

List of pages in this Trip Kit

Trip Kit Index

Airport Information For UUWW

Terminal Charts For UUWW

Revision Letter For Cycle 08-2012

Change Notices

Notebook

General Information

Location: Moscow Rus
IATA Code: VKO
Lat/Long: N55° 35.9' E037° 16.4'
Elevation: 685 ft

Airport Use: Public
Magnetic Variation: 10.2°E

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

Sunrise: 0215 Z
Sunset: 1645 Z,

Runway Information

Runway: 01
Length x Width: 10039 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 667 ft
Lighting: Edge, ALS, Centerline

Runway: 06
Length x Width: 9843 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 637 ft
Lighting: Edge, ALS, Centerline

Runway: 19
Length x Width: 10039 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 634 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 24
Length x Width: 9843 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 679 ft
Lighting: Edge, ALS, Centerline, TDZ

Communication Information

ATIS 131.85
ATIS 125.875 Non-English
Vnukovo Vtipport Tower 122.875
Vnukovo Tower 129.0 Secondary
Vnukovo Tower 124.4 Secondary
Vnukovo Tower 119.45 Secondary
Vnukovo Tower 118.3
Vnukovo Taxing 2 Ground Control 121.7
Vnukovo Taxiing 1 Ground Control 129.0 Secondary
Vnukovo Taxiing 1 Ground Control 124.4 Secondary
Vnukovo Taxiing 1 Ground Control 120.45
Vnukovo Taxiing 1 Ground Control 119.45 Secondary
Vnukovo Clearance Delivery 131.8
Vnukovo Clearance Delivery 131.125
Vnukovo Approach Control 129.0 Secondary
Vnukovo Approach Control 122.3
Moscow Approach Two Approach Control 124.4
Moscow Approach Two Approach Control 122.7
Moscow Approach Three Approach Control 128.0
Moscow Approach Six Approach Control 125.3
Moscow Approach Seven Approach Control 131.2
Moscow Approach One Approach Control 127.2
Moscow Approach One Approach Control 119.45
Moscow Approach Nine Approach Control 135.9
Moscow Approach Four Approach Control 123.4
Moscow Approach Five Approach Control 134.0
Moscow Approach Eight Approach Control 129.8
Vnukovo Radar 129.0 Secondary
Vnukovo Radar 126.0
Vnukovo Radar 124.4 Secondary
Vnukovo Radar 119.45

1. GENERAL

1.1. ATIS

ATIS 131.85
125.87 (Russian)

1.2. NOISE ABATEMENT PROCEDURES**1.2.1. GENERAL**

Noise abatement procedures shall be executed by all ACFT.

Noise abatement procedures shall not be executed at the expense of the reduction of flight safety.

1.2.2. NIGHTTIME RESTRICTIONS

Between 2300-0700LT departures and arrivals are allowed only for ACFT with a noise level not exceeding the requirements envisaged by the ICAO Annex 16, Chapter 3.

Arrivals and departures of all ACFT types are prohibited between 0330-0600LT.

1.2.3. PREFERENTIAL RWY SYSTEM

Between 2300-0700LT RWY 19 should not be used for landing in order of preference.

Between 2300-0700LT RWY 01 should not be used for take-off in order of preference.

Deviations from the given restrictions are possible due the prohibition to use RWY 06/24, extreme weather conditions and operational restrictions.

1.2.4. REVERSE THRUST

After landing between 2300-0700LT it is recommended to use reverse thrust at idle power except for flight safety reasons.

1.2.5. USE OF APU

Between 2300-0700LT the run-up of APU is prohibited. The use of APU should be avoided and/or restricted after parking onto the stands or before taxiing out of the stands equipped with the ground APU units and the devices for air conditioning.

1.3. TAXI PROCEDURES

Taxiing on TWYs 14 (between Twy C2 and closed Rwy 06/24), B1, B3, B6, B8, M3 and M4 at reduced speed, strictly along taxi guide line.

Taxiing on TWYs A7, A8, B1, B8, C9, M3 and M4 at night or when VIS is less than 2000m, with Follow-me car only; for AN-124 available by towing only.

1.4. PARKING INFORMATION

Use of Vnukovo I stands 34B and 91 by towing.

Use of Vnukovo I stand 28 under engines power, when stand 29 vacant.

When Vnukovo I stands 29A and 29C occupied, use of stands 30 and 31 by towing.

Use of Vnukovo I stand 51 by towing, when stand 45 is vacant.

Enter Vnukovo I stands 25C and 31C under engines power, leave stands by towing.

Enter Vnukovo I stands 41 and 43 by push-back from TWY M4.

Enter Vnukovo I stand 92A by towing, leave stand under engines power.

Leave Vnukovo I stand 38 by towing, when stand 39 is occupied.

Leave Vnukovo I stand 96 under engines power, when stand 74 vacant.

Vnukovo III stands 21 and 22 to be entered via vacant stands 23 thru 25 and vice versa.

Enter Vnukovo III stand 27 under engines power, when stand 18 vacant.

Enter Vnukovo III stands 1 thru 17, 28, 33, 34, 77 and 78 by towing.

Leave Vnukovo III stands under engines power as follows:

- Stand 6, when stand 31 vacant
- Stands 7 and 8, when stand 23 vacant
- Stands 9 and 10, when stand 22 vacant
- Stand 17, when stand 28 vacant
- Stands 18 and 28, when stand 27 vacant
- Stand 27, when stand 18 vacant

1. GENERAL

Leave Vnukovo III stands 51 thru 53 and 62 thru 78 by towing.
Leave Vnukovo III stands 21 thru 26 by towing, followed by taxiing with engines power 0.4 of the nominal.

Leave Vnukovo III stands by towing as follows:

- Stand 6, when stand 31 occupied
- Stands 7 and 8, when stand 23 occupied
- Stands 9 and 10, when stand 22 occupied
- Stand 17, when stand 28 occupied
- Stand 18, when stand 27 occupied
- Stand 27, when stand 18 occupied.

1.5. OTHER INFORMATION

Birds in vicinity of APT.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

2.1.1. APPROACH PHASE

Restrictions

Great rates of descent should be avoided (if possible) directly before the final approach.

The change of flight configuration and speed of ACFT, connected with noise abatement procedures, shall be carried out according to the requirements of the Airplane Flight Manual.

During instrument as well as visual approach, it is prohibited to fly below the ILS GS angle.

The noise abatement procedures shall not envisage the excess of the indicated rate of descent established by the Airplane Flight Manual of the given ACFT type.

2.2. CAT II OPERATIONS

RWY 19 approved for CAT II operations, special aircrew and ACFT certification required.

2.3. RWY OPERATION

2.3.1. MINIMUM RWY OCCUPANCY TIME

The pilot must vacate the RWY as fast as possible.

After obtaining line-up clearance the flight crew must execute taxiing to the assigned position on the RWY without delay.

Cockpit checks must be completed, if possible, before occupation of line-up position and the checks which to be done on the RWY shall be executed as soon as possible.

The flight crew shall provide the beginning of take-off run immediately after obtaining clearance for its execution.

If unable to execute the above mentioned requirements, the flight crews must inform Tower about it.

2.4. SPEED RESTRICTION

Unless otherwise instructed maintain:

250 KT below FL100 to TL,

230 KT below TL.

If unable to comply report to ATC.

3. DEPARTURE

3.1. START-UP, TOWING & TAXI PROCEDURES

3.1.1. START-UP

General:

Engine start-up, towing and taxiing of ACFT to RWY holding position shall be carried out on the flight crew's request and by clearance of Taxiing.

When requesting for start-up clearance from Taxiing, the flight crews of departing ACFT shall advise call sign and stand number.

When towing of ACFT to engine start-up position is required, the flight crew shall advise stand number and request for towing clearance from Taxiing.

Engine start-up shall be carried out at start-up points by the instruction of the technical specialist.

Flight crew can carry out engine start-up during towing of ACFT if this procedure is envisaged by Airplane Flight Manual and coordinated with the technical personnel of the tow-team.

Procedure:

Flight crews of departing ACFT must establish contact with Delivery not later than 5 minutes before the estimated time of engines start-up and advise the following:

- flight number;
- the ACFT registration number;
- the destination aerodrome;
- the ACFT type;
- the ACFT stand number;
- ATIS information index;
- other information (the necessity of de-icing treatment, the necessity to use full RWY distance for take-off, etc.).

The flight crews must obtain the ATC clearance as follows:

- the destination aerodrome;
- SID route from the aerodrome area;
- transponder code;
- flight level.

When ACFT is completely ready for departure the flight crew shall change over to communication with Taxiing by the instruction of Delivery.

A period of 10 min established additionally to departure time during reconstruction work for towing and engine start-up from Vnukovo I apron.

3.1.2. TAXIING

Up to 15 min are established for taxiing and provision of air traffic safety during departure.

3.2. NOISE ABATEMENT PROCEDURES

Flight crews shall strictly adhere to the established departure procedure to avoid overflying the settlements.

TAKE-OFF AND CLIMBING PHASE**Restrictions**

A displacement of THR shall not be used as a noise abatement measure.

A change of flight course direction after take-off is permitted only after reaching 1080'(395').

Turns initiated between 1080 '(395') and 1670 '(985') shall be executed with a bank angle of 15°.

Turns initiated between 1670 '(985') and 3640 '(2955') shall be executed with a bank angle of 20°.

Turns initiated at or above 3640 '(2955') shall be executed with 25° bank or with angular speed of turn of 3°/sec.

Noise Abatement Procedures NADP1 and NADP2.

The flight crews shall apply two noise abatement procedures during climbing phase: NADP1 and NADP2 (ICAO Doc 8168, Volume 1, Part V, Chapter 3)

3. DEPARTURE

3.3. OTHER INFORMATION

3.3.1. TAKE-OFF FROM INTERSECTION

During briefing, a pilot must report chosen line-up position to Tower.

If pilot-in-command is ready to carry out take-off without stop on RWY, he has to report his decision to Tower at first contact at RWY holding position. Whereas the pilot shall obtain take-off clearance simultaneously with line-up clearance.

TRANSITION DESIGNATION	REFER TO CHART
BOGDANOVO 1W, 2W, 3W, NAMIN 1W, 2W, 3W	10-2B
LARIONOVO 1W, 2W	10-2C
OKTYABRSKY 1W, 2W, SUKHOTINO 1W	10-2D
GAGARIN 1W, 2W, 3W, 4W, 5W, SODRU 1W, ZAKHAROVKA 1W	10-2E

RNAV STAR DESIGNATION	REFER TO CHART
IVANOVSKOYE 01PA, 01RA	10-2F
IVANOVSKOYE 19R	10-2G
GISIN 01R, UMBEG 01R	10-2H
GISIN 19P	10-2J
BITSA 01PA, 01RA	10-2K
BITSA 01R	10-2L
BITSA 19P, 19R	10-2M
KLIMOVSK 01PA, 01RA	10-2N
KLIMOVSK 19P, 19R	10-2P
SKURYGINO 01PA, 01R, 01RA	10-2Q
SKURYGINO 19P, 19R	10-2S
GAGARIN 01RA, KULEG 01RA	10-2T
GAGARIN 19R, KULEG 19R	10-2U

FOR STAR DESIGNATION REFER TO PAGE 10-2A

STAR DESIGNATION	REFER TO CHART
BITSA 01A, KLIMOVSK 01A, SKURYGINO 01A, UMBEG 01A	10-2W
BITSA 01B, KLIMOVSK 01B, SKURYGINO 01B, UMBEG 01B	10-2X
BITSA 19B	10-2X1
BITSA 19I	10-2X2
GISIN 19A, IVANOVSKOYE 19A	10-2X3
GISIN 19B, IVANOVSKOYE 19B	10-2X4
KLIMOVSK 19A, SKURYGINO 19A	10-2X5
KLIMOVSK 19K, SKURYGINO 19K, UMBEG 19K	10-2X6

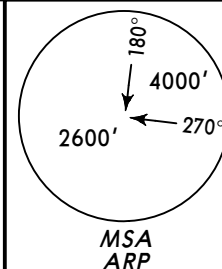
ATIS
131.85 (Russian 125.87)

Apt Elev
685'

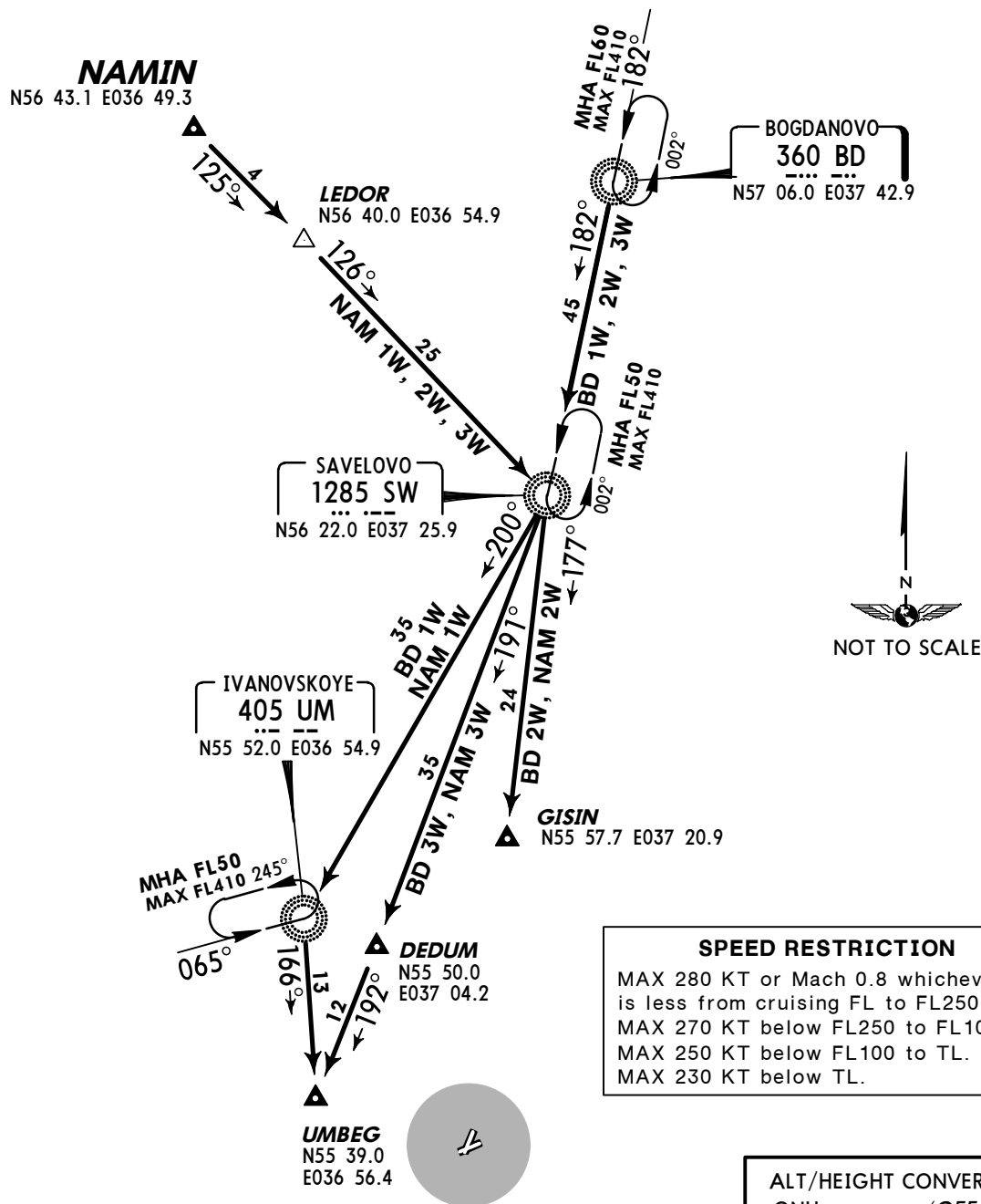
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3285')

BOGDANOVO 1W (BD 1W), BOGDANOVO 3W (BD 3W)
NAMIN 1W (NAM 1W), NAMIN 3W (NAM 3W)
TO UMBEG

BOGDANOVO 2W (BD 2W), NAMIN 2W (NAM 2W)
TO GISIN



TRANSITIONS

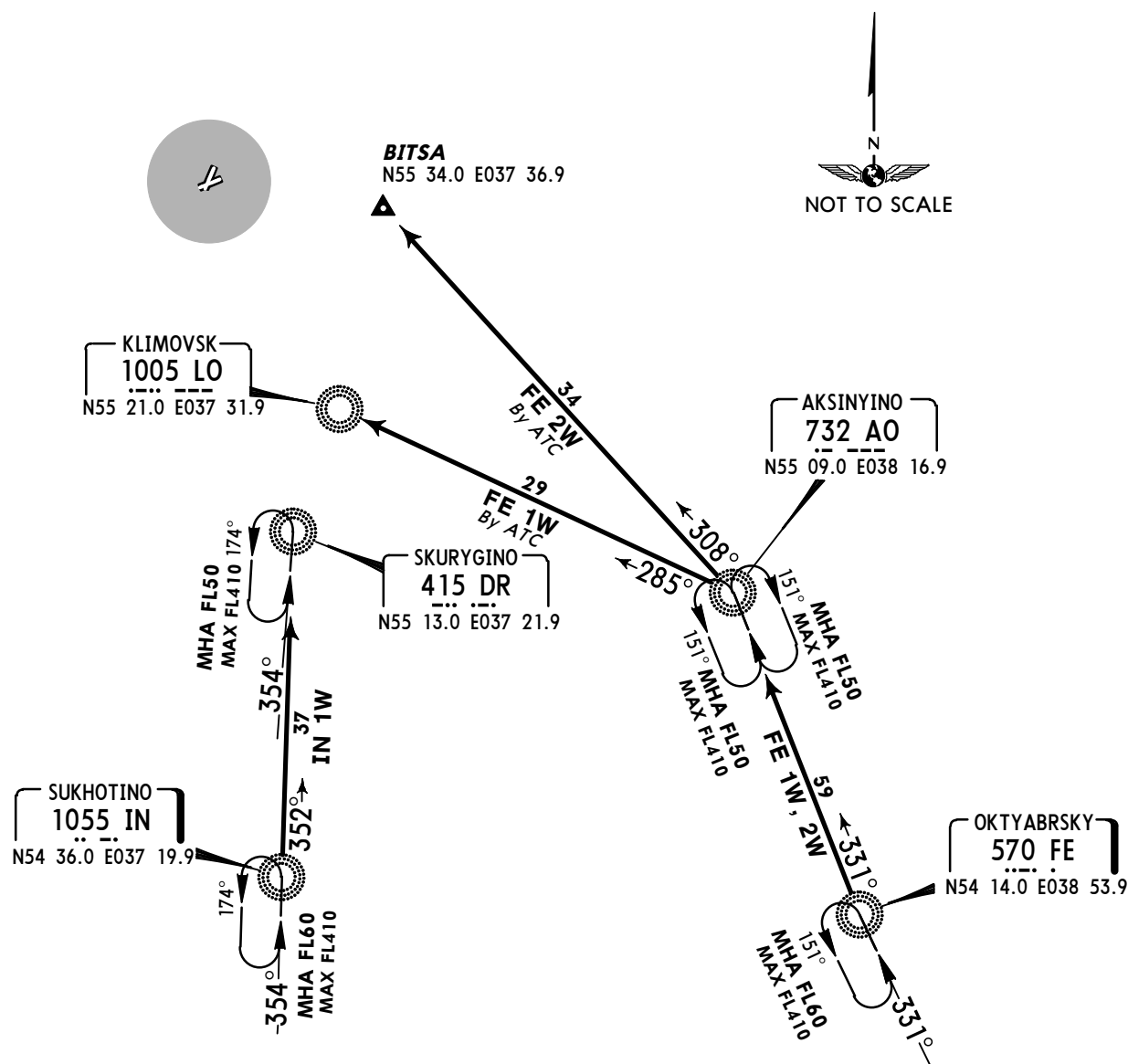
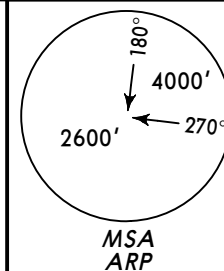


TRANSITION	ROUTING
BD 1W	To SW, then to UM, then to UMBEG.
BD 2W	To SW, then to GISIN.
BD 3W	To SW, then to DEDUM, then to UMBEG.
NAM 1W	To LEDOR, then to SW, then to UM, then to UMBEG.
NAM 2W	To LEDOR, then to SW, then to GISIN.
NAM 3W	To LEDOR, then to SW, then to DEDUM, then to UMBEG.

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ATIS
131.85 (Russian 125.87)Apt Elev
685'Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3285')OKTYABRSKY 1W (FE 1W)
TO LOOKTYABRSKY 2W (FE 2W)
TO BITSASUKHOTINO 1W (IN 1W)
TO DR

TRANSITIONS

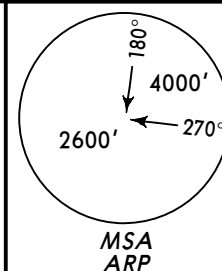


SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever
is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3285' - 1000m)

TRANSITION	ROUTING
FE 1W	To AO, then to LO.
FE 2W	To AO, then to BITSA.
IN 1W	To DR.

ATIS
131.85 (Russian 125.87)Apt Elev
685'Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3285')

GAGARIN 1W (FK 1W)

TO UM

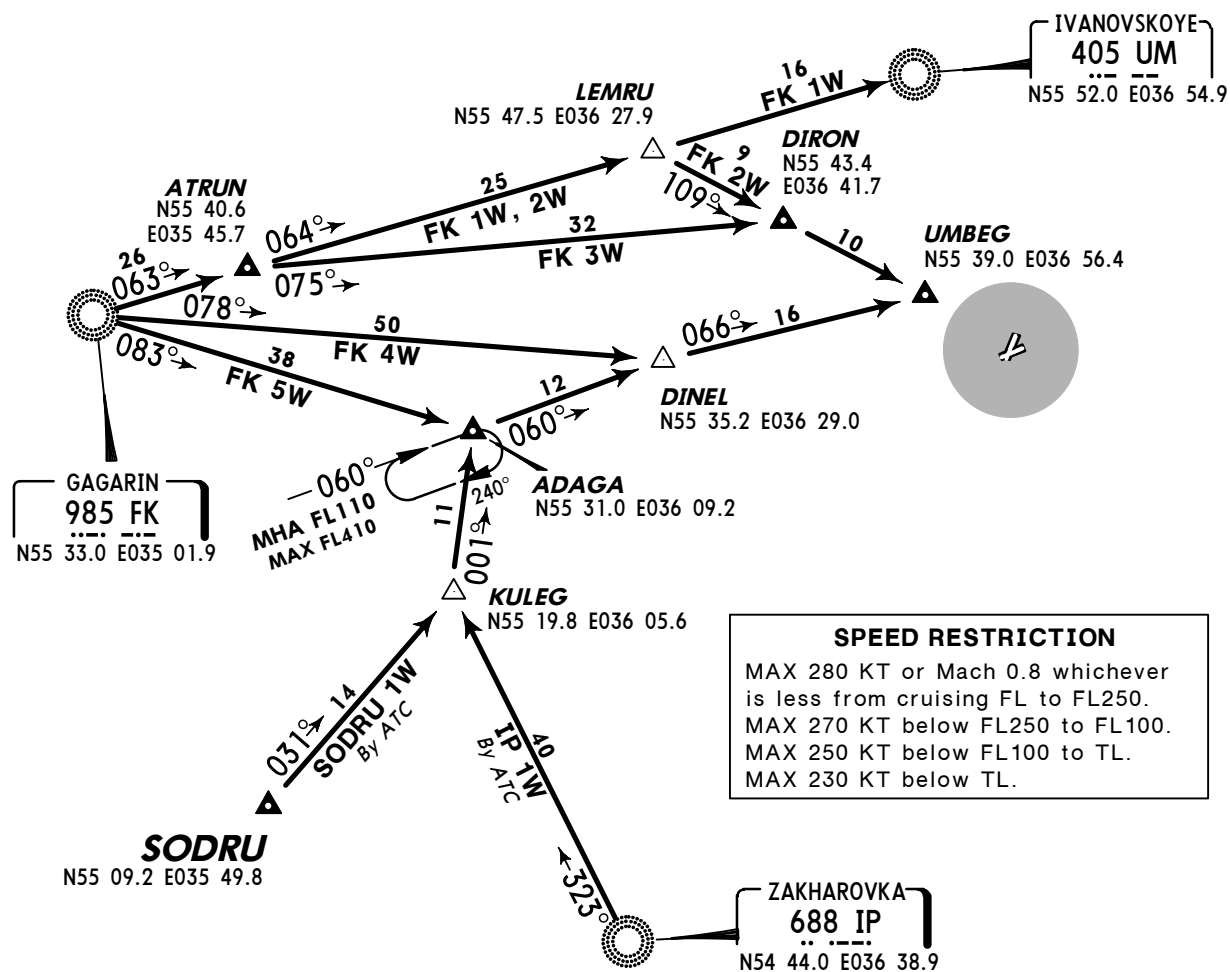
GAGARIN 2W (FK 2W) , GAGARIN 3W (FK 3W)

GAGARIN 4W (FK 4W) , GAGARIN 5W (FK 5W)

SODRU 1W [SOD1W] , ZAKHAROVKA 1W (IP 1W)

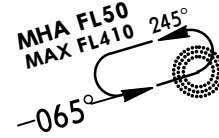
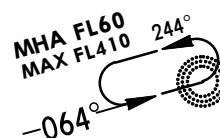
TO UMBEG

TRANSITIONS



SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever
is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

HOLDINGS OVER
FK UMALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3285' - 1000m)

NOT TO SCALE

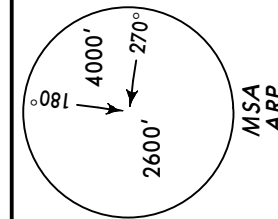
TRANSITION	ROUTING
FK 1W	To ATRUN, then to LEMRU, then to UM.
FK 2W	To ATRUN, then to LEMRU, then to DIRON, then to UMBEG.
FK 3W	To ATRUN, then to DIRON, then to UMBEG.
FK 4W	To DINEL, then to UMBEG.
FK 5W	To ADAGA, then to DINEL, then to UMBEG.
IP 1W	To KULEG, then to ADAGA, then to DINEL, then to UMBEG.
SODRU 1W	To KULEG, then to ADAGA, then to DINEL, then to UMBEG.

ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')

IVANOVSKOYE 01PA (UM 01PA)
IVANOVSKOYE 01RA (UM 01RA)
RWY 01 RNAV ARRIVALS

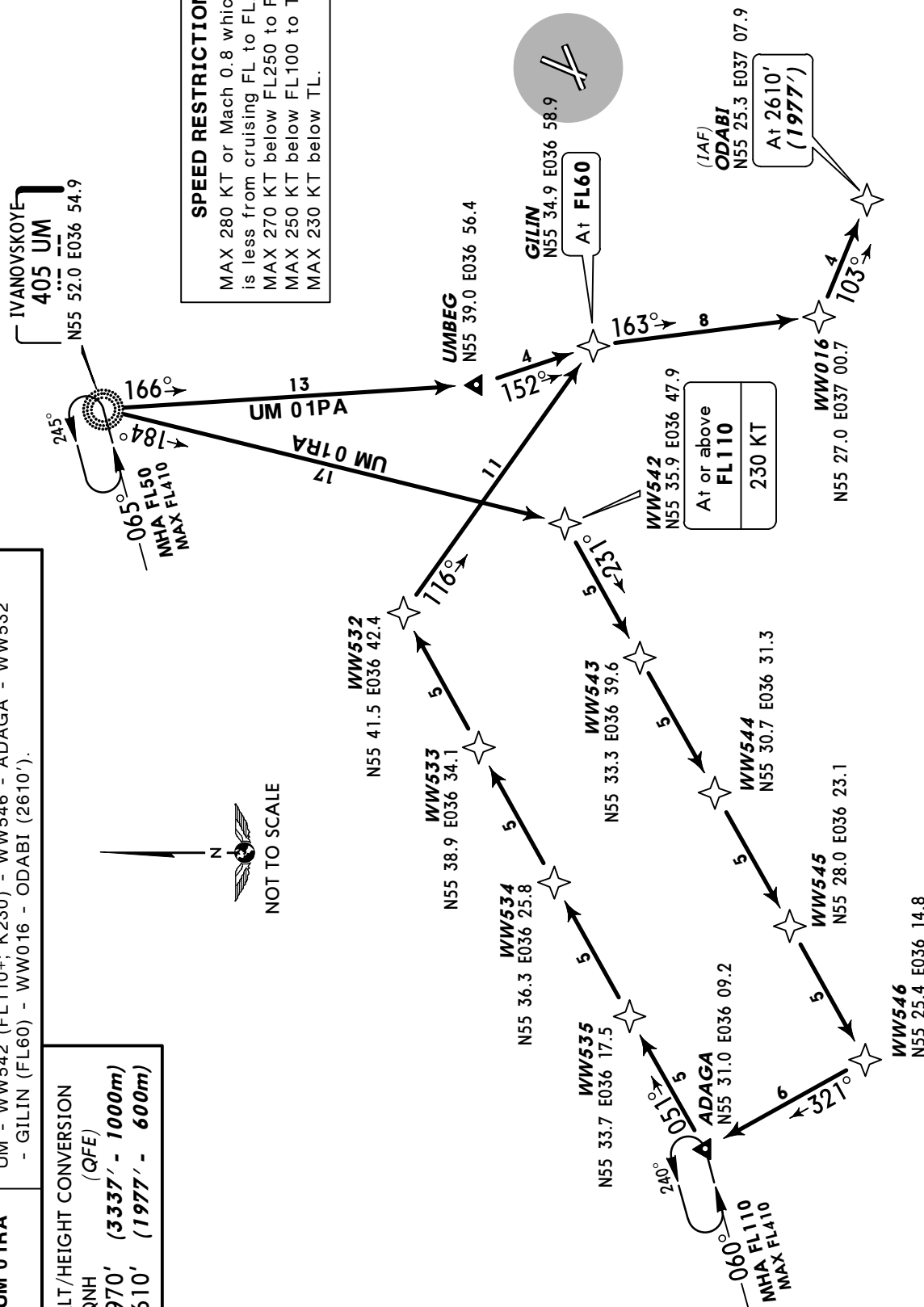
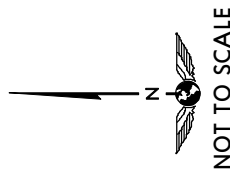


SPEED RESTRICTION

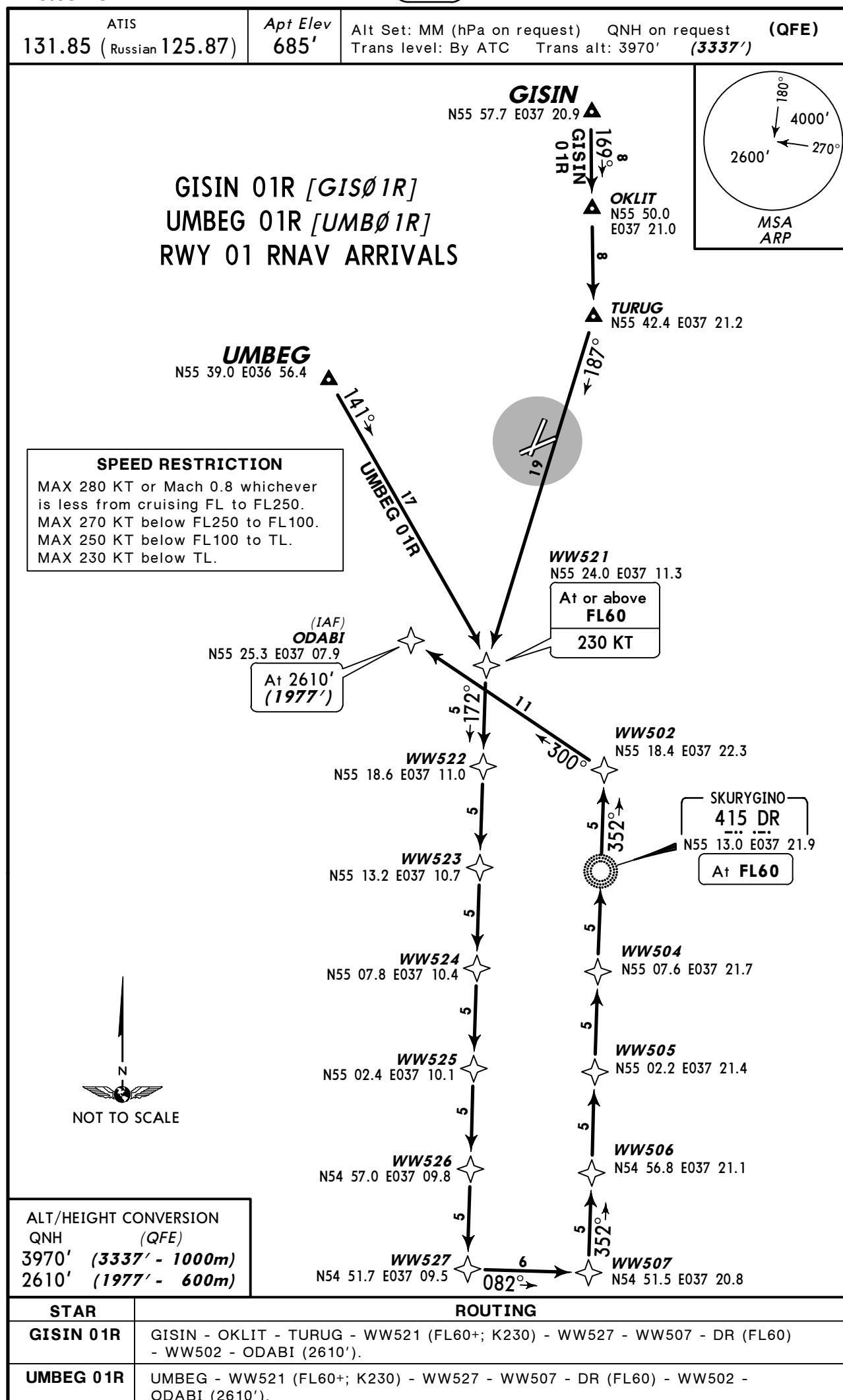
MAX 280 KT or Mach 0.8 whichever is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

STAR	ROUTING
UM 01PA	UM - UMBEG - GILIN (FL60) - WW016 - ODABI (2610').
UM 01RA	UM - WW542 (FL110+; K230) - WW546 - ADAGA - WW532 - GILIN (FL60) - WW016 - ODABI (2610').

ALT/HEIGHT CONVERSION
(QFE)
3970' (3337' - 1000m)
2610' (1977' - 600m)



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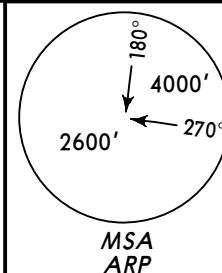


ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

GISIN 19P [GIS19P] RWY 19 RNAV ARRIVAL



GISIN
N55 57.7 E037 20.9 ▲

169°

8

(IAF)
OKLIT
N55 50.0 E037 21.0

Alt 3590'
(2956')



NOT TO SCALE

SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever
is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)

ROUTING

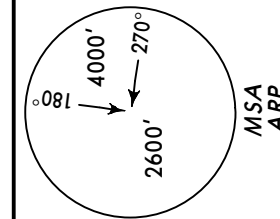
GISIN - OKLIT (3590').

ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')

BITSA 01PA [BIØ1PA]
BITSA 01RA [BIØ1RA]
RWY 01 RNAV ARRIVALS



SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

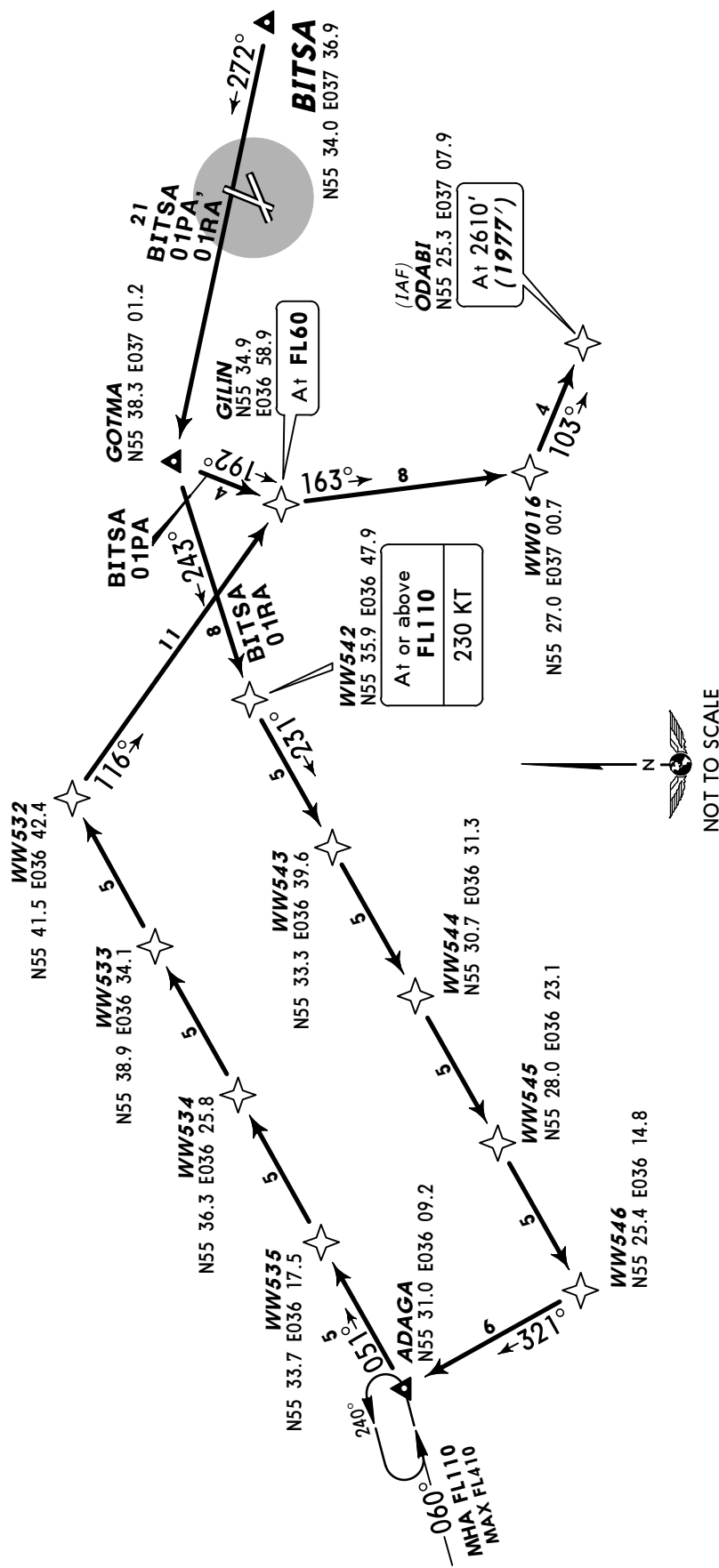
STAR	ROUTING
BITSA 01PA	BITSA - GOTMA - GILIN (FL60) - WW016 - ODABI (2610').
BITSA 01RA	BITSA - GOTMA - WW542 (FL110+; K230) - WW546 - ADAGA - WW532 - GILIN (FL60) - WW016 - ODABI (2610').

ALT/HEIGHT CONVERSION

(QFE)

3970' (3337' - 1000m)

2610' (1977' - 600m)

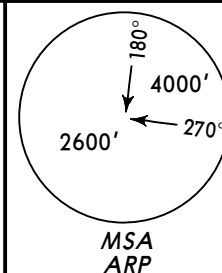


ATIS
131.85 (Russian 125.87)

Apt Elev
685'

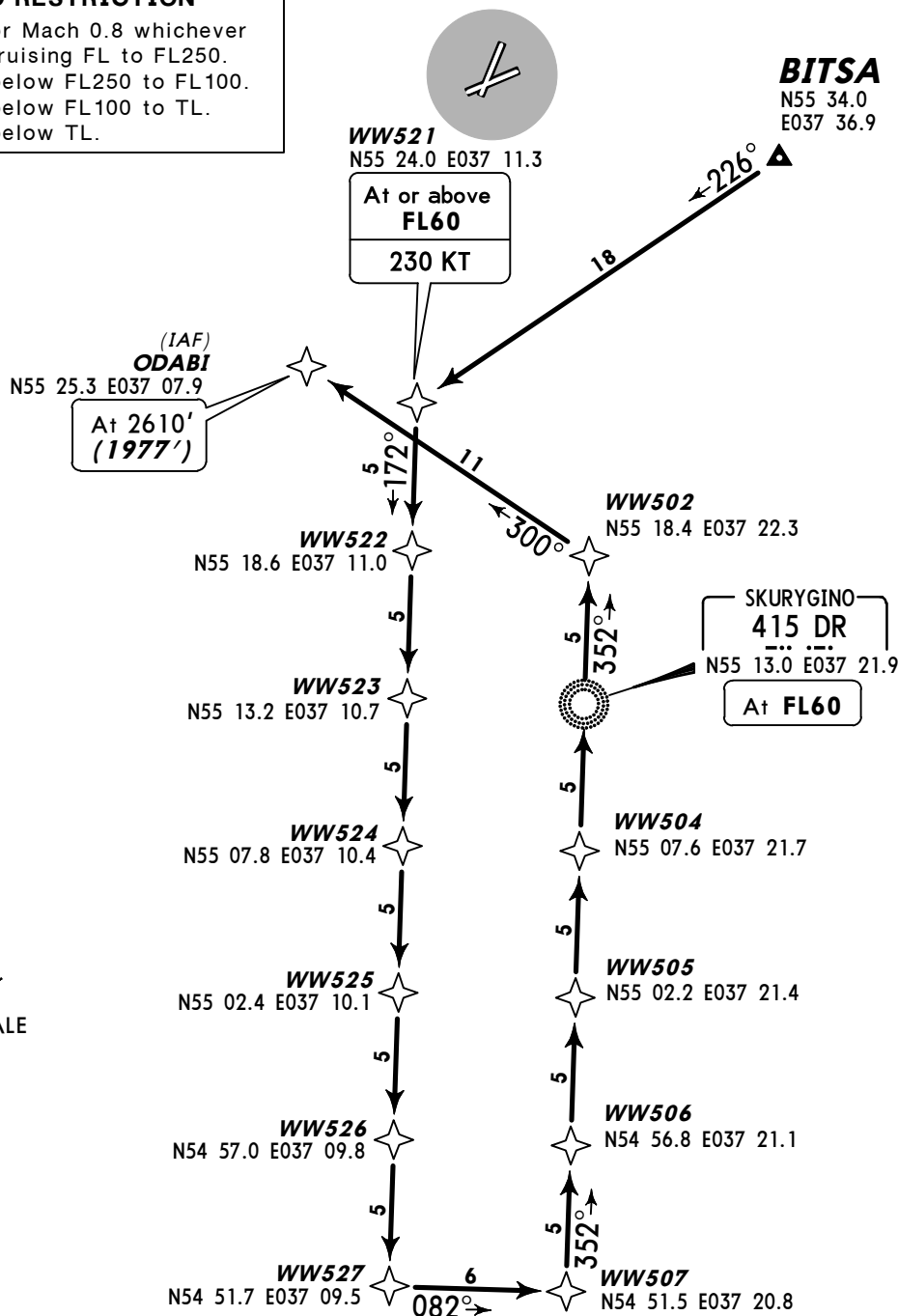
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')

BITSA 01R [BITØ1R]
RWY 01 RNAV ARRIVAL



SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.



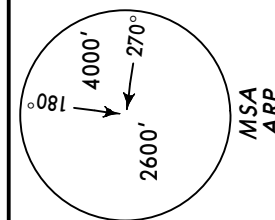
ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3337' - 1000m)
2610' (1977' - 600m)

ROUTING

BITSA - WW521 (FL60+; K230) - WW527 - WW507 - DR (FL60) - WW502 - ODABI (2610').

ATIS
131.85 (Russian 125.87)
Apt Elev
685'
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

BITSA 19P [BIT19P]
BITSA 19R [BIT19R]
RWY 19 RNAV ARRIVALS



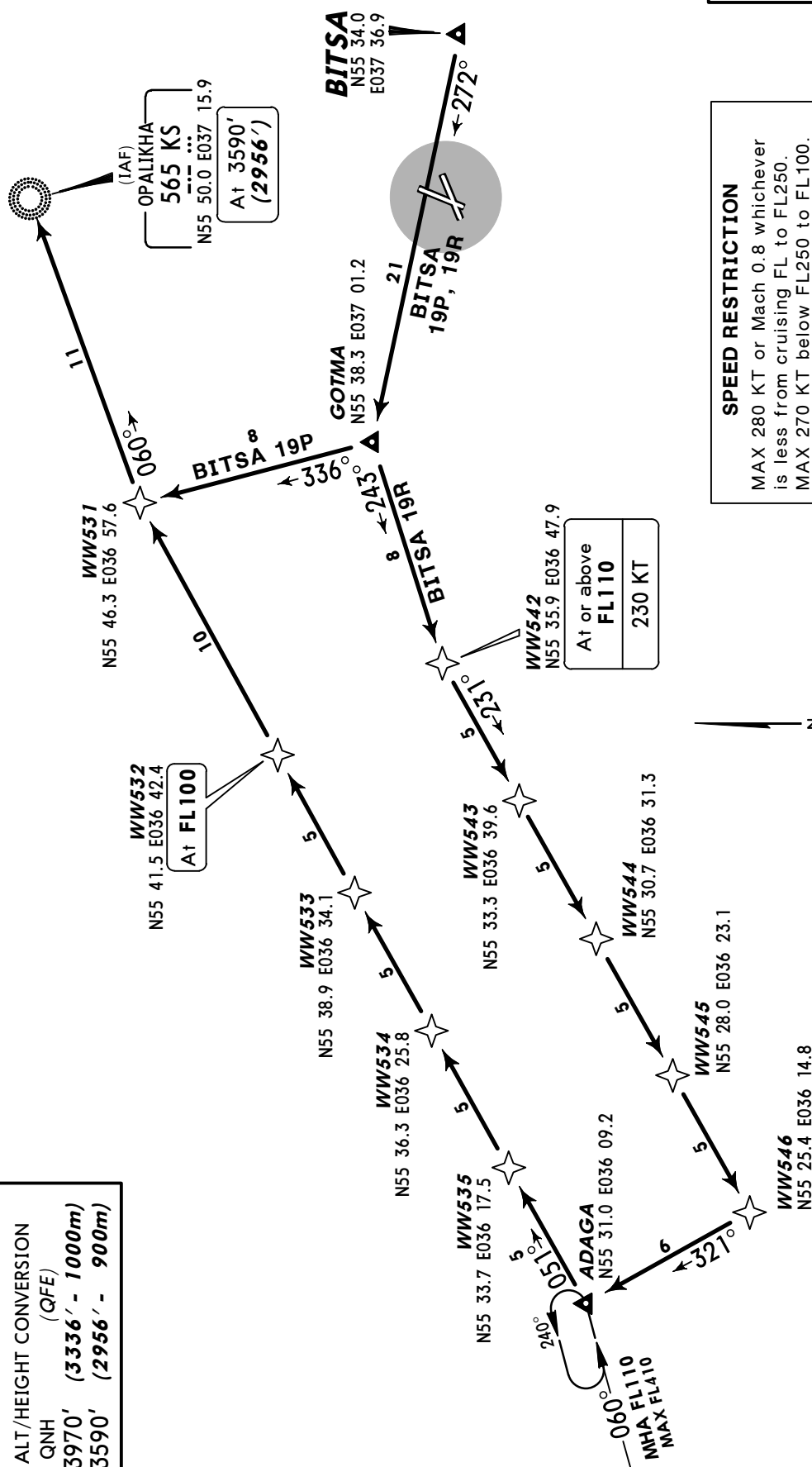
SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever
is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

NOT TO SCALE

STAR	ROUTING
BITSA 19P	BITSA - GOTMA - WW531 - KS (3590').
BITSA 19R	BITSA - GOTMA - WW542 (FL110+; K230) - WW546 - ADAGA - WW532 (FL100) - WW531 - KS (3590').

