JEPPESEN
JeppView for Windows

List of pages in this Trip Kit

General Information

Location: KALUGA RUS
ICAO/IATA: UUBC / KLF
Lat/Long: N54° 32.92', E036° 22.28'
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: Yes
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: No

Sunrise: 0149 Z
Sunset: 1714 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: 637 ft
Lighting: Edge, ALS

Communication Information

ATIS: 126.800
Kaluga Tower: 129.000 Secondary
Kaluga Tower: 120.300
Kaluga Transit Operations: 131.950 Non-English

1. GENERAL

1.1. ATIS

ATIS 126.8

1.2. LOW VISIBILITY PROCEDURES (LVP)

LVP applied when RVR is less than 550m. ATC will inform pilots using phraseology: "LVP in progress. Check your minimums."

The flight crew shall report RWY vacation to the controller - when operating on RWY 13 - after crossing the RWY-holding position on TWY A and - when operating on RWY 31 - after vacation of ILS critical area.

Special marking signs are not provided.

The following is prohibited during LVP:

- take-off not from the RWY extremity,
- take-off without stop at line-up position.

1.3. TAXI PROCEDURES

Flight crews must report execution of landing and RWY vacation.

RWY vacation shall be carried out via TWY A.

ACFT must vacate ILS ciritical area as fast as possible.

Flight crew shall report RWY vacation only after crossing the RWY-holding position marking on TWY A.

Towing assistance is provided when ACFT self-maneuvering operations are impractible, taxiing out of stands that are not available for self-maneuvering or ACFT is unable to taxi out under own engines power.

Taxiing out of/into stand is provided only by the clearance of TWR controller, following the signals of the ground technical specialist.

Taxiing shall be carried out strictly along taxi guidelines.

Taxiing during night-time and day-time under visibility of 2000m or below shall taxi with landing/taxi lights switched on.

Engines start-up and taxiing shall be performed upon request, only after TWR controller's clearance is obtained.

1.4. PARKING INFORMATION

Stand 4 available for helicopter.

1.5. COMMUNICATION FAILURE PROCEDURES

In case of communication failure:

- maintain listening watch on emergency frequency and on Lctr frequency for information and controller instructions.
- use telephone link with Flight Control Officer:
  +7 (4842) 59-13-63

1.6. NOISE ABATEMENT PROCEDURES

1.6.1. GENERAL

Noise abatement procedures shall be carried out during take-off and climbing phase.

Execution of noise abatement procedures shall not be carried out at the expense of reduction of flight safety or, in case of one engine failure at the phase of take-off and approach.

Noise abatement procedures shall be applied in accordance with the requirements of the Aeroplane Flight Manual.

All ACFT must follow noise abatement procedures in accordance with ICAO Annex 16, Chapter 2.

1. GENERAL

1.6.2. RESTRICTIONS

During the NIGHT period (2000-0400UTC) the following resrictions apply:

- Departure and arrival are permitted for the ACFT, which meet noise certification requirements specified in ICAO Annex 16, Chapter 3.
- ACT engine run-ups are prohibited.
- On the stands equipped with ground power units and preconditioned air systems, use of APU should be avoided (limited by time) after ACFT is parked on stand or before ACFT leaves the stand.
- Flights of TU-134 ACFT are prohibited, except for flights operated for the purpose of transport of Heads of State, provision of medical emergency and SAR assistance.

1.7. OTHER INFORMATION

Birds in vicinity of APT.

2. ARRIVAL

2.1. COMMUNICATION FAILURE PROCEDURES

In case of communication failure before ACFT entry into Kaluga/Grabtsevo CTR and the decision is made to land at destination aerodrome, use STARs BAMDO 2A, GITIK 2A, OBARO 2A, OTPAD 2A or SOTOG 2A maintaining the published altitude restrictions.

After passing KLG VORDME proceed to WI/GC Lctr descending to 2500' and then proceed to execute instrument approach (depending on ACFT category and approach procedure used).

In case of communication failure after ACFT entry into Kaluga/Grabtsevo CTR at FL090 or below, proceed at present flight level along the shortest track to the holding area over WI/GC Lctr (or KLG VORDME).

After passing WI/GC Lctr (or KLG VORDME) execute instrument approach (depending on ACFT category and approach procedure used).

If unable to land at the destination aerodrome, the flight crew can continue flight to the alternate aerodrome using SIDs.

2.2 NOISE ABATEMENT PROCEDURES

ACFT shall be stabilized and proceed on GP with GP angle 3° ± 0.5°.

Approach shall be performed with established speed of 1.3 * V_2+10 KT (20 km/h), with thrust stabilized until landing.

Wing configuration envisages maximum permissible flaps deflection for landing.

3. DEPARTURE

3.1. START-UP AND TAXI PROCEDURES

3.1.1. START-UP

Pilot-in-command must request the ATC clearance 5 minutes before the estimated time, indicated in the flight plan when the ACFT is ready for departure by reporting the flight number, destination aerodrome, stand number and ATIS Code letter.

"READY FOR DEPARTURE" means that all pre-flight procedures have been completed, all passengers are on board, entrance and cargo doors are closed, stairs removed, a tow bar is connected (when towing is required), de-icing/anti-icing treatment has been completed, ground personnel is ready to start tow (taxi) operations and has established radio contact with the pilot-in-command.

Obtained ATC clearance is the permission to start up engines on the stand, start up engines during towing, and start up engines at start-up position.

A "DLA message" must be submitted and new time of departure in flight plan and slot must be approved by relevant AD services, if time of ACFT departure, specified in the flight plan, is delayed for more than 30 minutes.

If ACFT executes alternate landing at KALUGA (Grabtsevo) AD, and in case flight crew intends to change the time of departure to a time earlier than the time specified in the flight plan, the new time of departure and slot must be approved by the aerodrome services, flight plan message must be submitted.

When departing from engines start-up position (have been towed to the start-up position), extra 10 minutes are added to the time of departure for tow and engines start-up operations - in such case departure is considered as scheduled. Up to 15 minutes are allocated for ACFT taxi operations and air traffic safety provision during departure of all types of ACFT.

3.1.2. TAXI PROCEDURES

To ensure safety of taxi operations, flight crew shall continuously assess the ACFT position, especially at the TWY intersections.

In case of difficulty or doubt in determining ACFT position, flight crew must stop taxiing and report to TWR controller.

It is PROHIBITED to cross the RWY-holding position limit (ILS critical area) indicated by day marking without clearance of TWR controller.

3.2. COMMUNICATION FAILURE PROCEDURES

In case of decision to proceed to the destination aerodrome, continue flight via SID assigned by ATS unit climbing to flight level according to flight plan maintaining the published altitude restrictions.

In case of decision to return to the aerodrome of departure, proceed to the holding area of the relevant STAR chosen by the flight crew.

3.3. NOISE ABATEMENT PROCEDURES

Displacement of RWY THRs for take-off shall not be used as noi se abatement measure. Take-off not from the beginning of the RWY shall be carried out only if it is possible to execute noise abatement procedures.

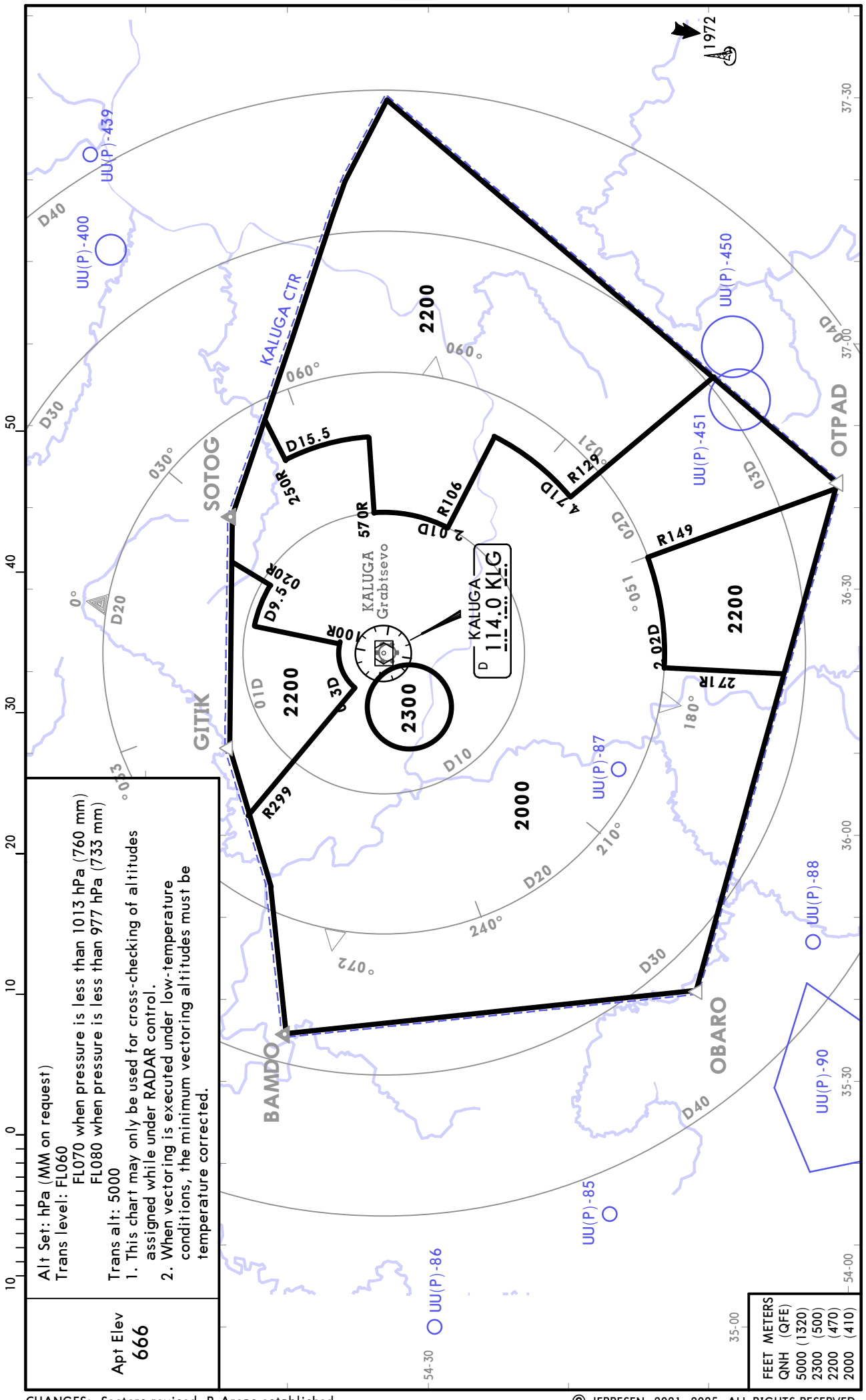
Average take-off thrust shall be applied from take-off till reaching altitude 690'/210m, after that the thrust shall not be reduced less than the value, maintaining the minimum climb gradient not less than 4.0%.

After ACFT lift-off, speed V_2+10 KT (20 km/h) shall be reached as fast as possible and maintained.

UUBC/KLF
GRABTSEVO

JEPPESEN
11 APR 25 (10-1R) Eff 17 Apr

KALUGA, RUSSIA
RADAR MINIMUM ALTITUDES



Alt Set: hPa (MM on request)
Trans level: FL060
FL070 when pressure is less than 1013 hPa (760 mm)
FL080 when pressure is less than 977 hPa (733 mm)

Trans alt: 5000

1. This chart may only be used for cross-checking of altitudes assigned while under RADAR control.
2. When vectoring is executed under low-temperature conditions, the minimum vectoring altitudes must be temperature corrected.

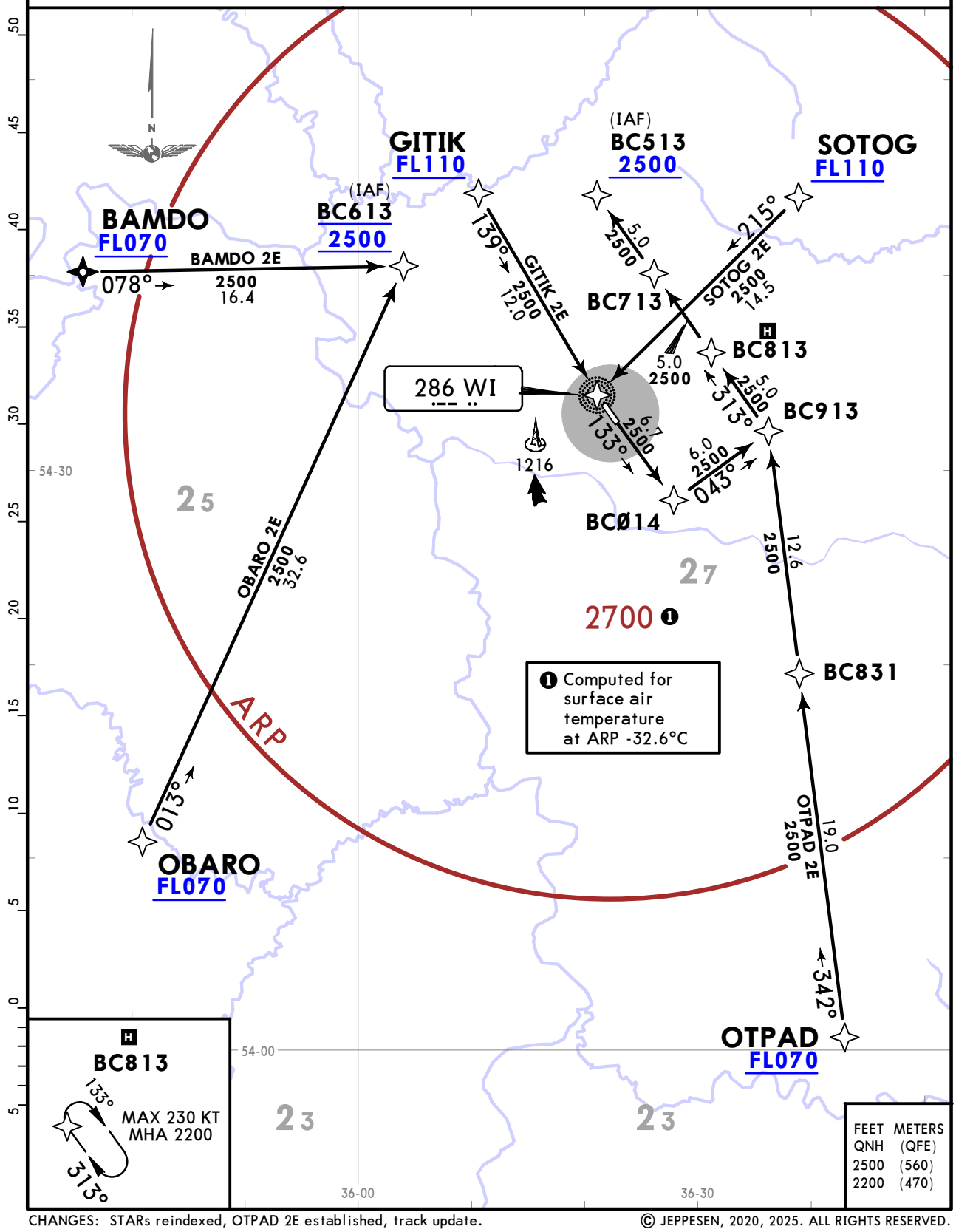
Apt Elev
666

FEET	METERS
QNH	(QFE)
5000	(1320)
2300	(500)
2200	(470)
2000	(410)

CHANGES: Sectors revised, P-Areas established.

