

List of pages in this Trip Kit

Trip Kit Index

Airport Information For UUWW

Terminal Charts For UUWW

Revision Letter For Cycle 01-2016

Change Notices

Notebook

General Information

Location: MOSCOW RUS
ICAO/IATA: UUWW / VKO
Lat/Long: N55° 35.95', E037° 16.38'
Elevation: 686 ft

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

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

Sunrise: 0555 Z
Sunset: 1321 Z

Runway Information

Runway: 01
Length x Width: 10039 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 633 ft
Lighting: Edge, ALS, Centerline

Runway: 06
Length x Width: 11483 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 629 ft
Lighting: Edge, ALS, Centerline, TDZ

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: 11483 ft x 197 ft
Surface Type: asphalt
TDZ-Elev: 685 ft
Lighting: Edge, ALS, Centerline, TDZ

Communication Information

ATIS: 131.850
ATIS: 125.875 Non-English
Vnukovo Tower/Precision Tower: 118.300
Vnukovo Tower/Precision Tower: 119.450 Secondary
Vnukovo Vipport Tower: 122.875
Vnukovo Tower/Precision Tower: 124.400 Secondary
Vnukovo Tower/Precision Tower: 129.000 Secondary
Vnukovo Taxiing 1 Ground: 119.450 Secondary
Vnukovo Taxiing 1 Ground: 129.000 Secondary
Vnukovo Taxiing 1 Ground: 120.450
Vnukovo Taxiing 2 Ground: 121.700
Vnukovo Taxiing 1 Ground: 124.400 Secondary
Vnukovo Delivery Clearance Delivery: 131.800
Moscow Approach Approach: 119.450 Secondary
Moscow Approach Approach: 135.900
Moscow Approach Approach: 134.000
Moscow Approach Approach: 131.200
Moscow Approach Approach: 129.800
Vnukovo-Approach-1 Approach: 129.000 Secondary
Moscow Approach Approach: 128.000
Moscow Approach Approach: 127.200
Moscow Approach Approach: 125.300
Moscow Approach Approach: 124.400 Secondary
Moscow Approach Approach: 123.400
Moscow Approach Approach: 122.700
Vnukovo-Approach-1 Approach: 122.300
Vnukovo Radar: 129.000 Secondary
Vnukovo Radar: 126.000
Vnukovo Transit Operations: 131.875
Vnukovo Operations: 131.125
Vnukovo Radar: 124.400 Secondary
Vnukovo Radar: 119.450
Vnukovo Vipport Operations: 122.875

UUWW/VKO
VNUKOVO



27 FEB 15

10-1P

Eff 5 Mar

MOSCOW, RUSSIA

AIRPORT BRIEFING

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, but not 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 that comply with the requirements of ICAO Annex 16, Chapter 3.

1.2.3. PREFERENTIAL RWY SYSTEM

Between 2300-0700LT RWY 19 should not be used for landing in order of preference, and 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. LOW VISIBILITY PROCEDURES

1.3.1. GENERAL

- Preparation: RVR is less than 800m and further deterioration of visibility up to the value less than 550m is expected according to weather forecast.
- Implementation: RVR is less than 550m. Flight crews will be informed by ATC or ATIS when LVP are in progress: "Low visibility procedures in progress, check your minimum".
- Termination: RVR is not less than 550m and further improvement of weather is expected according to weather forecast.

Taxiing when visibility is less than 2000m shall be carried out with air navigation lights and landing lights switched on.

When visibility is less than 350m ACFT taxiing shall be carried out along TWY only with TWY centerline lights switched on or after Follow-me car.

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10-1P1

Eff 5 Mar

MOSCOW, RUSSIA
AIRPORT BRIEFING

1. GENERAL

1.3.2. ARRIVAL

Flight crew shall report RWY vacation to VNUKOVO Precision only after complete crossing of RWY holding position marking, painted on TWY or passing last yellow light of exit TWY centerline indicating boundary of ILS critical area.

ACFT must vacate ILS critical area as soon as possible.

After CAT IIIA in LVP conditions, the ACFT shall vacate the RWY along TWYs A1 thru A3, A5, A7 and A9 (RWY 06) or TWY A6, A8, RWY 01/19, A10, A11 and A13 (RWY 24). After reporting to VNUKOVO Precision about the vacation of ILS critical area, the flight crew shall change over to the communication with VNUKOVO Taxiing and shall continue proceeding along green TWY center line lights of TWY A1 thru A3, A5, A7, A9 and M1 thru M3 (RWY 06) or A6, A8, A10, A11, A13 and M1 thru M3 (RWY 24) under VNUKOVO Taxiing. Taxiing shall be carried out under VNUKOVO Taxiing after Follow-me car.

Flight crew shall report the presence of Follow-me car in front of the ACFT as following: "VNUKOVO Taxiing, TTF 9075, on Mike - 1, "Follow-me" vehicle in front of us".

Further ACFT taxiing shall be carried out under control of VNUKOVO Taxiing.

Flight crew shall report to VNUKOVO Taxiing about ACFT arrival at the stand as following: "TTF 9075, on stand 12".

1.3.3. DEPARTURE

When visibility is less than 350m, the flight crew of the departing ACFT shall carry out taxiing only along the TWYs equipped with green TWY centerline lights. In case of failure of TWY centerline lights or stop bar lights, when visibility is less than 350m, the flight crew must carry out taxiing after the Follow-me car only.

When visibility is less than 350m, ACFT taxiing along the apron area shall be carried out after the Follow-me car only under control of Taxiing.

During taxiing along the apron area and manoeuvring area the flight crew must constantly check the ACFT position especially in the places of TWY intersection to make sure that taxiing is carried out in the conditions of complete safety. In case of difficulty or doubt in determination of ACFT position, it is necessary to stop taxiing and report to Taxiing or Tower about it.

RWY-holding positions in front of RWY 01 on TWYs M1 and M2 and in front of RWY 06/24 on TWYs A1 thru A11 and A13 are marked by red stop bar lights.

When visibility is less than 350m, ACFT taxiing for take-off from RWY 06 or RWY 24 shall be carried out after the Follow-me car to the first TWY centerline light, [TWYs A4, M1 and M2 (RWY 06)], which is switched on. The flight crew shall continue taxiing along green lights by the instruction of Taxiing to stop bar lights on TWYs A10, A11 and A13 (RWY 06) or TWYs A1 thru A5 (RWY 24) and stop. The transfer of control from Taxiing to Tower shall be carried out at stop bar lights.

The transfer of control from Taxiing to Tower shall be carried out before the marking of RWY holding position.

It is prohibited to cross the RWY holding position line (ILS critical area) marked by stop bar lights and with DAY marking installed without the permission of Tower.

The flight crew should read back all instructions of Tower and Taxiing on holding near the RWY.

After receiving the clearance to occupy the line-up position the flight crew must start taxiing only after switching off of stop bar lights. It is prohibited to cross the stop bar lights when they are switched on.

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10-1P2

Eff 5 Mar

MOSCOW, RUSSIA
AIRPORT BRIEFING

1. GENERAL

1.4. TAXI PROCEDURES

Taxiing along TWYs B1, B3, B6, B8, M3 (from TWY A2 to A3) and M4 at reduced speed, strictly along taxi guideline with increased CAUTION.

Taxiing on segments where TWY centerline lights and marking sign of position and movement direction are absent or on TWY C9: At NIGHT or when VIS is less than 2000m with Follow-me car only.

Taxi route from TWY C8 along hangars 9 thru 14 and between stand 54 and hangar 15 MAX wingspan 118'/36m.

1.5. PARKING INFORMATION

Enter Vnukovo I stands 32 and 34A along TWY B2 only by towing.

Enter Vnukovo I stands 57 thru 61 and 64 by towing.

Exit Vnukovo I stands 1 thru 31A, 41A thru 41E and 52 thru 56A by towing.

Exit Vnukovo I stand 64 under engines power; to TWY B5 by towing.

Use Vnukovo I stands 32 thru 35A, 38 thru 41, 65 and 66 by towing.

Enter Vnukovo III stands 1 thru 5, 8 thru 10 and 74 thru 75C by towing.

Exit Vnukovo III stands 21 and 23 thru 27 by towing.

Stands 35, 42 and 43 available for helicopters.

1.6. 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

RWYs 06 and 24 approved for CAT II/III 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.

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10-1P3

Eff 5 Mar

MOSCOW, RUSSIA
AIRPORT BRIEFING

2. ARRIVAL

2.4. SPEED RESTRICTIONS

MAX 280 KT +/- 10 KT or Mach 0.8 whichever is less from cruising FL to FL 250;
MAX 270 KT +/- 10 KT below FL 250 to FL 100;
MAX 250 KT +/- 10 KT below FL 100 to TL.

Below transition level, IAS shall be as in accordance with the Aeroplane Flight Manual without exceeding IAS indicated in limitations section. The above mentioned IAS shall be maintained by the flight crew unless otherwise instructed by ATS unit or by the established approach procedure.

If unable to maintain the above mentioned IAS, the flight crew shall report it to ATS unit.

2.5. TAXIING PROCEDURES

2.5.1. STANDARD TAXI ROUTES

FOR RWY 01:

Route 7: TWY M4, TR W.

Route 8: TWY M4, TWY B5, TR Z.

Route 9: TWY M4, TWY B5, TR Z, TR X, TR W.

FOR RWY 06:

Route 1: TWY M3, TWY A5, TR Z, TWY B5, TWY M4, TR W.

Route 2: TWY M3, TWY A5, TR Z (TR X, TR W).

Route 3: TWY M3, TWY A2, TR W.

FOR RWY 19:

Route 10: TWY M1, TR X, TR Z, TWY B5, TWY M4, TR W.

Route 11: TWY M1, TR X (TR Z, TR W).

Route 12: TWY M1, TWY M3, TWY A2, TR W.

FOR RWY 24:

Route 4: TWY M2, crossing of RWY 01/19 by ATC permission, TWY M1, TR X, TR Z, TWY B5, TWY M4, TR W.

Route 5: TWY M2, crossing of RWY 01/19 by ATC permission, TWY M1, TR X (TR Z, TR W).

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27 FEB 15

10-1P4

Eff 5 Mar

MOSCOW, RUSSIA
AIRPORT BRIEFING

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

A pilot-in-command shall request the ATC clearance 5 minutes prior to engines start-up or ACFT towing to the start-up point by passing the following information to Delivery:

- flight number;
- the destination aerodrome;
- the ACFT stand number;
- ATIS information index.

Delivery can elaborate the ACFT type, registration number, apron, flight level and other necessary information.

When the ACFT is completely ready for departure, the pilot-in-command must report to Delivery:

- "COMPLETELY READY FOR DEPARTURE",

obtain the ATC clearance and the instruction to change over to communication with Taxiing 1.

Note: "COMPLETELY READY FOR DEPARTURE"

means that all formalities are observed, the preparation works are completed, all passengers are on board, the entrance and cargo doors of the ACFT are closed, the stairs are taken away (the aerobridge is disconnected and is in a retracted position), a tow bar is connected (when towing is required), the procedure of de-icing treatment is completed, ground personnel are ready for towing (taxiing) and have established radio contact with the pilot-in-command.

For ACFT on aprons of Vnukovo III sector:

Obtained ATC clearance is the permission to start up engines on the stand, to start up engines during towing, for towing and to start up engines at start-up point. Taxiing of ACFT shall be carried out only after getting clearance from Taxiing-1.

3.1.2. STANDARD TAXI ROUTES

FOR RWY 01:

Route 19: TR W, TWY M4, TWY B5, TR Z, TR X, TWY M1, TWY A7, crossing of RWY 06/24 by ATC permission, TWY A8, TWY B8.

Route 20: TR W (TR Z), TR X, TWY M1, TWY A7, crossing of RWY 06/24 by ATC permission, TWY A8, TWY B8.

Route 21: TR W, TWY A2, TWY M3, TWY A7, crossing of RWY 06/24 by ATC permission, TWY A8, TWY B8.

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27 FEB 15 (10-1P5)

Eff 5 Mar

MOSCOW, RUSSIA
AIRPORT BRIEFING

3. DEPARTURE

FOR RWY 06:

Route 13: TR W, TWY M4, TWY B5, TR Z, TR X, TWY M1, crossing of RWY 01/19 by ATC permission, TWY M2.

Route 14: TR W (TR Z), TR X, TWY M1, crossing of RWY 01/19 by ATC permission, TWY M2.

FOR RWY 19:

Route 22: TR W, TWY M4.

Route 23: TR W, TR X, TR Z, TWY B5, TWY M4.

FOR RWY 24:

Route 16: TR W, TWY M4, TWY B5, TR Z, TWY A3.

Route 17: TR Z, TWY A3.

Route 18: TR W, TWY A2.

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'(394').

Turns initiated between 1080'(394') and 1670'(984') shall be executed with a bank angle of 15°.

Turns initiated between 1670'(984') and 3640'(2954') shall be executed with a bank angle of 20°.

Turns initiated at or above 3640'(2954') shall be executed with 25° bank or with angular speed of turn of 3°/sec.

Noise Abatement Procedures NADP1 and NADP2

Two methods of noise abatement during climbing are used by the flight crews: NADP1 for RWYs 01 & 06 and NADP2 for RWYs 19 & 24 (ICAO Doc 8168, Volume 1).

3.3. RWY OPERATION

3.3.1. MINIMUM RWY OCCUPANCY TIME

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 have 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.

3.4. OTHER INFORMATION

3.4.1. TAKE-OFF FROM INTERSECTION

Flight crew must report chosen line-up position during communication with GND controller.

If the 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.

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10 OCT 14

(10-1R)

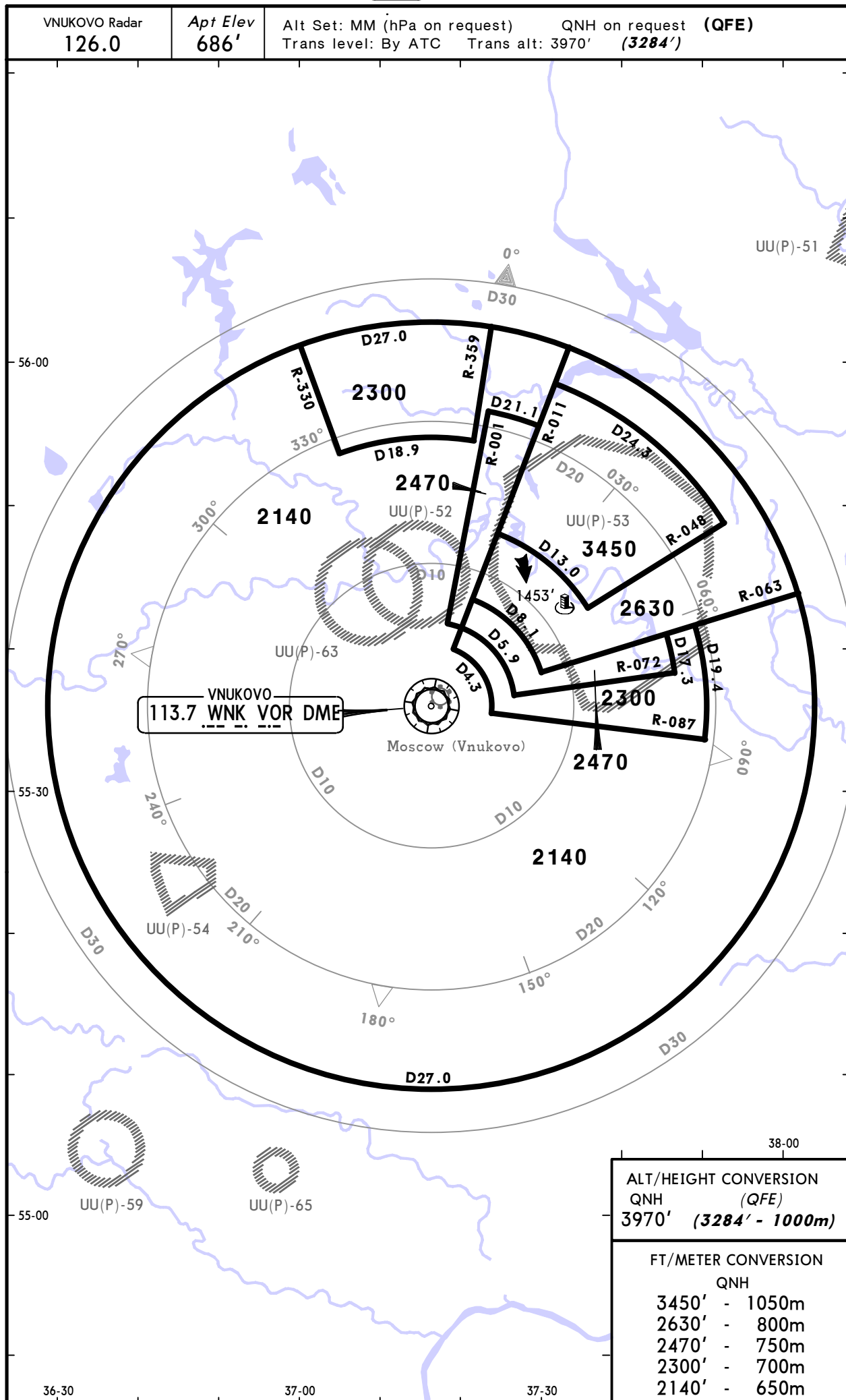
Eff 16 Oct RADAR MINIMUM ALTITUDES

VNUKOVO Radar
126.0

Apt Elev
686'

Alt Set: MM (hPa on request)
Trans level: By ATC

QNH on request (QFE)
Trans alt: 3970' (3284')



CHANGES: New chart.

