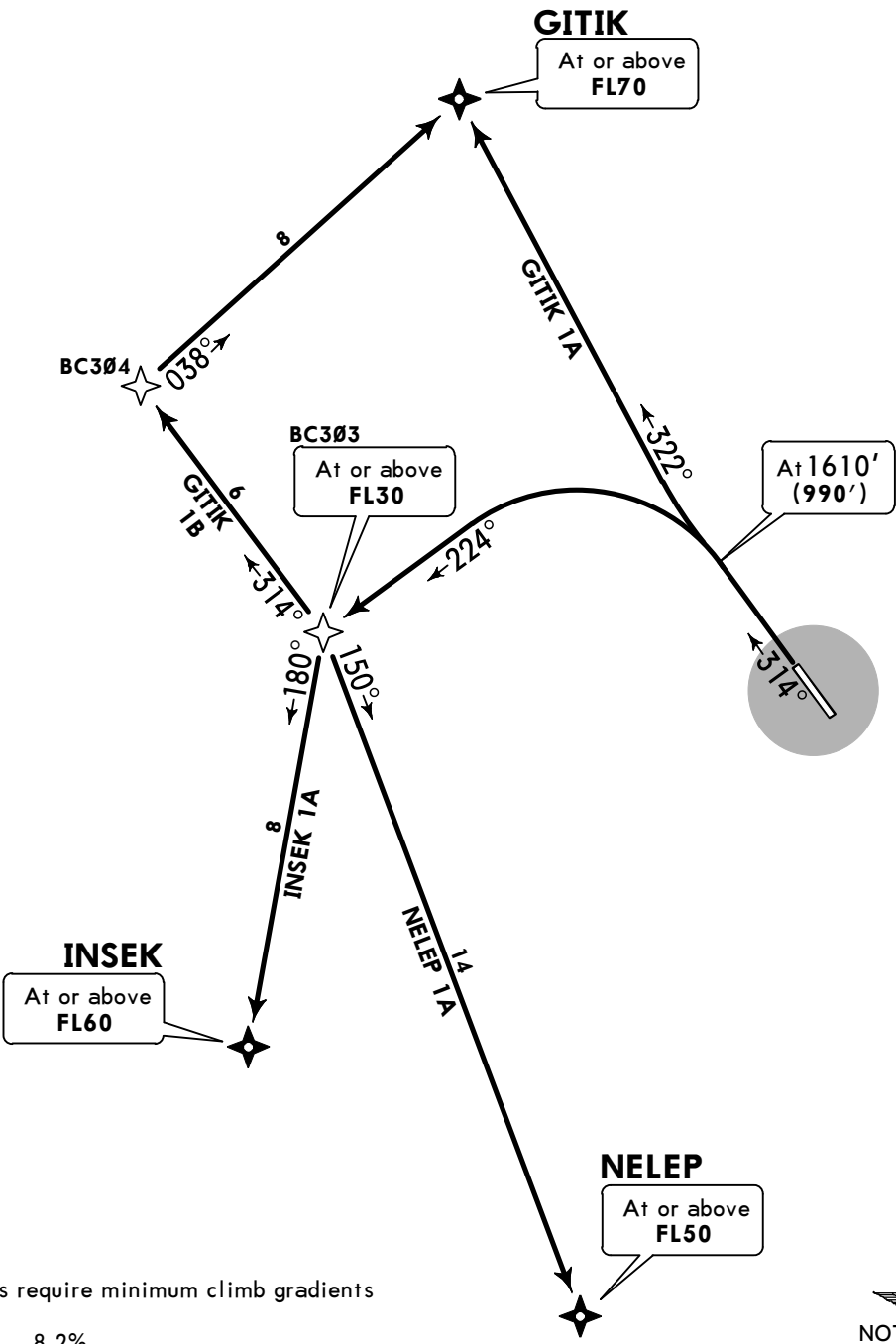
Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (2020')
1. GNSS required.
2. All turns shall be carried out with bank of 25°.

2600'

MSA ARP

GITIK 1A [GITI1A]
GITIK 1B [GITI1B]
INSEK 1A [INSE1A]
NELEP 1A [NELE1A]
RWY 31 RNAV DEPARTUES
SPEED: MAX 230 KT



These SIDs require minimum climb gradients of

GITIK 1A:	8.2%
GITIK 1B:	5.1%.
INSEK 1A:	5.3%.

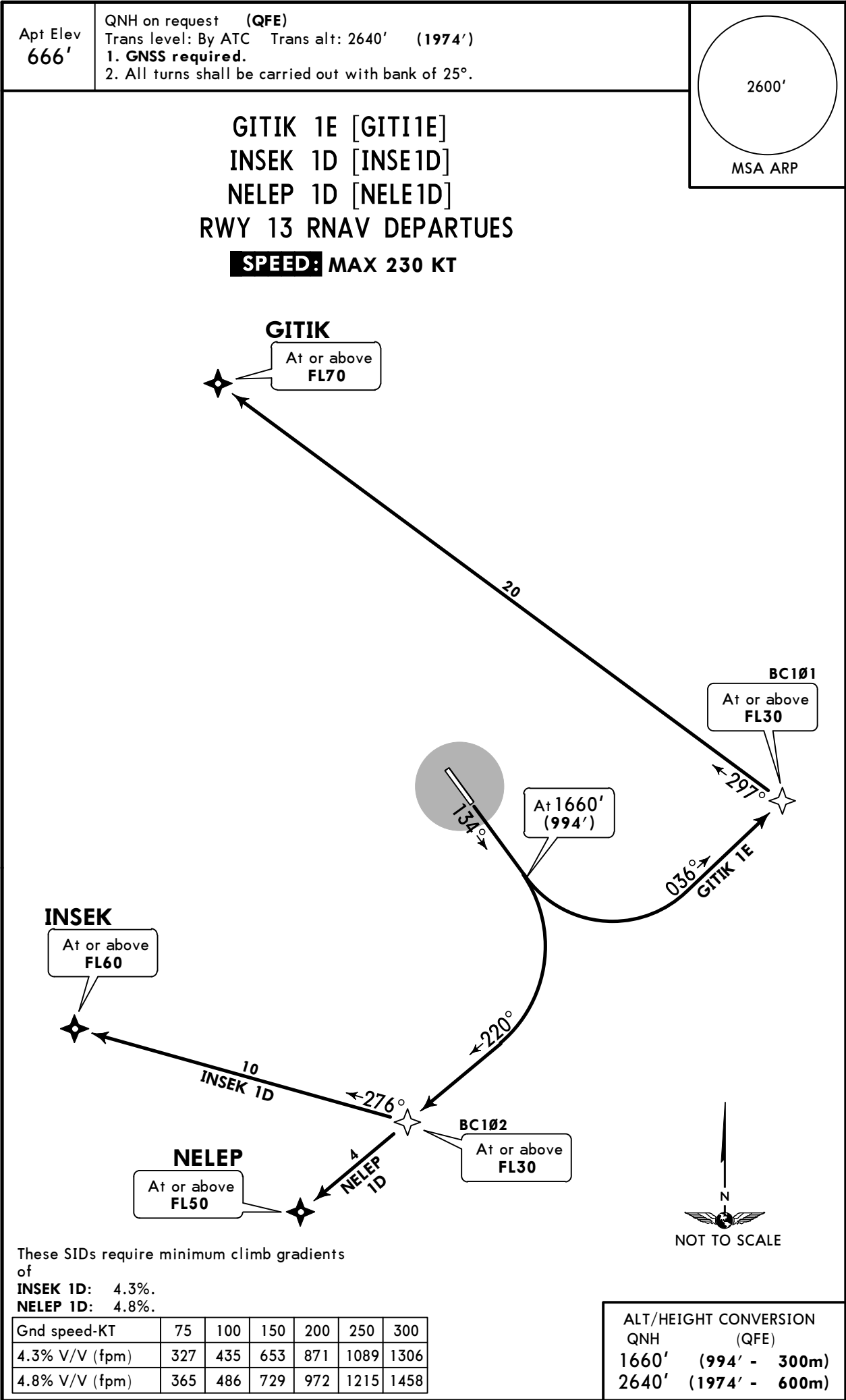
Gnd speed-KT	75	100	150	200	250	300
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.3% V/V (fpm)	403	537	805	1073	1342	1610
8.2% V/V (fpm)	623	830	1246	1661	2076	2491

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1610'	(990' - 300m)
2640'	(2020' - 600m)

UUBC/KLF
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JEPPesen
11 AUG 17 10-3C Eff 17 Aug

KALUGA, RUSSIA
RNAV SID



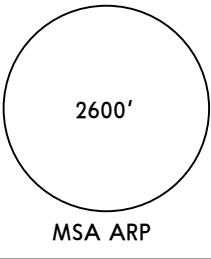
UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 10-3D Eff 17 Aug

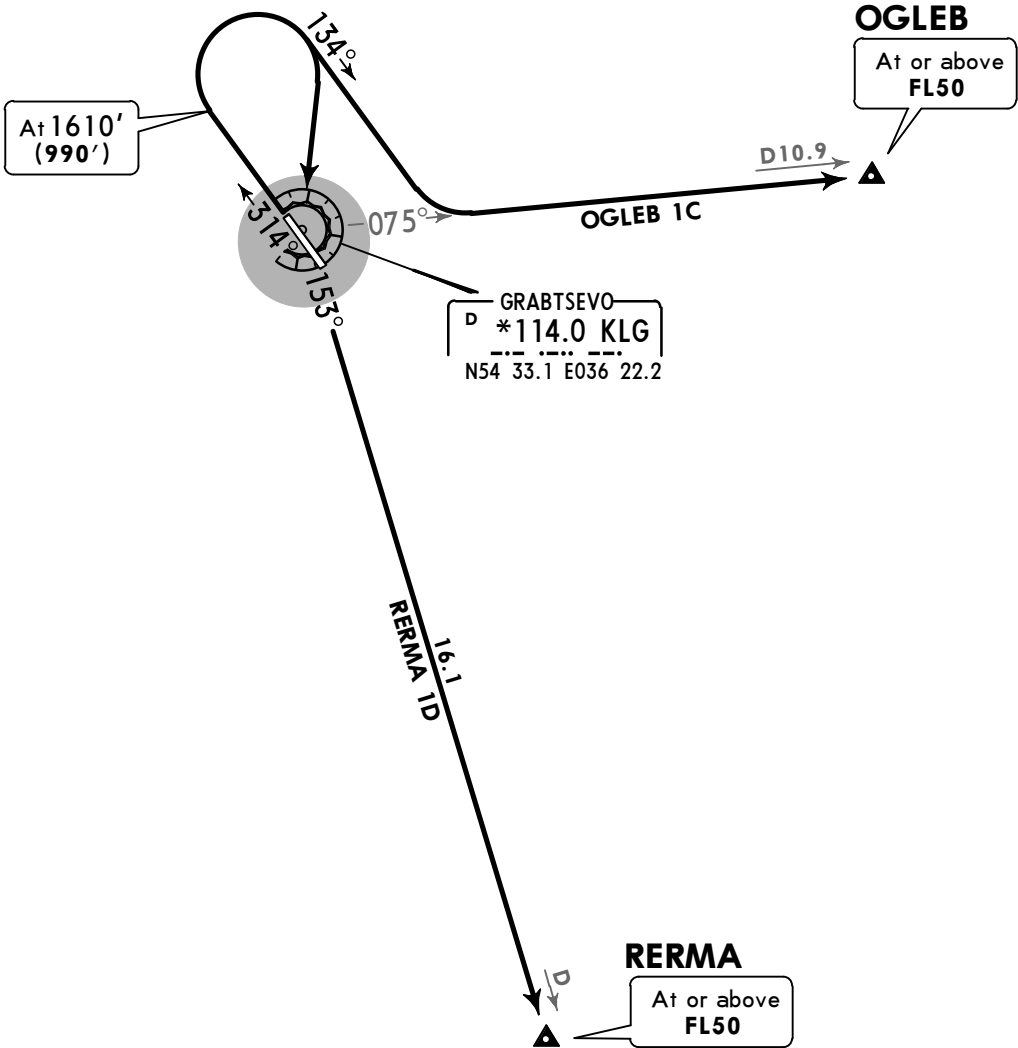
KALUGA, RUSSIA
SID

Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (2020')
All turns shall be carried out with bank of 25°.
DME required.