*ATIS 126.8	Apt Elev 666	Alt Set: hPa (MM on request) Trans level: FL060 FL070 if pressure is less than 1013 hPa (760 mm) FL080 if pressure is less than 977 hPa (733 mm)
		RNAV 1 GNSS required

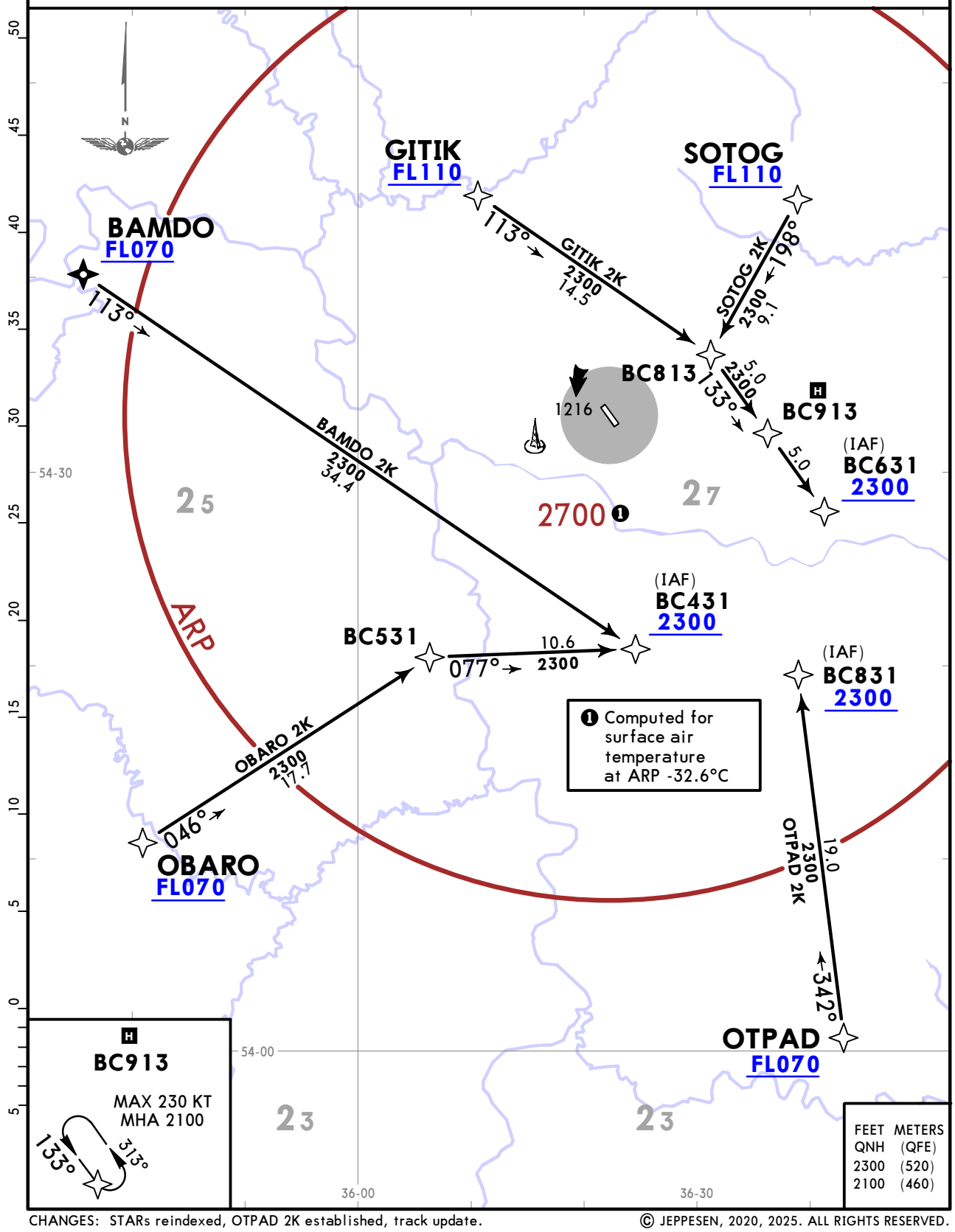
BAMDO 2E [BAMD2E], GITIK 2E [GITI2E]
OBARO 2E [OBAR2E], OTPAD 2E [OTPA2E], SOTOG 2E [SOTO2E]
RNAV ARRIVALS
(RWY 13)



CHANGES: STARs reindexed, OTPAD 2E established, track update.

*ATIS 126.8	Apt Elev 666	Alt Set: hPa (MM on request) Trans level: FL060 FL070 if pressure is less than 1013 hPa (760 mm) FL080 if pressure is less than 977 hPa (733 mm)
		RNAV 1 GNSS required

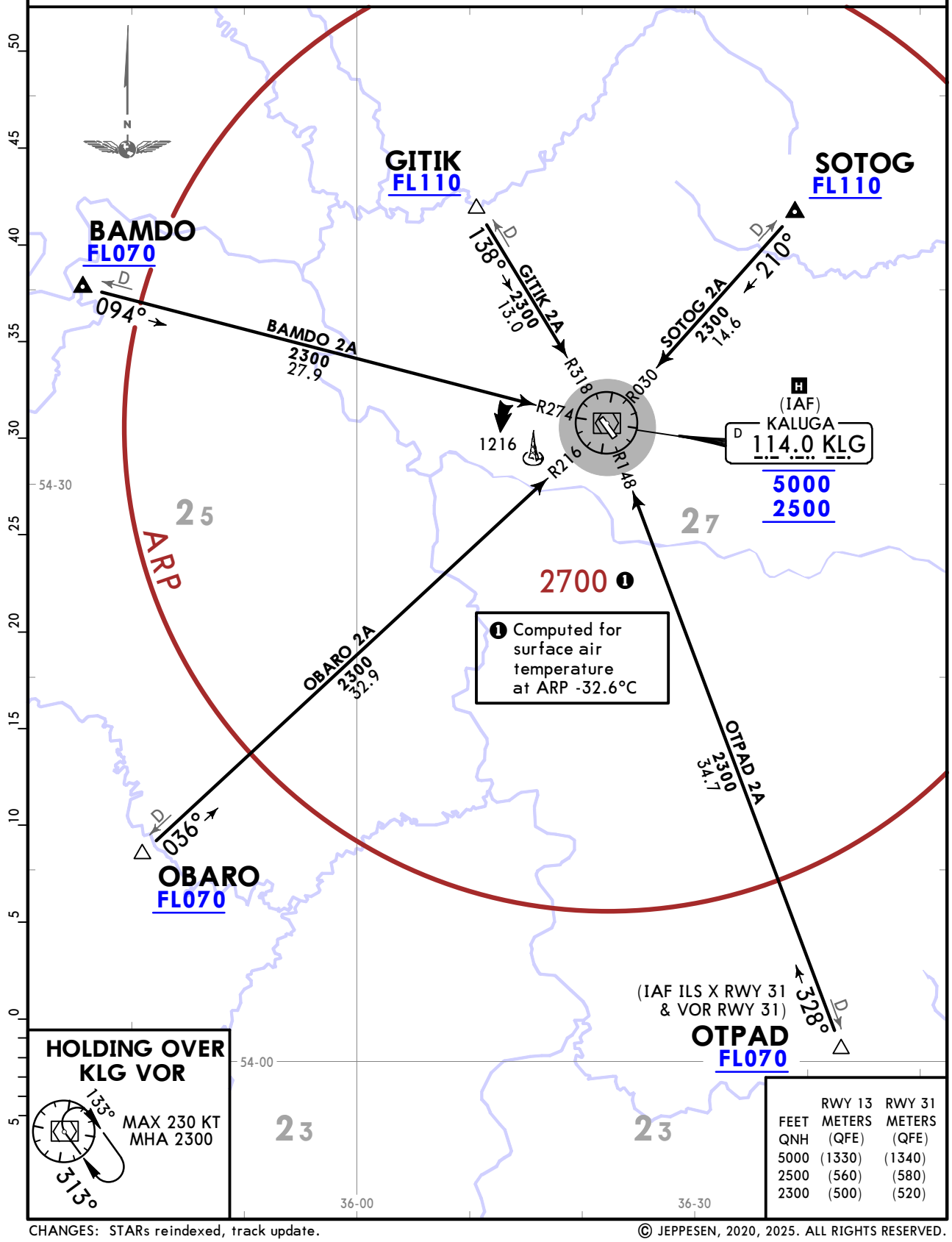
BAMDO 2K [BAMD2K], GITIK 2K [GITI2K]
OBARO 2K [OBAR2K], OTPAD 2K [OTPA2K], SOTOG 2K [SOTO2K]
RNAV ARRIVALS
(RWY 31)



CHANGES: STARs reindexed, OTPAD 2K established, track update.

*ATIS 126.8	Apt Elev 666	Alt Set: hPa (MM on request) Trans level: FL060 FL070 if pressure is less than 1013 hPa (760 mm) FL080 if pressure is less than 977 hPa (733 mm) DME required.

BAMDO 2A [BAMD2A], GITIK 2A [GITI2A]
OBARO 2A [OBAR2A], OTPAD 2A [OTPA2A]
SOTOG 2A [SOTO2A]
ARRIVALS
(RWYS 13/31)



HOLDING OVER KLG VOR

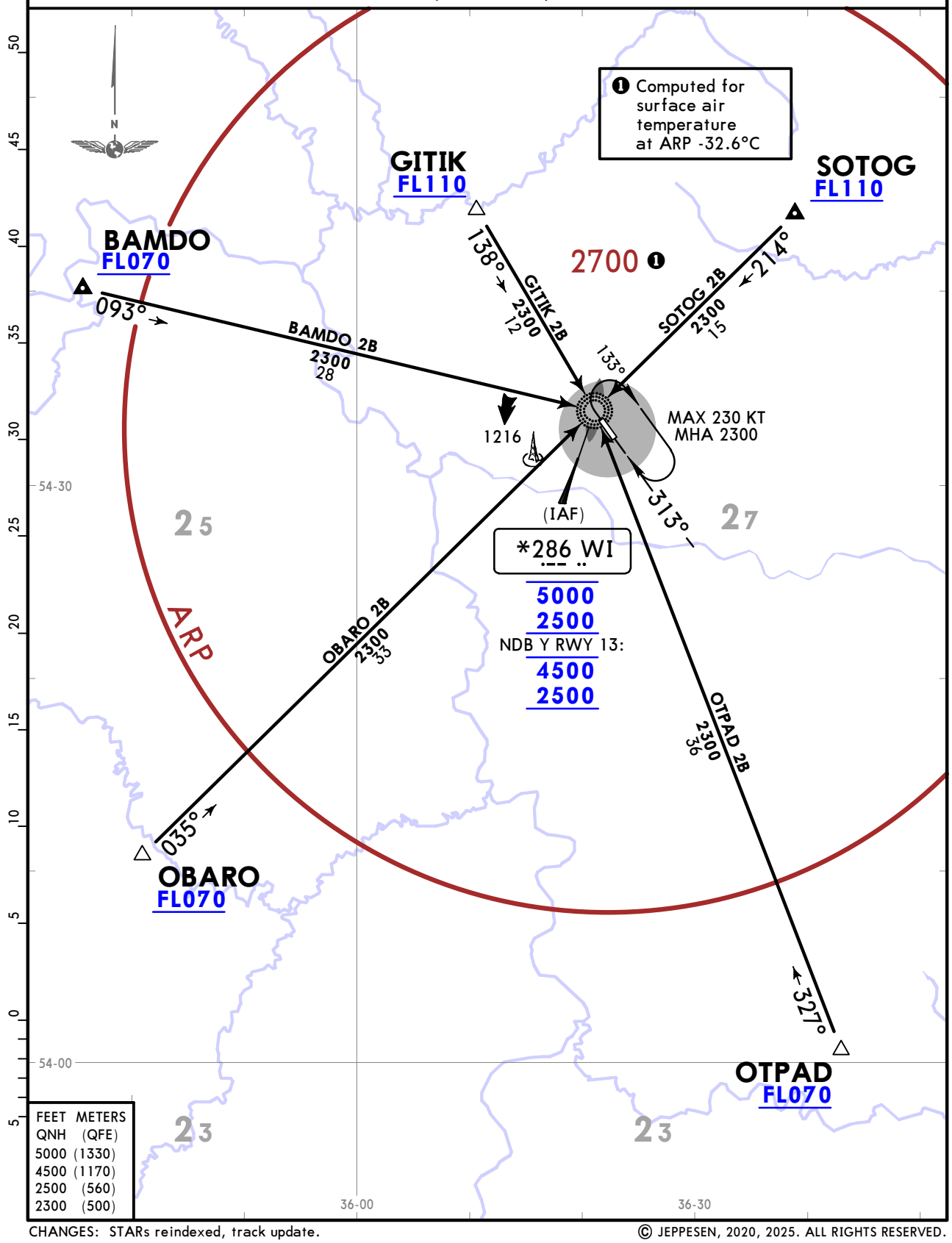
MAX 230 KT
MHA 2300

FEET QNH	RWY 13 METERS (QFE)	RWY 31 METERS (QFE)
5000	(1330)	(1340)
2500	(560)	(580)
2300	(500)	(520)

CHANGES: STARs reindexed, track update.

*ATIS	Apt Elev	Alt Set: hPa (MM on request) Trans level: FL060 FL070 if pressure is less than 1013 hPa (760 mm) FL080 if pressure is less than 977 hPa (733 mm)
126.8	666	

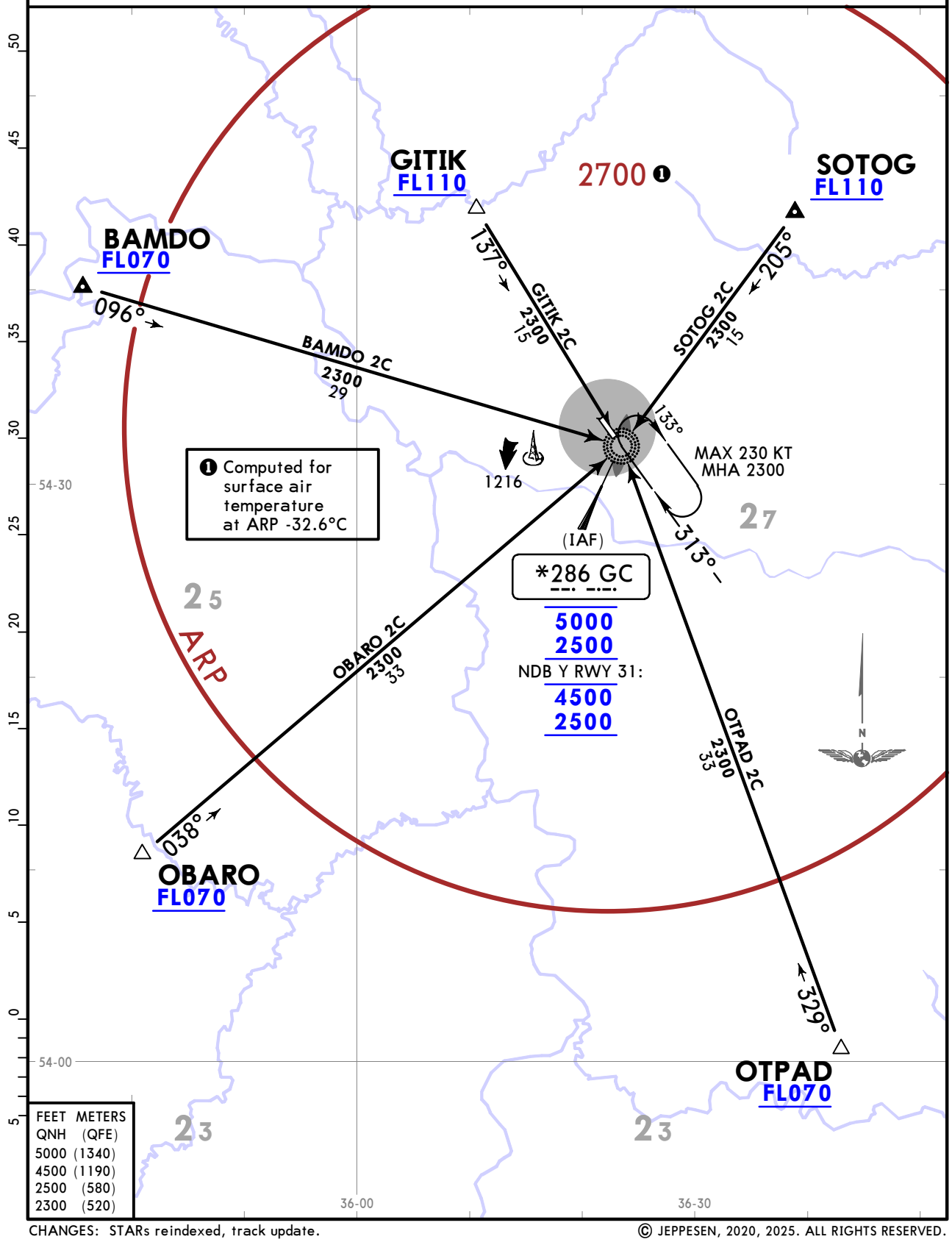
BAMDO 2B [BAMD2B], GITIK 2B [GITI2B]
OBARO 2B [OBAR2B], OTPAD 2B [OTPA2B]
SOTOG 2B [SOTO2B]
ARRIVALS
(RWY 13)



CHANGES: STARs reindexed, track update.

