JEPPESEN
JeppView for Windows

List of pages in this Trip Kit

General Information

Location: MAKHACHKALA RUS
ICAO/IATA: URML / MCX
Lat/Long: N42° 49.02', E047° 39.15'
Elevation: 16 ft

Airport Use: Public
Daylight Savings: Not Observed
UTC Conversion: -3:00 = UTC
Magnetic Variation: 7.0° 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: 0139 Z
Sunset: 1553 Z

Runway Information

Runway: 14
Length x Width: 8661 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 8 ft
Lighting: Edge, ALS

Runway: 32
Length x Width: 8661 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge, ALS

Communication Information

ATIS: 124.800 Non-English
ATIS: 125.475
Makhachkala Tower: 124.000
Makhachkala Tower: 121.300 Non-English
Makhachkala Approach: 119.700 Non-English
Makhachkala Approach: 124.000
Makhachkala Radar: 124.000
Makhachkala Transit Operations: 131.600
Makhachkala Radar: 121.300

1. GENERAL

1.1. ATIS

ATIS 125.475
124.8 (Russian)

1.2. LOW VISIBILITY PROCEDURES (LVP)

LVP are applied by ATC when RVR is less than 550m by the following phrase: "Low visibility procedures in progress, check your minimum".

When LVP are in force, it is prohibited

- to take off not from RWY beginning (except CAT A ACFT);
- to take off without stop at line-up position after entering the RWY;
- to maneuver more than one ACFT along the apron to TWY A or B.

1.3. TAXIING PROCEDURES

Taxiing and towing by MAKHACHKALA Start (TWR) controller's clearance.

During hours of darkness and in the daytime, when visibility is less than 2000m, taxi operations shall be carried out strictly along the taxi guidelines after Follow-me vehicle.

ACFT shall perform 180° turns with maximum radius of turn on the turn pad at the end of RWY.

ACFT braked pivot turn (with braking of one wheel) is prohibited.

Class 1 and 2 ACFT shall taxi on the apron at idle power. During ACFT maneuvering, a short-term increase of engines power is allowed. In such cases ACFT must avoid turning, if there are people, aerodrome maintenance equipment or ACFT being serviced in the direction opposite to ACFT turn, at a distance of less than 50 m.

At NIGHT and in the DAY-time, when visibility is below 400 m, ACFT shall taxi on the apron from TWY A to the stands after the Follow-me vehicle, strictly along the taxi guideline.

1.4. PARKING INFORMATION

Stands 1 thru 7 available for helicopters.

1.5. COMMUNICATION FAILURE PROCEDURES

In case of radio communication failure:

- listen to information and instructions of the controller on frequency of LOM, LMM of the RWY-in-use;
- use mobile communication with Flight Control Officer to coordinate actions Phone: +8 872-267-08-69.

1.6. OTHER INFORMATION

Birds in vicinity of APT.

2. ARRIVAL

2.1. COMMUNICATION FAILURE PROCEDURES

After entry into CTA continue at last assigned flight level cleared by ATS to join holding over NDB (LOM, LMM of the active heading).

Continue holding to reduce fuel as necessary. Descend at ETA or as close to this time as possible to FL130 without leaving holding.

Aerodrome pressure (QFE) shall be set at transition level FL130 and descent shall be continued according to the established procedure. Landing shall be carried out not later than 30 minutes after ETA.

3. DEPARTURE

3.1. DE-ICING

De-icing treatment of ACFT is carried out on start-up positions behind stands 1thru 15 and on stands 1 thru 8. De-icing treatment of ACFT with running engines is not provided.

3.2. START-UP PROCEDURES

Engine start-up shall be carried with MAKHACHKALA Start (TWR) controller's clearance.

3.3. COMMUNICATION FAILURE PROCEDURES

In case communication with MAKHACHKALA Radar is not established at 700' (200m):

- In case of taking the decision to return climb according to the missed approach procedure to join holding, execute IAP if meteorological conditions and landing mass are suitable.
- In case of taking the decision to proceed to the destination or alternate, continue along the route indicated in departure clearance climbing to flight level indicated in the flight plan or one of flight levels FL140, FL150, FL240, FL250, depending on flight direction.

3.4. CAT A OPERATIONS

Execution of an IFR flight by CAT A ACFT and HEL breaking through clouds at Makhachkala/Uytash to join commuter routes over mountainous terrain shall be cleared, when cloud top over the aerodrome is not more than 5900' (1800m) and alternate aerodrome is AVBL.

If ACFT has not got out of clouds at 5900' (1800m), execute descent and approach to departure aerodrome.

MAKHACHKALA, ~~RUSSIA~~

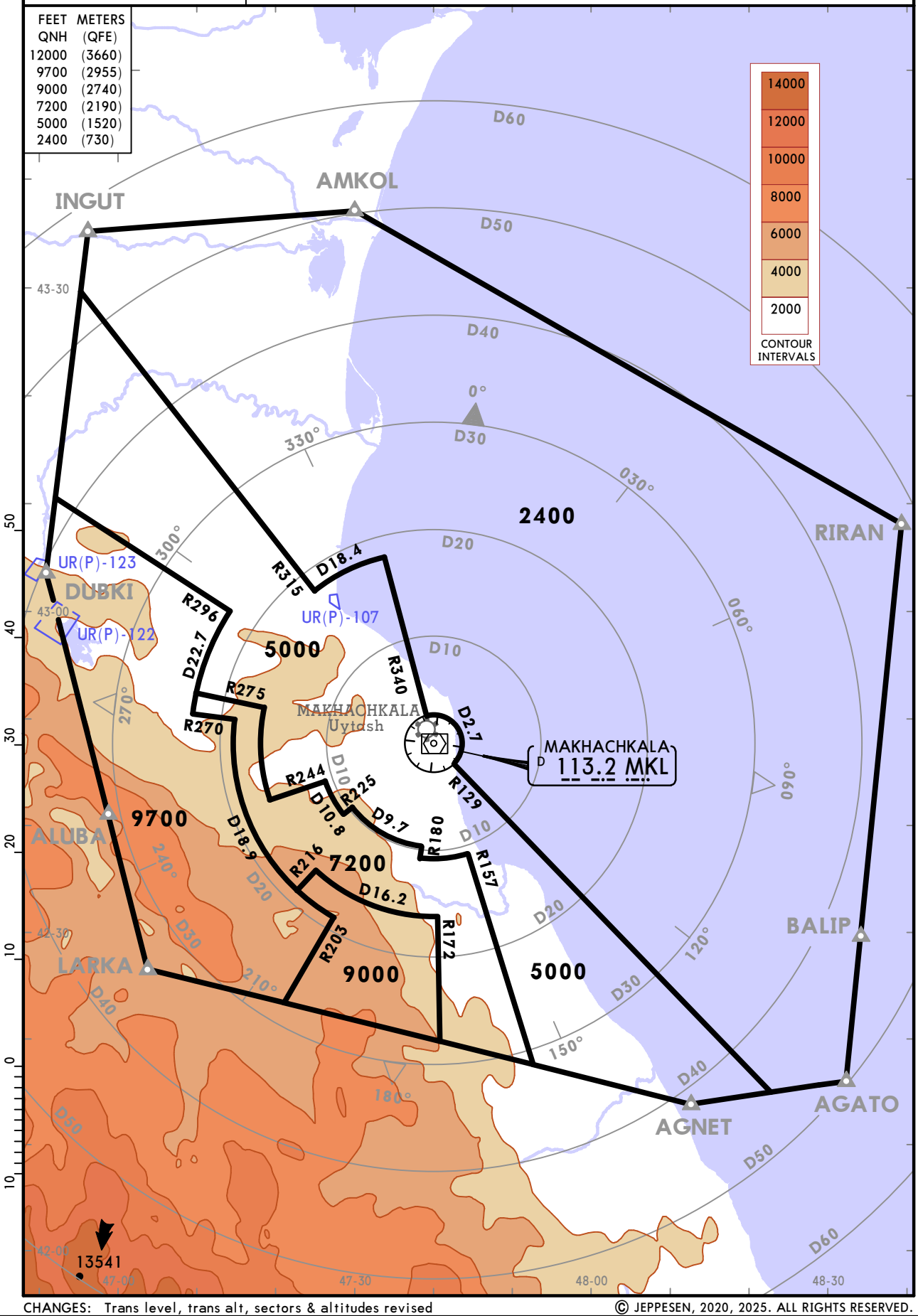
RADAR MINIMUM ALTITUDES

MAKHACHKALA
Radar
121.3

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)
Trans alt: 12000 QNH (QFE on request)
1. Chart only to be used for cross checking of altitudes while under RADAR control.
2. In case of vectoring under low temperature conditions, the minimum vectoring altitudes must be corrected by altimeter temperature correction.

FEET QNH	METERS (QFE)
12000	(3660)
9700	(2955)
9000	(2740)
7200	(2190)
5000	(1520)
2400	(730)



CHANGES: Trans level, trans alt, sectors & altitudes revised

ATIS	Apt Elev
125.475 (Russian 124.8)	16

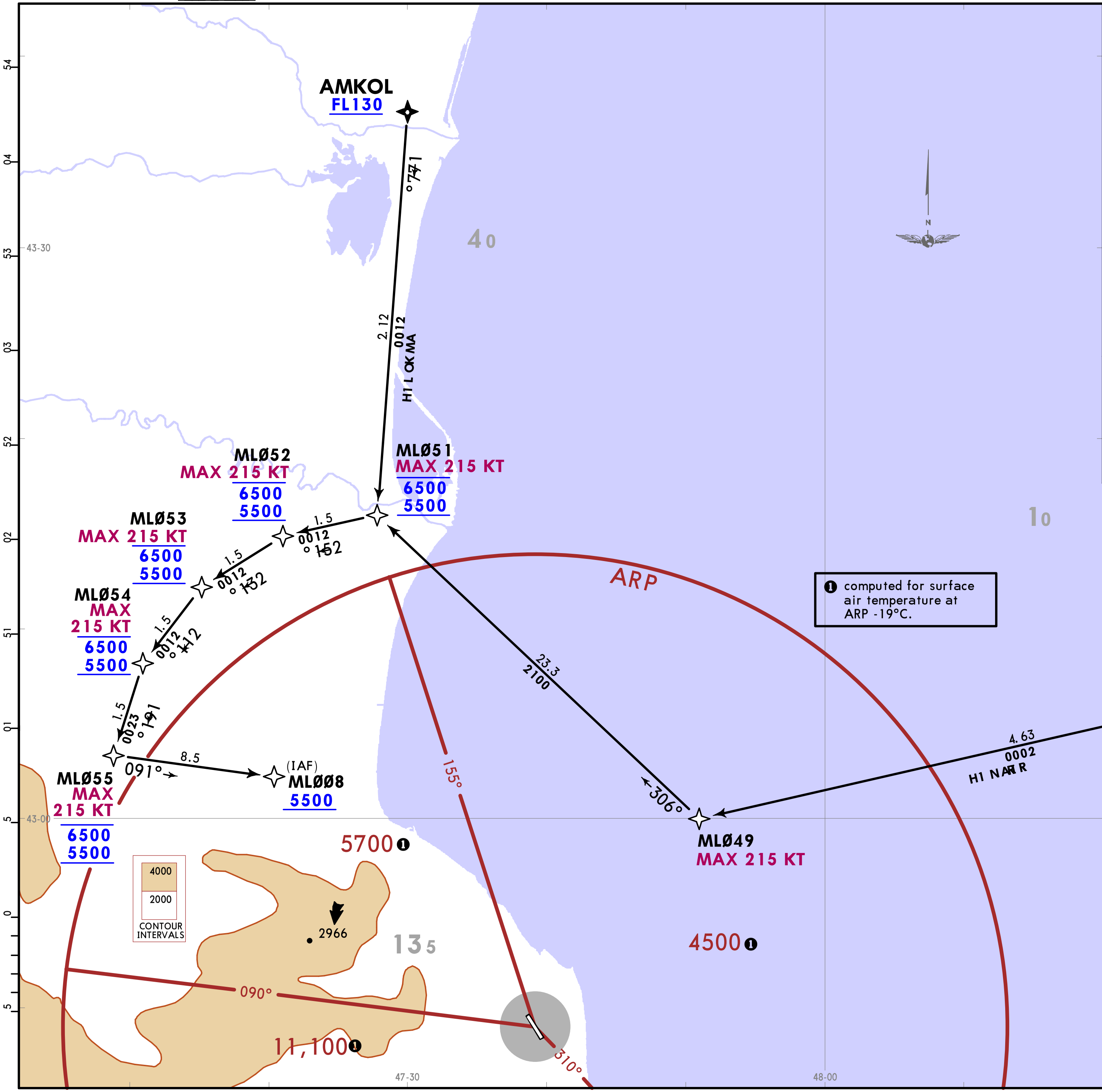
Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required.

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

AMKOL 1H [AMKO1H]
RIRAN 1H [RIRA1H]
RNAV ARRIVALS
(RWY 14)

FEET	METERS
QNH	(QFE)
6500	(1980)
5500	(1675)



ATIS	Apt Elev
125.475 (Russian 124.8)	16

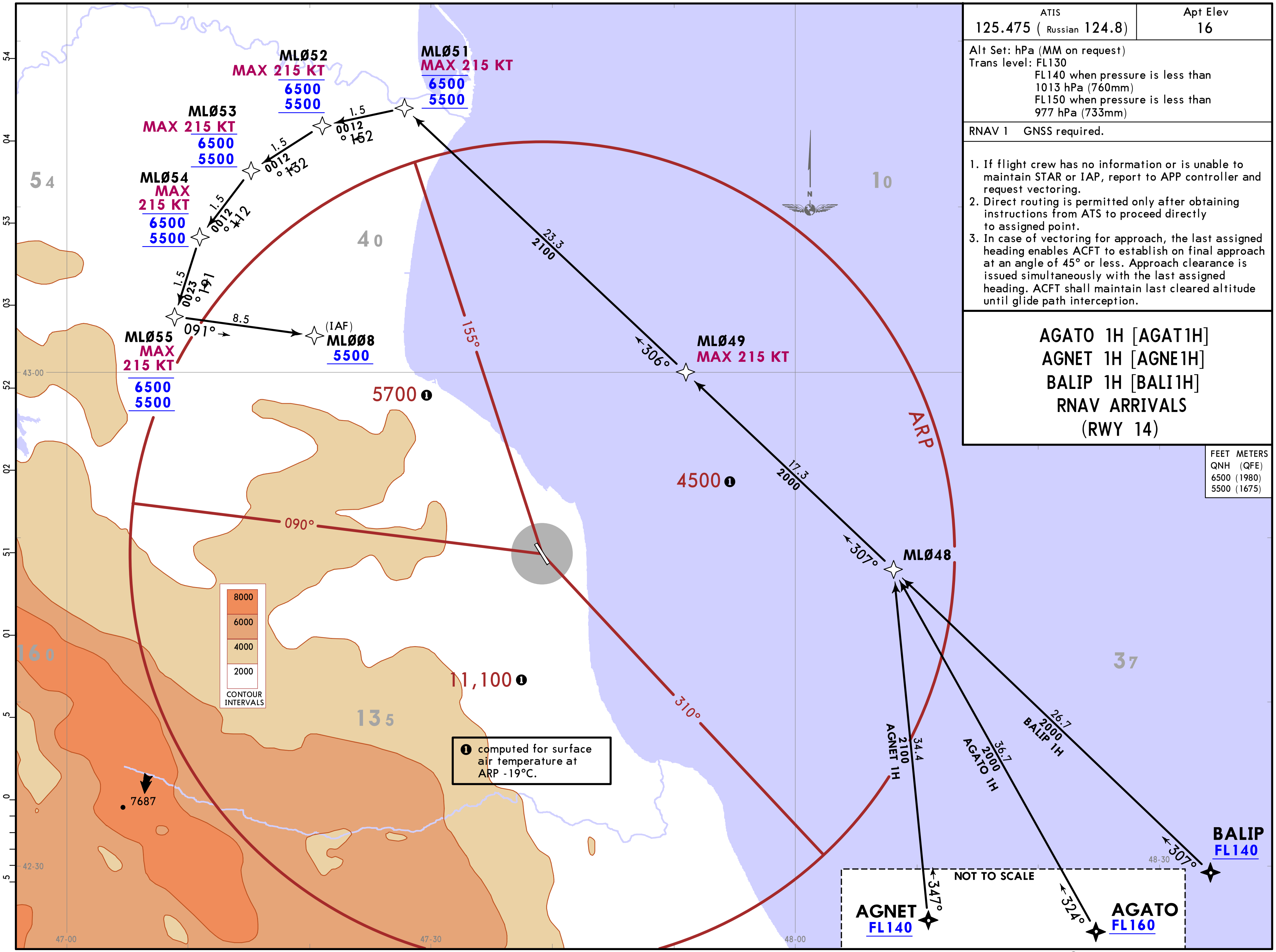
Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required.

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

AGATO 1H [AGAT1H]
AGNET 1H [AGNE1H]
BALIP 1H [BALI1H]
RNAV ARRIVALS
(RWY 14)

FEET	METERS
QNH	(QFE)
6500	(1980)
5500	(1675)



MAKHACHKALA, RUSSIA

RNAV STAR

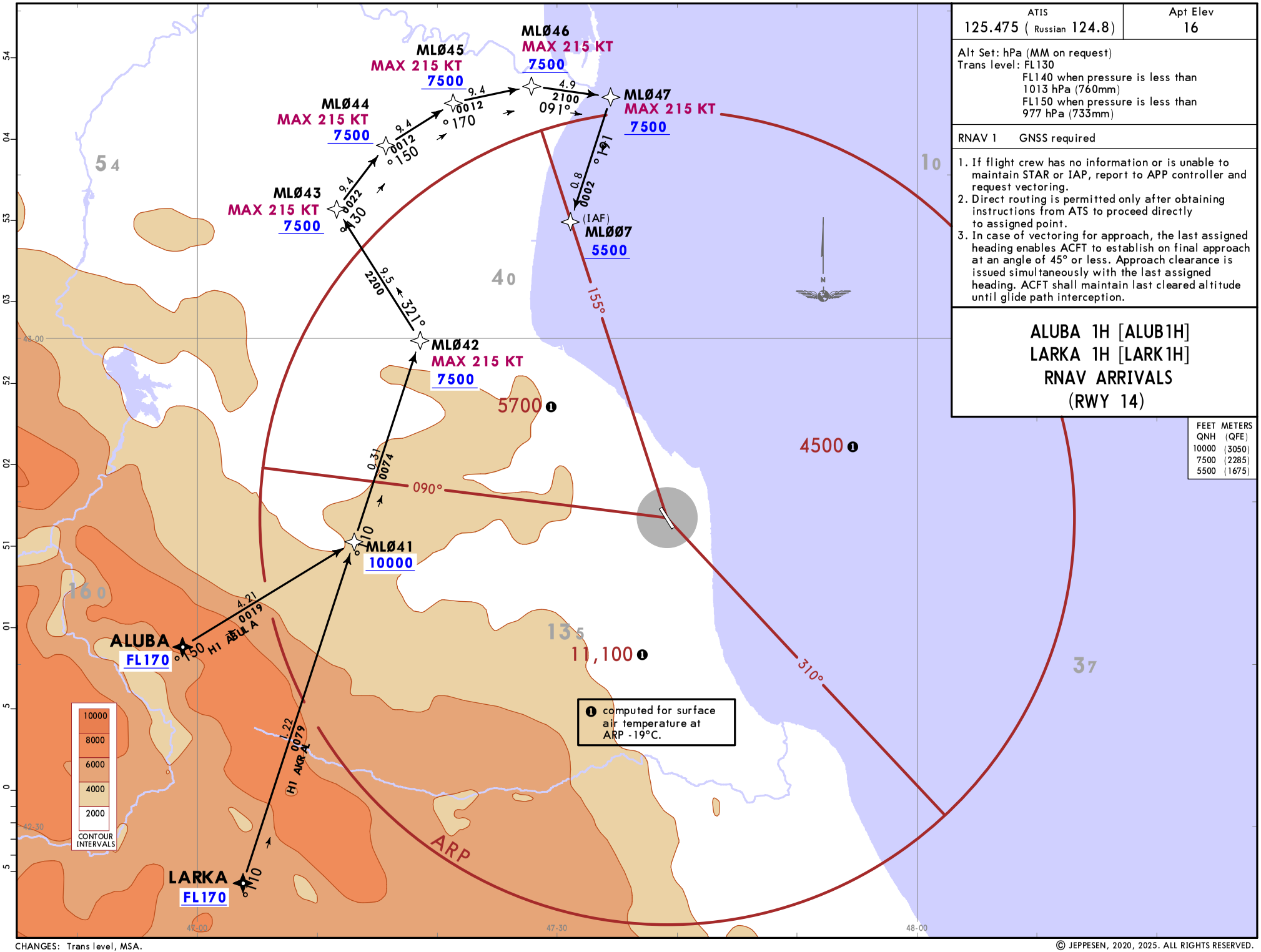
ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 1H [ALUB1H]
LARKA 1H [LARK1H]
RNAV ARRIVALS
(RWY 14)



CHANGES: Trans level, MSA.

ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required.

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

DUBKI 1H [DUBK1H]
BY ATC
INGUT 1H [INGU1H]
RNAV ARRIVALS
(RWY 14)

INGUT
FL130
132°
27.7
2100
INGUT 1H

MLØ46
MAX 215 KT
7500
9.4
170°
0012
4.9
2100
091°

MLØ47
MAX 215 KT
7500

MLØ44
MAX 215 KT
7500
9.4
0012
150°

MLØ45
MAX 215 KT
7500

0.8
191°
0002

(IAF)
MLØØ7
5500

9.91
0055
HIIKBUD

DUBKI
FL130
350°

ARP
155°
310°
090°

5700 ❶
4500 ❶
11,100 ❶

❶ computed for surface air temperature at ARP -19°C.

FEET	METERS
QNH	(QFE)
7500	(2285)
5500	(1675)

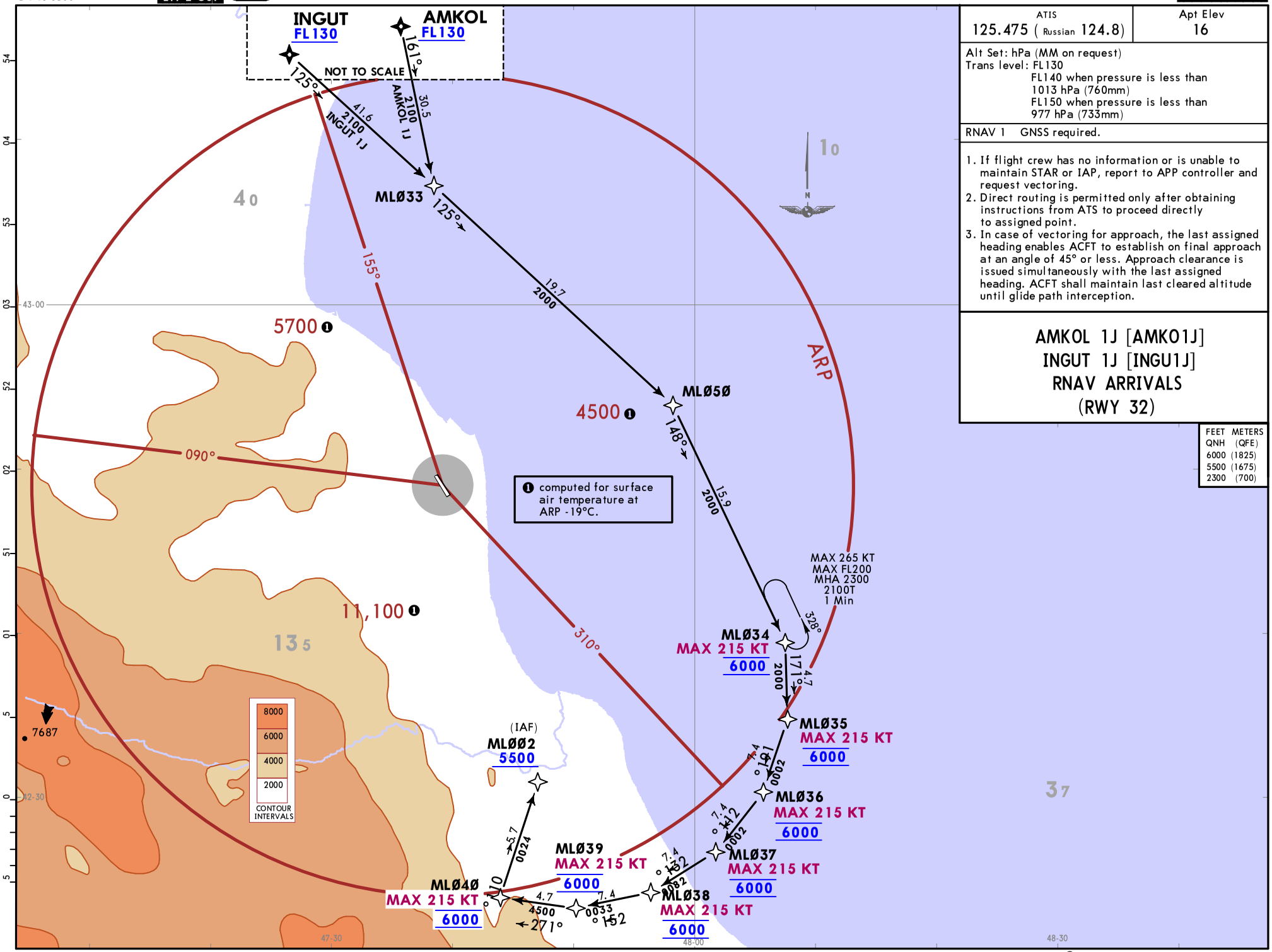
CONTOUR INTERVALS
10000
8000
6000
4000
2000

43-30
43-00
47-00
47-30
48-00

CHANGES: Trans level, MSA.

MAKHACHKALA, RUSSIA

RNAV STAR



ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

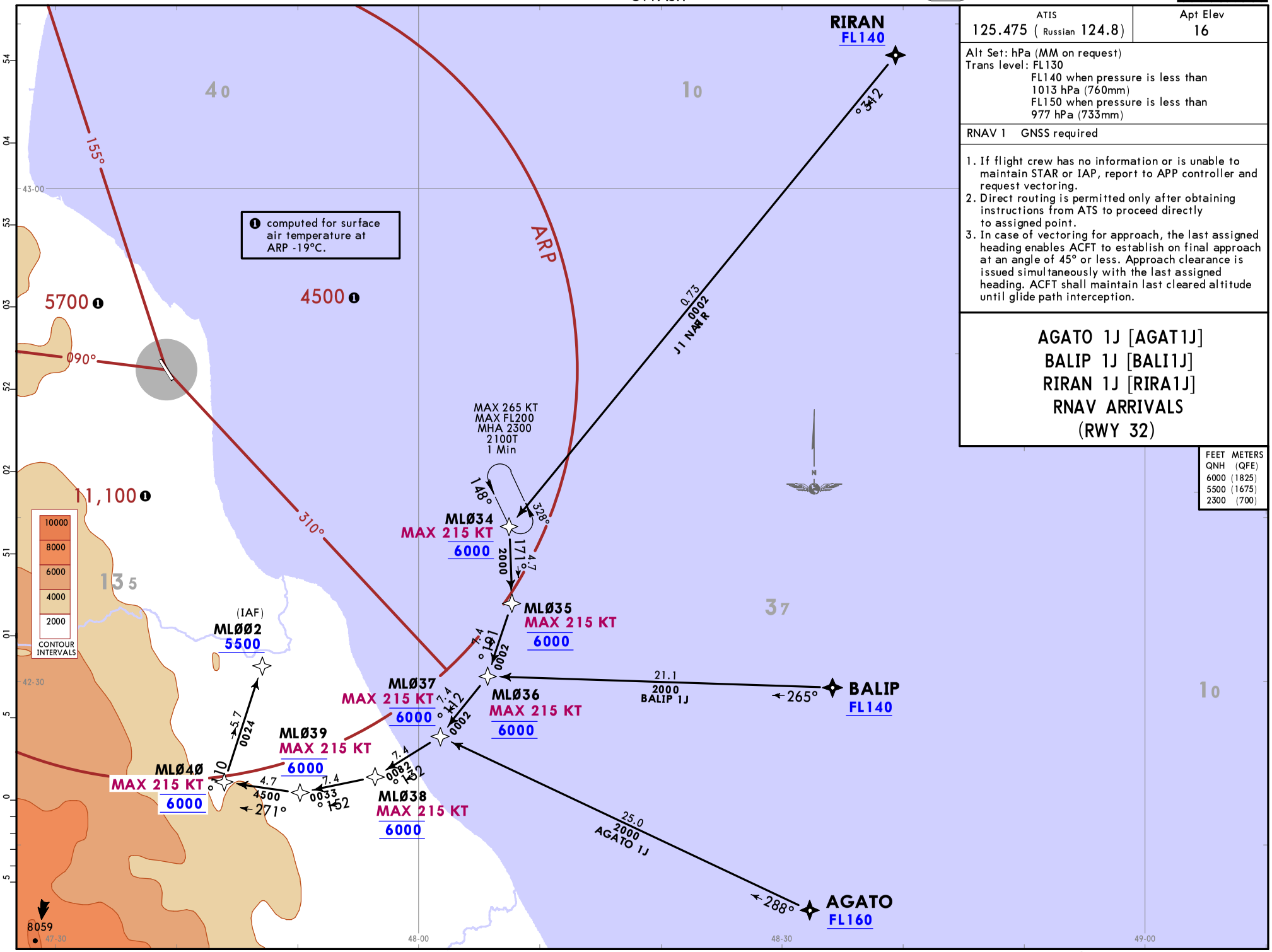
RNAV 1 GNSS required.

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

AMKOL 1J [AMKO1J]
INGUT 1J [INGU1J]
RNAV ARRIVALS
(RWY 32)

FEET	METERS
QNH	(QFE)
6000	(1825)
5500	(1675)
2300	(700)

CHANGES: Trans level, MSA.



ATIS
125.475 (Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

AGATO 1J [AGAT1J]
BALIP 1J [BALI1J]
RIRAN 1J [RIRA1J]
RNAV ARRIVALS
(RWY 32)

FEET	METERS
QNH	(QFE)
6000	(1825)
5500	(1675)
2300	(700)

CHANGES: Trans level, MSA.

MAKHACHKALA, RUSSIA

RNAV STAR

ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

AGNET 1J [AGNE1J]
RNAV ARRIVAL
(RWY 32)

FEET	METERS
QNH	(QFE)
7000	(2130)
5500	(1675)

5700 ❶
090°
155°
4500 ❶
310°
11,100 ❶
ARP
❶ computed for surface air temperature at ARP -19°C.
(IAF)
MLØØ1
5500
6.9
2000
271°
MLØ32
MAX 215 KT
7000
5.4
0002
10°
MLØ31
MAX 215 KT
7000
5.4
0002
30°
MLØ3Ø
MAX 215 KT
7000
15.7
2100
320°
AGNET
FL140
8000
6000
4000
2000
CONTOUR INTERVALS
6785
13 5
3 7
42-30
47-30
48-00
48-30

CHANGES: Trans level, MSA.

ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

RNAV 1 GNSS required

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 1J [ALUB1J]
LARKA 1J [LARK1J]

DUBKI 1J [DUBK1J]
BY ATC

RNAV ARRIVALS
(RWY 32)

FEET QNH	METERS (QFE)
10000	(3045)
8000	(2435)
7000	(2130)
5500	(1675)

DUBKI
FL200

ALUBA
FL170

LARKA
FL170

MLØ56
FL200

MLØ25
10000

MLØ26
MAX 215 KT
8000

MLØ27
MAX 215 KT
7000

MLØ28
MAX
215 KT
7000

MLØ29
MAX 215 KT
7000

MLØ30
MAX 215 KT
7000

MLØ31
MAX 215 KT
7000

MLØ32
MAX 215 KT
7000

(IAF)
MLØØ1
5500

ARP

5700

4500

11,100

❶ computed for surface air temperature at ARP -19°C.

CONTOUR INTERVALS: 10000, 8000, 6000, 4000, 2000

CHANGES: Trans level, MSA.

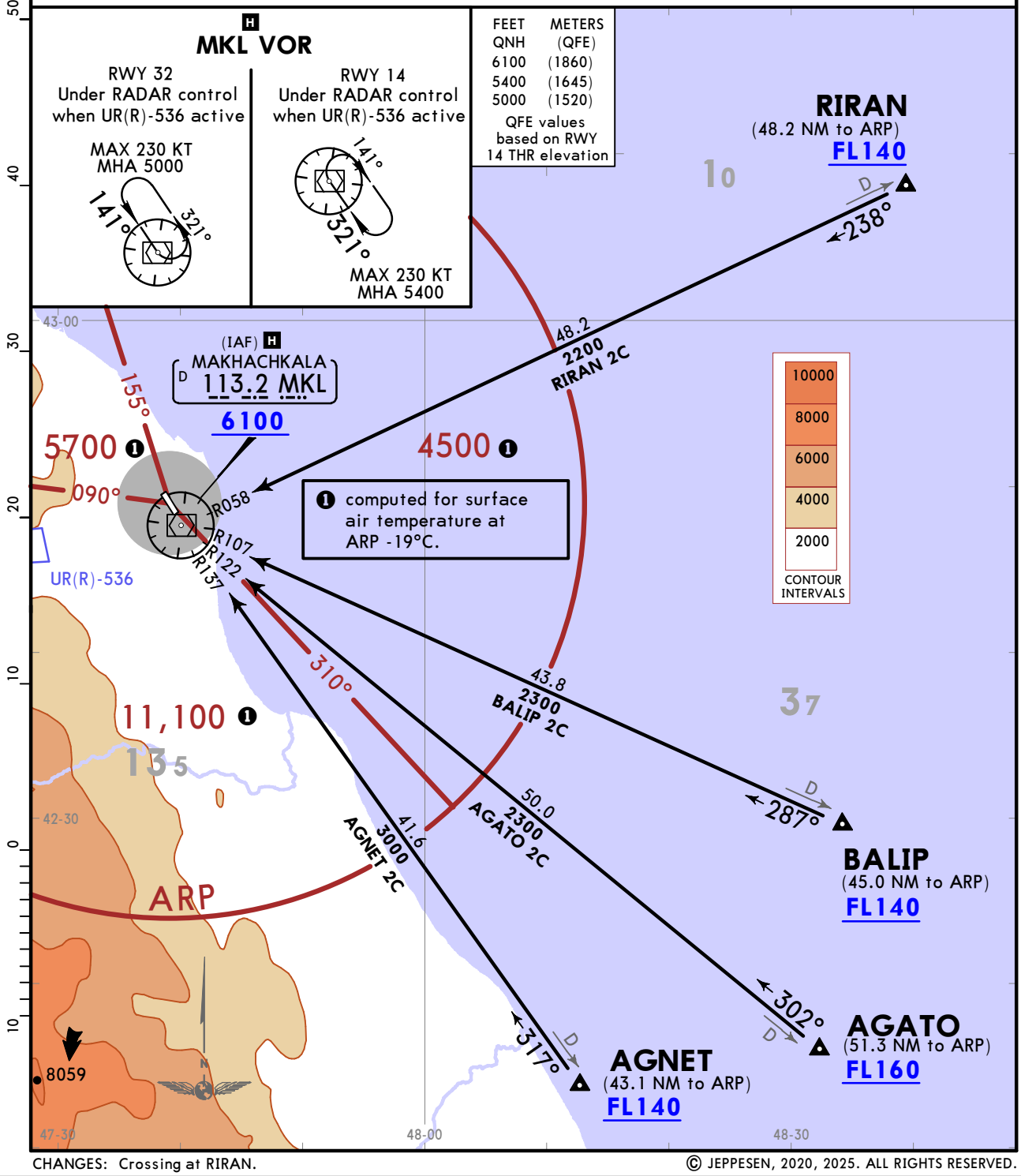
ATIS
125.475
(Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME or RADAR control required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

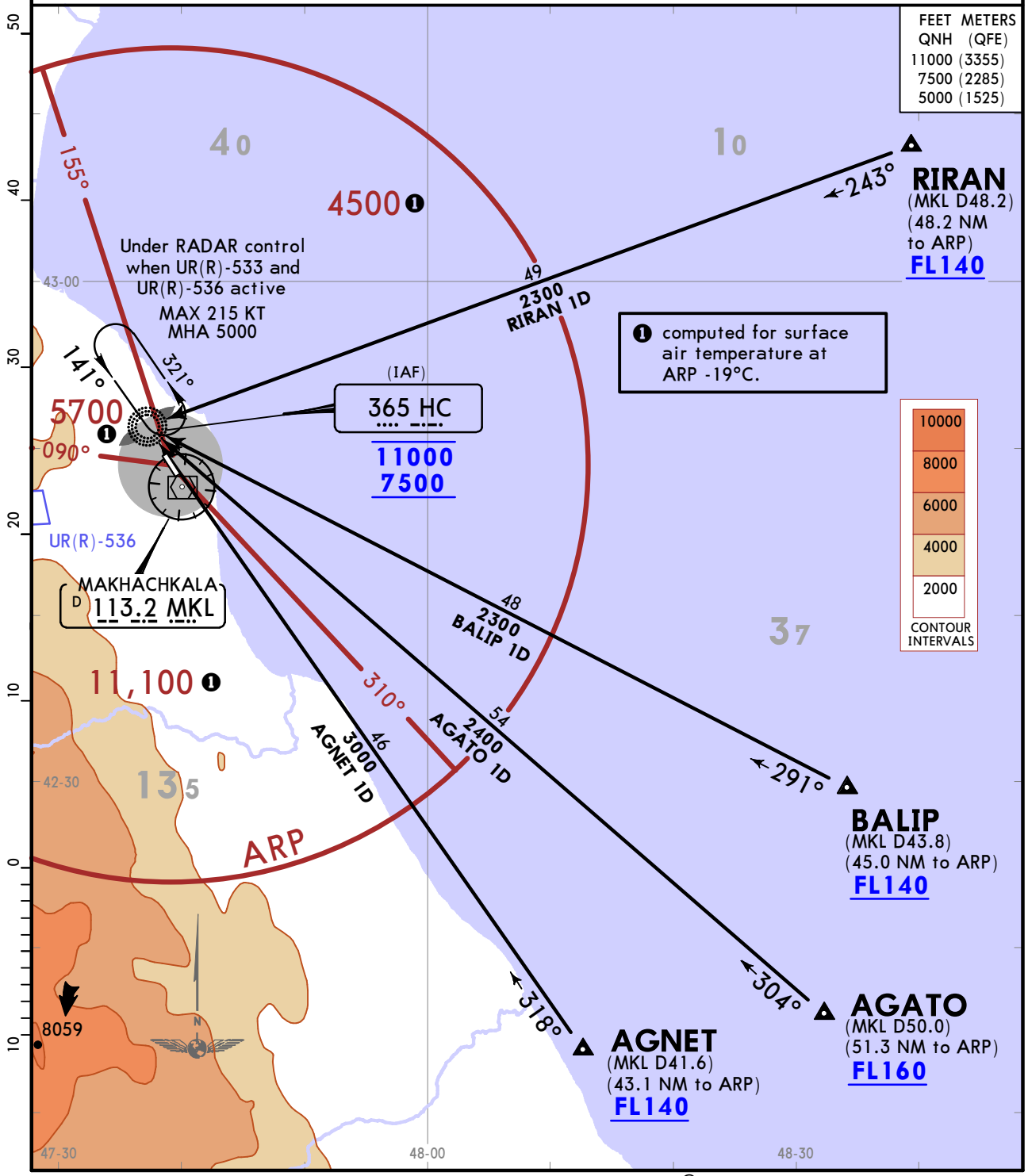
AGATO 2C [AGAT2C], AGNET 2C [AGNE2C]
BALIP 2C [BALI2C], RIRAN 2C [RIRA2C]
ARRIVALS
(ALL RWYS)



CHANGES: Crossing at RIRAN.