OGLEB 1C [OGLE1C]
RERMA 1D [RERM1D]
RWY 31 DEPARTUES
SPEED: MAX 230 KT



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1610'	(990' - 300m)
2640'	(2020' - 600m)

UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 10-3E Eff 17 Aug

KALUGA, RUSSIA
SID

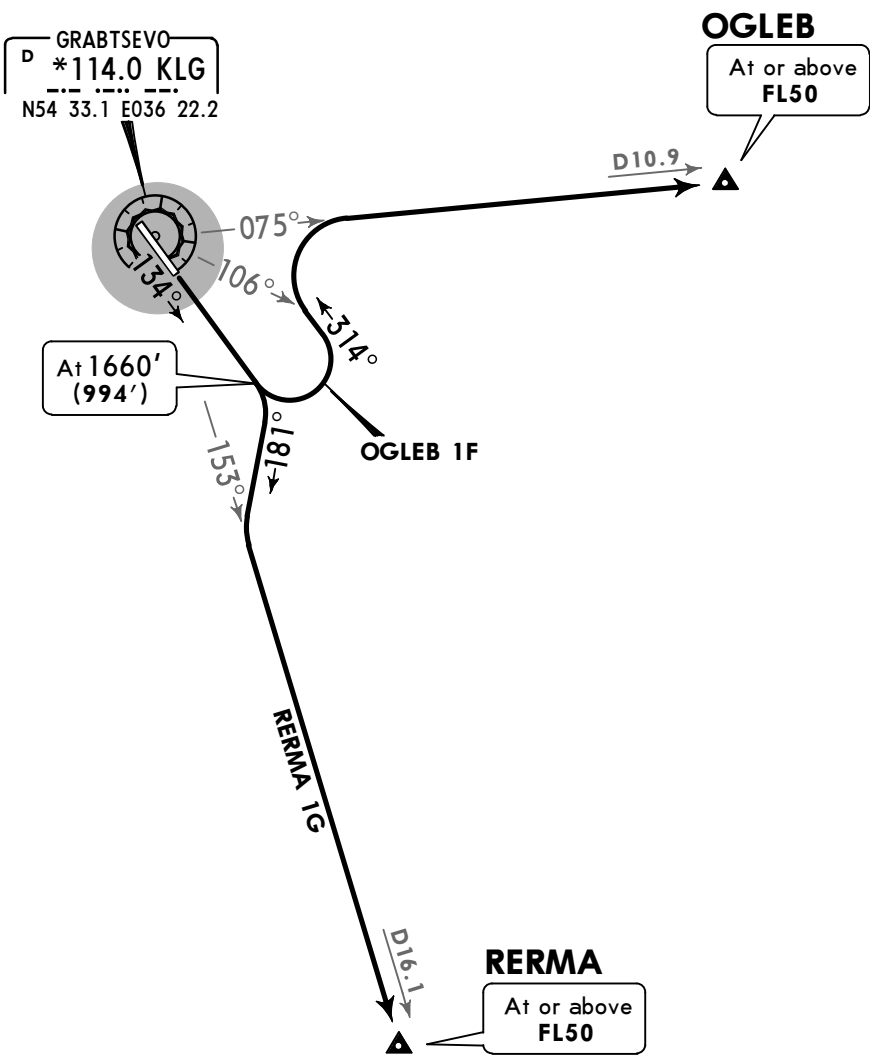
Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (1974')
All turns shall be carried out with bank of 25°.
DME required.

2600'

MSA ARP

OGLEB 1F [OGLE1F]
RERMA 1G [RERM1G]
RWY 13 DEPARTUES
SPEED: MAX 230 KT



These SIDs require minimum climb gradients of
OGLEB 1F: 5.0%.
RERMA 1G: 4.4%.

Gnd speed-KT	75	100	150	200	250	300
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.0% V/V (fpm)	380	506	760	1013	1266	1519

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1660'	(994' - 300m)
2640'	(1974' - 600m)

UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 10-3F Eff 17 Aug

KALUGA, RUSSIA
SID

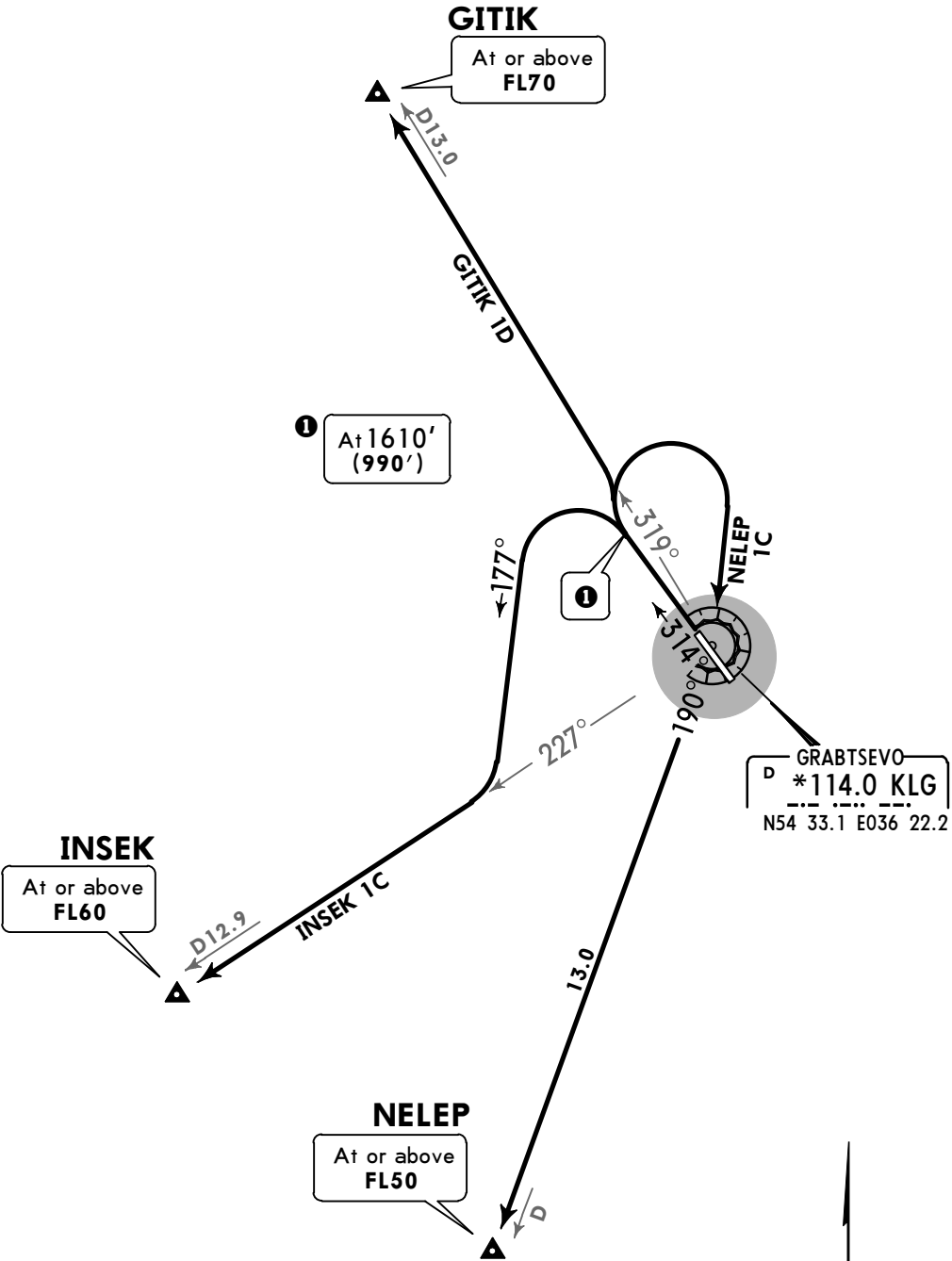
Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (2020')
All turns shall be carried out with bank of 25°.
DME required.

2600'

MSA ARP

GITIK 1D [GITI1D]
INSEK 1C [INSE1C]
NELEP 1C [NELE1C]
RWY 31 DEPARTUES
SPEED: MAX 230 KT



These SIDs require minimum climb gradients of

GITIK 1D: 8.2%.
INSEK 1C: 4.5%.

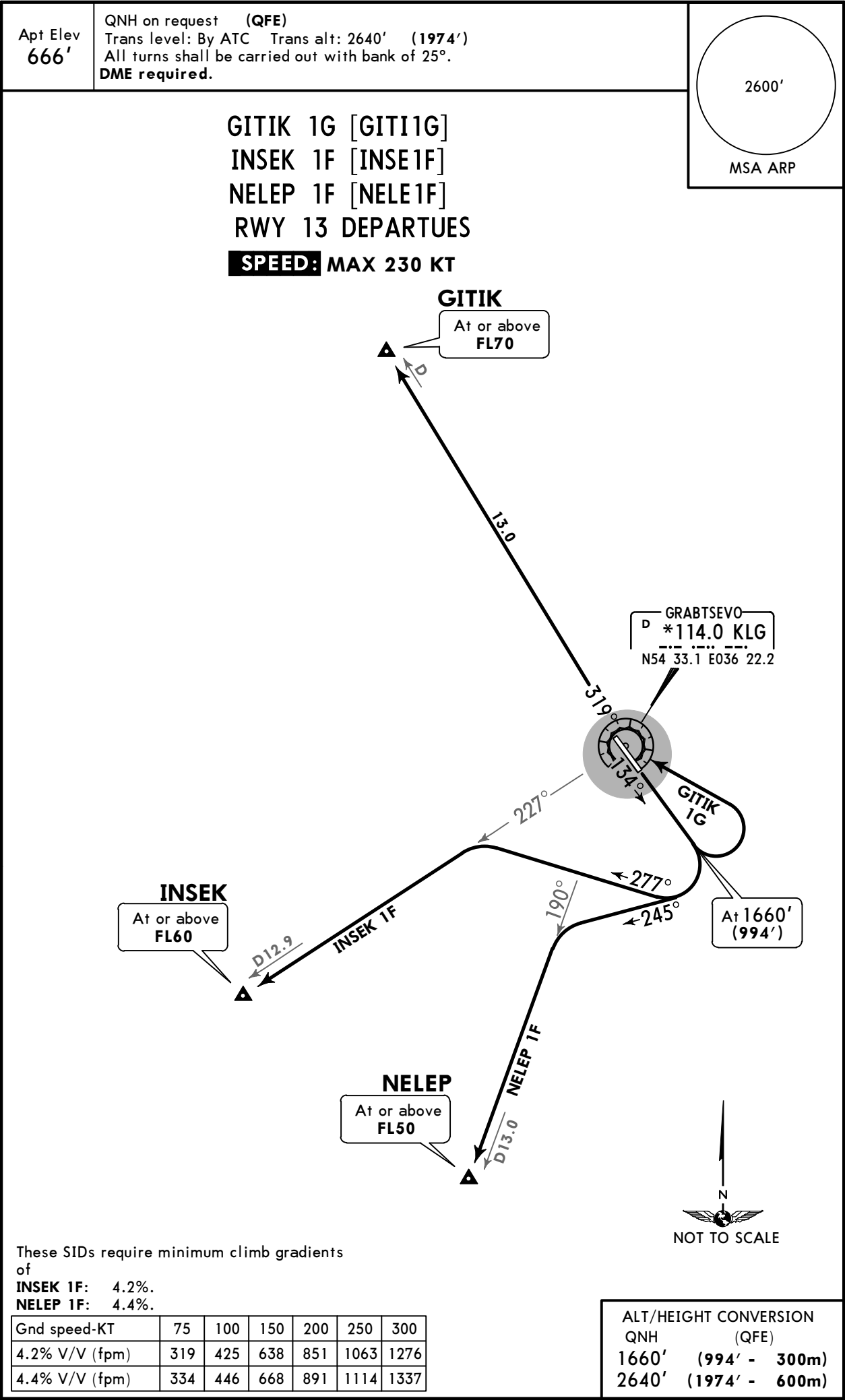
Gnd speed-KT	75	100	150	200	250	300
4.5% V/V (fpm)	342	456	684	911	1139	1367
8.2% V/V (fpm)	623	830	1246	1661	2076	2491

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1610'	(990' - 300m)
2640'	(2020' - 600m)