*ATIS	Apt Elev	Alt Set: hPa (MM on request) Trans level: FL060 FL070 if pressure is less than 1013 hPa (760 mm) FL080 if pressure is less than 977 hPa (733 mm)
126.8	666	

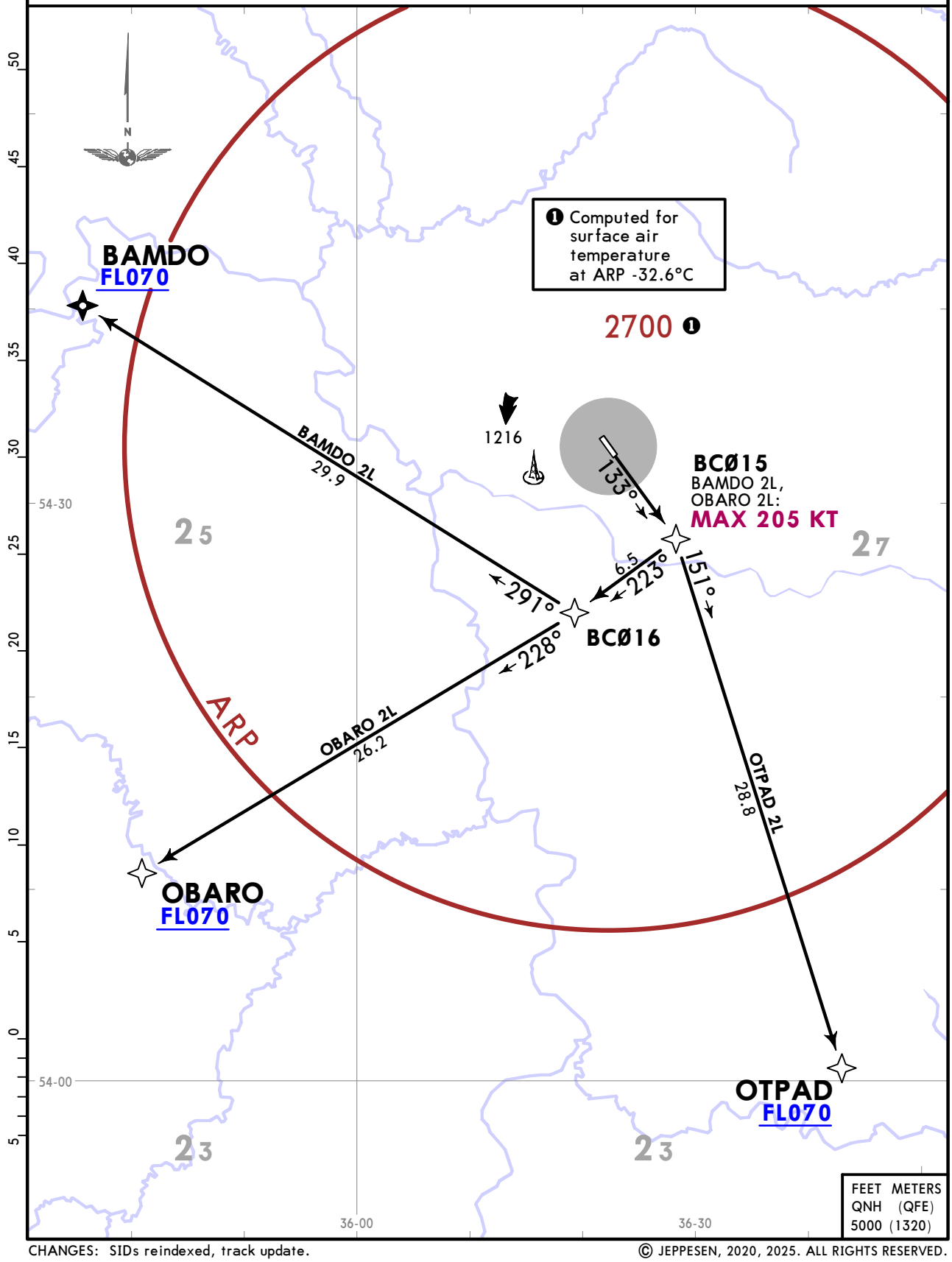
BAMDO 2C [BAMD2C], GITIK 2C [GITI2C]
OBARO 2C [OBAR2C], OTPAD 2C [OTPA2C]
SOTOG 2C [SOTO2C]
ARRIVALS
(RWY 31)



CHANGES: STARs reindexed, track update.

Apt Elev 666	Trans alt: 5000 QNH (QFE on request)
	RNAV 1 GNSS required.
	EXPECT close-in obstacles.

BAMDO 2L [BAMD2L]
OBARO 2L [OBAR2L]
OTPAD 2L [OTPA2L]
RNAV DEPARTURES
(RWY 13)



CHANGES: SIDs reindexed, track update.

BAMDO 2M [BAMD2M], OBARO 2M [OBAR2M]
OTPAD 2M [OTPA2M]
RNAV DEPARTURES
(RWY 31)

Trans alt: 5000 QNH (QFE on request)
RNAV 1 GNSS required.
EXPECT close-in obstacles.

Apt Elev 666

1 Computed for surface air temperature at ARP -32.6°C

286 CG

OTPAD 2M
33.4
149°
313°
264°
5.0
BCØ33
(OTPAD 2M only)
BCØ32
MAX 220 KT
BCØ35
168°
7.13
NM CRABO
BAMDO 2M
18.3

1216
2700 1

OTPAD
FL070
NOT TO SCALE

OBARO
FL070
NOT TO SCALE

BAMDO
FL070

ARP

27
25

36-30
36-00
54-30

FEET METERS
QNH (QFE)
5000 (1320)

CHANGES: SIDs reindexed, track update.

Trans alt: 5000 QNH (QFE on request)
1. DME required.
2. Close-In Obstacles:
Located to the LEFT of takeoff heading 0.047 NM - 0.058 NM from RWY 31 with MAX altitude 648.

Apt Elev 666

BAMDO 2D [BAMD2D]
OBARO 2D [OBAR2D]
OTPAD 2D [OTPA2D]
DEPARTURES (RWY 13)

SID	ROUTING
BAMDO 2D	Climb on 133° track to D5.6 KLG, turn LEFT to WI Lctr, turn LEFT, intercept 273° bearing from WI Lctr to BAMDO.
OBARO 2D	Climb on 133° track to D3.7 KLG, turn RIGHT, 250° track, turn LEFT, intercept 215° bearing from WI Lctr to OBARO.
OTPAD 2D	Climb on 133° track to D3.7 KLG, turn RIGHT, intercept 147° bearing from WI Lctr to OTPAD.

FEET METERS
QNH (QFE)
5000 (1320)
3000 (720)

KALUGA
D 114.0 KLG

*286 WI
3000

BAMDO 2D
133°
273°
327°
D3.7
D5.6
MAX 220 KT
OTPAD 2D
147°
OBARO 2D, OTPAD 2D:
MAX 220 KT
052°
2700 ❶
❶ Computed for surface air temperature at ARP -32.6°C
1216
D2 OR ABO
°530
°542
28
27
25
ARP

NOT TO SCALE
OTPAD
(D34.7 KLG)
FL070
36-30

NOT TO SCALE
BAMDO
(D27.9 KLG)
FL070
54-30

NOT TO SCALE
OBARO
(D32.9 KLG)
FL070
36-00

Trans alt: 5000 QNH (QFE on request)
1. DME required.
2. Close-In Obstacles: Located to the LEFT of takeoff heading 0.047 NM - 0.058 NM from RWY 31 with MAX altitude 648.

Apt Elev 666

BAMDO 2F [BAMD2F]
OBARO 2F [OBAR2F]
OBARO 2N [OBAR2N]
OTPAD 2F [OTPA2F]
DEPARTURES
(RWY 13)

SID	ROUTING
BAMDO 2F	Climb on 133° track to D5.6 KLG, turn LEFT to KLG VOR, KLG R274 to BAMDO.
OBARO 2F	Climb on 133° track to D3.7 KLG, turn RIGHT, 244° track, intercept KLG R216 to OBARO.
OBARO 2N	Climb on 133° track to D5.6 KLG, turn LEFT to KLG VOR, turn RIGHT, 261° track, intercept KLG R216 to OBARO.
OTPAD 2F	Climb on 133° track to D3.7 KLG, turn RIGHT, intercept KLG R148 to OTPAD.

FEET METERS
QNH (QFE)
5000 (1320)
3000 (720)

KALUGA
D 114.0 KLG
3000

BAMDO 2F
OBARO 2N
133°
D3.7
D5.6
MAX 220 KT
OTPAD 2F
OBARO 2F, OTPAD 2F:
MAX 220 KT
148°
261°
274°
219°
1216
442°
2700 ❶
❶ Computed for surface air temperature at ARP -32.6°C
N2 OR ABO
F2 OR ABO
BAMDO 2F
27.9
D34.7
NOT TO SCALE
OTPAD
FL070
NOT TO SCALE
BAMDO
FL070
NOT TO SCALE
OBARO
FL070
36-30
36-00
54-30
27
25
AIRPORT

Apt Elev 666

Trans alt: 5000 QNH (QFE on request)
1. DME required.
2. Close-In Obstacles:
Located to the LEFT of takeoff heading 0.219 NM - 0.222 NM from RWY 13 with MAX altitude 724.

BAMDO 2G [BAMD2G]
OBARO 2G [OBAR2G]
OTPAD 2G [OTPA2G]
DEPARTURES (RWY 31)

SID	ROUTING
BAMDO 2G	Climb on 313° track to D5.2 KLG, turn LEFT, 231° track, intercept 276° bearing from GC Lctr to BAMDO.
OBARO 2G	Climb on 313° track to D5.2 KLG, turn RIGHT, intercept 219° bearing from GC Lctr to OBARO.
OTPAD 2G	Climb on 313° to at or above 1200, turn RIGHT, 189° track, turn LEFT, intercept 149° bearing from GC Lctr to OTPAD.

FEET METERS
QNH (QFE)
5000 (1320)
3000 (730)
1200 (180)

*286 GC
3000

OTPAD 2G
149°
329°
186°
313°
OBARO 2G
D5.2
MAX 220 KT
OTPAD 2G:
MAX 220 KT
1200
KALUGA
D 114.0 KLG
1216
096°
276°
BAMDO 2G
NOT TO SCALE
BAMDO
(D27.9 KLG)
FL070
NOT TO SCALE
OTPAD
(D34.7 KLG)
FL070
OBARO 2G
NOT TO SCALE
OBARO
(D32.9 KLG)
FL070
2700 ARP
1 Computed for surface air temperature at ARP -32.6°C
27
25
36-30
36-00
54-30

CHANGES: SIDs reindexed, track update.

Apt Elev 666

Trans alt: 5000 QNH (QFE on request)
1. DME required.
2. Close-In Obstacles:
Located to the LEFT of takeoff heading 0.219 NM - 0.222 NM from RWY 13 with MAX altitude 724.

BAMDO 2H [BAMD2H]
OBARO 2H [OBAR2H]
OTPAD 2H [OTPA2H]
DEPARTURES
(RWY 31)

SID	ROUTING
BAMDO 2H	Climb on 313° track to D5.2 KLG, turn LEFT, 229° track, intercept KLG R274 to BAMDO.
OBARO 2H	Climb on 313° track to D5.2 KLG, turn RIGHT to KLG VOR, KLG R178 to D3.6 KLG, turn RIGHT, 251° track, intercept KLG R216 to OBARO.
OTPAD 2H	Climb on 313° track to at or above 1200, turn RIGHT, 193° track, intercept KLG R148 to OTPAD.

FEET METERS
QNH (QFE)
5000 (1320)
3000 (730)
1200 (180)

KALUGA D 114.0 KLG
3000

313°
148°
162°
OTPAD 2H
OBARO 2H
D5.2
MAX 220 KT
OTPAD 2H: MAX 220 KT 1200
274°
227°
BAMDO 2H
D3.6 KLG
152°
178°
H2 ORABO
1216
2700 ARP
1 Computed for surface air temperature at ARP -32.6°C

NOT TO SCALE
OTPAD FL070
D34.7
36-30

NOT TO SCALE
BAMDO FL070
D27.9

NOT TO SCALE
OBARO FL070
D23.6
36-00

54-30

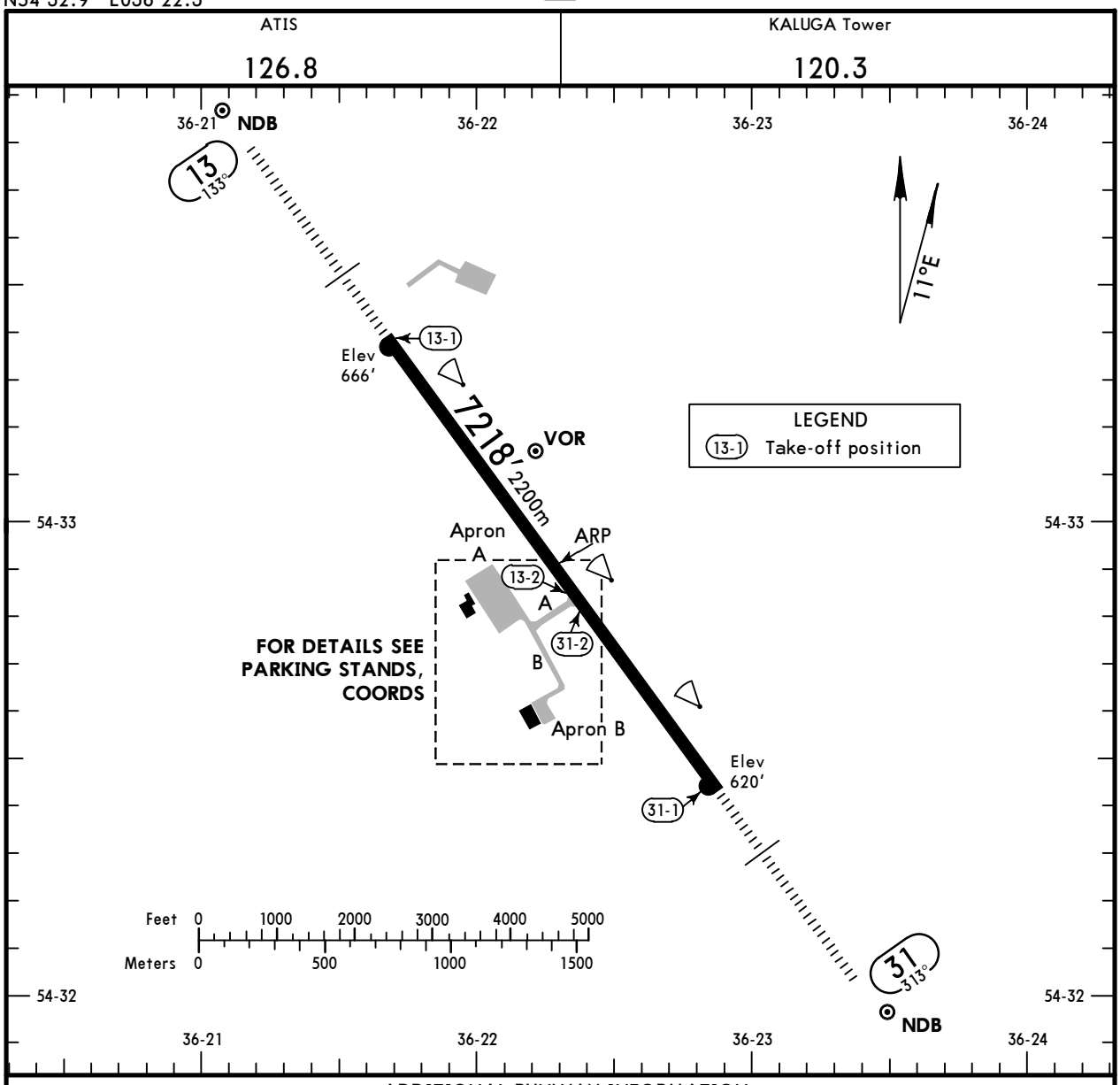
25 27

UUBC/KLF

Apt Elev **666′**
N54 32.9 E036 22.3

JEPPESEN
18 APR 25 (10-9)

KALUGA, ~~RUSSIA~~
GRABTSEVO



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
13 31	RL (60m) HIALS (900m) PAPI-L (3.0°) RVR		6306′ 1922m	❶	148′ 45m

❶ TAKE-OFF RUN AVAILABLE

RWY 13: From point 13-1 7218′(2200m)
from point 13-2 3077′ (938m)