ATIS 125.475 (Russian 124.8)	Alt Set: hPa (MM on request) Trans level: FL130 FL140 when pressure is less than 1013 hPa (760mm) FL150 when pressure is less than 977 hPa (733mm) 1. DME or RADAR control required. 2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring. 3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point. 4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.
Apt Elev 16	

AGATO 1D [AGAT1D], AGNET 1D [AGNE1D]
BALIP 1D [BALI1D], RIRAN 1D [RIRA1D]
ARRIVALS
(RWY 14)



CHANGES: None.

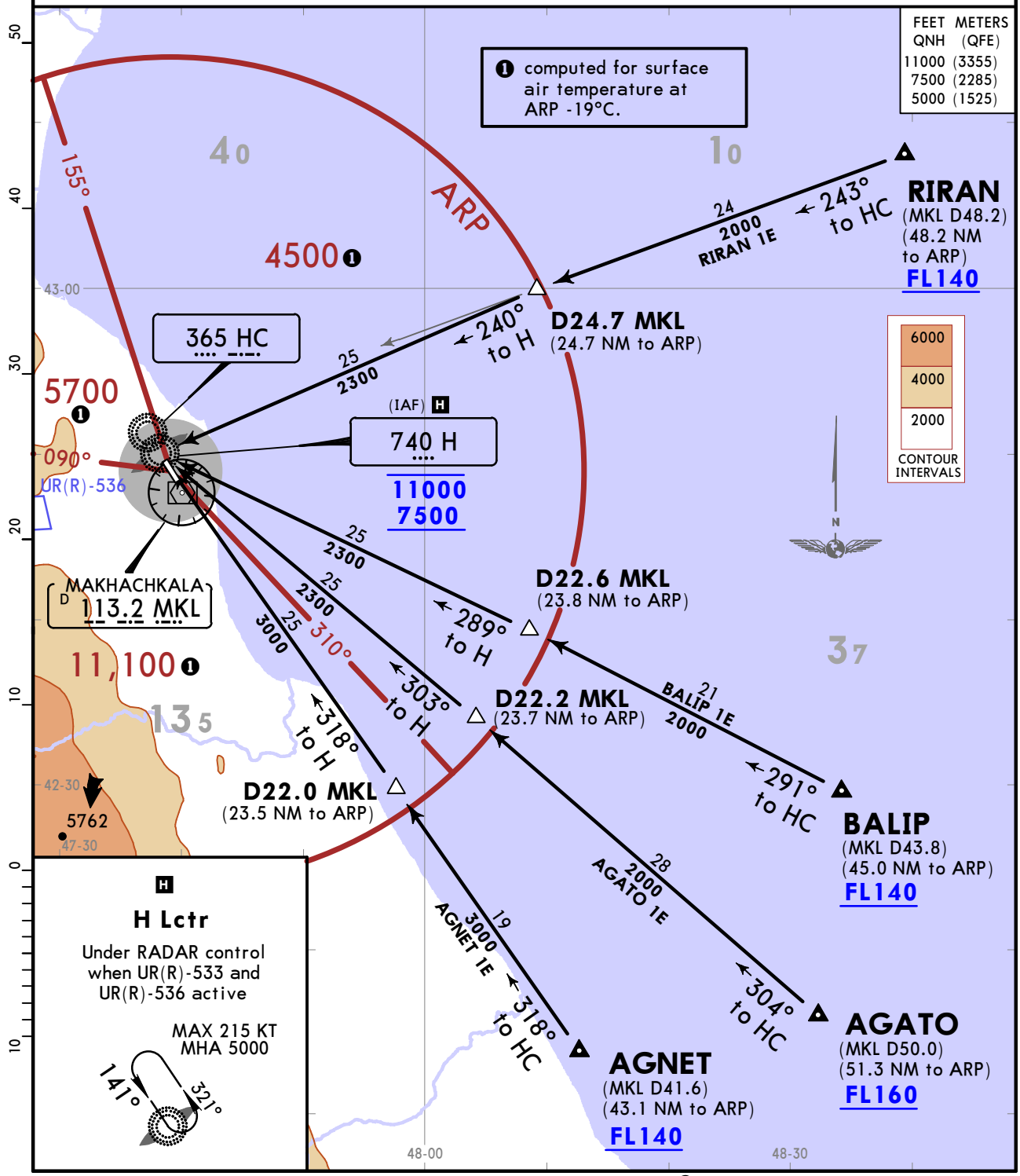
ATIS
125.475
(Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME or RADAR control required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

AGATO 1E [AGAT1E], AGNET 1E [AGNE1E]
BALIP 1E [BALI1E], RIRAN 1E [RIRA1E]
ARRIVALS
(RWY 14)



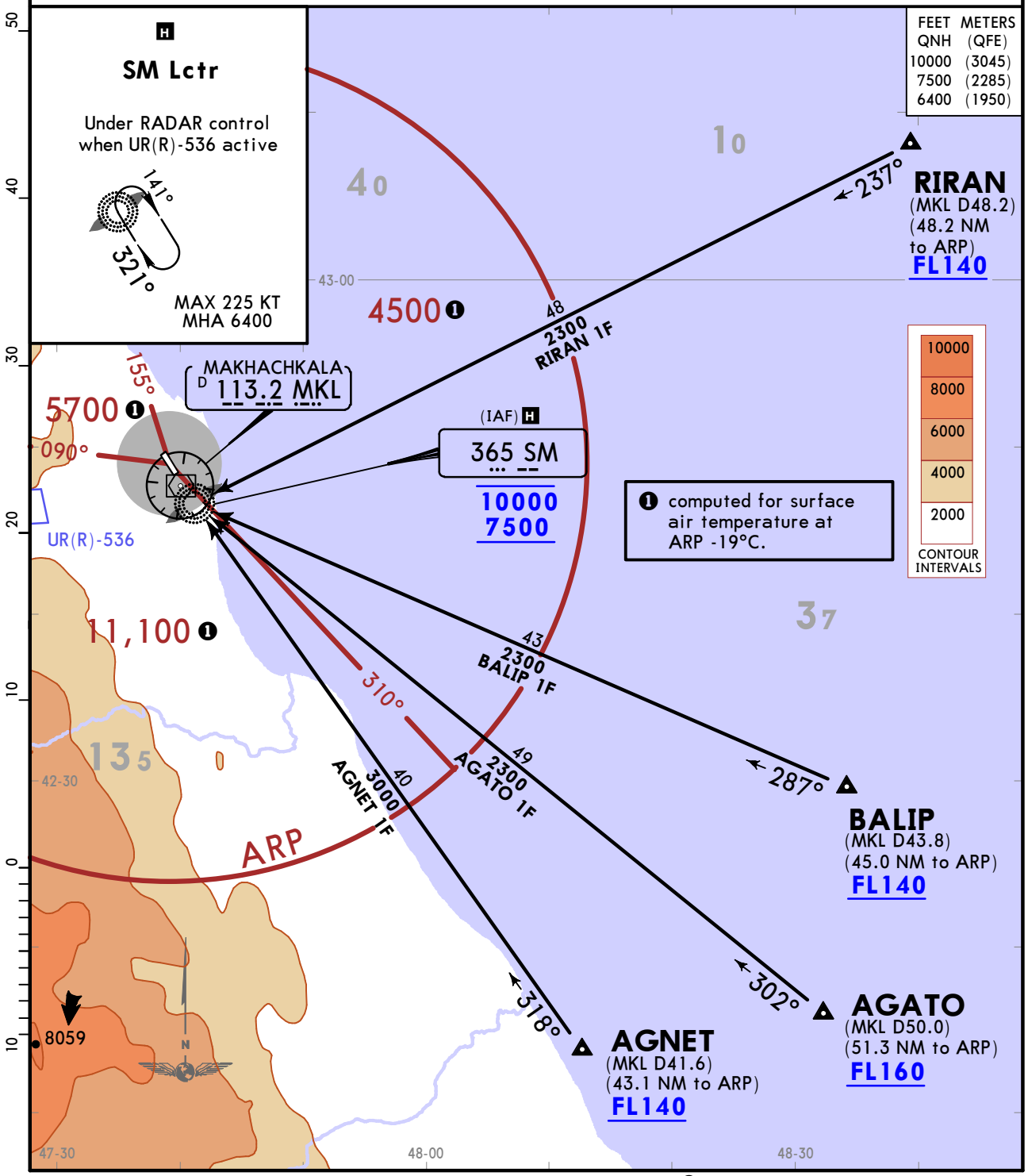
ATIS
125.475
(Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME or RADAR control required
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

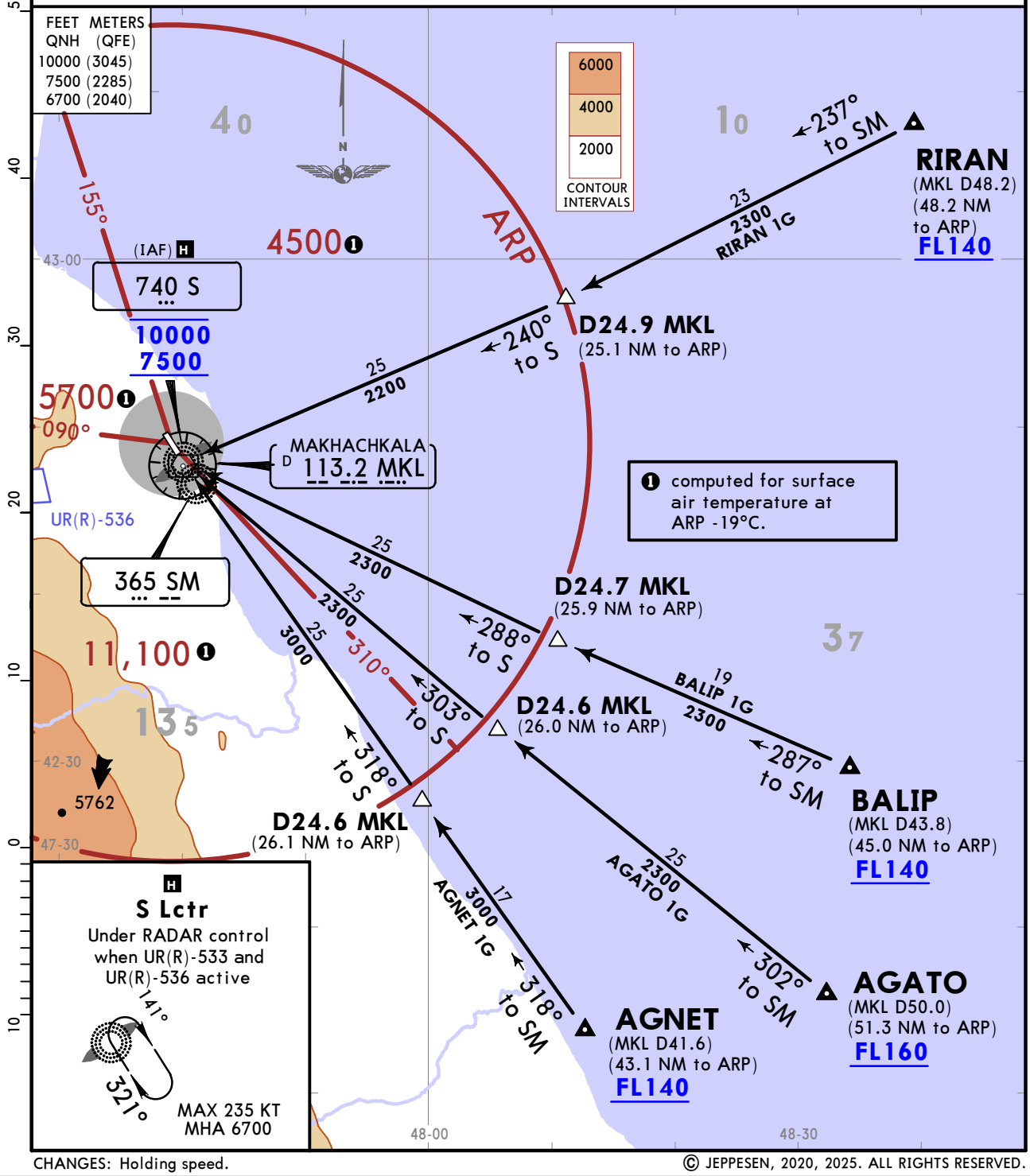
AGATO 1F [AGAT1F], AGNET 1F [AGNE1F]
BALIP 1F [BALI1F], RIRAN 1F [RIRA1F]
ARRIVALS
(RWY 32)



CHANGES: General instructions notes, trans level, MSA, WP defintions.

ATIS 125.475 (Russian 124.8)	Alt Set: hPa (MM on request) Trans level: FL130 FL140 when pressure is less than 1013 hPa (760mm) FL150 when pressure is less than 977 hPa (733mm) 1. DME or RADAR required. 2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring. 3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point. 4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.
Apt Elev 16	

AGATO 1G [AGAT1G], AGNET 1G [AGNE1G]
BALIP 1G [BALI1G], RIRAN 1G [RIRA1G]
ARRIVALS
(RWY 32)



CHANGES: Holding speed.

ATIS
125.475
(Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 2C [ALUB2C]
LARKA 2C [LARK2C]
ONLY AVAILABLE WHEN UR(R)-536 NOT ACTIVE

AMKOL 2C [AMKO2C]
INGUT 2C [INGU2C]

DUBKI 2C [DUBK2C]
BY ATC
ONLY AVAILABLE WHEN UR(R)-533 & UR(R)-536 NOT ACTIVE

ARRIVALS (ALL RWYS)

FEET QNH	METERS (QFE)
11000	(3355)
10000	(3050)
6100	(1860)
5400	(1645)
5000	(1520)

QFE values based on RWY 14 THR elevation

NOT TO SCALE

INGUT
(55.8 NM to ARP)
FL130

AMKOL
(48.6 NM to ARP)
FL130

DUBKI
(38.3 NM to ARP)
FL130

ALUBA
(30.8 NM to ARP)
FL170

LARKA
(34.4 NM to ARP)
FL170

D16.1 MKL
(15.8 NM to ARP)
11000

D11.4 MKL
(11.9 NM to ARP)
10000

MAKHACHKALA
(IAF) H
113.2 MKL
6100

MKL VOR
RWY 14
Under RADAR control when UR(R)-536 active
MAX 230 KT
MHA 5400

RWY 32
Under RADAR control when UR(R)-536 active
MAX 230 KT
MHA 5000

ARP
57.3 4000 INGUT 2C
50.0 2300 AMKOL 2C
39.5 6000 DUBKI 2C
15.0 9500 ALUBA 2C
22.7 9700 LARKA 2C
16.1 4300
11.4 4600

UR(R)-533
UR(R)-536

5700
4500
11,100

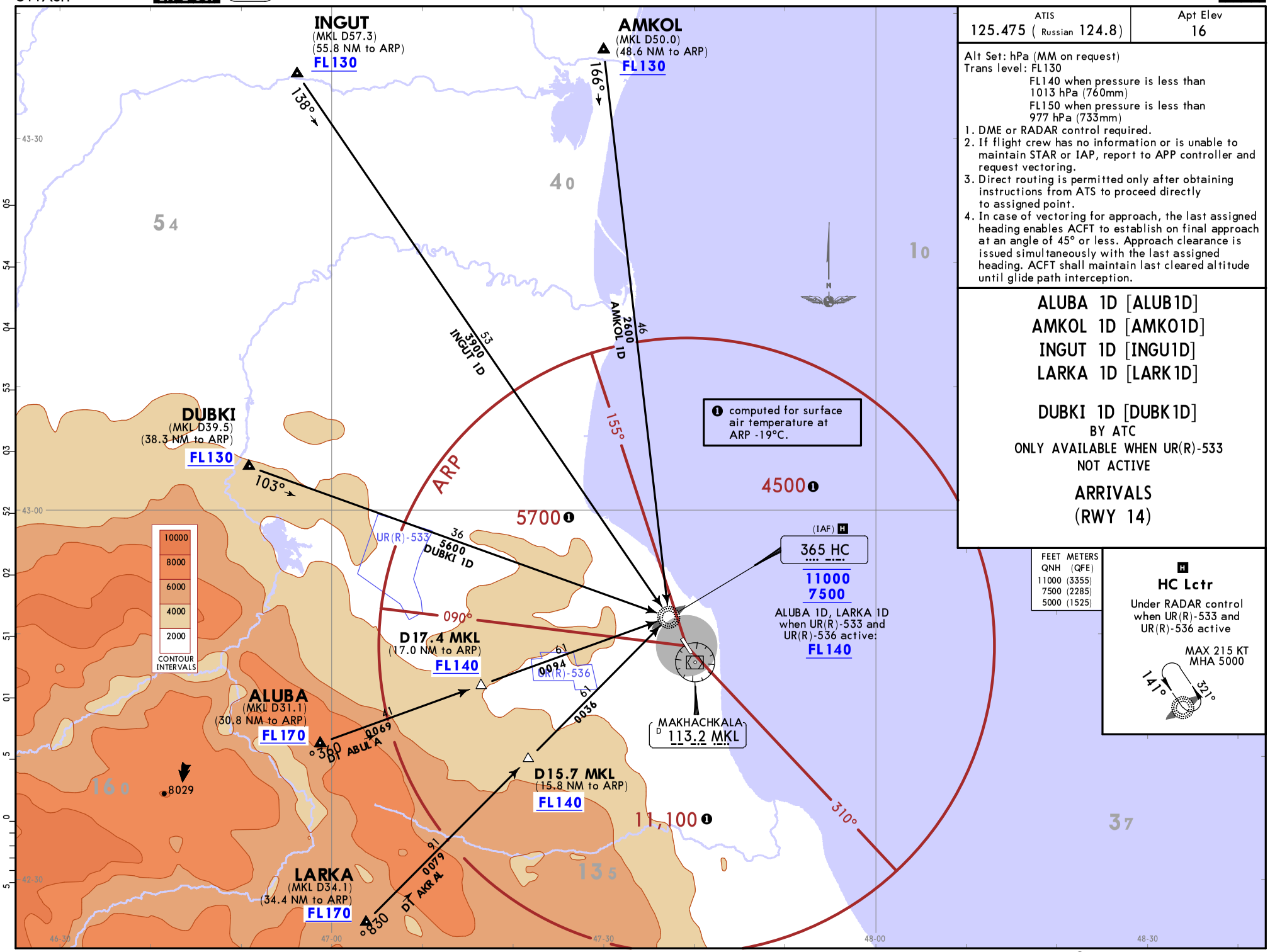
CONTOUR INTERVALS: 8000, 6000, 4000, 2000

1 computed for surface air temperature at ARP -19°C.

CHANGES: None.

MAKHACHKALA, RUSSIA

STAR



ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME or RADAR control required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 1D [ALUB1D]
AMKOL 1D [AMKO1D]
INGUT 1D [INGU1D]
LARKA 1D [LARK1D]

DUBKI 1D [DUBK1D]
BY ATC
ONLY AVAILABLE WHEN UR(R)-533 NOT ACTIVE

ARRIVALS
(RWY 14)

FEET	METERS
QNH	(QFE)
11000	(3355)
7500	(2285)
5000	(1525)

HC Ltr
Under RADAR control when UR(R)-533 and UR(R)-536 active

MAX 215 KT
MHA 5000
141°
321°

CHANGES: General instructions notes, trans level, MSA, WP defintions.

ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME or RADAR control required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 1E [ALUB1E]
AMKOL 1E [AMKO1E]
INGUT 1E [INGU1E]
LARKA 1E [LARK1E]

DUBKI 1E [DUBK1E]
BY ATC
ONLY AVAILABLE WHEN UR(R)-533 NOT ACTIVE

ARRIVALS
(RWY 14)

INGUT
(MKL D57.3)
(55.8 NM to ARP)
FL130

AMKOL
(MKL D50.0)
(48.6 NM to ARP)
FL130

D27.4 MKL
(26.0 NM to ARP)

D27.6 MKL
(26.1 NM to ARP)

DUBKI
(MKL D39.5)
(38.3 NM to ARP)
FL130

D17.0 MKL
(16.5 NM to ARP)
FL140

ALUBA
(MKL D31.1)
(30.8 NM to ARP)
FL170

D15.8 MLK
(16.0 NM to ARP)
FL140

LARKA
(MKL D34.1)
(34.4 NM to ARP)
FL170

ARP

138° to HC
166° to HC
165° to H
139° to H
104°
090°
155°
310°

30 2100 INGUT 1E
23 2100 AMKOL 1E
25 4000
25 2500
37 5600 DUBKI 1E
61 0054
61 0076
51 0069 E1 ABLUA
81 0079 E1 AKRAL
040°
060°

UR(R)-533
UR(R)-536

5700
4500
11,100

365 HC

(IAF) H
740 H
11000
7500

ALUBA 1E, LARKA 1E when UR(R)-533 and UR(R)-536 active:
FL140

MAKHACHKALA
D 113.2 MKL

computed for surface air temperature at ARP -19°C.

FEET	METERS
QNH	(QFE)
11000	(3355)
7500	(2285)
5000	(1525)

H Lctr
Under RADAR control when UR(R)-533 and UR(R)-536 active

MAX 215 KT
MHA 5000
141°
321°

CONTOUR INTERVALS
10000
8000
6000
4000
2000

8029

54 40 10 16 0 13 5 37

43-30 43-00 42-30 46-30 47-00 47-30 48-00 48-30

ATIS	Apt Elev
125.475 (Russian 124.8)	16

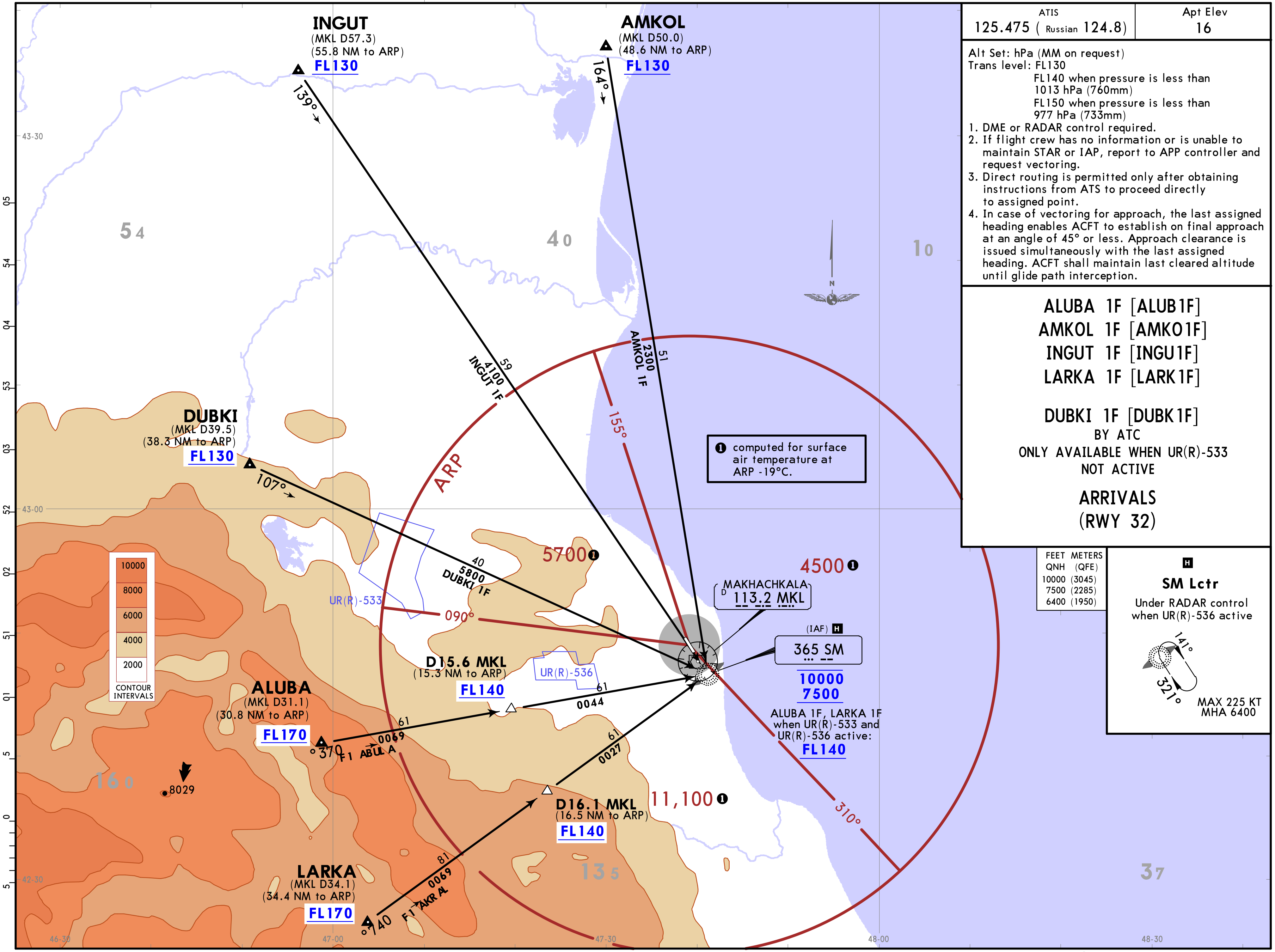
Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. DME or RADAR control required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 1F [ALUB1F]
AMKOL 1F [AMKO1F]
INGUT 1F [INGU1F]
LARKA 1F [LARK1F]

DUBKI 1F [DUBK1F]
BY ATC
ONLY AVAILABLE WHEN UR(R)-533 NOT ACTIVE

ARRIVALS
(RWY 32)



CHANGES: None.

ATIS	Apt Elev
125.475 (Russian 124.8)	16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

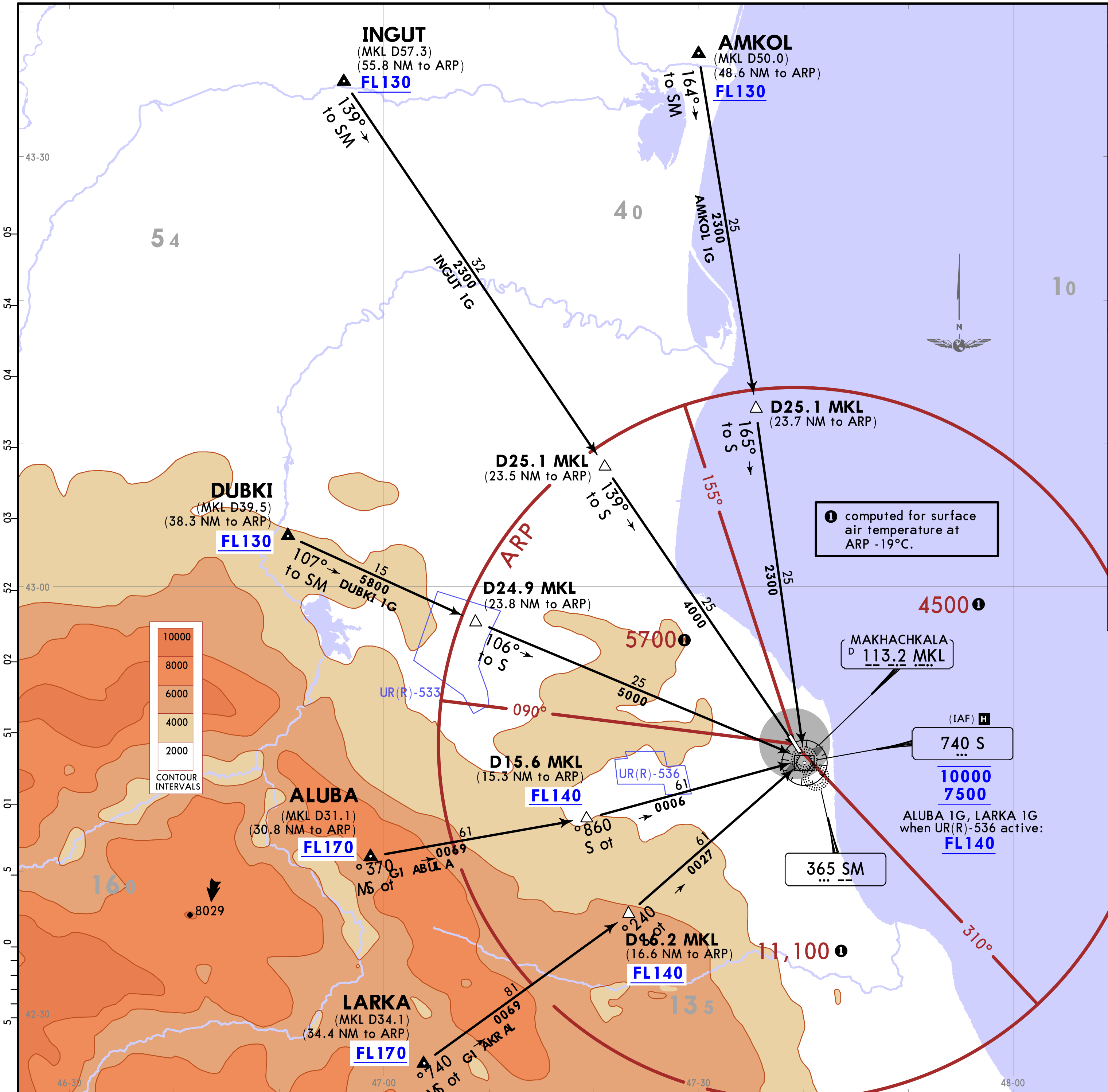
1. DME or RADAR control required.
2. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
3. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
4. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

ALUBA 1G [ALUB1G]
AMKOL 1G [AMKO1G]
INGUT 1G [INGU1G]
LARKA 1G [LARK1G]

DUBKI 1G [DUBK1G]
BY ATC
ONLY AVAILABLE WHEN UR(R)-533 NOT ACTIVE

ARRIVALS
(RWY 32)

FEET QNH	METERS (QFE)
10000	(3045)
7500	(2285)
6700	(2040)



S Lctr
Under RADAR control when UR(R)-533 and UR(R)-536 active

MAX 235 KT
MHA 6700

CHANGES: Holding speed.

ATIS
125.475
(Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

BUIKS 1E [BUIK1E]

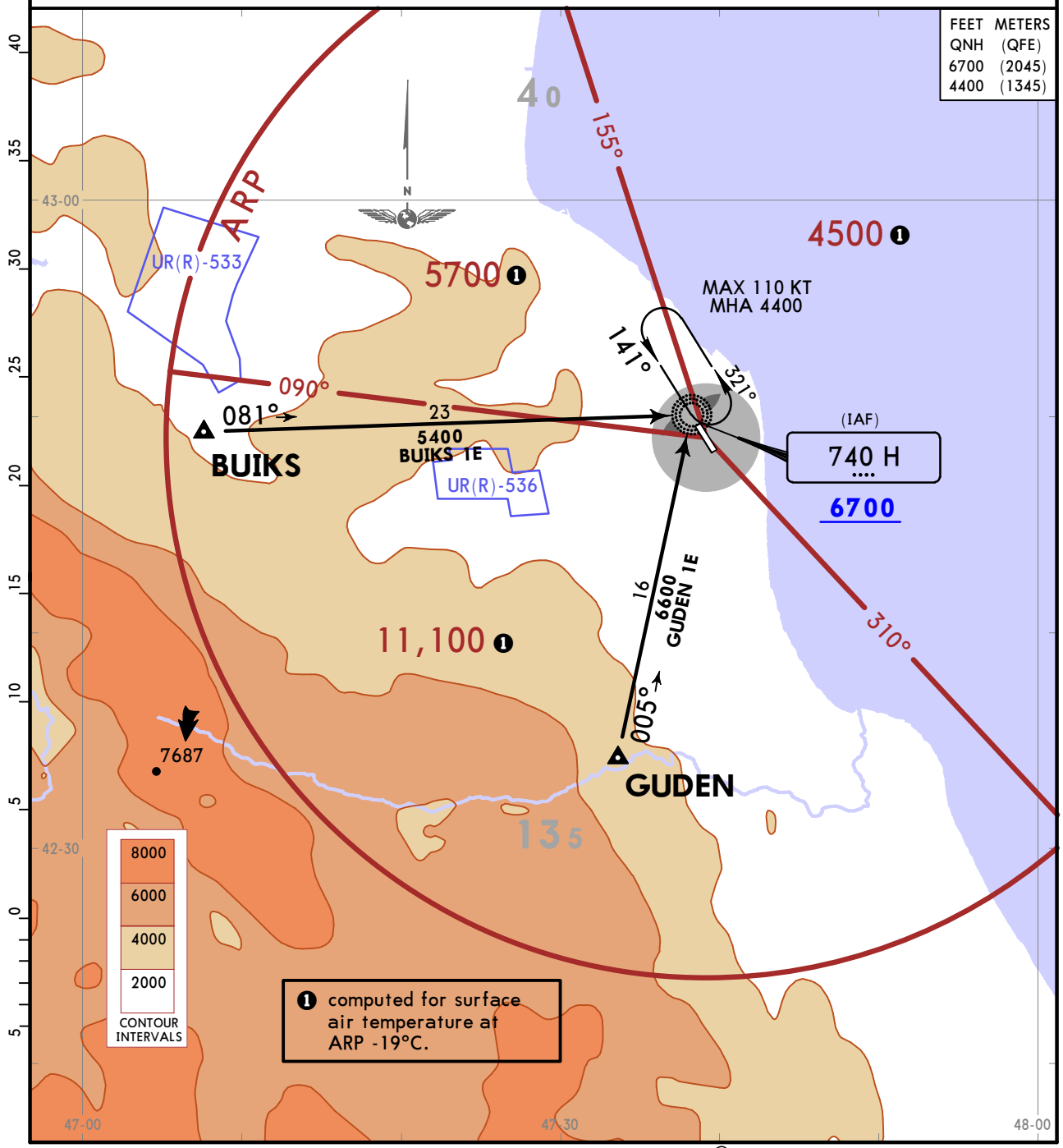
ONLY AVAILABE WHEN UR(R)-533 AND UR(R)-536 NOT ACTIVE

GUDEN 1E [GUDE1E]

ARRIVALS
(RWY 14)

CAT A

UNDER RADAR CONTROL WHEN UR(R)-536 ACTIVE



CHANGES: Trans level, MSA, AWY connection.

ATIS
125.475
(Russian 124.8)

Apt Elev
16

Alt Set: hPa (MM on request)
Trans level: FL130
FL140 when pressure is less than 1013 hPa (760mm)
FL150 when pressure is less than 977 hPa (733mm)

1. If flight crew has no information or is unable to maintain STAR or IAP, report to APP controller and request vectoring.
2. Direct routing is only permitted only after obtaining instructions from ATS to proceed directly to assigned point.
3. In case of vectoring for approach, the last assigned heading enables ACFT to establish on final approach at an angle of 45° or less. Approach clearance is issued simultaneously with the last assigned heading. ACFT shall maintain last cleared altitude until glide path interception.

BUIKS 1G [BUIK1G]

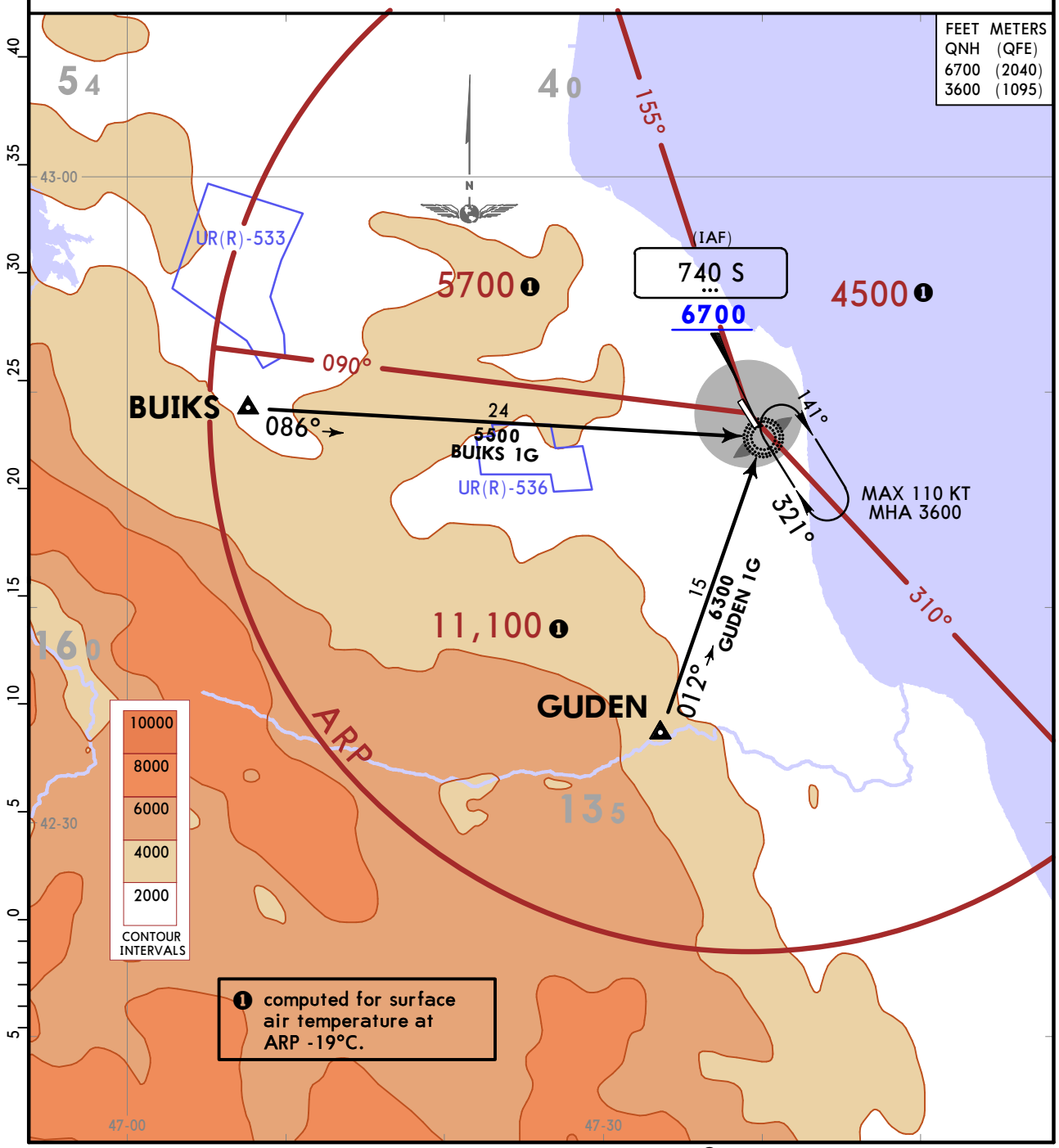
ONLY AVAILABE WHEN UR(R)-533 AND UR(R)-536 NOT ACTIVE

GUDEN 1G [GUDE1G]

ARRIVALS
(RWY 32)

CAT A

UNDER RADAR CONTROL WHEN UR(R)-536 ACTIVE



CHANGES: Trans level, MSA, AWY connections.