UUBC/KLF
GRABTSEVO

JEPPESSEN
11 AUG 17 10-3G Eff 17 Aug

KALUGA, RUSSIA
SID



UUBC
GRABTSEVO

JEPPESSEN
6 NOV 15 (10-3H) Eff 12 Nov

KALUGA, RUSSIA
SID

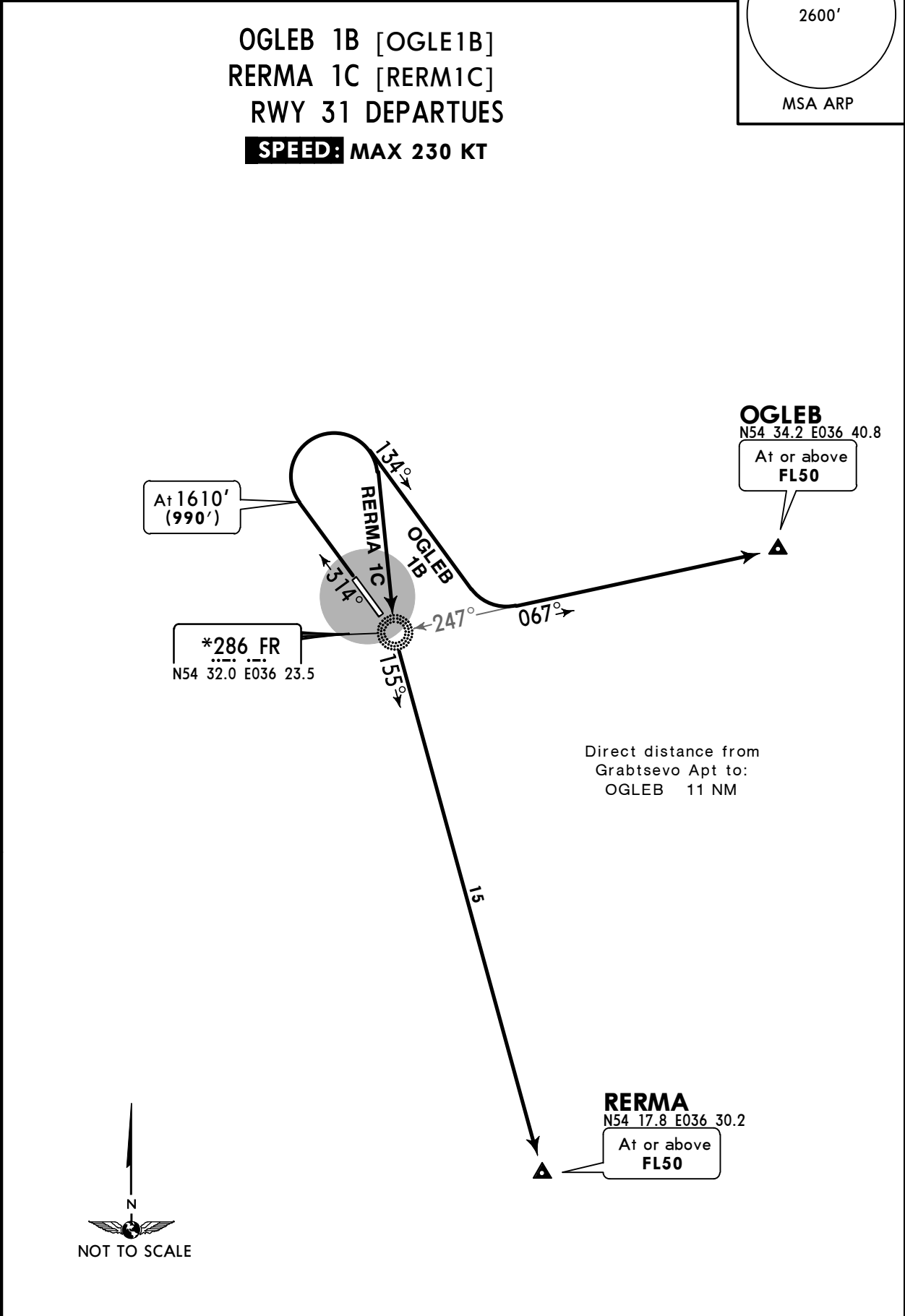
Apt Elev
666'

QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (2020')
All turns shall be carried out with bank of 25°.

2600'

MSA ARP

OGLEB 1B [OGLE1B]
RERMA 1C [RERM1C]
RWY 31 DEPARTUES
SPEED: MAX 230 KT



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1610'	(990' - 300m)
2640'	(2020' - 600m)

UUBC
GRABTSEVO

JEPPesen
6 NOV 15 10-3J Eff 12 Nov

KALUGA, RUSSIA
SID

Apt Elev
666'

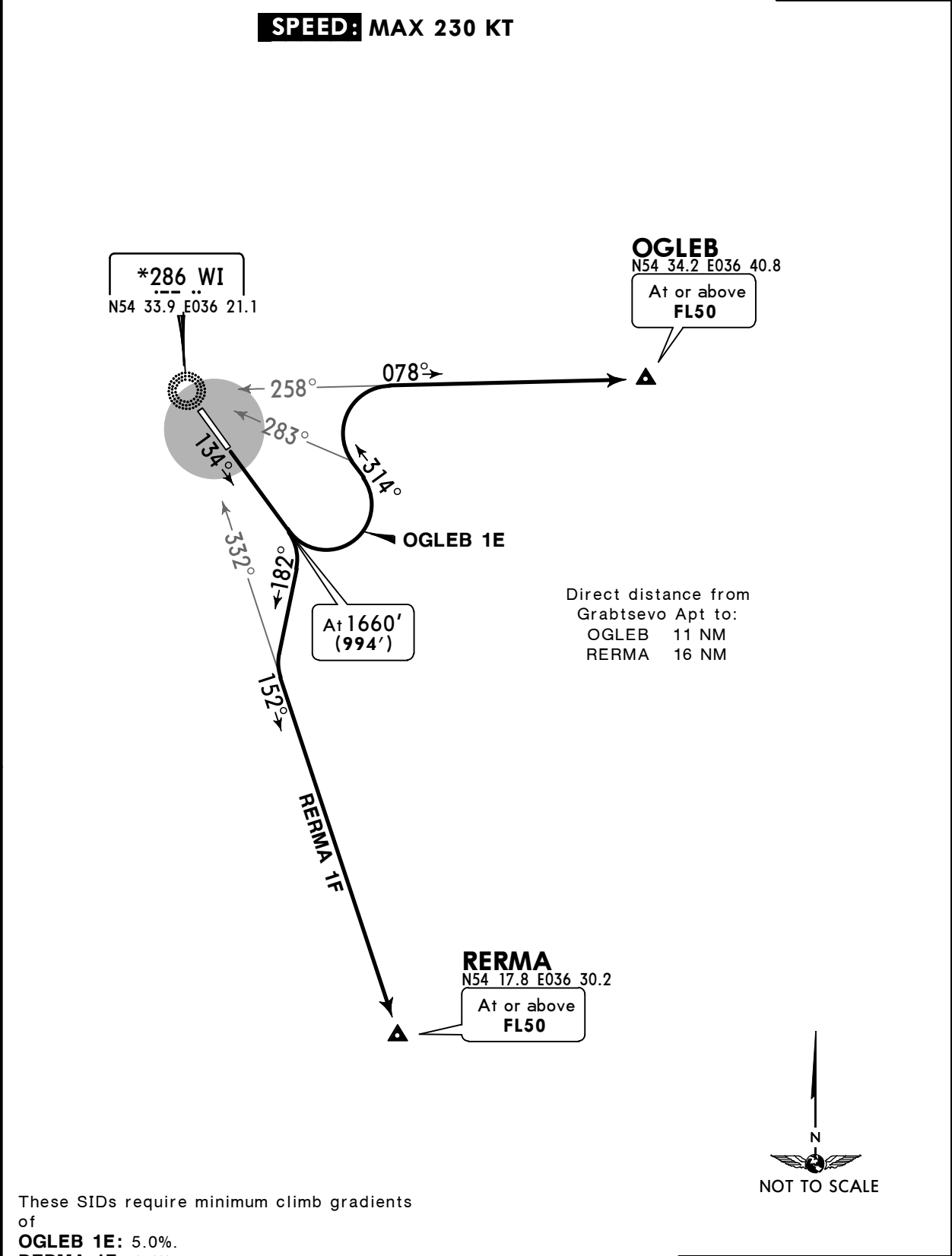
QNH on request (QFE)
Trans level: By ATC Trans alt: 2640' (1974')
All turns shall be carried out with bank of 25°.

2600'

MSA ARP

OGLEB 1E [OGLE1E]
RERMA 1F [RERM1F]
RWY 13 DEPARTUES

SPEED: MAX 230 KT



Gnd speed-KT	75	100	150	200	250	300
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.0% V/V (fpm)	380	506	760	1013	1266	1519

ALT/HEIGHT CONVERSION

QNH (QFE)

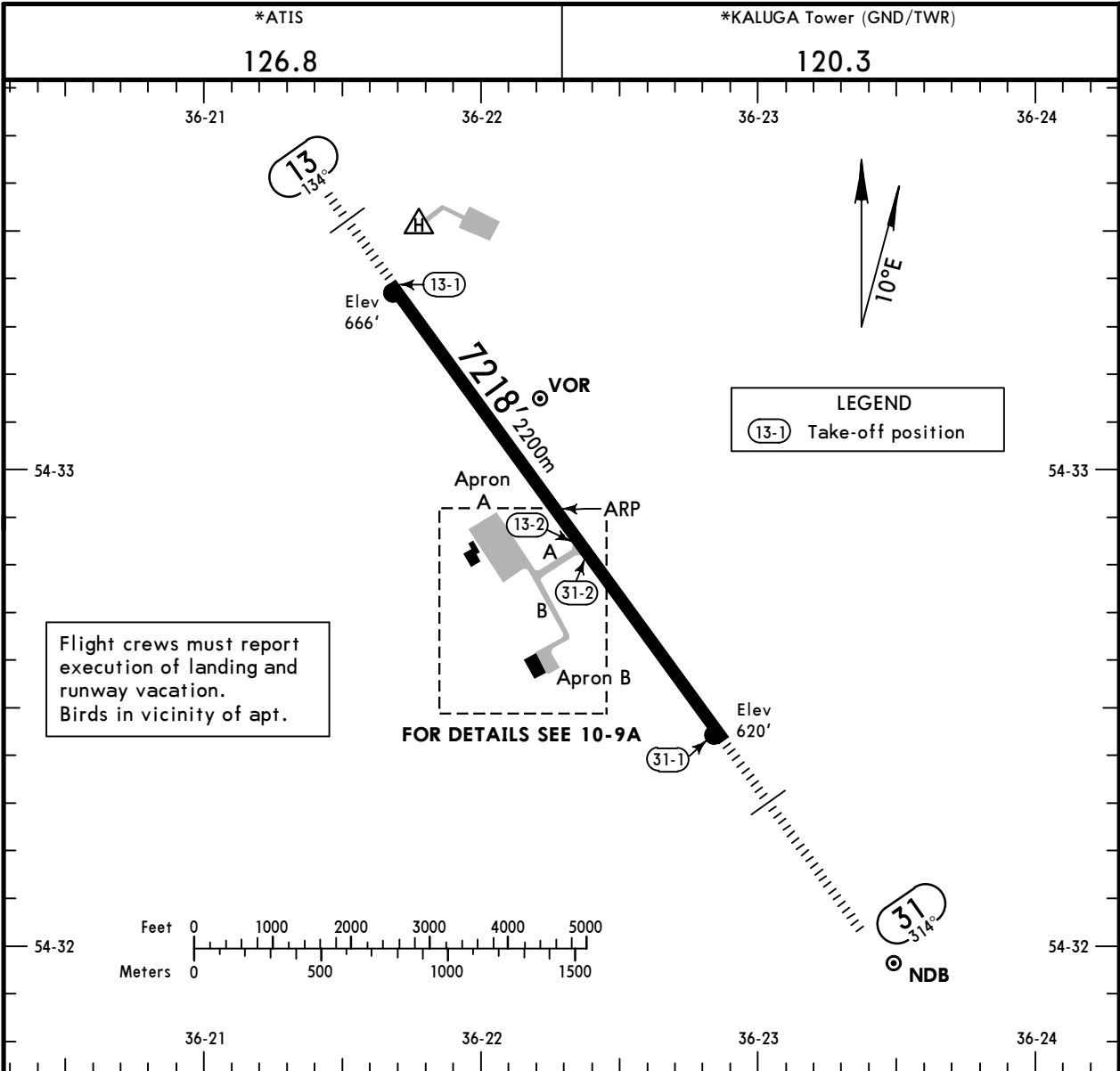
1660' (994' - 300m)