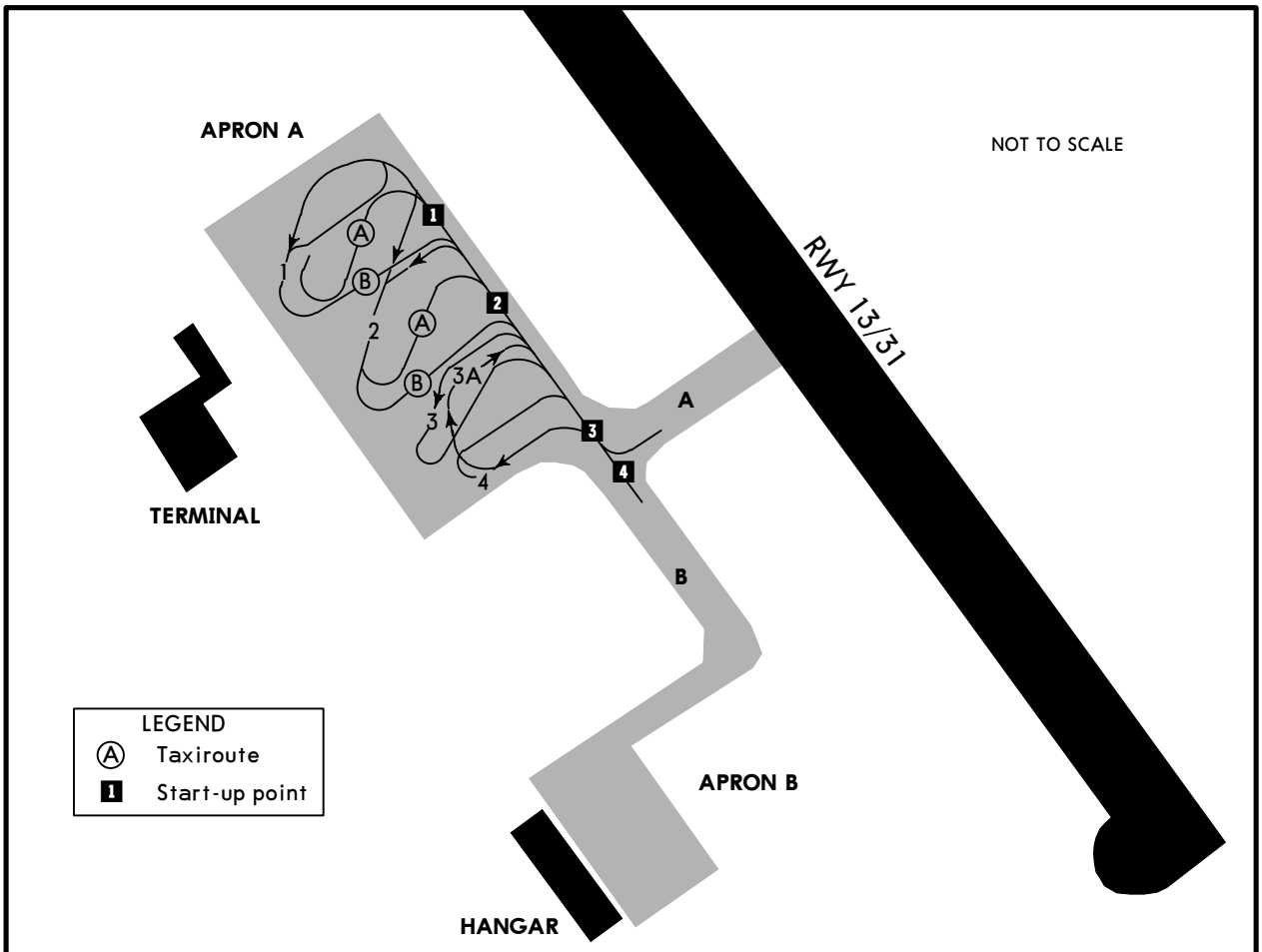
RWY 31: From point 31-1 7218′(2200m)
from point 31-2 4193′(1278m)

Std TAKE-OFF

1 RL & RCLM	1 RL or RCLM	Adequate Vis Ref DAY	Adequate Vis Ref NIGHT
R/V300m	R/V400m	R/V500m	NA

1 For NIGHT operations, at least RL or CL and RENL are required.

CHANGES: Variation, rwy bearings, RVR.



INS COORDINATES

STAND No.	COORDINATES		ELEV
1	N54 32.9	E036 22.1	638′
2	N54 32.8	E036 22.1	637′
3, 3A	N54 32.8	E036 22.1	636′
4	N54 32.8	E036 22.2	637′

TAXI RESTRICTIONS

IL-76 ACFT shall taxi from the runway onto TWY A and from TWY A onto the runway strictly along the centre line, at low speed, at idle power.
IL-76 ACFT shall taxi via TWY A strictly along the centre line, at low speed, at idle power, under inboard engines power.

CHANGES: ACFT stand 3A, taxi routes, notes.

KALUGA, RUSSIA

GRABTSEVO

STRAIGHT-IN RWY		A	B	C	D
13	GLS	**866**′(200′) ❶ R550m	**866**′(200′) ❶ R550m	**866**′(200′) ❶ R550m	**866**′(200′) ❶ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	RNP LNAV/VNAV	**992**′(326′) R800m	**1002**′(336′) R800m	**1012**′(346′) R900m	**1022**′(356′) R900m
	ALS out	R1500m	R1500m	R1600m	R1600m
	❷RNP LNAV	**1120**′(454′) R1400m	**1120**′(454′) R1400m	**1120**′(454′) R1400m	**1120**′(454′) R1400m
	ALS out	R1500m	R1500m	R2100m	R2100m
	❷VOR	**1130**′(464′) R1500m	**1130**′(464′) R1500m	**1130**′(464′) R1500m	**1130**′(464′) R1500m
	ALS out	R1500m	R1500m	R2200m	R2200m
	❷NDB Y	**1200**′(534′) R1500m	**1200**′(534′) R1500m	**1200**′(534′) R1700m	**1200**′(534′) R1700m
	ALS out	R1500m	R1500m	R2400m	R2400m
	❷NDB X	**1150**′(484′) R1500m	**1150**′(484′) R1500m	**1150**′(484′) R1500m	**1150**′(484′) R1500m
	ALS out	R1500m	R1500m	R2300m	R2300m
31	ILS Z, Y, X or W	**820**′(200′) ❶ R550m	**820**′(200′) ❶ R550m	**820**′(200′) ❶ R550m	**820**′(200′) ❶ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	GLS	**820**′(200′) ❶ R550m	**820**′(200′) ❶ R550m	**820**′(200′) ❶ R550m	**820**′(200′) ❶ R550m
	ALS out	R1200m	R1200m	R1200m	R1200m
	RNP LNAV/VNAV	**870**′(250′) R750m	**875**′(255′) R750m	**896**′(276′) R750m	**911**′(291′) R750m
	ALS out	R1300m	R1300m	R1300m	R1400m
	❷RNP LNAV	**980**′(360′) R900m	**980**′(360′) R900m	**980**′(360′) R900m	**980**′(360′) R900m
	ALS out	R1500m	R1500m	R1600m	R1600m
	❷❸ VOR	**980**′(360′) R900m	**980**′(360′) R900m	**980**′(360′) R900m	**980**′(360′) R900m
	ALS out	R1500m	R1500m	R1600m	R1600m
	❷❹ VOR	**1080**′(460′) R1400m	**1080**′(460′) R1400m	**1080**′(460′) R1400m	**1080**′(460′) R1400m
	ALS out	R1500m	R1500m	R2100m	R2100m
	❷NDB Y	**1180**′(560′) R1500m	**1180**′(560′) R1500m	**1290**′(670′) R2400m	**1290**′(670′) R2400m
	ALS out	R1500m	R1500m	R2400m	R2400m
	❷NDB X	**1080**′(460′) R1400m	**1080**′(460′) R1400m	**1080**′(460′) R1400m	**1080**′(460′) R1400m
	ALS out	R1500m	R1500m	R2100m	R2100m

❶ R750m when a Flight Director or Autopilot or HUDLS to DA is not used.
❷ Continuous Descent Final Approach.
❸ with D2.8.
❹ w/o D2.8.

CHANGES: Procedure Title.

KALUGA, RUSSIA
GRABTSEVO

❺CIRCLE-TO-LAND	100 KT	135 KT	180 KT	205 KT
	1180′(514′) V1500m	**1210**′(544′) V1600m	**1310**′(644′) V2400m	**1370**′(704′) V3600m

❺ Not authorized West of airport.

TAKE-OFF

Low Visibility Procedures required Approval for Low Visibility Take-off required		RCLM or RL	RL	Adequate Vis Ref	
RCLM & RL & RVR		DAY	NIGHT	DAY	NIGHT
DAY	NIGHT				
R300m		R/V400m		R/V500m	NA

CHANGES: None.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (11-1)

KALUGA, ~~RUSSIA~~
ILS Z Rwy 31

BRIEFING STRIP™

ATIS	KALUGA Tower
126.8	120.3

LOC IGC	Final Apch Crs	[FF31] MANDATORY	ILS DA(H)	Apt Elev 666′
*111.7	313°	2000′(1380′)	820′ (200′)	Rwy 620′

MISSED APCH: Climb on track 313° to BCØ34 (MAX 205 KT), turn RIGHT to BC913 climbing to 2100′ or above, then to the holding area or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

RNAV 1 for initial, intermediate and missed approach.

2700
MSA ARP ❷

GNSS required.
DME required.
ILS DME reads zero at rwy 31 threshold.

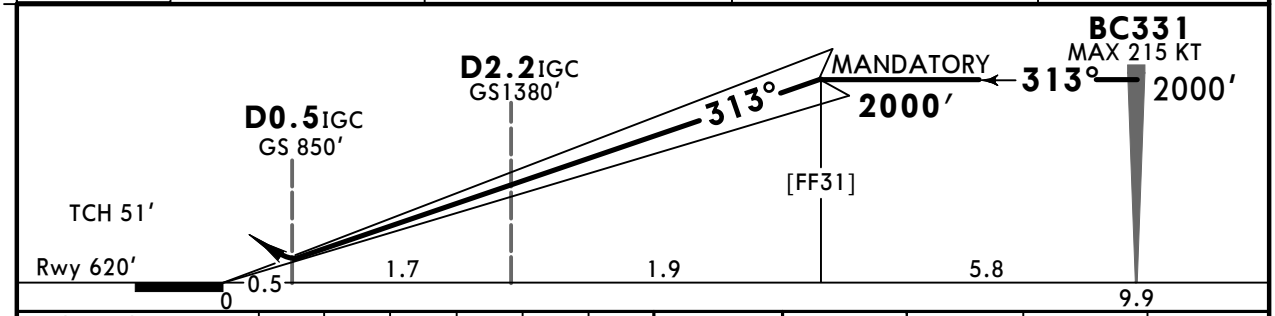
NOT TO SCALE

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

BCØ34
313°
133°
313°
D0.5IGC
D2.2IGC
[FF31]
1216′
BC913
MAX 230 KT
MHA 2100
❷ is computed for surface air temperature at apt -32.6°C.
54-30
(IAF)
BC631
2300
223°
6.0
2000
ILS DME
313° *111.7 IGC
313°
(IF)
BC331
MAX 215 KT
2000
6.0
2000
6.0
2000
043°
(IAF)
BC431
2300
313°
(IAF)
BC831
2300
36-10
54-20
36-20
36-30
36-40

FEET QNH	METERS (QFE)
5000	(1320)
2700	(600)
2300	(520)
2100	(460)
2000	(420)
1380	(235)
1370	(220) ❸
1310	(200) ❸
1210	(170) ❸
1180	(160) ❸
850	(70)
820	(61)

❸ Based on airport elevation.



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS
PAPI

BCØ34 on 313° 205 KT MAX BC913 RT

PANS OPS

Std STRAIGHT-IN LANDING

DA(H) 820′(200′)

	ALS out
A	❶ R550m
B	
C	R1200m
D	

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′(524′)	V1500m
135	1220′(554′)	V1600m
180	1320′(654′)	V2400m
205	1370′(704′)	V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Missed apch, bearings, speed, arrival withdrawn.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (11-2)

KALUGA, ~~RUSSIA~~
ILS Y Rwy 31

BRIEFING STRIP

ATIS	KALUGA Tower
126.8	120.3

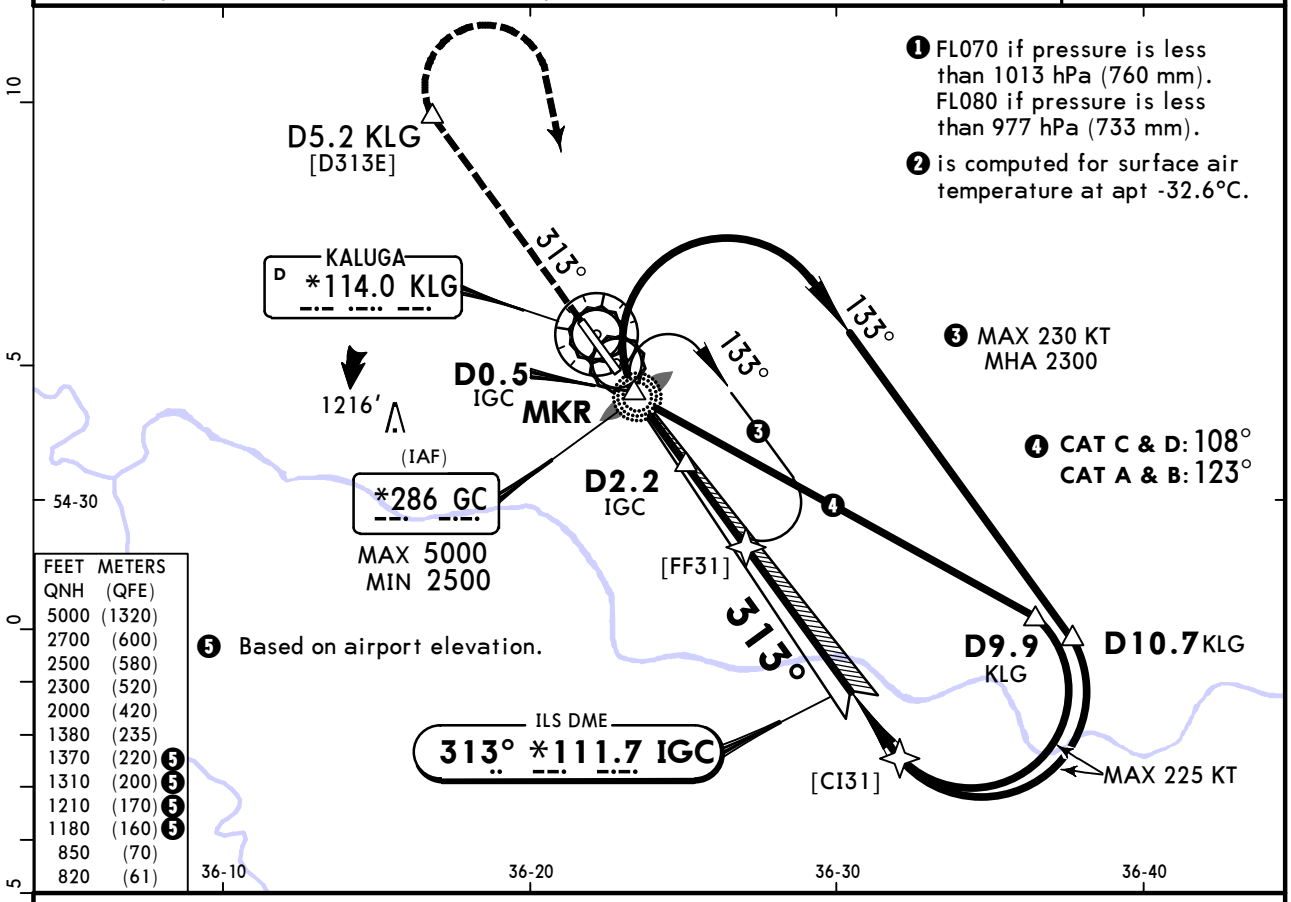
LOC IGC	Final Apch Crs	[FF31] MANDATORY	DA(H)	Apt Elev 666′
*111.7	313°	2000′ (1380′)	820′ (200′)	Rwy 620′

MISSED APCH: Climb on track 313° to D5.2 KLG (MAX 225 KT), turn RIGHT to NDB climbing to 2500′ or above, then proceed according to chart or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

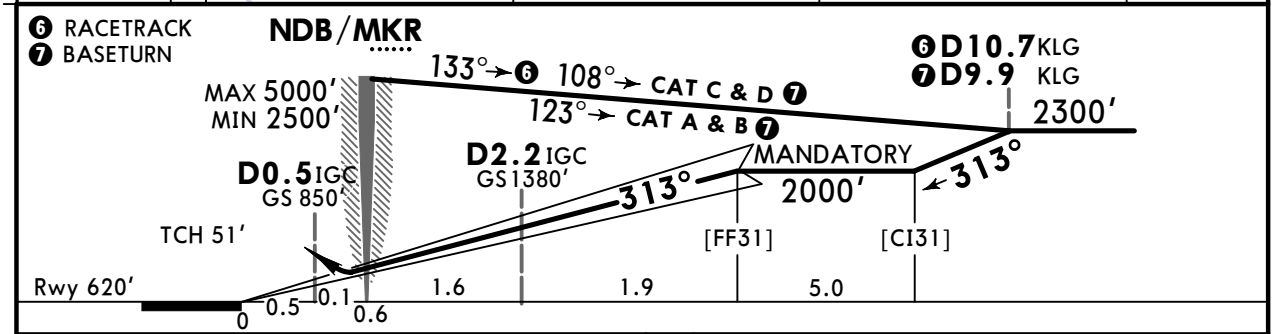
1. DME required. 2.ILS DME reads zero at rwy 31 threshold.

2700
MSA ARP ❷



FEET (QNH)	METERS (QFE)
5000	(1320)
2700	(600)
2500	(580)
2300	(520)
2000	(420)
1380	(235)
1370	(220) ❺
1310	(200) ❺
1210	(170) ❺
1180	(160) ❺
850	(70)
820	(61)

❺ Based on airport elevation.