MAKHACHKALA, RUSSIA

RNAV SID

MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)

RNAV 1 GNSS required

1. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
2. Radar vectoring and/or 'direct to' instructions can be applied.

AGATO 1N [AGAT1N]
AGNET 1N [AGNE1N]
BALIP 1N [BALI1N]
RIRAN 1N [RIRA1N]
RNAV DEPARTURES
(RWY 14)

Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
AGATO 1N: 5.4% up to FL170, due to airspace structure.
AGNET 1N: 4.8% up to FL130, due to airspace structure.
BALIP 1N: 5.4% up to FL150, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.8% V/V (fpm)	365	486	729	972	1215	1458
5.4% V/V (fpm)	410	547	820	1094	1367	1641

FEET	METERS
QNH	(QFE)
700	(211)
10000	(3050)
12000	(3660)

1 computed for surface air temperature at ARP -19°C.

RIRAN
FL130

BALIP
FL150

AGATO
FL170

AGNET
FL130

MLØ19

MLØ23
10000

4500 1

5700 1

11,100 1

4.34 NI NAR R

24.4 BALIP 1N

29.2 AGATO 1N

22.3 AGNET 1N

16.9

155°
090°
141°
118°
310°
230°
095°
152°
122°

ARP

6785

8000
6000
4000
2000
CONTOUR INTERVALS

CHANGES: General instructions note, trans alt, MSA, close-in obstacles.

MAKHACHKALA, RUSSIA

RNAV SID

MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)

RNAV 1 GNSS required

1. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
2. Radar vectoring and/or 'direct to' instructions can be applied.

ALUBA 1N [ALUB1N]
LARKA 1N [LARK1N]
RNAV DEPARTURES
(RWY 14)

Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
ALUBA 1N: 4.0% up to FL180, due to airspace structure.
LARKA 1N: 3.9% up to FL160, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.9% V/V (fpm)	296	395	592	790	987	1185
4.0% V/V (fpm)	304	405	608	810	1013	1215

FEET	METERS
QNH	(QFE)
700	(211)
10000	(3050)
12000	(3660)

1 computed for surface air temperature at ARP -19°C.

CONTOUR INTERVALS: 10000, 8000, 6000, 4000, 2000

ARP

155°

090°

141°

118°

310°

283°

264°

5700 1

4500 1

11,100 1

8059

ALUBA
FL180

LARKA
FL160

MLØ19

MLØ23
10000

MLØ24

16.9

43.8
ALUBA 1N

37.5
LARKA 1N

2.01

54 40 10 16 13 5 37

43-00 42-30 47-00 47-30 48-00 48-30

CHANGES: General instructions note, trans alt, MSA, close-in obstacles.

MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)

RNAV 1 GNSS required.

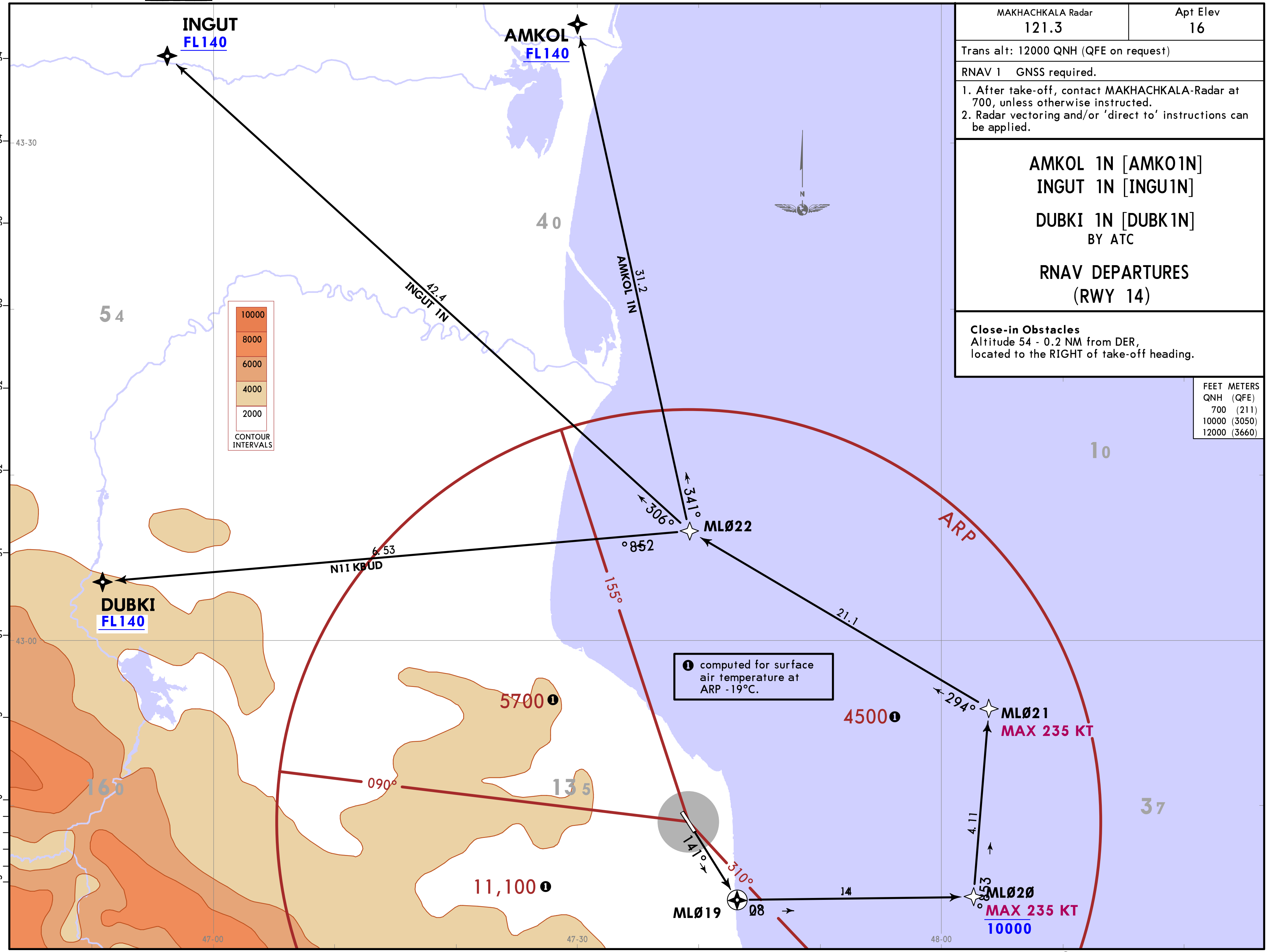
1. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
2. Radar vectoring and/or 'direct to' instructions can be applied.

AMKOL 1N [AMKO1N]
INGUT 1N [INGU1N]
DUBKI 1N [DUBK1N]
BY ATC

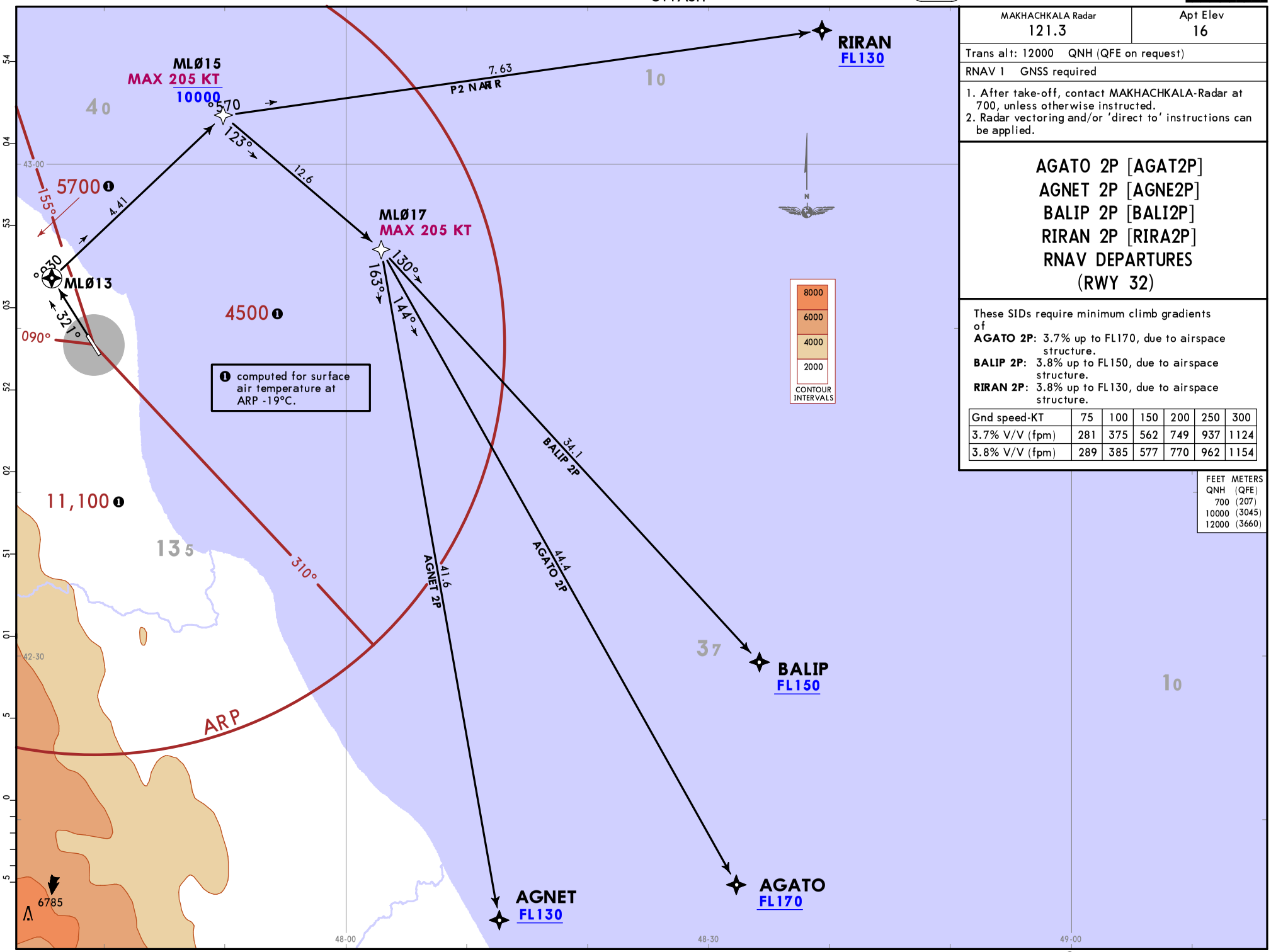
RNAV DEPARTURES
(RWY 14)

Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

FEET QNH	METERS (QFE)
700	(211)
10000	(3050)
12000	(3660)



CHANGES: Altitudes, general instructions note, trans alt, MSA, close-in obstacles.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)

RNAV 1 GNSS required

1. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
2. Radar vectoring and/or 'direct to' instructions can be applied.

AGATO 2P [AGAT2P]
AGNET 2P [AGNE2P]
BALIP 2P [BALI2P]
RIRAN 2P [RIRA2P]
RNAV DEPARTURES
(RWY 32)

These SIDs require minimum climb gradients of

AGATO 2P: 3.7% up to FL170, due to airspace structure.

BALIP 2P: 3.8% up to FL150, due to airspace structure.

RIRAN 2P: 3.8% up to FL130, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.7% V/V (fpm)	281	375	562	749	937	1124
3.8% V/V (fpm)	289	385	577	770	962	1154

FEET	METERS
QNH	(QFE)
700	(207)
10000	(3045)
12000	(3660)

CHANGES: RNAV SIDs renumbered, trans alt, MSA.

MAKHACHKALA, RUSSIA

RNAV SID

MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)

RNAV 1 GNSS required

1. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
2. Radar vectoring and/or 'direct to' instructions can be applied.

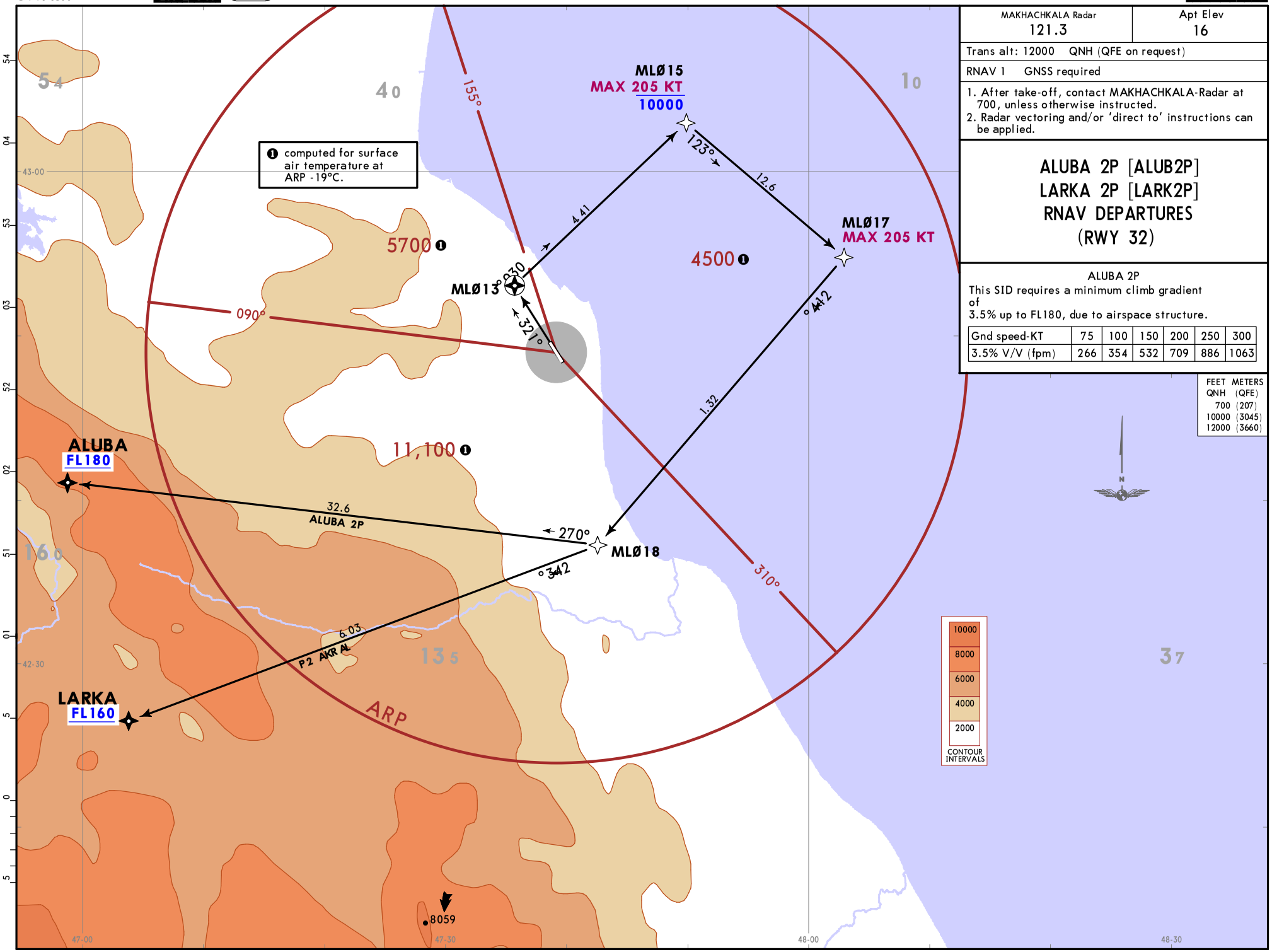
ALUBA 2P [ALUB2P]
LARKA 2P [LARK2P]
RNAV DEPARTURES
(RWY 32)

ALUBA 2P

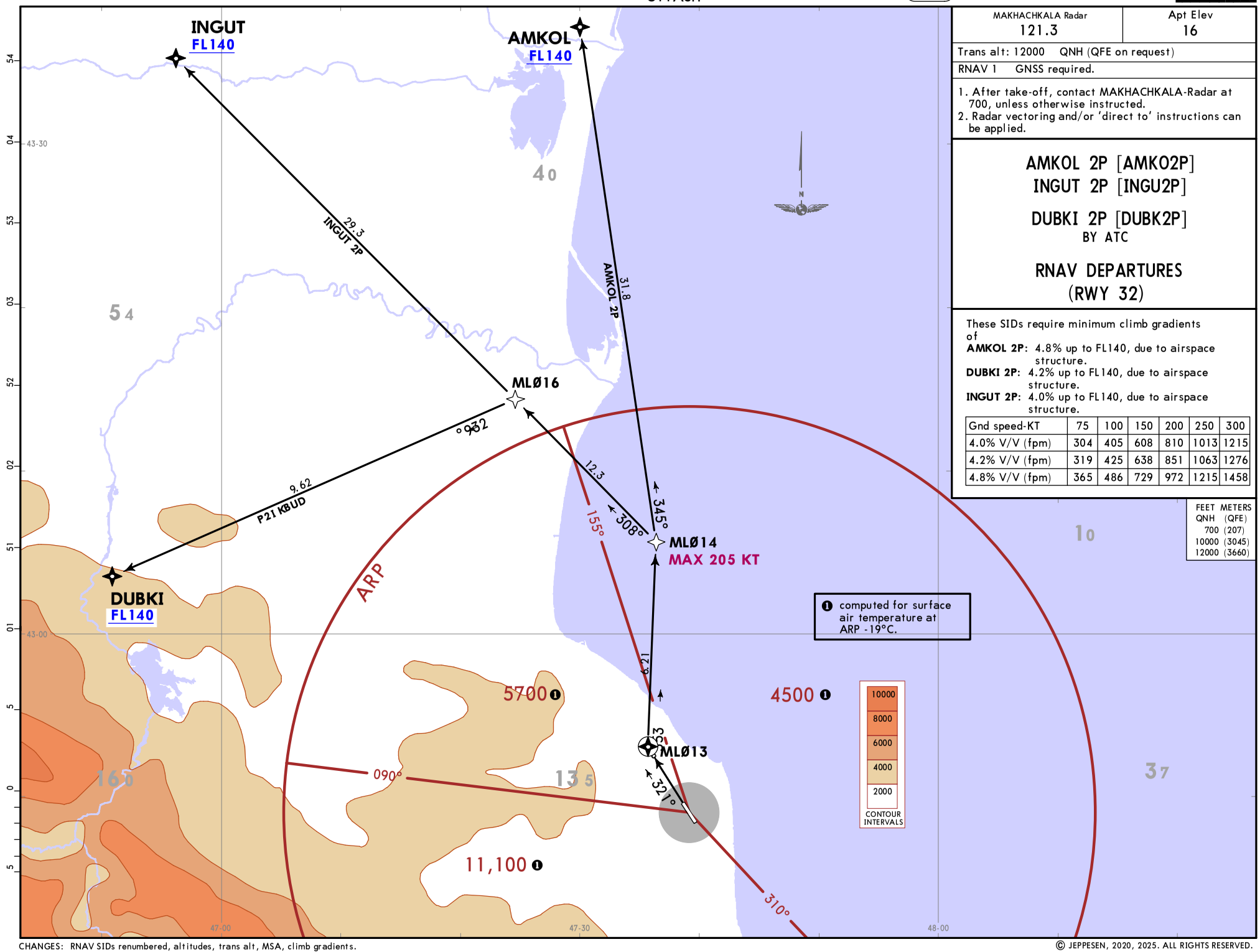
This SID requires a minimum climb gradient of 3.5% up to FL180, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.5% V/V (fpm)	266	354	532	709	886	1063

FEET	METERS
QNH	(QFE)
700	(207)
10000	(3045)
12000	(3660)



CHANGES: RNAV SIDs renumbered, trans alt, MSA., climb gradient



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)

RNAV 1 GNSS required.

1. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
2. Radar vectoring and/or 'direct to' instructions can be applied.

AMKOL 2P [AMKO2P]
INGUT 2P [INGU2P]
DUBKI 2P [DUBK2P]
BY ATC

RNAV DEPARTURES
(RWY 32)

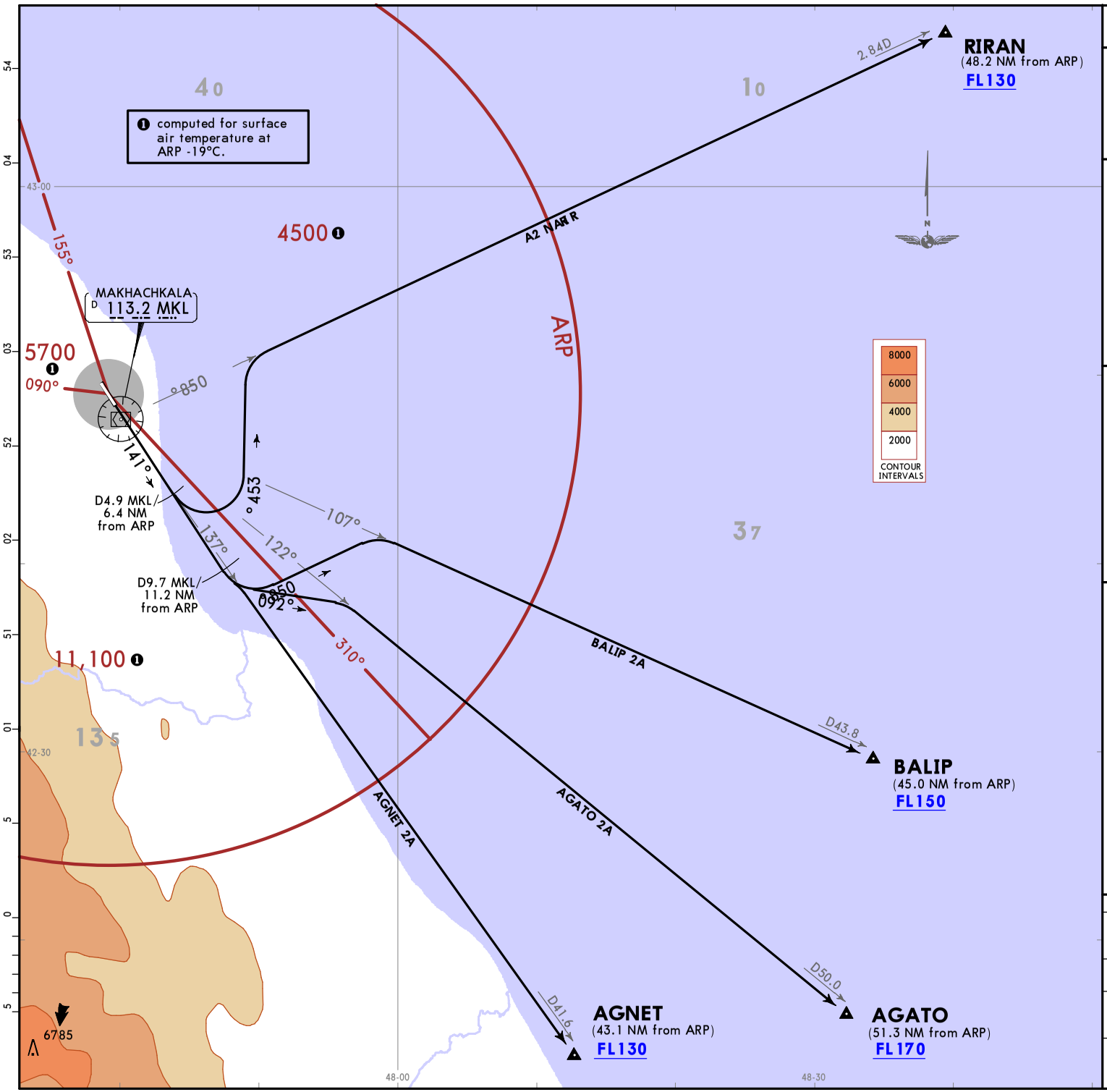
These SIDs require minimum climb gradients of
AMKOL 2P: 4.8% up to FL140, due to airspace structure.
DUBKI 2P: 4.2% up to FL140, due to airspace structure.
INGUT 2P: 4.0% up to FL140, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.0% V/V (fpm)	304	405	608	810	1013	1215
4.2% V/V (fpm)	319	425	638	851	1063	1276
4.8% V/V (fpm)	365	486	729	972	1215	1458

CHANGES: RNAV SIDs renumbered, altitudes, trans alt, MSA, climb gradients.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AGATO 2A [AGAT2A]
AGNET 2A [AGNE2A]
BALIP 2A [BALI2A]
RIRAN 2A [RIRA2A]
DEPARTURES
(RWY 14)

UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

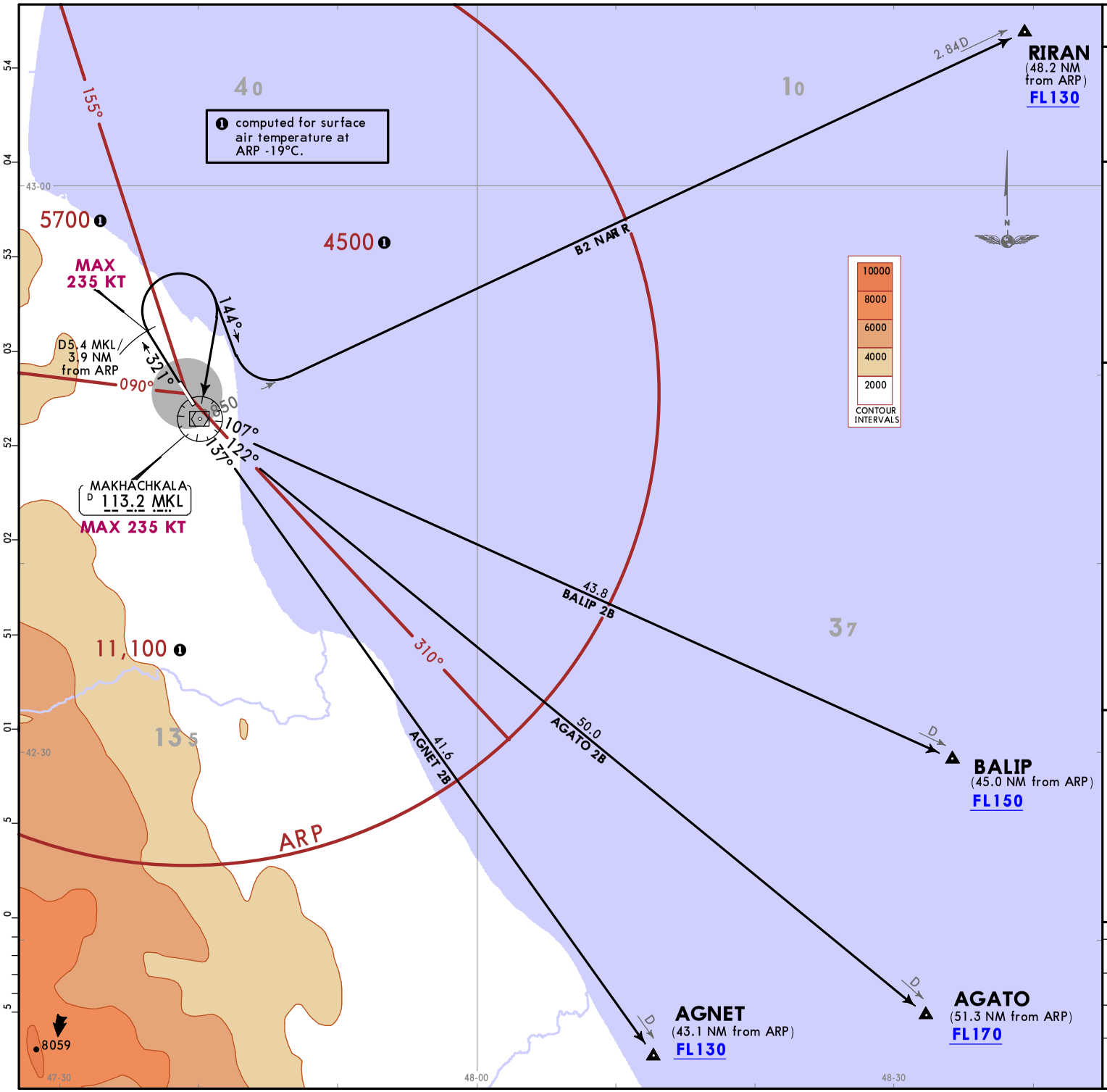
Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
AGATO 2A: 5.4% up to FL170, due to airspace structure.
AGNET 2A: 5.1% up to FL130, due to airspace structure.
BALIP 2A: 5.1% up to FL150, due to airspace structure.
RIRAN 2A: 3.6% up to FL130, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
5.1% V/V (fpm)	387	516	775	1033	1291	1549
5.4% V/V (fpm)	410	547	820	1094	1367	1641

SID	ROUTING
AGATO 2A	Climb on 141° track to D9.7 MKL, turn LEFT, 092° track, intercept MKL R122 to AGATO.
AGNET 2A	Climb on 141° track to D9.7 MKL, intercept MKL R137 to AGNET.
BALIP 2A	Climb on 141° track to D9.7 MKL, turn LEFT, 058° track, intercept MKL R107 to BALIP.
RIRAN 2A	Climb on 141° track to D4.9 MKL, turn LEFT, 354° track, intercept MKL R058 to RIRAN.

CHANGES: None.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AGATO 2B [AGAT2B]
AGNET 2B [AGNE2B]
BALIP 2B [BALI2B]
RIRAN 2B [RIRA2B]
DEPARTURES
(RWY 32)

UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

FEET	METERS
QNH	(QFE)
700	(207)
12000	(3660)

These SIDs require minimum climb gradients of
AGATO 2B: 3.8% up to FL170, due to airspace structure.
BALIP 2B: 3.7% up to FL150, due to airspace structure.
RIRAN 2B: 3.5% up to FL130, due to airspace structure.

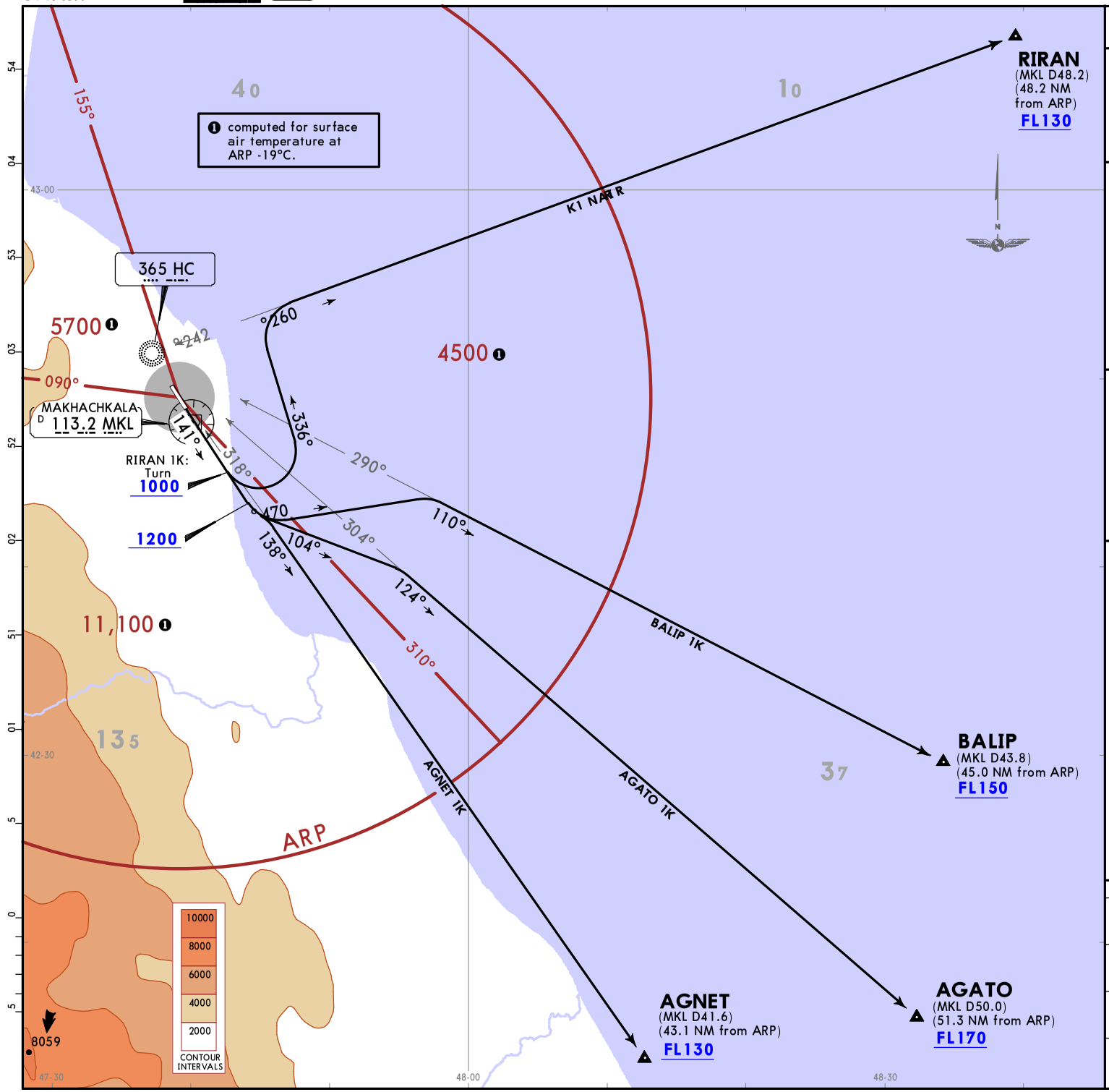
Gnd speed-KT	75	100	150	200	250	300
3.5% V/V (fpm)	266	354	532	709	886	1063
3.7% V/V (fpm)	281	375	562	749	937	1124
3.8% V/V (fpm)	289	385	577	770	962	1154

SID	ROUTING
AGATO 2B	Climb on 321° track to D5.4 MKL, turn RIGHT to MKL, MKL R122 to AGATO.
AGNET 2B	Climb on 321° track to D5.4 MKL, turn RIGHT to MKL, MKL R137 to AGNET.
BALIP 2B	Climb on 321° track to D5.4 MKL, turn RIGHT to MKL, MKL R107 to BALIP.
RIRAN 2B	Climb on 321° track to D5.4 MKL, turn RIGHT, 144° track, intercept MKL R058 to RIRAN.