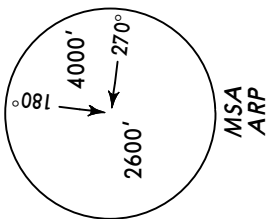
ALT/HEIGHT CONVERSION
(QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)



ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')



KLIMOVSK 01PA (LO 01PA) KLIMOVSK 01RA (LO 01RA) RWY 01 RNAV ARRIVALS

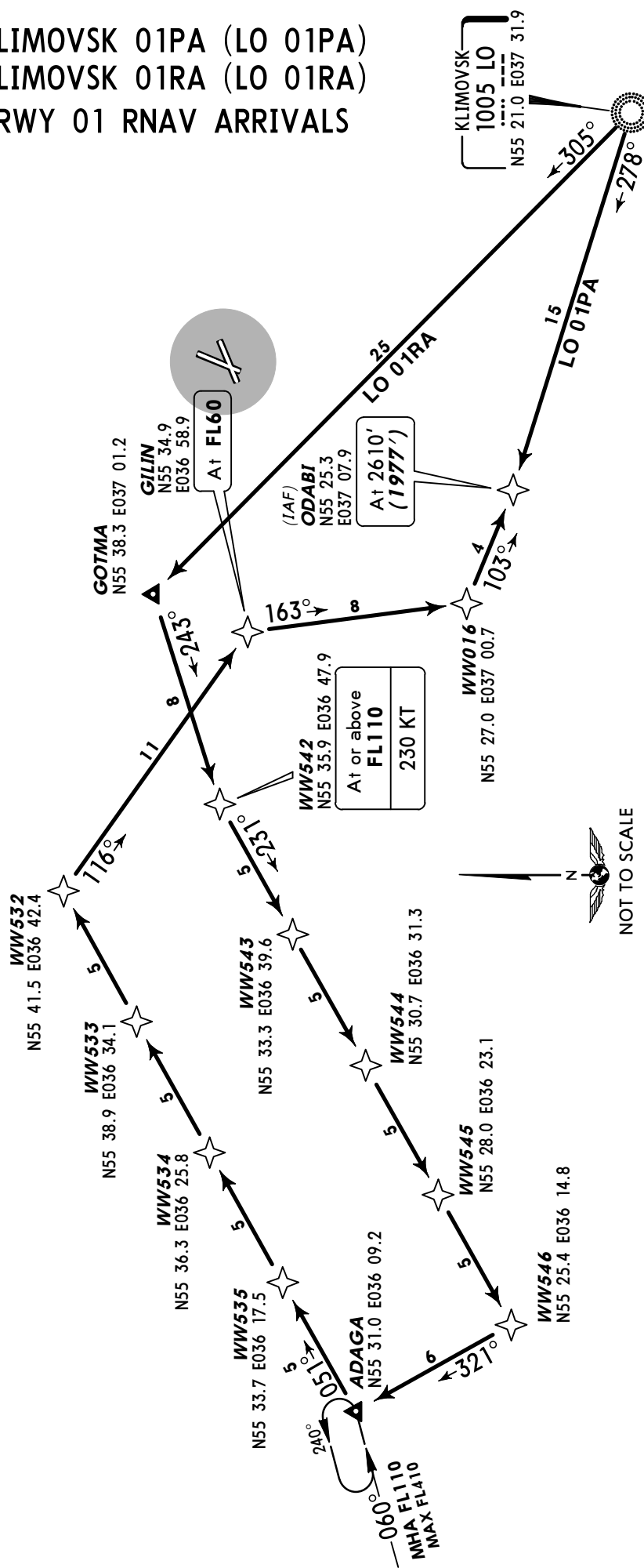
SPEED RESTRICTION

MAX 280 KT or Mach 0.8 whichever
is less from cruising FL to FL250.
MAX 270 KT below FL250 to FL100.
MAX 250 KT below FL100 to TL.
MAX 230 KT below TL.

STAR	ROUTING
LO 01PA	LO - ODABI (2610').
LO 01RA	LO - GOTMA - WW542 (FL110+; K230) - WW546 - ADAGA - WW532 - GILIN (FL60) - WW016 - ODABI (2610').

ALT/HEIGHT CONVERSION QNH (QFE)

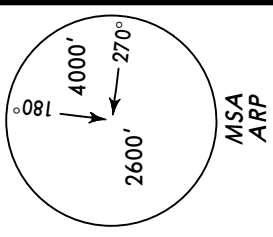
3970' (3337' - 1000m)
2610' (1977' - 600m)



ATIS
131.85 (Russian 125.87)

Apt Elev
685'

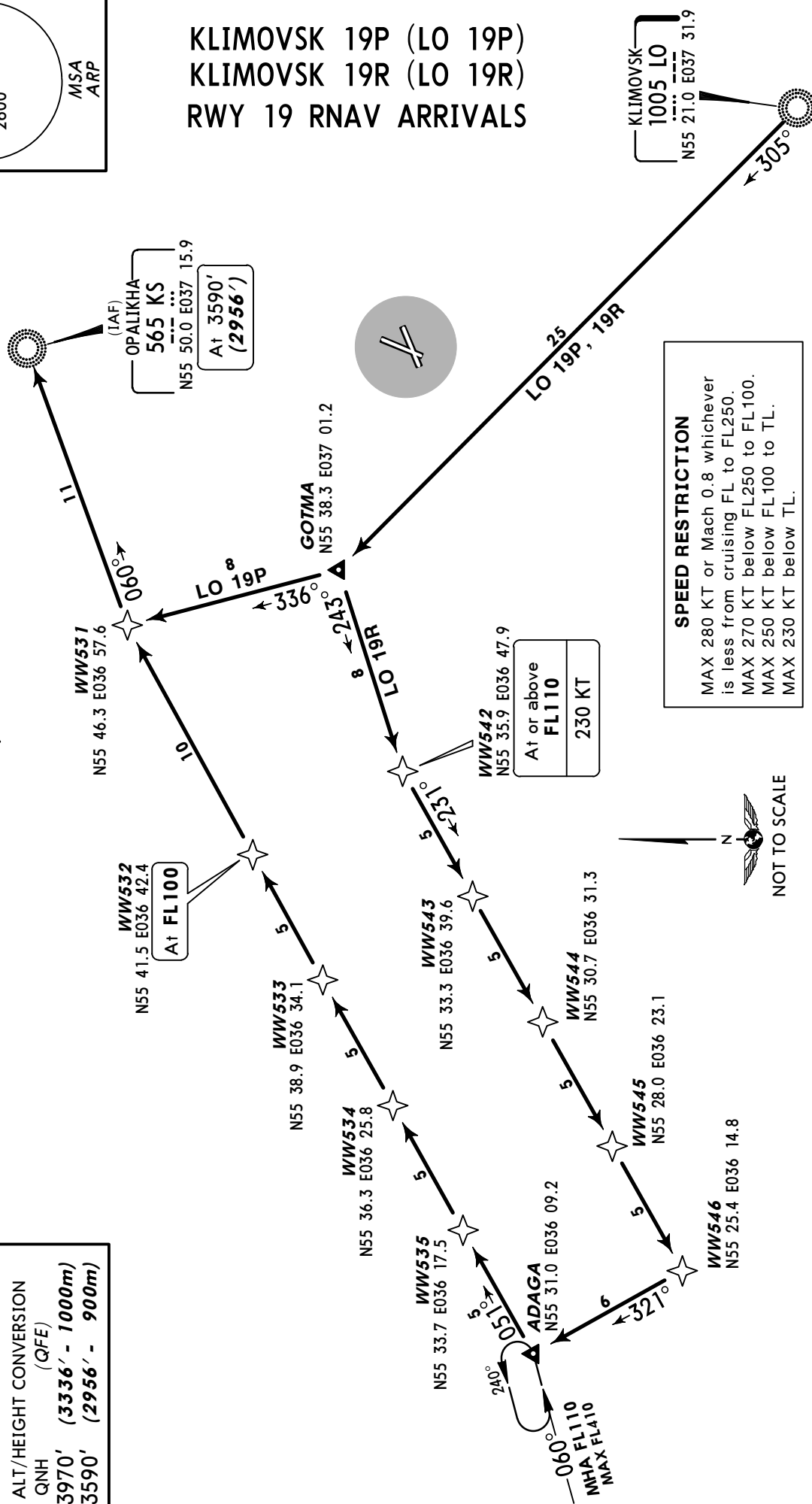
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')



KLIMOVSK 19P (LO 19P)
KLIMOVSK 19R (LO 19R)
RWY 19 RNAV ARRIVALS

STAR	ROUTING
LO 19P	LO - GOTMA - WW531 - KS (3590').
LO 19R	LO - GOTMA - WW542 (FL110+; K230) - WW546 - ADAGA - WW532 (FL100) - WW531 - KS (3590').

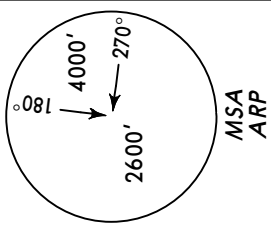
ALT/HEIGHT CONVERSION
(QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)



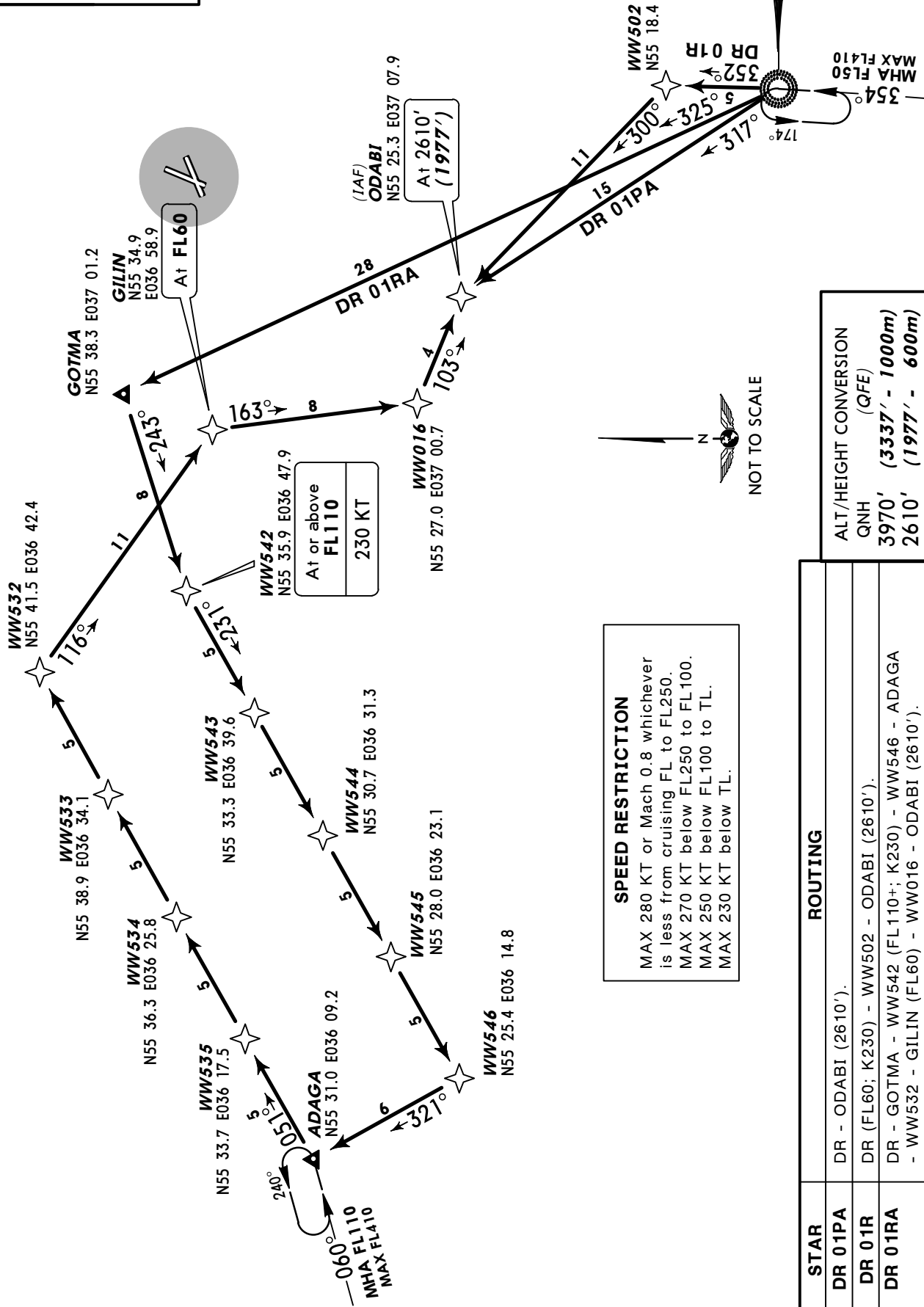
ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')



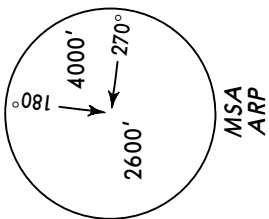
SKURYGINO 01PA (DR 01PA)
SKURYGINO 01R (DR 01R)
SKURYGINO 01RA (DR 01RA)
RWY 01 RNAV ARRIVALS



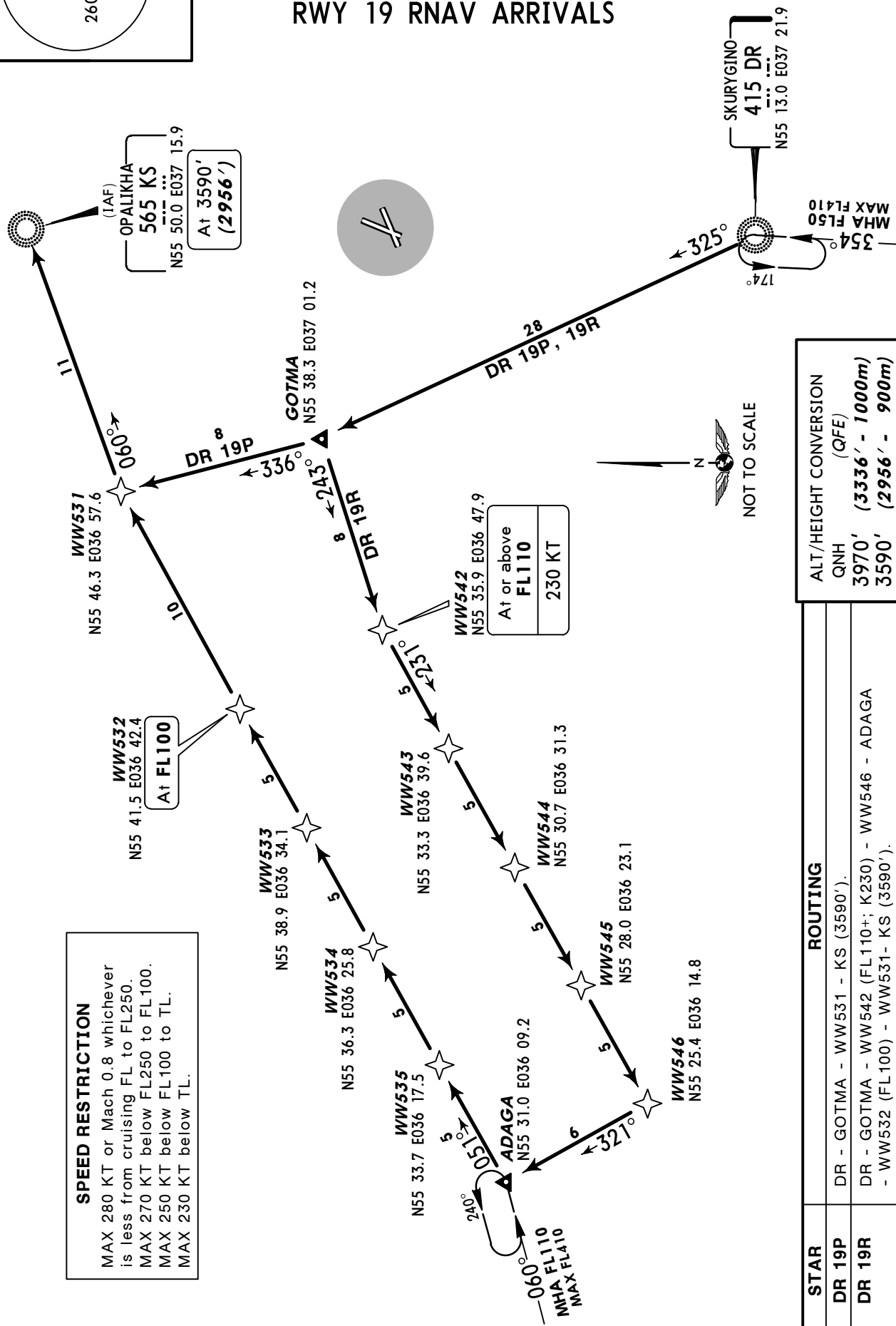
ATIS
131.85 (Russian 125.87)

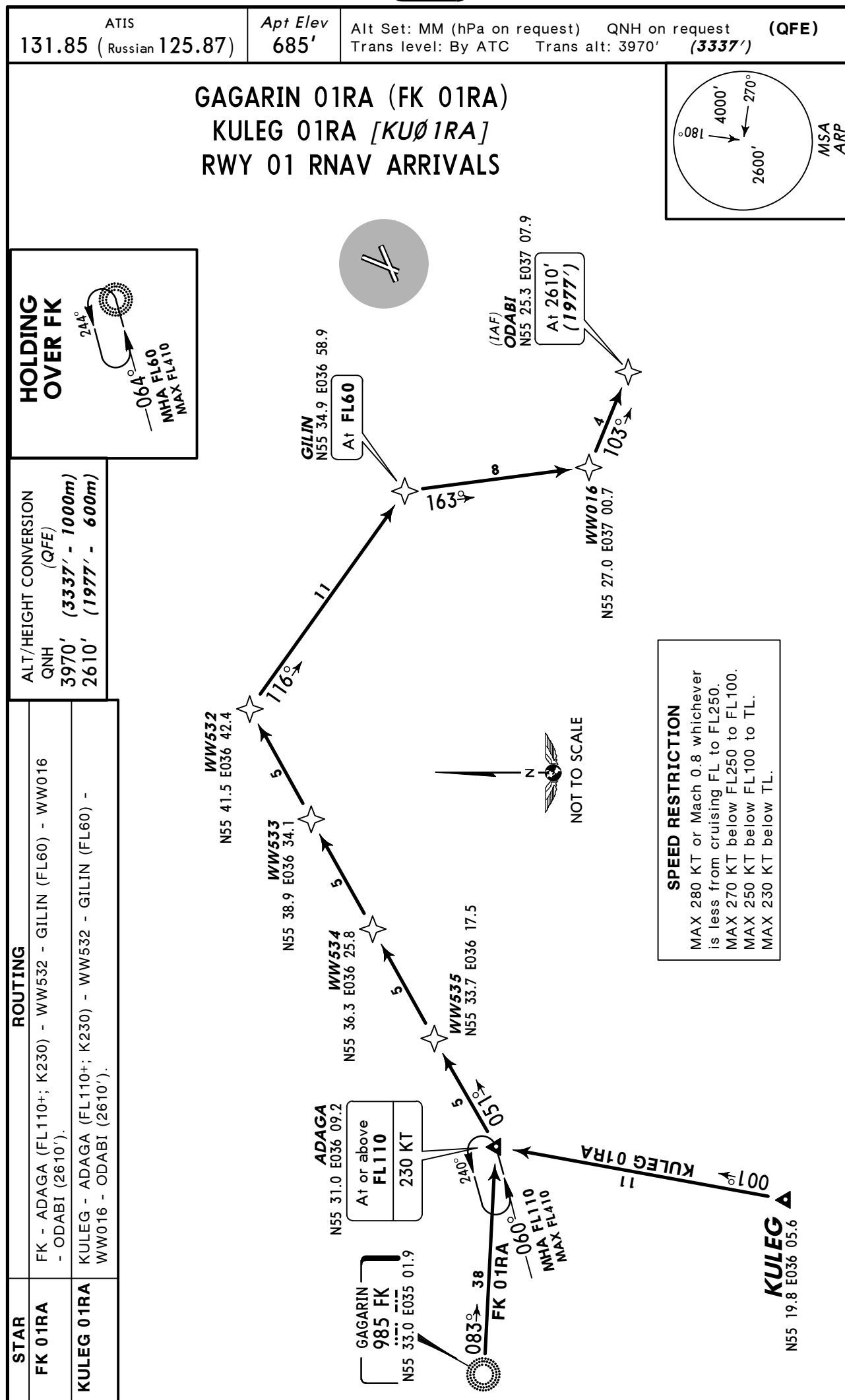
Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')



SKURYGINO 19P (DR 19P) SKURYGINO 19R (DR 19R) RWY 19 RNAV ARRIVALS





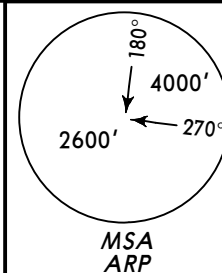
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ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')

BITSA 01A [BITØ1A], KLIMOVSK 01A (LO 01A)
SKURYGINO 01A (DR 01A), UMBEG 01A[UMBØ1A]
RWY 01 ARRIVALS



UMBEG

N55 39.0 E036 56.4



ILS DME
P(111.7) IWM
N55 35.4 E037 15.5

SPEED RESTRICTION
MAX 250 KT below FL100.
MAX 230 KT below TL.

949 OE
N55 34.7 E037 15.1

BITSA
N55 34.0 E037 36.9
(113.3 DMD R-307/D14.7)

(IAF)
ODABI
D10.8 IWM
N55 25.3 E037 07.9

N55 22.6 E037 09.9
At 2610' (1977')

N55 21.7 E037 12.8
At 2610' (1977')

N55 23.0 E037 16.5
At 3590' (2957')

N55 28.3 E037 17.7
At or above FL50

N55 22.3 E037 15.6
At 3590' (2957')

LO 01A

KLIMOVSK
1005 LO
N55 21.0 E037 31.9



DR 01A

MHA FL50
MAX FL410

SKURYGINO
415 DR
N55 13.0 E037 21.9

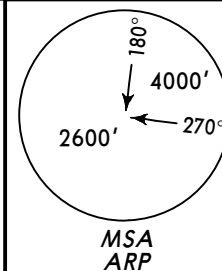
ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3337' - 1000m)
3590' (2957' - 900m)
2610' (1977' - 600m)

ATIS
131.85 (Russian 125.87)

Apt Elev
685'

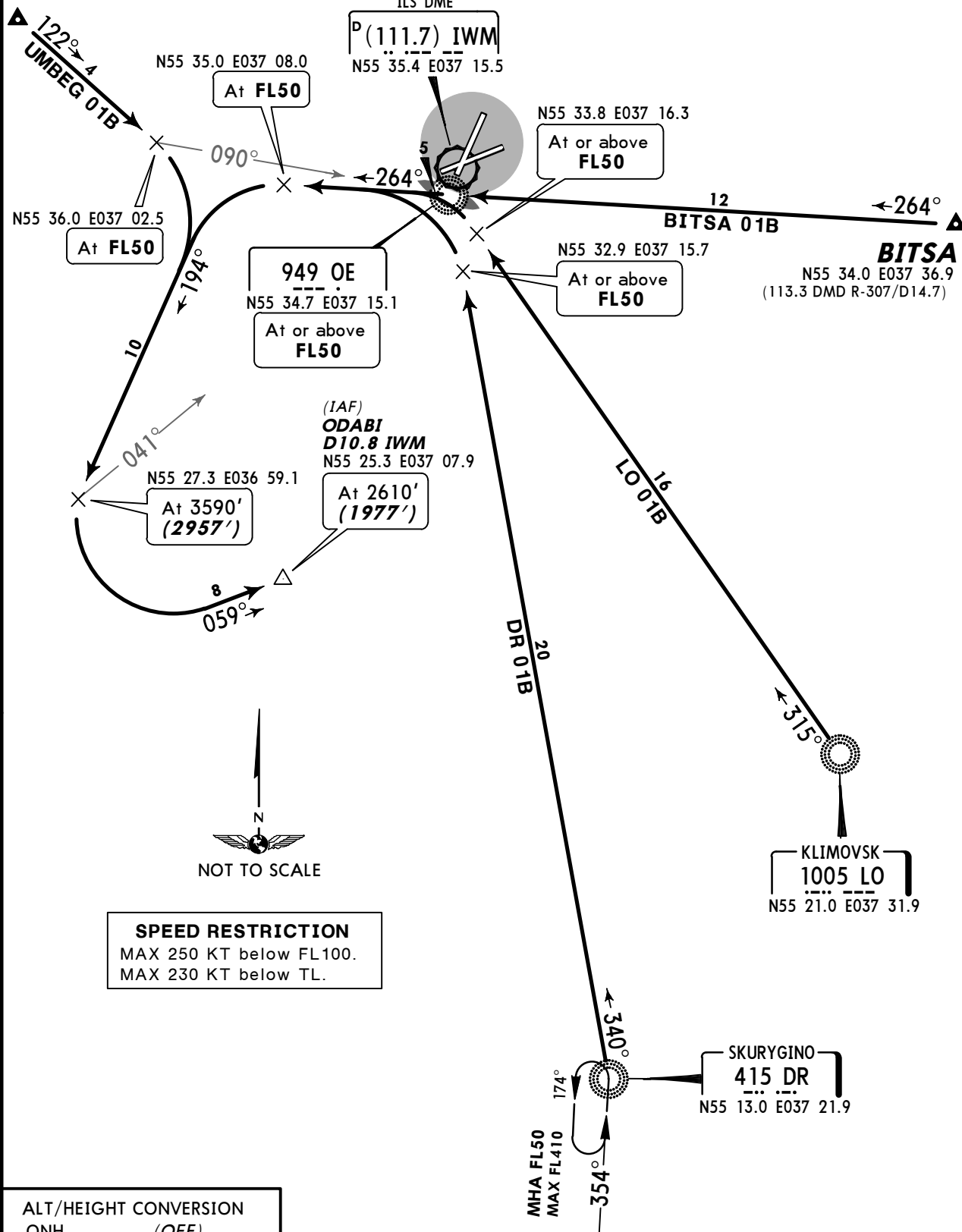
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')

BITSA 01B [BITØ1B] , KLIMOVSK 01B (LO 01B)
SKURYGINO 01B (DR 01B), UMBEG 01B[UMBØ1B]
RWY 01 ARRIVALS



UMBEG

N55 39.0 E036 56.4



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3337' - 1000m)
3590' (2957' - 900m)
2610' (1977' - 600m)