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS
PAPI

D5.2 KLG on 313°

225 KT MAX

GC 286 RT

PANS OPS

Std STRAIGHT-IN LANDING

DA(H) 820′ (200′)

	ALS out
A	❶ R550m
B	❶ R550m
C	❶ R550m
D	R1200m

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Missed apch, bearings, speed.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (11-3)

KALUGA, ~~RUSSIA~~
ILS X Rwy 31

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

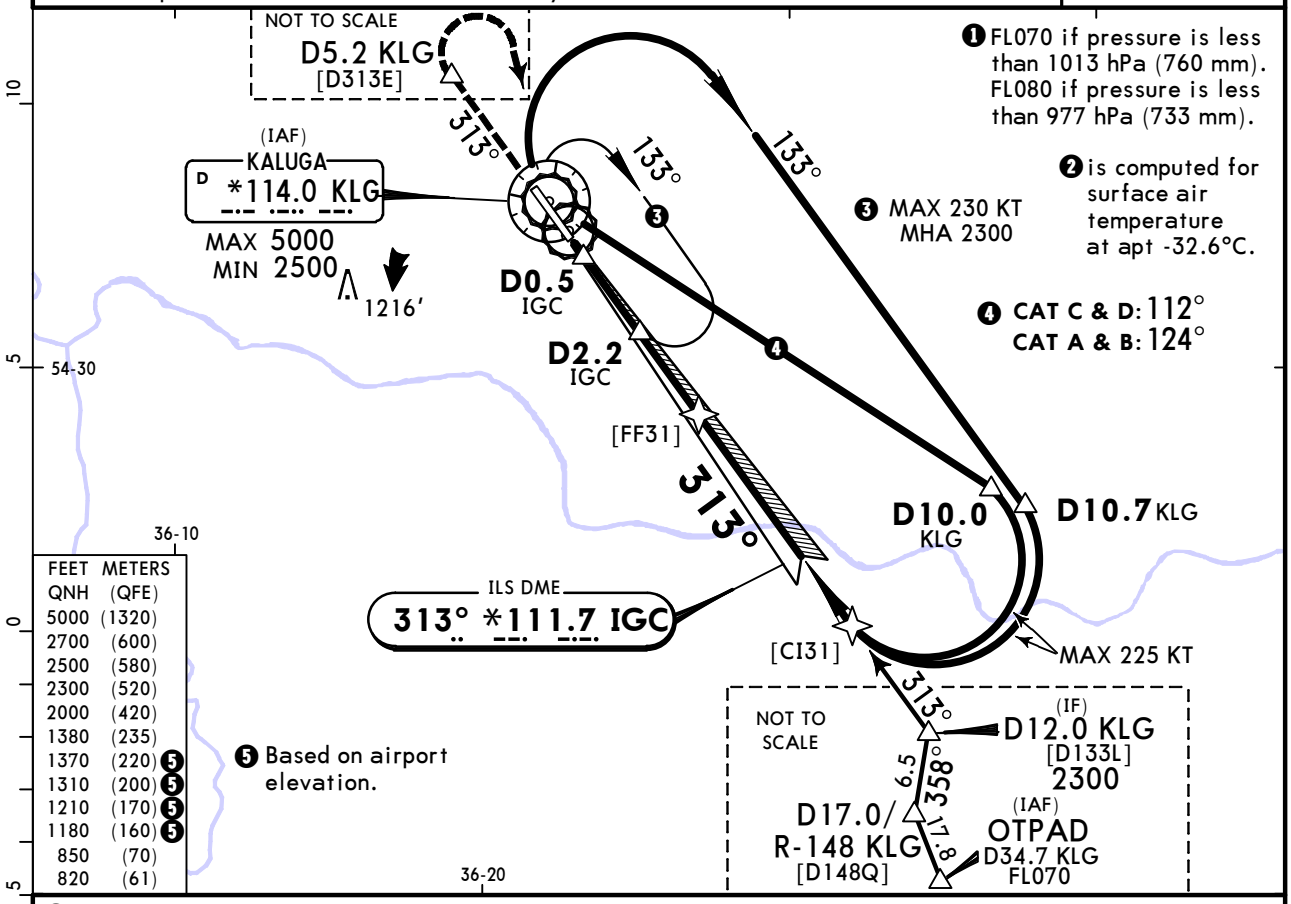
LOC IGC	Final Apch Crs	[FF31] MANDATORY	DA(H)	Apt Elev 666′
*111.7	313°	2000′ (1380′)	820′ (200′)	Rwy 620′

MISSED APCH: Climb on track 313° to D5.2 KLG (MAX 225 KT), turn RIGHT to VOR climbing to 2500′ or above, then proceed according to chart or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

1. DME required. 2. ILS DME reads zero at rwy 31 threshold.

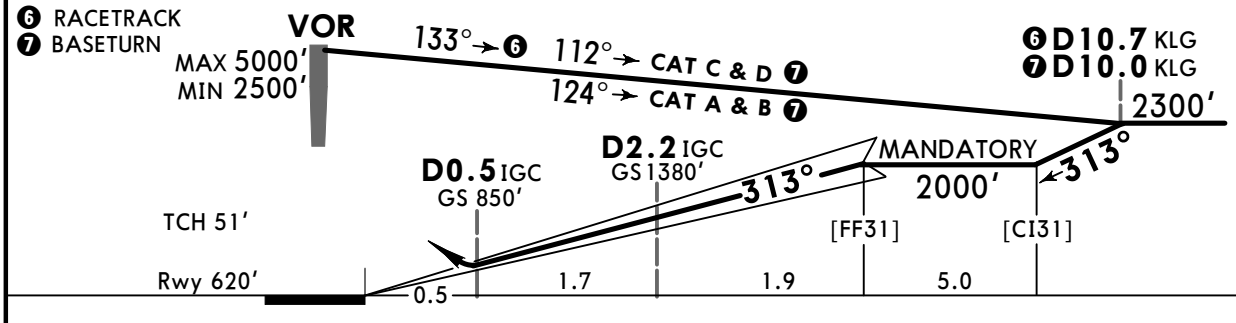
2700
MSA ARP ❷



FEET	METERS
QNH	(QFE)
5000	(1320)
2700	(600)
2500	(580)
2300	(520)
2000	(420)
1380	(235)
1370	(220) ❺
1310	(200) ❺
1210	(170) ❺
1180	(160) ❺
850	(70)
820	(61)

❺ Based on airport elevation.

❻ RACETRACK
❼ BASETURN



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS
PAPI

D5.2 KLG on 313°

225 KT MAX

KLG 114.0 RT

Std STRAIGHT-IN LANDING

DA(H) 820′ (200′)

	ALS out
A	❶ R550m
B	
C	R1200m
D	

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Missed apch, bearings, speed.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (11-4)

KALUGA, ~~RUSSIA~~
ILS W Rwy 31

BRIEFING STRIP™

ATIS	KALUGA Tower
126.8	120.3

LOC IGC	Final Apch Crs	[FF31] MANDATORY	DA(H)	Apt Elev 666′
*111.7	313°	2000′ (1380′)	820′ (200′)	Rwy 620′

MISSED APCH: Climb on track 313° to D5.2 KLG (MAX 185 KT), turn RIGHT to NDB climbing to 2500′ or above, then proceed according to chart or as directed.

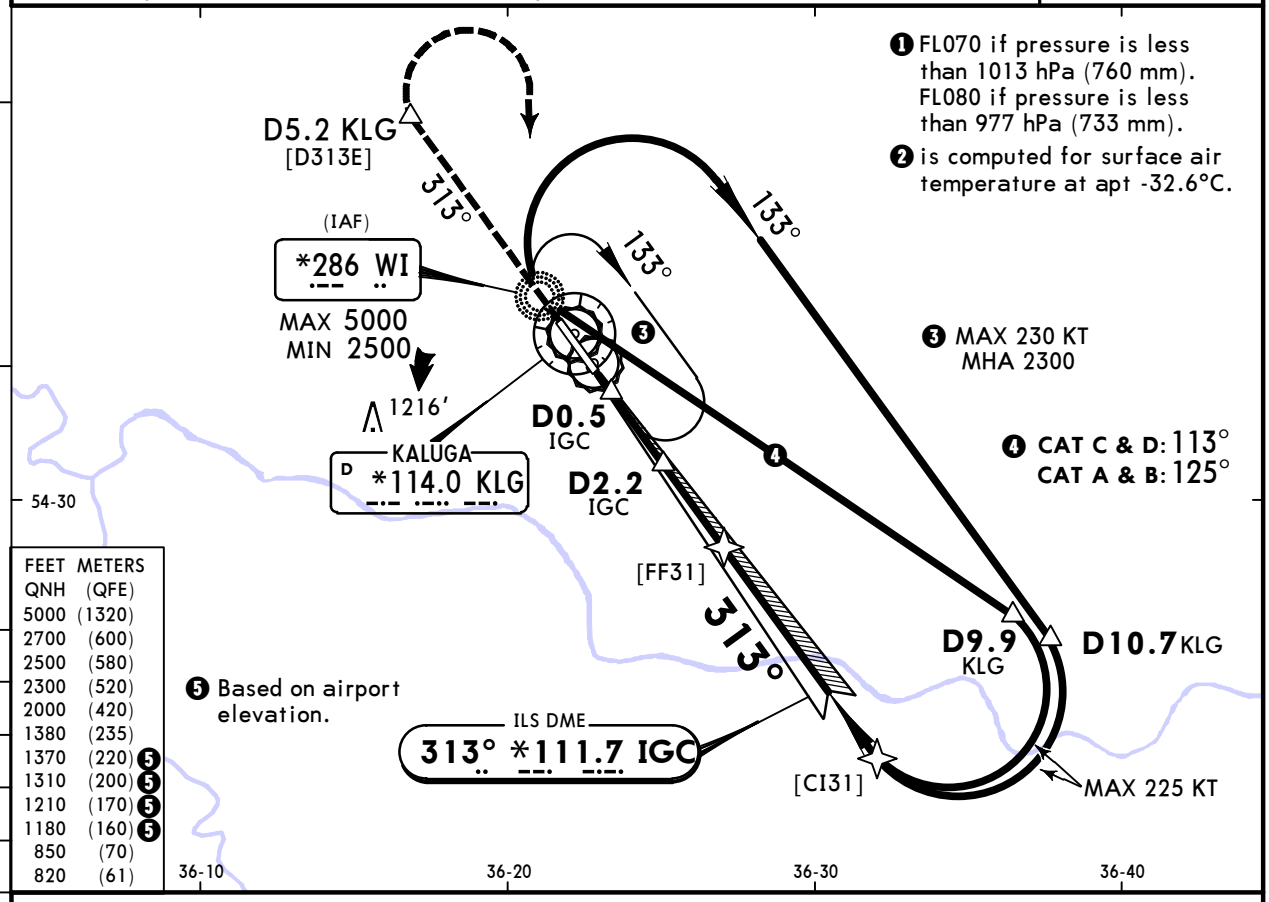
Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

1. DME required. 2. ILS DME reads zero at rwy 31 threshold.

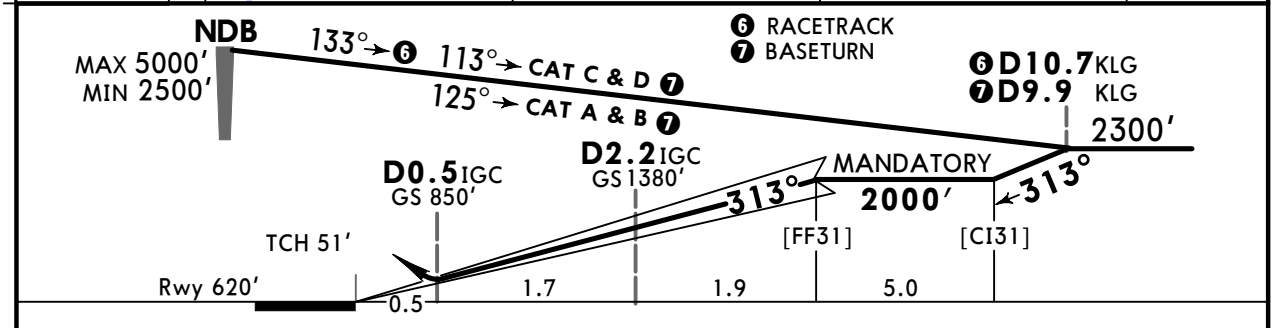
2700
MSA ARP ❷

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -32.6°C.



FEET QNH	METERS (QFE)
5000	(1320)
2700	(600)
2500	(580)
2300	(520)
2000	(420)
1380	(235)
1370	(220) ❺
1310	(200) ❺
1210	(170) ❺
1180	(160) ❺
850	(70)
820	(61)



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849

HIALS
PAPI

D5.2 KLG on 313°

185 KT MAX

WI 286 RT

Std STRAIGHT-IN LANDING

CIRCLE-TO-LAND
Prohibited
West of airport

DA(H) 820′(200′)

	ALS out	Max KT	MDA(H)
A	❶ R550m	100	1190′(524′) V1500m
B		135	1220′(554′) V1600m
C	R1200m	180	1320′(654′) V2400m
D		205	1370′(704′) V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

PANS OPS

CHANGES: Missed apch, bearings, speed.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (12-1)

KALUGA, ~~RUSSIA~~
RNP Rwy 13

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

RNP	Final Apch Crs 133°	BC213 MANDATORY 2000′ (1334′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 666′ Rwy 666′

MISSED APCH: Climb on track 133° to BCØ14 (MAX 205 KT), turn LEFT to BC813 climbing to 2200′ or above, then to the holding area or as directed.

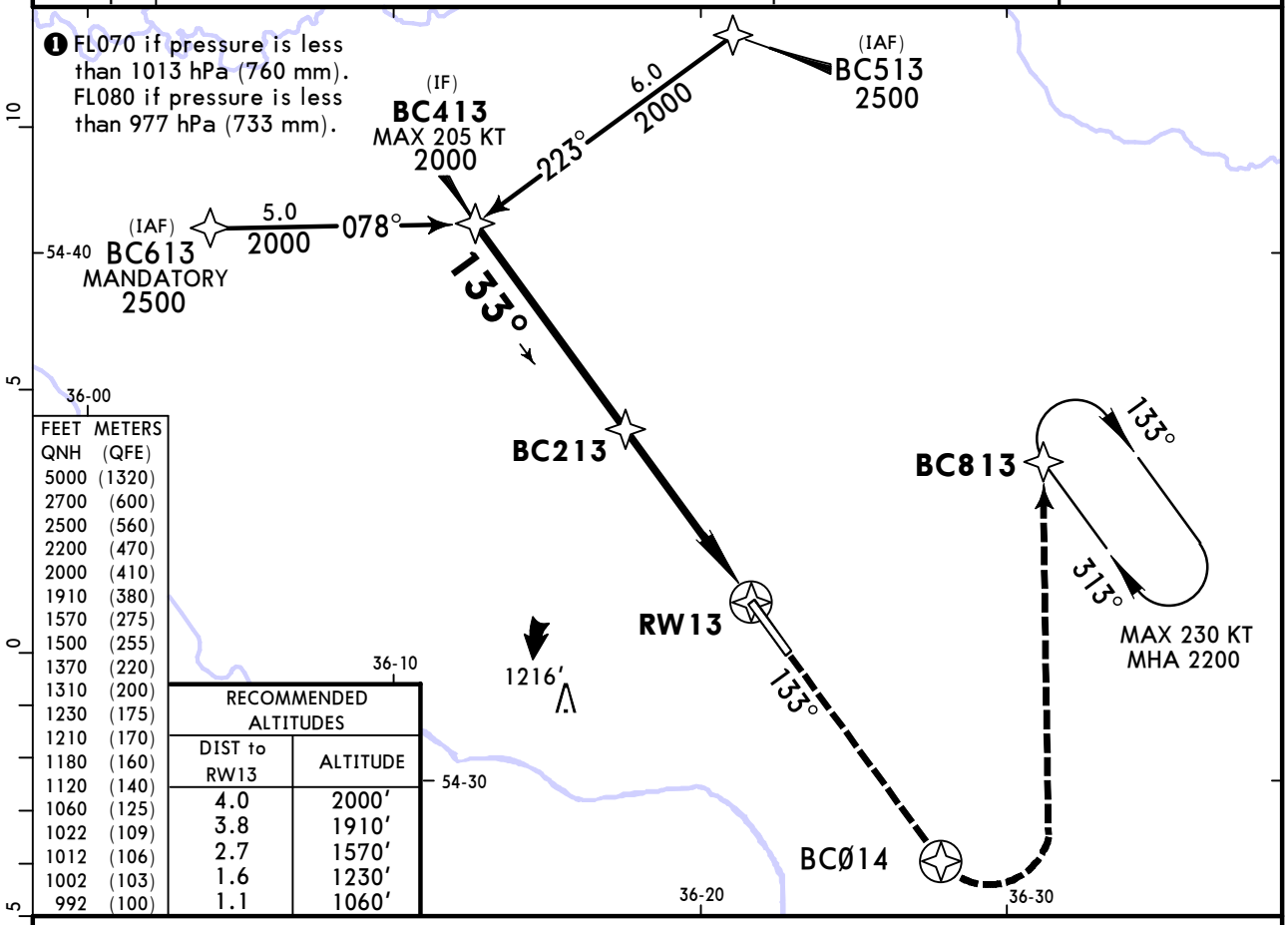
Alt Set: hPa (MM on req) Rwy Elev: 24 hPa Trans level: FL060 ❶ Trans alt: 5000′

RNP Apch | 1. Baro-VNAV not authorized below -33°C. 2. GNSS required.