CHANGES: Reissued.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AGATO 1K [AGAT1K]
AGNET 1K [AGNE1K]
BALIP 1K [BALI1K]
RIRAN 1K [RIRA1K]
DEPARTURES
(RWY 14)

UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

FEET QNH	METERS (QFE)
700	(211)
1000	(305)
1200	(370)
3700	(1130)
12000	(3660)

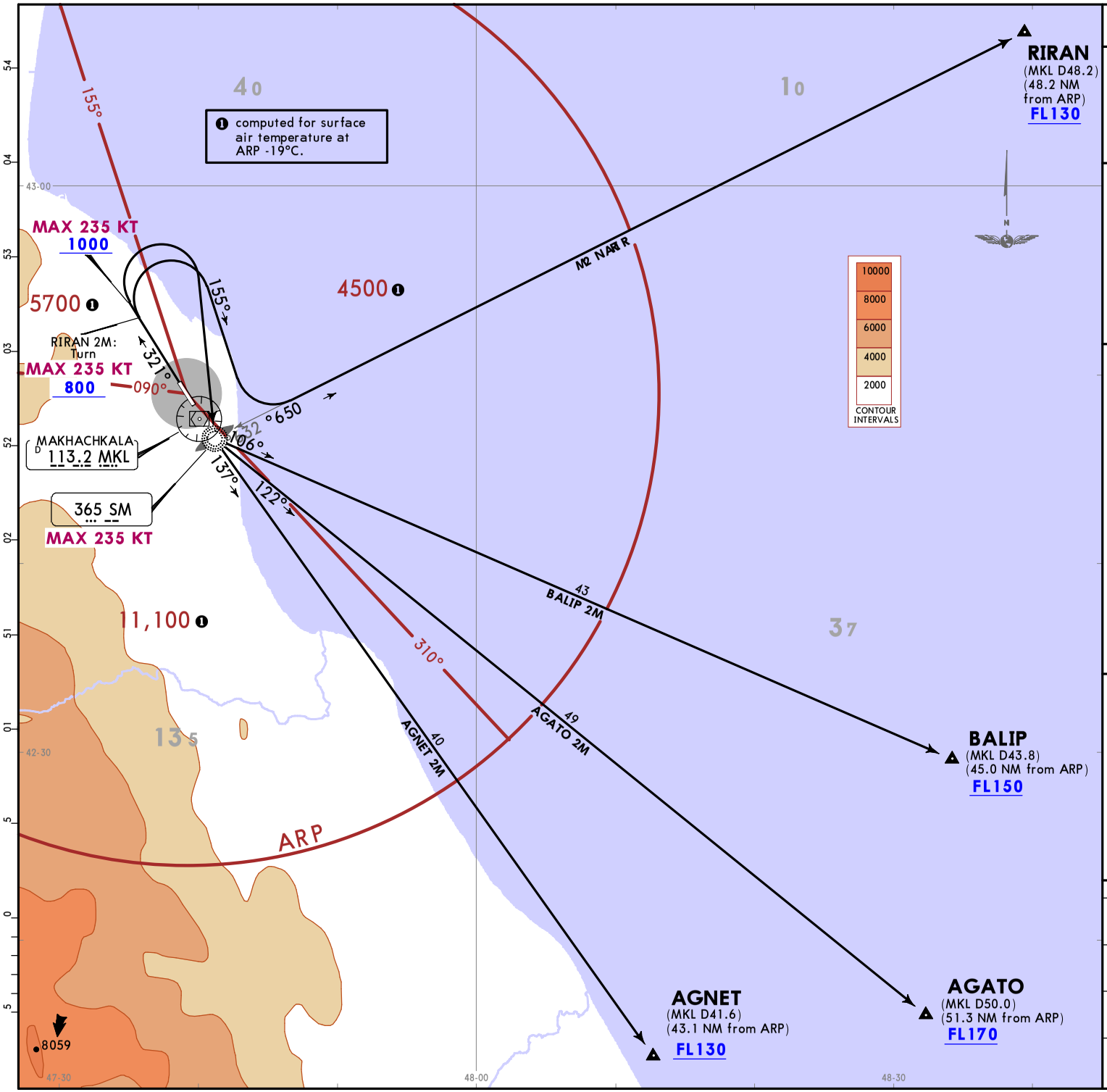
Close-in Obstacles
Altitude 54 - 0.2 NM from DER,
located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
AGATO 1K: 5.5% up to FL170, due to airspace structure.
AGNET 1K: 5.0% up to FL130, due to airspace structure.
BALIP 1K: 5.4% up to FL150, due to airspace structure.
RIRAN 1K: 4.2% up to 3700, due to obstacles.
3.8% up to FL130, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.8% V/V (fpm)	289	385	577	770	962	1154
4.2% V/V (fpm)	319	425	638	851	1063	1276
5.0% V/V (fpm)	380	506	760	1013	1266	1519
5.4% V/V (fpm)	410	547	820	1094	1367	1641
5.5% V/V (fpm)	418	557	835	1114	1392	1671

SID	ROUTING
AGATO 1K	Climb straight ahead to at or above 1200, turn LEFT, 104° track, intercept 124° bearing from HC to AGATO.
AGNET 1K	Climb straight ahead to at or above 1200, intercept 138° bearing from HC to AGNET.
BALIP 1K	Climb straight ahead to at or above 1200, turn LEFT, 074° track, intercept 110° bearing from HC to BALIP.
RIRAN 1K	Climb straight ahead to at or above 1000, turn LEFT, 336° track, intercept 062° bearing from HC to RIRAN.

CHANGES: Trans alt, MSA, WP definitions, availability.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AGATO 2M [AGAT2M]
AGNET 2M [AGNE2M]
BALIP 2M [BALI2M]
RIRAN 2M [RIRA2M]
DEPARTURES
(RWY 32)

FEET	METERS
QNH	(QFE)
700	(207)
800	(245)
1000	(305)
2200	(670)
12000	(3660)

These SIDs require minimum climb gradients of
AGATO 2M: 4.0% up to FL170, due to airspace structure.
BALIP 2M: 3.9% up to FL150, due to airspace structure.
RIRAN 2M: 3.7% up to 2200, due to obstacles.

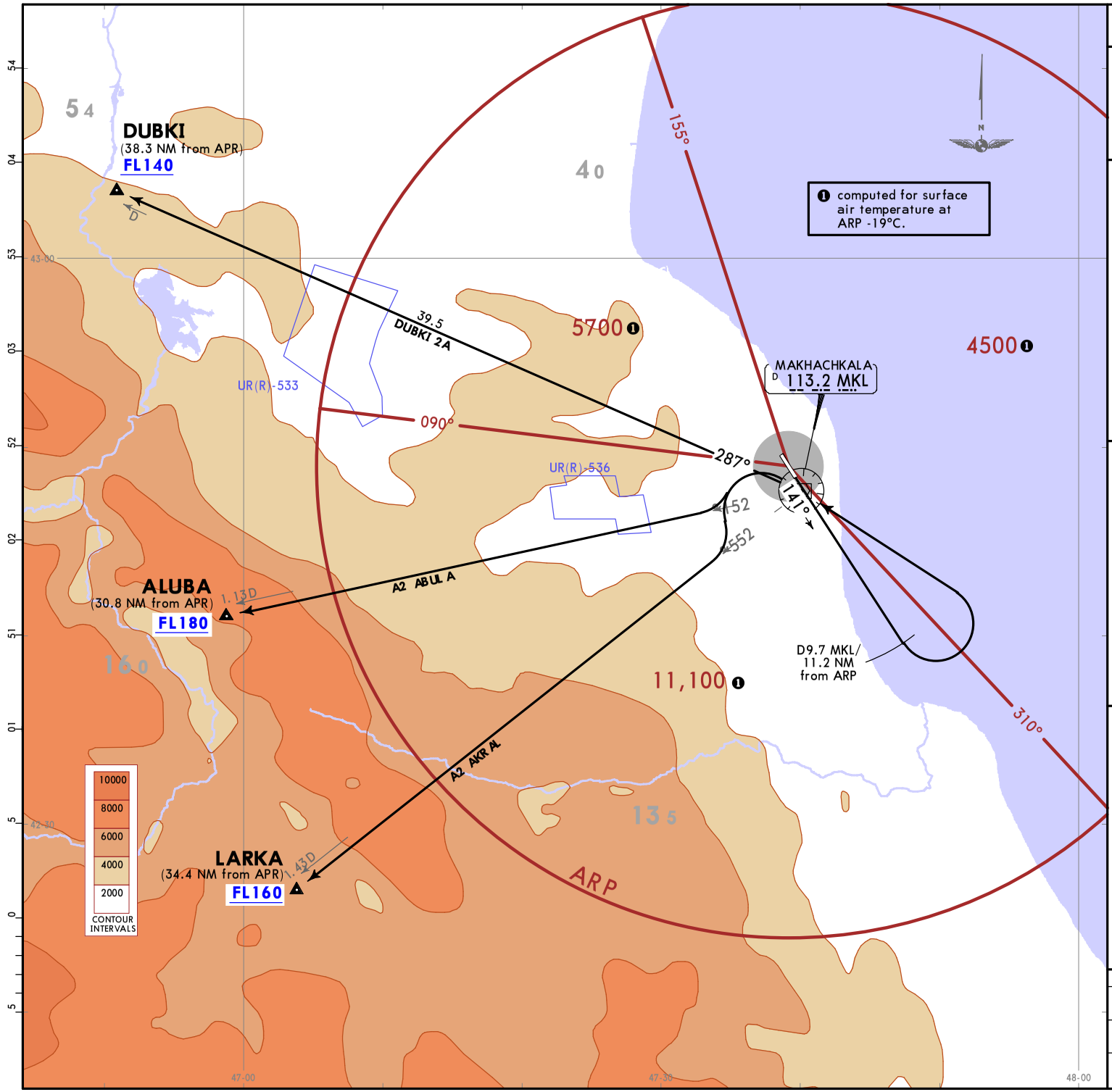
Gnd speed-KT	75	100	150	200	250	300
3.7% V/V (fpm)	281	375	562	749	937	1124
3.9% V/V (fpm)	296	395	592	790	987	1185
4.0% V/V (fpm)	304	405	608	810	1013	1215

SID	ROUTING
AGATO 2M	Climb straight ahead to at or above 1000, turn RIGHT to SM, 122° bearing from SM to AGATO.
AGNET 2M	Climb straight ahead to at or above 1000, turn RIGHT to SM, 137° bearing from SM to AGNET.
BALIP 2M	Climb straight ahead to at or above 1000, turn RIGHT to SM, 106° bearing from SM to BALIP.
RIRAN 2M	Climb straight ahead to at or above 800, turn RIGHT, 155° track, intercept 056° bearing from SM to RIRAN.

CHANGES: SIDs renumbered & revised, MSA, trans alt.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

ALUBA 2A [ALUB2A]
DUBKI 2A [DUBK2A]
ONLY AVAILABLE WHEN UR(R)-533
AND UR(R)-536 NOT ACTIVE

LARKA 2A [LARK2A]
ONLY AVAILABLE WHEN UR(R)-536 NOT ACTIVE

DEPARTURES
(RWY 14)
UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

FEET QNH	METERS (QFE)
700	(211)
9300	(2835)
9400	(2865)
12000	(3660)

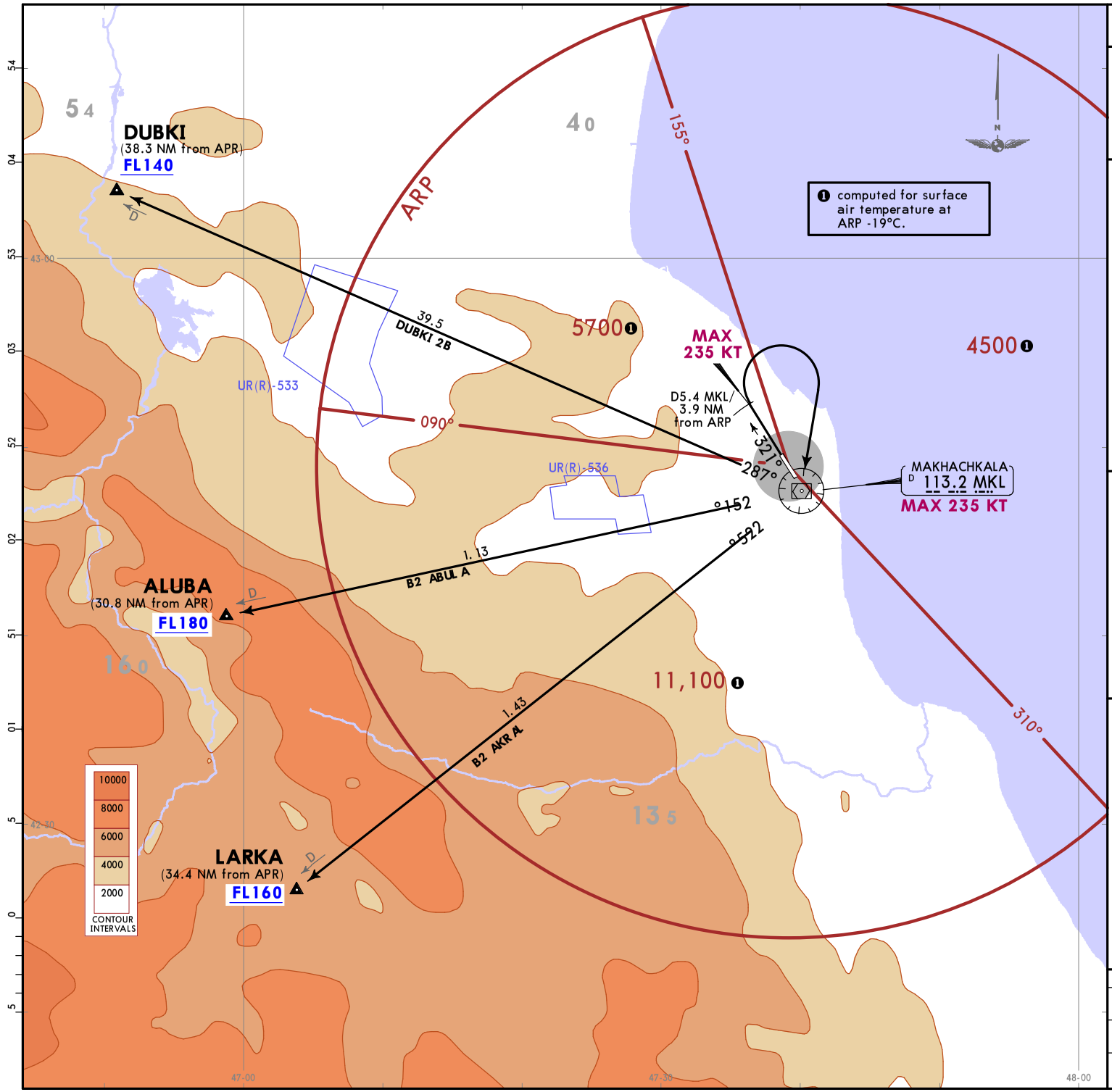
Close-in Obstacles
Altitude 54 - 0.2 NM from DER,
located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
ALUBA 2A: 3.4% up to 9300, due to obstacles.
4.5% up to FL180, due to airspace structure.
LARKA 2A: 3.6% up to 9400, due to obstacles.
3.8% up to FL160, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.4% V/V (fpm)	258	344	516	689	861	1033
3.6% V/V (fpm)	273	365	547	729	911	1094
3.8% V/V (fpm)	289	385	577	770	962	1154
4.5% V/V (fpm)	342	456	684	911	1139	1367

SID	ROUTING
ALUBA 2A	Climb on 141° track to D9.7 MKL, turn LEFT to MKL, MKL R251 to ALUBA.
DUBKI 2A By ATC	Climb on 141° track to D9.7 MKL, turn LEFT to MKL, MKL R287 to DUBKI.
LARKA 2A	Climb on 141° track to D9.7 MKL, turn LEFT to MKL, MKL R225 to LARKA.

CHANGES: None.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

ALUBA 2B [ALUB2B]
ONLY AVAILABLE WHEN UR(R)-536 NOT ACTIVE

DUBKI 2B [DUBK2B]
ONLY AVAILABLE WHEN UR(R)-533
AND UR(R)-536 NOT ACTIVE
BY ATC

LARKA 2B [LARK2B]

DEPARTURES
(RWY 32)
UNDER RADAR CONTROL WHEN UR(R)-536 ACTIVE

FEET QNH	METERS (QFE)
700	(207)
4000	(1220)
8400	(2560)
9400	(2865)
12000	(3660)

These SIDs require minimum climb gradients of
ALUBA 2B: 4.6% up to 9400, due to obstacles. 6.0% up to FL180, due to airspace structure.
DUBKI 2B: 4.8% up to 4000, due to obstacles. 3.7% up to FL140, due to airspace structure.
LARKA 2B: 4.4% up to 8400, due to obstacles. 4.7% up to FL160, due to airspace structure.

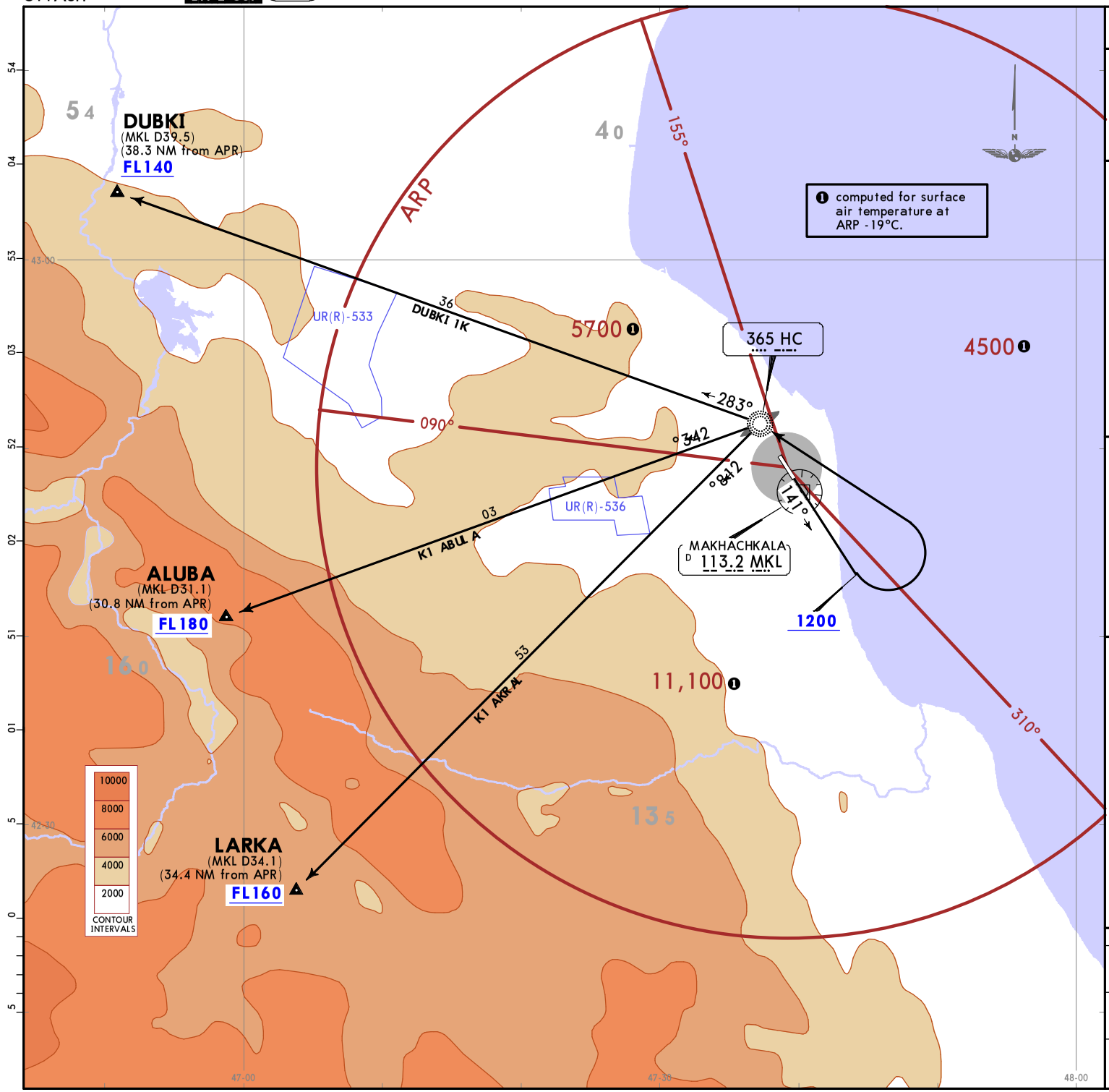
Gnd speed-KT	75	100	150	200	250	300
3.7% V/V (fpm)	281	375	562	749	937	1124
4.4% V/V (fpm)	334	446	668	891	1114	1337
4.6% V/V (fpm)	349	466	699	932	1165	1397
4.7% V/V (fpm)	357	476	714	952	1190	1428
4.8% V/V (fpm)	365	486	729	972	1215	1458
6.0% V/V (fpm)	456	608	911	1215	1519	1823

SID	ROUTING
ALUBA 2B	Climb on 321° track to D5.4 MKL, turn RIGHT to MKL, MKL R251 to ALUBA.
DUBKI 2B	Climb on 321° track to D5.4 MKL, turn RIGHT to MKL, MKL R287 to DUBKI.
LARKA 2B	Climb on 321° track to D5.4 MKL, turn RIGHT to MKL, MKL R225 to LARKA.

CHANGES: Reissued.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

ALUBA 1K [ALUB1K]
LARKA 1K [LARK1K]
ONLY AVAILABLE WHEN UR(R)-536 NOT ACTIVE

DUBKI 1K [DUBK1K]
ONLY AVAILABLE WHEN UR(R)-533
AND UR(R)-536 NOT ACTIVE
BY ATC

DEPARTURES
(RWY 14)
UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

FEET QNH	METERS (QFE)
700	(211)
3700	(1130)
7200	(2195)
9500	(2895)
12000	(3660)

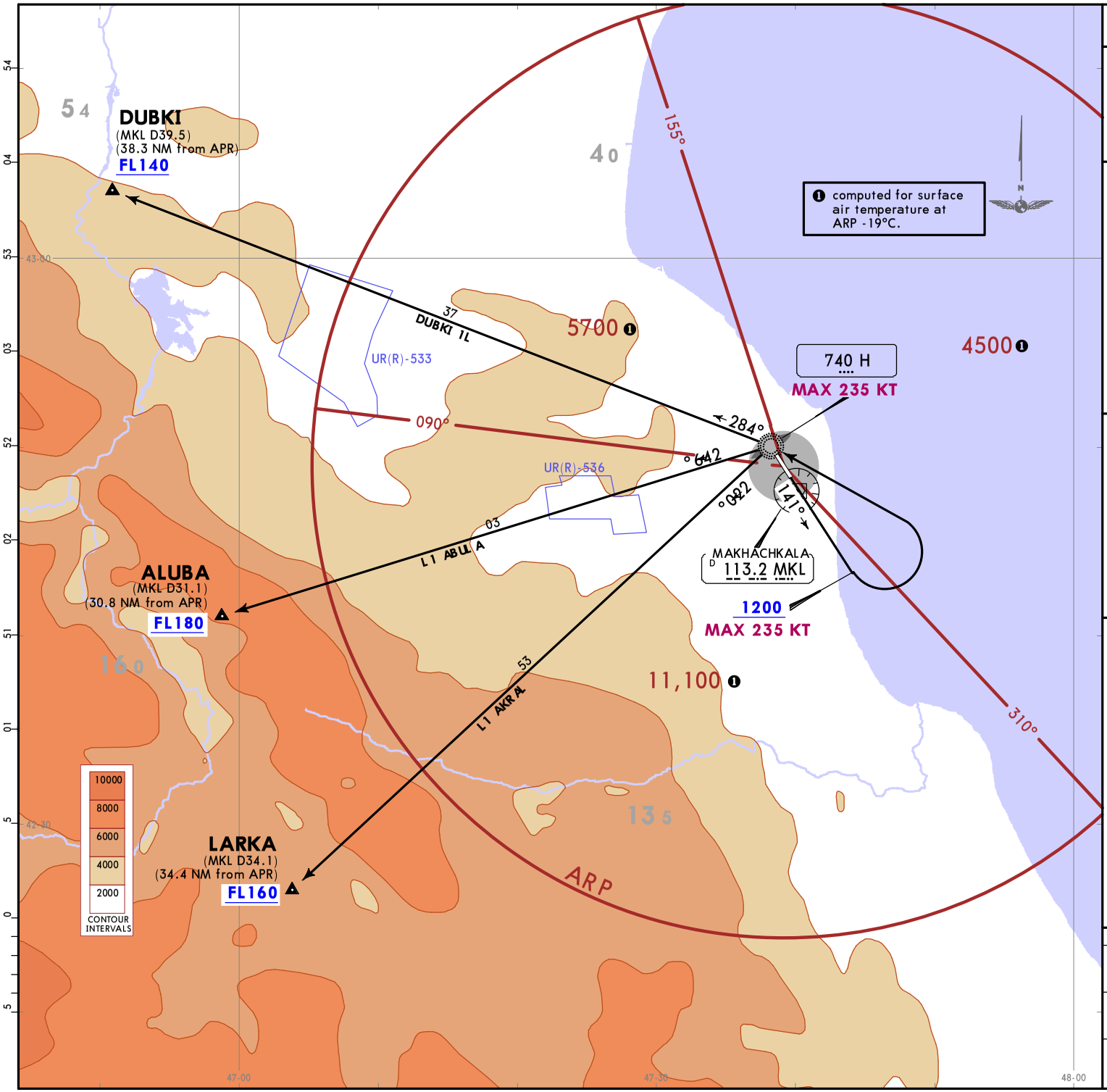
Close-in Obstacles
Altitude 54 - 0.2 NM from DER,
located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
ALUBA 1K: 4.3% up to 9500, due to obstacles.
6.3% up to FL180, due to airspace structure.
DUBKI 1K: 4.2% up to 3700, due to obstacles.
4.2% up to FL140, due to airspace structure.
LARKA 1K: 4.2% up to 7200, due to obstacles.
5.0% up to FL160, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V (fpm)	319	425	638	851	1063	1276
4.3% V/V (fpm)	327	435	653	871	1089	1306
5.0% V/V (fpm)	380	506	760	1013	1266	1519
6.3% V/V (fpm)	478	638	957	1276	1595	1914

SID	ROUTING
ALUBA 1K	Climb straight ahead to at or above 1200, turn LEFT to HC, 243° bearing from HC to ALUBA.
DUBKI 1K	Climb straight ahead to at or above 1200, turn LEFT to HC, 283° bearing from HC to DUBKI.
LARKA 1K	Climb straight ahead to at or above 1200, turn LEFT to HC, 218° bearing from HC to LARKA.

CHANGES: DUBKI 1K climb gradient, altitude over DUBKI, MSA, trans alt, WP definitions, availability.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

ALUBA 1L [ALUB1L]
LARKA 1L [LARK1L]
ONLY AVAILABLE WHEN UR(R)-536 NOT ACTIVE

DUBKI 1L [DUBK1L]
ONLY AVAILABLE WHEN UR(R)-533
AND UR(R)-536 NOT ACTIVE
BY ATC

DEPARTURES
(RWY 14)

FEET QNH	METERS (QFE)
700	(211)
1200	(370)
3600	(1100)
3700	(1130)
9500	(2895)
12000	(3660)

Close-in Obstacles
Altitude 54 - 0.2 NM from DER,
located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
ALUBA 1L: 4.4% up to 9500, due to obstacles.
6.5% up to FL180, due to airspace structure.
DUBKI 1L: 4.3% up to 3600, due to obstacles.
4.1% up to FL140, due to airspace structure.
LARKA 1L: 4.3% up to 3700, due to obstacles.
5.2% up to FL160, due to airspace structure.

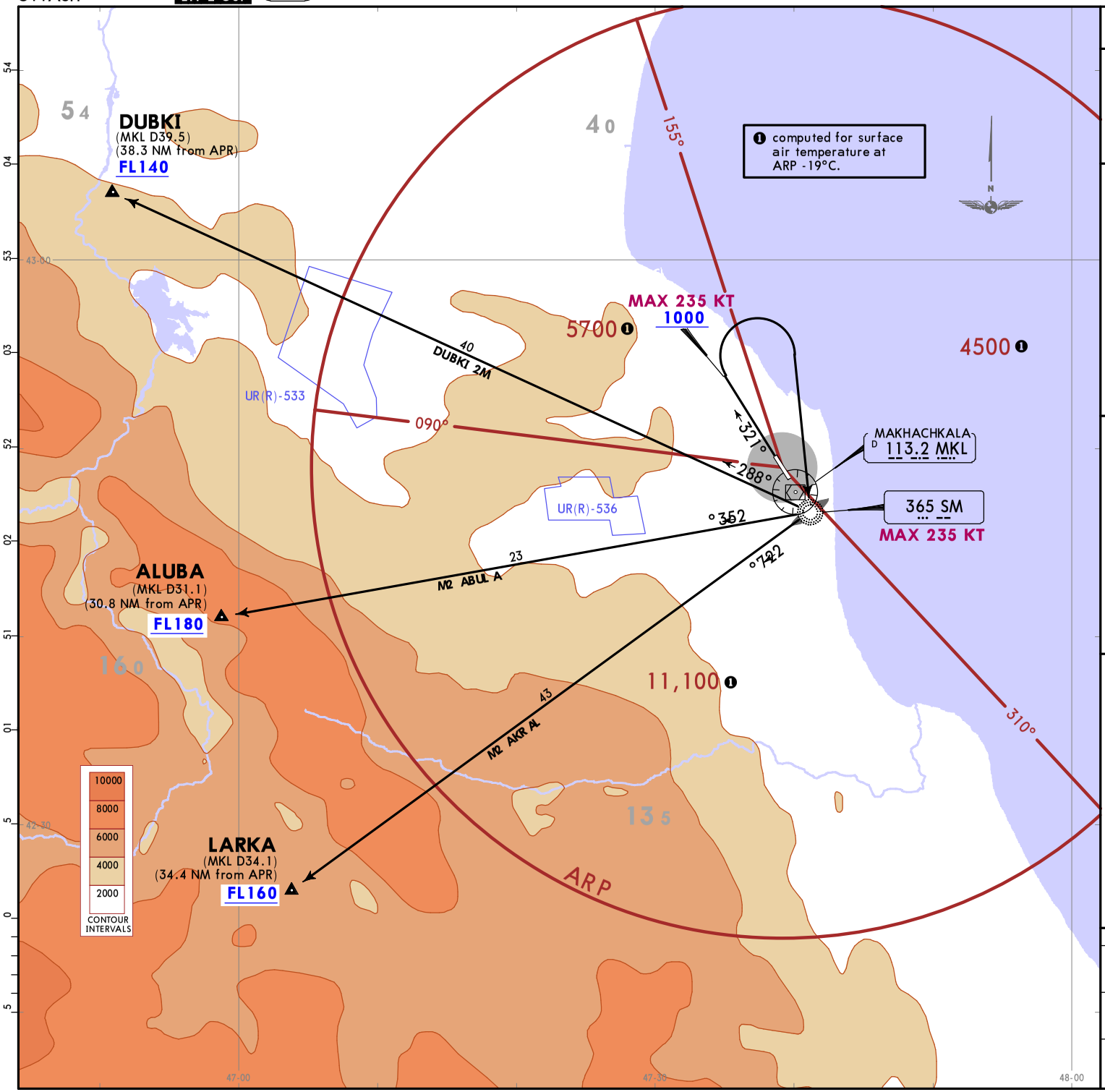
Gnd speed-KT	75	100	150	200	250	300
4.1% V/V (fpm)	311	415	623	830	1038	1246
4.3% V/V (fpm)	327	435	653	871	1089	1306
4.4% V/V (fpm)	334	446	668	891	1114	1337
5.2% V/V (fpm)	395	527	790	1053	1316	1580
6.5% V/V (fpm)	494	658	987	1316	1646	1975

SID	ROUTING
ALUBA 1L	Climb straight ahead to at or above 1200, turn LEFT to H, 246° bearing from H to ALUBA.
DUBKI 1L	Climb straight ahead to at or above 1200, turn LEFT to H, 284° bearing from H to DUBKI.
LARKA 1L	Climb straight ahead to at or above 1200, turn LEFT to H, 220° bearing from H to LARKA.

CHANGES: DUBKI 1L climb gradient, altitude over DUBKI, MSA, trans alt, WP definitions.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

ALUBA 2M [ALUB2M]

ONLY AVAILABLE WHEN UR(R)-536 NOT ACTIVE

DUBKI 2M [DUBK2M]

ONLY AVAILABLE WHEN UR(R)-533 AND UR(R)-536 NOT ACTIVE BY ATC

LARKA 2M [LARK2M]

DEPARTURES (RWY 32)

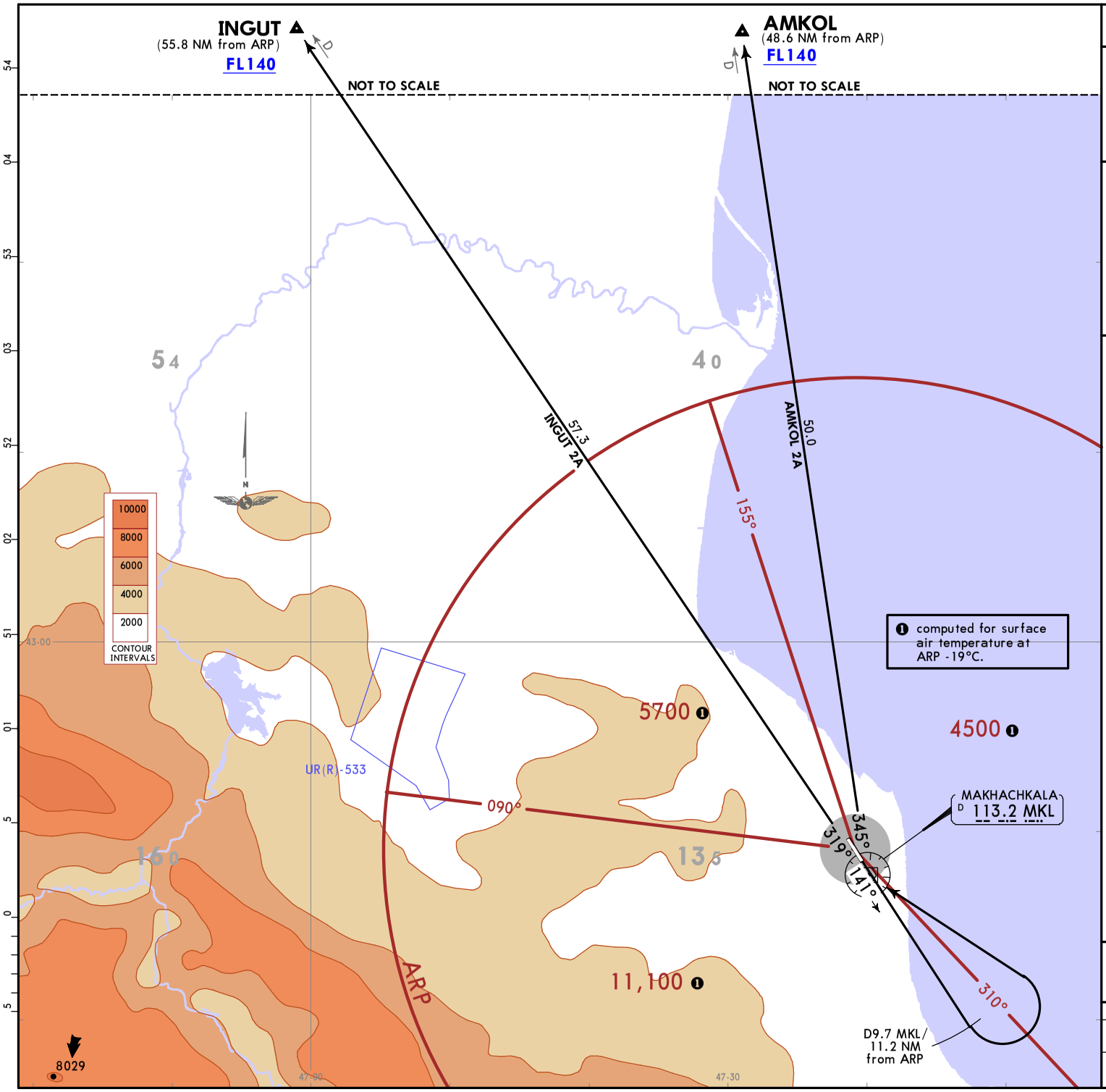
FEET QNH	METERS (QFE)
700	(207)
1000	(305)
4200	(1280)
7200	(2190)
9500	(2890)
10000	(3045)

These SIDs require minimum climb gradients of
ALUBA 2M: 4.7% up to 9400, due to obstacles.
5.8% up to FL180, due to airspace structure.
DUBKI 2M: 4.5% up to 4000, due to obstacles
3.8% up to FL140, due to airspace structure.
LARKA 2M: 5.4% up to 7200, due to obstacles.
4.9% up to FL160, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.8% V/V (fpm)	289	385	577	770	962	1154
4.5% V/V (fpm)	342	456	684	911	1139	1367
4.7% V/V (fpm)	357	476	714	952	1190	1428
4.9% V/V (fpm)	372	496	744	992	1241	1489
5.4% V/V (fpm)	410	547	820	1094	1367	1641
5.8% V/V (fpm)	441	587	881	1175	1468	1762

SID	ROUTING
ALUBA 2M	Climb straight ahead to at or above 1000, turn RIGHT to SM, 253° bearing from SM to ALUBA.
DUBKI 2M	Climb straight ahead to at or above 1000, turn RIGHT to SM, 288° bearing from SM to DUBKI.
LARKA 2M	Climb straight ahead to at or above 1000, turn RIGHT to SM, 227° bearing from SM to LARKA.

CHANGES: SIDs renumbered & revised, MSA, trans alt, WP definitions.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AMKOL 2A [AMKO2A]
INGUT 2A [INGU2A]
DEPARTURES
(RWY 14)
UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

FEET	METERS
QNH	(QFE)
700	(211)
12000	(3660)

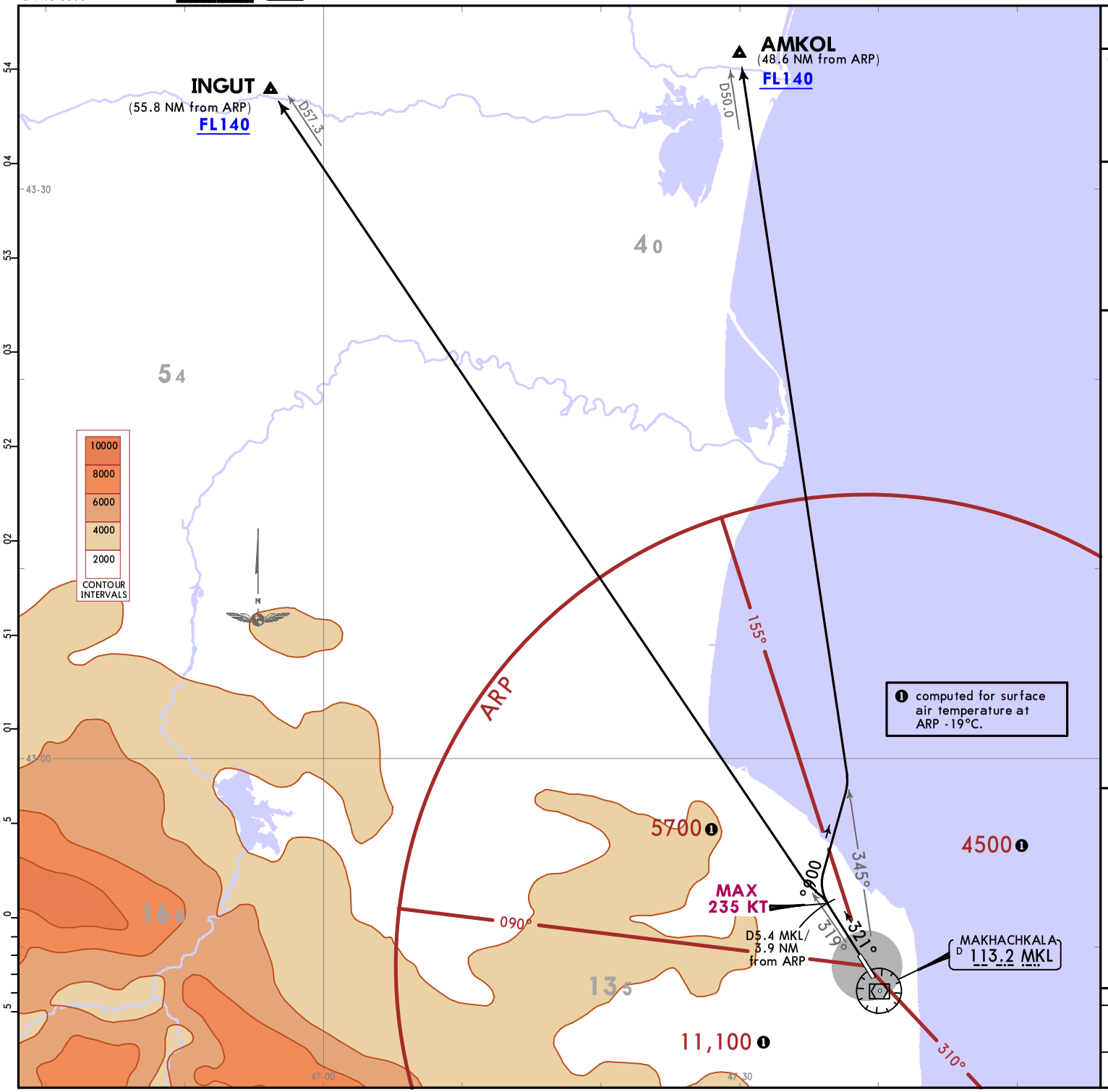
Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

SID	ROUTING
AMKOL 2A	Climb on 141° track to D9.7 MKL, turn LEFT to MKL, MKL R345 to AMKOL.
INGUT 2A	Climb on 141° track to D9.7 MKL, turn LEFT to MKL, MKL R319 to INGUT.