UUWW/VKO
VNUKOVO

JEPPESEN
4 NOV 11 10-2X1 Eff 17 Nov

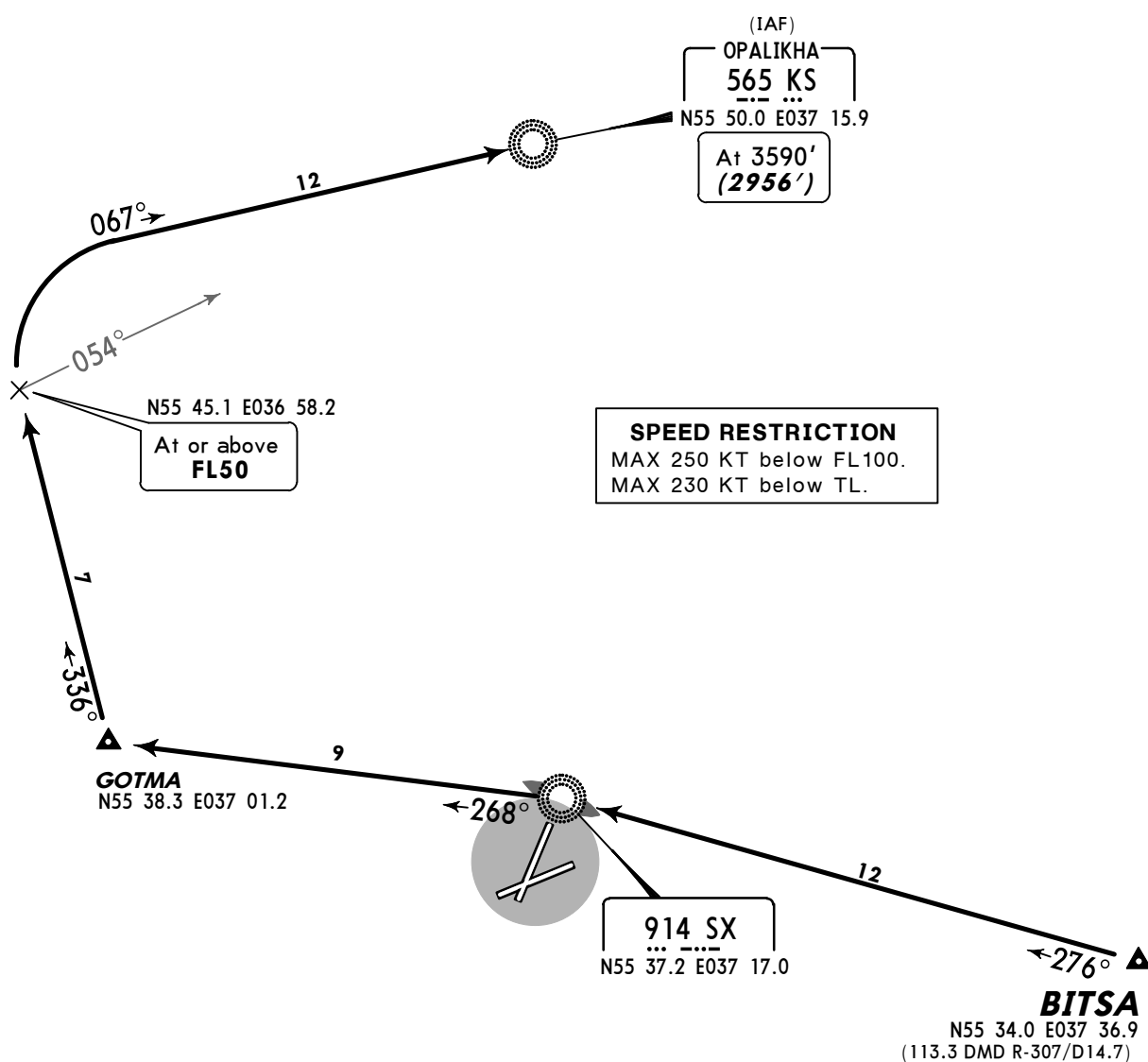
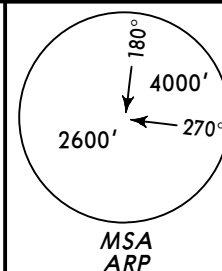
MOSCOW, RUSSIA
STAR

ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

BITSA 19B [BIT19B] RWY 19 ARRIVAL



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)



UUWW/VKO
VNUKOVO

JEPPESEN
4 NOV 11 10-2X2 Eff 17 Nov

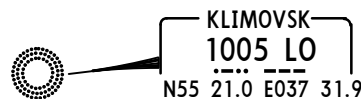
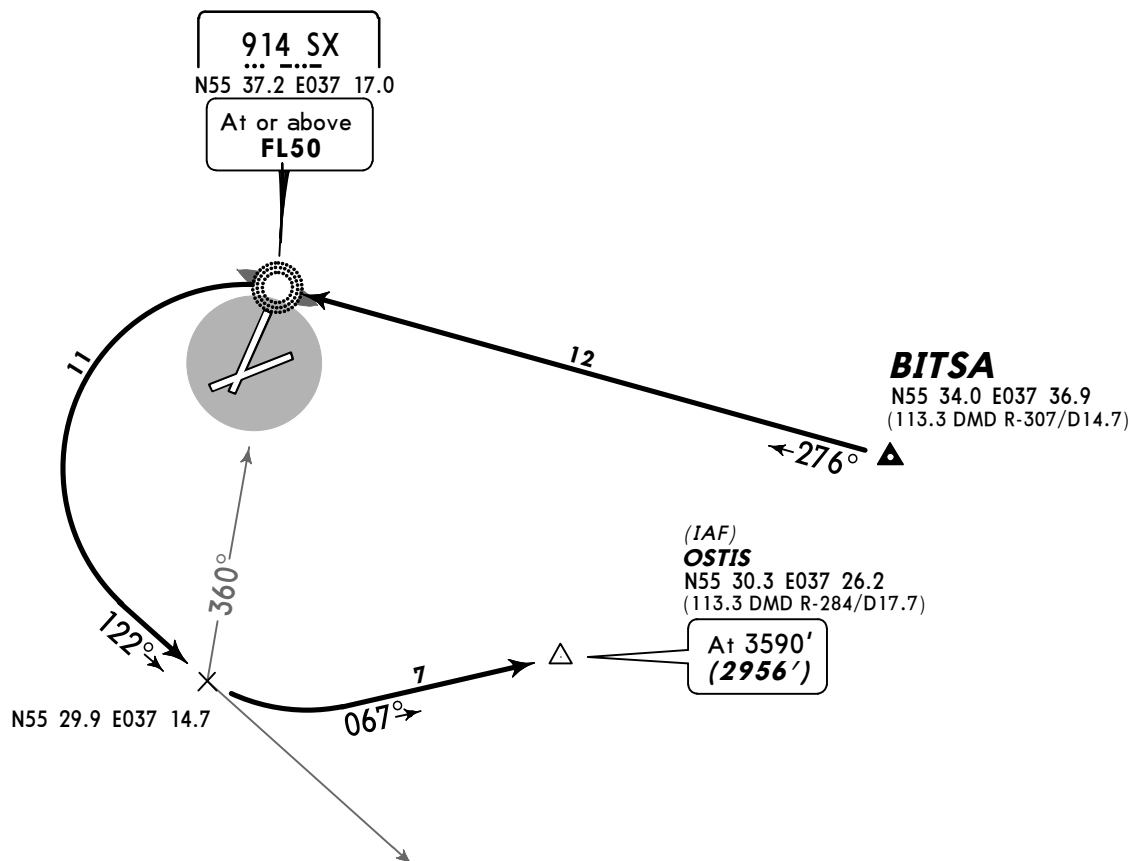
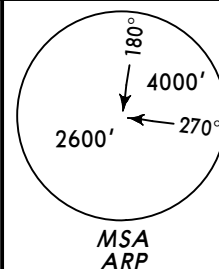
MOSCOW, RUSSIA
STAR

ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

BITSA 19I [BIT19I] RWY 19 ARRIVAL



SPEED RESTRICTION
MAX 250 KT below FL100.
MAX 230 KT below TL.

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)

UUWW/VKO
VNUKOVO

4 NOV 11

10-2X3

Eff 17 Nov

MOSCOW, RUSSIA

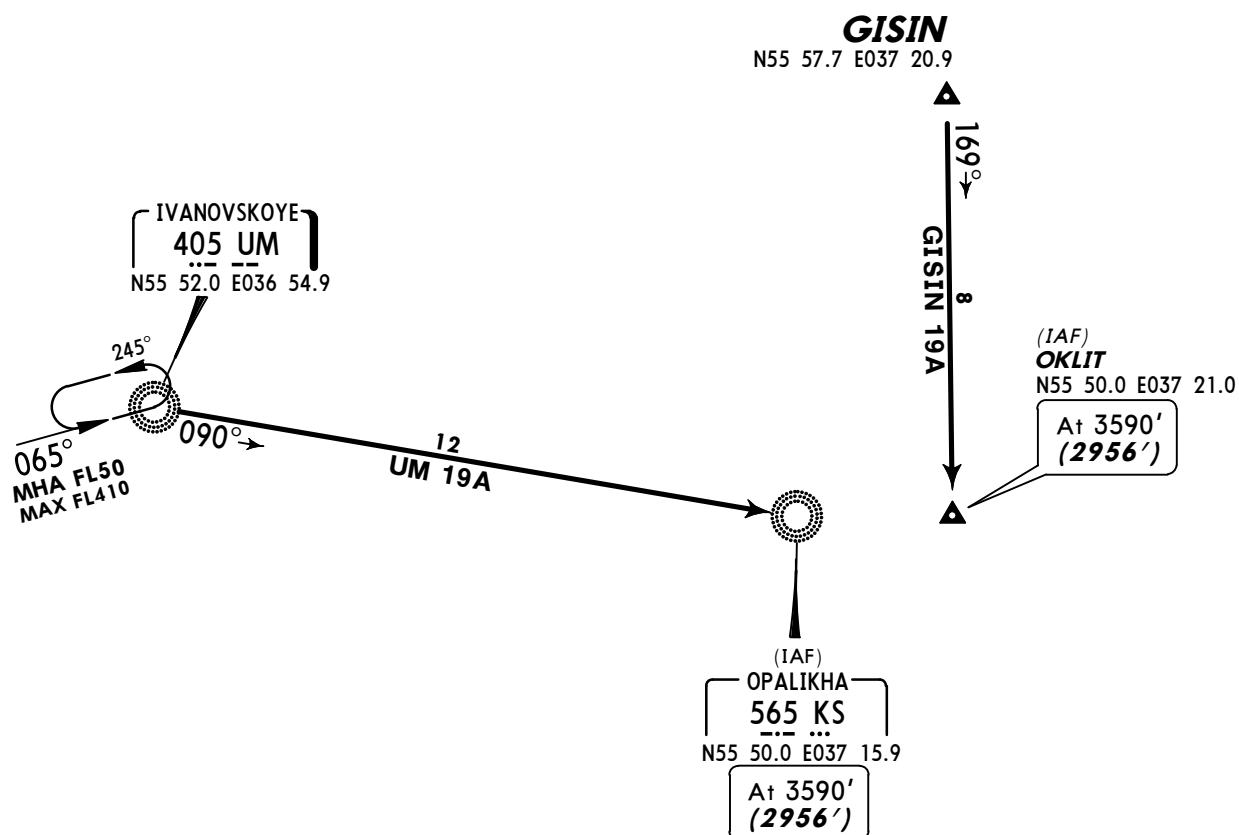
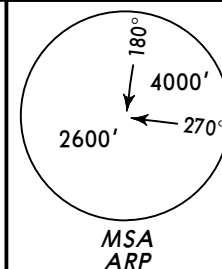
STAR

ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

GISIN 19A [GIS19A]
IVANOVSKOYE 19A (UM 19A)
RWY 19 ARRIVALS



SPEED RESTRICTION
MAX 250 KT below FL100.
MAX 230 KT below TL.



NOT TO SCALE

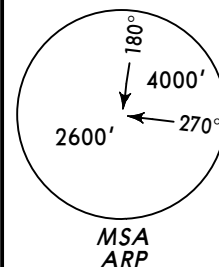
ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)

ATIS
131.85 (Russian 125.87)

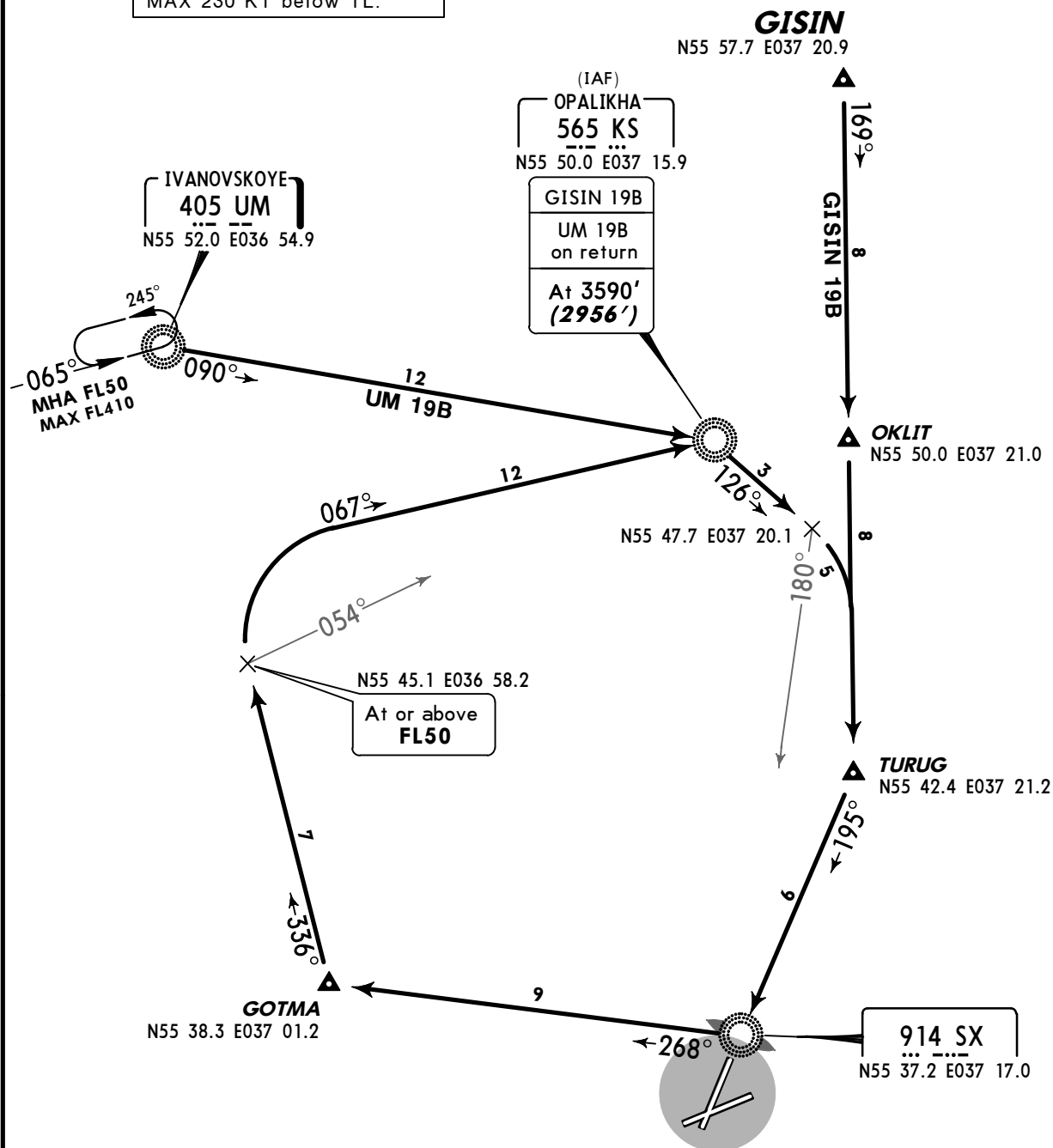
Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

GISIN 19B [GIS19B]
IVANOVSKOYE 19B (UM 19B)
RWY 19 ARRIVALS



SPEED RESTRICTION
MAX 250 KT below FL100.
MAX 230 KT below TL.



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)

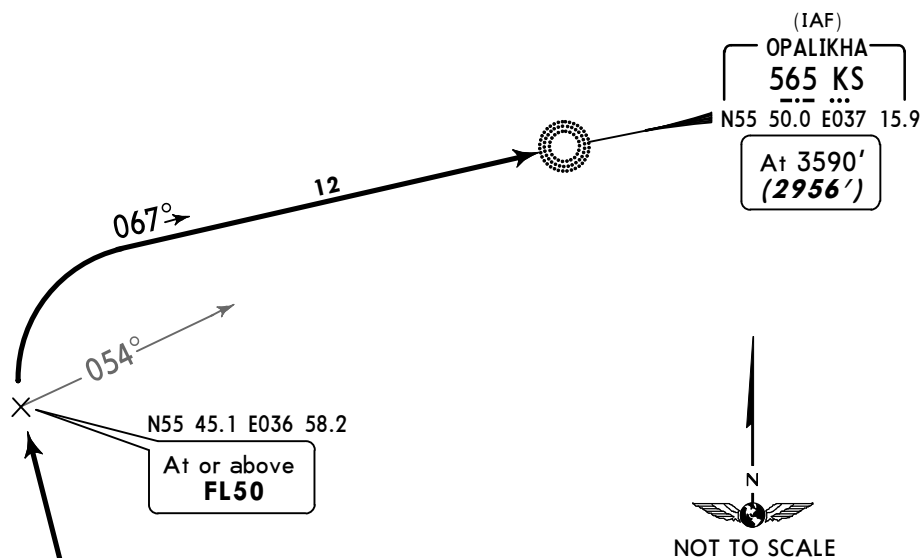
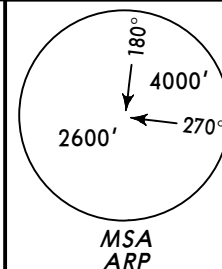


ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

KLIMOVSK 19A (LO 19A)
SKURYGINO 19A (DR 19A)
RWY 19 ARRIVALS



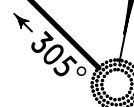
**HOLDING
OVER DR**



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
3590' (2956' - 900m)

DR 19A 28
LO 19A 25

KLIMOVSK
1005 LO
N55 21.0 E037 31.9



SKURYGINO
415 DR
N55 13.0 E037 21.9

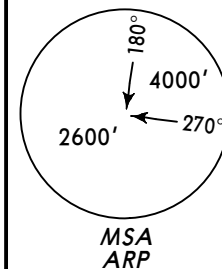


ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')

KLIMOVSK 19K (LO 19K)
SKURYGINO 19K (DR 19K)
UMBEG 19K [UMB19K]
RWY 19 ARRIVALS



UMBEG

N55 39.0 E036 56.4



UMBEG 19K

N55 29.9 E037 14.7

914 SX

N55 37.2 E037 17.0

(IAF)

OSTIS

N55 30.3 E037 26.2
(113.3 DMD R-284/D17.7)

At 3590'
(2956')



NOT TO SCALE

SPEED RESTRICTION

MAX 250 KT below FL100.
MAX 230 KT below TL.

ALT/HEIGHT CONVERSION

QNH (QFE)

3970' (3336' - 1000m)

3590' (2956' - 900m)

MHA FL50
MAX FL410

SKURYGINO
415 DR

N55 13.0 E037 21.9

KLIMOVSK
1005 LO

N55 21.0 E037 31.9

RNAV SID DESIGNATION	REFER TO CHART
DEDUM 01D, 01E, IVANOVSKOYE 01D, 01E	10-3B
DEDUM 19D, IVANOVSKOYE 19D	10-3C
BITSA 01D, 01E, KLIMOVSK 01D, 01E, OKLIT 01D	10-3D
BITSA 19D, 19E, KLIMOVSK 19D, 19E, OKLIT 19E	10-3E
BADNI 01D, 01E, KAMENKA 01D, 01E	10-3F
BADNI 19D, KAMENKA 19D	10-3G

FOR SID AND TRANSITION DESIGNATION
REFER TO PAGE 10-3A

SID DESIGNATION	REFER TO CHART
DEDUM 01D, 01E, IVANOVSKOYE 01D, 01E	10-3H
DEDUM 19D, IVANOVSKOYE 19D	10-3J
BITSA 01D, 01E, KLIMOVSK 01D, 01E, OKLIT 01D	10-3K
BITSA 19D, 19E, KLIMOVSK 19D, 19E, OKLIT 19E	10-3L
BADNI 01D, 01E, KAMENKA 01D, 01E	10-3M
BADNI 19D, KAMENKA 19D	10-3N
TRANSITION DESIGNATION	REFER TO CHART
NERL 1W, 2W, TIMIG 1W, 2W	10-3P
CHERUSTI 1W, VENEV 1W	10-3Q
ADETI 1W, ROLUN 1W, SODRU 2W, ZAKHAROVKA 2W	10-3S
BELAG 1W, 2W, KARMANOVO 1W, OBELU 1W	10-3T

VNUKOVO
Radar
126.0

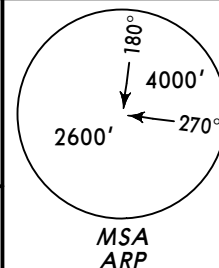
Apt Elev
685'

QNH on request (QFE)

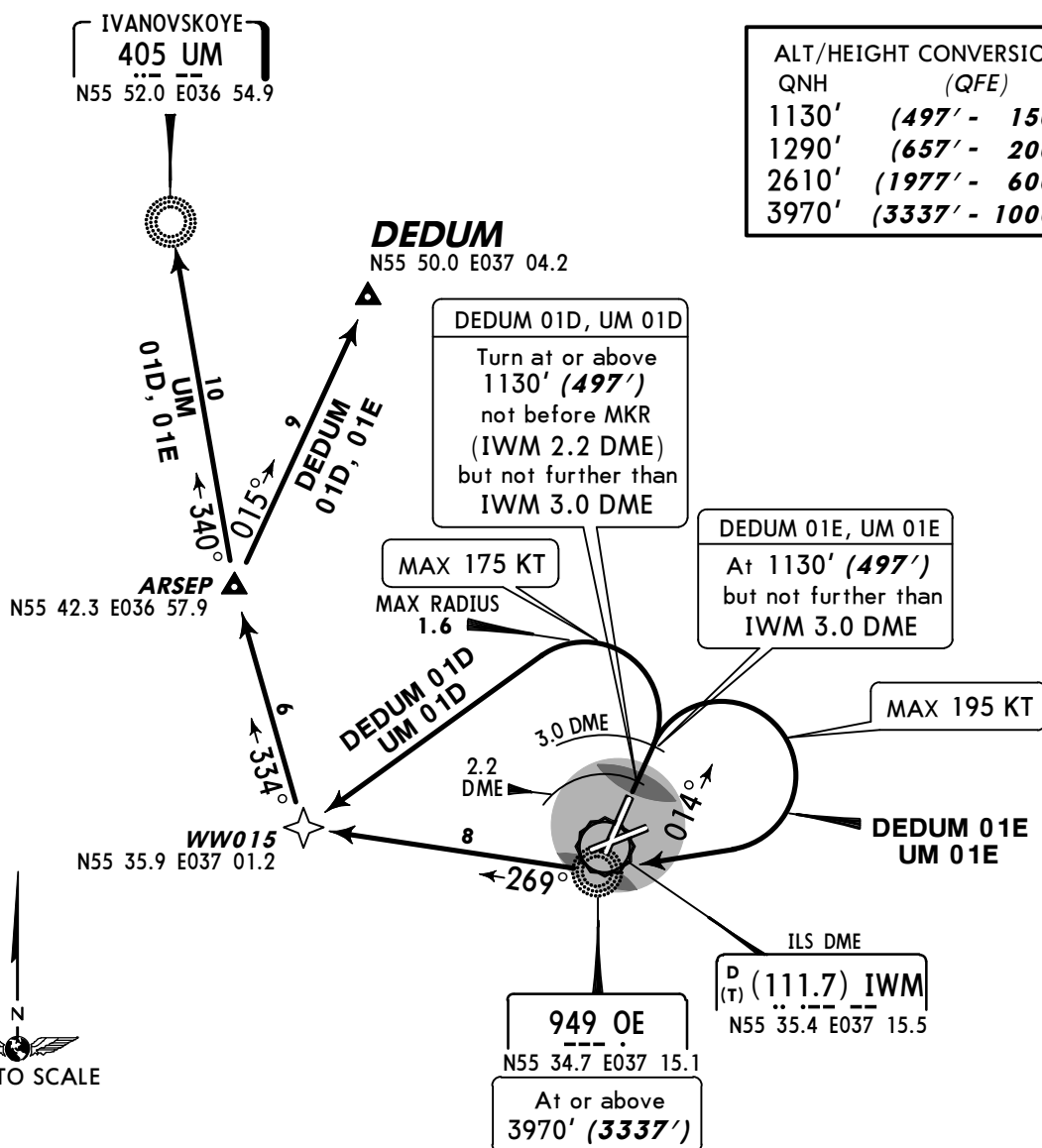
Trans level: By ATC Trans alt: 3970' (3337')

1. Contact VNUKOVO Radar immediately after crossing 1290' (657').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 01D [DEDØ1D], DEDUM 01E [DEDØ1E]
IVANOVSKOYE 01D (UM 01D)
IVANOVSKOYE 01E (UM 01E)
RWY 01 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



These SIDs require a minimum climb gradient of 352' per NM (5.8%) up to 1130' (497').