2640' (1974' - 600m)

UUBC/KLF
Apt Elev **666'**
N54 32.9 E036 22.3

JEPPESSEN
4 AUG 17 **(10-9)** Eff 17 Aug

KALUGA, RUSSIA
GRABTSEVO



ADDITIONAL RUNWAY INFORMATION					
RWY				USABLE LENGTHS	
				LANDING BEYOND	TAKE-OFF
13 31	RL (45m) HIALS PAPI-L (3.0°)			Threshold	
				Glide Slope	
				6306' 1922m	1
					148' 45m

1 TAKE-OFF RUN AVAILABLE					
<u>RWY 13:</u> From point 13-1		7218' (2200m)	<u>RWY 31:</u> From point 31-1		7218' (2200m)
from point 13-2		3077' (938m)	from point 31-2		4193' (1278m)

LOW VISIBILITY PROCEDURES (LVP)

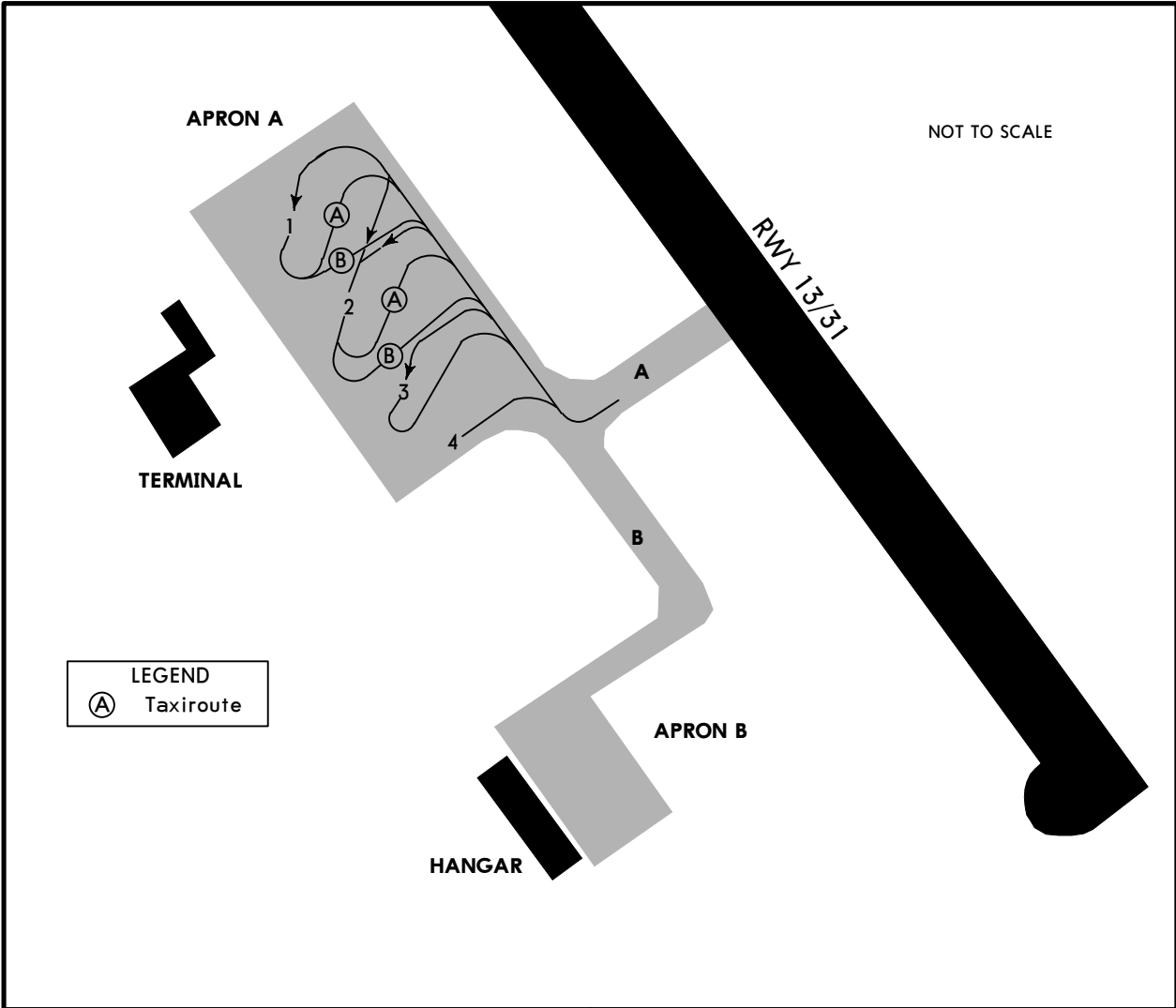
LVP applied when RVR is less than 600m. ATC will inform pilots using phraseology:
"LVP in progress. Check your minimum."

The following is prohibited during LVP:
- take-off not from the runway extremity,
- take-off without stop at line-up position after entering runway.

TAKE-OFF		
AIR CARRIER (JAA)		
All Rwy's		
	LVP must be in force RCLM (DAY only) or RL	RCLM (DAY only) or RL
A		
B	250m	400m
C		
D	300m	

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KALUGA, RUSSIA
GRABTSEVO



INS COORDINATES		
STAND No.	COORDINATES	
1	N54 32.9	E036 22.1
2, 3	N54 32.8	E036 22.1
4	N54 32.8	E036 22.2

Taxiing on apron shall be carried out at power unit rate not more than 0.42 of the nominal.
If unable to taxi out at this power unit rate, flight crew shall request a tow tractor to tow acft to the start-up point.

Engines start-up and taxiing shall be carried out by permission of controller.

Stands 1 and 2 available for de-icing.

Stand 4 available for helicopter.

UUBC


JEPPesen
19 FEB 16 **10-9S**
Standard
KALUGA, RUSSIA
GRABTSEVO

STRAIGHT-IN RWY		A	B	C	D
13	RNAV ①	1120'(454') R1500m	1120'(454') R1500m	1120'(454') R1700m	1120'(454') R1700m
	ALS out	R1500m	R1500m	C2100m	C2100m
	VOR ①	1130'(464') R1500m	1130'(464') R1500m	1130'(464') R1800m	1130'(464') R1800m
	ALS out	R1500m	R1500m	C2200m	C2200m
	NDB ① ②	1130'(464') R1500m	1130'(464') R1500m	1130'(464') R1800m	1130'(464') R1800m
	ALS out	R1500m	R1500m	C2200m	C2200m
	NDB ③	1260'(594') C2200m	1260'(594') C2200m	1260'(594') C2700m	1260'(594') C2700m
	ALS out	C2900m	C2900m	C3100m	C3100m
31	ILS FULL Limited ALS out	820'(200') R550m R750m R1200m	820'(200') R550m R750m R1200m	820'(200') R550m R750m R1200m	820'(200') R550m R750m R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ①	970'(350') R900m	970'(350') R900m	970'(350') R900m	970'(350') R900m
	ALS out	R1500m	R1500m	R1600m	R1600m
	VOR ①	980'(360') R900m	980'(360') R900m	980'(360') R900m	980'(360') R900m
	ALS out	R1500m	R1500m	R1600m	R1600m
	NDB ① ②	970'(350') R900m	970'(350') R900m	970'(350') R900m	970'(350') R900m
	ALS out	R1500m	R1500m	R1600m	R1600m
	NDB ③	1180'(560') R2000m	1180'(560') R2000m	1180'(560') C2200m	1180'(560') C2200m
	ALS out	C2700m	C2700m	C2900m	C2900m

① Continuous Descent Final Approach.

② with FAF.

③ w/o FAF.

CIRCLE-TO-LAND ④	100 KT	135 KT	180 KT	205 KT
to rwy 13	1180'(514') V1500m⑥	1260'(594') V1600m	1360'(694') V2400m	1610'(944') V3600m
to rwy 31 ⑤	1140'(520') V1500m⑥	1220'(600') V1600m⑥	1310'(690') V2400m	1570'(950') V3600m

④ Prohibited in sector 182° - 299°.

⑤ Circling height based on rwy 31 threshold elev of 620'.

⑥ or higher minimums of preceding straight-in approach.

TAKE-OFF RWY 13, 31

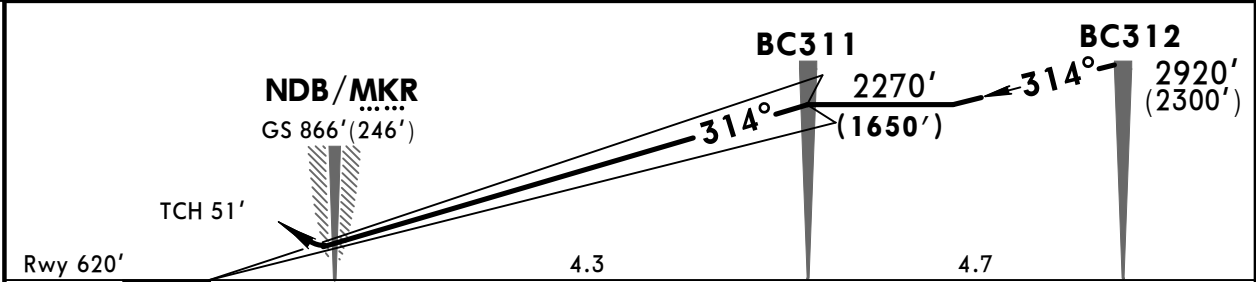
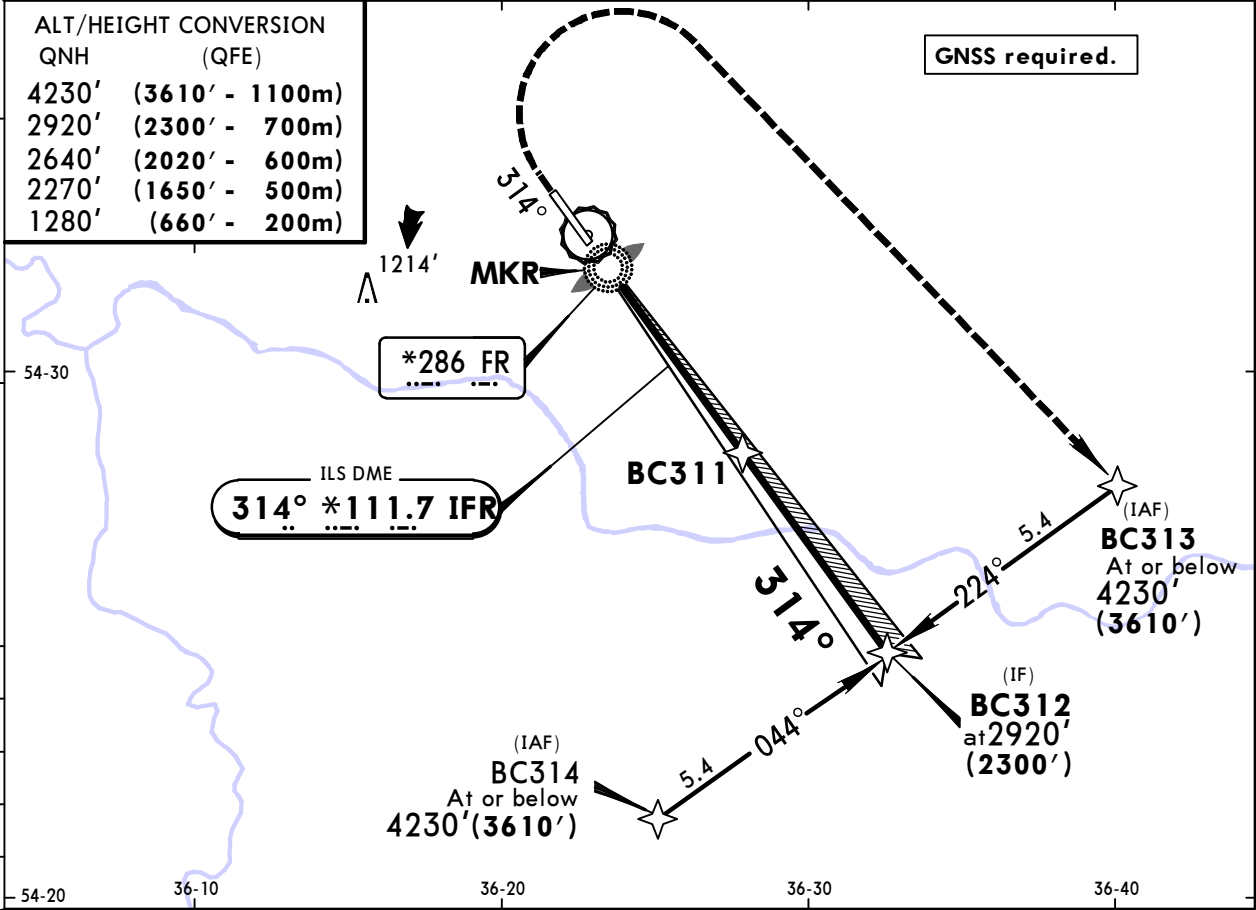
LVP must be in Force			
RCLM (DAY only) or RL		RCLM (DAY only) or RL	NIL (DAY only)
A	250m	400m	500m
B			
C			
D	300m		