CHANGES: SIDs renumbered & revised, MSA, trans alt.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AMKOL 2B [AMKO2B]
INGUT 2B [INGU2B]
DEPARTURES
(RWY 32)

UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

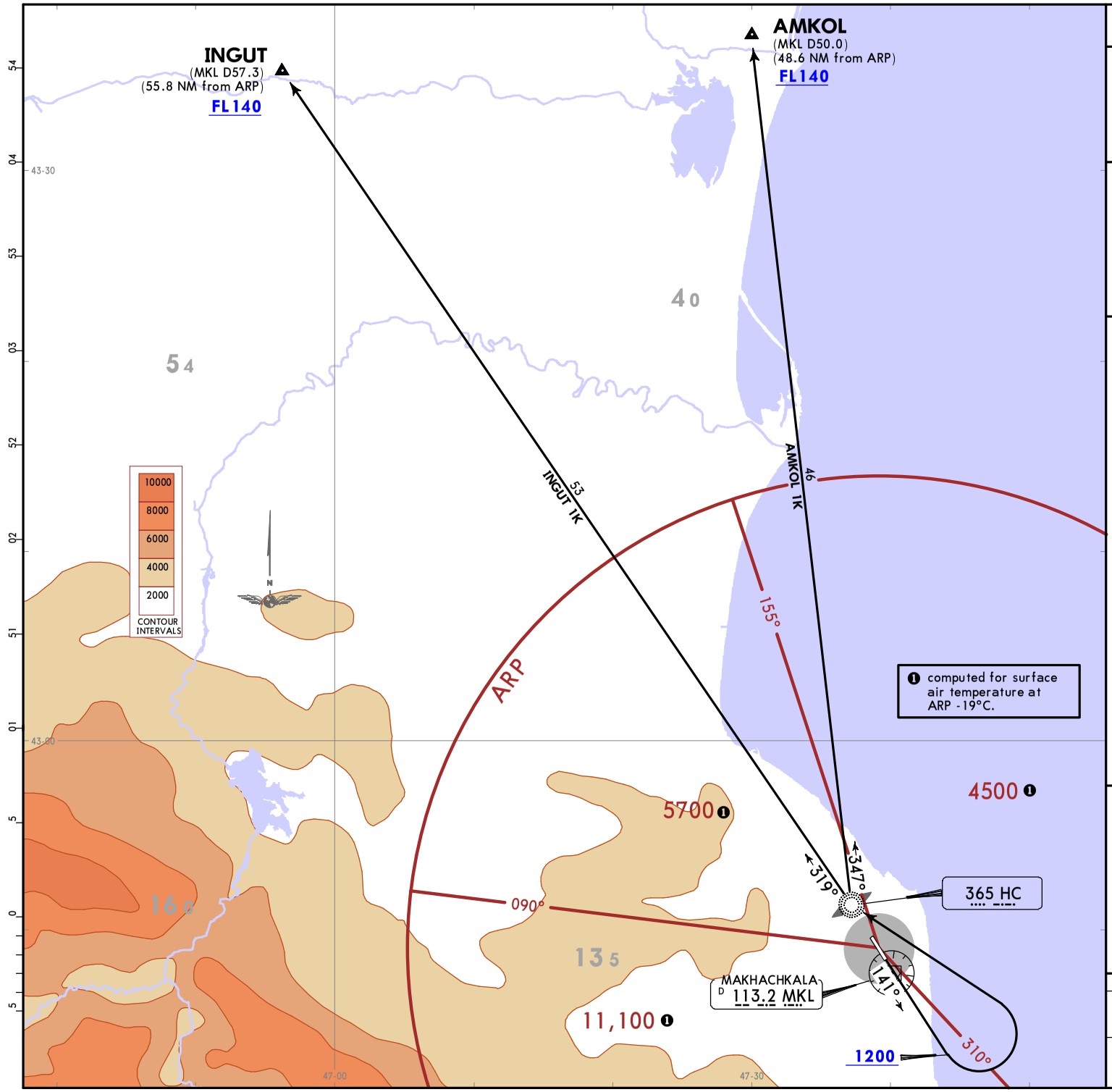
FEET	METERS
QNH	(QFE)
700	(207)
1800	(545)
12000	(3660)

This SID requires a minimum climb gradient of
AMKOL 2B: 4.8% up to FL140, due to airspace structure.
INGUT 2B: 3.6% up to 1900, due to obstacles.
4.2% up to FL140, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
3.6% V/V (fpm)	273	365	547	729	911	1094
4.2% V/V (fpm)	319	425	638	851	1063	1276
4.8% V/V (fpm)	365	486	729	972	1215	1458

SID	ROUTING
AMKOL 2B	Climb on 321° track to D5.4 MKL, turn RIGHT, 009° track, intercept MKL R345 to AMKOL.
INGUT 2B	Climb on 321° track to D5.4 MKL, intercept MKL R319 to INGUT.

CHANGES: SIDs renumbered & revised, MSA, trans alt.



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AMKOL 1K [AMKO1K]
INGUT 1K [INGU1K]
DEPARTURES
(RWY 14)

UNDER RADAR CONTROL WHEN UR(R)-533 ACTIVE

FEET	METERS
QNH	(QFE)
700	(211)
1200	(370)
3700	(1130)
12000	(3660)

Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

These SIDs require minimum climb gradients of
4.2% up to 3700, due to obstacles.
AMKOL 1K: 4.2% up to FL140, due to airspace structure.

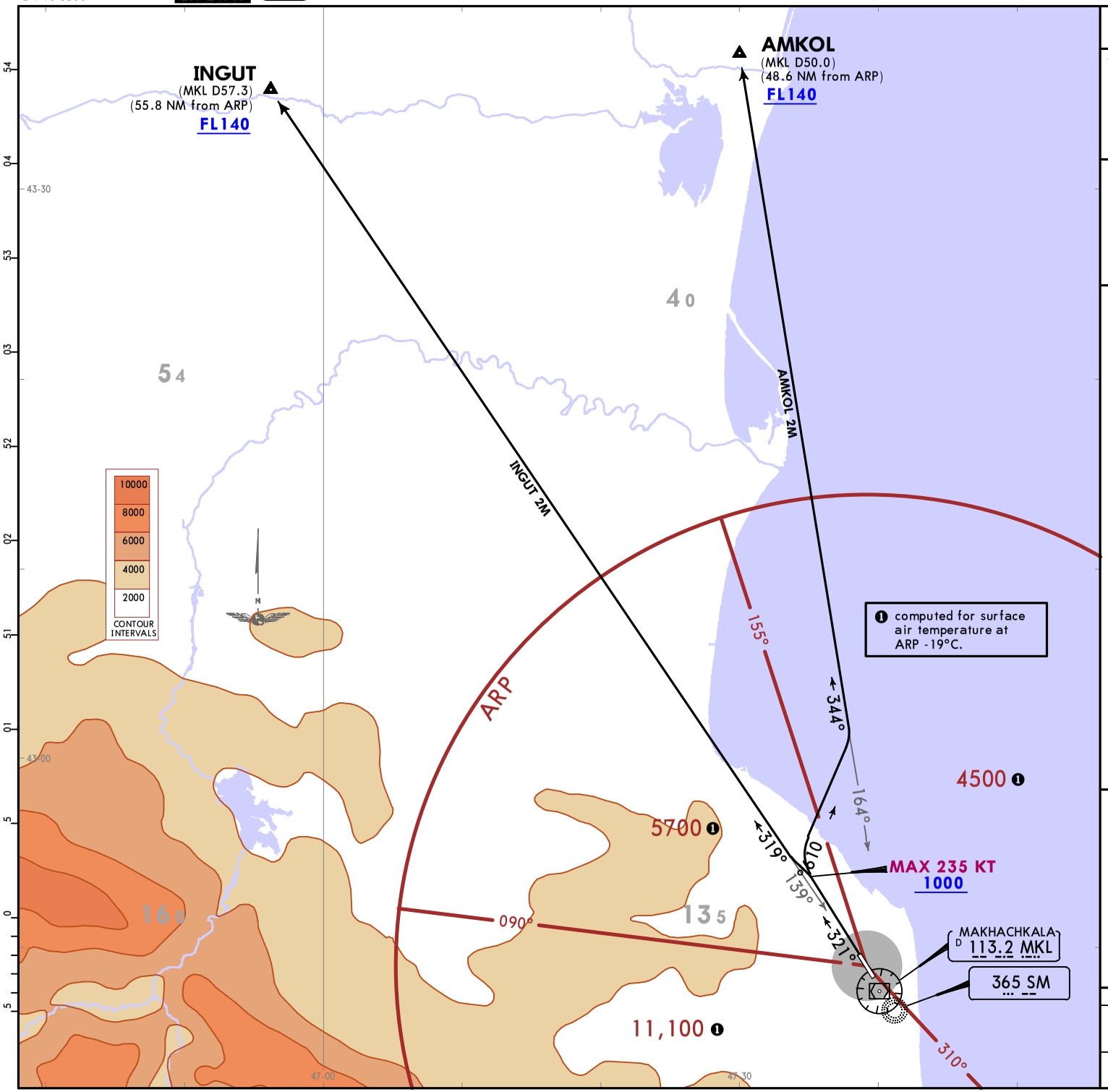
Gnd speed-KT	75	100	150	200	250	300
4.2% V/V (fpm)	319	425	638	851	1063	1276

SID	ROUTING
AMKOL 1K	Climb straight ahead to at or above 1200, turn LEFT to HC, 347° bearing from HC to AMKOL.
INGUT 1K	Climb straight ahead to at or above 1200, turn LEFT to HC, 319° bearing from HC to INGUT.

CHANGES: Altitude restrictions, MSA, trans alt, WP definitions, availability.

MAKHACHKALA, RUSSIA

SID



MAKHACHKALA Radar	Apt Elev
121.3	16

Trans alt: 12000 QNH (QFE on request)
1. DME or RADAR control required.
2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.
3. Radar vectoring and/or 'direct to' instructions can be applied.
4. Turn before DER is prohibited.

AMKOL 2M [AMKO2M]
INGUT 2M [INGU2M]
DEPARTURES
(RWY 32)

FEET	METERS
QNH	(QFE)
700	(207)
1000	(305)
2600	(790)
12000	(3660)

These SIDs requires minimum climb gradients of
AMKOL 2M: 4.7% up to FL140, due to airspace structure.
INGUT 2M: 4.3% up to 2600.
4.2% up to FL140, due to airspace structure.

Gnd speed-KT	75	100	150	200	250	300
4.2% V/V (fpm)	319	425	638	851	1063	1276
4.3% V/V (fpm)	327	435	653	871	1089	1306
4.7% V/V (fpm)	357	476	714	952	1190	1428

SID	ROUTING
AMKOL 2M	Climb straight ahead to at or above 1000, turn RIGHT, 016° track, intercept 344° bearing from SM to AMKOL.
INGUT 2M	Climb straight ahead to at or above 1000, intercept 319° bearing from SM to INGUT.

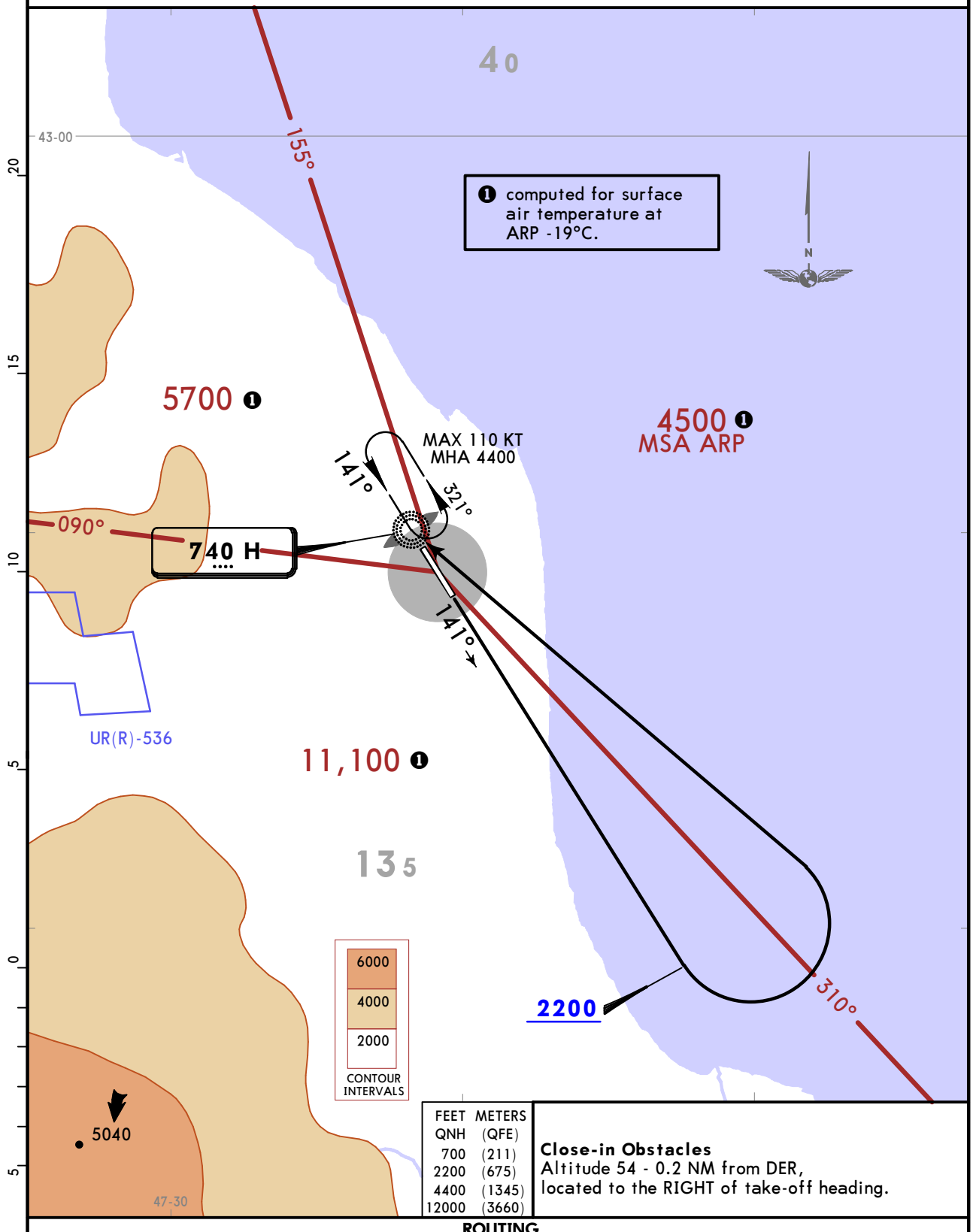
CHANGES: SIDs renumbered & revised, MSA, trans alt.

MAKHACHKALA Radar 121.3	Apt Elev 16	Trans alt: 12000 QNH (QFE on request) 1. Turn before DER PROHIBITED. 2. Radar vectoring and/or 'direct to' instructions can be applied. 3. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.

H 1A
DEPARTURE
(RWY 14)

CAT A

UNDER RADAR CONTROL WHEN UR(R)-536 ACTIVE



FEET QNH	METERS (QFE)
700	(211)
2200	(675)
4400	(1345)
12000	(3660)

Close-in Obstacles
Altitude 54 - 0.2 NM from DER, located to the RIGHT of take-off heading.

ROUTING

Climb straight ahead to at or above 2200, turn LEFT to H climbing to at or above 4400, join holding area.

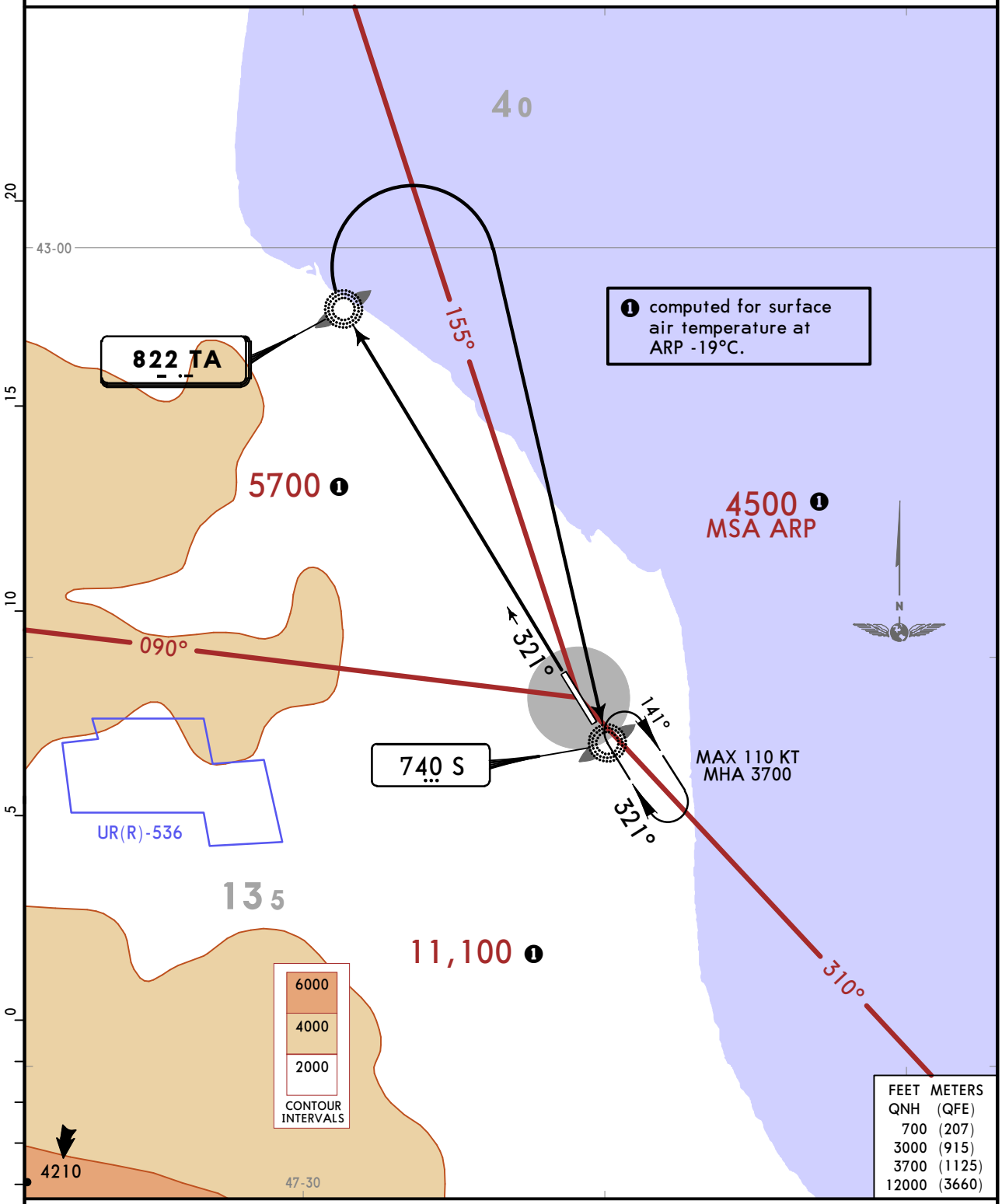
CHANGES: MSA, trans alt.

MAKHACHKALA Radar 121.3	Apt Elev 16	Trans alt: 12000 QNH (QFE on request) 1. Radar vectoring and/or 'direct to' instructions can be applied. 2. After take-off, contact MAKHACHKALA-Radar at 700, unless otherwise instructed.

TA 2A
DEPARTURE
(RWY 32)

CAT A

UNDER RADAR CONTROL WHEN UR(R)-536 ACTIVE



This SID requires a minimum climb gradient of 4.3% up to 3000.

Gnd speed-KT	75	100	150	200	250	300
4.3% V/V (fpm)	327	435	653	871	1089	1306

ROUTING

Climb straight ahead to TA, turn RIGHT to S climbing to at or above 3700, join holding area.

CHANGES: SID renumberd, MSA, trans alt.

URML/MCX

Apt Elev 16′
N42 49.0 E047 39.2

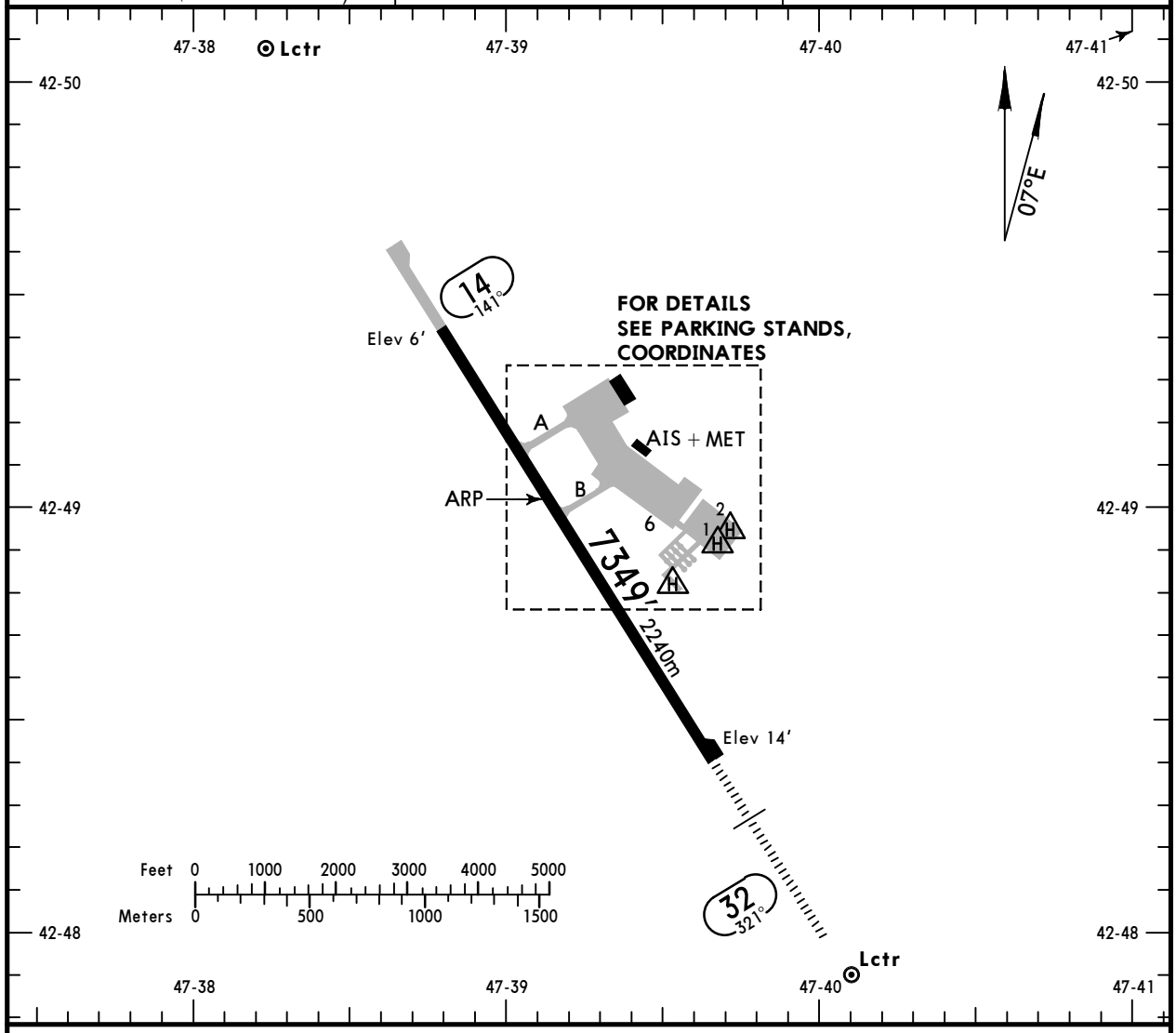
JEPPESEN

17 OCT 25 (10-9)

MAKHACHKALA, ~~RUSSIA~~

UYTASH

ATIS	MAKHACHKALA Radar (TWR)	Start (TWR)
125.475 (Russian 124.8)	121.3	121.3



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND — Threshold	Glide Slope	TAKE-OFF	WIDTH
14 ❶ 32	HIRL (60m)		6316′ 1925m	❷	148′ 45m
	HIRL (60m) HIALS PAPI-L (3.00°)		6437′ 1962m		

❶ Tailwind component shall not exceed 5m/sec.

❷ TAKE-OFF RUN AVAILABLE

RWY 14:

From rwy head	7349′(2240m)
twy A int	5282′(1610m)
twy B int	4134′(1260m)

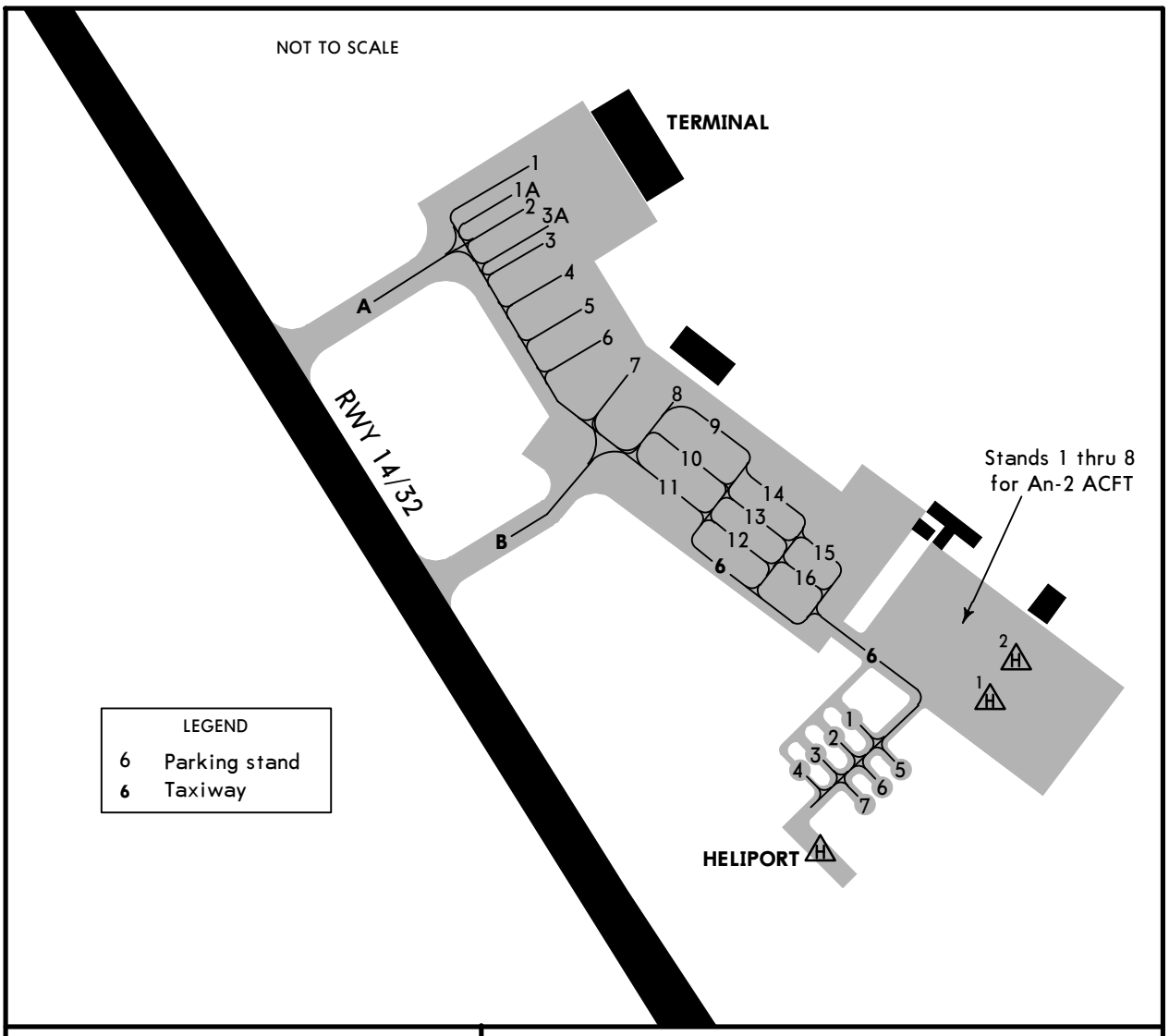
RWY 32:

From rwy head	7349′(2240m)
twy A int	2146′(654m)
twy B int	3215′(980m)

Std TAKE-OFF

RL & RCLM	RL	RL or RCLM	Adequate Vis Ref	
DAY	NIGHT	DAY	DAY	NIGHT
R300m		R400m	R/V500m	NA

CHANGES: Lights.



INS COORDINATES	
STAND No.	**COORDINATES**
1, 1A	N42 49.3 E047 39.3
2 thru 4	N42 49.2 E047 39.3
5, 6	N42 49.2 E047 39.4
7, 8	N42 49.1 E047 39.4

CHANGES: None.

MAKHACHKALA, RUSSIA

UYTASH

STRAIGHT-IN RWY		A	B	C	D
14	ILS Z, Y or W	**207**′(201′) R1200m	**220**′(214′) R1200m	**228**′(222′) R1200m	**238**′(232′) R1200m
	GLS	**207**′(201′) R1200m	**220**′(214′) R1200m	**228**′(222′) R1200m	**238**′(232′) R1200m
	❷ LOC Z or W	**690**′(684′) R1500m	**690**′(684′) R1500m	**690**′(684′) R2400m	**690**′(684′) R2400m
	❷ LOC Y	**570**′(564′) R1500m	**570**′(564′) R1500m	**570**′(564′) R2400m	**570**′(564′) R2400m
	RNP **LNAV/VNAV**	**256**′(250′) R1300m	**266**′(260′) R1300m	**276**′(270′) R1300m	**286**′(280′) R1300m
	❷ RNP **LNAV**	**580**′(574′) R1500m	**580**′(574′) R1500m	**580**′(574′) R2400m	**580**′(574′) R2400m
	❷ VOR	**620**′(614′) R1500m	**620**′(614′) R1500m	**620**′(614′) R2400m	**620**′(614′) R2400m
	❷ NDB Z **with D5.2**	**570**′(564′) R1500m	**570**′(564′) R1500m	**570**′(564′) R2400m	**570**′(564′) R2400m
	❷ NDB Z **w/o D5.2**	**690**′(684′) R1500m	**690**′(684′) R1500m	**690**′(684′) R2400m	**690**′(684′) R2400m
	❷ NDB Y or W	**730**′(724′) R1500m	**730**′(724′) R1500m	**730**′(724′) R2400m	**730**′(724′) R2400m
	❷ NDB X	**1810**′(1804′) R1500m	**1810**′(1804′) R1500m	**1810**′(1804′) R2400m	**1810**′(1804′) R2400m
32	ILS Z, Y, X or W ALS out	**214**′(200′) R550m ❶ R1200m	**215**′(201′) R550m ❶ R1200m	**221**′(207′) R550m ❶ R1200m	**231**′(217′) R550m ❶ R1200m
	GLS ALS out	**214**′(200′) R550m ❶ R1200m	**215**′(201′) R550m ❶ R1200m	**221**′(207′) R550m ❶ R1200m	**231**′(217′) R550m ❶ R1200m
	❷ LOC Z, Y, X or W	**740**′(726′) R1500m	**740**′(726′) R1500m	**740**′(726′) R2400m	**740**′(726′) R2400m
	RNP **LNAV/VNAV** ALS out	**334**′(320′) R700m ❷ R1400m	**344**′(330′) R800m R1500m	**354**′(340′) R800m R1500m	**364**′(350′) R900m R1600m
	❷ RNP **LNAV**	**740**′(726′) R1500m	**740**′(726′) R1500m	**740**′(726′) R2400m	**740**′(726′) R2400m
	❷ VOR	**920**′(906′) R1500m	**920**′(906′) R1500m	**920**′(906′) R2400m	**920**′(906′) R2400m

❶ R750m when a Flight Director or Autopilot or HUDLS to DA is not used.
❷ Continuous Descent Final Approach.

MAKHACHKALA, RUSSIA

UYTASH

STRAIGHT-IN RWY		A	B	C	D
32 (contd)	❶❹ NDB Z	**740**′(726′) R1500m	**740**′(726′) R1500m	**740**′(726′) R2400m	**740**′(726′) R2400m
	❸❹ NDB Z	**1020**′(1006′) R1500m	**1020**′(1006′) R1500m	**1020**′(1006′) R2400m	**1020**′(1006′) R2400m
	❷❹ NDB Y	**740**′(726′) R1500m	**740**′(726′) R1500m	**740**′(726′) R2400m	**740**′(726′) R2400m
	❸❹ NDB Y	**1100**′(1086′) R1500m	**1100**′(1086′) R1500m	**1100**′(1086′) R2400m	**1100**′(1086′) R2400m
	NDB X	**1910**′(1896′) R1500m	**1910**′(1896′) R1500m	**1910**′(1896′) R2400m	**1910**′(1896′) R2400m

❶ with missed approach climb gradient mim 3.0% (183′/NM).
❷ with missed approach climb gradient mim 3.4% (207′/NM).
❸ with missed approach climb gradient mim 2.5% (152′/NM).
❹ Continuous Descent Final Approach.

❺ CIRCLE-TO-LAND	100 KT	135 KT	180 KT	205 KT
	790′(774′)	**830**′(814′)	**1040**′(1024′)	**1040**′(1024′)
After VOR Rwy 32	**920**′(904′)	**920**′(904′)	**1040**′(1024′)	**1040**′(1024′)
After NDB Z Rwy 32	**1030**′(1014′)	**1030**′(1014′)	**1040**′(1024′)	**1040**′(1024′)
After NDB Y Rwy 32	**1110**′(1094′)	**1110**′(1094′)	**1110**′(1094′)	**1110**′(1094′)
After NDB X Rwy 14	**1820**′(1804′)	**1820**′(1804′)	**1820**′(1804′)	**1820**′(1804′)
After NDB X Rwy 32	**1920**′(1904′)	**1920**′(1904′)	**1920**′(1904′)	**1920**′(1904′)
	❻ V1500m	❻ V1600m	❻ V2400m	❻ V3600m

❺ Prohibited West of airport
❻ or higher straight-in minimums.

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

CHANGES: Minimums.

MAKHACHKALA, RUSSIA
ILS Z or LOC Z Rwy 14

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

LOC IHC	Final Apch Crs	D7.5 IHC	ILS DA(H) Refer to Minimums	Apt Elev 16′
108.3	141°	2400′ (2394′)		Rwy 6′

MISSED APCH: Climb on track 141° to MLØ11, then turn LEFT to MLØ12, then to MLØ51 climbing 5500′ or above, then according to chart.
MAX 215 KT.

❶ MSA ARP

Alt Set: hPa (MM on req) Rwy Elev: 0 hPa Trans level: FL130❷ Trans alt: 12000′

RNAV 1 for initial and missed approach.

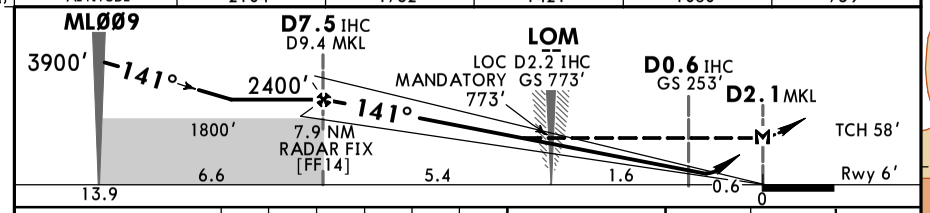
1. GNSS and DME or Radar control required. 2. ILS DME reads zero at rwy 14 threshold.

❶ is computed for surface air temperature at apt -19°C.
❷ FL140 if pressure is less than 1013 hPa (760 mm).
FL150 if pressure is less than 977 hPa (733 mm).

FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
5700	(1750)
5500	(1675)
4500	(1350)
3900	(1190)
3800	(1160)
3200	(975)
2400	(730)
2155	(656)
2104	(640)
2100	(640)
1814	(551)
1800	(550)
1762	(536)
1473	(447)
1421	(432)
1131	(343)
1080	(328)
1040	(310) ❸
830	(250) ❸
790	(239)
790	(235) ❸
739	(224)
773	(234)
690	(210)
253	(76)
238	(71)
228	(68)
219	(65)
207	(62)

❸ Based on airport elevation.