Gnd speed-KT	75	100	150	200	250	300
352' per NM	441	587	881	1175	1468	1762

Initial climb clearance 2610' (1977')

SID	ROUTING
DEDUM 01D	(1130'; K175-) - WW015 - ARSEP - DEDUM.
DEDUM 01E	(1130'; K195-) - OE (3970'+) - WW015 - ARSEP - DEDUM.
UM 01D	(1130'; K175-) - WW015 - ARSEP - UM.
UM 01E	(1130'; K195-) - OE (3970'+) - WW015 - ARSEP - UM.

VNUKOVO
Radar
126.0

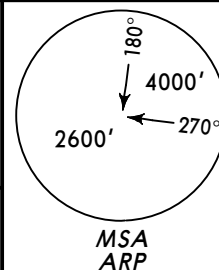
Apt Elev
685'

QNH on request (QFE)

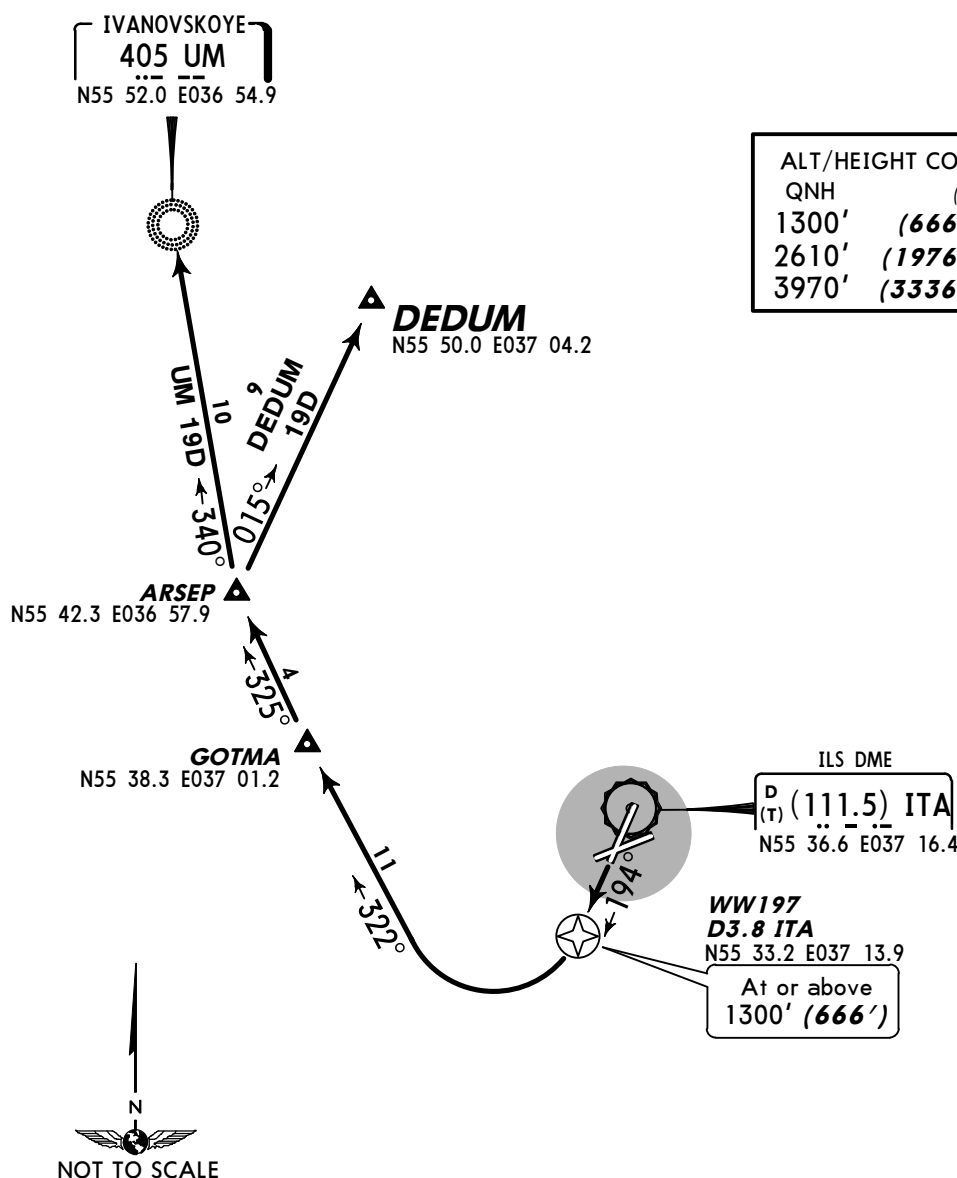
Trans level: By ATC Trans alt: 3970' (3336')

1. Contact VNUKOVO Radar immediately after crossing 1300' (666').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



**DEDUM 19D [DED19D]
IVANOVSKOYE 19D (UM 19D)
RWY 19 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100**



QNH	(QFE)
1300'	(666' - 200m)
2610'	(1976' - 600m)
3970'	(3336' - 1000m)

Initial climb clearance 2610' (1976')

SID	ROUTING
DEDUM 19D	WW197 (1300'+) - GOTMA - ARSEP - DEDUM.
UM 19D	WW197 (1300'+) - GOTMA - ARSEP - UM.

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VNUKOVO
Radar
126.0

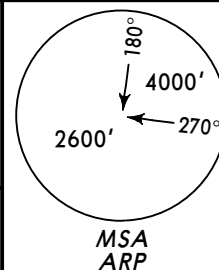
Apt Elev
685'

QNH on request (QFE)

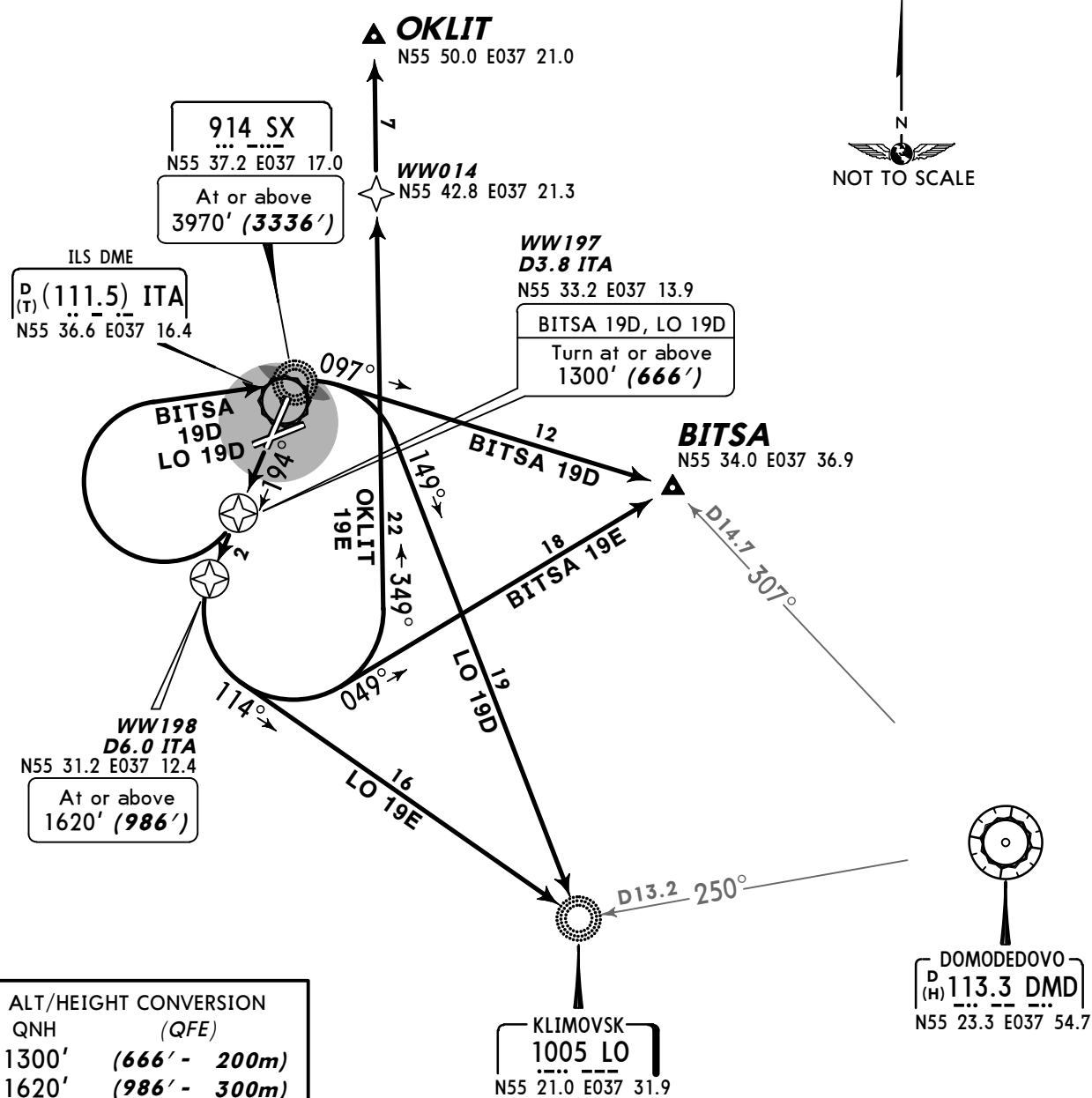
Trans level: By ATC Trans alt: 3970' (3336')

1. Contact VNUKOVO Radar immediately after crossing 1300' (666').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 19D [BIT19D], BITSA 19E [BIT19E]
KLIMOVSK 19D (LO 19D), KLIMOVSK 19E (LO 19E)
OKLIT 19E [OKL19E]
RWY 19 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

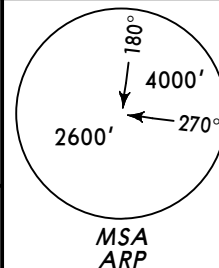


ALT/HEIGHT CONVERSION	QNH	(QFE)
1300'	(666' - 200m)	
1620'	(986' - 300m)	
2610'	(1976' - 600m)	
3970'	(3336' - 1000m)	

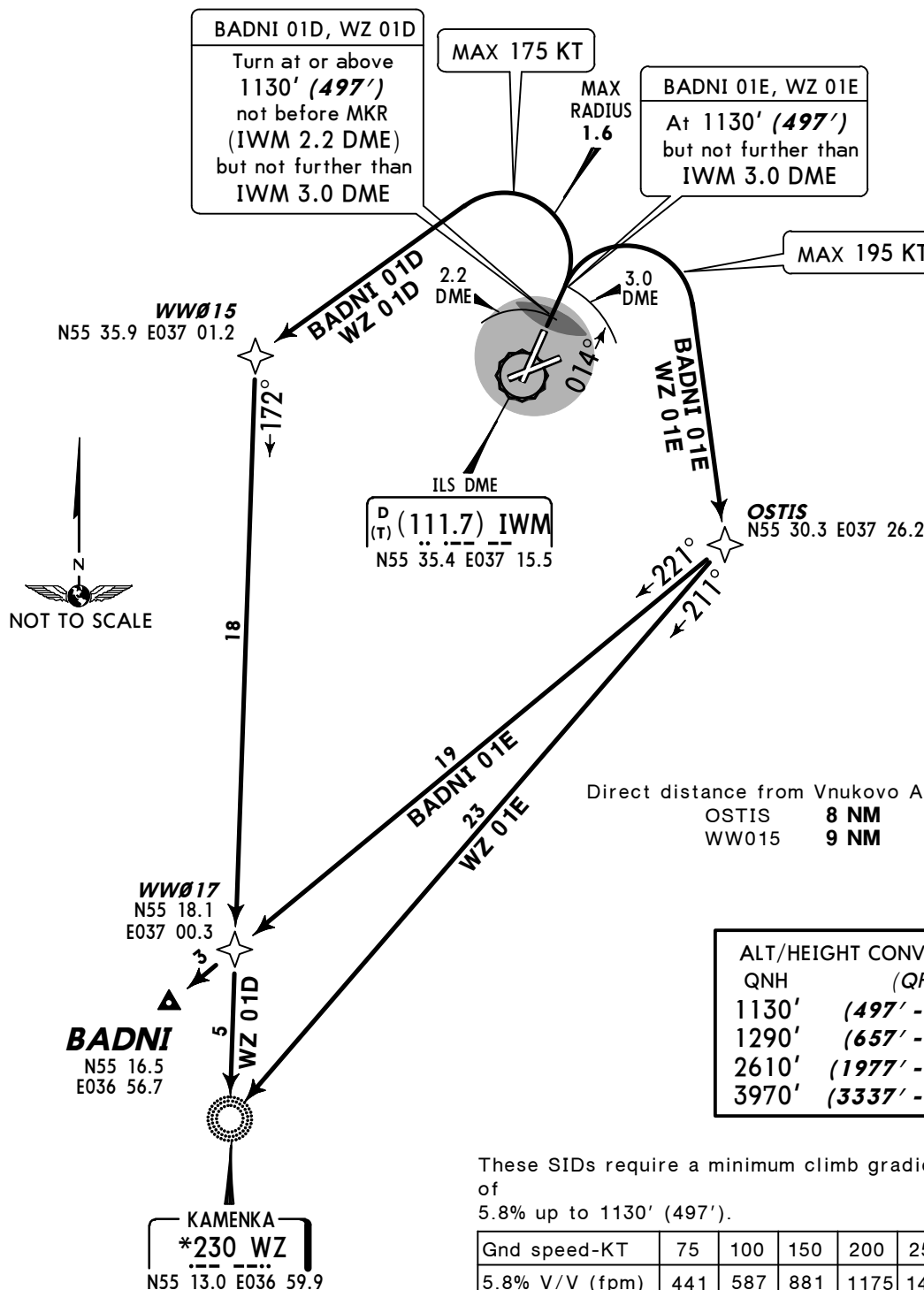
Initial climb clearance 2610' (1976')

SID	ROUTING
BITSA 19D	WW197 (1300'+) - SX (3970'+) - BITSA.
BITSA 19E	WW198 (1620'+) - BITSA.
LO 19D	WW197 (1300'+) - SX (3970'+) - LO.
LO 19E	WW198 (1620'+) - LO.
OKLIT 19E	WW198 (1620'+) - WW014 - OKLIT.

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



SPEED: MAX 250 KT BELOW FL100



These SIDs require a minimum climb gradient of 5.8% up to 1130' (497').

Gnd speed-KT	75	100	150	200	250	300
5.8% V/V (fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2610' (**1977'**)

SID	ROUTING
BADNI 01D	(1130'; K175-) - WW015 - WW017 - BADNI.
BADNI 01E	(1130'; K195-) - OSTIS - BADNI.
WZ 01D	(1130'; K175-) - WW015 - WZ.
WZ 01E	(1130'; K195-) - OSTIS - WZ.

VNUKOVO
Radar
126.0

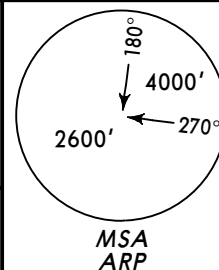
Apt Elev
685'

QNH on request (QFE)

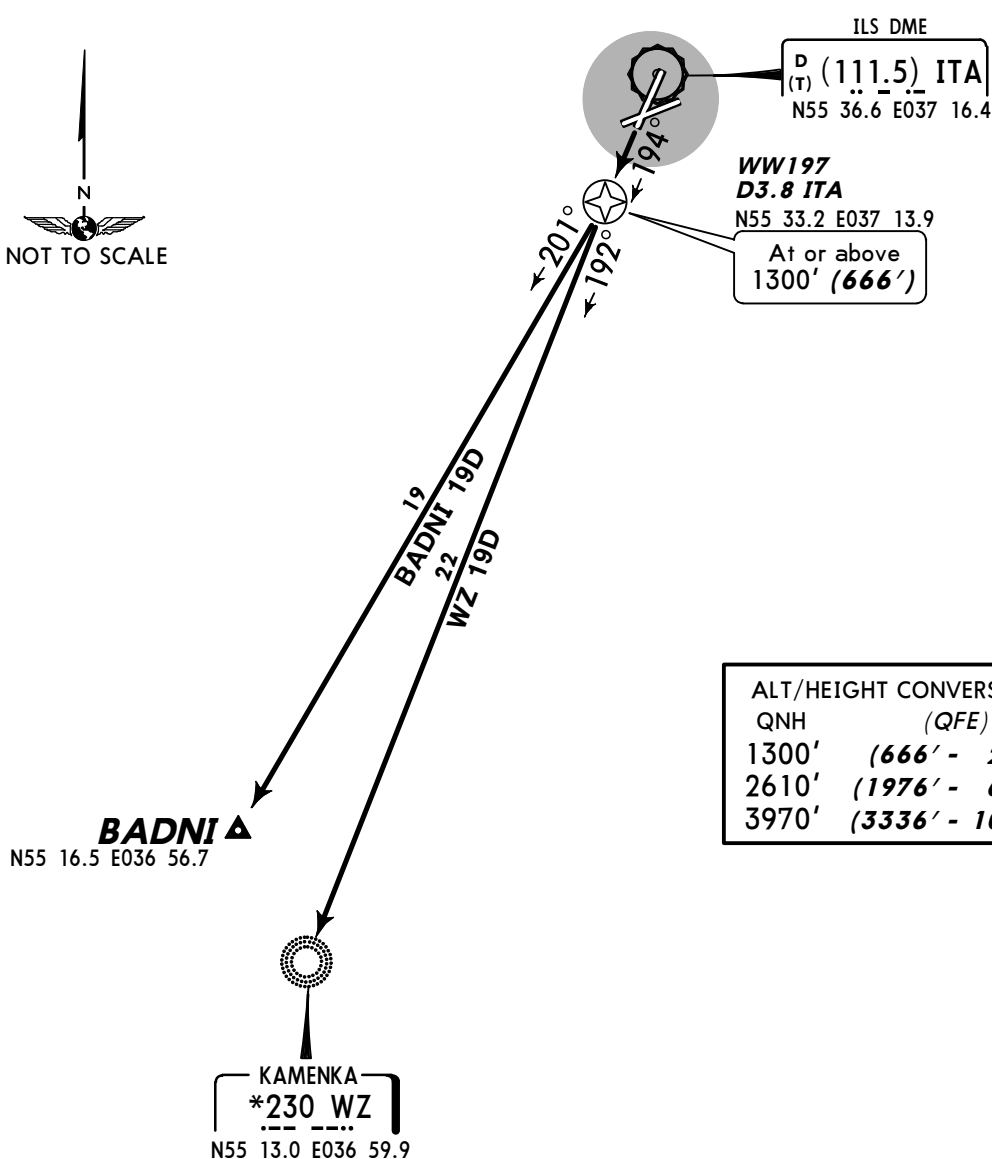
Trans level: By ATC Trans alt: 3970' (3336')

1. Contact VNUKOVO Radar immediately after crossing 1300' (666').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



**BADNI 19D [BAD19D]
KAMENKA 19D (WZ 19D)
RWY 19 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100**



Initial climb clearance 2610' (1976')

SID	ROUTING
BADNI 19D	WW197 (1300'+) - BADNI.
WZ 19D	WW197 (1300'+) - WZ.

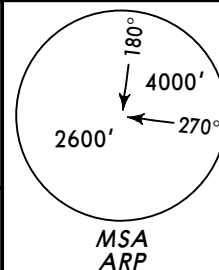
VNUKOVO
Radar
126.0Apt Elev
685'

QNH on request (QFE)

Trans level: By ATC Trans alt: 3970' (3337')

1. Contact VNUKOVO Radar immediately after crossing 1290' (657').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



DEDUM 01D, DEDUM 01E
IVANOVSKOYE 01D (UM 01D)
IVANOVSKOYE 01E (UM 01E)
RWY 01 DEPARTURES
SPEED MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION

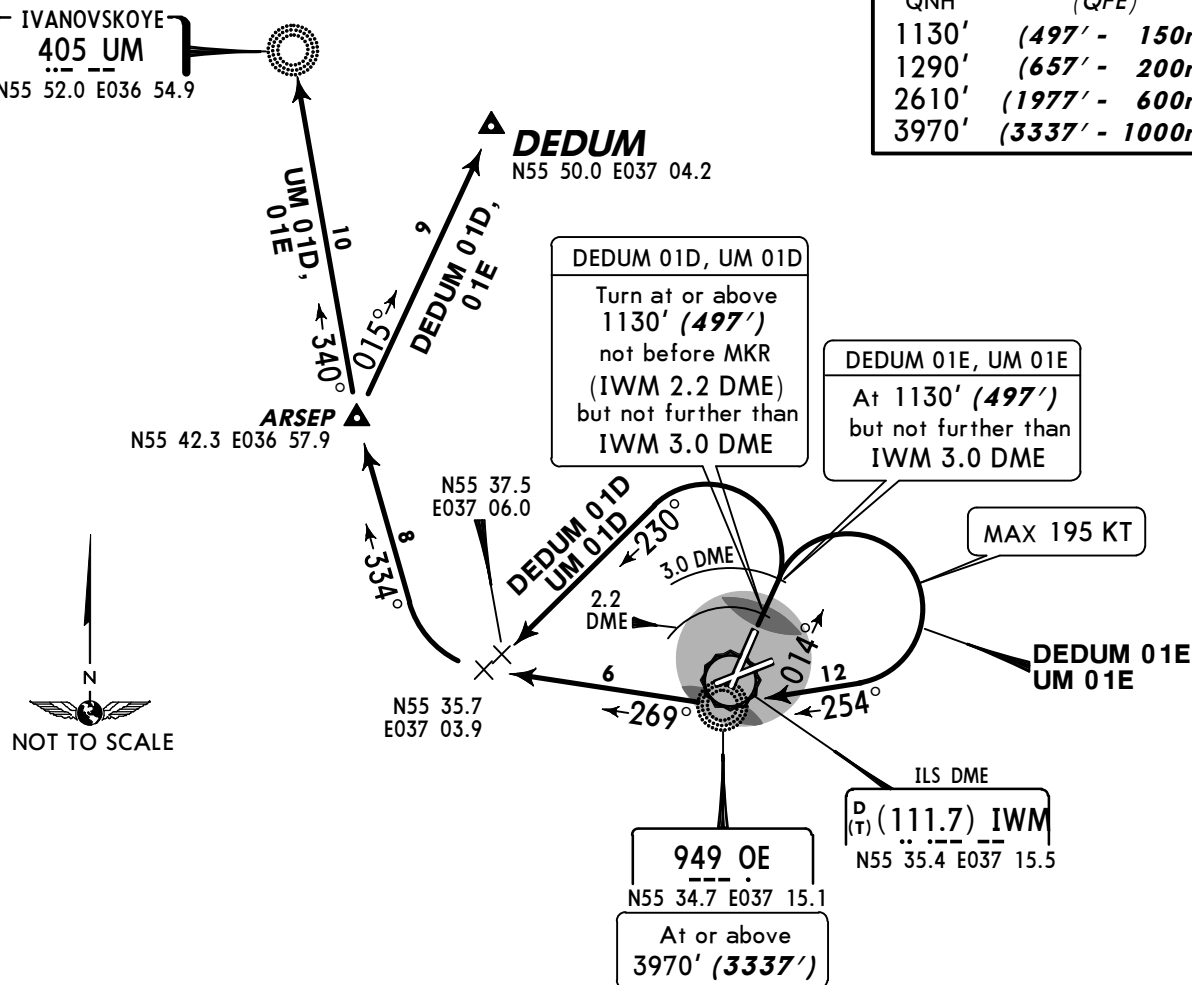
QNH (QFE)

1130' (497' - 150m)

1290' (657' - 200m)

2610' (1977' - 600m)

3970' (3337' - 1000m)

IVANOVSKOYE
405 UM
N55 52.0 E036 54.9

NOT TO SCALE

These SIDs require a minimum climb gradient of 352' per NM (5.8%) up to 1130' (497').