2700

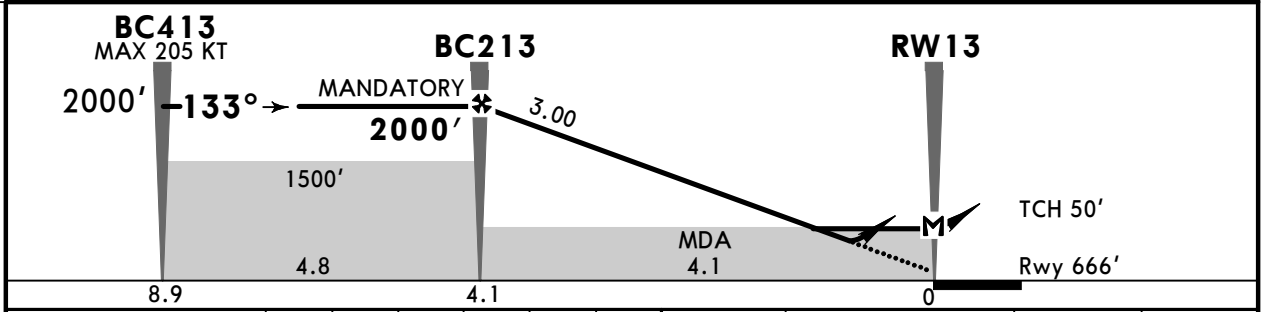
MSA ARP is computed for surface air temperature at apt -32.6°C

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).



FEET QNH	METERS (QFE)
5000	(1320)
2700	(600)
2500	(560)
2200	(470)
2000	(410)
1910	(380)
1570	(275)
1500	(255)
1370	(220)
1310	(200)
1230	(175)
1210	(170)
1180	(160)
1120	(140)
1060	(125)
1022	(109)
1012	(106)
1002	(103)
992	(100)

RECOMMENDED ALTITUDES	
DIST to RW13	ALTITUDE
4.0	2000′
3.8	1910′
2.7	1570′
1.6	1230′
1.1	1060′



Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849
MAP at RW13							

HIALS
PAPI

BCØ14 on 133°

205 KT MAX

BC813 LT

Std STRAIGHT-IN LANDING

LNAV/VNAV		LNAV CDFA	
A:992′(326′) C:1012′(346′) DA(H) B:1002′(336′) D:1022′(356′)		❶ DA/MDA(H) 1120′(454′)	
	ALS out		ALS out
A	R800m	R1400m	R1500m
B			
C	R900m		R2100m
D			

CIRCLE-TO-LAND

Prohibited West of airport

Max KT	MDA(H)	
100	1190′(524′)	V1500m
135	1220′(554′)	V1600m
180	1320′(654′)	V2400m
205	1370′(704′)	V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings, arrival withdrawn.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (12-2)

KALUGA, ~~RUSSIA~~
RNP Rwy 31

BRIEFING STRIP™

ATIS	KALUGA Tower
126.8	120.3

RNP	Final Apch Crs 313°	BC231 MANDATORY 2000′(1380′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 666′ Rwy 620′

MISSED APCH: Climb on track 313° to BCØ34 (MAX 205 KT), turn RIGHT to BC913 climbing to 2100′ or above, then to the holding area or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

RNP Apch | 1. Baro-VNAV not authorized below -33°C. 2. GNSS required.

2700

MSA ARP

is computed for surface air temperature at apt -32.6°C

NOT TO SCALE

BCØ34

MAX 230 KT
MHA 2100

313°

133°

313°

1216′

RW31

BC931

BC913

BC231

54-30

36-10

36-20

54-20

36-30

36-40

10

5

0

5

FEET QNH	METERS (QFE)
5000	(1320)
2700	(600)
2300	(520)
2100	(460)
2000	(420)
1870	(385)
1525	(275)
1400	(235)
1370	(220) ❷
1310	(200) ❷
1210	(170) ❷
1200	(180)
1185	(175)
1180	(160) ❷
1070	(140)
1015	(120)
980	(110)
911	(89)
896	(84)
875	(78)
870	(77)

❷ Based on airport elevation

RECOMMENDED ALTITUDES	
DIST to RW31	ALTITUDE
4.2	2000′
3.8	1870′
2.7	1525′
1.6	1185′
1.1	1015′

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

(IAF)
BC631
2300

6.0
2000
223°

313°

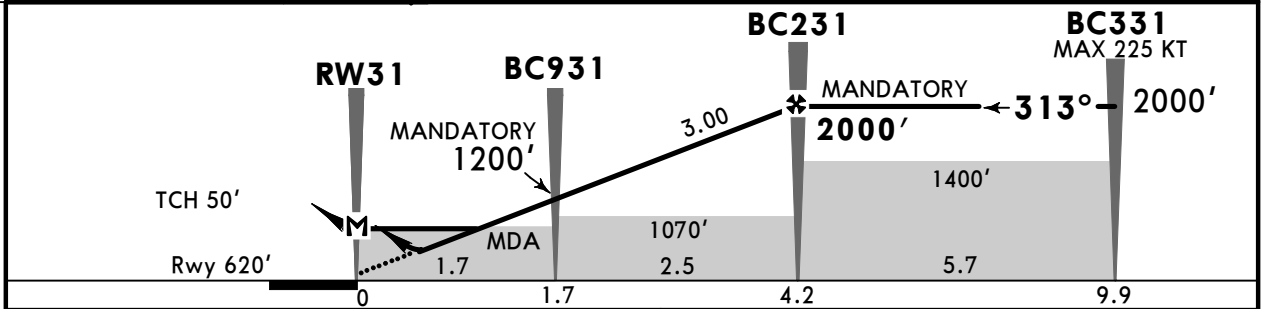
(IF)
BC331
MAX 225 KT
2000

043°
6.0
2000

(IAF)
BC431
2300

313°
6.0
2000

(IAF)
BC831
2300



Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849
MAP at RW31							

HIALS
PAPI

BCØ34 on 313°

205 KT MAX

BC913 RT

Std STRAIGHT-IN LANDING

LNAV/VNAV

A:**870′**(250′) C:**896′**(276′)
DA(H) B:**875′**(255′) D:**911′**(291′)

LNAV CDFA

❶ DA/MDA(H) **980′**(360′)

CIRCLE-TO-LAND

Prohibited
West of airport

	ALS out	ALS out
A	R750	R1300m
B		
C		R1400m
D		

	ALS out
	R900m
	R1500m
	R1600m

Max KT	MDA(H)	
100	1190′(524′)	V1500m
135	1220′(554′)	V1600m
180	1320′(654′)	V2400m
205	1370′(704′)	V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings, speed, arrival withdrawn.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (12-40)

KALUGA, ~~RUSSIA~~
GLS Rwy 13

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

GBAS	Final Apch Crs	BCØ13 MANDATORY	DA(H)	Apt Elev 666′
Ch 20497 G13A	**133°**	**2000′** (1334′)	**866′** (200′)	Rwy 666′

MISSED APCH: Climb on track 133° to BCØ14 (MAX 205 KT), turn LEFT to BC813 climbing to 2200′ or above, then to the holding area or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 24 hPa Trans level: FL060 ❶ Trans alt: 5000′

1. RNAV 1 for initial, intermediate and missed approach. 2. GNSS required.

2700
MSA ARP ❷

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -32.6°C.

FEET	METERS
QNH	(QFE)
5000	(1320)
2700	(600)
2500	(560)
2200	(470)
2000	(410)
1935	(390)
1585	(280)
1370	(220)
1310	(200)
1235	(175)
1210	(170)
1180	(160)
1065	(125)
866	(61)

(IAF) BC513 2500
(IF) BC413 MAX 205 KT 2000
6.0 223° 2000
(IAF) BC613 MANDATORY 2500
5.0 078° 2000
133°
BCØ13
BC813
133°
313°
MAX 230 KT MHA 2200
GBAS Ch 20497 G13A
RW13
1216′
133°
BCØ14

54-40
54-30
36-00
36-10
36-20
36-30
10
5
0
5

RECOMMENDED ALTITUDES	
DIST to RW13	ALTITUDE
4.0	2000′
3.8	1935′
2.7	1585′
1.6	1235′
1.1	1065′

BC413 MAX 205 KT
2000′ 133° MANDATORY 2000′
(FAP) BCØ13
RW13
TCH 50′
Rwy 666′
8.9 4.9 4.0 0

Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849

HIALS
PAPI

BCØ14 on 133° | 205 KT MAX | BC813 LT

Std STRAIGHT-IN LANDING

GLS
DA(H) **866′** (200′)

	ALS out
A	❶ R550m
B	
C	R1200m
D	

CIRCLE-TO-LAND
Prohibited
West of airport

Max KT	MDA(H)	
100	1190′(524′)	V1500m
135	1220′(554′)	V1600m
180	1320′(654′)	V2400m
205	1370′(704′)	V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Missed apch, bearings, arrival withdrawn.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (12-41)

KALUGA, ~~RUSSIA~~
GLS Rwy 31

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

GBAS	Final Apch Crs	BCØ31 MANDATORY	DA(H)	Apt Elev 666′ Rwy 620′
Ch 20908 G31A	313°	2000′ (1380′)	820′ (200′)	

MISSED APCH: Climb on track 313° to BCØ34 (MAX 205 KT), turn RIGHTto BC913 climbing to 2100′ or above, then to the holding area or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

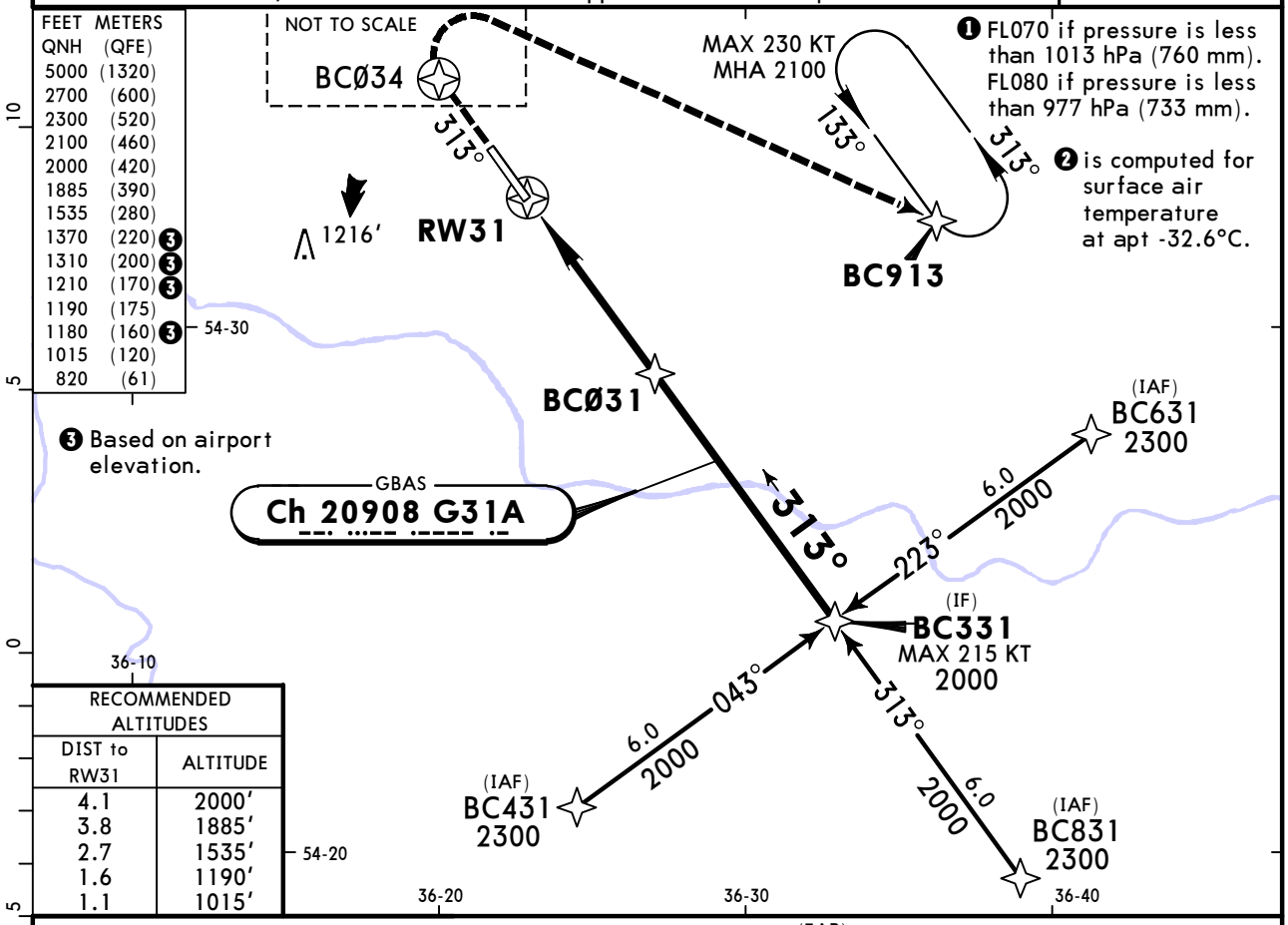
1. RNAV 1 for initial, intermediate and missed approach. 2. GNSS required.

2700
MSA ARP ❷

FEET QNH	METERS (QFE)
5000	(1320)
2700	(600)
2300	(520)
2100	(460)
2000	(420)
1885	(390)
1535	(280)
1370	(220) ❸
1310	(200) ❸
1210	(170) ❸
1190	(175)
1180	(160) ❸
1015	(120)
820	(61)

54-30

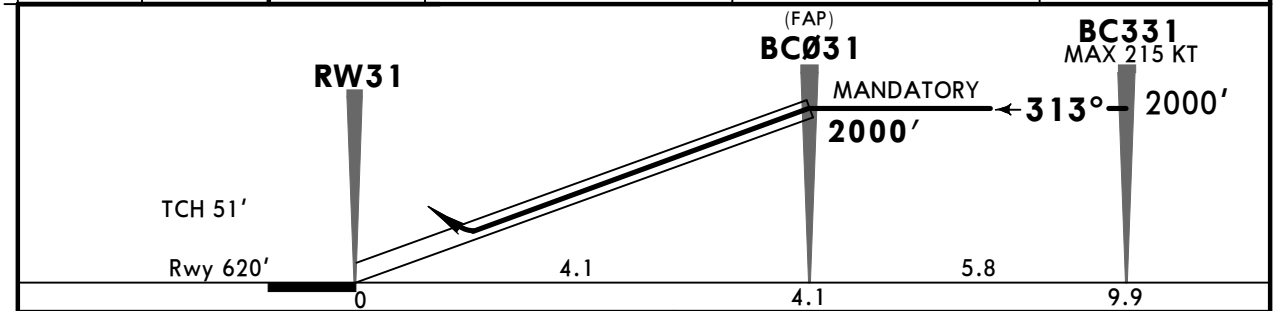
❸ Based on airport elevation.



❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -32.6°C.