MKL DME	8.6	7.6	6.5	5.4	4.3
ALTITUDE	2155′	1814′	1473′	1131′	790′
IHC DME	6.5	5.4	4.3	3.2	2.2
ALTITUDE	2104′	1762′	1421′	1080′	739′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.1 MKL							

215 KT MAX | MLØ11 | on 141°

Std STRAIGHT-IN LANDING

ILS
DA(H) A: **207′** (201′) C: **228′** (222′)
B: **220′** (214′) D: **238′** (232′)

LOC (GS out)
CDFA
❶ DA/MDA(H) **690′** (684′)

CIRCLE-TO-LAND
Prohibited West of airport

			Max KT	MDA(H)	
A	R1200m	R1500m	100	790′ (774′)	V1500m
B			135	830′ (814′)	V1600m
C		R2400m	180	1040′ (1024′)	V2400m
D			205	1040′ (1024′)	V3600m

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

CHANGES: Crossing altitude, lights.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (11-2)

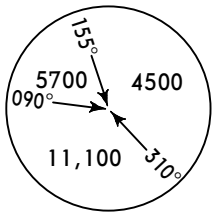
MAKHACHKALA, ~~RUSSIA~~
ILS Y or LOC Y Rwy 14

BRIEFING STRIP

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

LOC IHC	Final Apch Crs	D7.5 IHC	ILS DA(H) Refer to Minimums	Apt Elev 16′
108.3	141°	2400′ (2394′)		Rwy 6′

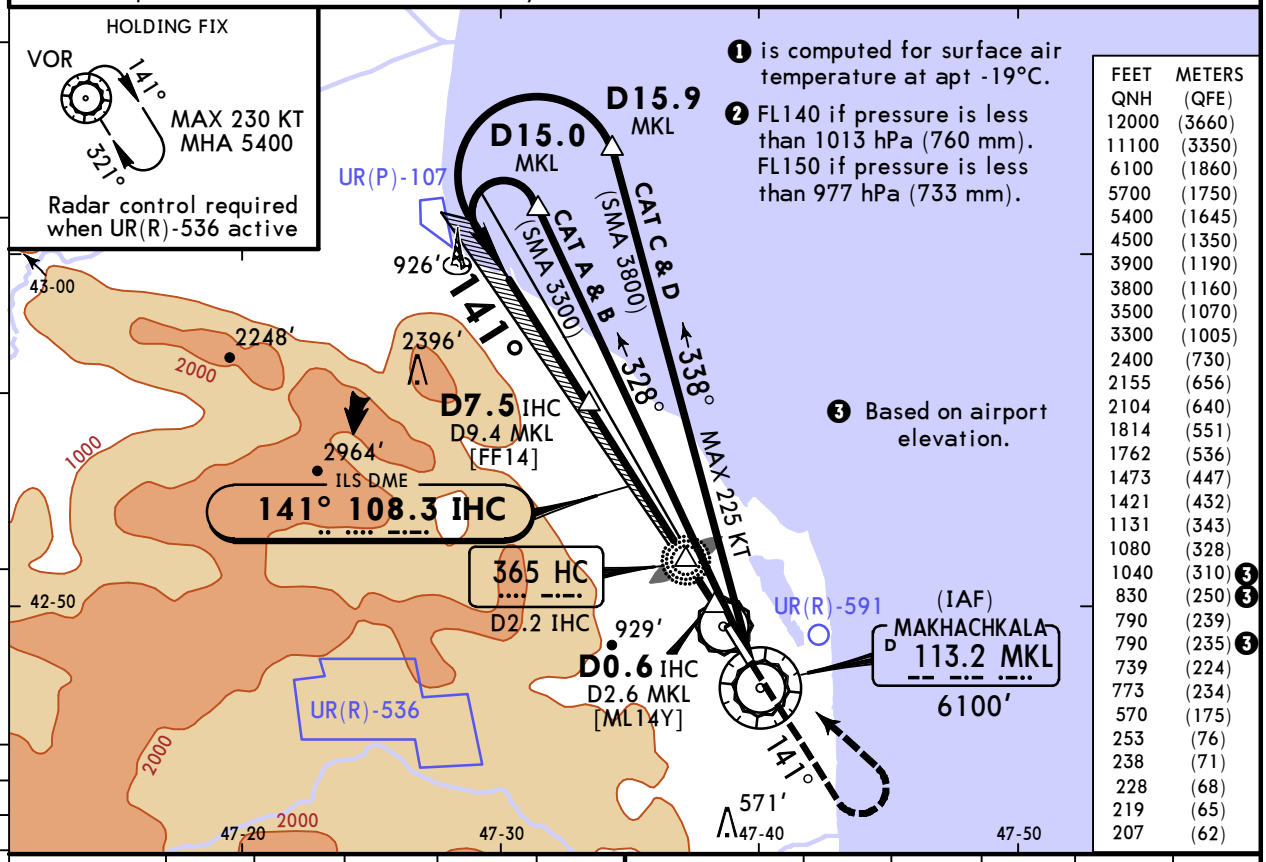
MISSED APCH: Climb on track 141° to 3500′ or above, then turn LEFT to VOR climbing to 5400′ or above. Do not turn before MAP.



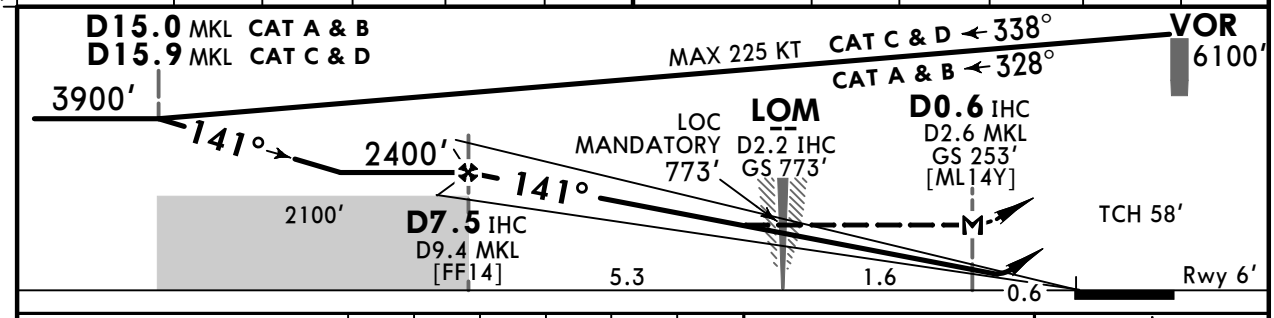
❶ MSA ARP

Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. DME required. 2. ILS DME reads zero at rwy 14 threshold.



MKL DME	8.6	7.6	6.5	5.4	4.3	IHC DME	6.5	5.4	4.3	3.2	2.2
ALTITUDE	2155′	1814′	1473′	1131′	790′	ALTITUDE	2104′	1762′	1421′	1080′	739′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849

MAP at D2.6 MKL/D0.6 IHC/Timing not authorized for defining the MAP.

MIN 3500′ on 141°

PANS OPS

Std STRAIGHT-IN LANDING

ILS
DA(H) A: **207′** (201′) C: **228′** (222′)
B: **220′** (214′) D: **238′** (232′)

LOC (GS out)
CDFA
❶ DA/MDA(H) **570′** (564′)

CIRCLE-TO-LAND
Prohibited West of airport

			Max KT	MDA(H)	
A	R1200m	R1500m	100	790′ (774′)	V1500m
B			135	830′ (814′)	V1600m
C		R2400m	180	1040′ (1024′)	V2400m
D			205	1040′ (1024′)	V3600m

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

CHANGES: Crossing altitude, lights.

URML/MCX
UYTASH

JEPPESEN 17 OCT 25 (11-3)

MAKHACHKALA, ~~RUSSIA~~
ILS W or LOC W Rwy 14

BRIEFING STRIP

ATIS (Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (124.8)	119.7	121.3	121.3

LOC IHC	Final Apch Crs	D7.5 IHC	ILS DA(H) Refer to Minimums	Apt Elev 16′
108.3	141°	2400′ (2394′)		Rwy 6′

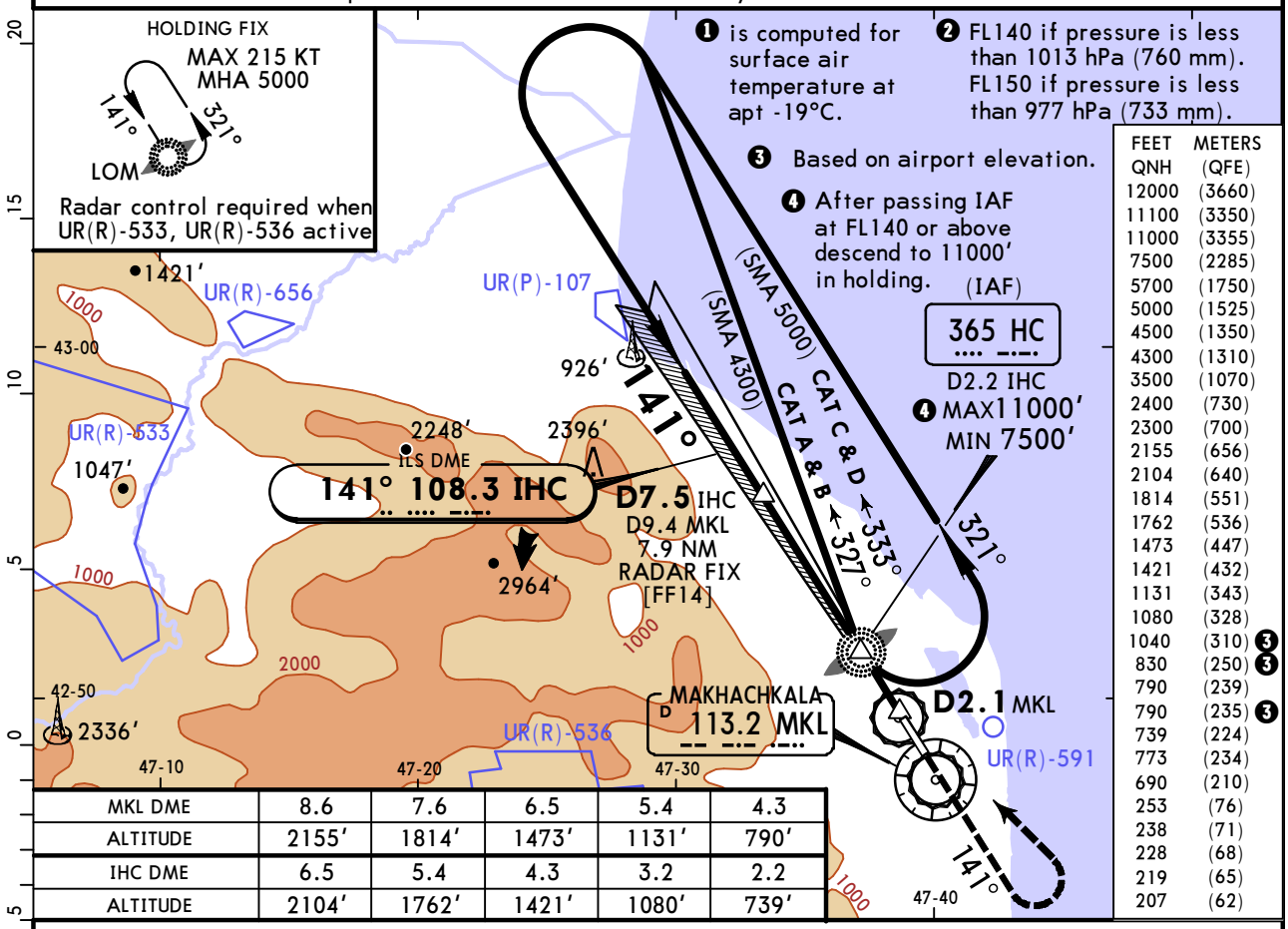
MISSED APCH: Climb on track 141° to 3500′ or above, then turn LEFT to HC NDB climbing to 5000′ or above. Do not turn before MAP.

155° 5700 4500 090° 11,100 310°

❶ MSA ARP

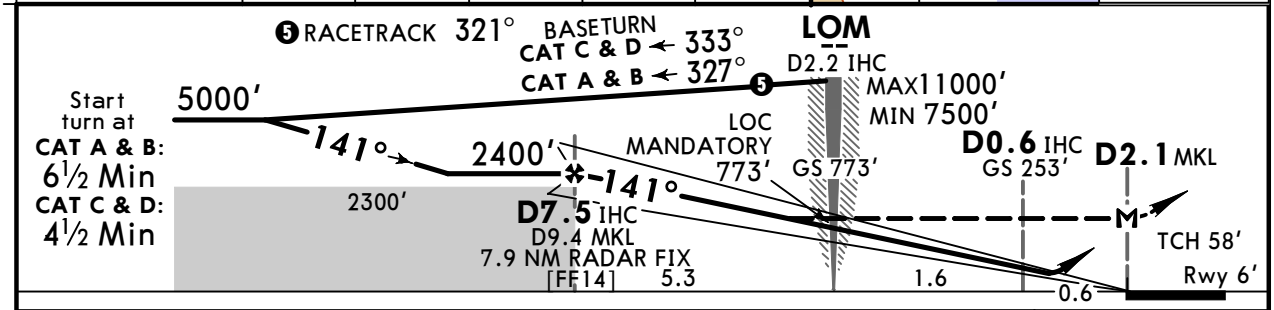
Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. DME or Radar control required. 2. ILS DME reads zero at rwy 14 threshold.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
11000	(3355)
7500	(2285)
5700	(1750)
5000	(1525)
4500	(1350)
4300	(1310)
3500	(1070)
2400	(730)
2300	(700)
2155	(656)
2104	(640)
1814	(551)
1762	(536)
1473	(447)
1421	(432)
1131	(343)
1080	(328)
1040	(310) ❸
830	(250) ❸
790	(239)
790	(235) ❸
739	(224)
773	(234)
690	(210)
253	(76)
238	(71)
228	(68)
219	(65)
207	(62)

MKL DME	8.6	7.6	6.5	5.4	4.3
ALTITUDE	2155′	1814′	1473′	1131′	790′
IHC DME	6.5	5.4	4.3	3.2	2.2
ALTITUDE	2104′	1762′	1421′	1080′	739′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.1 MKL							

MIN 3500′ on 141°

PANS OPS

Std STRAIGHT-IN LANDING

ILS	LOC (GS out)
DA(H) A: 207′ (201′) C: 228′ (222′)	CDFA
B: 220′ (214′) D: 238′ (232′)	❶ DA/MDA(H) 690′ (684′)

CIRCLE-TO-LAND

Prohibited West of airport

			Max KT	MDA(H)	
A	R1200m	R1500m	100	790′ (774′)	V1500m
B			135	830′ (814′)	V1600m
C		R2400m	180	1040′ (1024′)	V2400m
D			205	1040′ (1024′)	V3600m

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

CHANGES: Crossing altitude, lights.

MAKHACHKALA, RUSSIA
ILS Z or LOC Z Rwy 32

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

LOC ISM	Final Apch Crs	D7.3 ISM	ILS DA(H) Refer to Minimums	Apt Elev 16′ Rwy 14′
109.9	321°	2400′ (2386′)		

MISSED APCH: Climb on track 321° to MLØØ5, then turn RIGHT to MLØØ6 then to MLØ34 climbing 6000′.
MAX 215 KT.

❶ MSA ARP
155° 5700 4500
090° 11,100 310°

Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130❷ | Trans alt: 12000′

RNAV 1 for initial and missed approach.

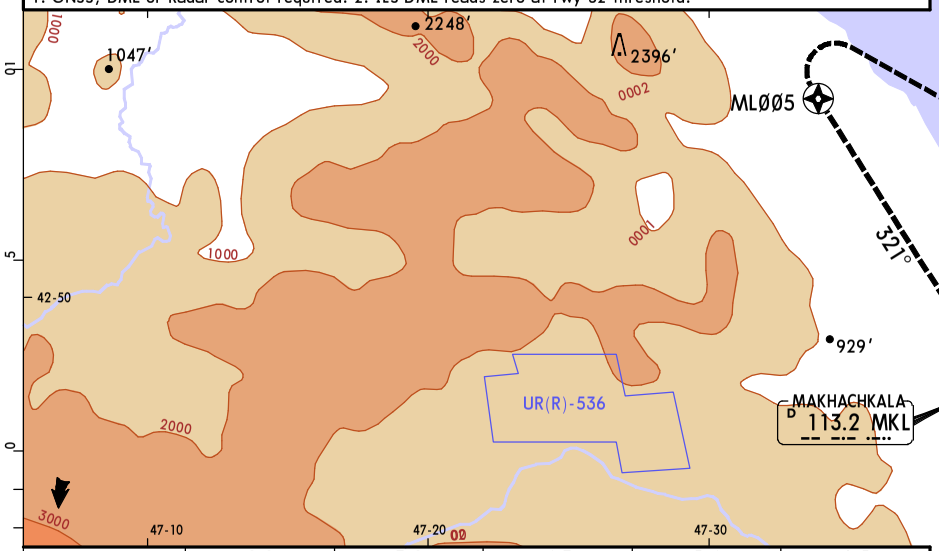
1. GNSS, DME or Radar control required. 2. ILS DME reads zero at rwy 32 threshold.

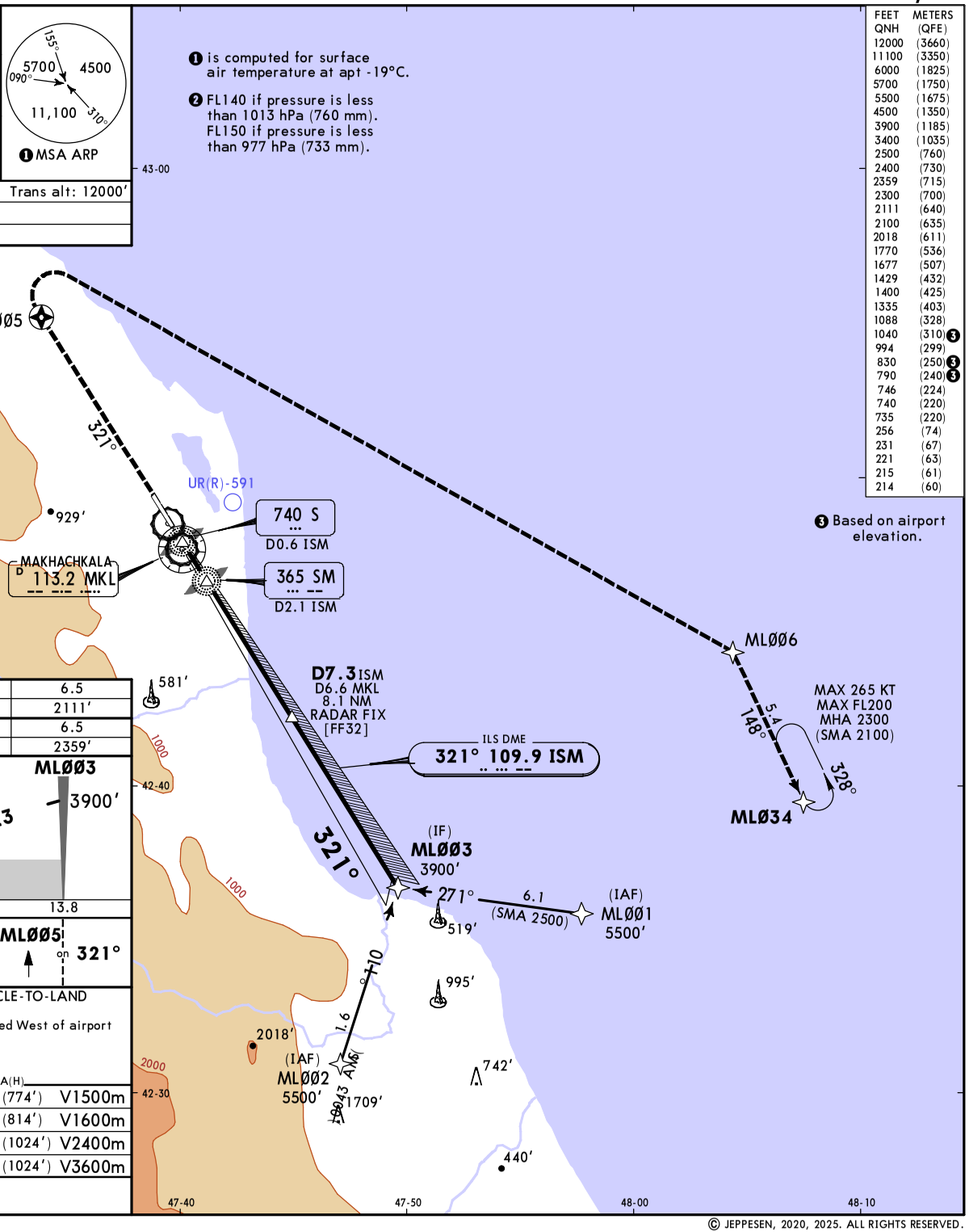
❶ is computed for surface air temperature at apt -19°C.

❷ FL140 if pressure is less than 1013 hPa (760 mm). FL150 if pressure is less than 977 hPa (733 mm).

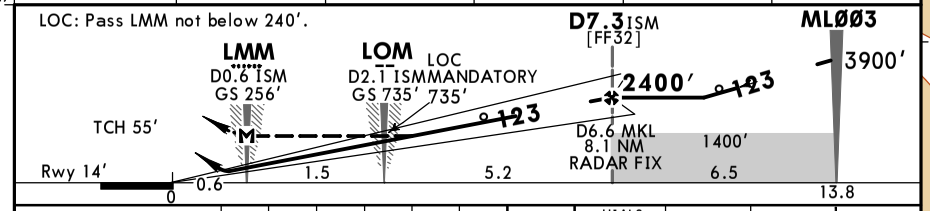
FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
6000	(1825)
5700	(1750)
5500	(1675)
4500	(1350)
3900	(1185)
3400	(1035)
2500	(760)
2400	(730)
2359	(715)
2300	(700)
2111	(640)
2100	(635)
2018	(611)
1770	(536)
1677	(507)
1429	(432)
1400	(425)
1335	(403)
1088	(328)
1040	(310)❸
994	(299)
830	(250)❸
790	(240)❸
746	(224)
740	(220)
735	(220)
256	(74)
231	(67)
221	(63)
215	(61)
214	(60)

❸ Based on airport elevation.





ISM DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	746′	1088′	1429′	1770′	2111′
MKL DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	994′	1335′	1677′	2018′	2359′



Gnd speed-Kts	70	90	100	120	140	160
ILS GS or LOC Descent Angle 3.00°	372	478	531	637	743	849

MAP at LMM/D0.6 ISM/Timing not authorized for defining the MAP.

HIALS PAPI

215 KT MAX | MLØØ5 on 321°

Std STRAIGHT-IN LANDING

ILS	LOC (GS out)
DA(H) A: 214′ (200′) C: 221′ (207′) B: 215′ (201′) D: 231′ (217′)	CDFA ❷ DA/MDA(H) 740′ (726′)

	ILS ALS out	LOC (GS out) ALS out
A	❶ R550m	R1500m
B		
C	R1200m	R2400m
D		

CIRCLE-TO-LAND
Prohibited West of airport

Max Kts	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

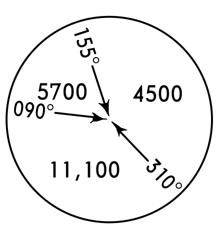
❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Trans level, Trans alt, MSA, VOR DME position, rwy length, procedure, notes, minimums.

BRIEFING STRIP™

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

LOC ISM	Final Apch Crs	D7.3 ISM	ILS DA(H)	Apt Elev 16′
109.9	321°	2400′ (2386′)	Refer to Minimums	Rwy 14′

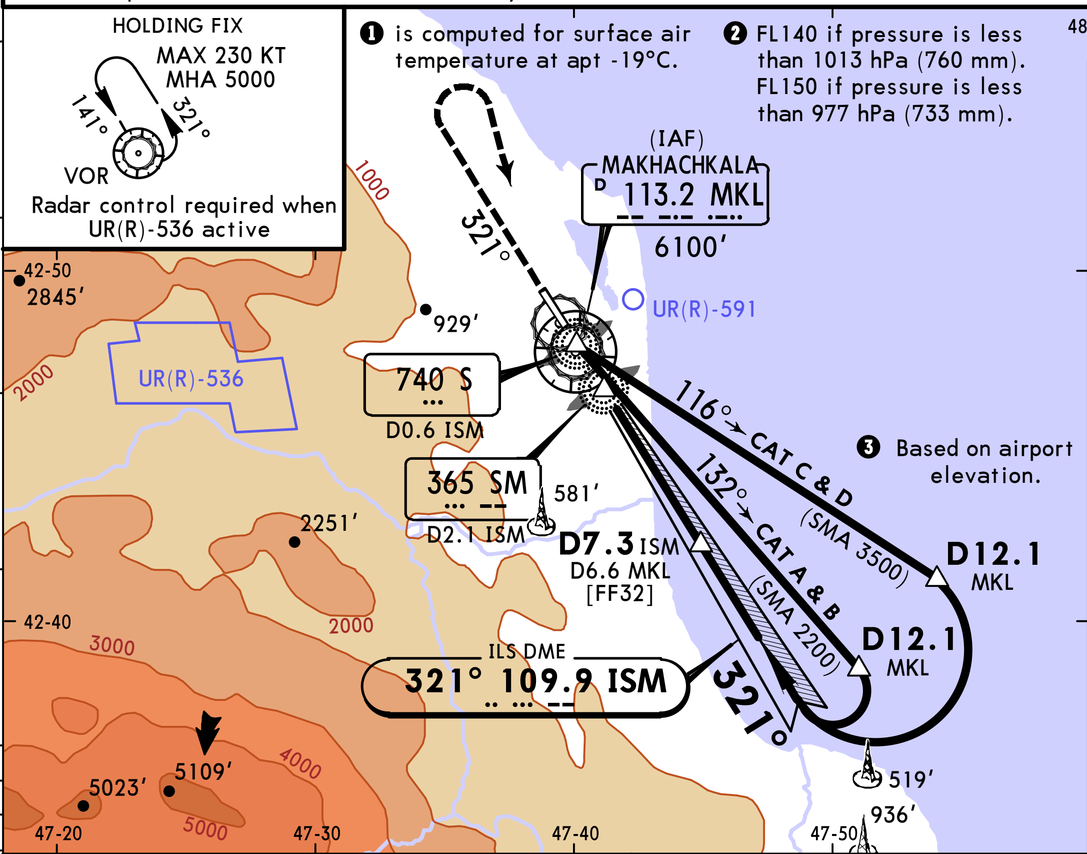


❶ MSA ARP

MISSED APCH: Climb on track 321° to 3500′ or above, then turn RIGHT to VOR climbing to 5000′ or above. Do not turn before MAP.

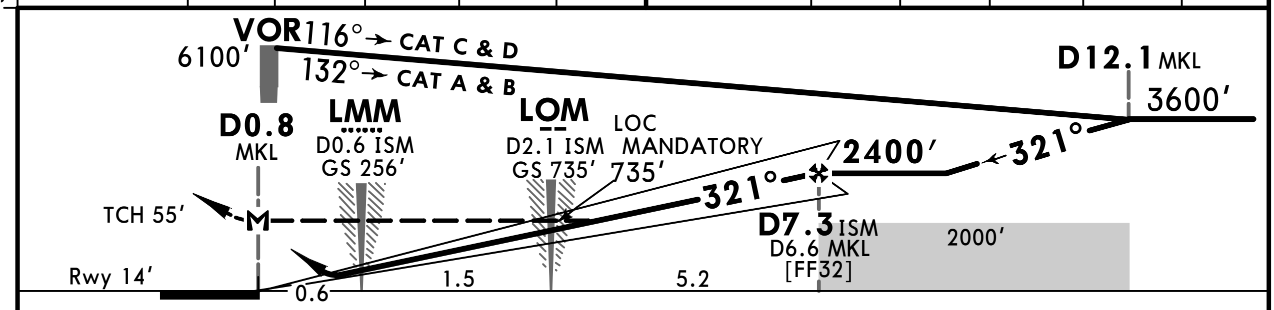
Alt Set: hPa (MM on req) Rwy Elev: 1 hPa Trans level: FL130 ❷ Trans alt: 12000′

1. DME required. 2. ILS DME reads zero at rwy 32 threshold.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
6100	(1860)
5700	(1750)
5000	(1520)
4500	(1350)
3600	(1095)
3500	(1065)
2400	(730)
2359	(715)
2200	(670)
2111	(640)
2018	(611)
2000	(610)
1770	(536)
1677	(507)
1429	(432)
1335	(403)
1088	(328)
1040	(310) ❸
994	(299)
830	(250) ❸
790	(235) ❸
746	(224)
740	(220)
735	(220)
256	(74)
231	(67)
221	(63)
215	(61)
214	(60)

ISM DME	2.2	3.2	4.3	5.4	6.5	MKL DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	746′	1088′	1429′	1770′	2111′	ALTITUDE	994′	1335′	1677′	2018′	2359′



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

HIALS PAPI

MIN 3500′ on 321°

Std

STRAIGHT-IN LANDING

	ILS		LOC (GS out)		CIRCLE-TO-LAND
	A: 214′(200′) C: 221′(207′) DA(H) B: 215′(201′) D: 231′(217′)		CDFA ❷ DA/MDA(H) 740′(726′)		Prohibited West of airport
		ALS out		ALS out	
A	❶ R550m	R1200m	R1500m		
B	❶ R550m	R1200m	R1500m		
C	❶ R550m	R1200m	R2400m		
D	❶ R550m	R1200m	R2400m		

Max Kts	MDA(H)	
100	790′(774′)	V1500m
135	830′(814′)	V1600m
180	1040′(1024′)	V2400m
205	1040′(1024′)	V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

PANS OPS

CHANGES: Trans level, Trans alt, MSA, VOR DME position, procedure, minimums.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (11-7)

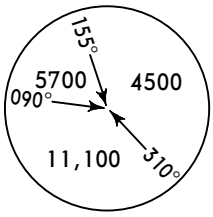
MAKHACHKALA, ~~RUSSIA~~
ILS X or LOC X Rwy 32

BRIEFING STRIP

ATIS	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (Russian 124.8)	119.7	121.3	121.3

LOC ISM	Final Apch Crs	D7.3 ISM	ILS DA(H) Refer to Minimums	Apt Elev 16′
109.9	321°	2400′ (2386′)		Rwy 14′

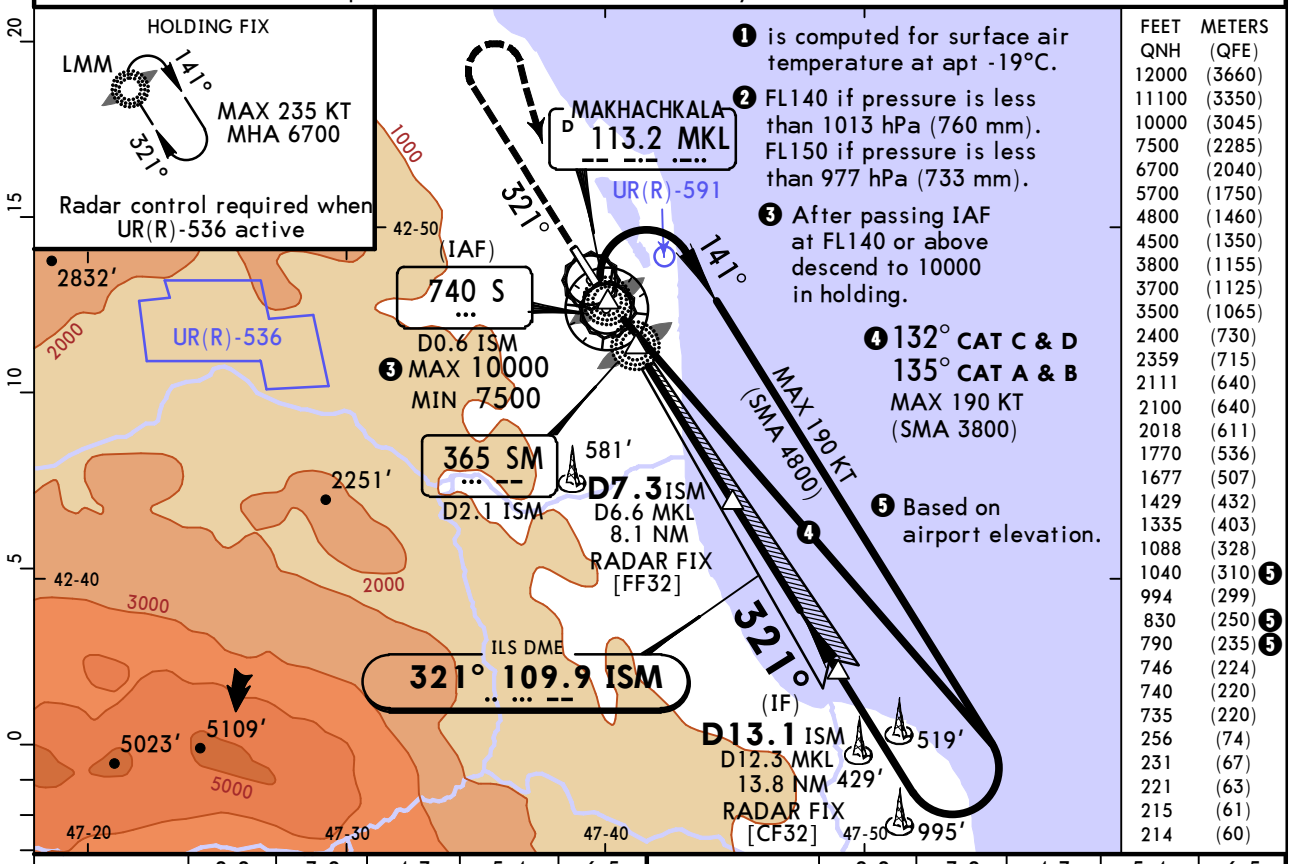
MISSED APCH: Climb on track 321° to 3500′ or above, then turn RIGHT to S Lctr climbing to 4800′ or above. MAX 215 KT. Do not turn before MAP.



❶ MSA ARP

Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

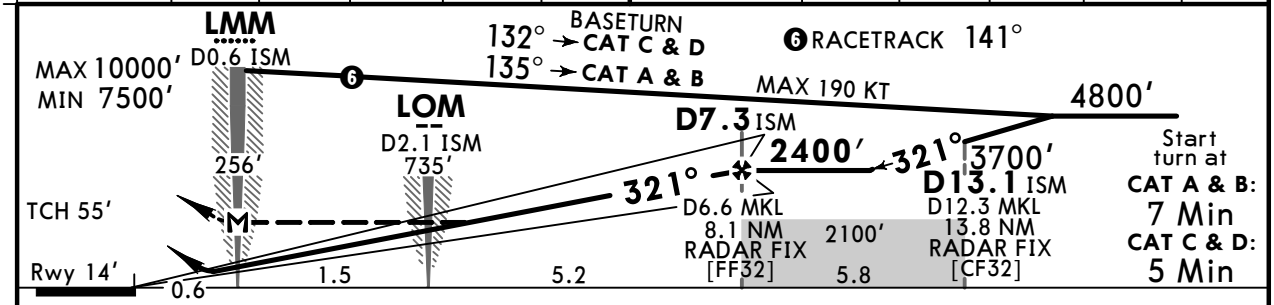
1. DME or Radar control required. 2. ILS DME reads zero at rwy 32 threshold.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
10000	(3045)
7500	(2285)
6700	(2040)
5700	(1750)
4800	(1460)
4500	(1350)
3800	(1155)
3700	(1125)
3500	(1065)
2400	(730)
2359	(715)
2111	(640)
2100	(640)
2018	(611)
1770	(536)
1677	(507)
1429	(432)
1335	(403)
1088	(328)
1040	(310) ❺
994	(299)
830	(250) ❺
790	(235) ❺
746	(224)
740	(220)
735	(220)
256	(74)
231	(67)
221	(63)
215	(61)
214	(60)

ISM DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	746′	1088′	1429′	1770′	2111′

MKL DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	994′	1335′	1677′	2018′	2359′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849

MAP at LMM/D0.6 ISM/Timing not authorized for defining the MAP.

HIALS
PAPI

215 KT MAX

MIN 3500′ on 321°

PANS OPS

Std STRAIGHT-IN LANDING

ILS	LOC (GS out)
A: 214′ (200′) C: 221′ (207′)	CDFA
DA(H) B: 215′ (201′) D: 231′ (217′)	❷ DA/MDA(H) 740′ (726′)

	ALS out	ALS out
A	❶ R550m	R1500m
B		
C	R1200m	R2400m
D		

CIRCLE-TO-LAND

Prohibited West of airport

Max KT	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: Holding speed.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (11-8)

MAKHACHKALA, ~~RUSSIA~~
ILS W or LOC W Rwy 32

BRIEFING STRIP

ATIS	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (Russian 124.8)	119.7	121.3	121.3

LOC ISM	Final Apch Crs	D7.3 ISM	ILS DA(H) Refer to Minimums	Apt Elev 16′
109.9	321°	2400′ (2386′)		Rwy 14′

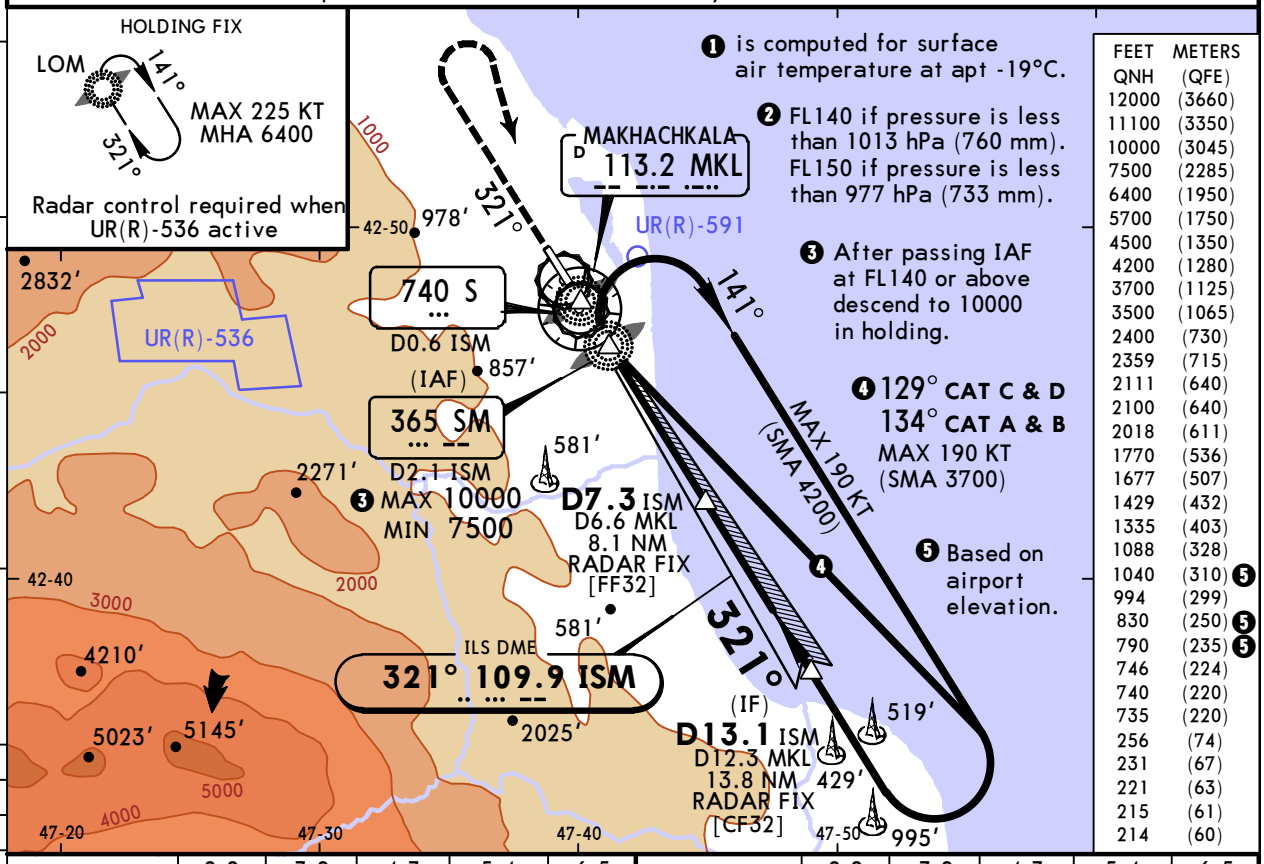
MISSED APCH: Climb on track 321° to 3500′ or above, then turn RIGHT to SM NDB climbing to 4200′ or above. MAX 215 KT. Do not turn before MAP.