Gnd speed-KT	75	100	150	200	250	300
352' per NM	441	587	881	1175	1468	1762

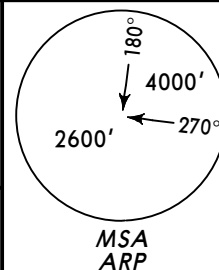
Initial climb clearance 2610' (1977')

SID	ROUTING
DEDUM 01D	Climb straight ahead, at or above 1130' (497'), not before MKR (IWM 2.2 DME) but not further than IWM 3.0 DME turn LEFT, 230° track to N55 37.5 E037 06.0, turn RIGHT, 334° track to ARSEP, 015° track to DEDUM.
DEDUM 01E	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME turn RIGHT, intercept 254° bearing to OE, 269° bearing to N55 35.7 E037 03.9, turn RIGHT, 334° track to ARSEP, then to DEDUM.
UM 01D	Climb straight ahead, at or above 1130' (497'), not before MKR (IWM 2.2 DME) but not further than IWM 3.0 DME turn LEFT, 230° track to N55 37.5 E037 06.0, turn RIGHT, 334° track to ARSEP, intercept 340° bearing to UM.
UM 01E	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME turn RIGHT, intercept 254° bearing to OE, 269° bearing to N55 35.7 E037 03.9, turn RIGHT, 334° track to ARSEP, then to UM.

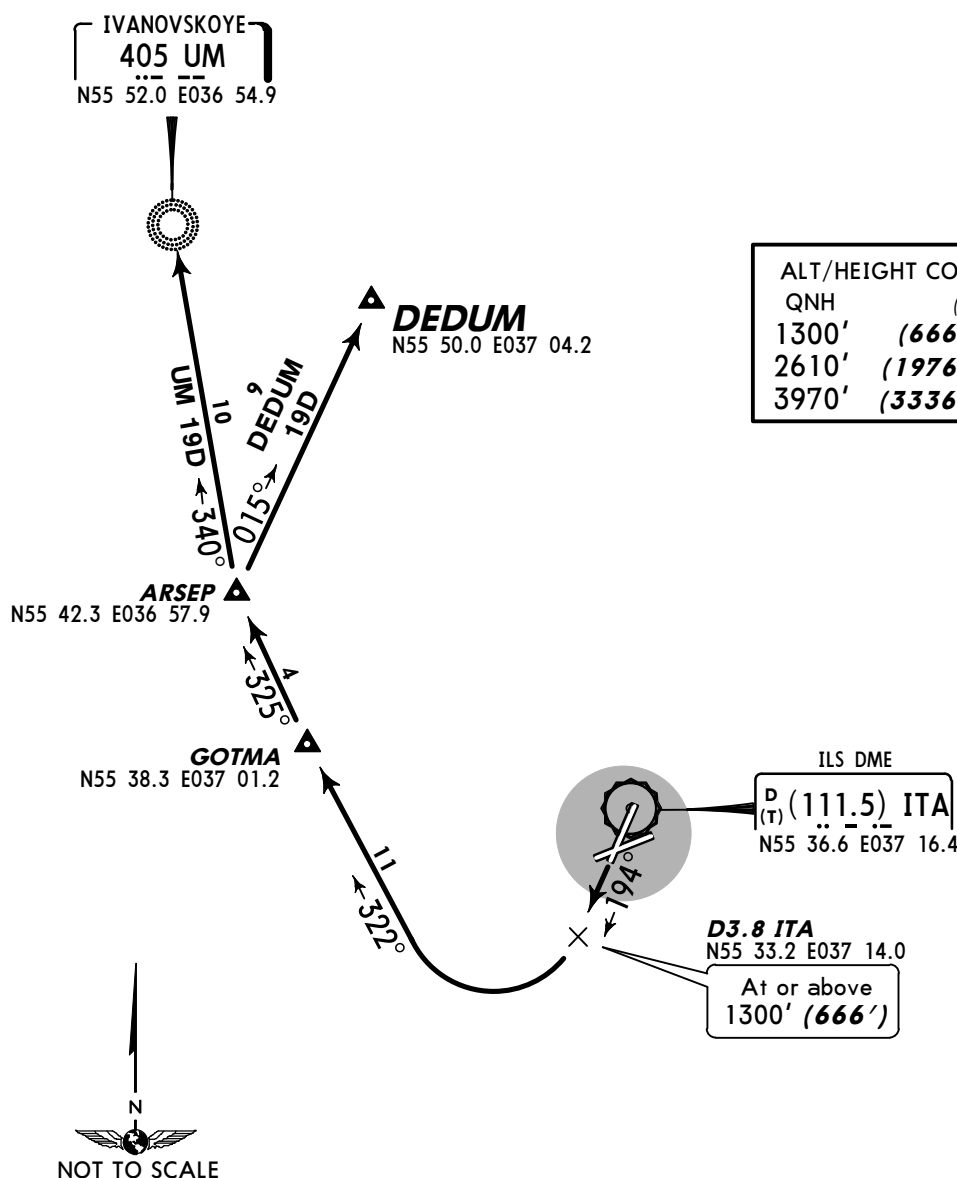
VNUKOVO
Radar
126.0

Apt Elev
685'

QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3336')
1. Contact VNUKOVO Radar immediately after crossing
1300' (666').
2. Execute noise abatement procedures according to
ICAO Annex 16, DOC 8168.



DEDUM 19D
IVANOVSKOYE 19D (UM 19D)
RWY 19 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300'	(666' - 200m)
2610'	(1976' - 600m)
3970'	(3336' - 1000m)

Initial climb clearance 2610' (1976')

SID	ROUTING
DEDUM 19D	Climb straight ahead to at or above 1300' (666') at D3.8 ITA, turn RIGHT, 322° track to GOTMA, 325° track to ARSEP, then to DEDUM.
UM 19D	Climb straight ahead to at or above 1300' (666') at D3.8 ITA, turn RIGHT, 322° track to GOTMA, 325° track to ARSEP, then to UM.

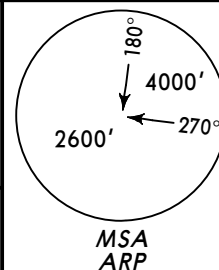
VNUKOVO
Radar
126.0Apt Elev
685'

QNH on request (QFE)

Trans level: By ATC Trans alt: 3970' (3337')

1. Contact VNUKOVO Radar immediately after crossing 1290' (657').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

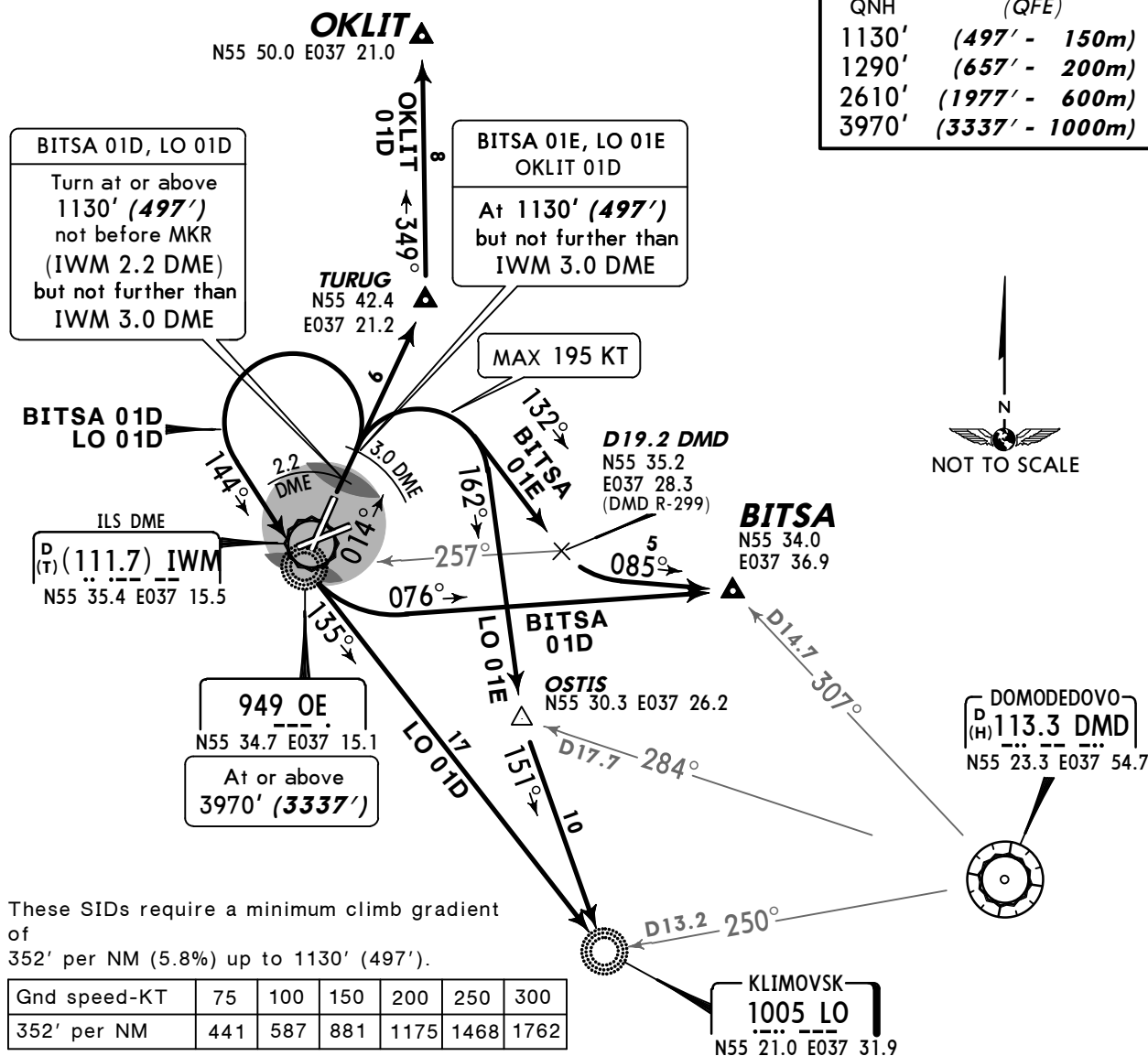


BITSA 01D, BITSA 01E
KLIMOVSK 01D (LO 01D), KLIMOVSK 01E (LO 01E)
OKLIT 01D
RWY 01 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION

QNH (QFE)

1130'	(497' - 150m)
1290'	(657' - 200m)
2610'	(1977' - 600m)
3970'	(3337' - 1000m)



Initial climb clearance 2610' (1977')

SID	ROUTING
BITSA 01D	Climb straight ahead, at or above 1130' (497'), not before MKR (IWM 2.2 DME) but not further than IWM 3.0 DME turn LEFT, intercept 144° bearing to OE, 076° track to BITSA.
BITSA 01E	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME turn RIGHT, 132° track to D19.2 DMD, 085° track to BITSA.
LO 01D	Climb straight ahead, at or above 1130' (497'), not before MKR (IWM 2.2 DME) but not further than IWM 3.0 DME turn LEFT, intercept 144° bearing to OE, 135° bearing to LO.
LO 01E	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME turn RIGHT, 162° track to OSTIS, turn LEFT, intercept 151° bearing to LO.
OKLIT 01D	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME proceed to TURUG, then to OKLIT.

VNUKOVO
Radar
126.0

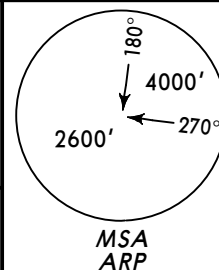
Apt Elev
685'

QNH on request (QFE)

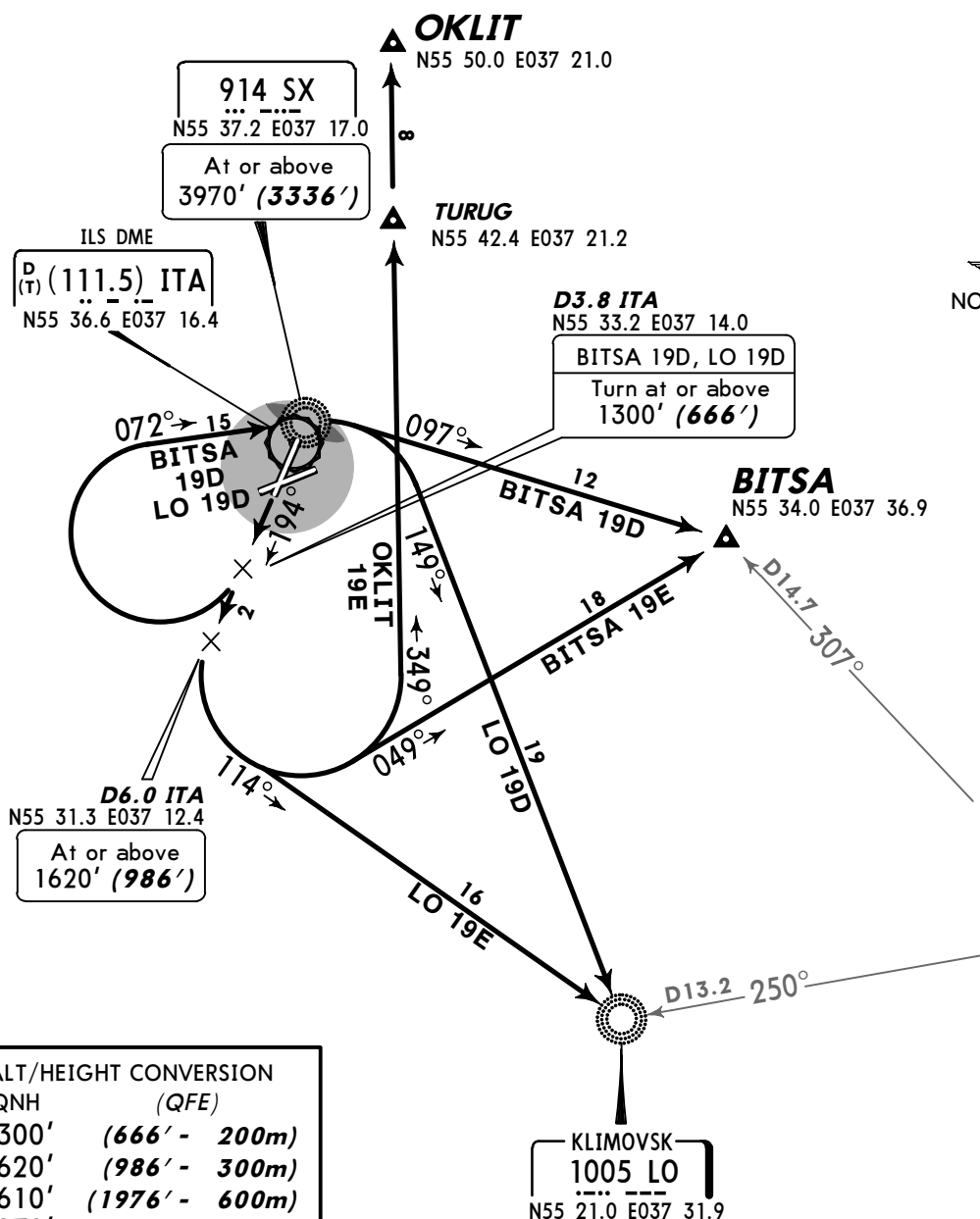
Trans level: By ATC Trans alt: 3970' (3336')

1. Contact VNUKOVO Radar immediately after crossing 1300' (666').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BITSA 19D, BITSA 19E
KLIMOVSK 19D (LO 19D), KLIMOVSK 19E (LO 19E)
OKLIT 19E
RWY 19 DEPARTURES
SPEED: MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300'	(666' - 200m)
1620'	(986' - 300m)
2610'	(1976' - 600m)
3970'	(3336' - 1000m)

DOMODEDOVO
D 113.3 DMD
(H) N55 23.3 E037 54.7

Initial climb clearance 2610' (1976')

SID	ROUTING
BITSA 19D	Climb straight ahead to at or above 1300' (666') at D3.8 ITA, turn RIGHT, intercept 072° bearing to SX, then to BITSA.
BITSA 19E	Climb straight ahead to at or above 1620' (986') at D6.0 ITA, turn LEFT to BITSA.
LO 19D	Climb straight ahead to at or above 1300' (666') at D3.8 ITA, turn RIGHT, intercept 072° bearing to SX, then to LO.
LO 19E	Climb straight ahead to at or above 1620' (986') at D6.0 ITA, turn LEFT to LO.
OKLIT 19E	Climb straight ahead to at or above 1620' (986') at D6.0 ITA, turn LEFT, 349° track to TURUG, then to OKLIT.

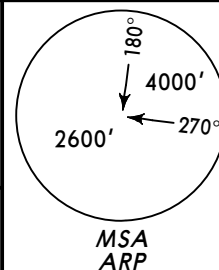
VNUKOVO
Radar
126.0Apt Elev
685'

QNH on request (QFE)

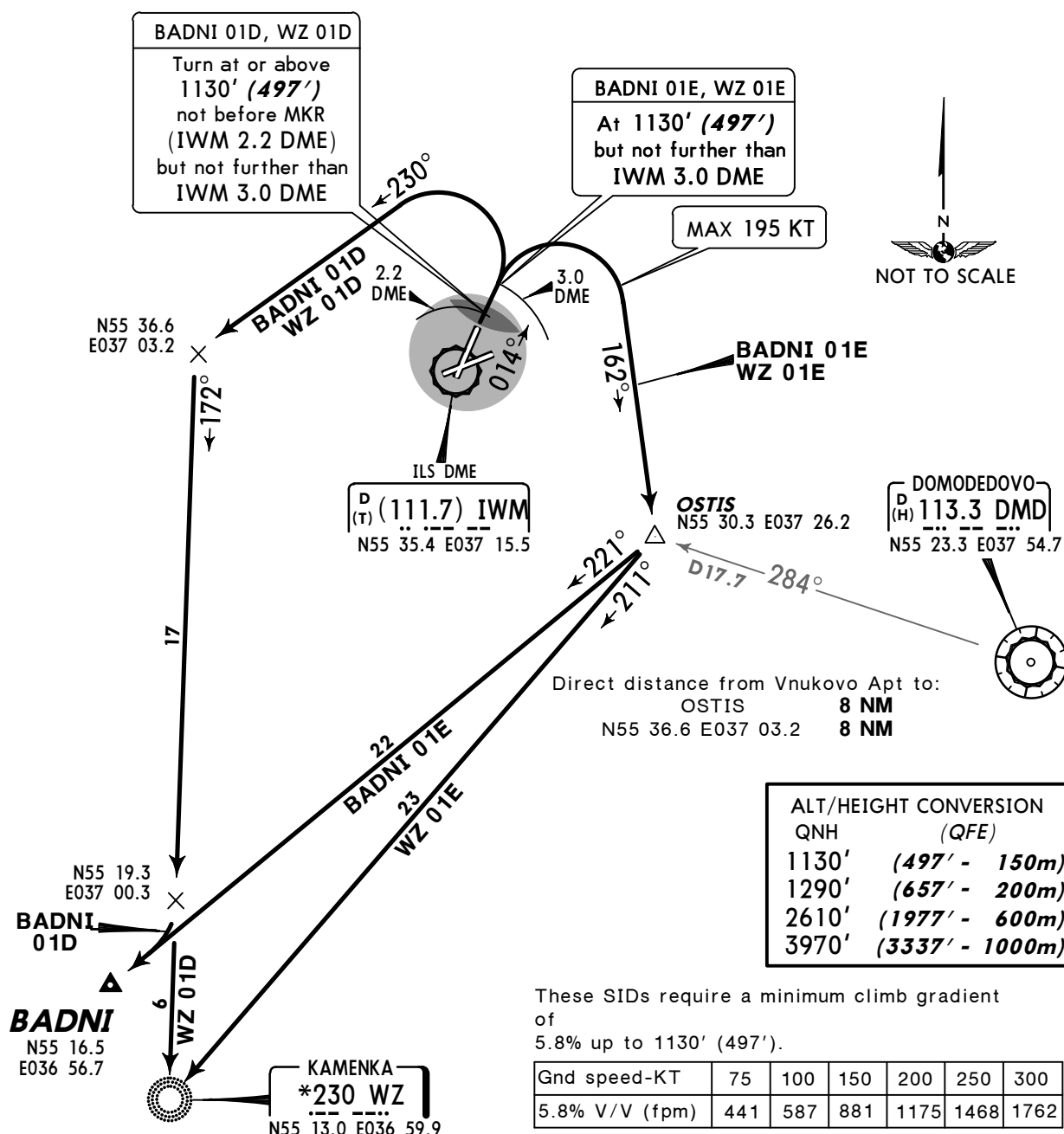
Trans level: By ATC Trans alt: 3970' (3337')

1. Contact VNUKOVO Radar immediately after crossing 1290' (657').

2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



BADNI 01D, BADNI 01E
KAMENKA 01D (WZ 01D), KAMENKA 01E (WZ 01E)
RWY 01 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



Initial climb clearance 2610' (1977')

SID	ROUTING
BADNI 01D	Climb straight ahead, at or above 1130' (497'), not before MKR (IWM 2.2 DME) but not further than IWM 3.0 DME turn LEFT, 230° track to N55 36.6 E037 03.2, turn LEFT, 172° track to N55 19.3 E037 00.3, 221° track to BADNI.
BADNI 01E	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME turn RIGHT, 162° track to OSTIS, then to BADNI.
WZ 01D	Climb straight ahead, at or above 1130' (497'), not before MKR (IWM 2.2 DME) but not further than IWM 3.0 DME turn LEFT, 230° track to N55 36.6 E037 03.2, intercept 172° bearing to WZ.
WZ 01E	Climb straight ahead, at 1130' (497'), but not further than IWM 3.0 DME turn RIGHT, 162° track to OSTIS, then to WZ.

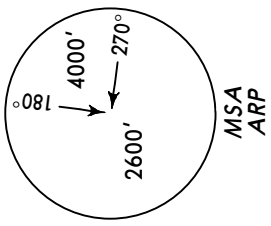
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NOT TO SCALE

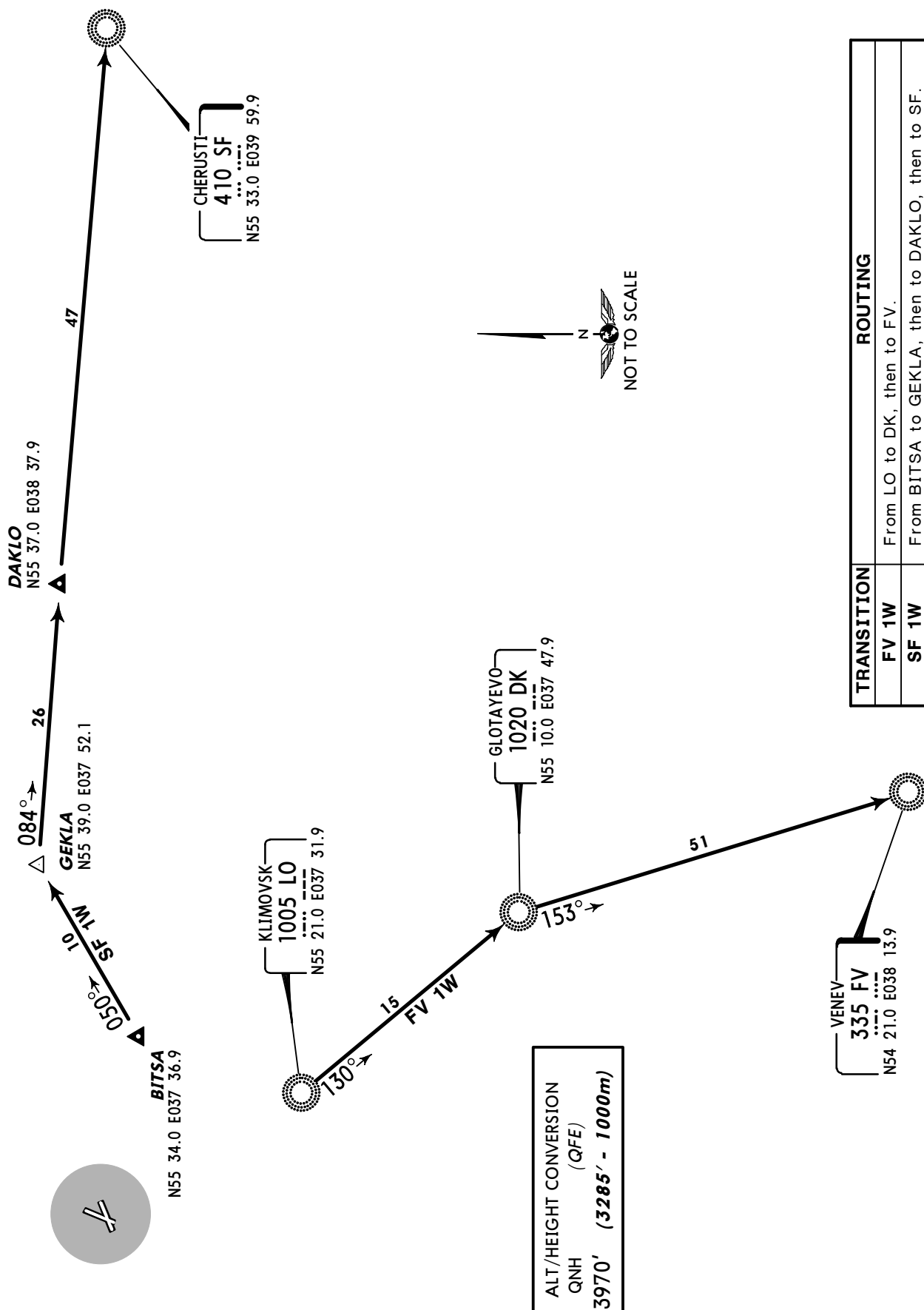
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Apt Elev
685'

QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3285')



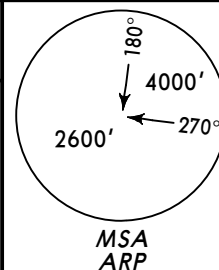
CHERUSTI 1W (SF 1W), VENEV 1W (FV 1W) TRANSITIONS FROM BITSA & LO



TRANSITION	ROUTING
FV 1W	From LO to DK, then to FV.
SF 1W	From BITSA to GEKLA, then to DAKLO, then to SF.