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 **JEPPESEN**
21 JUN 13 **10-2** **Eff 27 Jun**

MOSCOW, RUSSIA
RNAV STAR

TRANSITION DESIGNATION	REFER TO CHART
BOGDANOVO 1W, 2W, 3W, NAMIN 1W, 2W, 3W, 4W	10-2B
LARIONOVO 1W, 2W	10-2C
RELTO 1W, 2W, TIKBI 1W, 2W	10-2D
OKTYABRSKIY 1W, 2W, SUKHOTINO 1W	10-2E
GAGARIN 1W, 2W, 3W, 4W, 5W, SODRU 1W, SUGIR 1W	10-2F

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RNAV STAR DESIGNATION	REFER TO CHART
BITSA 3R, KLIMOVSK 3R, SKURYGINO 3R, 5R, UMBEG 3R	10-2H
BITSA 2R, KLIMOVSK 2R, SKURYGINO 2R, 5R, UMBEG 2R	10-2J
BITSA 4R, KLIMOVSK 4R, SKURYGINO 4R, 5R, UMBEG 4R	10-2K
BITSA 1R, KLIMOVSK 1R, SKURYGINO 1R, 5R, UMBEG 1R	10-2L
ADAGA 4P, BITSA 4P, IVANOVSKOYE 4P, KLIMOVSK 4P, OKLIT 4P, SKURYGINO 4P	10-2M

FOR STAR DESIGNATION REFER TO PAGE 10-2A
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 **JEPPESEN**
21 JUN 13 **(10-2A)** **Eff 27 Jun**

MOSCOW, RUSSIA
STAR

STAR DESIGNATION	REFER TO CHART
BITSA Ø1A, Ø1M	10-2P
KLIMOVSK Ø1A, Ø1M	10-2Q
SKURYGINO Ø1A, Ø1M	10-2S
UMBEG Ø1B, Ø1K	10-2T
BITSA Ø6A, KLIMOVSK Ø6A, SKURYGINO Ø6A, UMBEG Ø6A, Ø6B	10-2U
BITSA Ø6B, KLIMOVSK Ø6B, SKURYGINO Ø6B	10-2V
BITSA 19B	10-2W
BITSA 19M, OKLIT 19K	10-2X
KLIMOVSK 19A, SKURYGINO 19A, UMBEG 19A	10-2X1
IVANOVSKOYE 19K, KLIMOVSK 19K, SKURYGINO 19K	10-2X2
BITSA 24B	10-2X3
KLIMOVSK 24A, SKURYGINO 24A, UMBEG 24A	10-2X4

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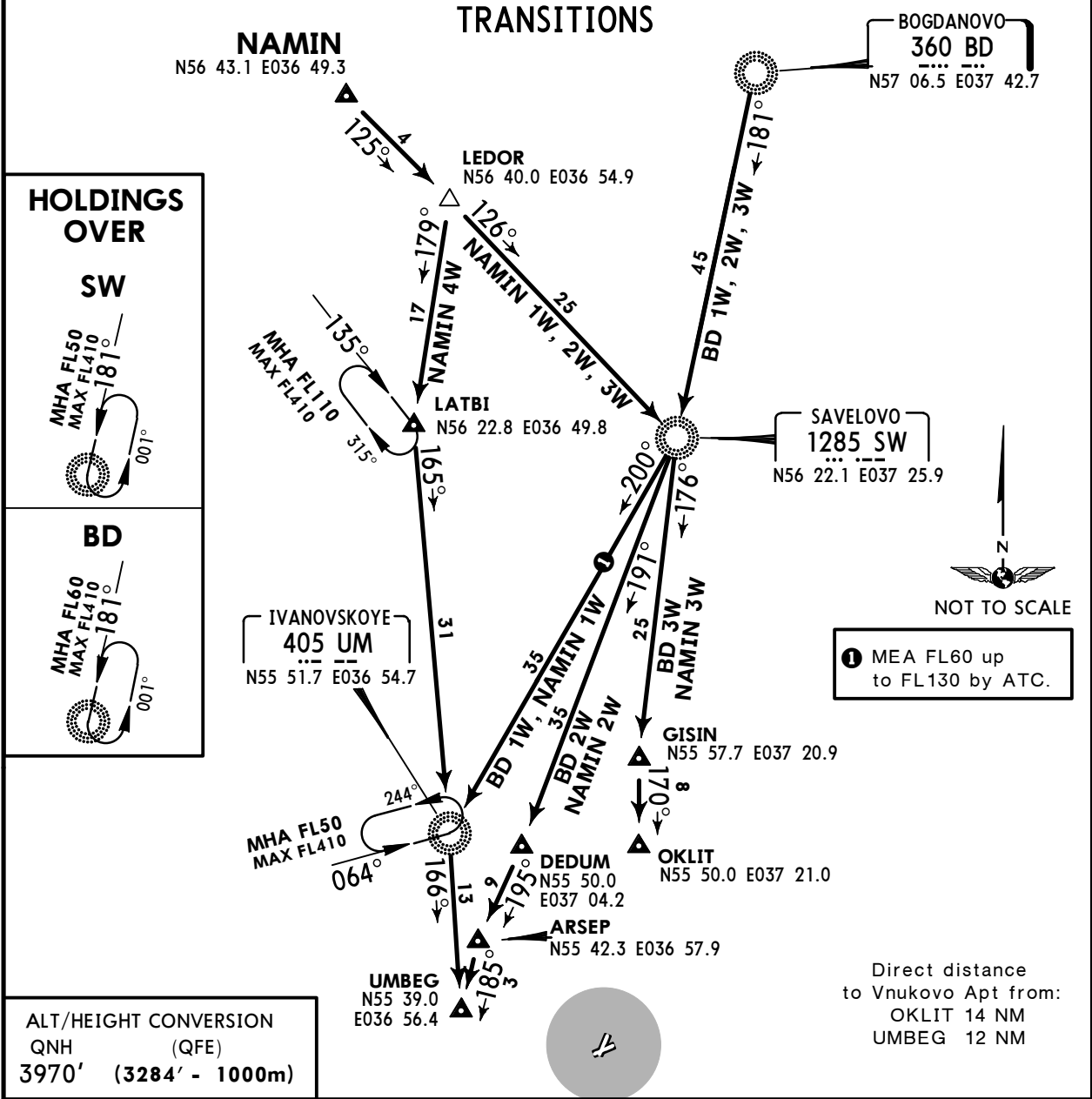
UUWW/VKO
VNUKOVO

1 MAY 15 10-2B

MOSCOW, RUSSIA
TRANSITION

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) Trans level: By ATC	QNH on request Trans alt: 3970' (3284')	(QFE)
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BOGDANOVO 1W (BD 1W), BOGDANOVO 2W (BD 2W)
NAMIN 1W [NAM1W] , NAMIN 2W [NAM2W]
NAMIN 4W [NAM4W]
TO UMBEG
BOGDANOVO 3W (BD 3W), NAMIN 3W [NAM3W]
TO OKLIT



TRANSITION	ROUTING
BD 1W	To SW, then to UM, then to UMBEG.
BD 2W By ATC	To SW, then to DEDUM, then to ARSEP, then to UMBEG.
BD 3W By ATC	To SW, then to GISIN, then to OKLIT.
NAMIN 1W	To LEDOR, then to SW, then to UM, then to UMBEG.
NAMIN 2W By ATC	To LEDOR, then to SW, then to DEDUM, then to ARSEP, then to UMBEG.
NAMIN 3W By ATC	To LEDOR, then to SW, then to GISIN, then to OKLIT.
NAMIN 4W By ATC	To LEDOR, then to LATBI, then to UM, then to UMBEG.

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1 MAY 15 10-2D

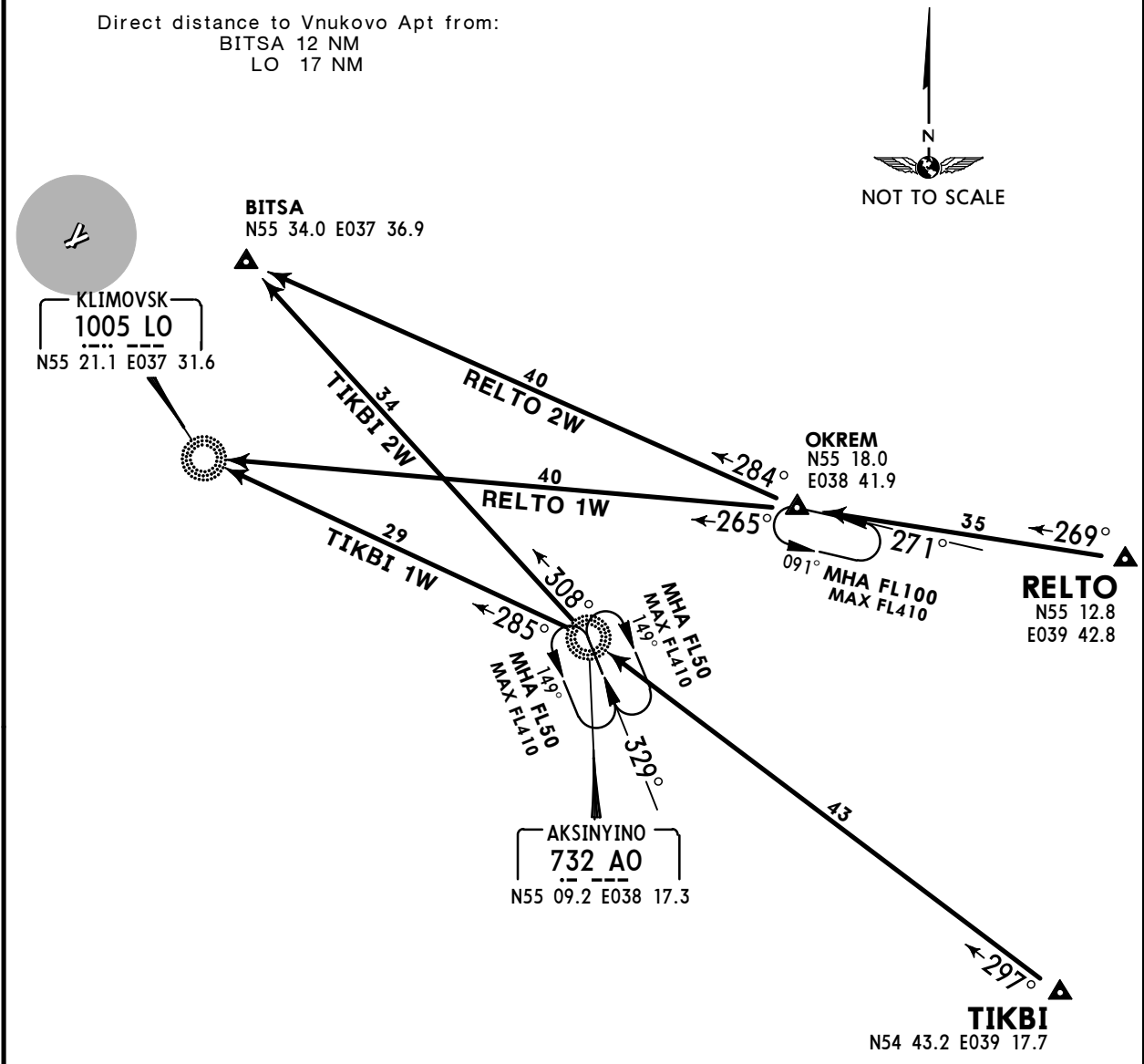
MOSCOW, RUSSIA
TRANSITION

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) Trans level: By ATC	QNH on request Trans alt: 3970' (3284')	(QFE)
---------------------------------	------------------	---	--	-------

RELTO 1W [REL1W], TIKBI 1W [TIK1W]
TO LO

RELTO 2W [REL2W], TIKBI 2W [TIK2W]
TO BITSA

TRANSITIONS
BY ATC



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3284' - 1000m)

TRANSITION	ROUTING
RELTO 1W	To OKREM, then to LO.
RELTO 2W	To OKREM, then to BITSA.
TIKBI 1W	To AO, then to LO.
TIKBI 2W	To AO, then to BITSA.

UUWW/VKO
VNUKOVO

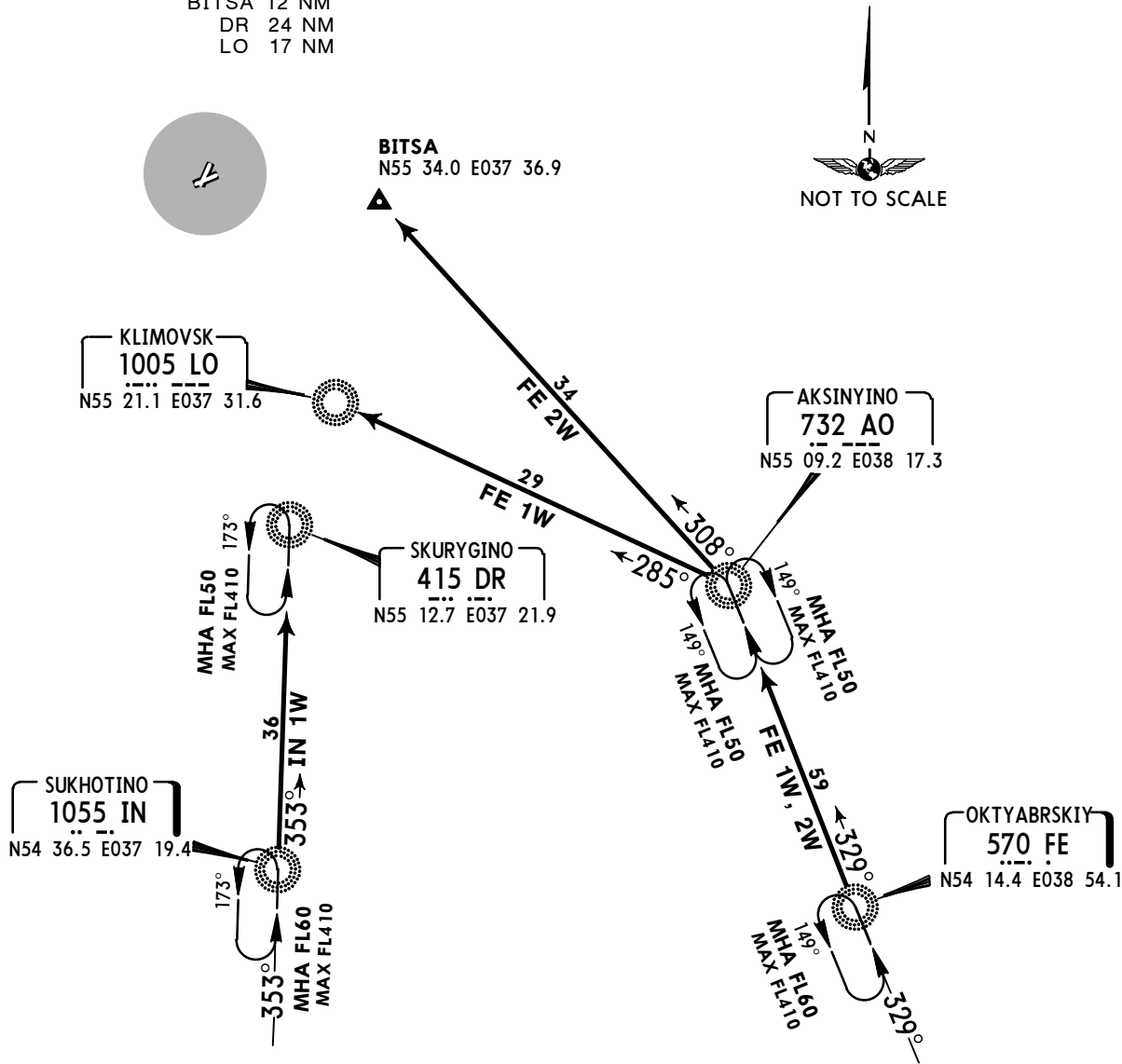
JEPPESEN
1 MAY 15 10-2E

MOSCOW, RUSSIA
TRANSITION

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3284')
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OKTYABRSKIY 1W (FE 1W)
TO LO
OKTYABRSKIY 2W (FE 2W)
TO BITSA
SUKHOTINO 1W (IN 1W)
TO DR
TRANSITIONS