UUBC/KLF
GRABTSEVO

JEPPESSEN
8 MAR 19 (11-1)

KALUGA, RUSSIA
ILS Z Rwy 31

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
LOC IFR *111.7	Final Apch Crs 314°	GS BC311 2270'(1650')	ILS DA(H) 820'(200')	Apt Elev 666' Rwy 620'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1280'(660'), then turn RIGHT to BC313 climbing to 2270'(1650'), then as directed.					
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC	
					Trans alt: 2640'(2020')



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	1280' (660')	BC313	2270' (1650')
ILS GS	3.00°	372	478	531	637	743		↑	RT	↑

STRAIGHT-IN LANDING RWY 31				CIRCLE-TO-LAND			
ILS		LOC (GS out)		Prohibited in sector 182°-299°.			
DA(H) 820'(200')							
FULL		ALS out					
A				Max Kts	MDA(H)		
B				100	1140'(520')	1600m	
C	800m	1200m	NOT AUTHORIZED	135	1220'(600')	1600m	
D				180	1310'(690')	3200m	
				205	1570'(950')	4800m	

1 Circling height based on rwy 31 thresh elev of 620'.

UUBC/KLF
GRABTSEVO

JEPPESSEN
8 MAR 19 **(11-2)**

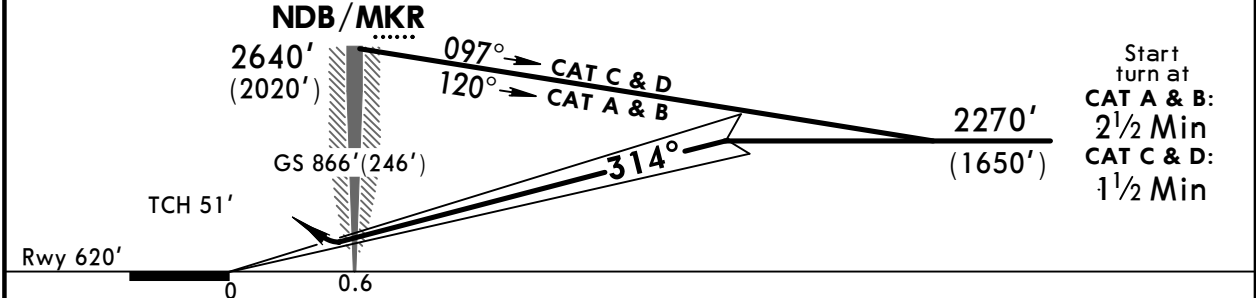
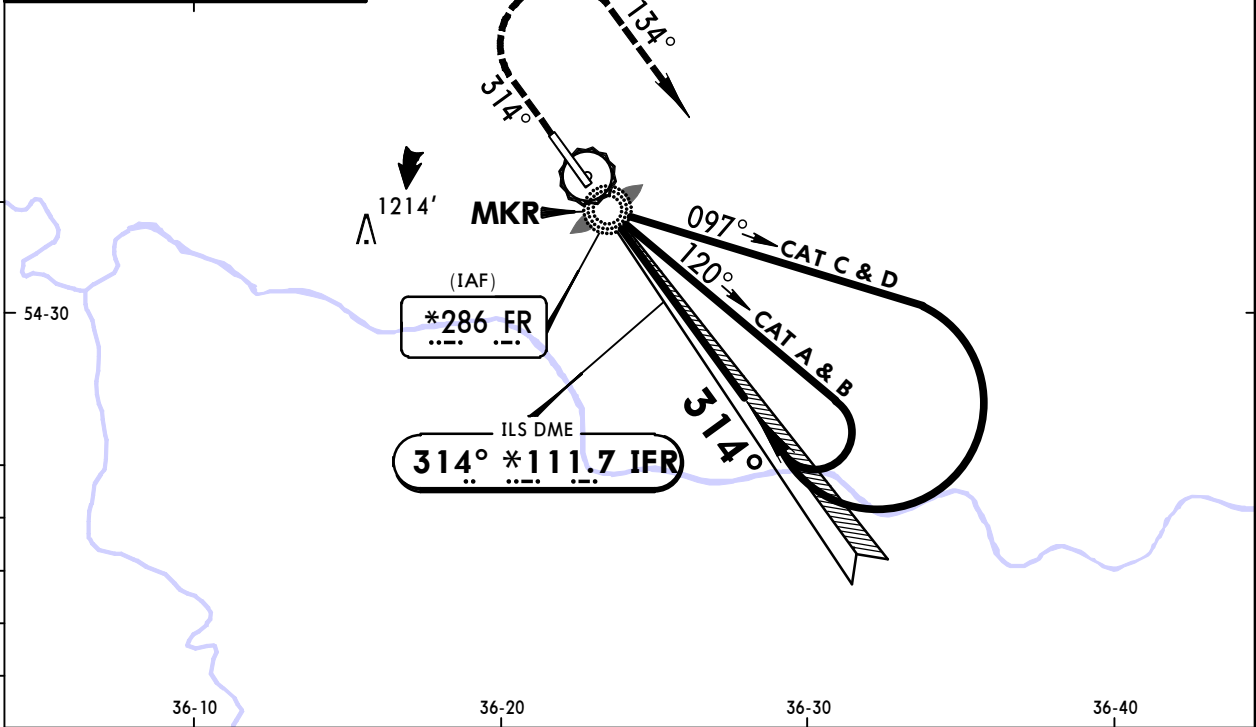
KALUGA, RUSSIA
ILS Y Rwy 31

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
LOC IFR *111.7	Final Apch Crs 314°	GS No Altitude published	ILS DA(H) 820'(200')	Apt Elev 666' Rwy 620'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1280'(660'), then turn RIGHT onto 134° climbing to 2270'(1650'), then as directed.					
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC	
					Trans alt: 2640'(2020')

ALT/HEIGHT CONVERSION		
QNH	(QFE)	
2640'	(2020' - 600m)	
2270'	(1650' - 500m)	
1280'	(660' - 200m)	

ADF required.

10
5
0
5
36-1036-2036-3036-40



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	1280' (660')	134° RT	2270' (1650')
ILS GS	3.00°	372	478	531	637	743				

STRAIGHT-IN LANDING RWY 31				CIRCLE-TO-LAND I	
ILS		LOC (GS out)		Prohibited in sector 182°-299°.	
DA(H) 820'(200')					
FULL		ALS out		Max Kts	MDA(H)
A				100	1140'(520') 1600m
B				135	1220'(600') 1600m
C	800m	1200m	NOT AUTHORIZED	180	1310'(690') 3200m
D				205	1570'(950') 4800m

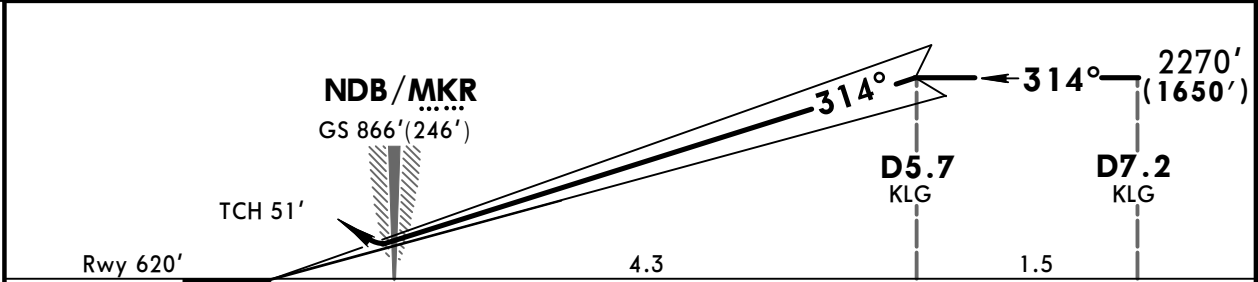
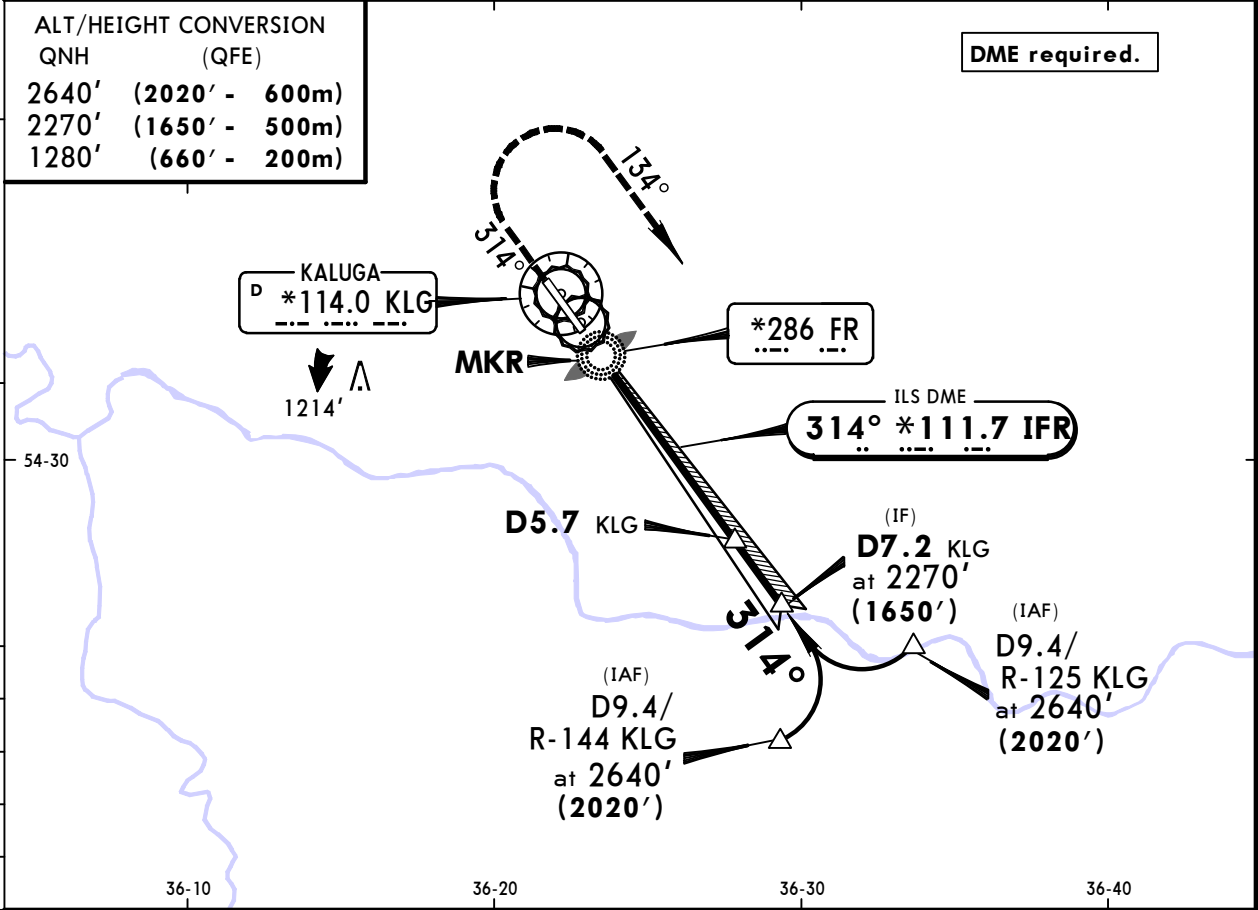
I Circling height based on rwy 31 thresh elev of 620'.