Apt Elev
685'

QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970' **(3285')**



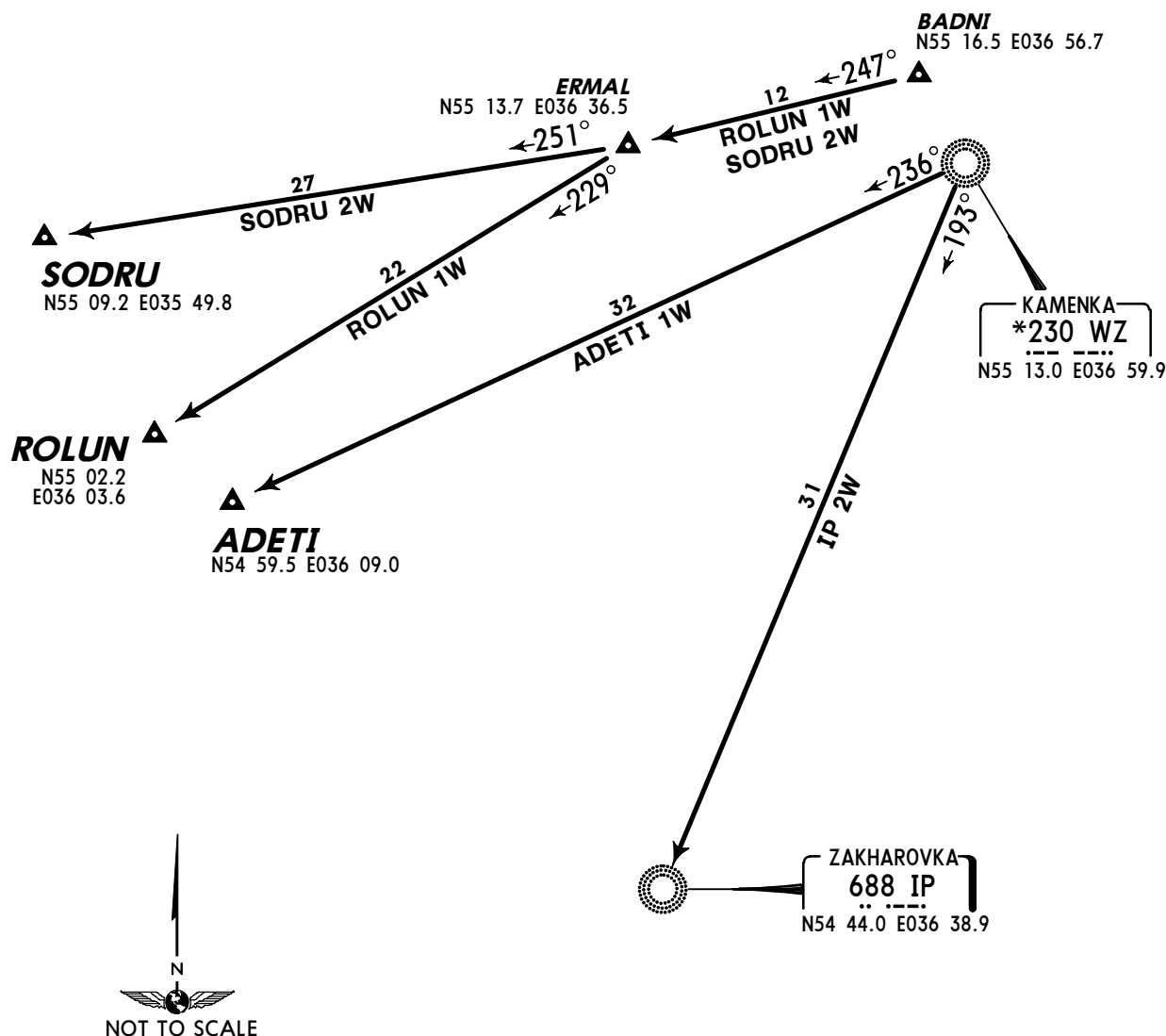
**ADETI 1W [ADE1W],
ROLUN 1W [ROL1W]
SODRU 2W [SOD2W]
BY ATC**

ZAKHAROVKA 2W (IP 2W)

TRANSITIONS



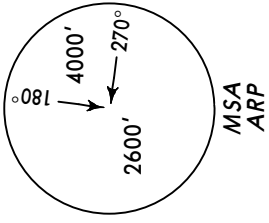
ALT/HEIGHT CONVERSION
QNH **(QFE)**
3970' **(3285' - 1000m)**



TRANSITION	ROUTING
ADETI 1W	From WZ to ADETI.
IP 2W	From WZ to IP.
ROLUN 1W	From BADNI to ERMAL, then to ROLUN.
SODRU 2W	From BADNI to ERMAL, then to SODRU.

Apt Elev
685'

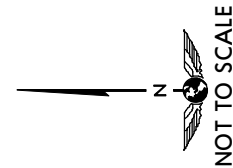
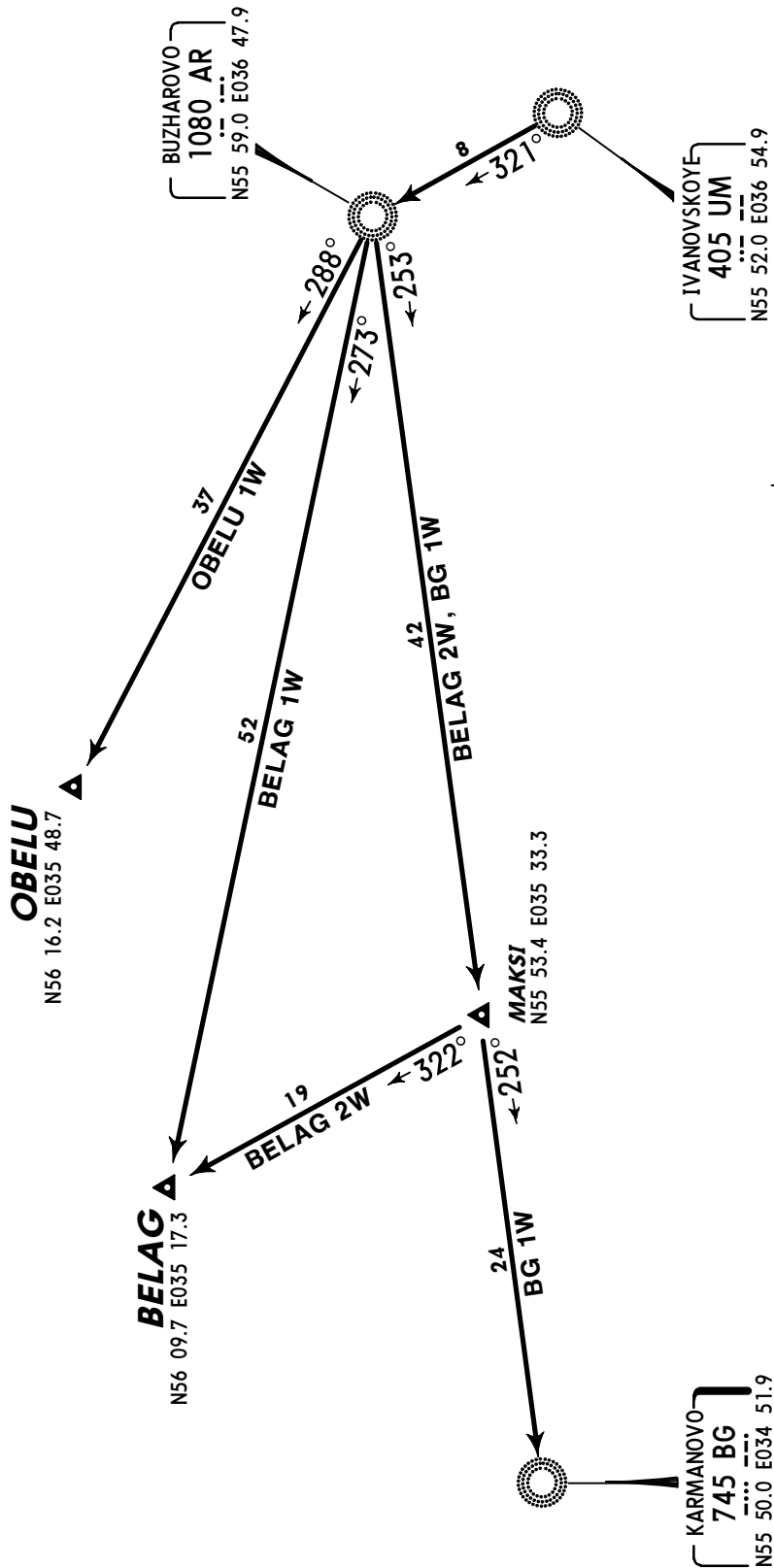
QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3285')



BELAG 1W [BEL1W], BELAG 2W [BEL2W]
KARMANOVO 1W (BG 1W)
OBELU 1W [OBE1W]
TRANSITIONS



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3285' - 1000m)



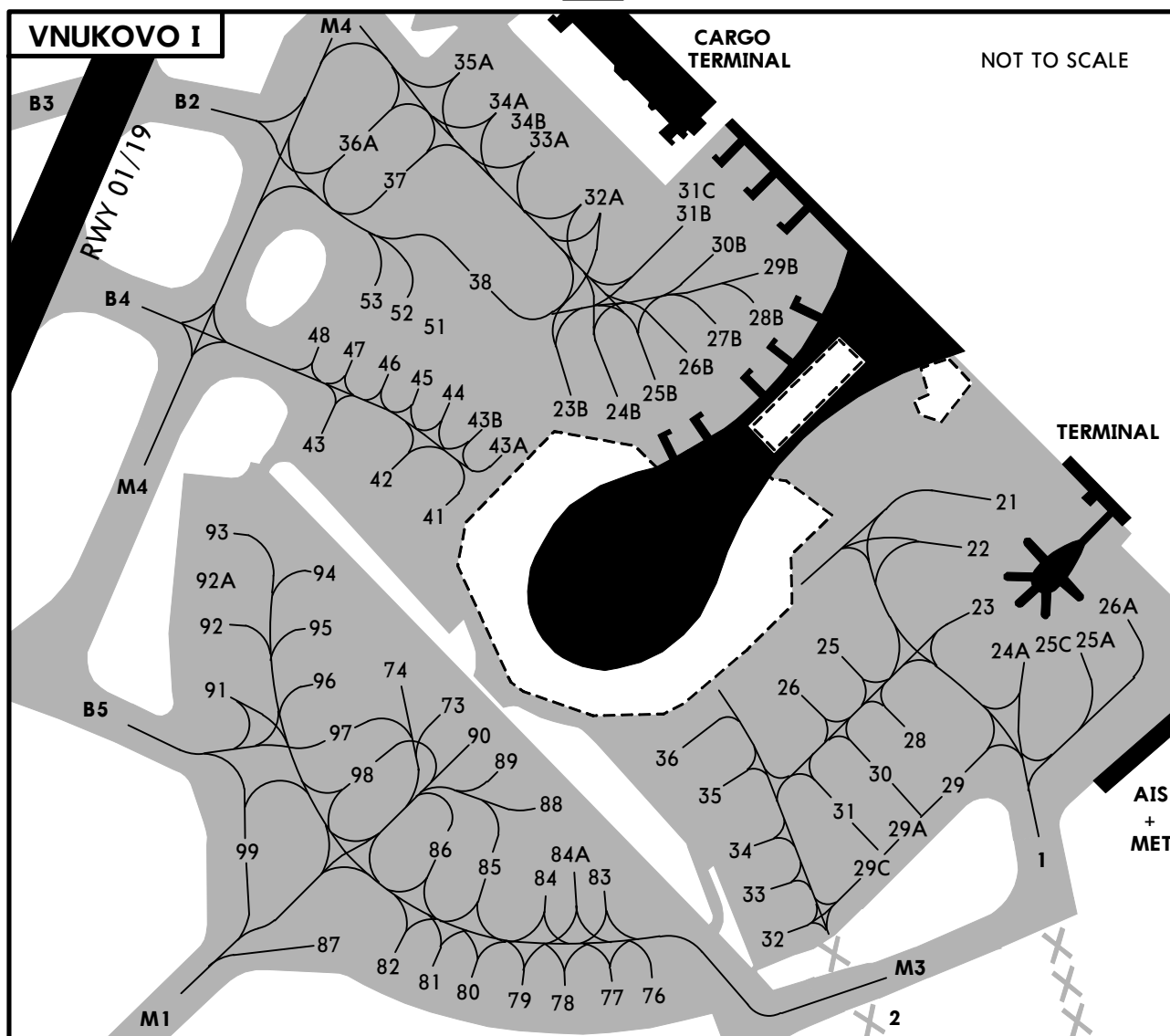
TRANSITION	ROUTING
BELAG 1W	From UM to AR, then to BELAG.
BELAG 2W	From UM to AR, then to MAKSI, then to BELAG.
BG 1W	From UM to AR, then to MAKSI, then to BG.
OBELU 1W	From UM to AR, then to OBELU.



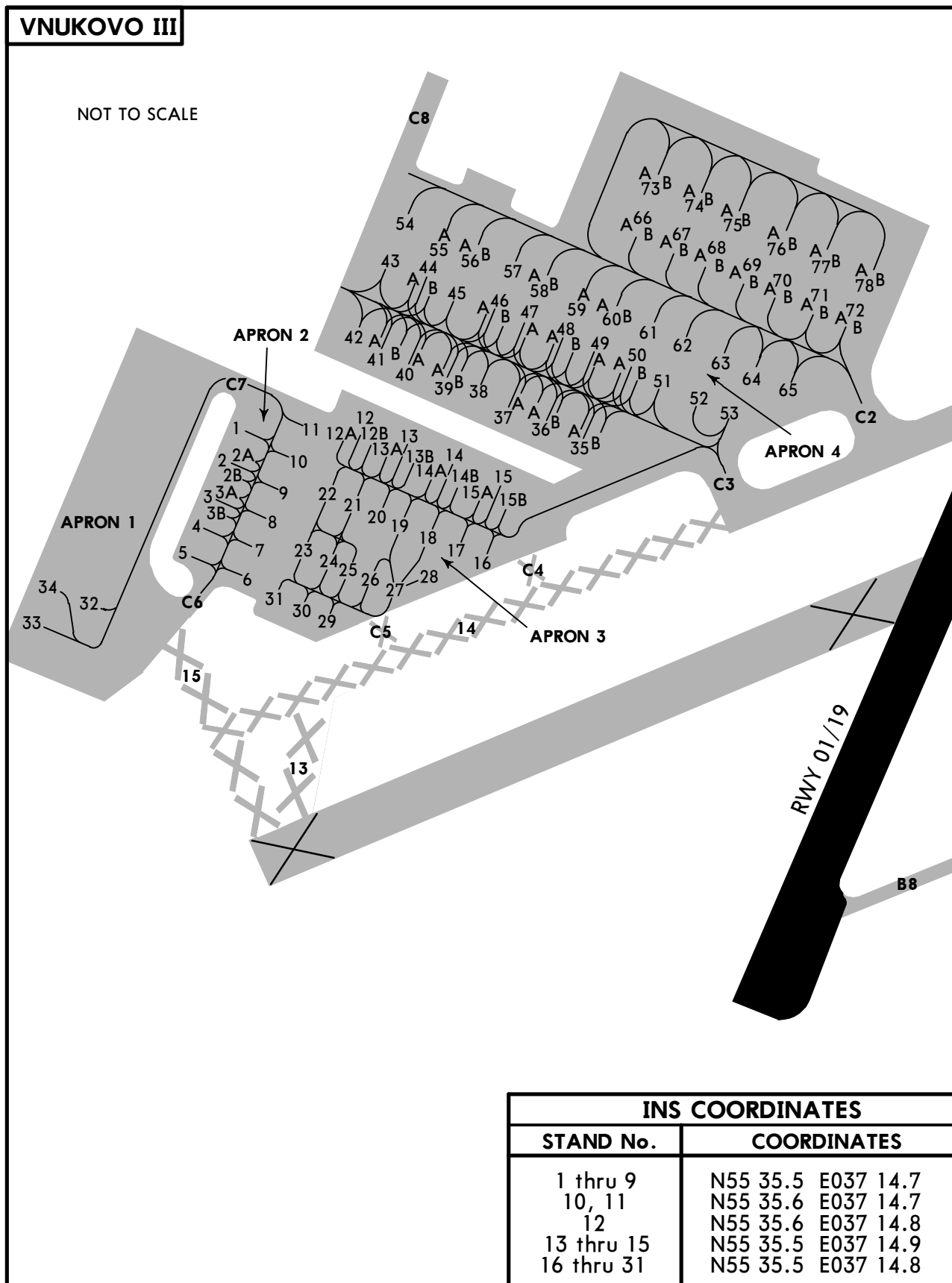
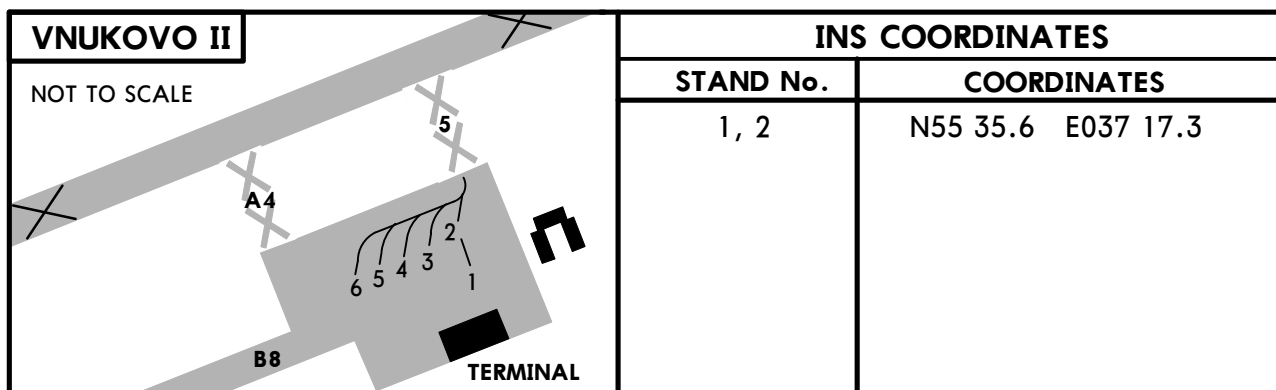
1 TAKE-OFF RUN AVAILABLE

RWY 19: From point 19-1	10,039' (3060m)
from point 19-2	8333' (2540m)
from point 19-3	7677' (2340m)

RVR *500m*
VIS *400m*

**INS COORDINATES**

STAND No.	COORDINATES	STAND No.	COORDINATES
21 thru 23	N55 36.2 E037 17.3	51 thru 53	N55 36.3 E037 16.7
24A	N55 36.1 E037 17.3	73	N55 36.1 E037 16.8
25	N55 36.2 E037 17.1	74	N55 36.1 E037 16.7
25A	N55 36.1 E037 17.4	76	N55 36.0 E037 17.0
26	N55 36.1 E037 17.1	77, 78	N55 35.9 E037 16.9
26A	N55 36.2 E037 17.4	79	N55 35.9 E037 16.8
28	N55 36.1 E037 17.2	80	N55 36.0 E037 16.8
29	N55 36.1 E037 17.3	81, 82	N55 36.0 E037 16.7
29A	N55 36.1 E037 17.2	83 thru 84A	N55 36.0 E037 16.9
29C	N55 36.0 E037 17.2	85, 86	N55 36.0 E037 16.8
30	N55 36.1 E037 17.2	87	N55 36.0 E037 16.7
31	N55 36.1 E037 17.1	88	N55 36.0 E037 16.8
32 thru 34	N55 36.0 E037 17.1	89, 90	N55 36.1 E037 16.8
35, 36	N55 36.1 E037 17.0	91	N55 36.1 E037 16.6
41	N55 36.2 E037 16.8	92	N55 36.2 E037 16.5
42	N55 36.2 E037 16.7	93 thru 95	N55 36.2 E037 16.6
43	N55 36.3 E037 16.6	96, 97	N55 36.1 E037 16.6
44	N55 36.3 E037 16.8	98	N55 36.1 E037 16.7
45 thru 47	N55 36.3 E037 16.7	99	N55 36.0 E037 16.6
48	N55 36.3 E037 16.6		



STRAIGHT-IN RWY		A	B	C	D
01	ILS	833' (200')	833' (200')	833' (200')	833' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ①	1050' (417')	1050' (417')	1050' (417')	1050' (417')
19	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	NDB ①	1400' (767')	1400' (767')	1400' (767')	1400' (767')
		R1500m	R1500m	C2400m	C2400m
	PAR	856' (223')	866' (233')	876' (243')	886' (253')
	<i>ALS out</i>	R750m	R750m	R750m	R750m
		R1200m	R1200m	R1300m	R1300m
19	CAT 2 ILS	734' (100')	734' (100')	734' (100')	734' (100')
		RA105' R350m	RA105' R350m	RA105' R350m	RA105' R350m
	ILS	834' (200')	834' (200')	834' (200')	834' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ①	1110' (476')	1110' (476')	1110' (476')	1110' (476')
	<i>ALS out</i>	R1500m	R1500m	R1500m	R1500m
		R1500m	R1500m	C2200m	C2200m
	NDB ①	1410' (776')	1410' (776')	1410' (776')	1410' (776')
		R1500m	R1500m	C2400m	C2400m
	PAR	857' (223')	867' (233')	877' (243')	887' (253')
	<i>ALS out</i>	R750m	R750m	R750m	R750m
		R1200m	R1200m	R1300m	R1300m

① Continuous Descent Final Approach

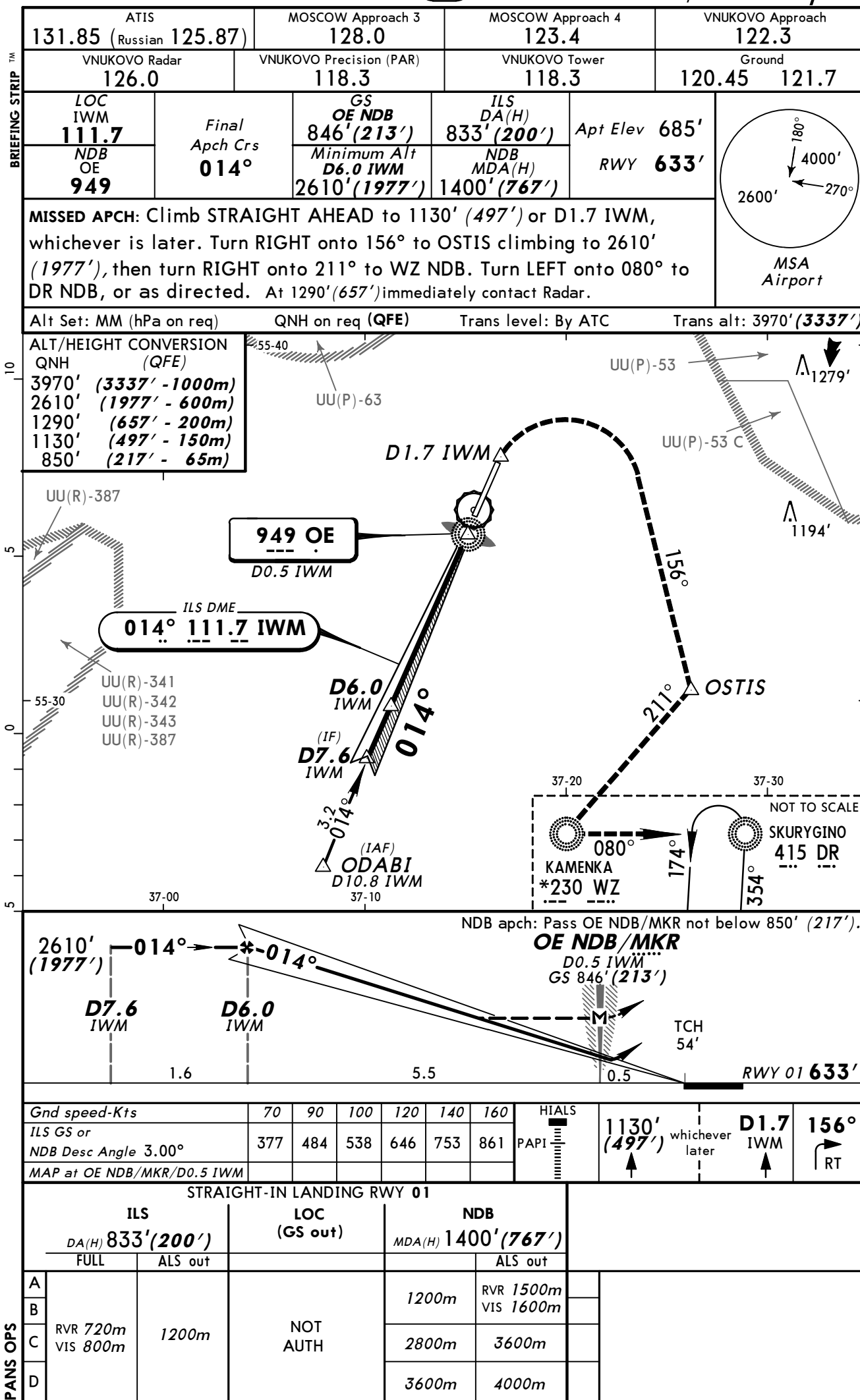
TAKE-OFF RWY 01, 19

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

STRAIGHT-IN RWY		A	B	C	D
01	ILS	833' (200')	833' (200')	833' (200')	833' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
	RNAV	1050' (417')	1050' (417')	1050' (417')	1050' (417')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m
	NDB	1400' (767')	1400' (767')	1400' (767')	1400' (767')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
19	PAR	856' (223')	866' (233')	876' (243')	886' (253')
		R600m	R600m	R600m	R650m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1200m
	CAT 2 ILS	734' (100')	734' (100')	734' (100')	734' (100')
		RA105' R350m	RA105' R350m	RA105' R350m	RA105' R350m
	ILS	834' (200')	834' (200')	834' (200')	834' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
	RNAV	1110' (476')	1110' (476')	1110' (476')	1110' (476')
		R1000m	R1200m	R1200m	R1600m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
	NDB	1410' (776')	1410' (776')	1410' (776')	1410' (776')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
	PAR	857' (223')	867' (233')	877' (243')	887' (253')
		R600m	R600m	R600m	R650m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1200m

TAKE-OFF RWY 01, 19

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

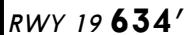


BRIEFING STRIP™

MSA Airport

105.