Direct distance to Vnukovo Apt from:
BITSA 12 NM
DR 24 NM
LO 17 NM



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3284' - 1000m)

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

UUWW/VKO
VNUKOVO

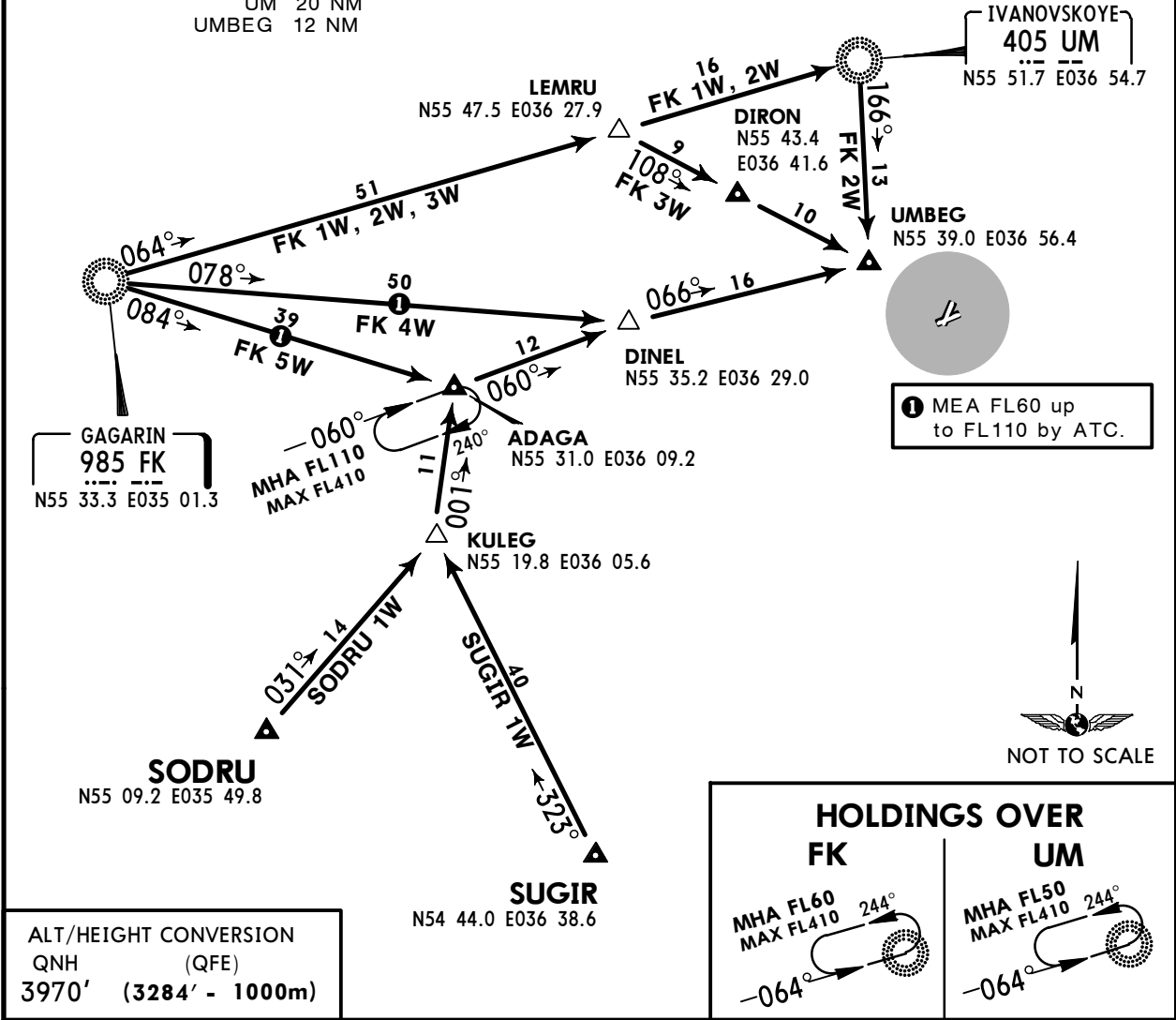
JEPPESEN
1 MAY 15 10-2F

MOSCOW, RUSSIA
TRANSITION

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3284')
---------------------------------	------------------	---

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] , SUGIR 1W [SUG1W]
TO UMBEG
TRANSITIONS

Direct distance to Vnukovo Apt from:
UM 20 NM
UMBEG 12 NM



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3284' - 1000m)

HOLDINGS OVER FK	HOLDINGS OVER UM
MHA FL60 MAX FL410 244° -064°	MHA FL50 MAX FL410 244° -064°

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

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VNUKOVO
JEPPESSEN
MOSCOW, RUSSIA

9 OCT 15

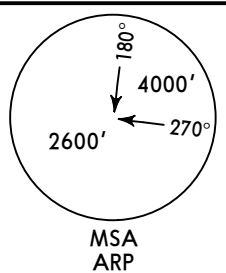
(10-2H)

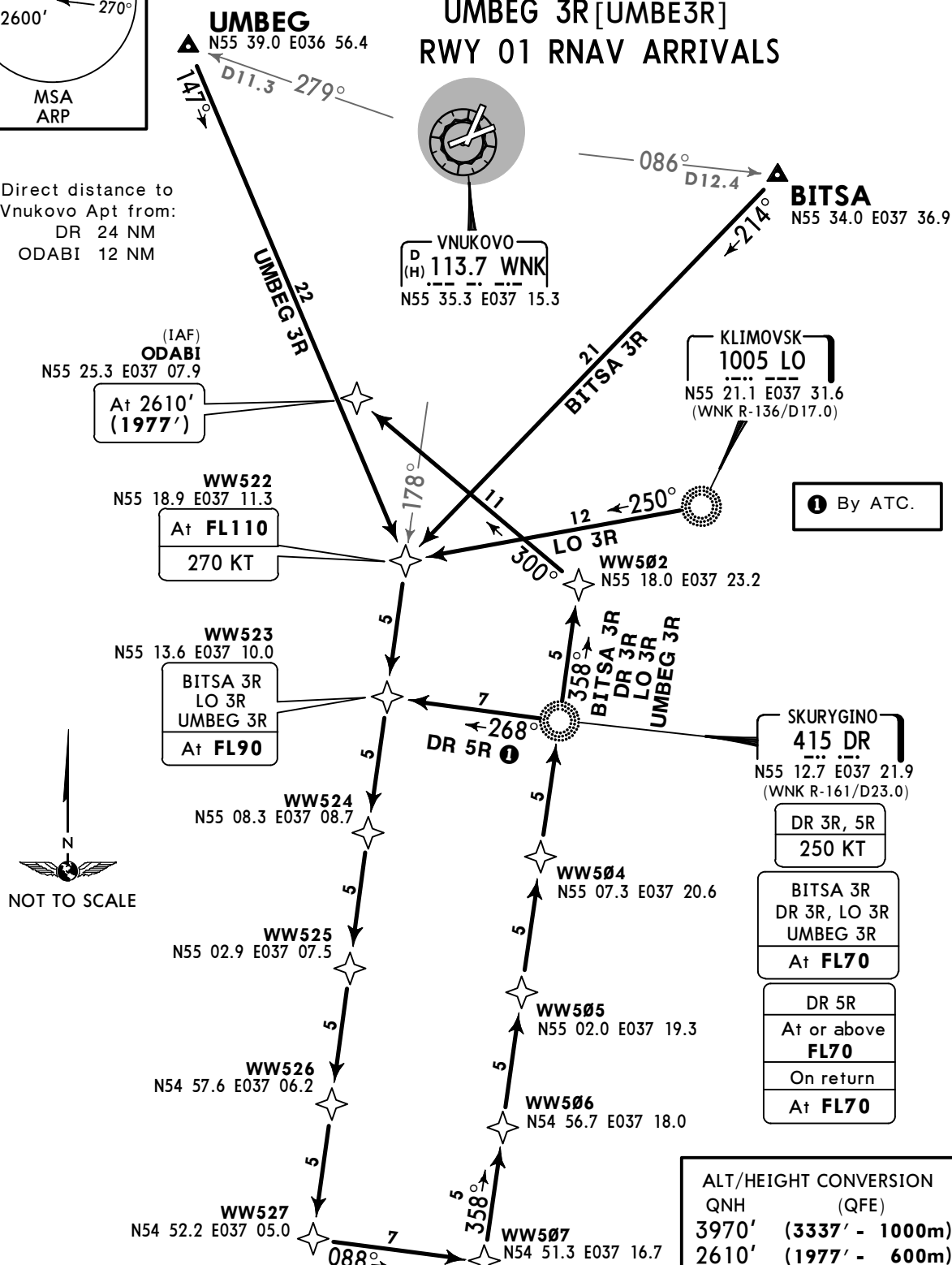
Eff 15 Oct

RNAV STAR

ATIS
131.85 (Russian 125.87)

Apt Elev
686'

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

Direct distance to
Vnukovo Apt from:
DR 24 NM
ODABI 12 NM

BITSA 3R [BITS3R] , KLIMOVSK 3R (LO 3R)
SKURYGINO 3R (DR 3R), SKURYGINO 5R (DR 5R) ①
UMBEG 3R [UMBE3R]
RWY 01 RNAV ARRIVALS


STAR	ROUTING
BITSA 3R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2610').
DR 3R	DR (FL70; K250) - WW502 - ODABI (2610').
DR 5R ①	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 3R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2610').
UMBEG 3R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2610').

CHANGES: IAS at DR and WW522 revised.

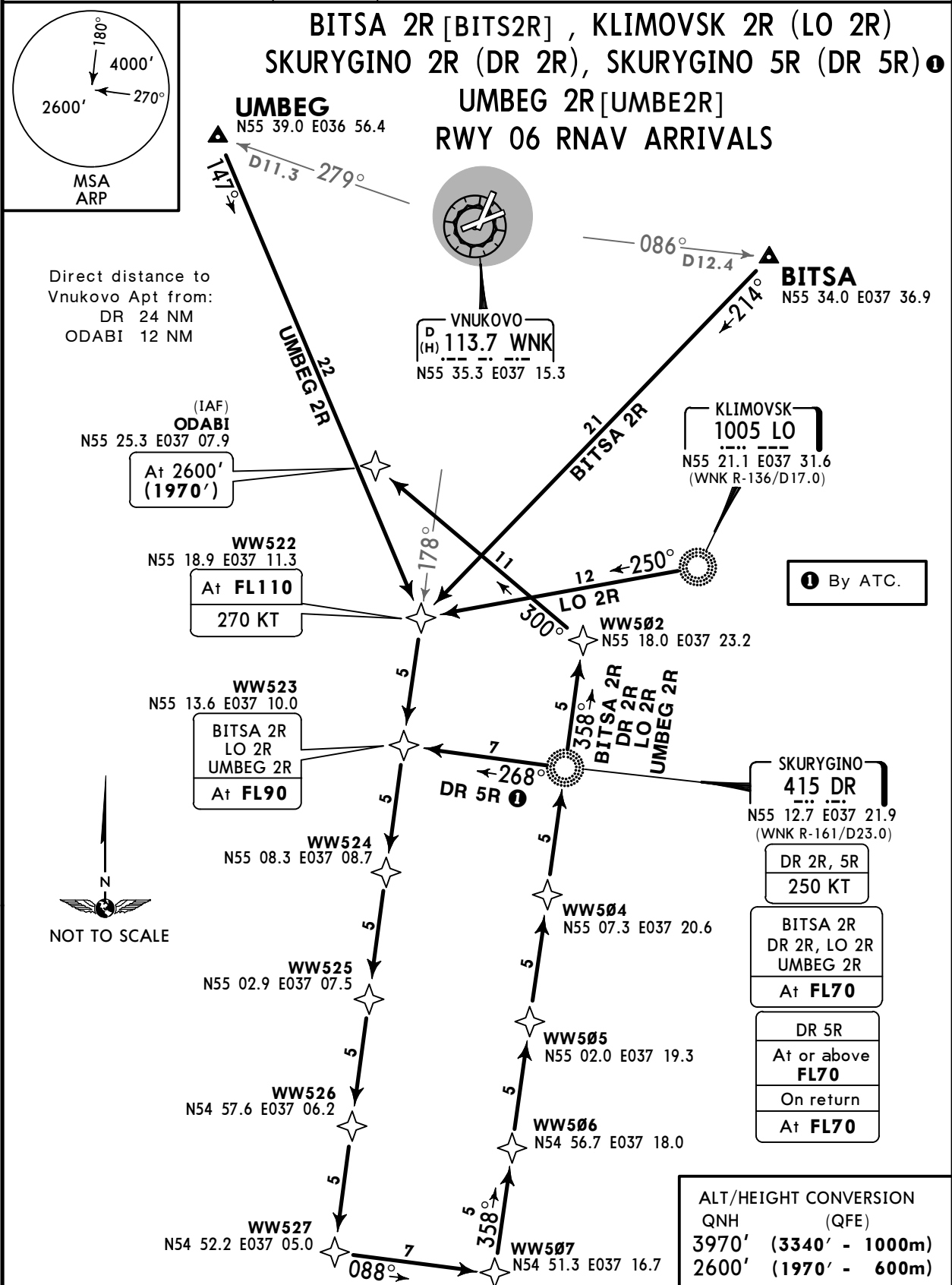
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UUWW/VKO
VNUKOVO

JEPPESSEN
9 OCT 15 10-2J Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3340') RNAV (GNSS)
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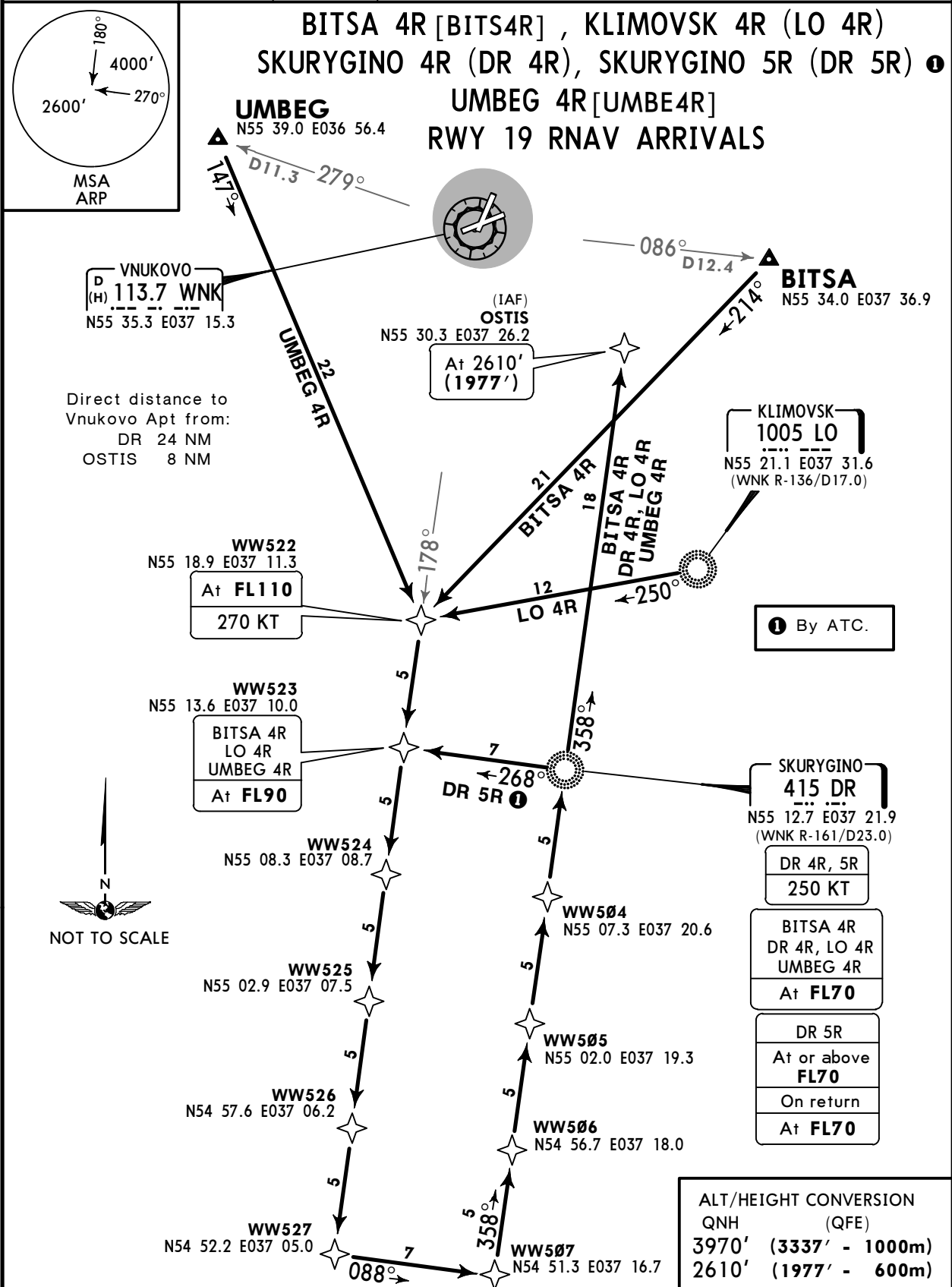
STAR	ROUTING
BITSA 2R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2600').
DR 2R	DR (FL70; K250) - WW502 - ODABI (2600').
DR 5R ①	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 2R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2600').
UMBEG 2R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - WW502 - ODABI (2600').

UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 10-2K Eff 15 Oct

MOSCOW, RUSSIA
RNAV STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3337') RNAV (GNSS)
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STAR	ROUTING
BITSA 4R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2610').
DR 4R	DR (FL70; K250) - OSTIS (2610').
DR 5R ①	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 4R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2610').
UMBEG 4R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2610').

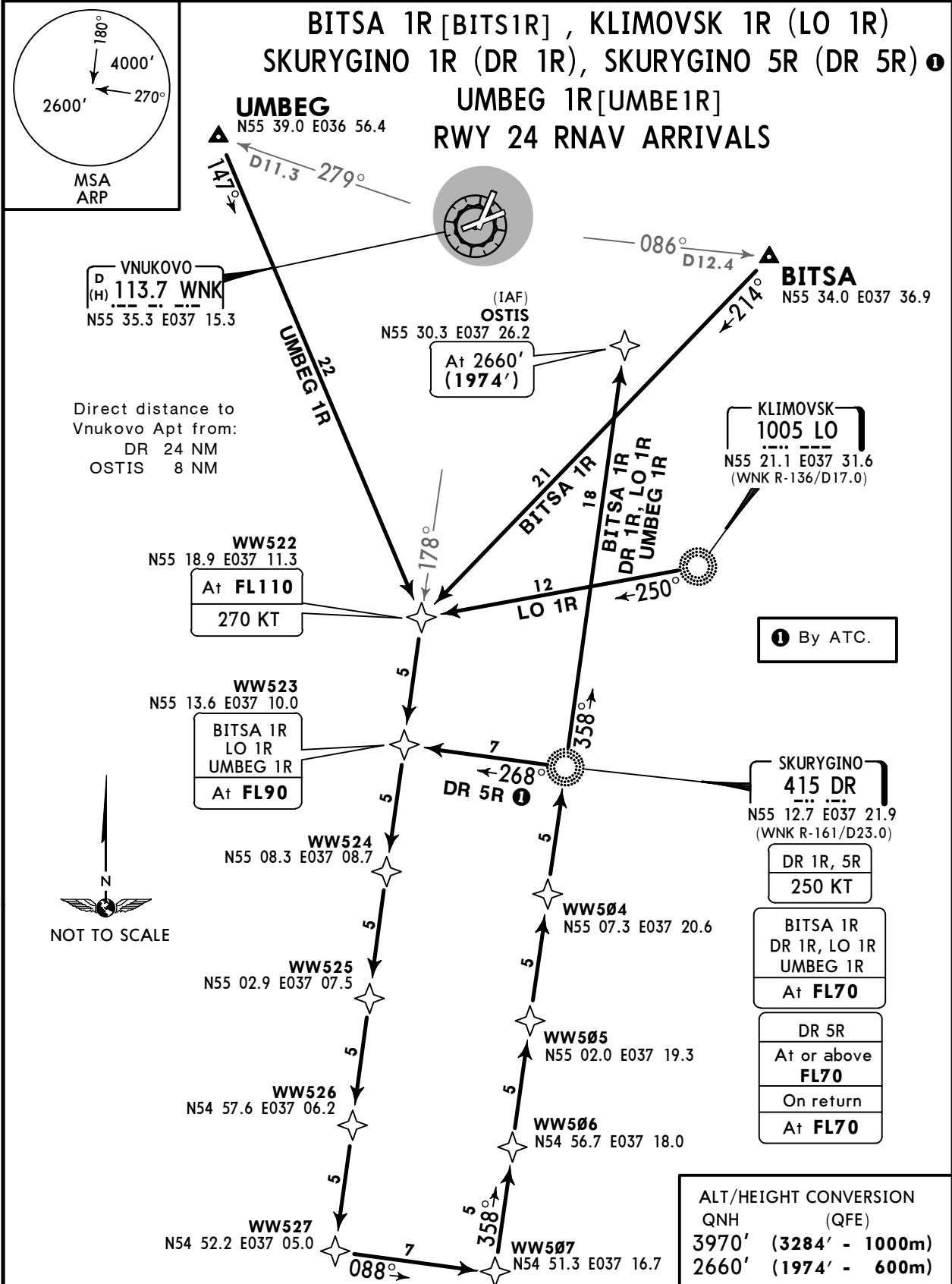
UUWW/VKO
VNUKOVO

9 OCT 15 10-2L Eff 15 Oct

MOSCOW, RUSSIA

RNAV STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3284') RNAV (GNSS)
---------------------------------	------------------	--



STAR	ROUTING
BITSA 1R	BITSA - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2660').
DR 1R	DR (FL70; K250) - OSTIS (2660').
DR 5R ①	DR (FL70+; K250) - WW523 - WW527 - WW507 - DR (FL70).
LO 1R	LO - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2660').
UMBEG 1R	UMBEG - WW522 (FL110; K270) - WW523 (FL90) - WW527 - WW507 - DR (FL70) - OSTIS (2660').

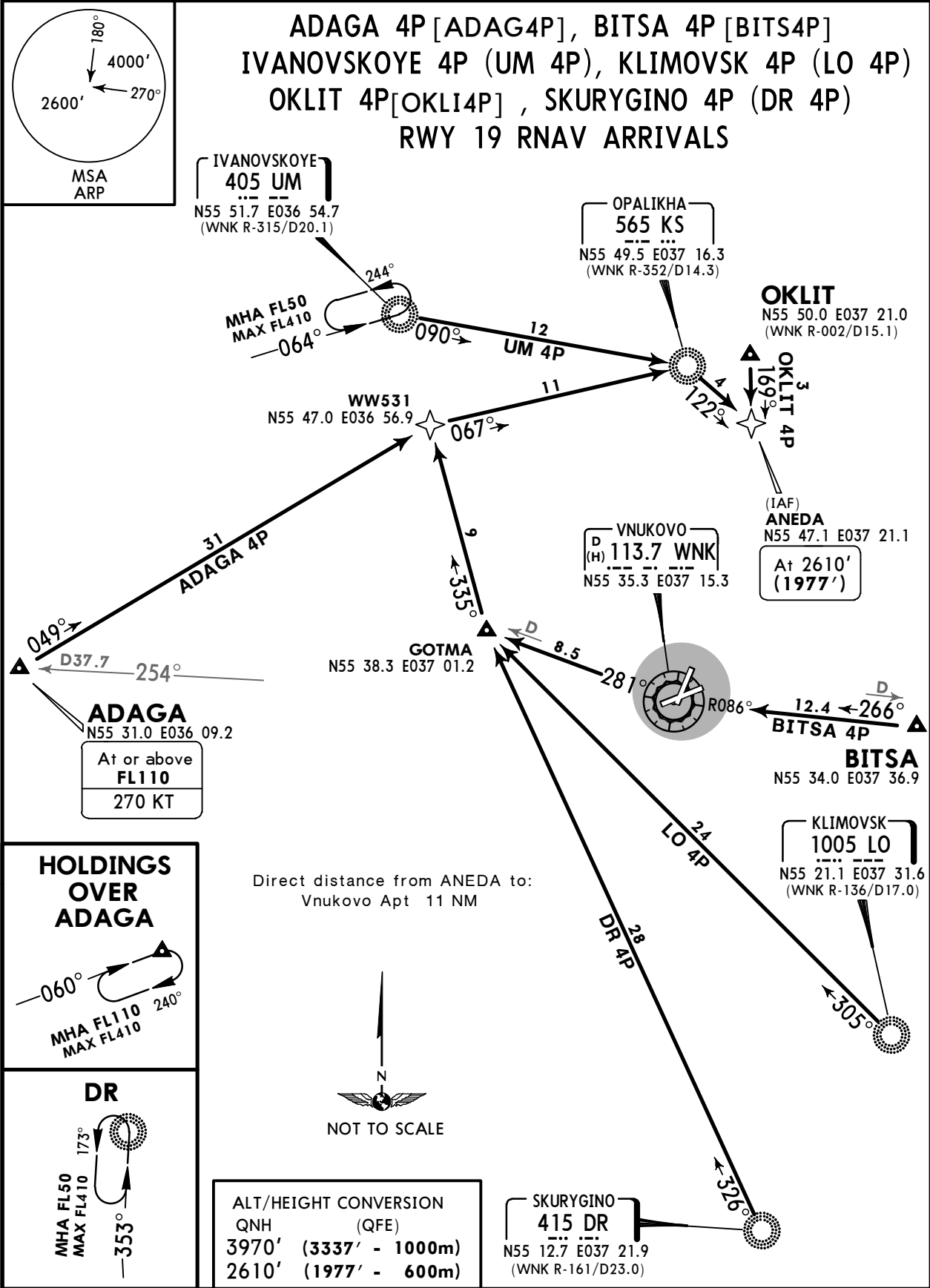
UUWW/VKO
VNUKOVO

JEPPESEN
9 OCT 15 10-2M Eff 15 Oct

MOSCOW, RUSSIA

RNAV STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3337') RNAV (GNSS)
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STAR	ROUTING
ADAGA 4P	ADAGA (FL110+; K270) - WW531 - KS - ANEDA (2610').
BITSA 4P	BITSA - WNK - GOTMA - WW531 - KS - ANEDA (2610').
DR 4P	DR - GOTMA - WW531 - KS - ANEDA (2610').
LO 4P	LO - GOTMA - WW531 - KS - ANEDA (2610').
OKLIT 4P	OKLIT - ANEDA (2610').
UM 4P	UM - KS - ANEDA (2610').

UUWW/VKO
VNUKOVO

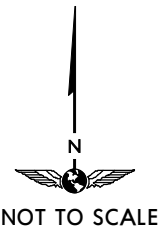
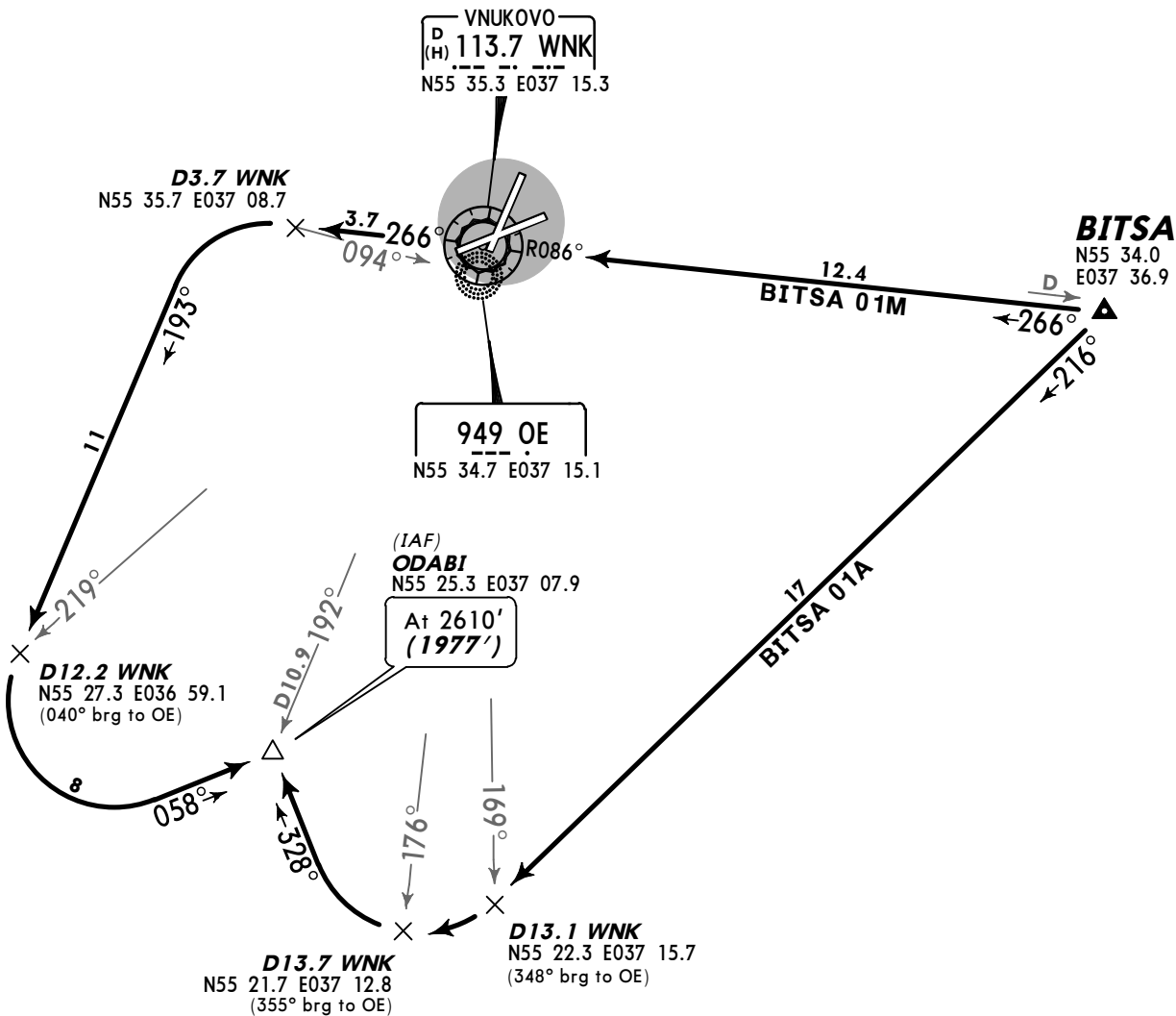
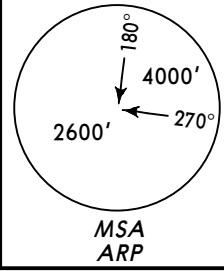
JEPPESEN
21 JUN 13 10-2P Eff 27 Jun

MOSCOW, RUSSIA

STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3337')	(QFE)
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BITSA 01A [BIT01A]
BITSA 01M [BIT01M]
RWY 01 ARRIVALS