155° 5700 4500 090° 11,100 310°

❶ MSA ARP

Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

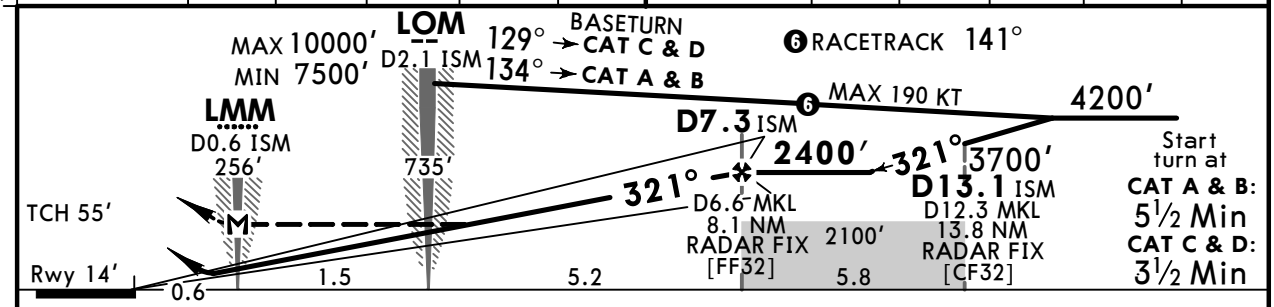
1. DME or Radar control required. 2. ILS DME reads zero at rwy 32 threshold.



FEET QNH	METERS (QFE)	
12000	(3660)	
11100	(3350)	
10000	(3045)	
7500	(2285)	
6400	(1950)	
5700	(1750)	
4500	(1350)	
4200	(1280)	
3700	(1125)	
3500	(1065)	
2400	(730)	
2359	(715)	
2111	(640)	
2100	(640)	
2018	(611)	
1770	(536)	
1677	(507)	
1429	(432)	
1335	(403)	
1088	(328)	
1040	(310)	❺
994	(299)	
830	(250)	❺
790	(235)	❺
746	(224)	
740	(220)	
735	(220)	
256	(74)	
231	(67)	
221	(63)	
215	(61)	
214	(60)	

ISM DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	746′	1088′	1429′	1770′	2111′

MKL DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	994′	1335′	1677′	2018′	2359′



Gnd speed-Kts		70	90	100	120	140	160
ILS GS or LOC Descent Angle	3.00°	372	478	531	637	743	849

MAP at LMM/D0.6 ISM/Timing not authorized for defining the MAP.

HIALS
PAPI

215 KT MAX

MIN 3500′ on 321°

Std STRAIGHT-IN LANDING

ILS	LOC (GS out)
A: 214′ (200′) C: 221′ (207′)	CDFA
DA(H) B: 215′ (201′) D: 231′ (217′)	❷ DA/MDA(H) 740′ (726′)

CIRCLE-TO-LAND

Prohibited West of airport

	ALS out	ALS out	Max KT	MDA(H)	
A	❶ R550m	R1200m	100	790′ (774′)	V1500m
B		R1500m	135	830′ (814′)	V1600m
C			180	1040′ (1024′)	V2400m
D		R2400m	205	1040′ (1024′)	V3600m

PANS OPS

❶ R750m when a Flight Director or Autopilot or HUD to DA is not used.
❷ VNAV DA(H) in lieu of MDA(H) depends on operator policy.

CHANGES: None.

MAKHACHKALA, RUSSIA
RNP Rwy 14

ATIS	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (Russian 124.8)	119.7	121.3	121.3

RNAV	Final Apch Crs 141°	MLØ57 2400′ (2394′)	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev 16′ Rwy 6′

MISSED APCH: Climb on 141° to MLØ11, then turn LEFT to MLØ12, then to MLØ51 climbing 5500′ or above, then according to chart.
MAX 215 KT.

Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

RNP apch.

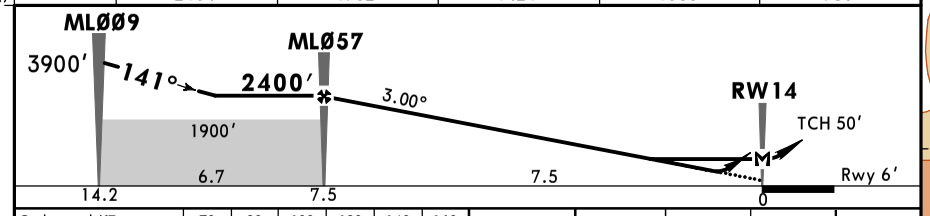
1. GNSS required. 2. Baro-VNAV not authorized below -31°C. 3. VPA exceeds 3.5° above 61°C.

❶ MSA ARP: 5700 (155°–090°), 4500 (310°–155°), 11,100 (090°–310°)

❶ is computed for surface air temperature at apt -19°C
❷ FL140 if pressure is less than 1013 hPa (760 mm).
FL150 if pressure is less than 977 hPa (733 mm).

FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
5700	(1750)
5500	(1675)
4500	(1350)
3900	(1190)
3800	(1160)
3200	(975)
2400	(730)
2104	(640)
2100	(640)
1900	(580)
1762	(536)
1421	(432)
1080	(328)
1040	(310)
830	(250)
790	(235)
739	(224)
580	(175)
286	(85)
276	(80)
266	(80)
256	(75)

DIST to RW14	6.5	5.4	4.3	3.2	2.2
ALTITUDE	2104′	1762′	1421′	1080′	739′



Gnd speed-KT		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at RW14							

Timing not authorized for defining the MAP.

PAPI-L | 215 KT MAX | MLØ11 | 141°

Std STRAIGHT-IN LANDING

LNAV/VNAV	LNAV
A: 256′ (250′) C: 276′ (270′)	CDFA
DA(H) B: 266′ (260′) D: 286′ (280′)	❶ DA/MDA(H) 580′ (574′)

A	R1300m	R1500m
B		
C		R2400m
D		

CIRCLE-TO-LAND
Prohibited West of airport

Max KT	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

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

CHANGES: Restricted areas withdrawn, PAPI, note.

JEPPESEN 12 DEC 25 (12-2) Eff 25 Dec

MAKHACHKALA, RUSSIA
RNP Rwy 32

ATIS (Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 124.8)	119.7	121.3	121.3

	Final Apch Crs	MLØØ4	LNAV/VNAV DA(H) Refer to Minimums	
RNAV	321°	2400′ (2386′)		Apt Elev 16′ Rwy 14′

MISSED APCH: Climb on 321° to MLØØ5, then turn RIGHT to MLØØ6 then to MLØ34 climbing 6000′.
MAX 215 KT.

1 MSA ARP

Alt Set: hPa (MM on req)	Rwy Elev: 1 hPa	Trans level: FL130 2	Trans alt: 12000′

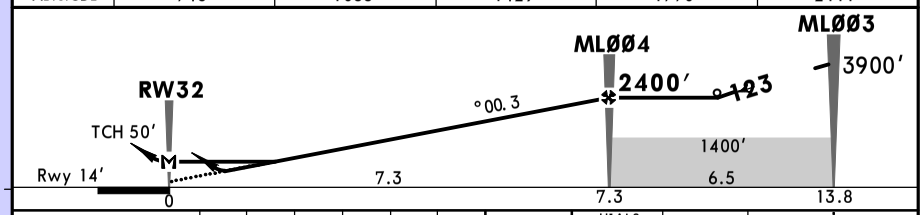
RNP apch.

1. GNSS required. 2. Baro-VNAV not authorized below -31°C. 3. VPA exceeds 3.5° above 50°C.

1 is computed for surface air temperature at apt -19°C
2 FL140 if pressure is less than 1013 hPa (760 mm).
FL150 if pressure is less than 977 hPa (733 mm).

FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
6000	(1825)
5700	(1750)
5500	(1675)
4500	(1350)
3900	(1185)
3400	(1035)
2500	(760)
2400	(730)
2300	(700)
2111	(640)
2100	(640)
1770	(536)
1429	(432)
1400	(425)
1088	(328)
1040	(310)
830	(250)
790	(235)
746	(224)
740	(225)
364	(105)
354	(105)
344	(100)
334	(100)

DIST to RW32	2.2	3.2	4.3	5.4	6.5
ALTITUDE	746′	1088′	1429′	1770′	2111′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at RW32						

Timing not authorized for defining MAP.

HIALS PAPI

215 KT MAX

MLØØ5 321°

Std STRAIGHT-IN LANDING

LNAV/VNAV		LNAV	
DA(H)	A: 334′ (320′) C: 354′ (340′) B: 344′ (330′) D: 364′ (350′)	CDFA 1 DA/MDA(H)	740′ (726′)

	ALS out	ALS out
A	R750m	R1400m
B	R800m	R1500m
C		R2400m
D	R900m	R1600m

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

CIRCLE-TO-LAND

Prohibited West of airport

Max KT	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

CHANGES: Restricted area withdrawn, note.

MAKHACHKALA, RUSSIA
GLS Rwy 14

ATIS	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (Russian 124.8)	119.7	121.3	121.3

GBAS	Final Apch Crs	MLØ57	GLS DA(H) Refer to Minimums	Apt Elev 16′
Ch 20645 G14A	141°	2400′ (2394′)		Rwy 6′

MISSED APCH: Climb on 141° to MLØ11, then turn LEFT to MLØ12, then to MLØ51 climbing 5500′ or above, then according to chart.
MAX 215 KT.

5700 4500 11,100 155° 090° 310°
❶ MSA ARP

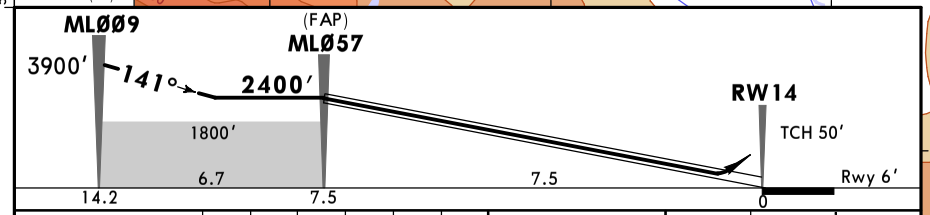
Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130❷ | Trans alt: 12000′

RNAV 1 for initial and missed approach.

GNSS required.

❶ is computed for surface air temperature at apt -19°C
❷ FL140 if pressure is less than 1013 hPa (760 mm).
FL150 if pressure is less than 977 hPa (733 mm).

FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
5700	(1750)
5500	(1675)
4500	(1350)
3900	(1190)
3800	(1160)
3200	(975)
2400	(730)
2100	(640)
1800	(550)
1040	(310)
830	(250)
790	(235)
238	(71)
228	(68)
220	(65)
207	(62)



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

215 KT MAX | MLØ11 | 141°

Std STRAIGHT-IN LANDING
GLS

DA(H) A: **207′** (201′) C: **228′** (222′)
B: **220′** (214′) D: **238′** (232′)

A	R1200m
B	
C	
D	

CIRCLE-TO-LAND
Prohibited West of airport

Max Kts	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

CHANGES: Lights.

JEPPESEN 17 OCT 25 (12-41)

MAKHACHKALA, RUSSIA
GLS Rwy 32

ATIS (Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 124.8)	119.7	121.3	121.3

GBAS	Final Apch Crs	MLØØ4	GLS DA(H) Refer to Minimums	Apt Elev 16′
Ch 21056 G32A	321°	2400′ (2386′)		Rwy 14′

MISSED APCH: Climb on 321° to MLØØ5, then turn RIGHT to MLØØ6 then to MLØ34 climbing 6000′.
MAX 215 KT.

5700 4500 11,100 155° 090° 310°
❶ MSA ARP

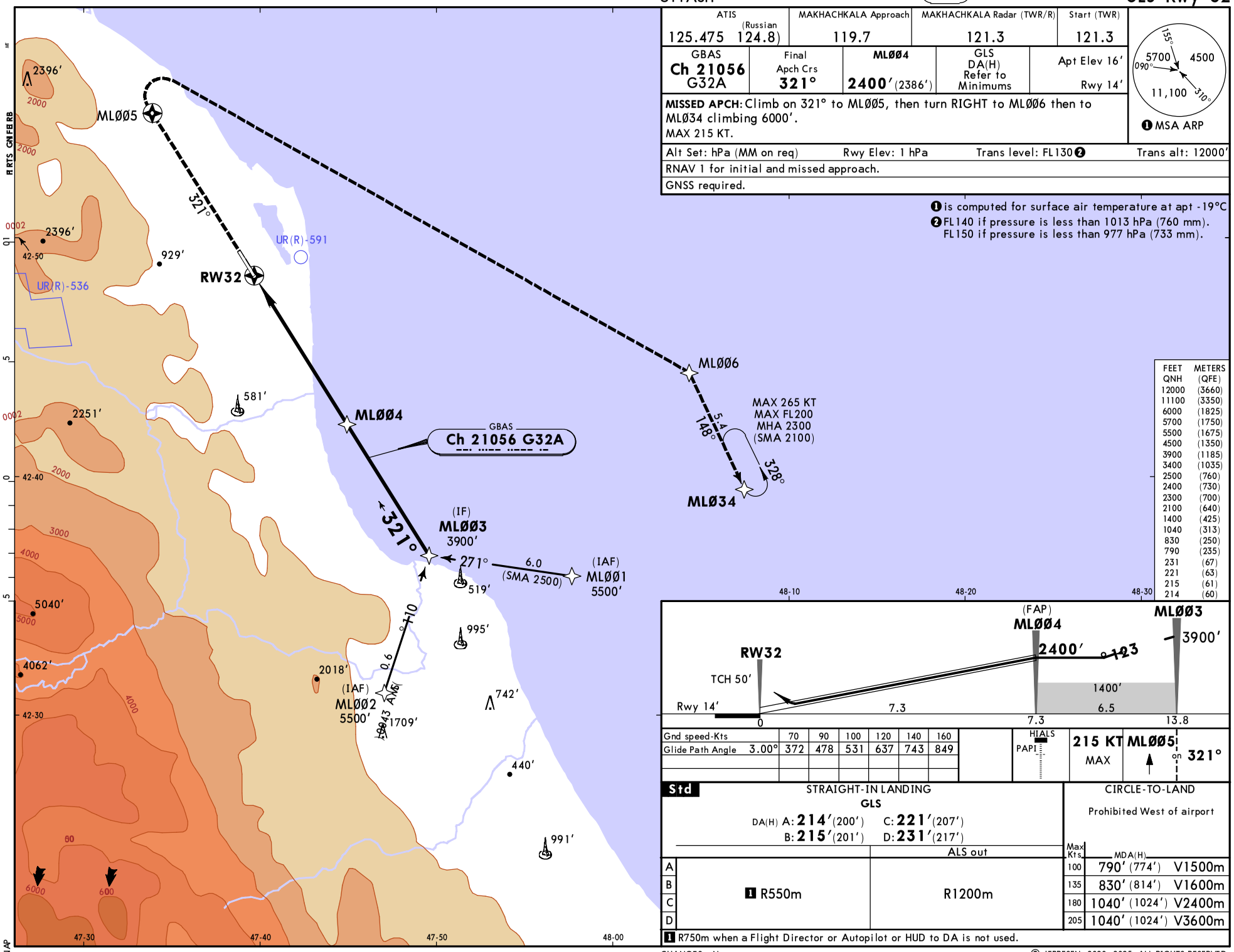
Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130❷ | Trans alt: 12000′

RNAV 1 for initial and missed approach.

GNSS required.

❶ is computed for surface air temperature at apt -19°C
❷ FL140 if pressure is less than 1013 hPa (760 mm).
FL150 if pressure is less than 977 hPa (733 mm).

FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
6000	(1825)
5700	(1750)
5500	(1675)
4500	(1350)
3900	(1185)
3400	(1035)
2500	(760)
2400	(730)
2300	(700)
2100	(640)
1400	(425)
1040	(313)
830	(250)
790	(235)
231	(67)
221	(63)
215	(61)
214	(60)



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

HIALS PAPI

215 KT MAX | MLØ5 | 321°

Std STRAIGHT-IN LANDING
GLS

DA(H) A: **214′** (200′) C: **221′** (207′)
B: **215′** (201′) D: **231′** (217′)

	ALS out
A	❶ R550m
B	
C	R1200m
D	

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

CIRCLE-TO-LAND
Prohibited West of airport

Max Kts	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

CHANGES: None.

URML/MCX
UYTASH

JEPPESEN 12 DEC 25 (13-1) Eff 25 Dec

MAKHACHKALA, ~~RUSSIA~~
VOR Rwy 14

BRIEFING STRIP

ATIS	(Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	124.8)	119.7	121.3	121.3

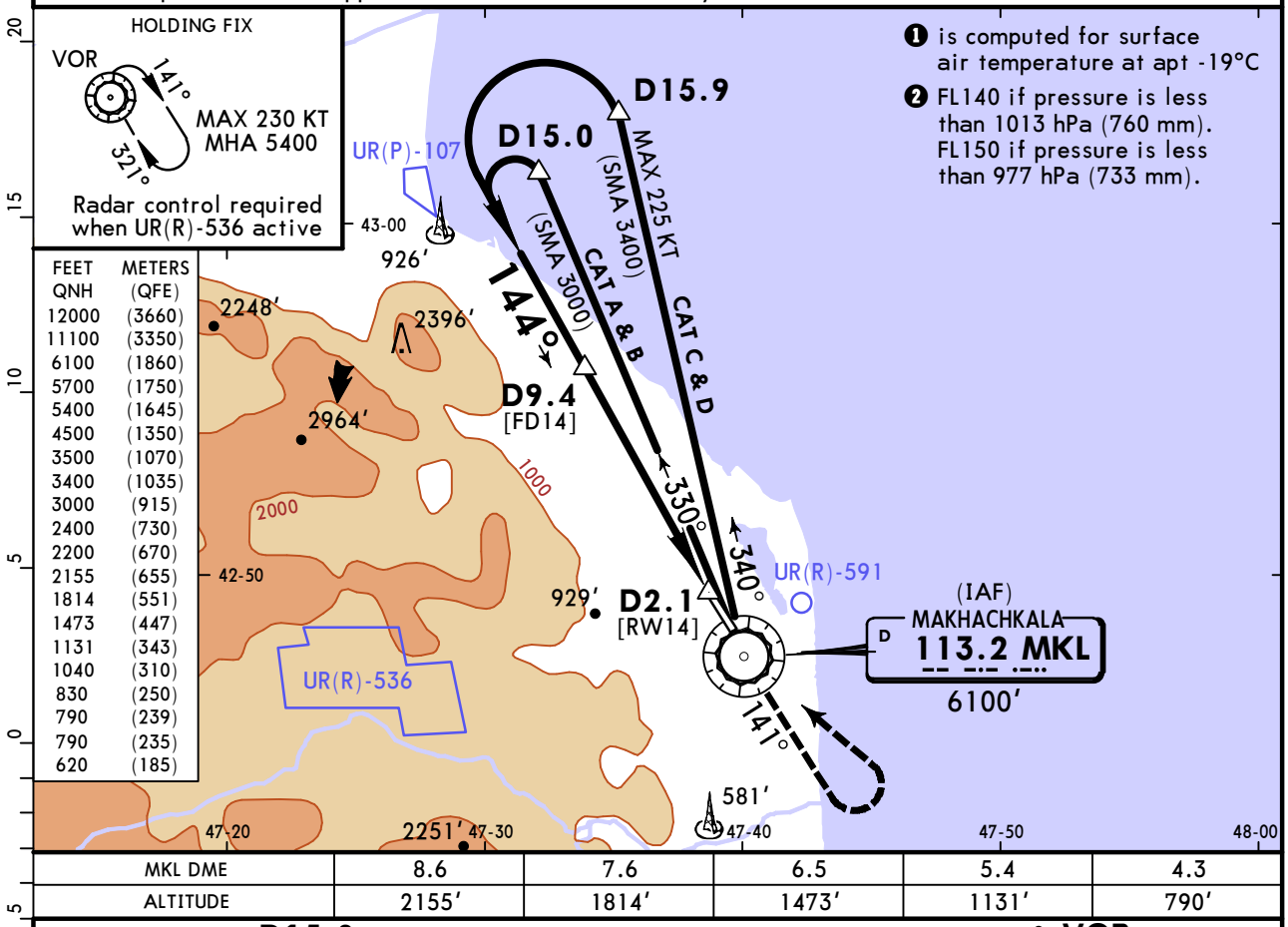
VOR MKL	Final Apch Crs	D9.4	DA/MDA(H)	Apt Elev 16′
113.2	144°	2400′ (2394′)	620′ (614′)	Rwy 6′

MISSED APCH: Climb on 141° to 3500′ or above, then turn LEFT to VOR climbing to 5400′ or above. Turn before passing MAP is PROHIBITED.

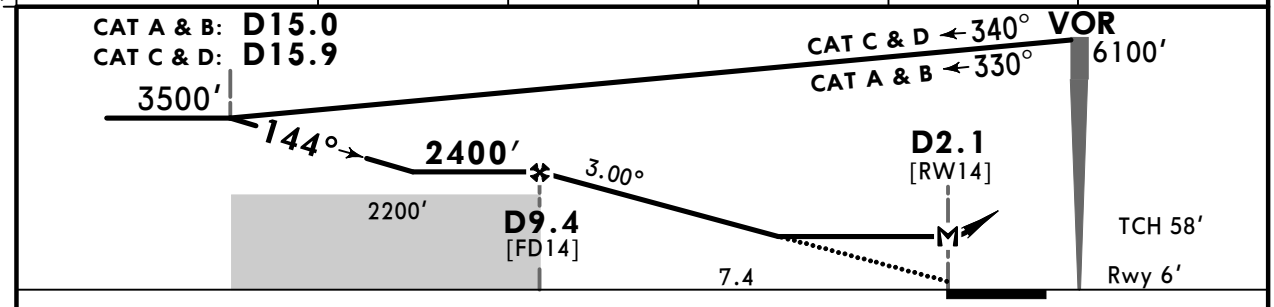
MSA ARP ❶: 155° 5700 4500 090° 11,100 310°

Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

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



MKL DME	8.6	7.6	6.5	5.4	4.3
ALTITUDE	2155′	1814′	1473′	1131′	790′



Gnd speed-KT	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D2.1						

Timing not authorized for defining the MAP.

PAPI-L

MIN 3500′ on 141°

PANS OPS

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 620′ (614′)

CIRCLE-TO-LAND

Prohibited West of airport

		Max KT	MDA(H)	
A	R1500m	100	790′ (774′)	V1500m
B		135	830′ (814′)	V1600m
C	R2400m	180	1040′ (1024′)	V2400m
D		205	1040′ (1024′)	V3600m

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

CHANGES: Note, PAPI.

URML/MCX
UYTASH

JEPPESEN 12 DEC 25 (13-2) Eff 25 Dec

MAKHACHKALA, ~~RUSSIA~~
VOR Rwy 32

BRIEFING STRIP

ATIS	(Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	124.8)	119.7	121.3	121.3

VOR MKL	Final Apch Crs	D6.6	DA/MDA(H)	Apt Elev 16′
113.2	316°	2400′ (2386′)	920′ (906′)	Rwy 14′

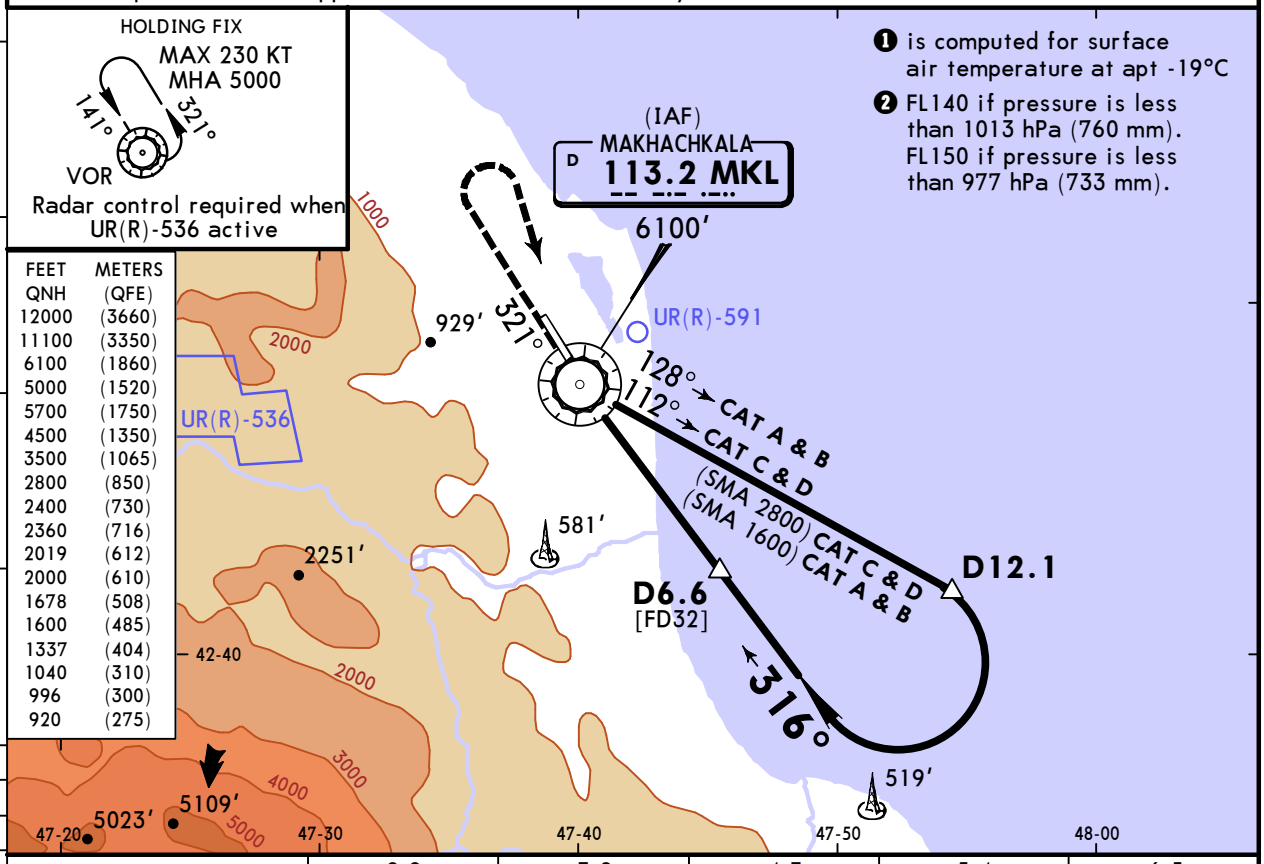
MISSED APCH: Climb on 321° to 3500′ or above, then turn RIGHT to VOR climbing to 5000′ or above. Turn before passing MAP is PROHIBITED.

MSA ARP ❶

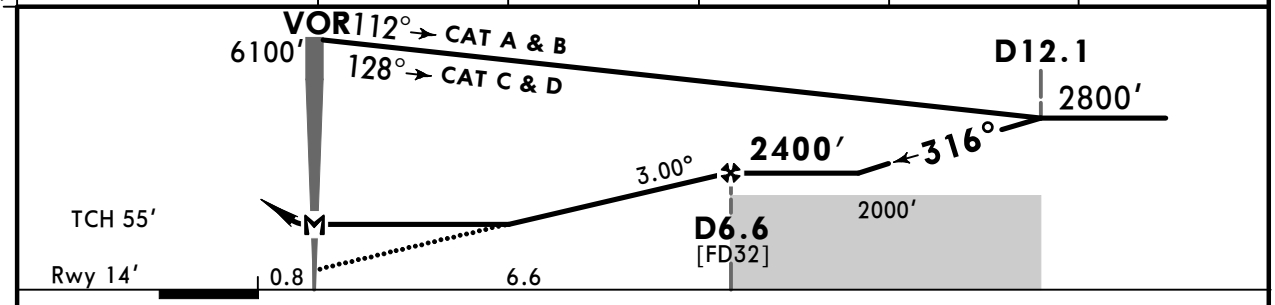
155° 5700 4500 090° 11,100 310°

Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. DME required. 2. Final approach track offset 5° from rwy centerline.



MKL DME	2.2	3.2	4.3	5.4	6.5
ALTITUDE	996′	1337′	1678′	2019′	2360′



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

Timing not authorized for defining MAP.

HIALS PAPI

MIN 3500′ on 321°

PANS OPS

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 920′ (906′)

ALS out

		Max Kts	MDA(H)	
A	R1500m	100	920′ (904′)	V1500m
B		135	920′ (904′)	V1600m
C	R2400m	180	1040′ (1024′)	V2400m
D		205	1040′ (1024′)	V3600m

CIRCLE-TO-LAND

Prohibited West of airport

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

CHANGES: None.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (16-1)

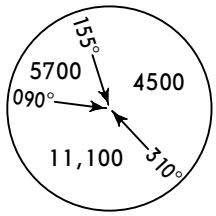
MAKHACHKALA, ~~RUSSIA~~
NDB Z Rwy 14

BRIEFING STRIP

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

Lctr	Final	D9.4	DA/MDA(H)) (CONDITIONAL)	Apt Elev 16′
H	Apch Crs	2400′ (2394′)	570′ (564′)	Rwy 6′
740	141°			

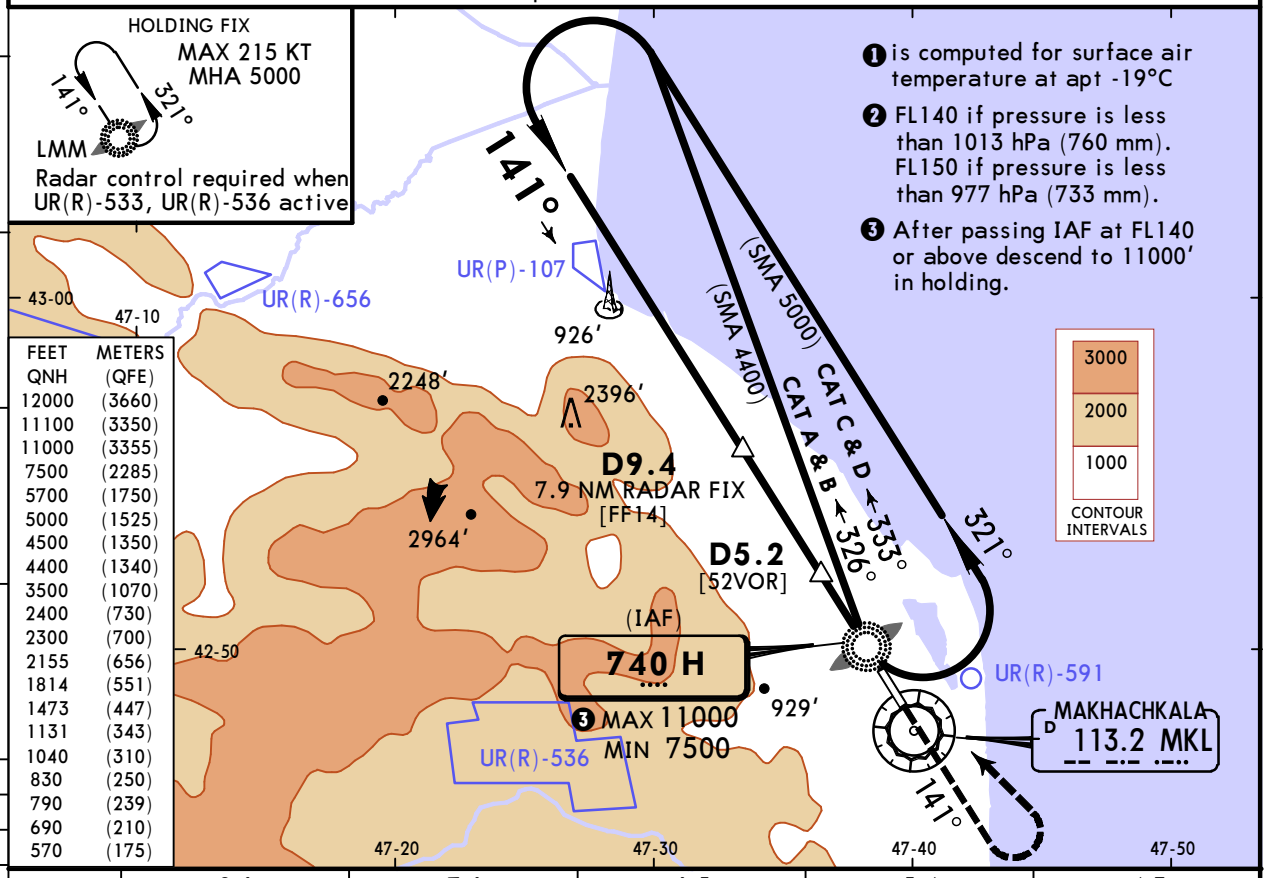
MISSED APCH: Climb on 141° to 3500′ or above, then turn LEFT to Lctr climbing to 5000′ or above. Turn before passing MAP is prohibited.



❶ MSA ARP

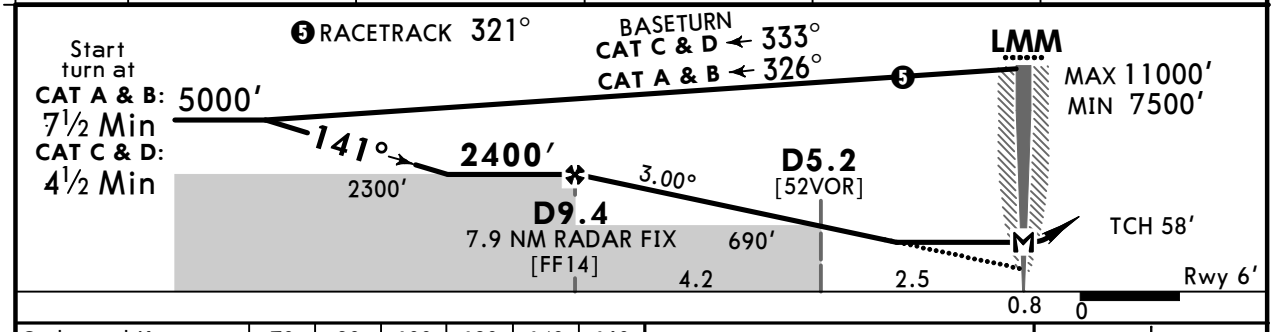
Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. TAR reads zero at ARP. 2. DME or radar required.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
11000	(3355)
7500	(2285)
5700	(1750)
5000	(1525)
4500	(1350)
4400	(1340)
3500	(1070)
2400	(730)
2300	(700)
2155	(656)
1814	(551)
1473	(447)
1131	(343)
1040	(310)
830	(250)
790	(239)
690	(210)
570	(175)

MKL DME	8.6	7.6	6.5	5.4	4.3
ALTITUDE	2155′	1814′	1473′	1131′	790′



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

MAP at LMM/Timing not authorized for defining the MAP.