UUBC/KLF
GRABTSEVO

JEPPESSEN
4 AUG 17 11-3 Eff 17 Aug

KALUGA, RUSSIA
ILS X Rwy 31

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
LOC IFR *111.7	Final Apch Crs 314°	GS D5.7 KLG 2270'(1650')	ILS DA(H) 820'(200')	Apt Elev 666' Rwy 620'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1280'(660'), then turn RIGHT onto 134° climbing to 2270'(1650'), then as directed.					
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC	
					Trans alt: 2640'(2020')



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	1280' (660')	134° RT	2270' (1650')
ILS GS	3.00°	372	478	531	637	743				

STRAIGHT-IN LANDING RWY 31				CIRCLE-TO-LAND	
ILS		LOC (GS out)		Prohibited in sector 182°-299°.	
DA(H) 820'(200')					
FULL		ALS out			
A				Max Kts	MDA(H)
B				100	1140'(520') 1600m
C	800m	1200m	NOT AUTHORIZED	135	1220'(600') 1600m
D				180	1310'(690') 3200m
				205	1570'(950') 4800m

UUBC/KLF
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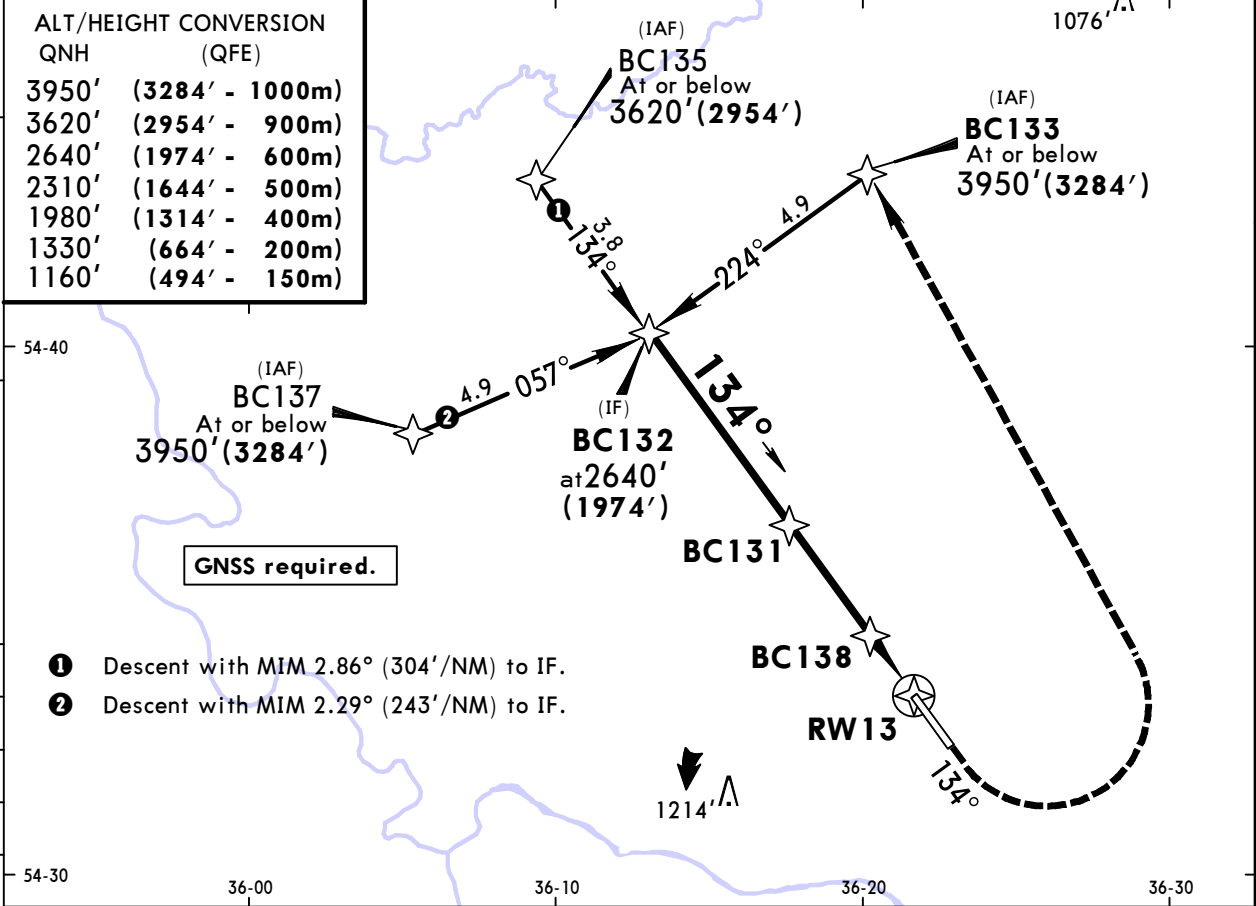
JEPPESSEN
4 AUG 17 **(12-1)** Eff 17 Aug

KALUGA, RUSSIA
RNAV (GNSS) Rwy 13

*ATIS 126.8		*KALUGA Tower (R/APP/TWR) 120.3		*Ground 120.3	
RNAV	Final Apch Crs 134°	Minimum Alt BC131 1980'(1314')	MDA(H) 1120'(454')	Apt Elev 666' Rwy 666'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1330'(664'), then turn LEFT to BC133 climbing to 2310'(1644'), then as directed.					

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 2640'(1974')

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3950'	(3284' - 1000m)
3620'	(2954' - 900m)
2640'	(1974' - 600m)
2310'	(1644' - 500m)
1980'	(1314' - 400m)
1330'	(664' - 200m)
1160'	(494' - 150m)



BC132 2640' (1974')		BC131 1980' (1314')		BC138		RW13	
8.5		4.0		1.4		0	
4.5		2.6		1.4		0	
TCH 50'		Rwy 666'					
1330' (664')		BC133		2310' (1644')			
MAP at RW13							

STRAIGHT-IN LANDING RWY 13				CIRCLE-TO-LAND			
MDA(H) 1120'(454')				Prohibited in sector 182°-299°.			
ALS out		Max Kts		MDA(H)			
A	1200m	1600m	100	1180'(514')	1600m		
B			135	1260'(594')	1600m		
C	2000m		180	1360'(694')	3200m		
D	2400m		205	1610'(944')	4800m		

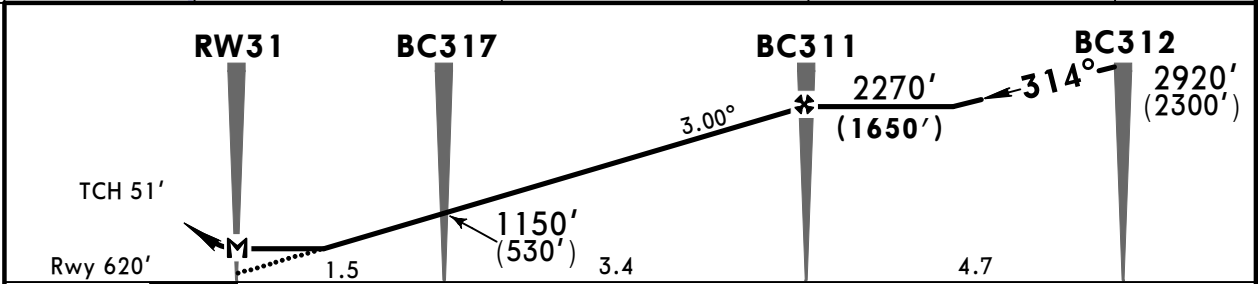
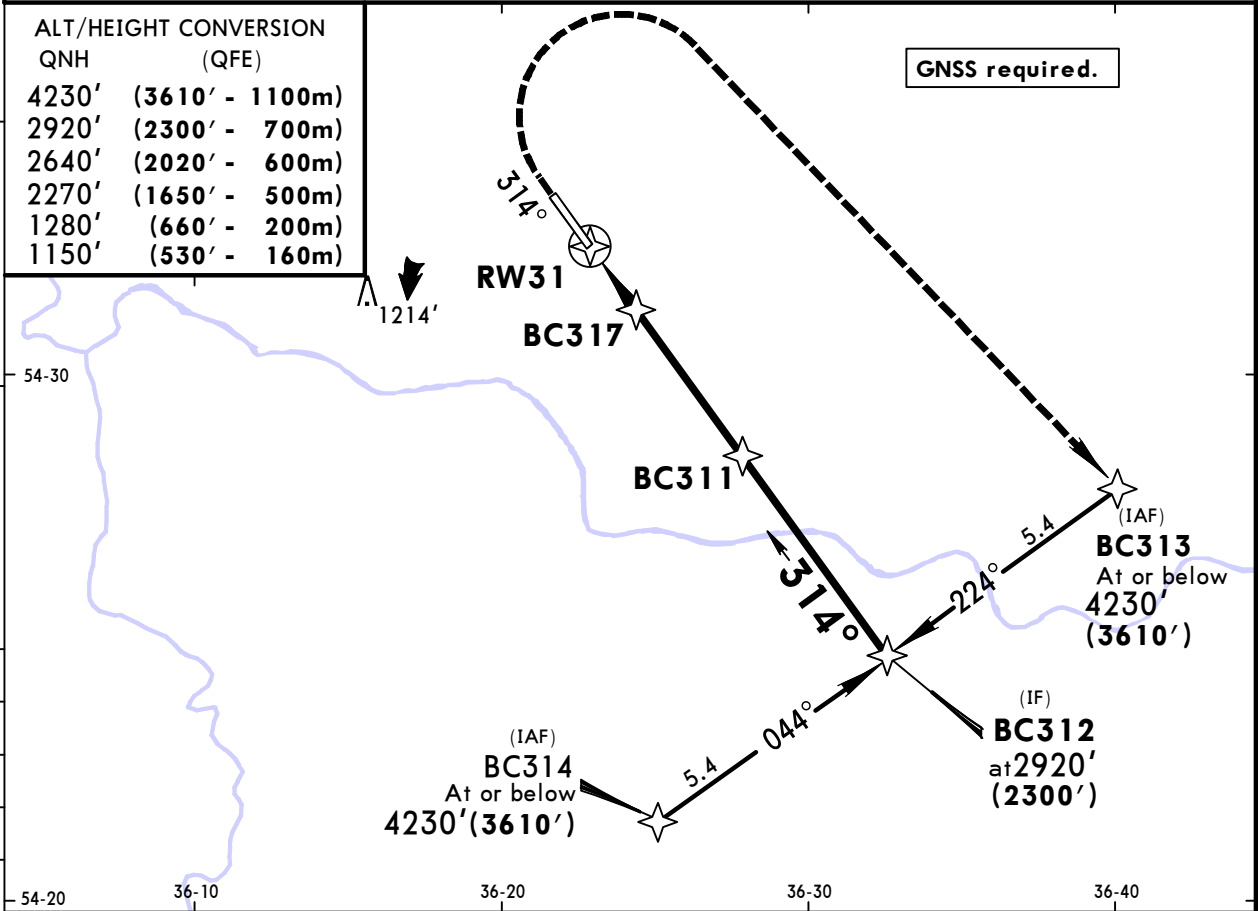
UUBC/KLF
GRABTSEVO

JEPPESSEN
4 AUG 17 **(12-2)** Eff 17 Aug

KALUGA, RUSSIA
RNAV (GNSS) Rwy 31

*ATIS 126.8		*KALUGA Tower (R/APP/TWR) 120.3		*Ground 120.3	
RNAV	Final Apch Crs 314°	Minimum Alt BC311 2270'(1650')	MDA(H) 970'(350')	Apt Elev 666' Rwy 620'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1280'(660'), then turn RIGHT to BC313 climbing to 2270'(1650'), then as directed.					

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 2640' (2020')



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	1280' (660')	BC313	2270' (1650')
Descent Angle	3.00°	372	478	531	637	743		↑	RT	↑
MAP at RW31										

STRAIGHT-IN LANDING RWY 31				CIRCLE-TO-LAND 1	
MDA(H) 970'(350')				Prohibited in sector 182°-299°.	
		ALS out		Max Kts	MDA(H)
A	800m	1600m	100	1140'(520')	1600m
B			135	1220'(600')	1600m
C			180	1310'(690')	3200m
D	1600m	2000m	205	1570'(950')	4800m
1 Circling height based on rwy 31 thresh elev of 620'.					