NOT TO SCALE

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

UUWW/VKO
VNUKOVO

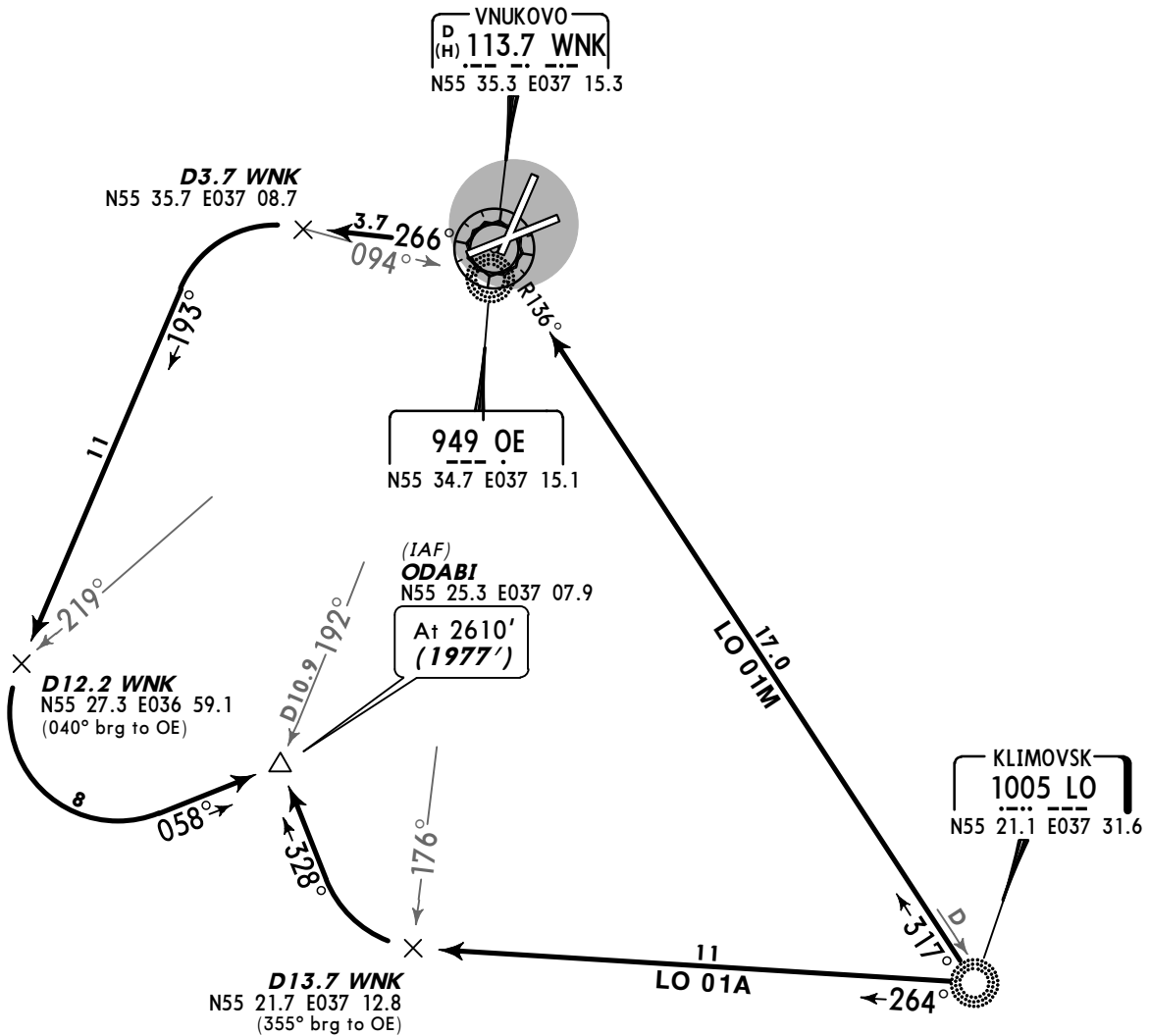
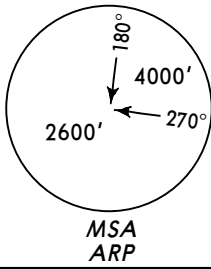
21 JUN 13 10-2Q Eff 27 Jun

MOSCOW, RUSSIA

STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3337')	(QFE)
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KLIMOVSK 01A (LO 01A)
KLIMOVSK 01M (LO 01M)
RWY 01 ARRIVALS

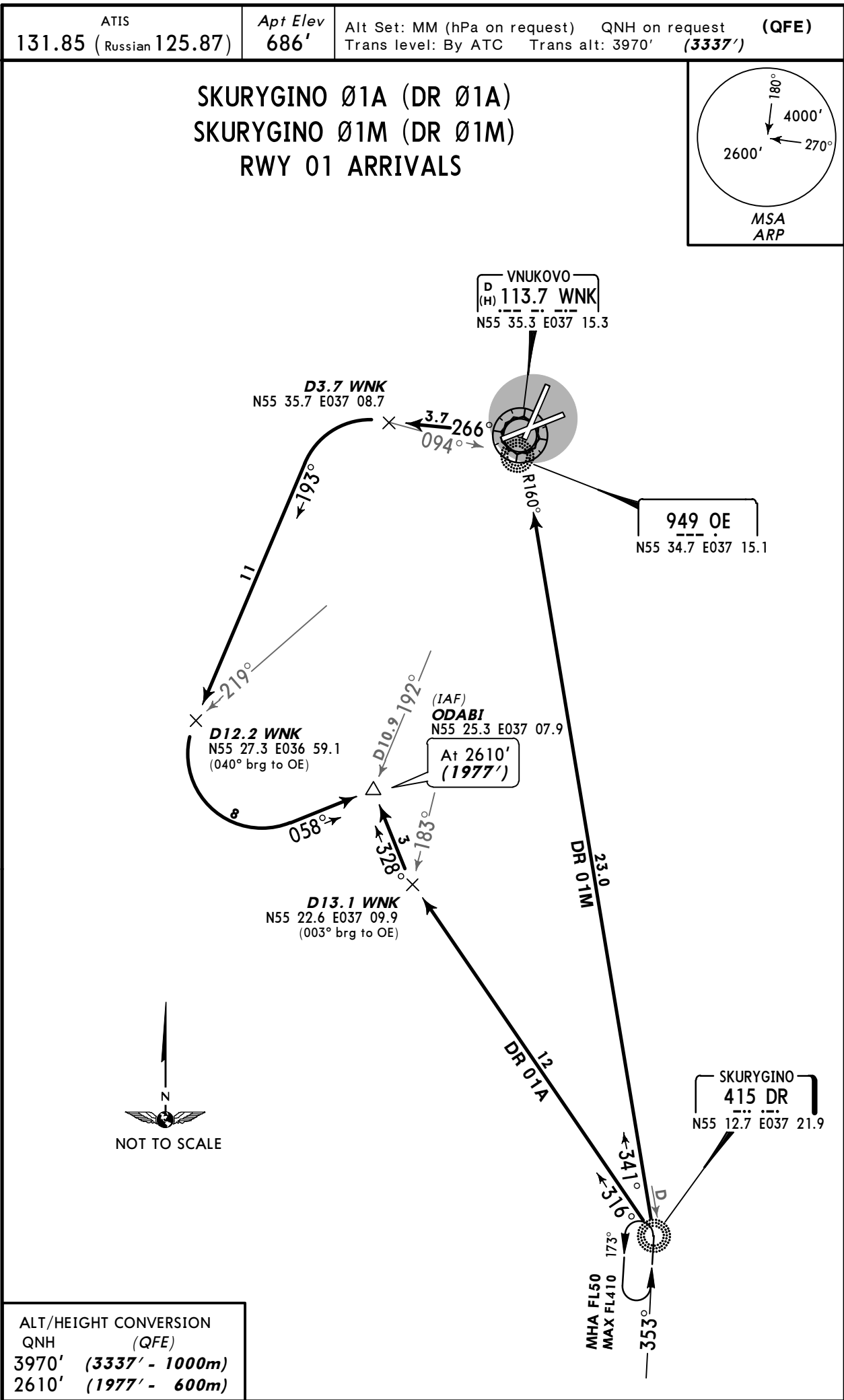


ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-2S Eff 27 Jun

MOSCOW, RUSSIA
STAR



UUWW/VKO
VNUKOVO

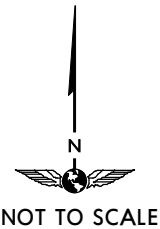
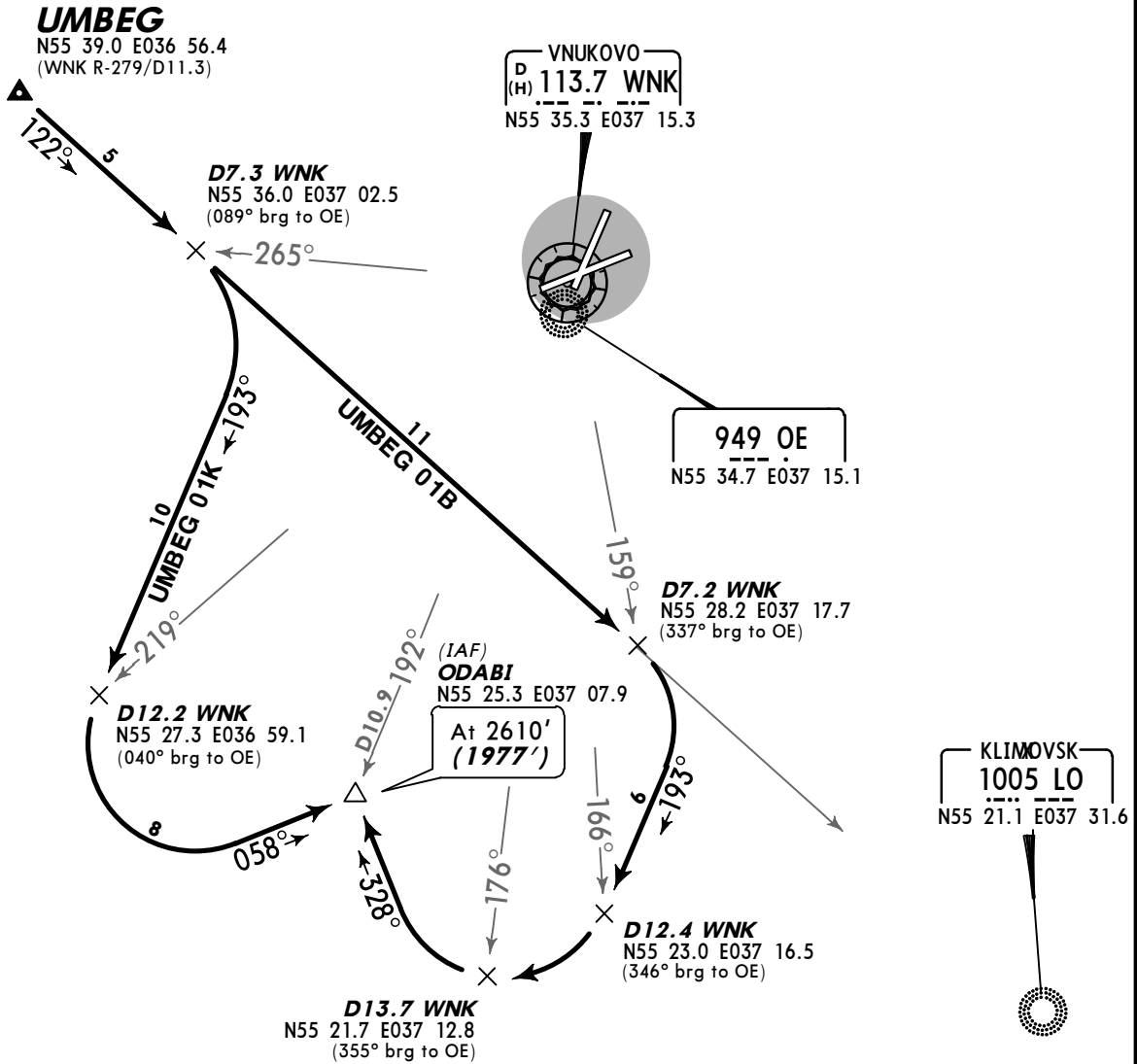
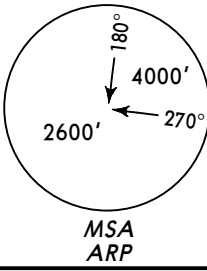
JEPPESSEN
21 JUN 13 10-2T Eff 27 Jun

MOSCOW, RUSSIA

STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) Trans level: By ATC	QNH on request Trans alt: 3970' (3337')	(QFE)
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UMBEG Ø1B [UMBØ1B]
UMBEG Ø1K [UMBØ1K]
RWY 01 ARRIVALS

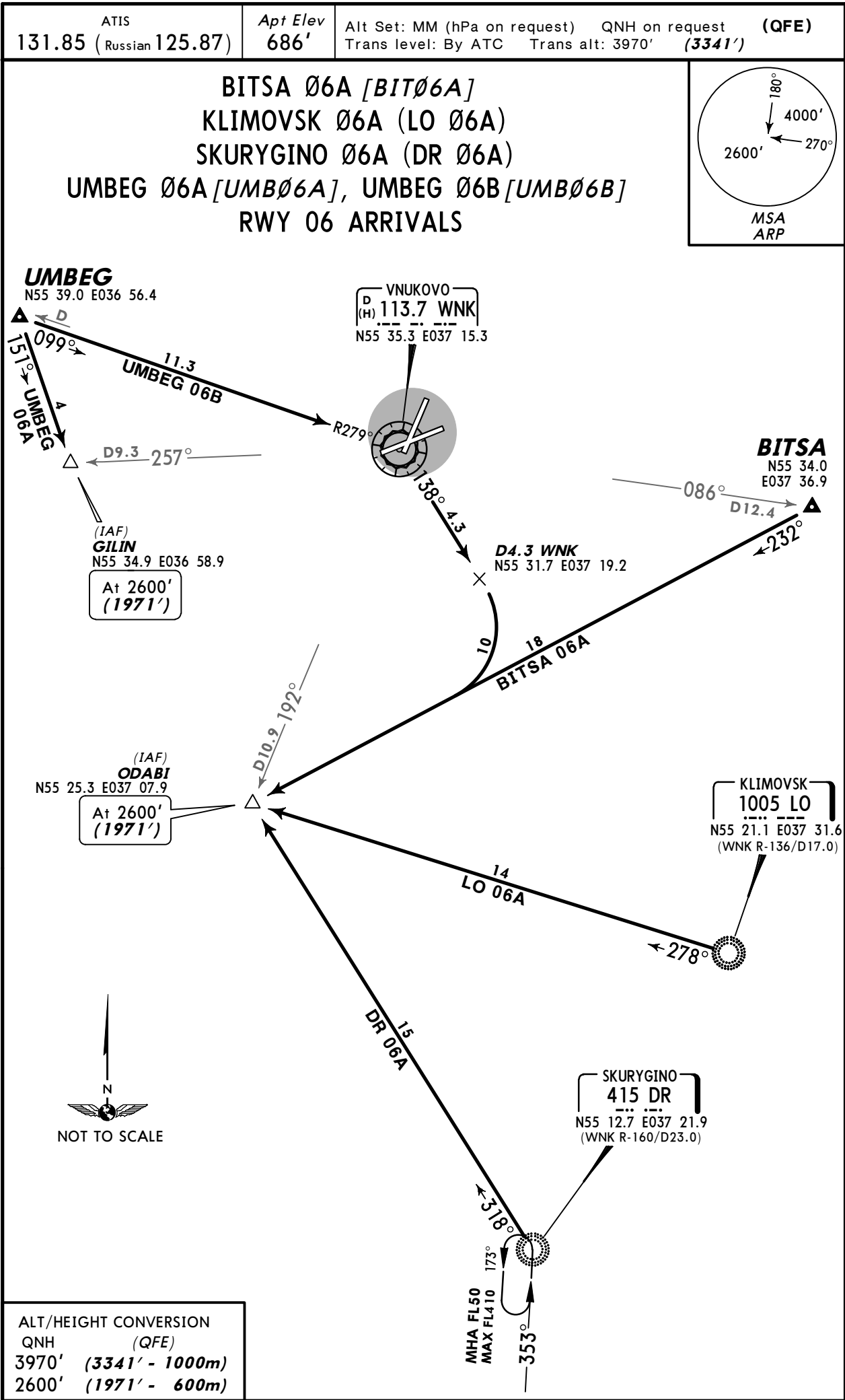


ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)

UUWW/VKO
VNUKOVO

JEPPESSEN
21 JUN 13 10-2U Eff 27 Jun

MOSCOW, RUSSIA
STAR



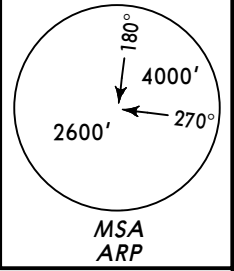
UUWW/VKO
VNUKOVO

JEPPESSEN
21 JUN 13 10-2V Eff 27 Jun

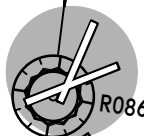
MOSCOW, RUSSIA
STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3341')	(QFE)
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BITSA 06B [BIT06B]
KLIMOVSK 06B (LO 06B)
SKURYGINO 06B (DR 06B)
RWY 06 ARRIVALS