RECOMMENDED ALTITUDES	
DIST to RW31	ALTITUDE
4.1	2000′
3.8	1885′
2.7	1535′
1.6	1190′
1.1	1015′



Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle	3.00°	372	478	531	637	743	849

HIALS
PAPI

BCØ34 on 313°

205 KT MAX

BC913 RT

Std STRAIGHT-IN LANDING

GLS

DA(H) **820′** (200′)

	ALS out
A	❶ R550m
B	
C	
D	

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Missed apch, bearings, arrival withdrawn.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (13-1)

KALUGA, ~~RUSSIA~~
VOR Rwy 13

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

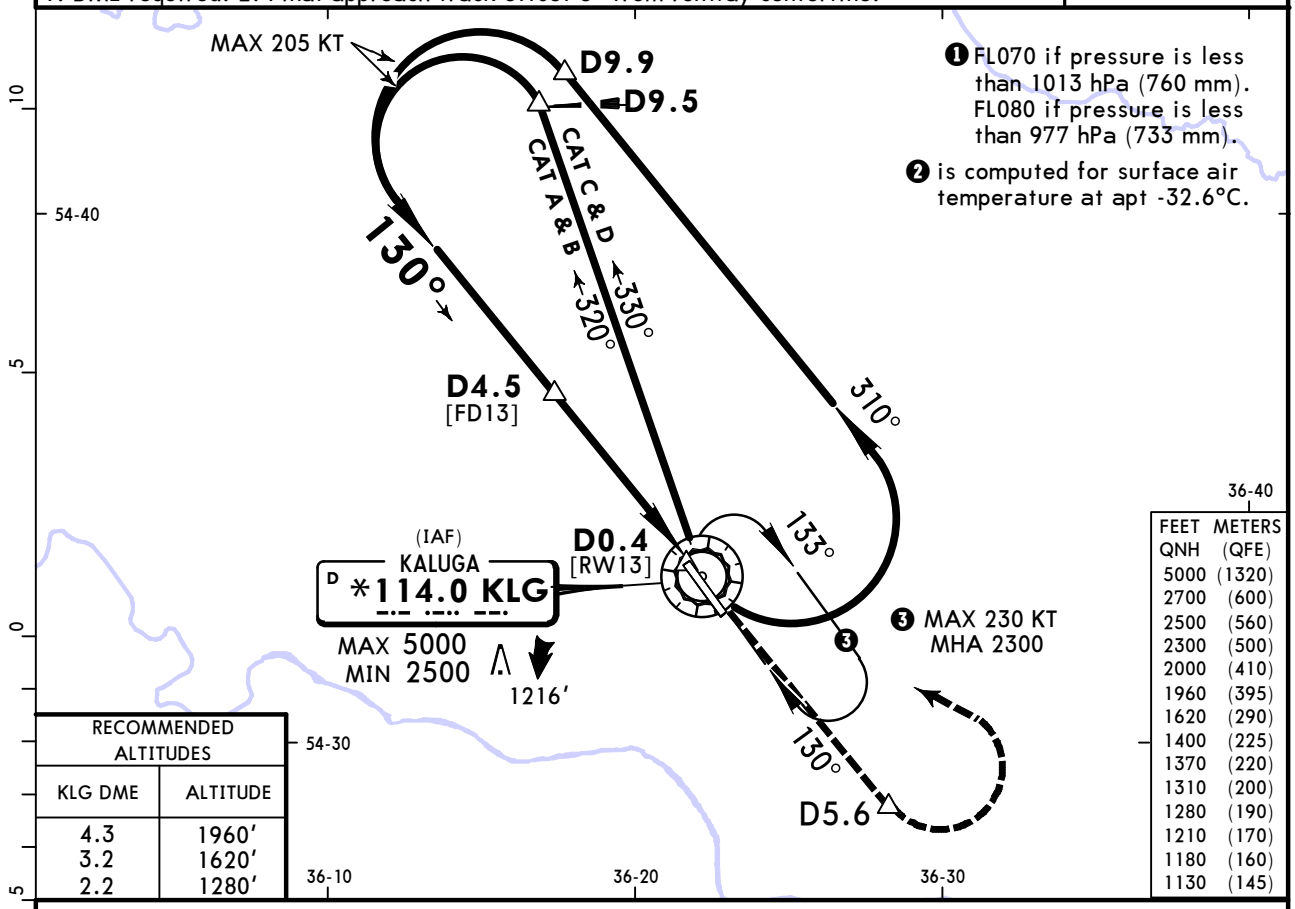
VOR KLG	Final Apch Crs	D4.5 MANDATORY	DA/MDA(H)	Apt Elev 666′
*114.0	130°	2000′ (1334′)	1130′ (464′)	

MISSED APCH: Climb on 130° to D5.6 (MAX 205 KT), turn LEFT to VOR climbing to 2500′ or above, then proceed according to chart or as directed.

2700
MSA ARP ❷

Alt Set: hPa (MM on req) Apt Elev: 24 hPa Trans level: FL060 ❶ Trans alt: 5000′

1. DME required. 2. Final approach track offset 3° from runway centerline.

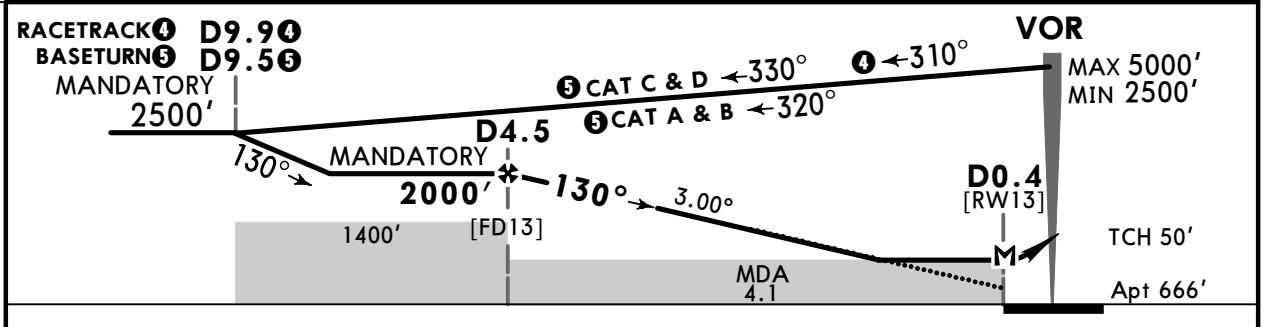


❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -32.6°C.

RECOMMENDED ALTITUDES	
KLG DME	ALTITUDE
4.3	1960′
3.2	1620′
2.2	1280′

FEET	METERS
QNH	(QFE)
5000	(1320)
2700	(600)
2500	(560)
2300	(500)
2000	(410)
1960	(395)
1620	(290)
1400	(225)
1370	(220)
1310	(200)
1280	(190)
1210	(170)
1180	(160)
1130	(145)



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.4							
Timing not authorized for defining MAP							

HIALS
PAPI

D5.6 on 130° — 205 KT MAX

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 1130′ (464′)

ALS out

A	R1500m	
B		
C	R1500m	R2200m
D		

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (13-2)

KALUGA, ~~RUSSIA~~
VOR Rwy 31

BRIEFING STRIP™

ATIS	KALUGA Tower
126.8	120.3

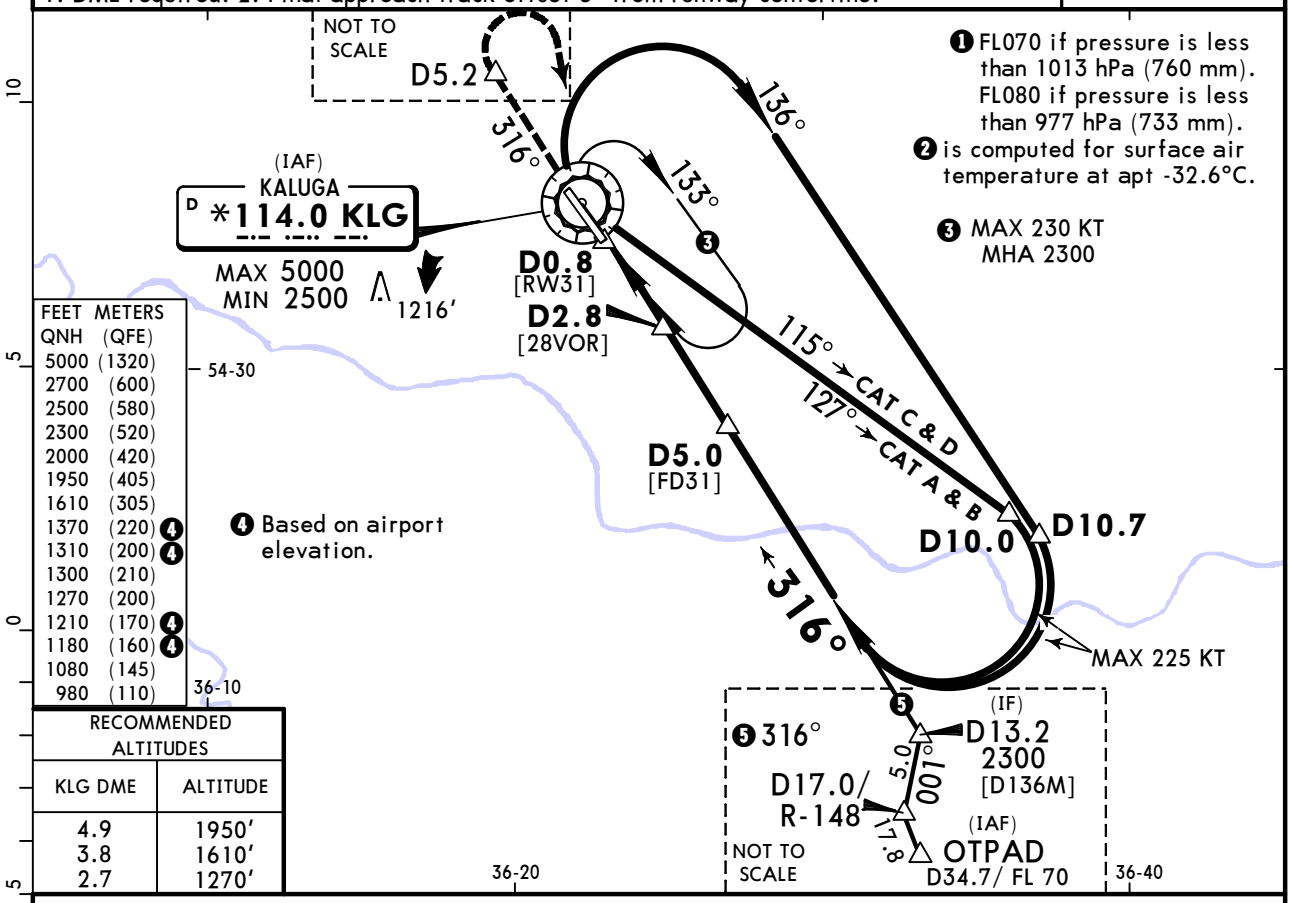
VOR KLG	Final Apch Crs	D5.0 MANDATORY	DA/MDA(H) (CONDITIONAL)	Apt Elev 666′ Rwy 620′
*114.0	316°	2000′ (1380′)	980′ (360′)	

MISSED APCH: Climb STRAIGHT AHEAD to D5.2 (MAX 225 KT), turn RIGHT to VOR climbing to 2500′ or above, then proceed according to chart or as directed.

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

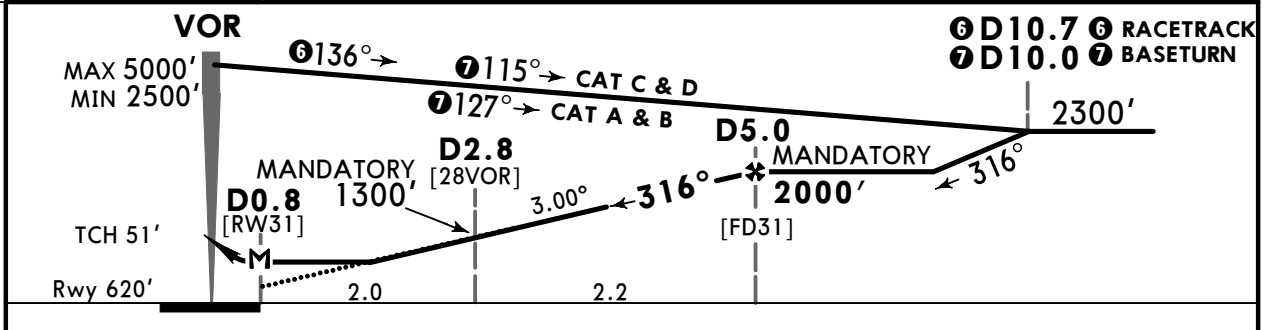
1. DME required. 2. Final approach track offset 3° from runway centerline.

2700
MSA ARP ❷



FEET QNH	METERS (QFE)
5000	(1320)
2700	(600)
2500	(580)
2300	(520)
2000	(420)
1950	(405)
1610	(305)
1370	(220) ❹
1310	(200) ❹
1300	(210)
1270	(200)
1210	(170) ❹
1180	(160) ❹
1080	(145)
980	(110)

RECOMMENDED ALTITUDES	
KLG DME	ALTITUDE
4.9	1950′
3.8	1610′
2.7	1270′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D0.8							
Timing not authorized for defining MAP							

HIALS
PAPI
D5.2
225 KT MAX

Std STRAIGHT-IN LANDING

	With D2.8 CDFA ❶ DA/MDA(H) 980′ (360′)		W/o D2.8 CDFA ❶ DA/MDA(H) 1080′ (460′)	
		ALS out		ALS out
A	R900m	R1500m	R1400m	R1500m
B				
C		R1600m		R2100m
D				

CIRCLE-TO-LAND
Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (16-1)

KALUGA, ~~RUSSIA~~
NDB Y Rwy 13

BRIEFING STRIP™

ATIS	KALUGA Tower
126.8	120.3

NDB WI	Final Apch Crs	[FN13]	DA/MDA(H)	Apt Elev 666′
*286	133°	2500′ (1834′)	1200′ (534′)	

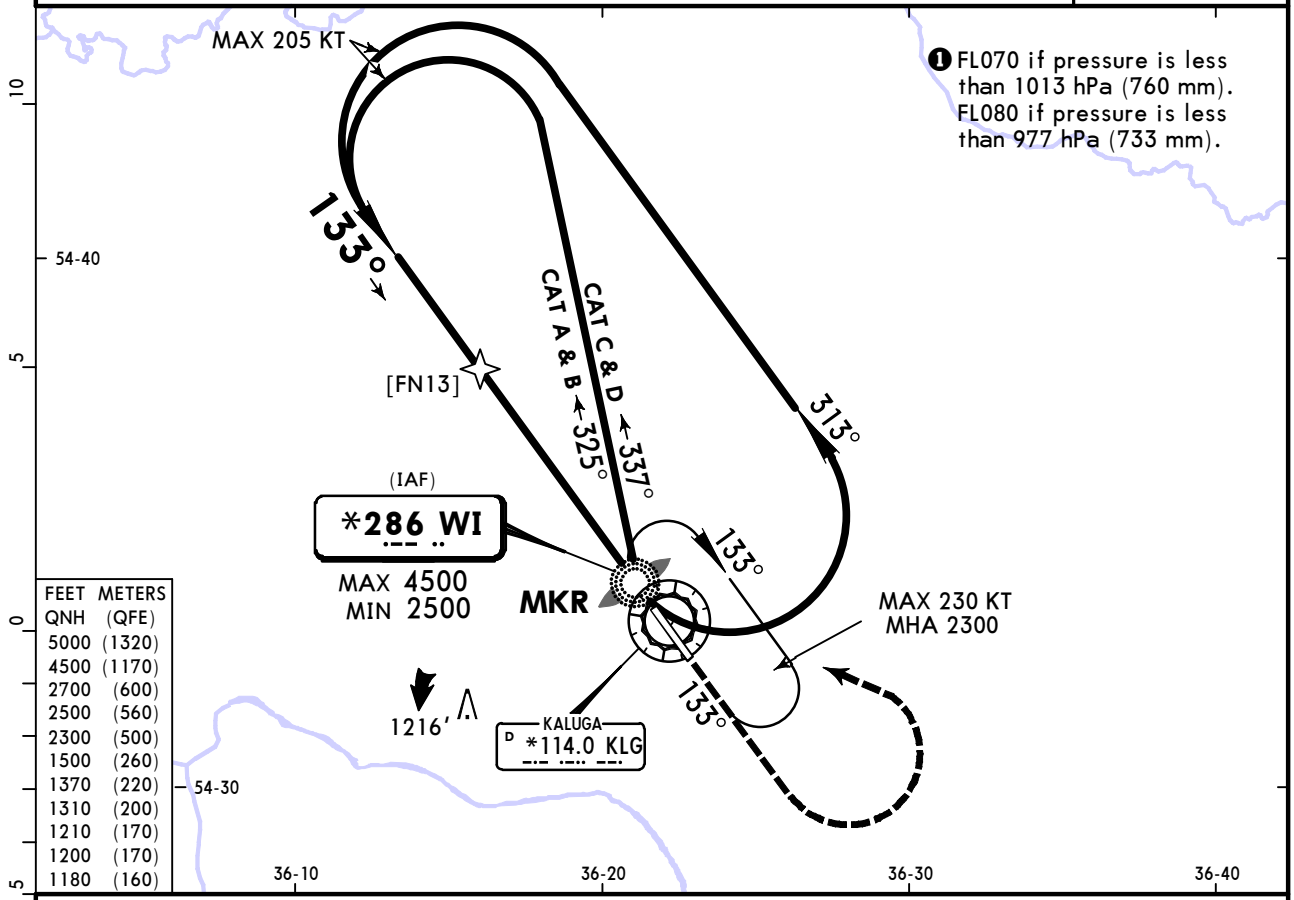
MISSED APCH: Climb on track 133° to 1500′ or above, turn LEFT (MAX 205 KT) to NDB climbing to 2500′ or above, then proceed according to chart or, as directed.