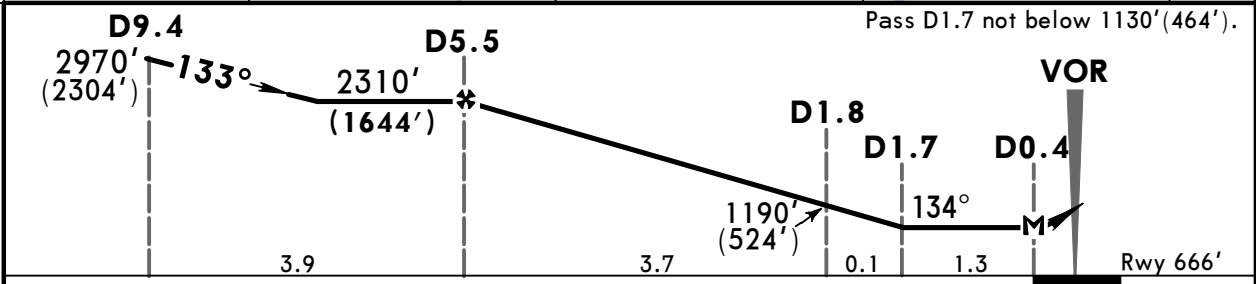
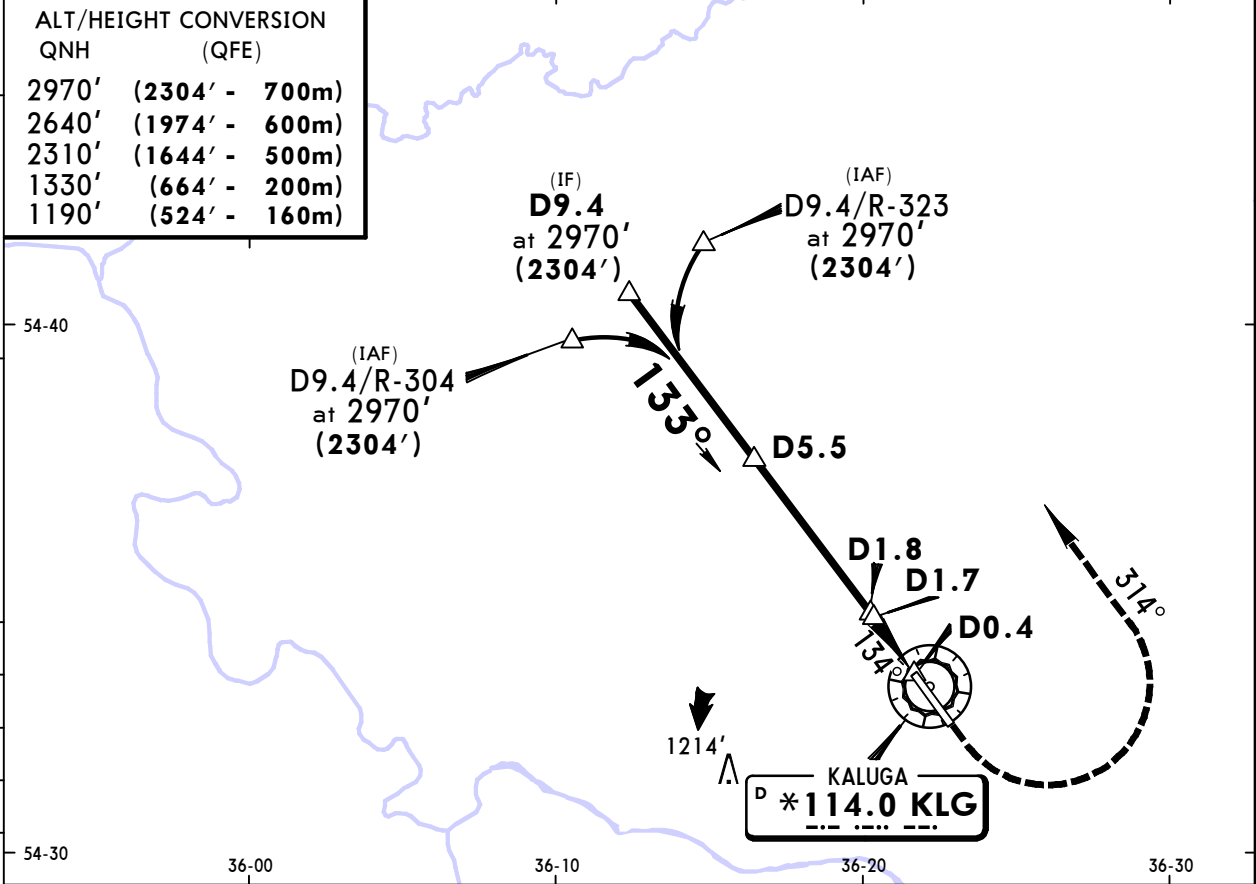
UUBC/KLF
GRABTSEVO

JEPPESSEN
4 AUG 17 **(13-1)** Eff 17 Aug

KALUGA, RUSSIA
VOR Rwy 13

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
VOR KLG *114.0	Final Apch Crs 133°	Minimum Alt D5.5 2310'(1644')	MDA(H) 1130'(464')	Apt Elev 666' Rwy 666'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1330'(664'), then turn LEFT onto 314° climbing to 2310'(1644'), then as directed.					
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC	
1. DME required.		2. Final approach track offset 1° from runway centerline.		Trans alt: 2640'(1974')	

ALT/HEIGHT CONVERSION	
QNH	(QFE)
2970'	(2304' - 700m)
2640'	(1974' - 600m)
2310'	(1644' - 500m)
1330'	(664' - 200m)
1190'	(524' - 160m)



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	1330' (664')	314° LT	2310' (1644')
Descent Angle	3.00°	372	478	531	637	743				
MAP at D0.4										

STRAIGHT-IN LANDING RWY 13				CIRCLE-TO-LAND			
MDA(H) 1130'(464')				Prohibited in sector 182°-299°.			
		ALS out		Max Kts	MDA(H)		
A	1200m	1600m		100	1180'(514')	1600m	
B				135	1260'(594')	1600m	
C	2000m			180	1360'(694')	3200m	
D	2400m			205	1610'(944')	4800m	

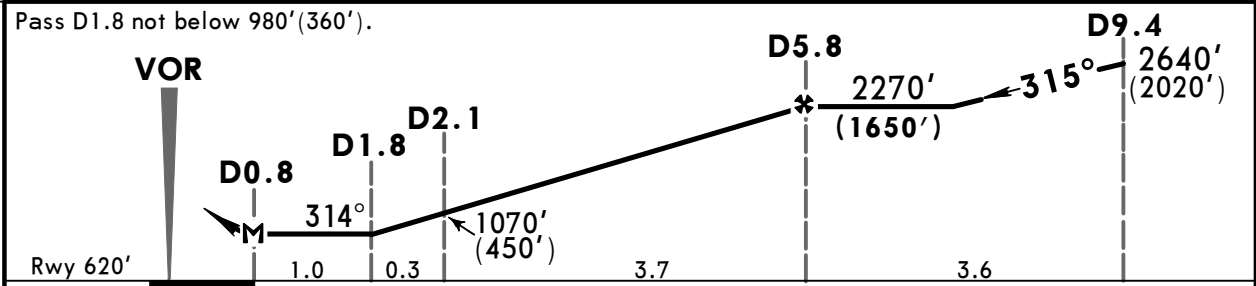
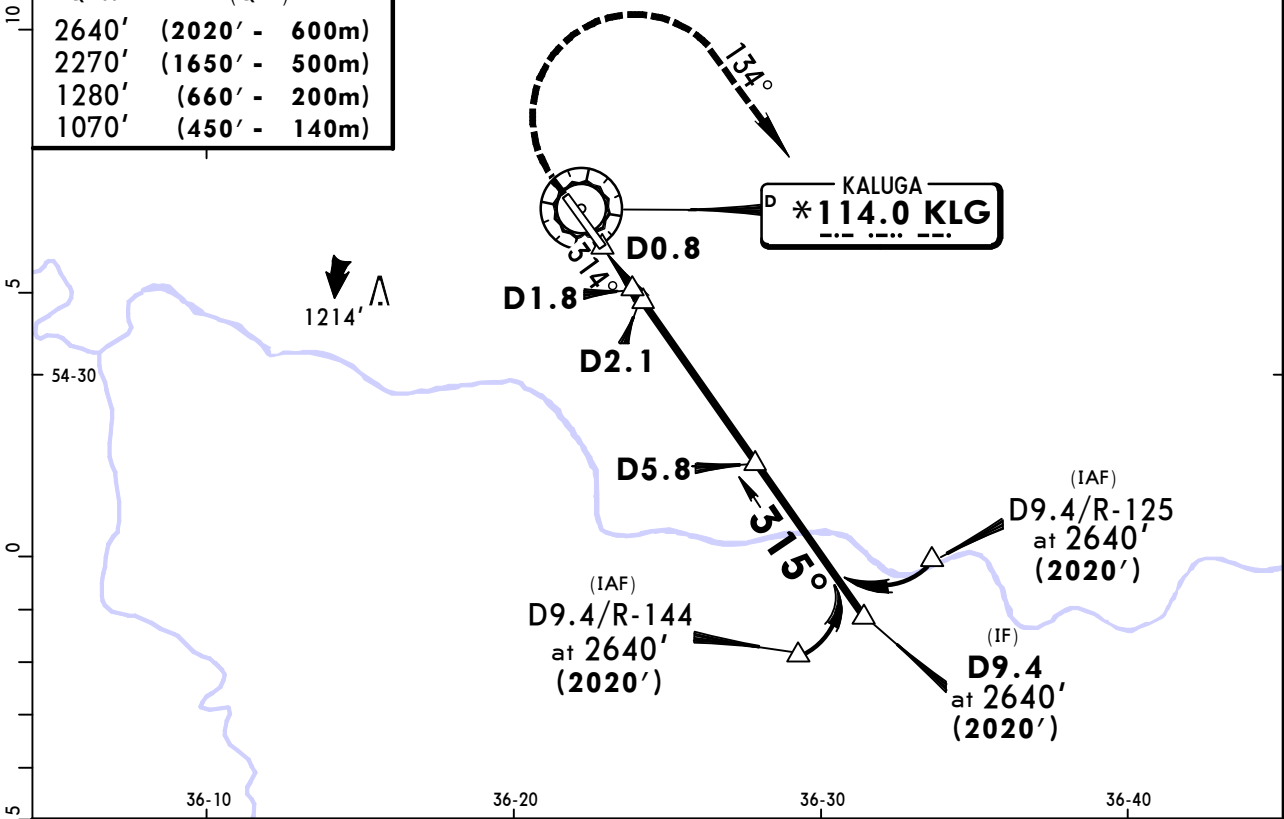
UUBC/KLF
GRABTSEVO

JEPPESSEN
4 AUG 17 **(13-2)** Eff 17 Aug

KALUGA, RUSSIA
VOR Rwy 31

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
VOR KLG *114.0	Final Apch Crs 315°	Minimum Alt D5.8 2270'(1650')	MDA(H) 980'(360')	Apt Elev 666' Rwy 620'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1280'(660'), then turn RIGHT onto 134° climbing to 2270'(1650'), then as directed.					
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 2640'(2020')					
1. DME required. 2. Final approach track offset 1° from runway centerline.					

ALT/HEIGHT CONVERSION	
QNH	(QFE)
2640'	(2020' - 600m)
2270'	(1650' - 500m)
1280'	(660' - 200m)
1070'	(450' - 140m)



Gnd speed-Kts	70	90	100	120	140	160	PAPI	1280' (660')	134° RT	2270' (1650')
Descent Angle	3.00°	372	478	531	637	743				
MAP at D0.8										

STRAIGHT-IN LANDING RWY 31				CIRCLE-TO-LAND I			
MDA(H) 980'(360')				Prohibited in sector 182°-299°.			
ALS out				Max Kts	MDA(H)		
A				100	1140'(520')	1600m	
B	800m			135	1220'(600')	1600m	
C				180	1310'(690')	3200m	
D	1600m			205	1570'(950')	4800m	

I Circling height based on rwy 31 thresh elev of 620'.