(IAF)
VNUKOVO
D 113.7 WNK
(H) 113.7 WNK
N55 35.3 E037 15.3

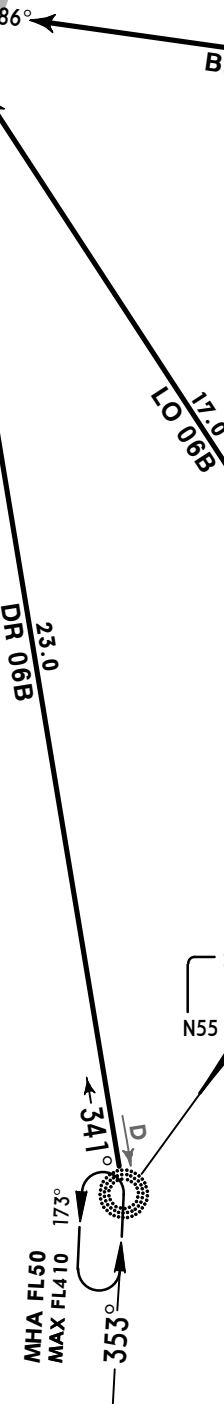


BITSA
N55 34.0 E037 36.9
BITSA 06B
12.4
266°

KLIMOVSK
1005 LO
N55 21.1 E037 31.6



SKURYGINO
415 DR
N55 12.7 E037 21.9



MHA FL50
MAX FL410
173°
353°



NOT TO SCALE

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3341' - 1000m)

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UUWW/VKO
VNUKOVO

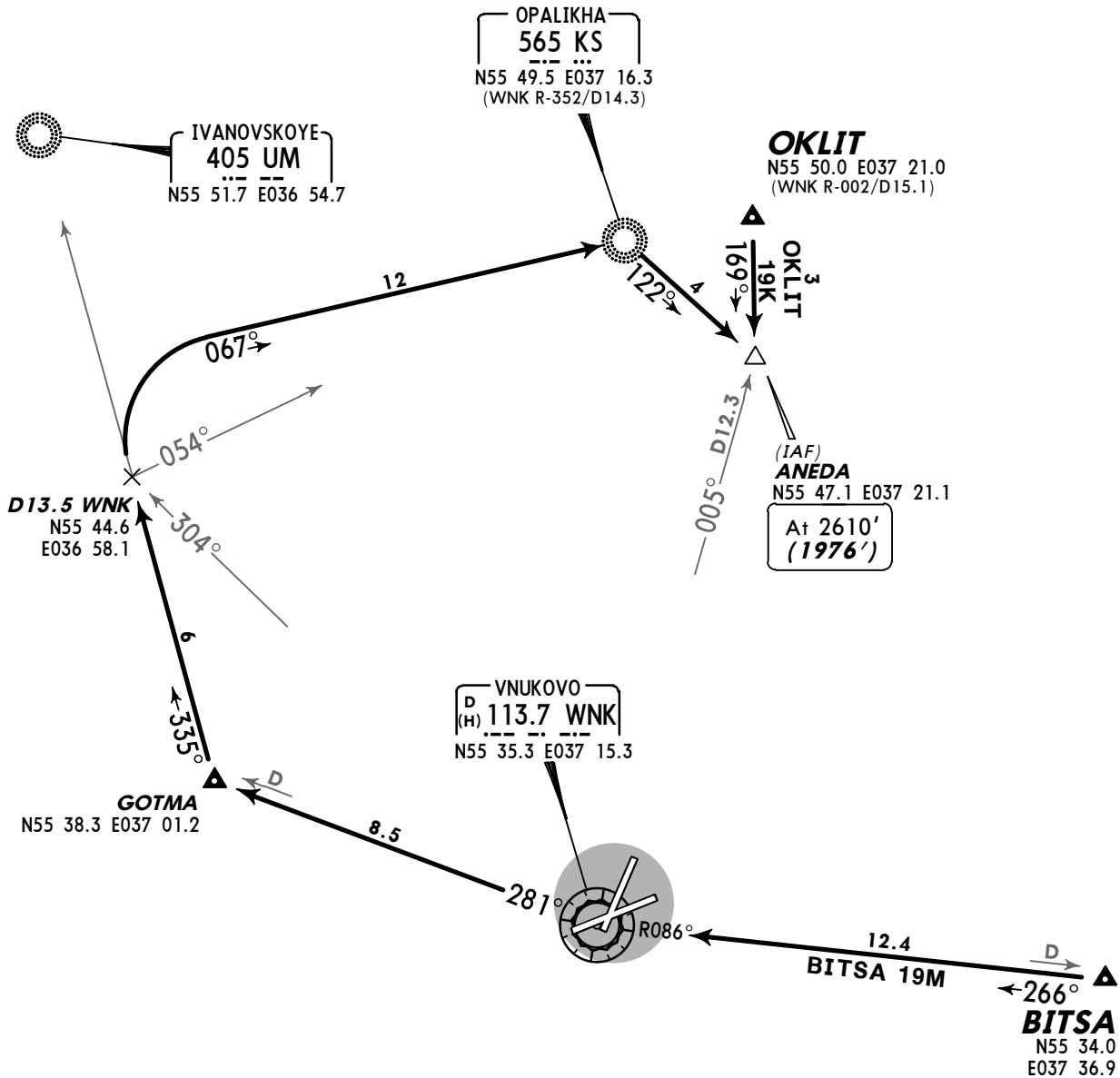
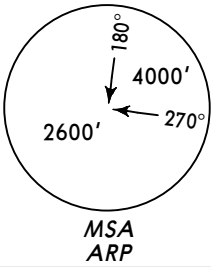
21 JUN 13 **10-2X** Eff 27 Jun

MOSCOW, RUSSIA

STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3336')	(QFE)
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BITSA 19M [BIT19M]
OKLIT 19K [OKL19K]
RWY 19 ARRIVALS

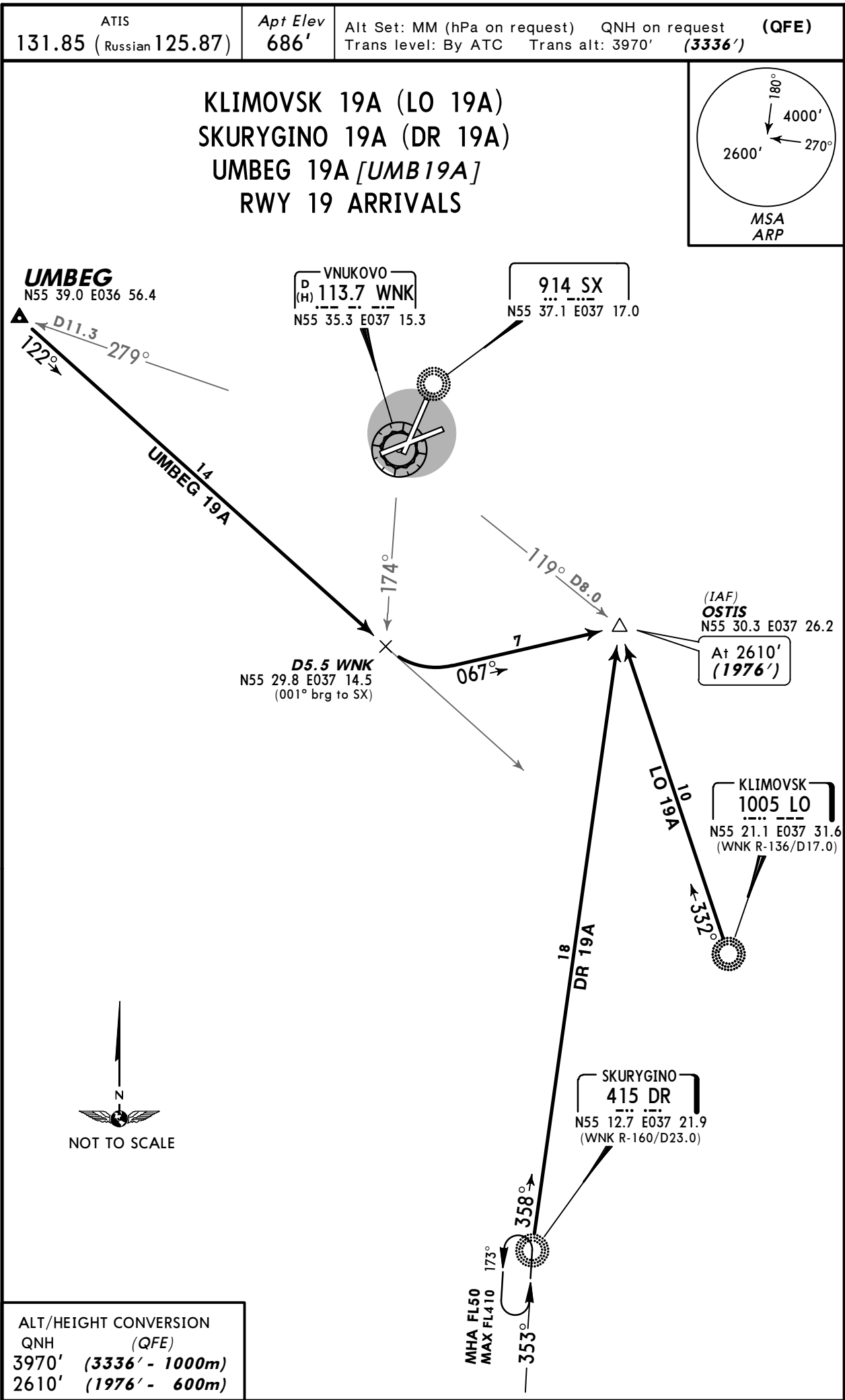


ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3336' - 1000m)
2610' (1976' - 600m)

UUWW/VKO
VNUKOVO

JEPPESSEN
21 JUN 13 (10-2X1) Eff 27 Jun

MOSCOW, RUSSIA
STAR

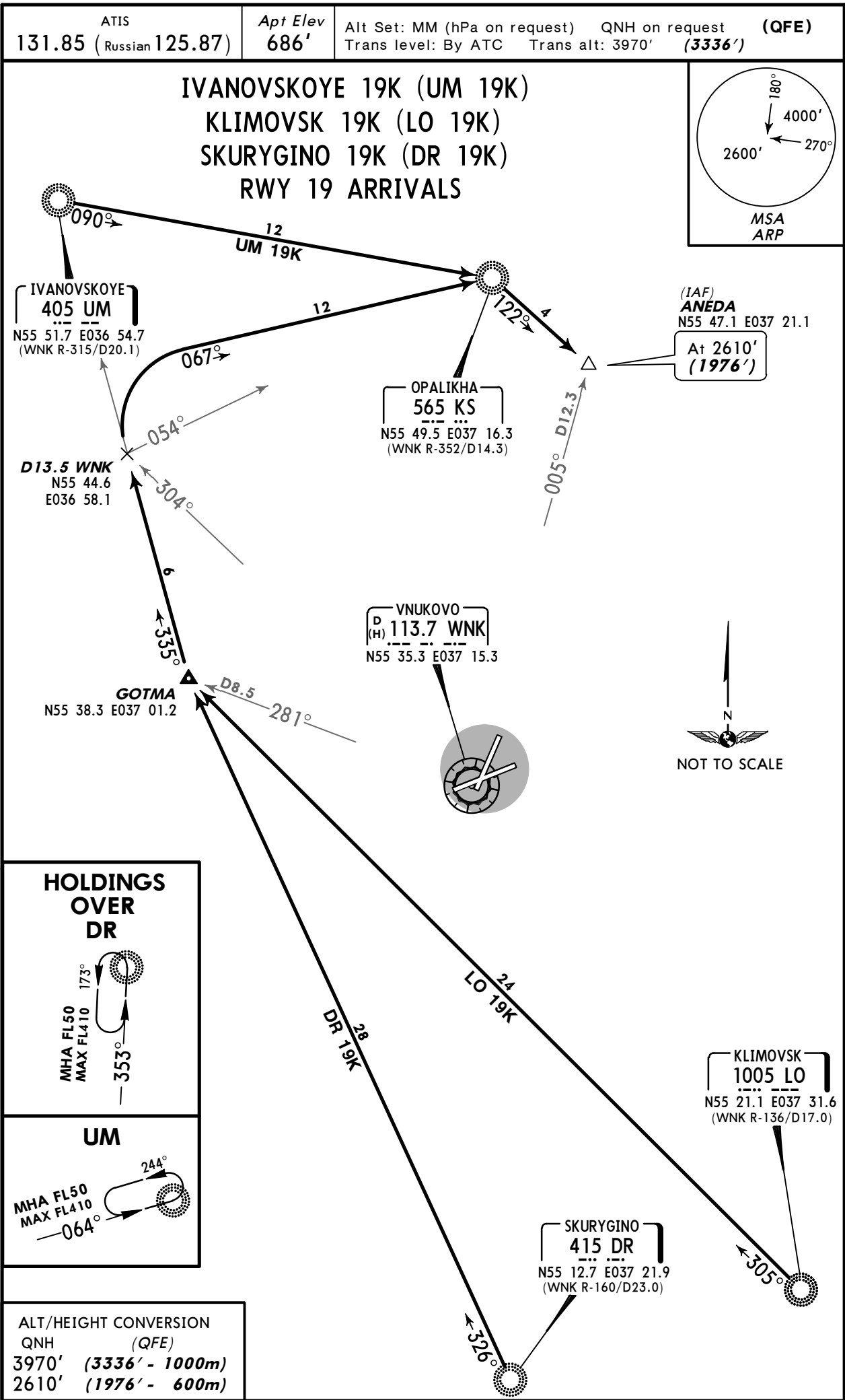


UUWW/VKO
VNUKOVO

21 JUN 13 10-2X2 Eff 27 Jun

MOSCOW, RUSSIA

STAR



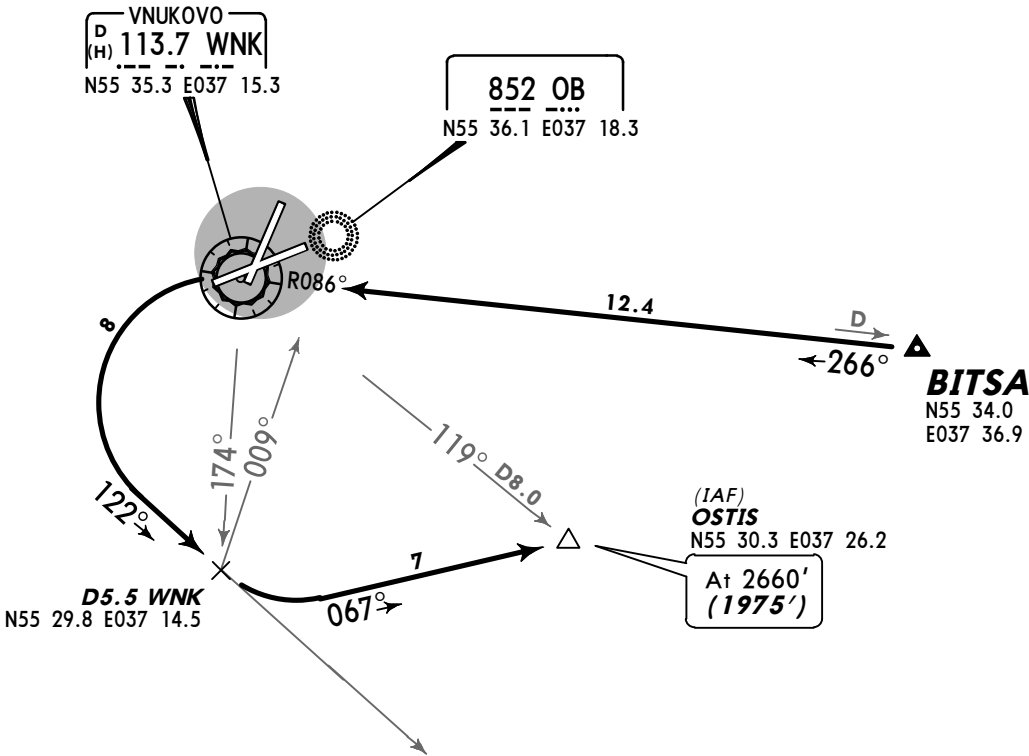
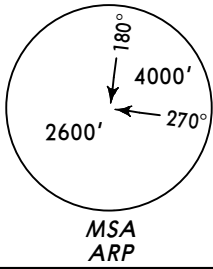
UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 (10-2X3) Eff 27 Jun

MOSCOW, RUSSIA
STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 686'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3285')	(QFE)
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BITSA 24B [BIT24B]
RWY 24 ARRIVAL