Alt Set: hPa (MM on req) Apt Elev: 24 hPa Trans level: FL060 ❶ Trans alt: 5000′

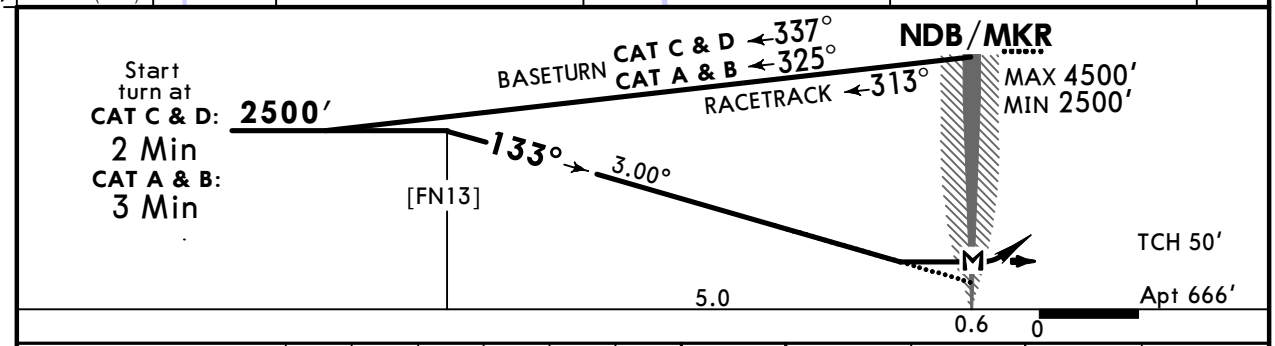
2700

MSA ARP

is computed for surface air temperature at apt -32.6°C



FEET	METERS (QFE)
QNH	
5000	(1320)
4500	(1170)
2700	(600)
2500	(560)
2300	(500)
1500	(260)
1370	(220)
1310	(200)
1210	(170)
1200	(170)
1180	(160)



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at NDB/MKR							
Timing not authorized for defining MAP							

HIALS
PAPI

MIN 1500′ on 133°

205 KT MAX

PANS OPS

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 1200′ (534′)

ALS out

A	R1500m
B	
C	R1700m
D	R2400m

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1200′ (534′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (16-2)

KALUGA, ~~RUSSIA~~
NDB X Rwy 13

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

NDB WI	Final Apch Crs	D4.5 MANDATORY	DA/MDA(H)	Apt Elev 666′
*286	133°	2000′(1334′)	1150′(484′)	

MISSED APCH: Climb on track 133° to D5.6, turn LEFT (MAX 205 KT) to NDB climbing to 2500′ or above, then proceed according to chart, or as directed.

Alt Set: hPa (MM on req) Apt Elev: 24 hPa Trans level: FL060 ❶ Trans alt: 5000′

DME required.

2700

MSA ARP

is computed for surface air temperature at apt -32.6°C

FEET (QFE)	METERS (QNH)
5000	(1320)
2700	(600)
2500	(560)
2300	(500)
2000	(410)
1400	(225)
1370	(220)
1310	(200)
1210	(170)
1180	(160)
1150	(150)

54-40

54-30

MAX 205 KT

D9.9

D9.5

133°

CAT A & B ←323°

CAT C & D ←333°

313°

133°

D4.5
[FQ13]

(IAF)

*286 WI

MAX 5000
MIN 2500

MKR

MAX 230 KT
MHA 2300

1216′

KALUGA
D *114.0 KLG

133°

D5.6

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

10 5 0 5

36-10 36-20 36-30 36-40

RACETRACK ❹
BASETURN ❺

D9.9❹
D9.5❺

2500′

❹ ←313°

❺ CAT C & D ←333°

❺ CAT A & B ←323°

NDB/MKR

MAX 5000′
MIN 2500′

133°

MANDATORY

D4.5

2000′

133°

3.00°

1400′

[FQ13]

MDA
3.5

TCH 50′

Apt 666′

0.6 0

Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at NDB/MKR							
Timing not authorized for defining MAP							

HIALS
PAPI

D5.6 on 133°

205 KT MAX

Std

STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 1150′(484′)

ALS out

A	R1500m
B	
C	R1500m
D	R2300m

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′(524′)	V1500m
135	1220′(554′)	V1600m
180	1320′(654′)	V2400m
205	1370′(704′)	V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (16-3)

KALUGA, ~~RUSSIA~~
NDB Y Rwy 31

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

NDB GC	Final Apch Crs	[FN31]	DA/MDA(H) Refer to Minimums	Apt Elev 666′ Rwy 620′
*286	313°	2100′ (1480′)		

MISSED APCH: Climb on track 313° to 1500′ or above, turn RIGHT (MAX 225 KT) to NDB climbing to 2500′ or above, then proceed according to chart or as directed.

2700
MSA ARP ❷

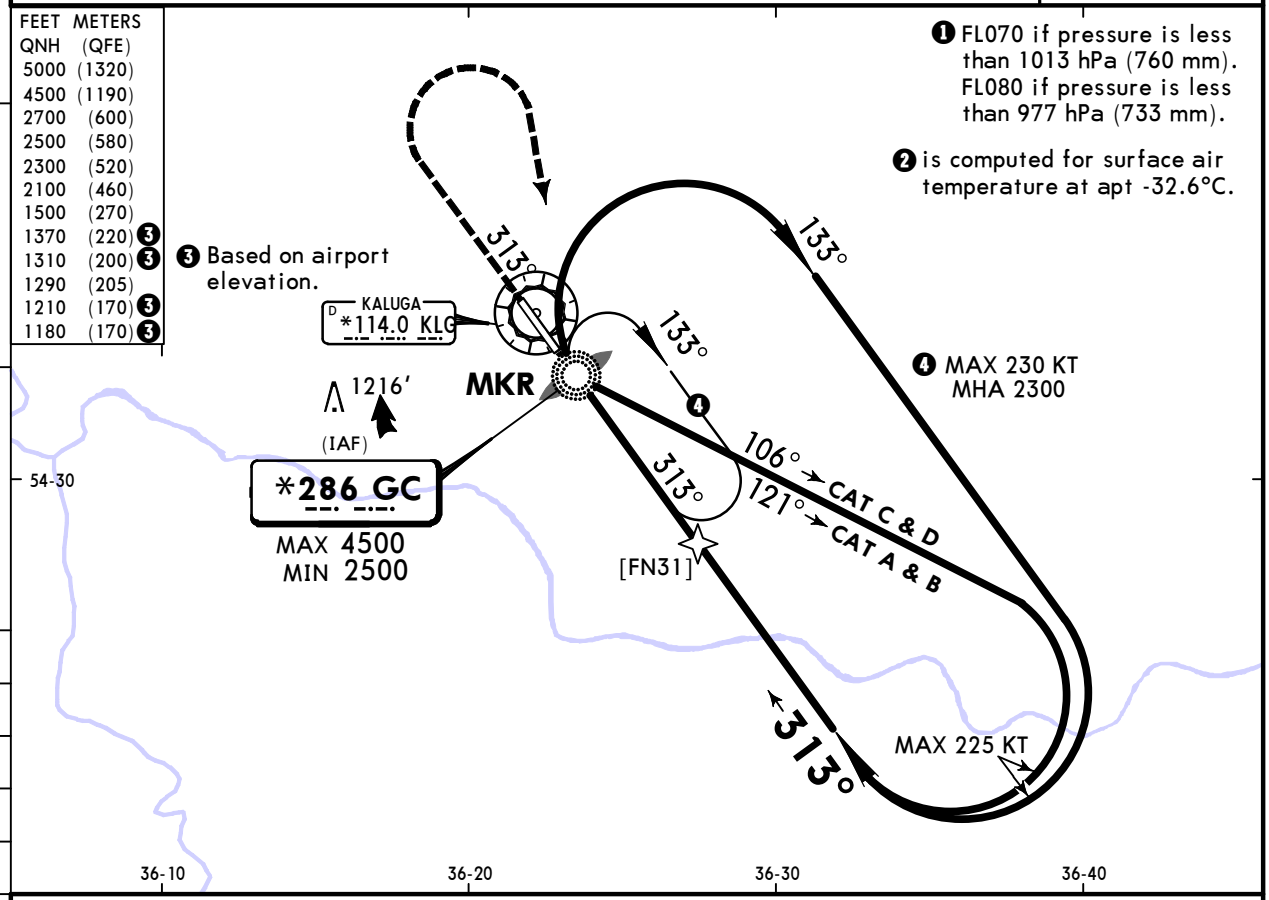
Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

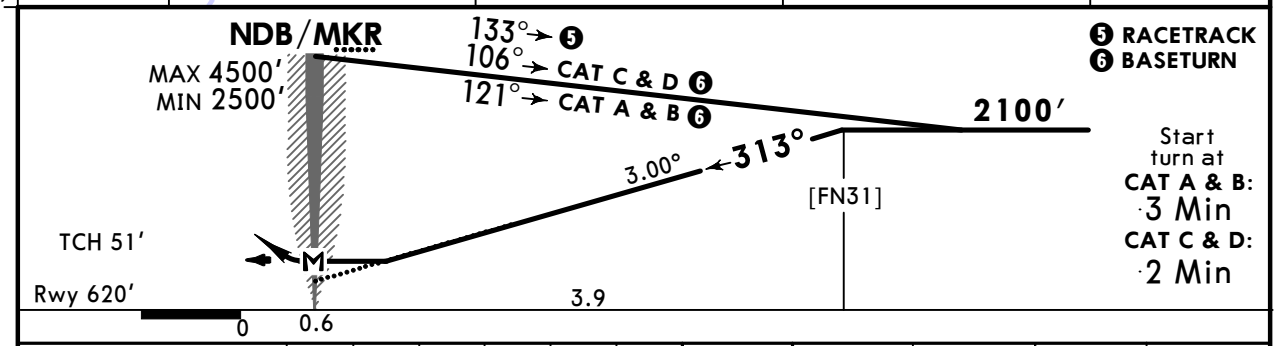
FEET QNH	METERS (QFE)
5000	(1320)
4500	(1190)
2700	(600)
2500	(580)
2300	(520)
2100	(460)
1500	(270)
1370	(220) ❸
1310	(200) ❸
1290	(205)
1210	(170) ❸
1180	(170) ❸

❸ Based on airport elevation.

❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -32.6°C.





Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at NDB/MKR							
Timing not authorized for defining MAP.							

HIALS
PAPI

MIN 1500′ on 313°

225 KT MAX

Std STRAIGHT-IN LANDING
CDFA

❶ DA/MDA(H) AB: **1180′** (560′) CD: **1290′** (670′)
ALS out

A	R1500m
B	
C	R2400m
D	

CIRCLE-TO-LAND
Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

PANS OPS

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings, speed.

UUBC/KLF
GRABTSEVO

JEPPESEN
18 APR 25 (16-4)

KALUGA, ~~RUSSIA~~
NDB X Rwy 31

BRIEFING STRIP ™

ATIS	KALUGA Tower
126.8	120.3

NDB GC	Final Apch Crs	D5.0 MANDATORY	DA/MDA(H)	Apt Elev 666′ Rwy 620′
*286	313°	2000′ (1380′)	1080′ (460′)	

MISSED APCH: Climb on track 313° to D5.2, turn RIGHT (MAX 225 KT) to NDB climbing to 2500′ or above, then proceed according to chart or as directed.

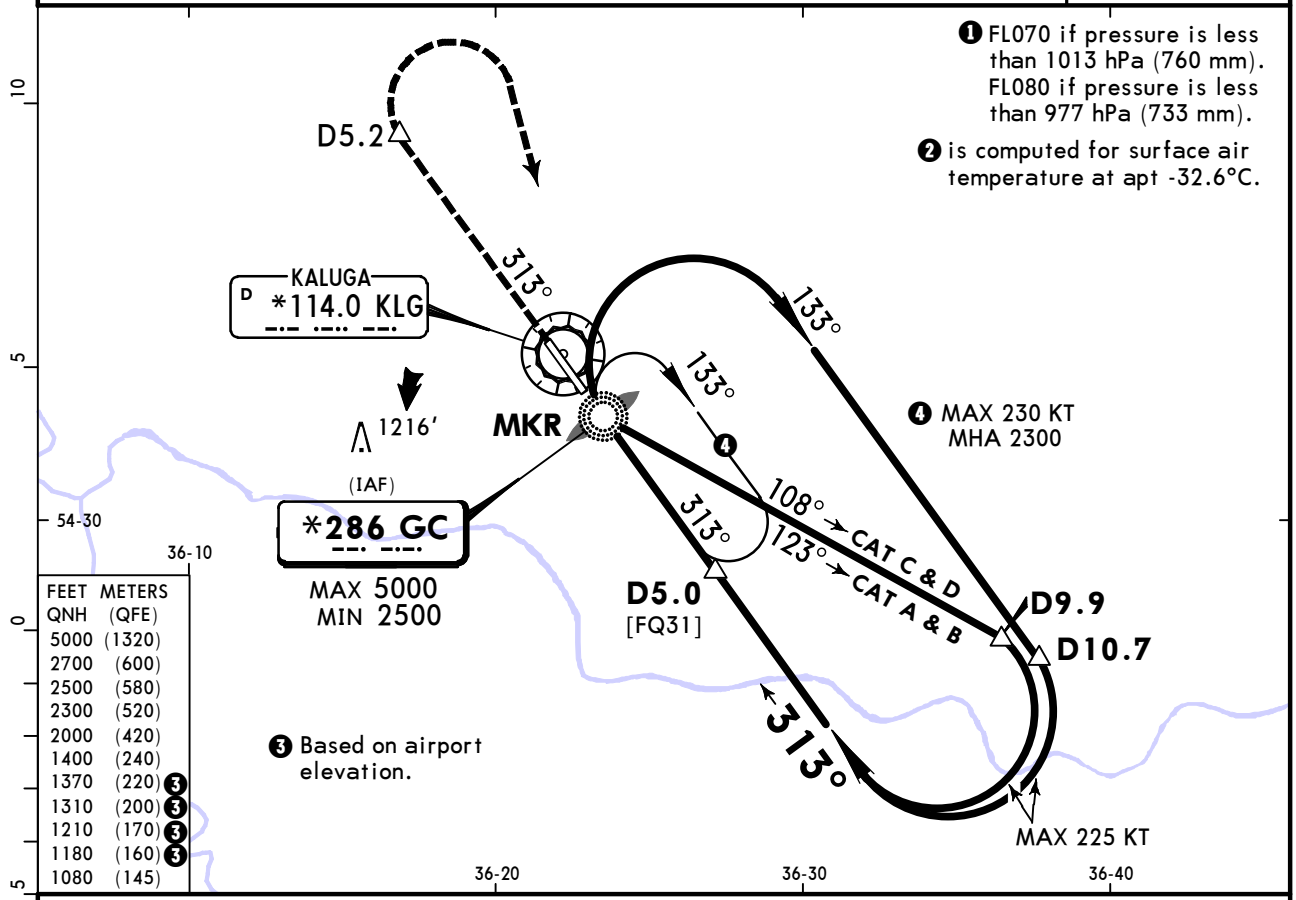
2700
MSA ARP ❷

Alt Set: hPa (MM on req) Rwy Elev: 23 hPa Trans level: FL060 ❶ Trans alt: 5000′

DME required.

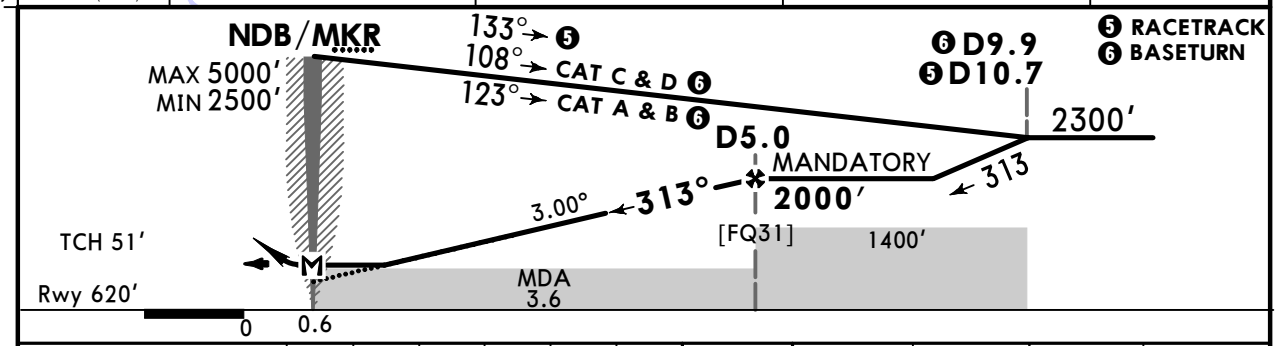
❶ FL070 if pressure is less than 1013 hPa (760 mm). FL080 if pressure is less than 977 hPa (733 mm).

❷ is computed for surface air temperature at apt -32.6°C.



FEET	METERS (QFE)
QNH	
5000	(1320)
2700	(600)
2500	(580)
2300	(520)
2000	(420)
1400	(240)
1370	(220) ❸
1310	(200) ❸
1210	(170) ❸
1180	(160) ❸
1080	(145)

❸ Based on airport elevation.



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at NDB/MKR							
Timing not authorized for defining MAP							

HIALS
PAPI

D5.2 on 313°

225 KT MAX

PANS OPS

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 1080′ (460′)

	ALS out
A	R1400m
B	R1500m
C	R2100m
D	R2100m

CIRCLE-TO-LAND

Prohibited
West of airport

Max KT	MDA(H)	
100	1190′ (524′)	V1500m
135	1220′ (554′)	V1600m
180	1320′ (654′)	V2400m
205	1370′ (704′)	V3600m

❶ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Missed apch, bearings, speed.

Chart changes since cycle 07-2026

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