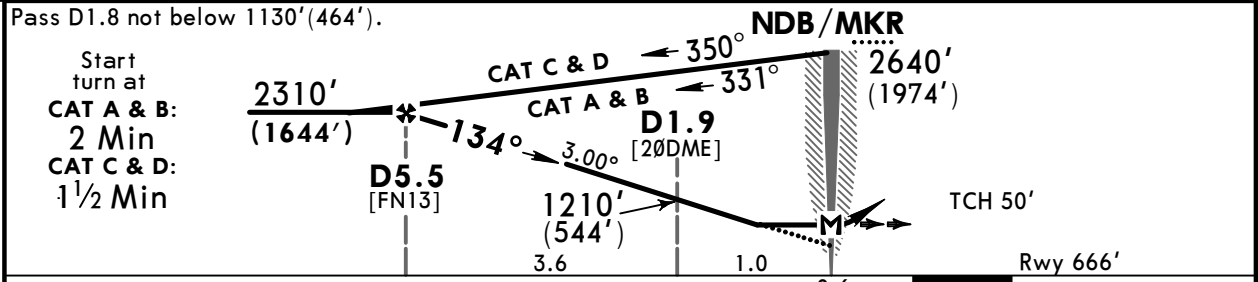
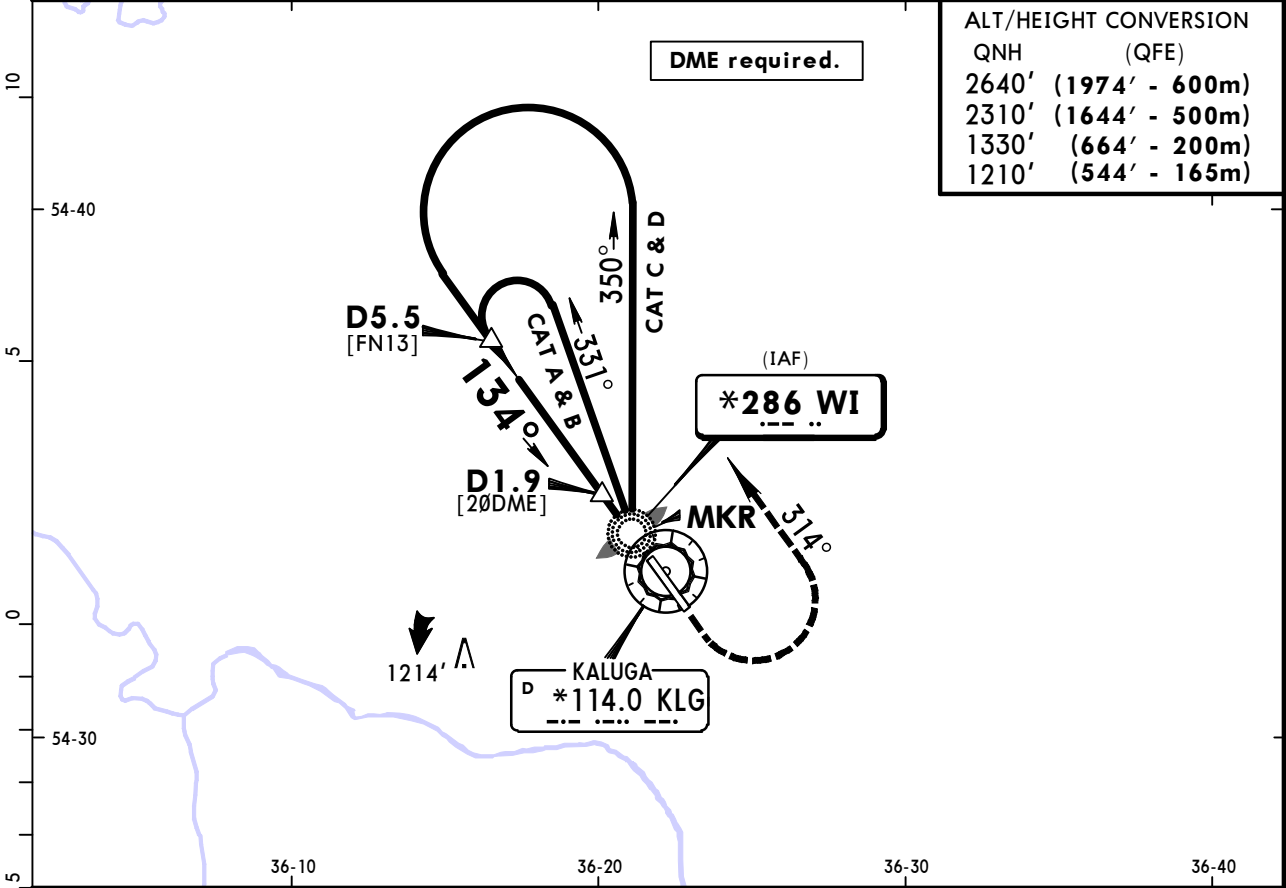
UUBC/KLF
GRABTSEVO

JEPPESSEN
4 AUG 17 (16-1) Eff 17 Aug

KALUGA, RUSSIA
NDB Rwy 13

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
NDB WI *286	Final Apch Crs 134°	Minimum Alt D5.5 2310'(1664')	MDA(H) (CONDITIONAL) 1130'(464')	Apt Elev 666' Rwy 666'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1330'(664'), then turn LEFT onto 314° climbing to 2310'(1664'), then as directed.					

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 2640'(1974')



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI	1330' (664')	314° LT	2310' (1644')
Descent Angle	3.00°	372	478	531	637	743				
MAP at NDB/MKR										

STRAIGHT-IN LANDING RWY 13					CIRCLE-TO-LAND Prohibited in sector 182°-299°.	
With FAF			W/o FAF		Max Kts	MDA(H)
MDA(H) 1130'(464')			MDA(H) 1260'(594')			
		ALS out				
A	1200m	1600m	1200m	1600m	100	1180'(514') 1600m
B					135	1260'(594') 1600m
C	2000m		2400m		180	1360'(694') 3200m
D	2400m		2800m		205	1610'(944') 4800m

After apch w/o FAF: MDA(H) 1260'(594').

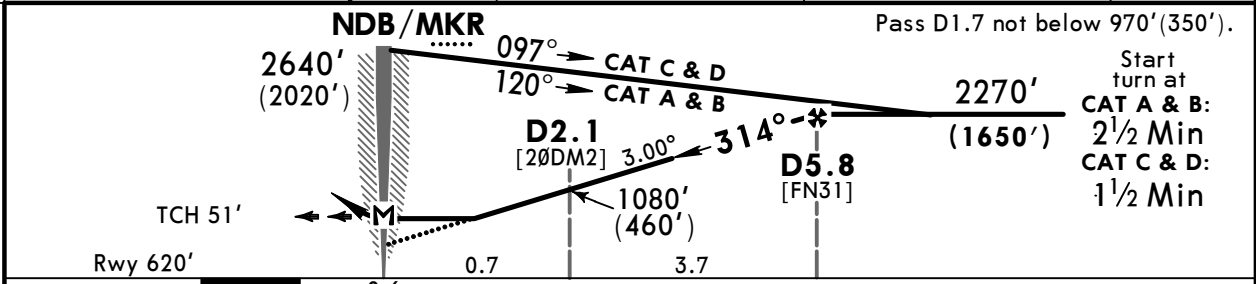
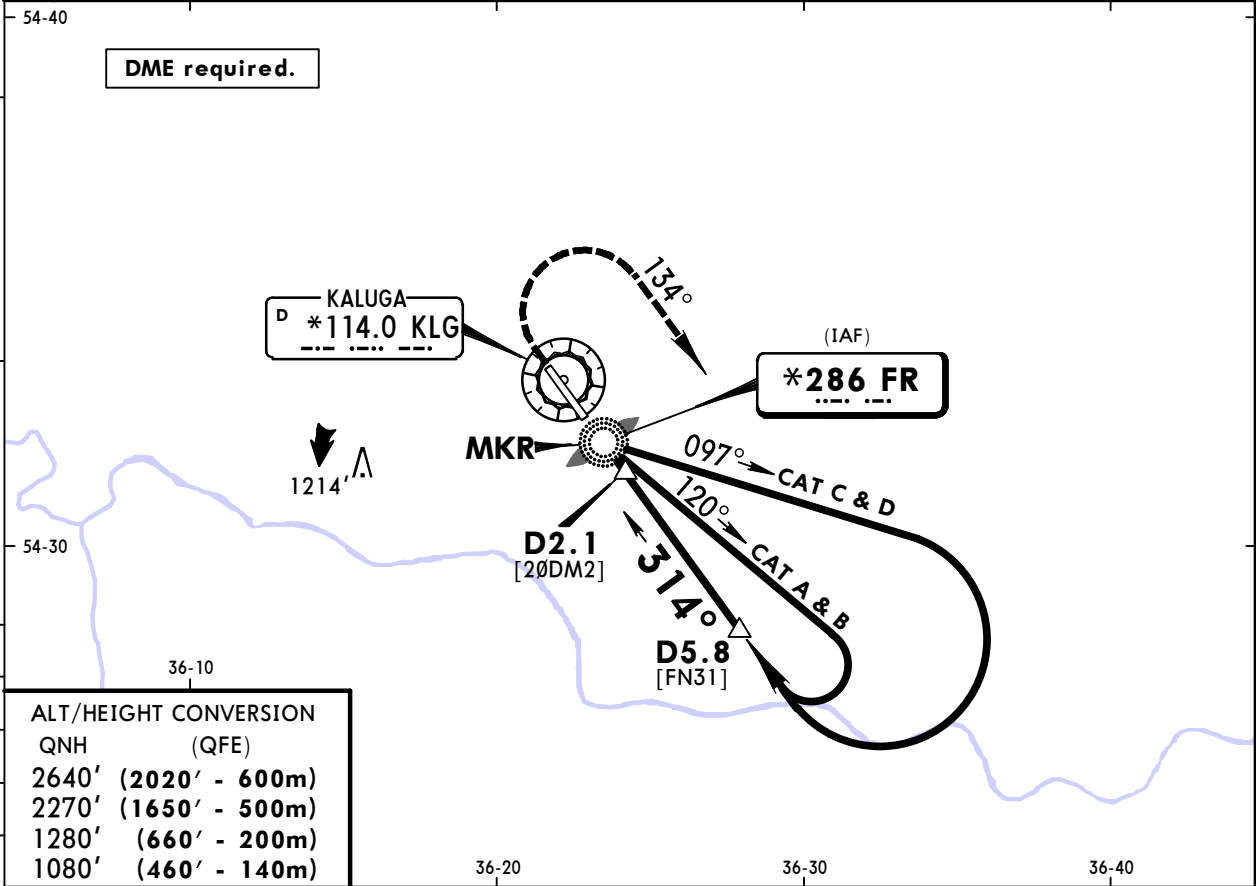
UUBC/KLF
GRABTSEVO

JEPPESSEN
4 AUG 17 **(16-2)** Eff 17 Aug

KALUGA, RUSSIA
NDB Rwy 31

*ATIS		*KALUGA Tower (R/APP/TWR)		*Ground	
126.8		120.3		120.3	
NDB FR *286	Final Apch Crs 314°	Minimum Alt D5.8 2270'(1650')	MDA(H) (CONDITIONAL) 970'(350')	Ap† Elev 666' Rwy 620'	2600' MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1280'(660'), then turn RIGHT onto 134°climbing to 2270'(1650'), then as directed.					

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 2640'(2020')



0 0.6							HIALS PAPI <
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STRAIGHT-IN LANDING RWY 31					CIRCLE-TO-LAND 1		
With FAF		W/o FAF		Max Kts	Prohibited in sector 182°-299°.		1
MDA(H)	ALS out	MDA(H)	ALS out		MDA(H)		
A				100	1140'(520')	1600m	
B	1200m	1600m	1200m	135	1220'(600')	1600m	
C			1600m	180	1310'(690')	3200m	
D	1600m	2000m	2400m	205	1570'(950')	4800m	

1 Circling height based on rwy 31 thresh elev of 620'. 2 After apch w/o FAF: MDA(H) 1180'(560').

Chart changes since cycle 08-2019

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
KALUGA, (GRABTSEVO - UUBC)				

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport UUBC