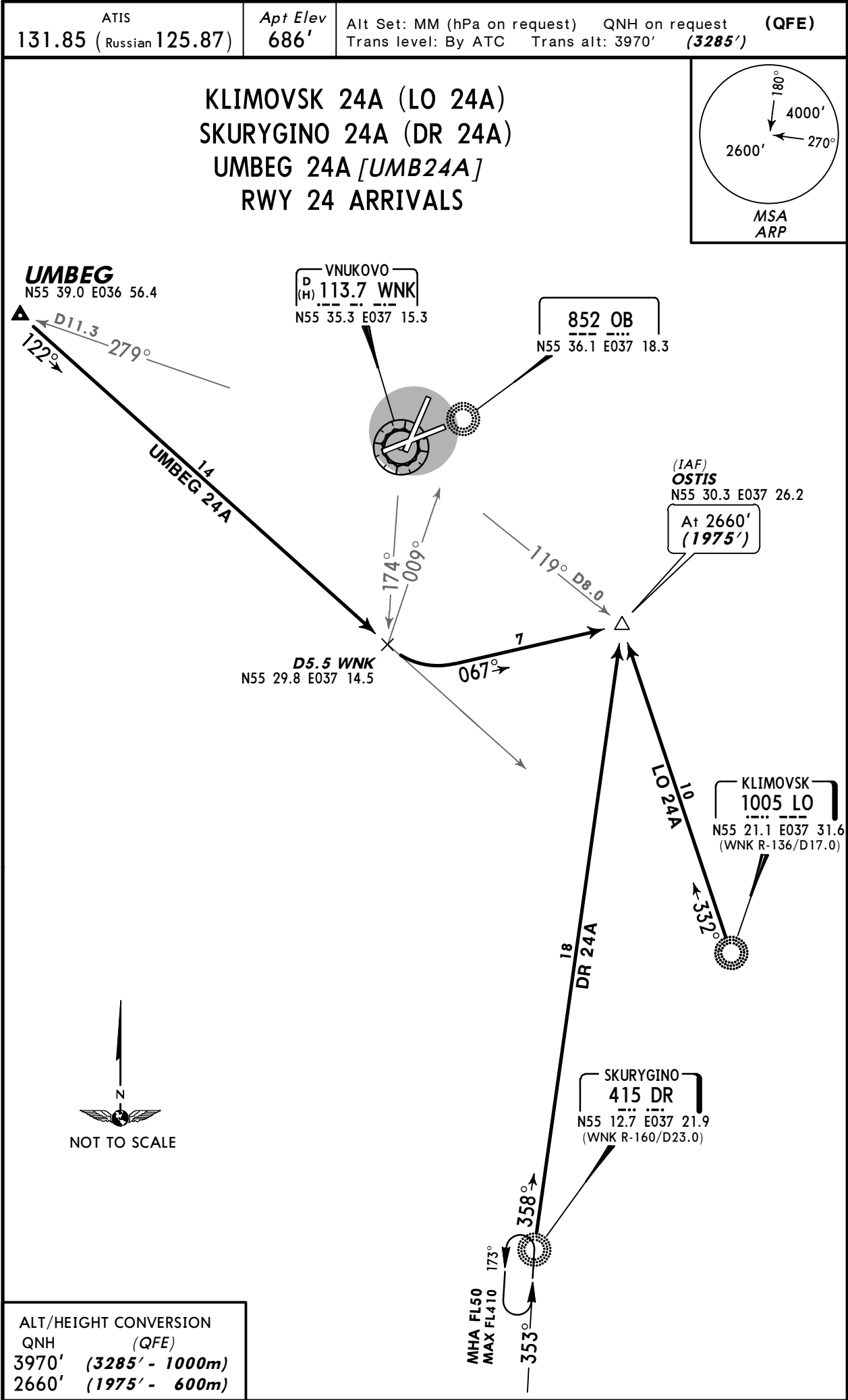
ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3285' - 1000m)
2660' (1975' - 600m)

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-2X4 Eff 27 Jun

MOSCOW, RUSSIA

STAR



UUWW/VKO
VNUKOVO

 **JEPPESEN**
21 JUN 13 **10-3** **Eff 27 Jun**

MOSCOW, RUSSIA
RNAV SID

RNAV SID DESIGNATION	REFER TO CHART
DEDUM 1D, IVANOVSKOYE 1D	10-3B
DEDUM 2D, 2E, IVANOVSKOYE 2D, 2E	10-3C
DEDUM 3D, 3E, IVANOVSKOYE 3D, 3E	10-3D
DEDUM 4D, IVANOVSKOYE 4D	10-3E
BITSA 1D, 1E, KLIMOVSK 1D, 1E	10-3F
BITSA 2D, 2E, 2F, KLIMOVSK 2D, 2E, 2F, OKLIT 2D	10-3G
BITSA 3D, 3E, KLIMOVSK 3D, 3E, OKLIT 3D	10-3H
BITSA 4D, 4E, KLIMOVSK 4D, 4E, OKLIT 4E	10-3J
BADNI 1E, KAMENKA 1E	10-3K
BADNI 2D, 2E, KAMENKA 2D, 2E	10-3L
BADNI 3D, 3E, KAMENKA 3D, 3E	10-3M
BADNI 4D, KAMENKA 4D	10-3N

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

UUWW/VKO
VNUKOVO

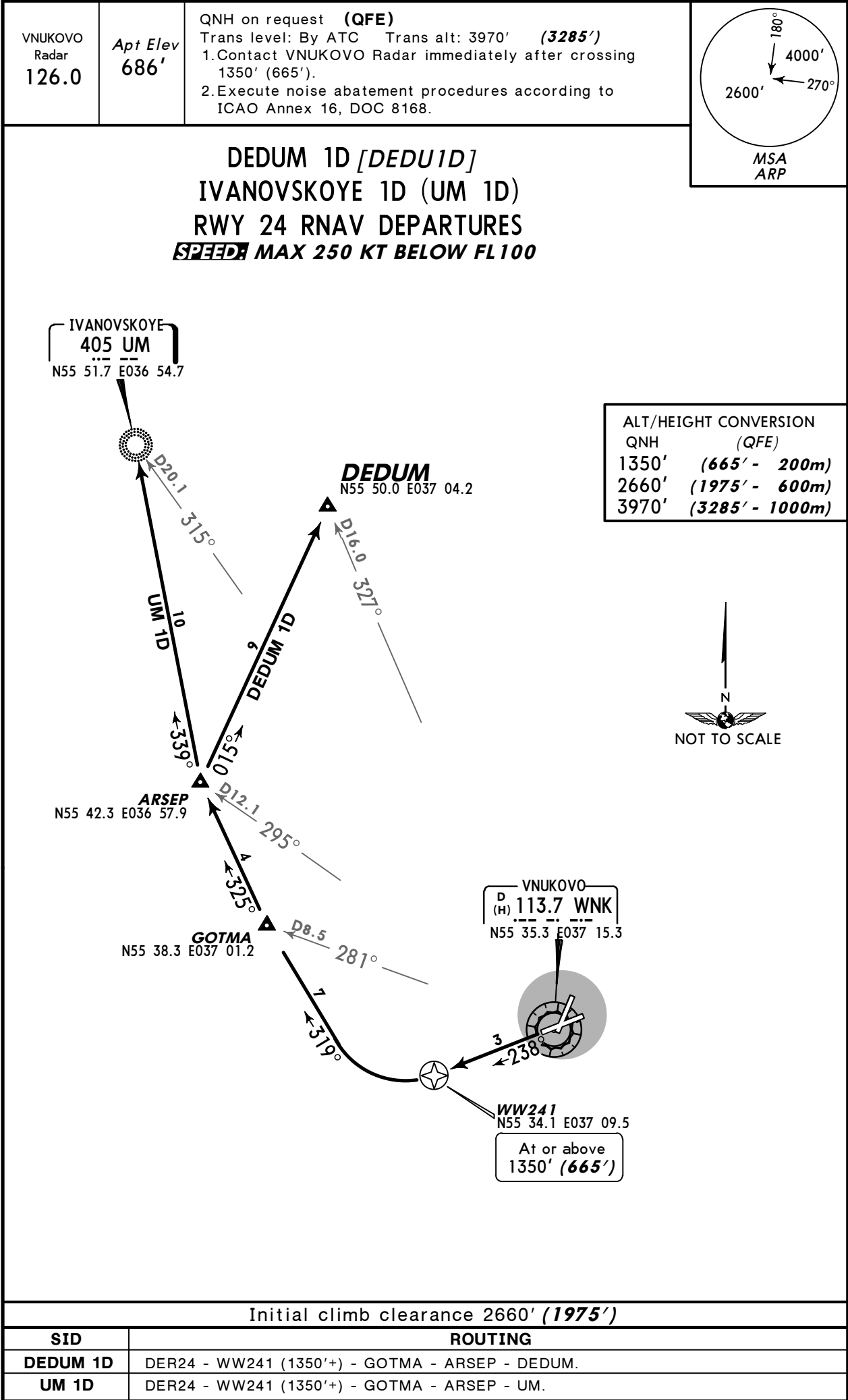
JEPPESEN
21 JUN 13 **(10-3A)** **Eff 27 Jun**
MOSCOW, RUSSIA
SID

SID DESIGNATION	REFER TO CHART
DEDUM 01D, 01E, IVANOVSKOYE 01D, 01E	10-3P
DEDUM 06D, 06E, IVANOVSKOYE 06D, 06E	10-3Q
DEDUM 19D, IVANOVSKOYE 19D	10-3S
DEDUM 24D, IVANOVSKOYE 24D	10-3T
BITSA 01D, 01E, KLIMOVSK 01D, 01E, OKLIT 01D	10-3U
BITSA 06D, 06E, 06F	10-3V
KLIMOVSK 06D, 06E, 06F, OKLIT 06D	10-3V1
BITSA 19D, 19E, KLIMOVSK 19D, 19E, OKLIT 19E	10-3W
BITSA 24D, 24E, KLIMOVSK 24D, 24E	10-3X
BADNI 01D, 01E, KAMENKA 01D, 01E	10-3X1
BADNI 06D, 06E, KAMENKA 06D, 06E	10-3X2
BADNI 19D, KAMENKA 19D	10-3X3
BADNI 24E, KAMENKA 24E	10-3X4
TRANSITION DESIGNATION	REFER TO CHART
NERL 1W, 2W, TIMIG 1W, 2W	10-3X5
CHERUSTI 1W, RELTO 3W TIKBI 3W, VENEV 1W	10-3X6
ADETI 1W, ROLUN 1W, SODRU 2W, SUGIR 2W	10-3X7
BELAG 1W, KARMANOVO 1W, OBEU 1W	10-3X8

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3B Eff 27 Jun

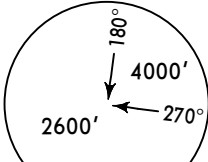
MOSCOW, RUSSIA
RNAV SID



UUWW/VKO
VNUKOVO

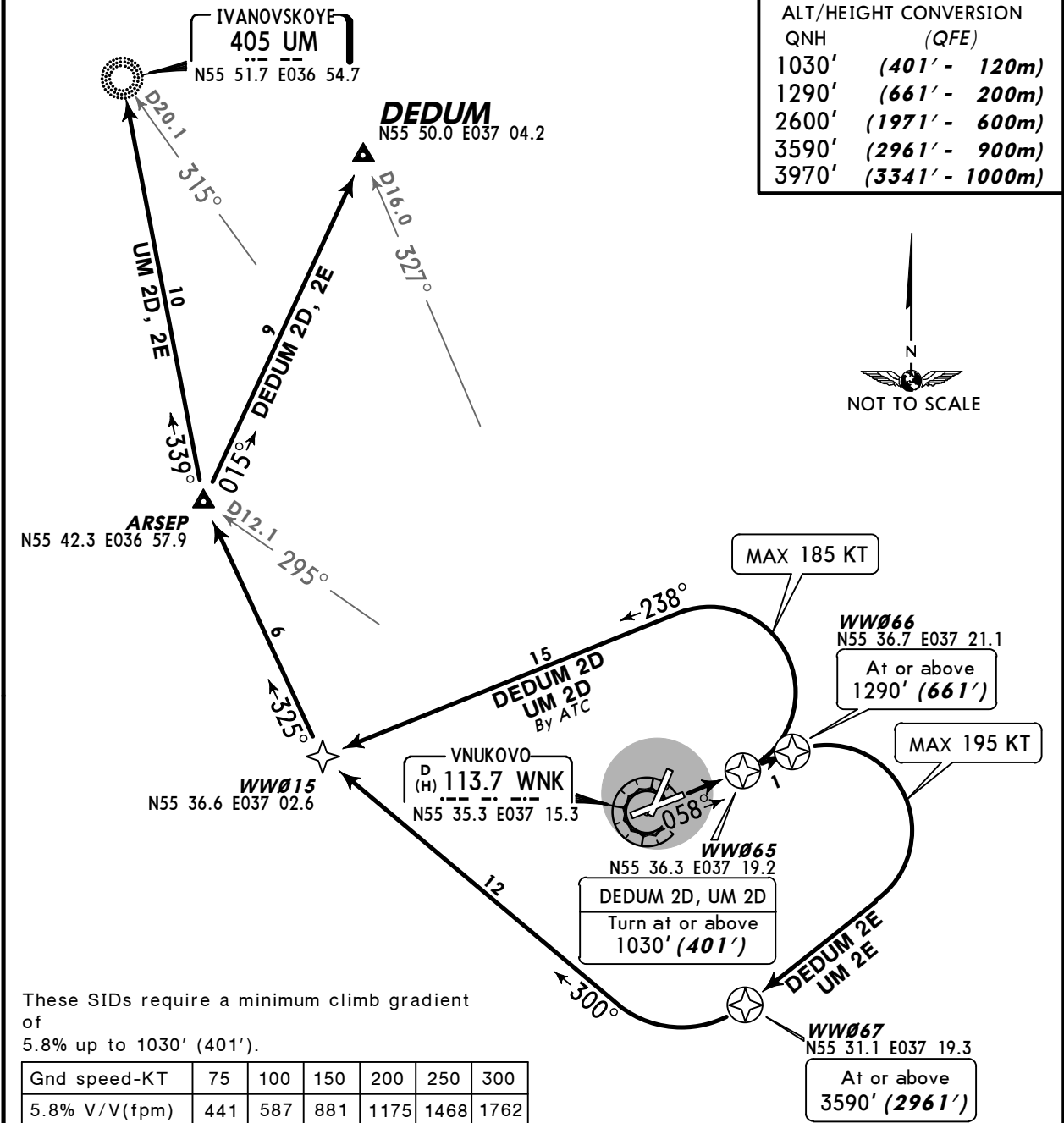
JEPPESSEN
21 JUN 13 10-3C Eff 27 Jun

MOSCOW, RUSSIA
RNAV SID

VNUKOVO Radar 126.0	Apt Elev 686'	QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3341') 1.Contact VNUKOVO Radar immediately after crossing 1290' (661'). 2.Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.	 MSA ARP
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DEDUM 2D [DEDU2D] , DEDUM 2E [DEDU2E]
IVANOVSKOYE 2D (UM 2D)
IVANOVSKOYE 2E (UM 2E)
RWY 06 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	QNH	(QFE)
1030'	(401' - 120m)	
1290'	(661' - 200m)	
2600'	(1971' - 600m)	
3590'	(2961' - 900m)	
3970'	(3341' - 1000m)	



Initial climb clearance 2600' (1971')	
SID	ROUTING
DEDUM 2D By ATC	DER06 - WW065 (1030'+; K185-) - WW015 - ARSEP - DEDUM.
DEDUM 2E	DER06 - WW066 (1290'+; K195-) - WW067 (3590'+) - WW015 - ARSEP - DEDUM.
UM 2D By ATC	DER06 - WW065 (1030'+; K185-) - WW015 - ARSEP - UM.
UM 2E	DER06 - WW066 (1290'+; K195-) - WW067 (3590'+) - WW015 - ARSEP - UM.