MIN 3500′ on 141°

PANS OPS

Std STRAIGHT-IN LANDING

with D5.2 CDFA		w/o D5.2 CDFA	
❶ DA/MDA(H) 570′ (564′)		❶ DA/MDA(H) 690′ (684′)	
	ALS out		ALS out
A	R1500m	R1500m	
B			
C	R2400m	R2400m	
D			

CIRCLE-TO-LAND

Prohibited West of airport

Max KT	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

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

CHANGES: SMA, lights.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (16-2)

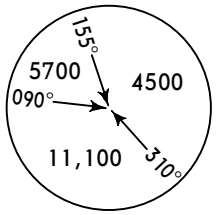
MAKHACHKALA, ~~RUSSIA~~
NDB Y Rwy 14

BRIEFING STRIP

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

NDB HC	Final Apch Crs	D9.4	DA/MDA(H))	Apt Elev 16′
365	141°	2400′ (2394′)	730′ (724′)	Rwy 6′

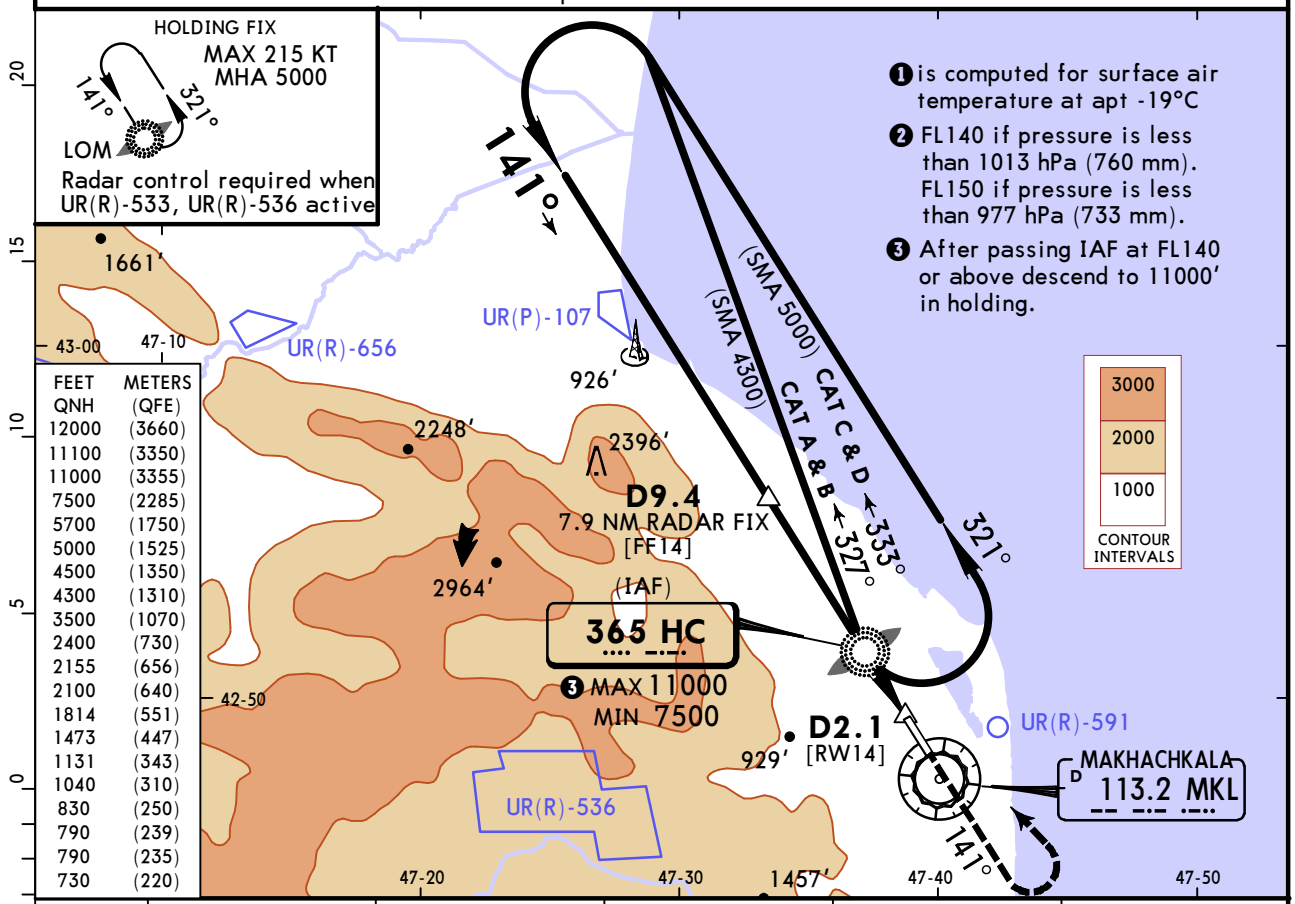
MISSED APCH: Climb on 141° to 3500′ or above, then turn LEFT to HC NDB climbing to 5000′ or above. Turn before passing MAP is prohibited.



❶ MSA ARP

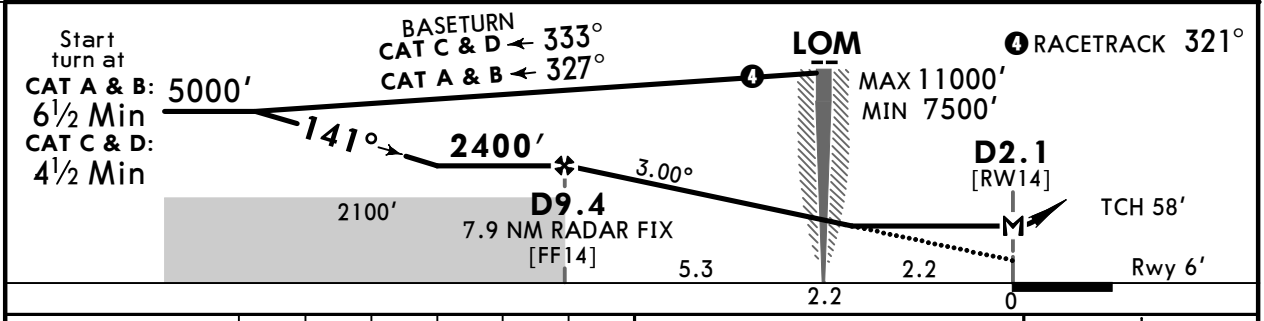
Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. TAR reads zero at ARP. 2. DME or radar required.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
11000	(3355)
7500	(2285)
5700	(1750)
5000	(1525)
4500	(1350)
4300	(1310)
3500	(1070)
2400	(730)
2155	(656)
2100	(640)
1814	(551)
1473	(447)
1131	(343)
1040	(310)
830	(250)
790	(239)
790	(235)
730	(220)

MKL DME	8.6	7.6	6.5	5.4	4.3
ALTITUDE	2155′	1814′	1473′	1131′	790′



Gnd speed-Kts		70	90	100	120	140	160
Descent Angle	3.00°	372	478	531	637	743	849
MAP at D2.1							
D9.4 to MAP	7.5	6:26	5:00	4:30	3:45	3:13	2:49

MIN 3500′ on 141°

PANS OPS

Std

STRAIGHT-IN LANDING
CDFA
❶ DA/MDA(H) 730′ (724′)

	ALS out
A	R1500m
B	
C	R2400m
D	

CIRCLE-TO-LAND
Prohibited West of airport

Max KT	MDA(H)	
100	790′ (774′)	V1500m
135	830′ (814′)	V1600m
180	1040′ (1024′)	V2400m
205	1040′ (1024′)	V3600m

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

CHANGES: Crossing altitude withdrawn, lights.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (16-3)

MAKHACHKALA, ~~RUSSIA~~
NDB X Rwy 14

BRIEFING STRIP

ATIS	(Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	124.8)	119.7	121.3	121.3

Lctr	Final Apch Crs	[FN14X]	DA/MDA(H)	Apt Elev 16′
H				Rwy 6′
740	141°	5000′ (4994′)	1810′ (1804′)	

MISSED APCH: Climb on 141° to 3500′ or above, then turn LEFT to Lctr climbing to 5000′ or above. Turn before passing MAP is prohibited.

155° 5700 4500 090° 11,100 310°
❶ MSA ARP

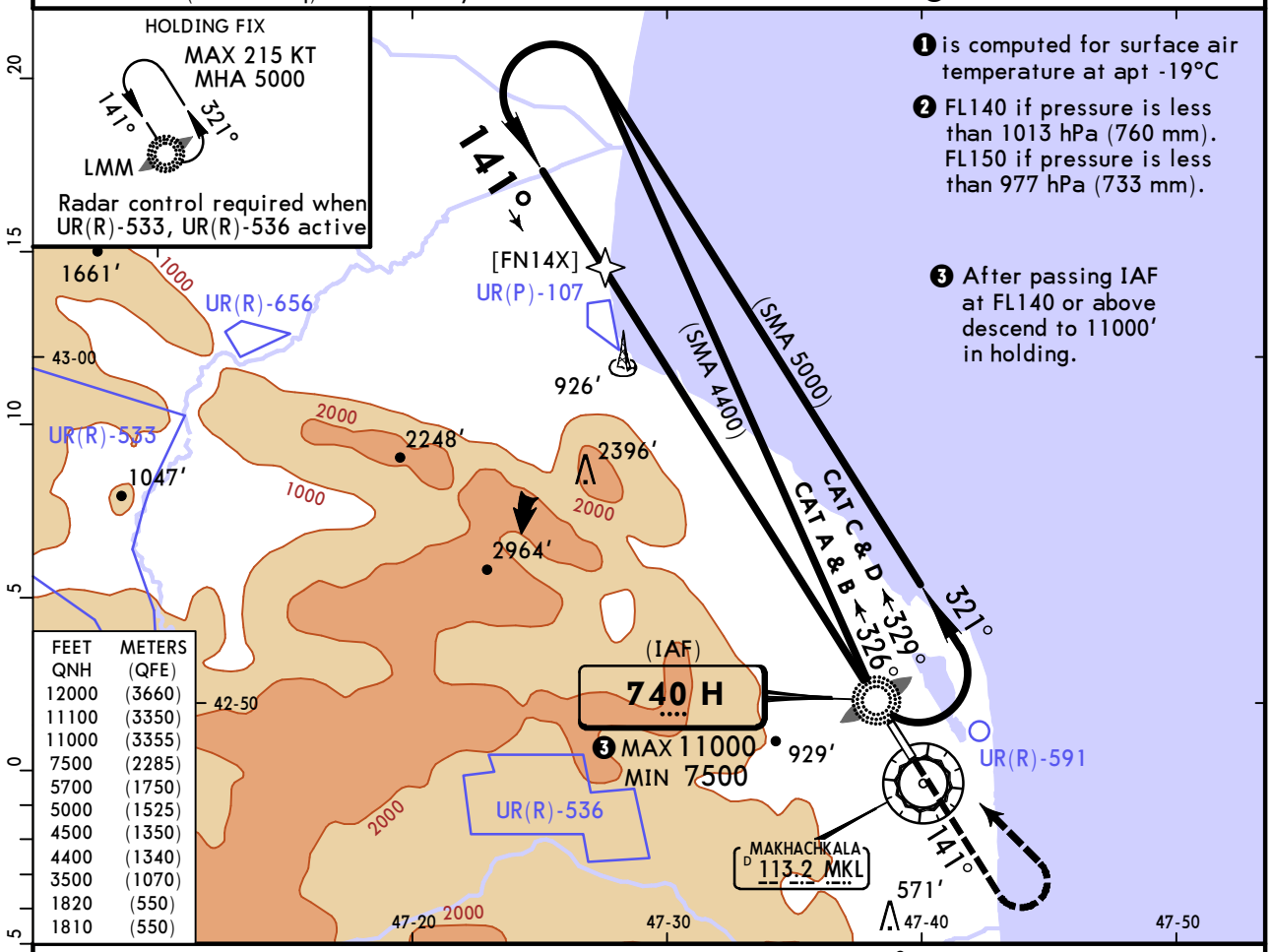
Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

HOLDING FIX
MAX 215 KT
MHA 5000
141° 321°
LMM
Radar control required when UR(R)-533, UR(R)-536 active

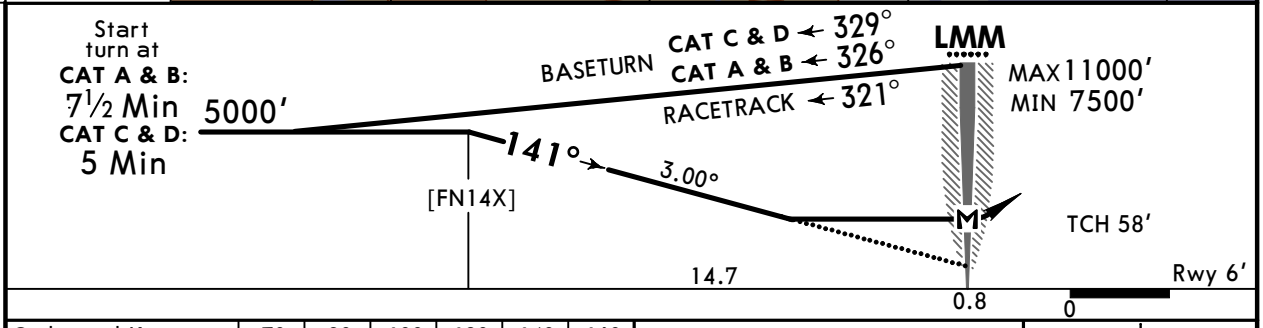
❶ is computed for surface air temperature at apt -19°C

❷ FL140 if pressure is less than 1013 hPa (760 mm). FL150 if pressure is less than 977 hPa (733 mm).

❸ After passing IAF at FL140 or above descend to 11000′ in holding.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
11000	(3355)
7500	(2285)
5700	(1750)
5000	(1525)
4500	(1350)
4400	(1340)
3500	(1070)
1820	(550)
1810	(550)



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

MAP at LMM/Timing not authorized for defining the MAP.

MIN 3500′ on 141°

PANS OPS

Std STRAIGHT-IN LANDING

CDFA
❶ DA/MDA(H) 1810′ (1804′)

A	R1500m
B	R1500m
C	R2400m
D	R2400m

CIRCLE-TO-LAND

Prohibited West of airport

Max KT	MDA(H)	
100	1820′ (1804′)	V1500m
135	1820′ (1804′)	V1600m
180	1820′ (1804′)	V2400m
205	1820′ (1804′)	V3600m

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

CHANGES: Bearing, timing, lights.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (16-4)

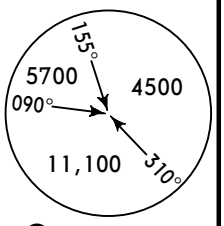
MAKHACHKALA, ~~RUSSIA~~
NDB W Rwy 14

BRIEFING STRIP™

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

NDB HC	Final Apch Crs	D7.2 MKL	DA/MDA(H)	Apt Elev 16′
365	141°	1700′ (1694′)	730′ (724′)	Rwy 6′

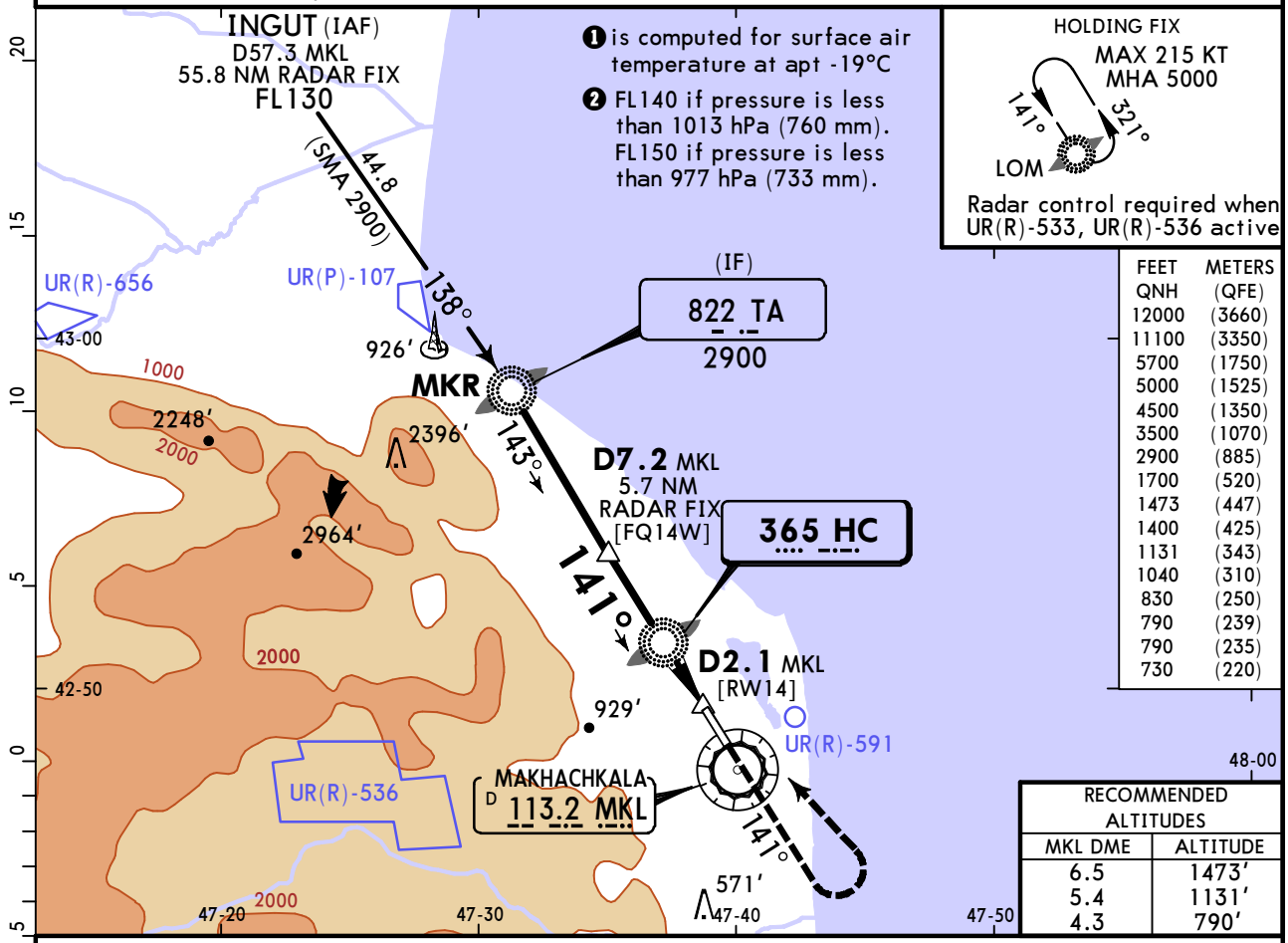
MISSED APCH: Climb on 141° to 3500′ or above, then turn LEFT to HC NDB climbing to 5000′ or above. Turn before passing MAP is prohibited.



❶ MSA ARP

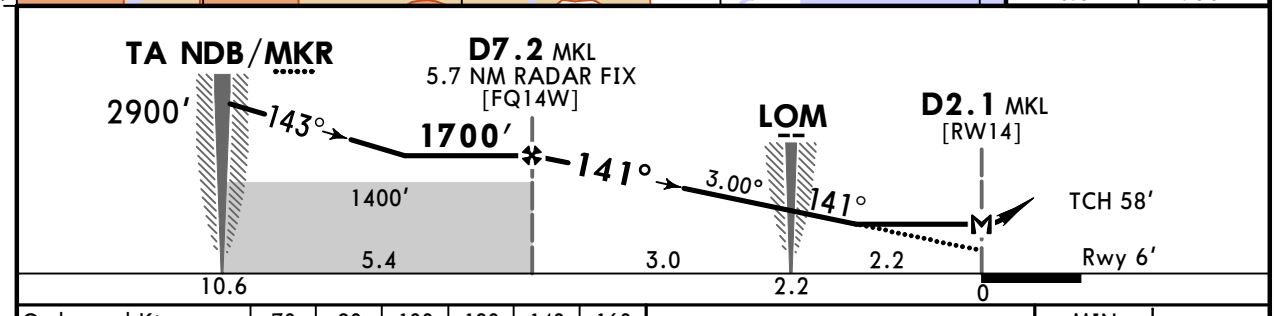
Alt Set: hPa (MM on req) | Rwy Elev: 0 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

DME or Radar control required.



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
5700	(1750)
5000	(1525)
4500	(1350)
3500	(1070)
2900	(885)
1700	(520)
1473	(447)
1400	(425)
1131	(343)
1040	(310)
830	(250)
790	(239)
790	(235)
730	(220)

RECOMMENDED ALTITUDES	
MKL DME	ALTITUDE
6.5	1473′
5.4	1131′
4.3	790′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at D2.1 MKL						
D7.2 MKL to MAP 5.2	4:27	3:28	3:07	2:36	2:14	1:57

MIN 3500′ on 141°

Std STRAIGHT-IN LANDING

CDFA

❶ DA/MDA(H) 730′ (724′)

CIRCLE-TO-LAND

Prohibited West of airport

		Max KT	MDA(H)	
A	R1500m	100	790′ (774′)	V1500m
B		135	830′ (814′)	V1600m
C	R2400m	180	1040′ (1024′)	V2400m
D		205	1040′ (1024′)	V3600m

PANS OPS

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

CHANGES: Lights.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (16-5)

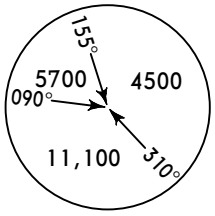
MAKHACHKALA, ~~RUSSIA~~
NDB Z Rwy 32

BRIEFING STRIP

ATIS		MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475	(Russian 124.8)	119.7	121.3	121.3

Lctr	Final Apch Crs	D6.6	DA/MDA(H) Refer to Minimums	Apt Elev 16′
S				Rwy 14′
740	321°	2400′ (2386′)		

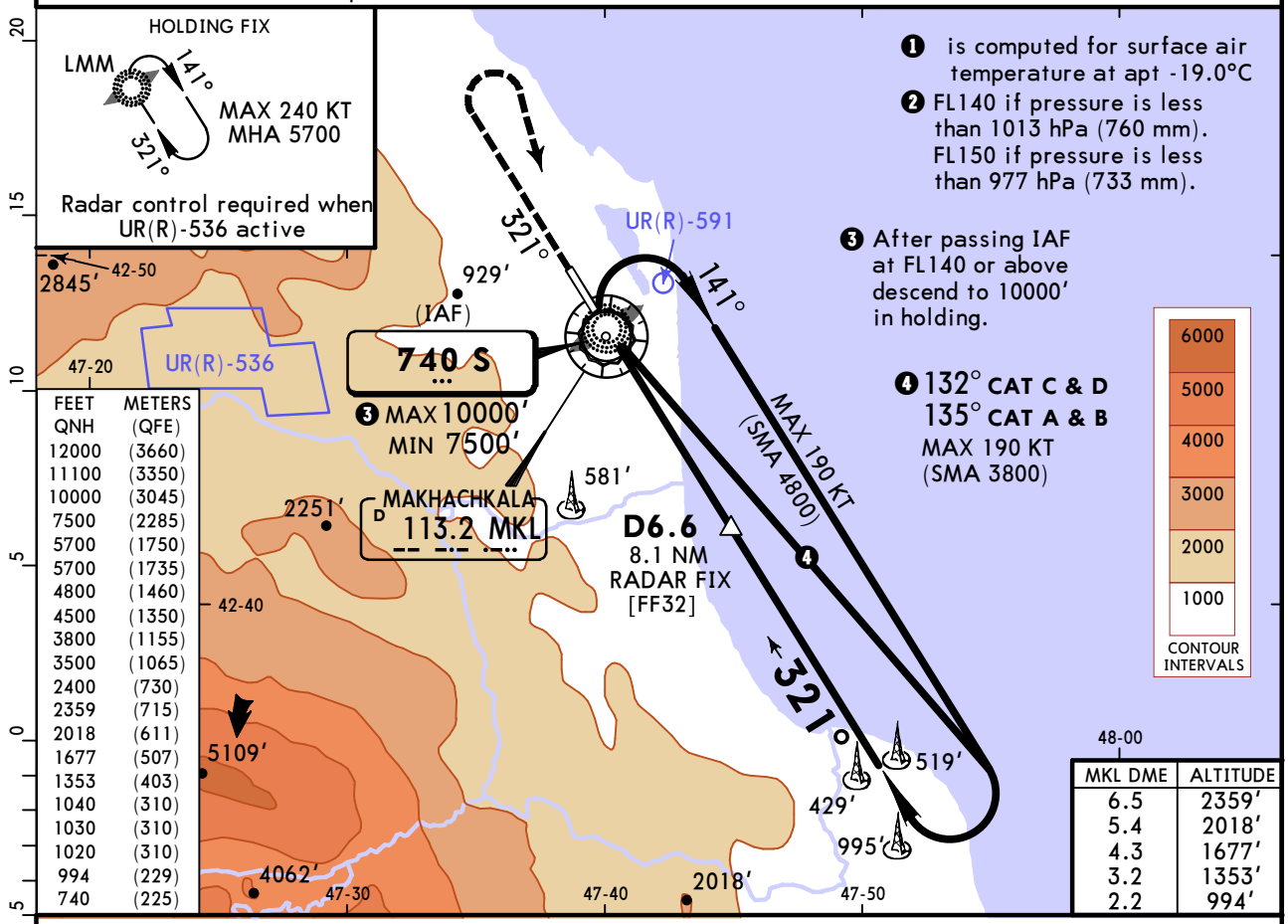
MISSED APCH: Climb on 321° to 3500′ or above, then turn RIGHT to S Lctr climbing to 4800′ or above. MAX 215 KT. Do not turn before MAP.



MSA ARP ❶

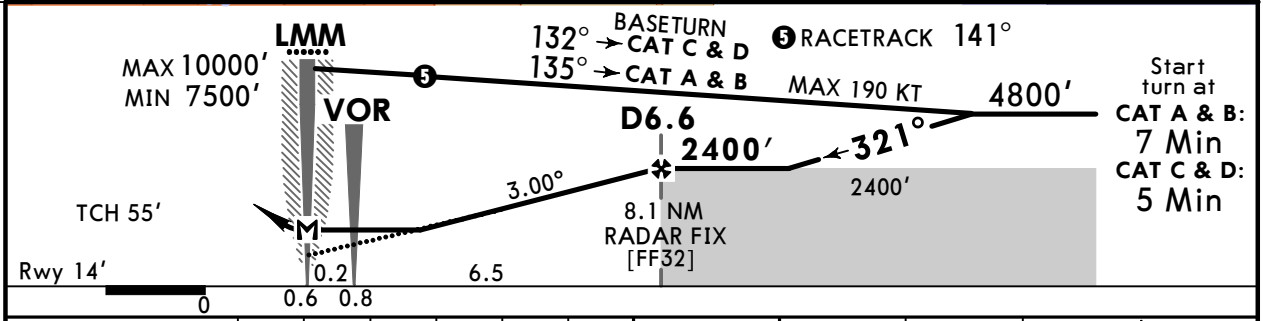
Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. DME or Radar control required. 2. TAR distance is indicated from ARP



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
10000	(3045)
7500	(2285)
5700	(1750)
5700	(1735)
4800	(1460)
4500	(1350)
3800	(1155)
3500	(1065)
2400	(730)
2359	(715)
2018	(611)
1677	(507)
1353	(403)
1040	(310)
1030	(310)
1020	(310)
994	(229)
740	(225)

MKL DME	ALTITUDE
6.5	2359′
5.4	2018′
4.3	1677′
3.2	1353′
2.2	994′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at LMM.						
Timing not authorized to define MAP.						

HIALS
PAPI

215 KT MAX

MIN 3500′ on 321°

Std

STRAIGHT-IN LANDING		CIRCLE-TO-LAND
MACG MIN 3.0% (183′/NM) CDFA	MACG MIN 2.5% (152′/NM) CDFA	Prohibited West of airport
❶ DA/MDA(H) 740′ (726′)	❶ DA/MDA(H) 1020′ (1006′)	
ALS out	ALS out	

			Max KT	MDA(H)
A	R1500m	R1500m	100	1030′ (1014′) V1500m
B			135	1030′ (1014′) V1600m
C	R2400m	R2400m	180	1040′ (1024′) V2400m
D			205	1040′ (1024′) V3600m

PANS OPS

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

CHANGES: None.

URML/MCX
UYTASH

JEPPESEN
17 OCT 25 (16-6)

MAKHACHKALA, ~~RUSSIA~~
NDB Y Rwy 32

BRIEFING STRIP

ATIS (Russian)	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (124.8)	119.7	121.3	121.3

NDB SM	Final Apch Crs	D6.6	DA/MDA(H) Refer to Minimums	Apt Elev 16′ Rwy 14′
365	321°	2400′ (2386′)		

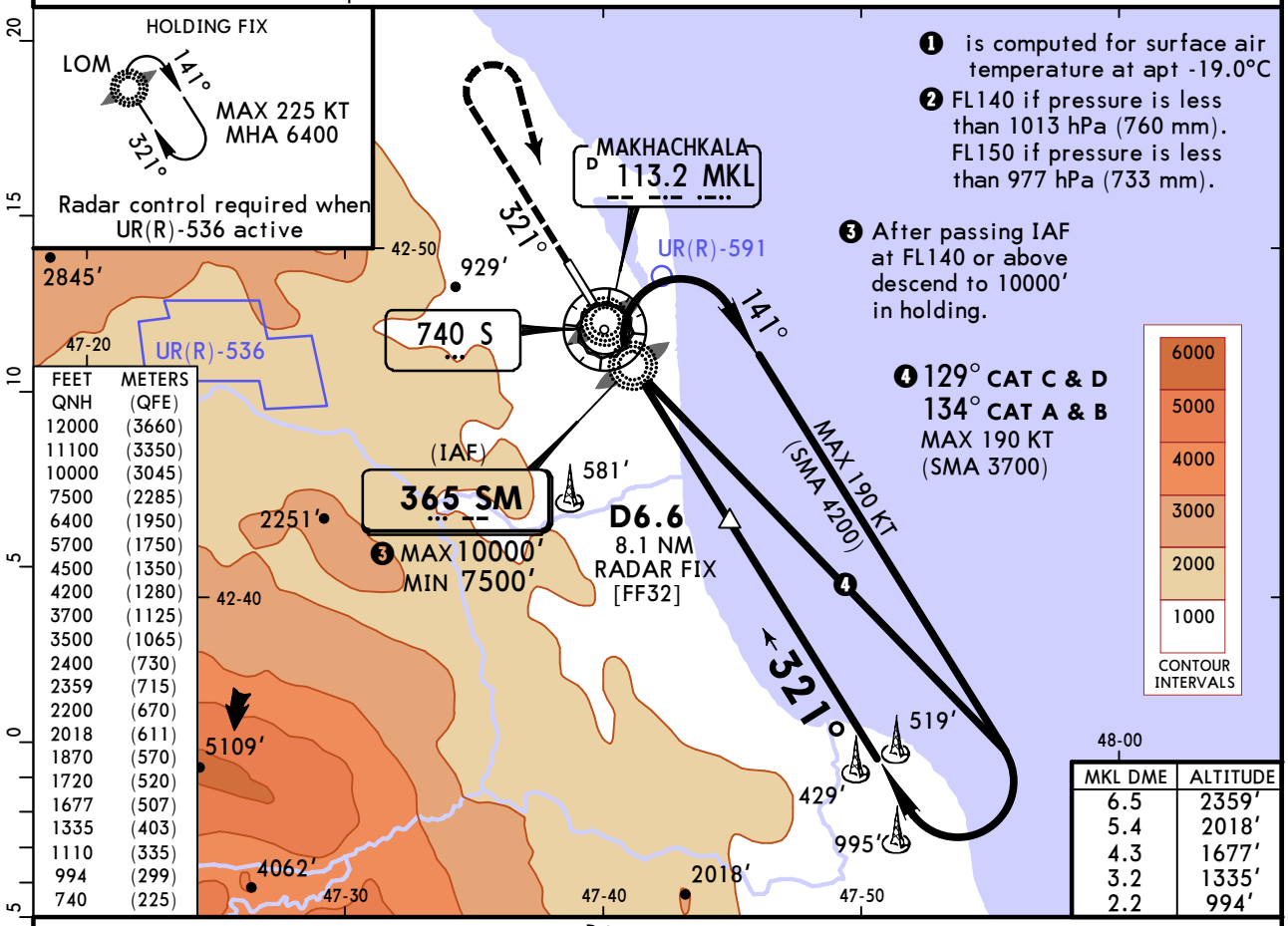
MISSED APCH: Climb on 321° to 3500′ or above, then turn RIGHT to SM NDB climbing to 4200′ or above. MAX 215 KT. Do not turn before MAP.

MSA ARP ❶

155° 5700 4500 090° 11,100 310°

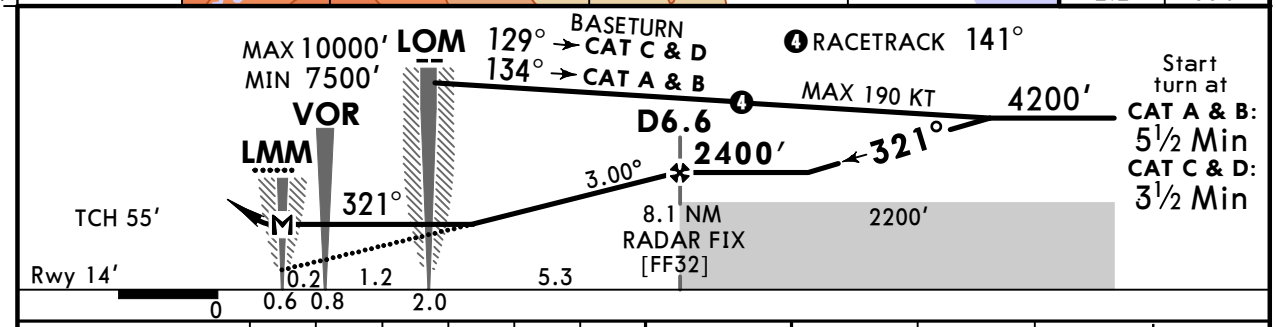
Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

1. DME or Radar control required. 2. TAR distance is indicated from ARP



FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
10000	(3045)
7500	(2285)
6400	(1950)
5700	(1750)
4500	(1350)
4200	(1280)
3700	(1125)
3500	(1065)
2400	(730)
2359	(715)
2200	(670)
2018	(611)
1870	(570)
1720	(520)
1677	(507)
1335	(403)
1110	(335)
994	(299)
740	(225)

MKL DME	ALTITUDE
6.5	2359′
5.4	2018′
4.3	1677′
3.2	1335′
2.2	994′



Gnd speed-Kts	70	90	100	120	140	160
Descent Angle 3.00°	372	478	531	637	743	849
MAP at LMM.						

Timing not authorized to define MAP.

HIALS
PAPI

215 KT MAX

MIN 3500′ on 321°

PANS OPS

Std

STRAIGHT-IN LANDING		CIRCLE-TO-LAND
MACG MIN 3.4% (207′/NM) CDFA	MACG MIN 2.5% (152′/NM) CDFA	Prohibited West of airport
❶ DA/MDA(H) 740′ (726′)	❶ DA/MDA(H) 1100′ (1086′)	
ALS out	ALS out	

			Max KT	MDA(H)
A	R1500m	R1500m	100	1110′ (1094′) V1500m
B			135	1110′ (1094′) V1600m
C	R2400m	R2400m	180	1110′ (1094′) V2400m
D			205	1110′ (1094′) V3600m

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

CHANGES: Recommended altitudes.

URML/MCX
UYTASH

JEPPESEN
3 OCT 25 (16-7)

MAKHACHKALA, ~~RUSSIA~~
NDB X Rwy 32

BRIEFING STRIP™

ATIS	MAKHACHKALA Approach	MAKHACHKALA Radar (TWR/R)	Start (TWR)
125.475 (Russian 124.8)	119.7	121.3	121.3

Lctr	Final Apch Crs	[FN32X]	MDA(H)	Apt Elev 16′
S 740	321°	4800′ (4786′)	1910′ (1896′)	Rwy 14′

MISSED APCH: Climb on 321° to 3500′ or above, then turn RIGHT to Lctr climbing to 4800′ or above. MAX 215 KT. Do not turn before MAP.

MSA ARP ❶
155° 5700 4500 090° 310° 11,100

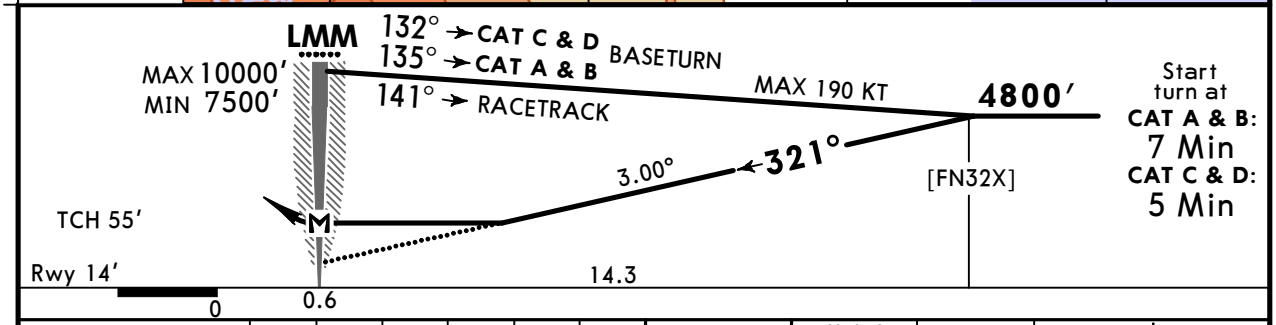
Alt Set: hPa (MM on req) | Rwy Elev: 1 hPa | Trans level: FL130 ❷ | Trans alt: 12000′

HOLDING FIX
LMM 141° 321°
MAX 235 KT
MHA 6700
Radar control required when UR(R)-536 active

❶ is computed for surface air temperature at apt -19°C
❷ FL140 if pressure is less than 1013 hPa (760 mm). FL150 if pressure is less than 977 hPa (733 mm).
❸ After passing IAF at FL140 or above descend to 10000′ in holding.
❹ 132° CAT C & D
135° CAT A & B
MAX 190 KT
(SMA 3800)

UR(R)-591
UR(R)-536
929′ (IAF)
740 S
❸ MAX 10000′
MIN 7500′
MAX 190 KT (SMA 4800) ❹
321°
141°
581′
2251′
519′
[FN32X]
429′
995′
2018′
5109′
4062′
2845′
42-50
47-20
42-40
47-30
47-40
47-50
48-00
2000
1000
2000
3000
4000
5000

FEET QNH	METERS (QFE)
12000	(3660)
11100	(3350)
10000	(3045)
7500	(2285)
6700	(2040)
5700	(1750)
4800	(1460)
4500	(1350)
3800	(1150)
3500	(1065)
1920	(580)
1910	(580)



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

Timing not authorized for defining MAP.

HIALS
PAPI

215 KT MAX

MIN 3500′ on 321°

Std STRAIGHT-IN LANDING

MDA(H) 1910′ (1896′)
ALS out

A	R2400m
B	
C	
D	

CIRCLE-TO-LAND
Prohibited West of airport

Max Kts	MDA(H)	
100	1920′ (1904′)	❶ V1500m
135	1920′ (1904′)	❶ V1600m
180	1920′ (1904′)	V2400m
205	1920′ (1904′)	V3600m

PANS OPS

❶ or higher straight-in minimums.

CHANGES: TA, TL, MSA, procedure, minimums.

Chart changes since cycle 07-2026

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

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE

MAKHACHKALA, (UYTASH - URML)

TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport URML

Type: Terminal
Effectivity: Temporary
Begin Date: 20251225
End Date: Until Further Notice

(11-1) ILS Z or LOC Z RWY 14, (12-40) GLS RWY 14, - Restricted areas UR(R)-533 and UR(R)-536 deleted from chart. (11-2) ILS Y or LOC Y RWY 14, - Restricted area UR(R)-533 deleted from chart. (11-5) ILS Z or LOC Z RWY 32, (12-41) GLS RWY 32 - Restricted area UR(R)-536 deleted from chart. (11-2) ILS Y or LOC Y RWY 14, (11-3) ILS W or LOC W RWY 14, (11-6) ILS Y or LOC Y RWY 32, (11-7) ILS X or LOC X RWY 32, (11-8) ILS W or LOC W RWY 32, (16-1) NDB Z RWY 14, (16-2) NDB Y RWY 14, (16-3) NDB X RWY 14, (16-4) NDB W RWY 14, (16-5) NDB Z RWY 32, (16-6) NDB Y RWY 32, (16-7) NDB X RWY 32, - Read note "Do not turn before MAP." as "Turn before MAP is PROHIBITED.".