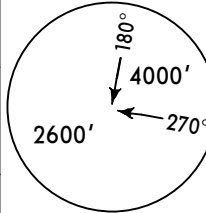
SX NDB/MKR
D0.5 ITA.....
GS 847' (213')

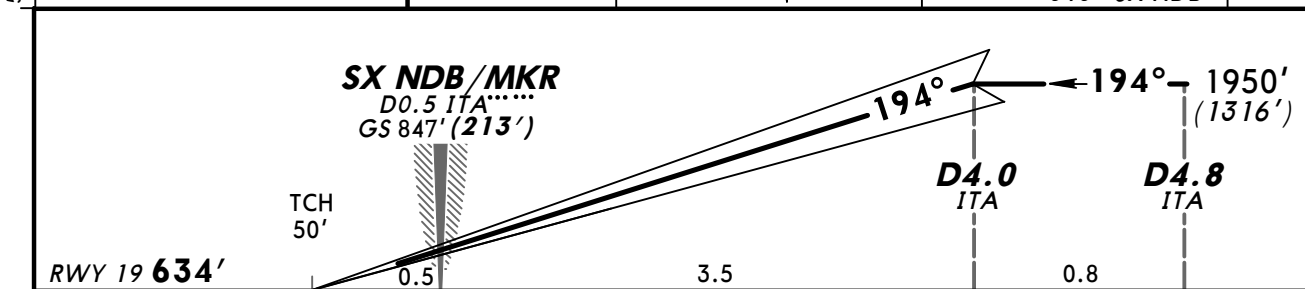
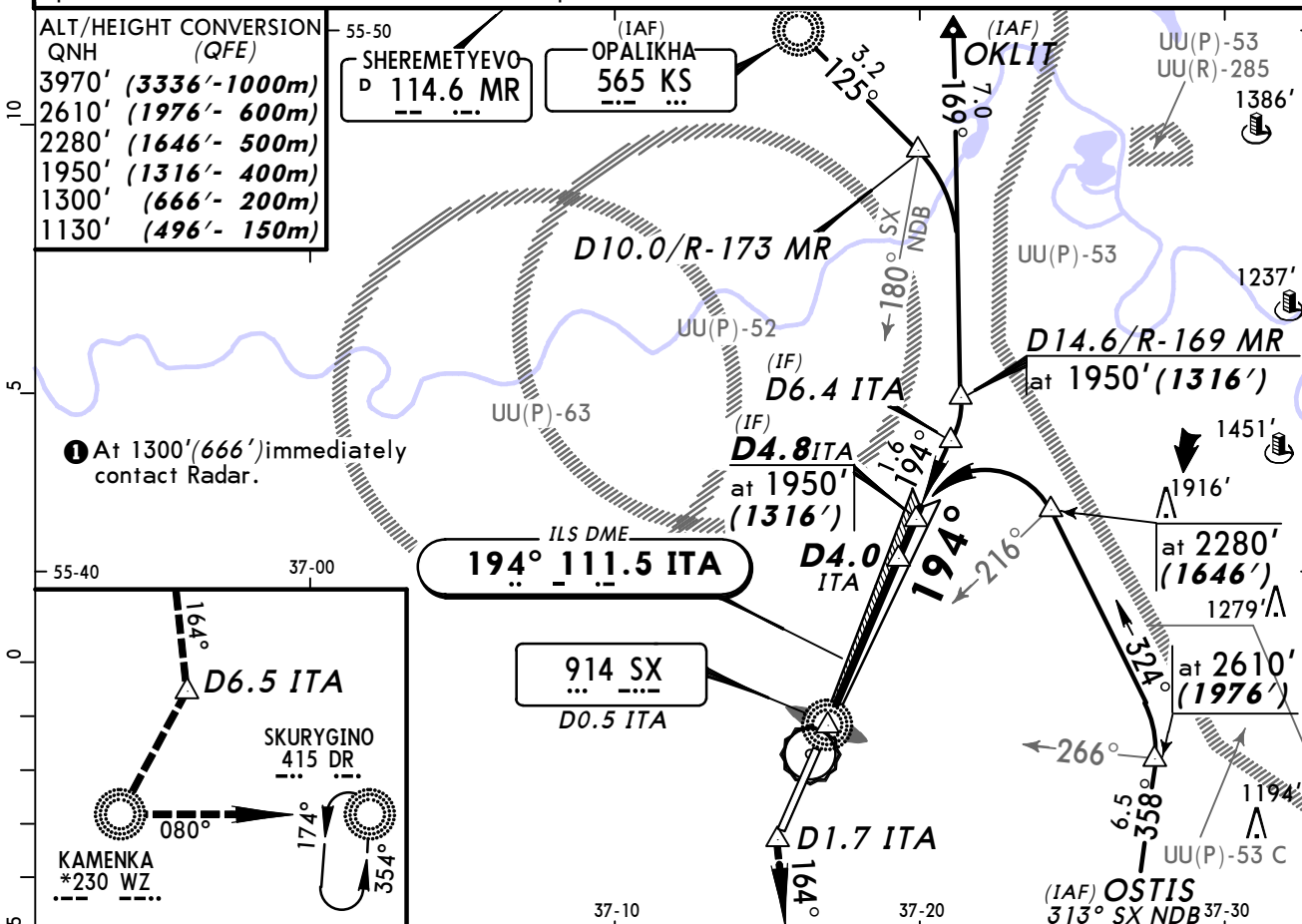


PANS OPS

CHANGES: Missed apch.

BRIEFING STRIP™

ATIS		MOSCOW Approach 3		MOSCOW Approach 4		VNUKOVO Approach	
131.85 (Russian 125.87)		128.0		123.4		122.3	
VNUKOVO Radar	VNUKOVO Precision (PAR)		VNUKOVO Tower		Ground		
126.0	118.3		118.3		120.45 121.7		
LOC ITA 111.5	Final Apch Crs 194°	GS SX NDB 847' (213')	CAT II ILS RA 105' DA(H) 734' (100')	Apt Elev 685' RWY 634'			 MSA Airport
MISSED APCH: Climb STRAIGHT AHEAD to 1130' (496') or D1.7 ITA, whichever is later. Turn LEFT onto 164° to D6.5 ITA climbing to 2610' (1976'), then turn RIGHT to WZ NDB. Turn LEFT onto 080° to DR NDB, or as directed. ①							
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3336')							
Special Aircrew & Aircraft Certification Required.							



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	1130' (496') ↑	D1.7 ITA ↑	164° LT
GS 3.00°	377	484	538	646	753	861				

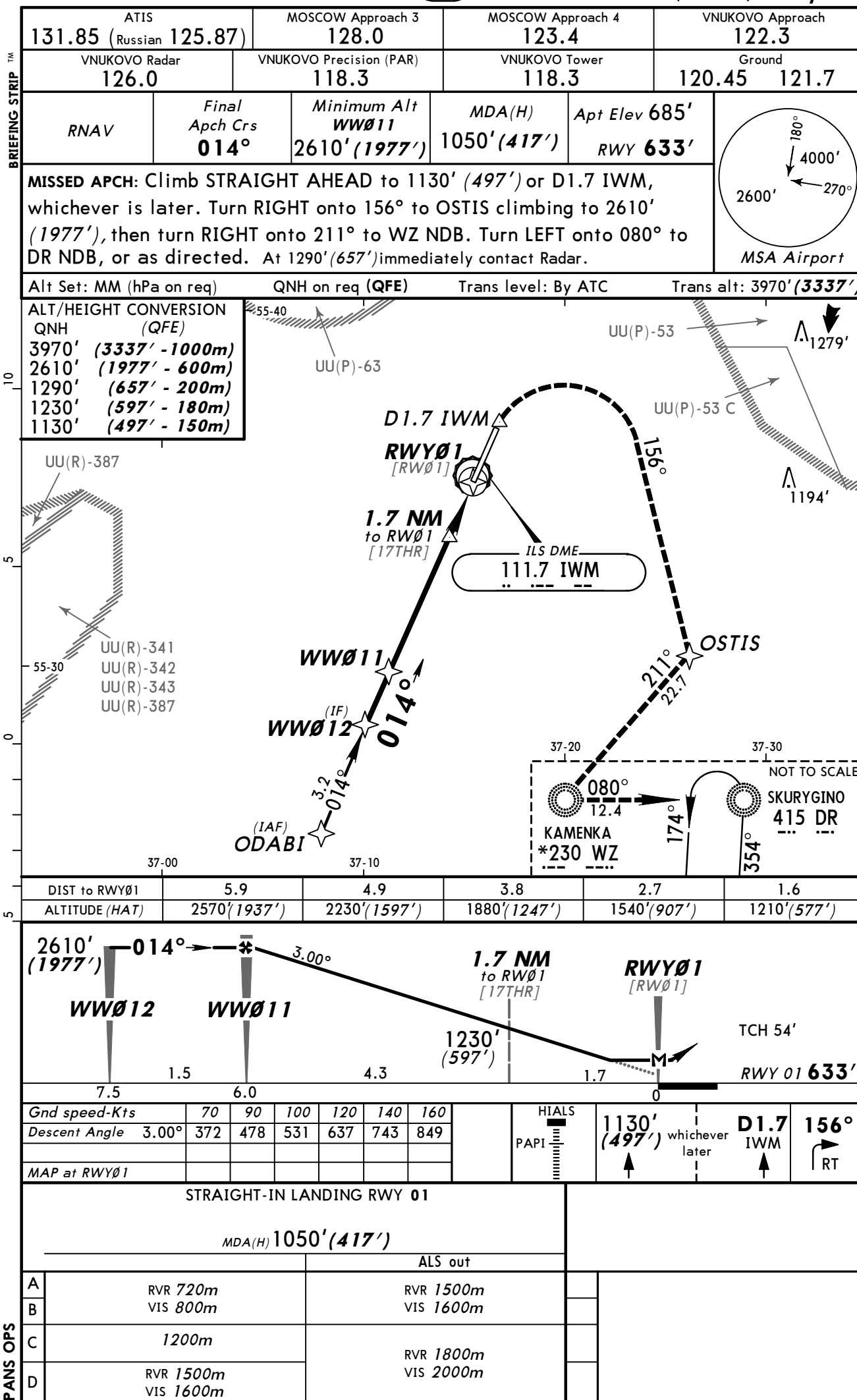
STRAIGHT-IN LANDING RWY 19
CAT II ILS
ABCD
RA 105'
DA(H) 734' (100')

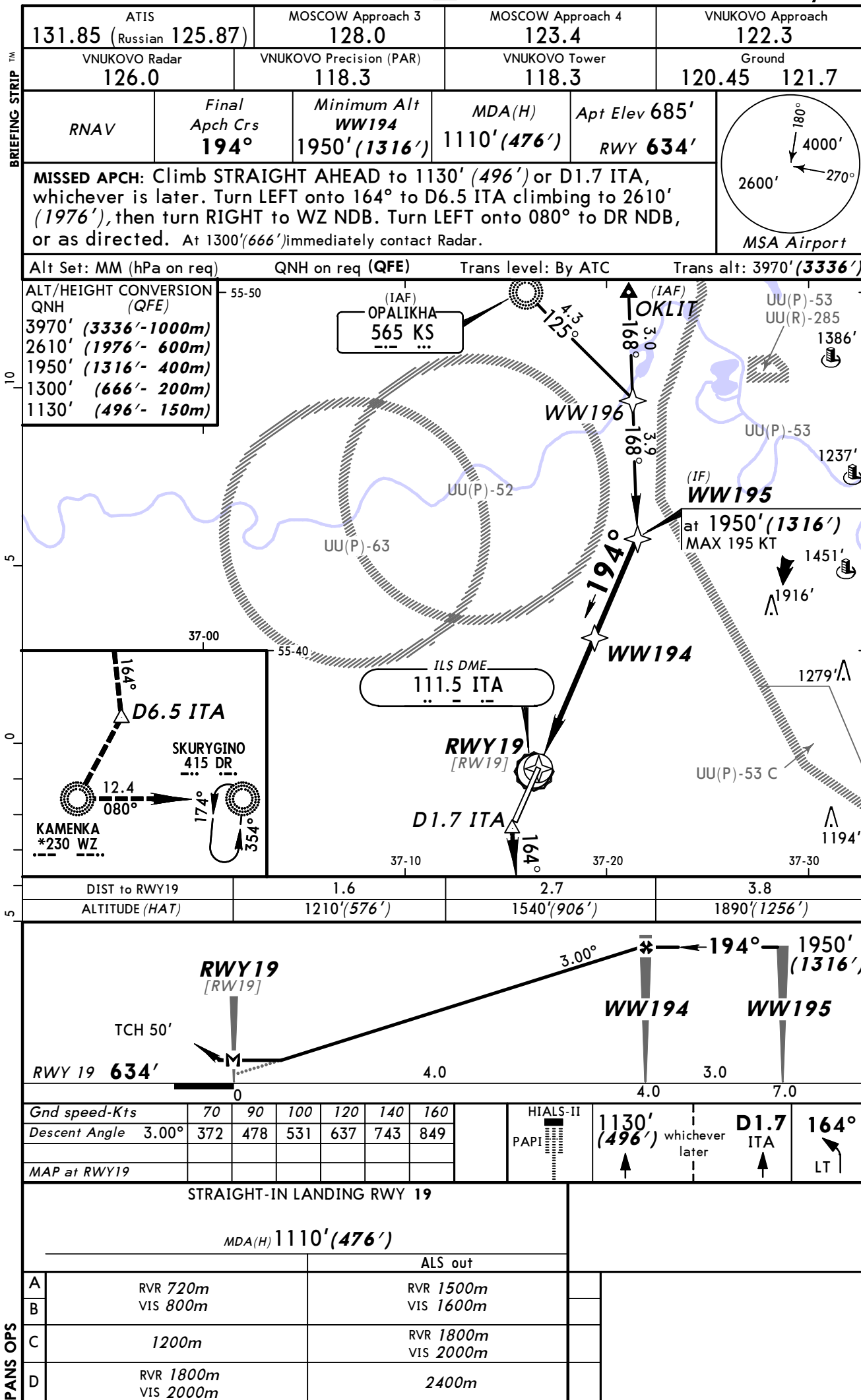
RVR 350m

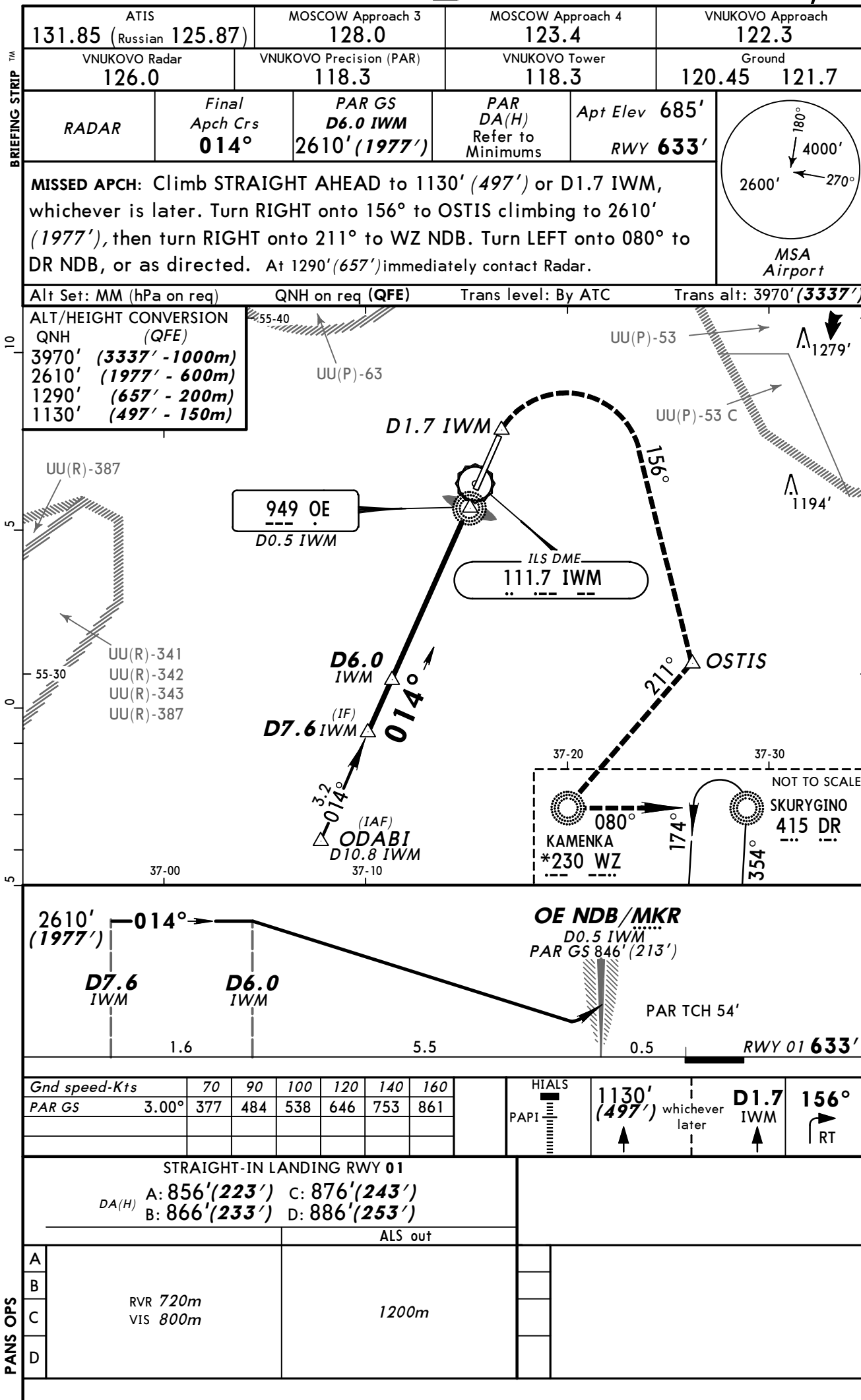
UUWW/VKO
VNUKOVO

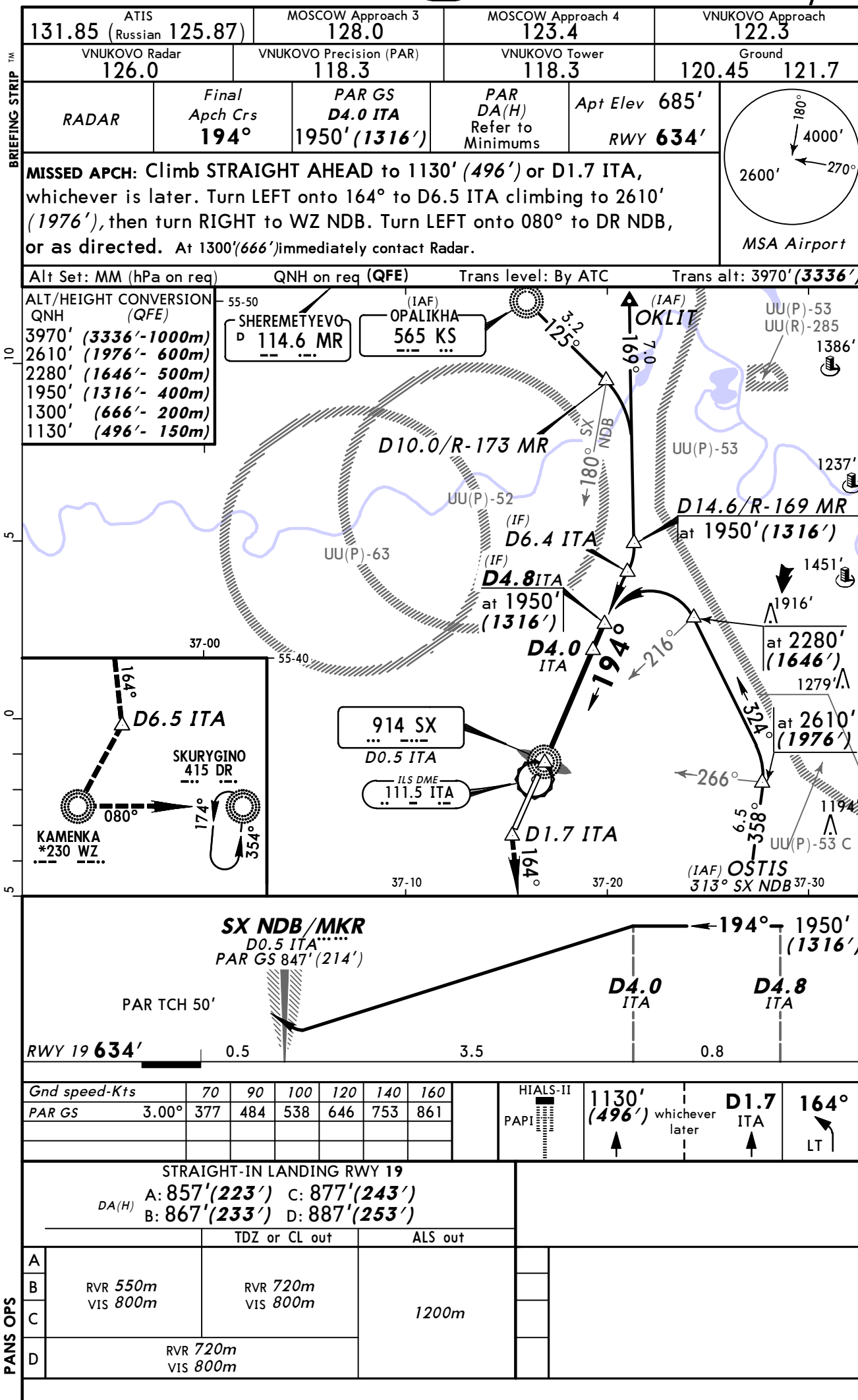
JEPPESSEN
6 APR 12 (12-1)

MOSCOW, RUSSIA
RNAV (GNSS) Rwy 01









TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport UUWW

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(10-9) VNUKOVO Delivery freq 131.25 changed to 131.12Mhz.

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(10-3F/3G, 10-3M/3N, 10-3S) Coordinates of WZ NDB to read N55 13.0 E036 59.9.

Chart Change Notices for Country RUS

Type: Gen Tmnl

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

The Russian CAA provided major changes for the AIRAC cycle effective 17 November 2011, including implementation of RVSM separation techniques and ICAO flight level system, airspace alignment and change of the existing coordinates standard to PZ-90.02. Also affected by the change are the countries of Afghanistan, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Turkmenistan, and Uzbekistan. We have also received late sources effective 17 November 2011. Please continue to refer to the notices published for the individual airports and our website. www.jepesen.com/eurasiachange.