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3D Eff 27 Jun

MOSCOW, RUSSIA
RNAV SID

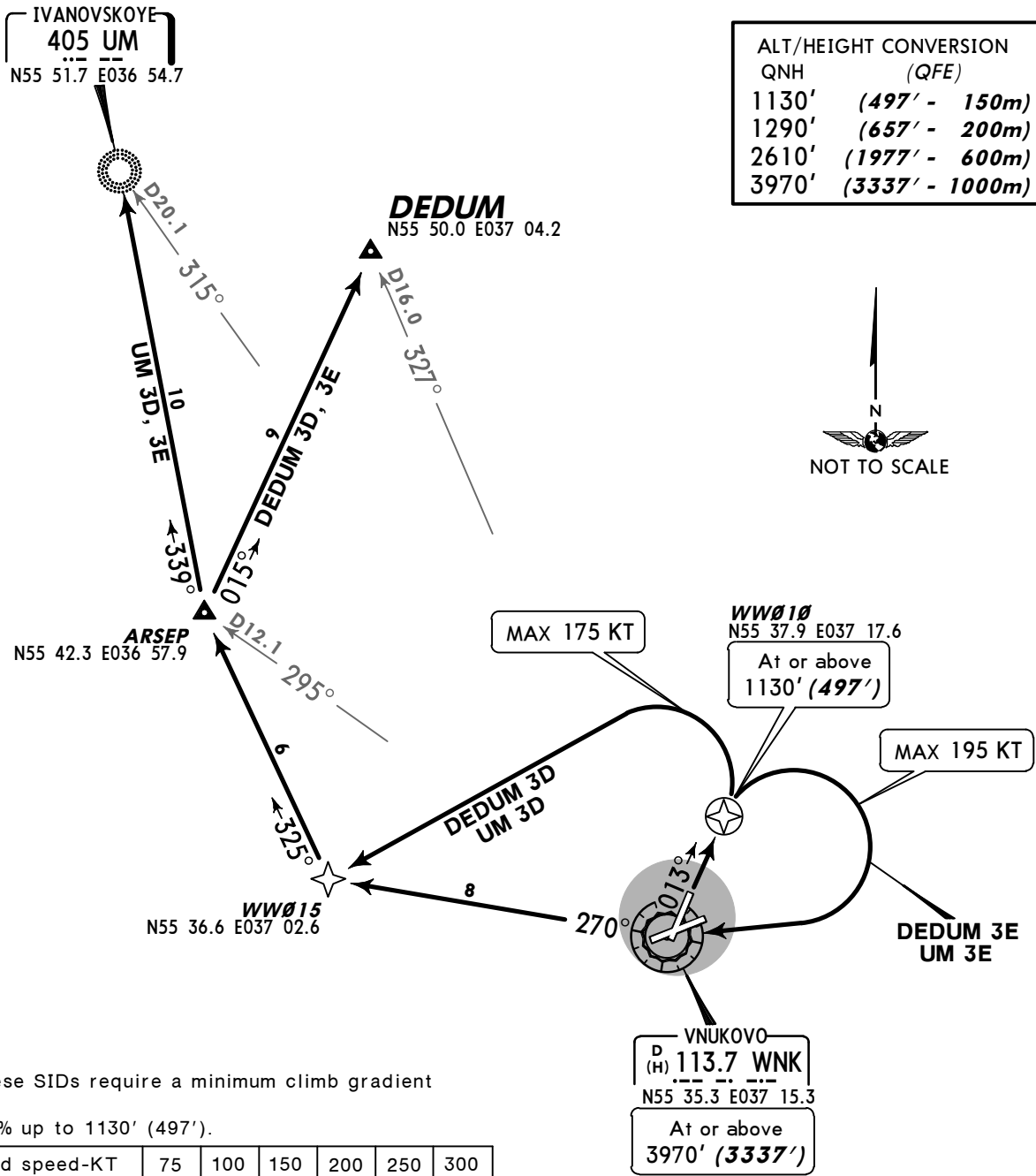
VNUKOVO
Radar
126.0

Apt Elev
686'

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.

MSA
ARP

DEDUM 3D [DEDU3D] , DEDUM 3E [DEDU3E]
IVANOVSKOYE 3D (UM 3D)
IVANOVSKOYE 3E (UM 3E)
RWY 01 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



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

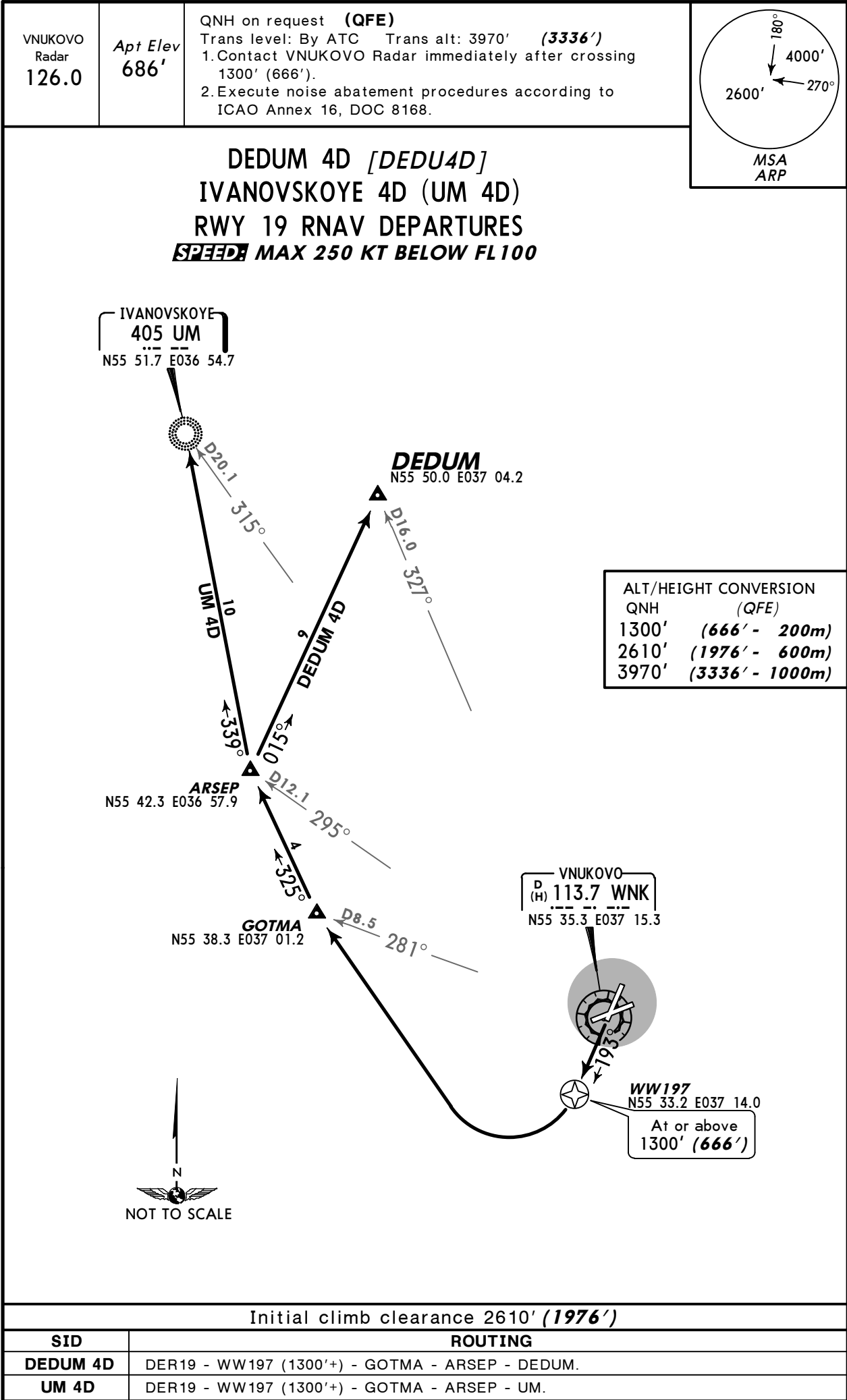
Gnd speed-KT	75	100	150	200	250	300
5.8% V/V(fpm)	441	587	881	1175	1468	1762

Initial climb clearance 2610' (1977')	
SID	ROUTING
DEDUM 3D	DER01 - WW010 (1130'+; K175-) - WW015 - ARSEP - DEDUM.
DEDUM 3E	DER01 - WW010 (1130'+; K195-) - WNK (3970'+) - WW015 - ARSEP - DEDUM.
UM 3D	DER01 - WW010 (1130'+; K175-) - WW015 - ARSEP - UM.
UM 3E	DER01 - WW010 (1130'+; K195-) - WNK (3970'+) - WW015 - ARSEP - UM.

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3E Eff 27 Jun

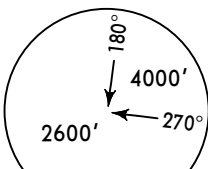
MOSCOW, RUSSIA
RNAV SID



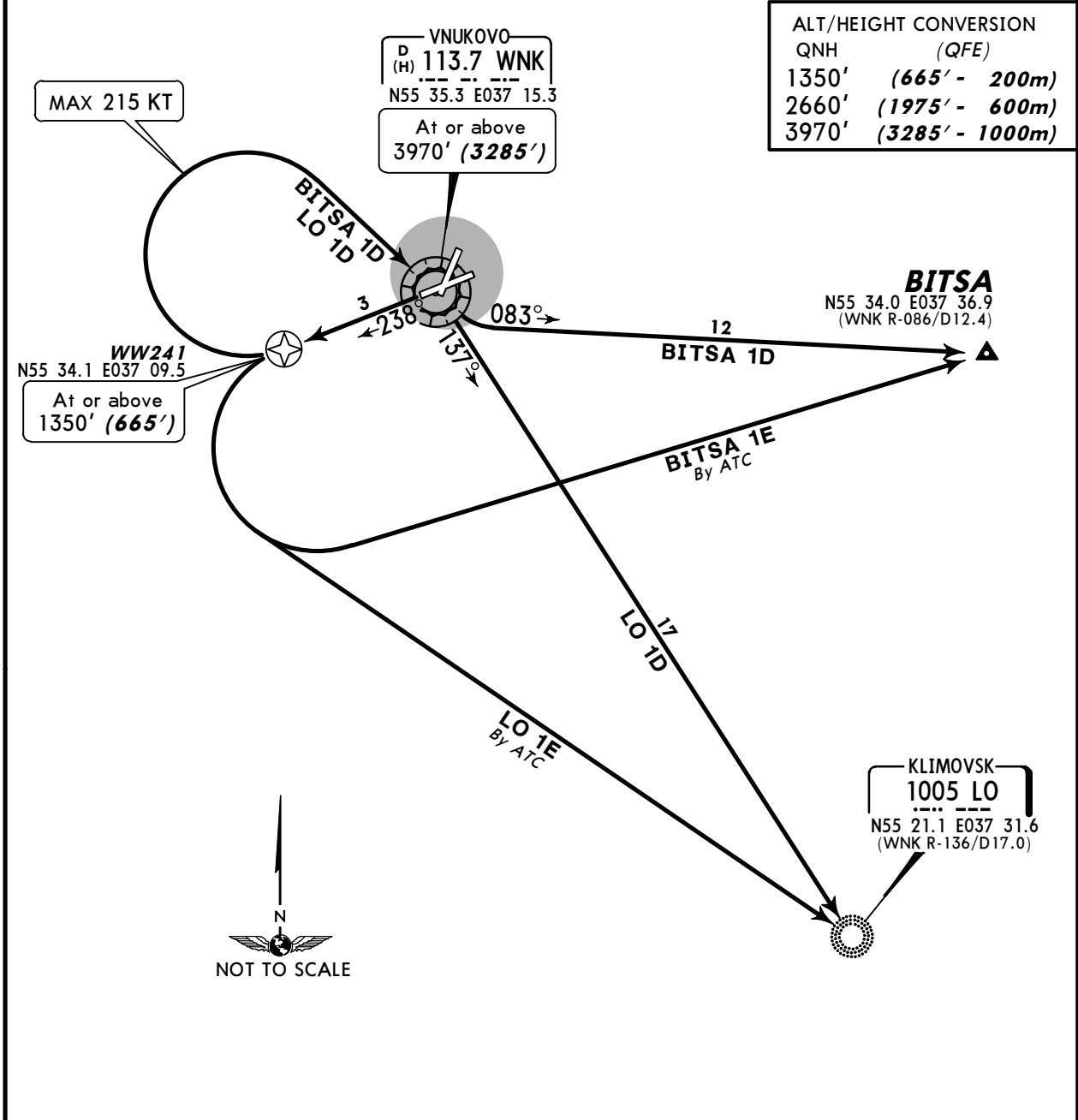
UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3F Eff 27 Jun

MOSCOW, RUSSIA
RNAV SID

VNUKOVO Radar 126.0	Apt Elev 686'	QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3285') 1.Contact VNUKOVO Radar immediately after crossing 1350' (665'). 2.Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.	 MSA ARP
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BITSA 1D [BITS1D] , BITSA 1E [BITS1E]
KLIMOVSK 1D (LO 1D), KLIMOVSK 1E (LO 1E)
RWY 24 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

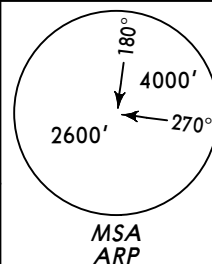


SID	ROUTING
BITSA 1D	DER24 - WW241 (1350'+; K215-) - WNK (3970'+) - BISTA.
BITSA 1E By ATC	DER24 - WW241 (1350'+) - BISTA.
LO 1D	DER24 - WW241 (1350'+; K215-) - WNK (3970'+) - LO.
LO 1E By ATC	DER24 - WW241 (1350'+) - LO.

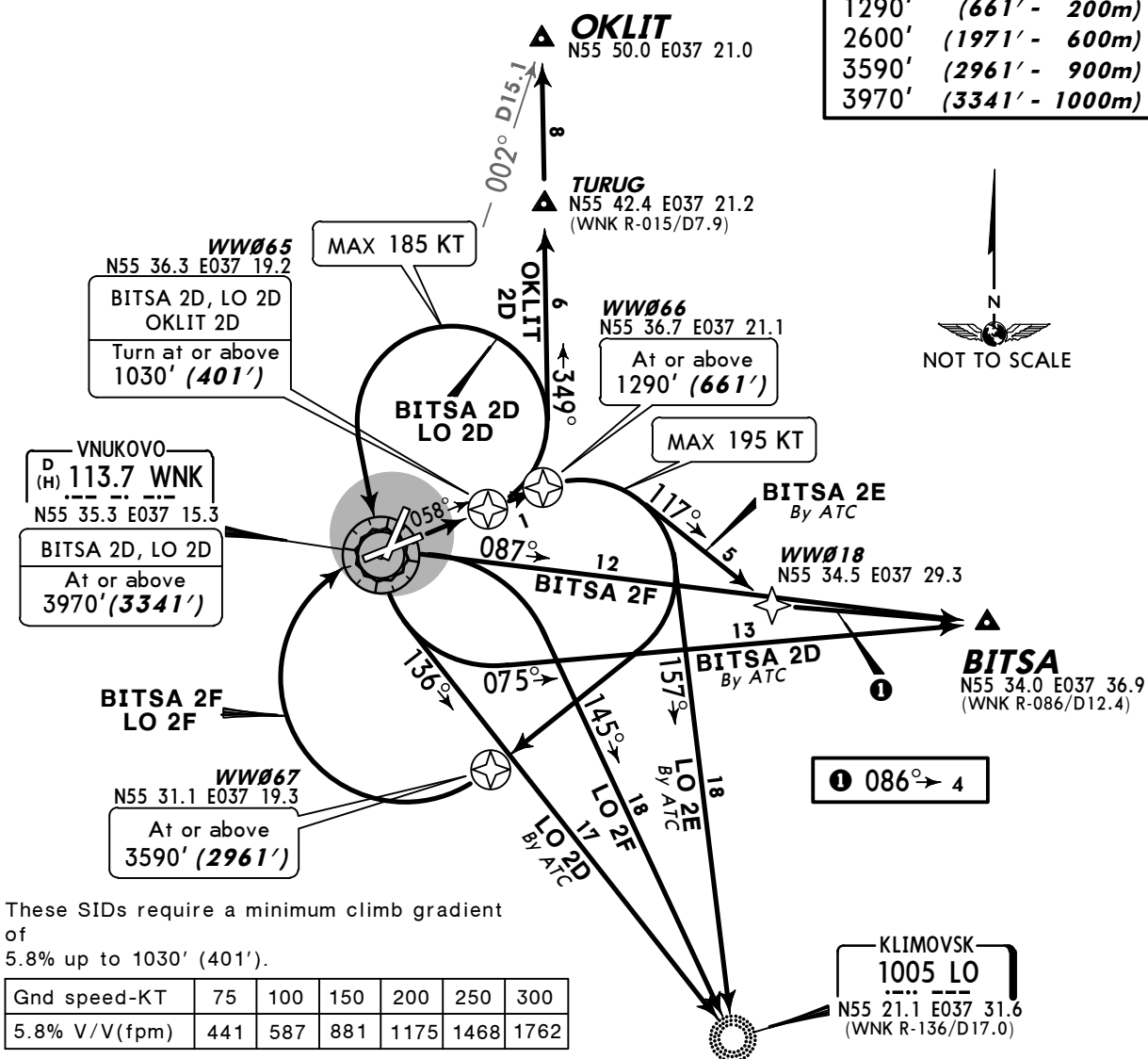
UUWW/VKO
VNUKOV
JEPPesen
21 JUN 13 **10-3G** **Eff 27 Jun**
MOSCOW, RUSSIA
RNAV SID

VNUKOV
Radar
126.0

Apt Elev
686'

QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3341')
1. Contact VNUKOV Radar immediately after crossing
1290' (661').
2. Execute noise abatement procedures according to
ICAO Annex 16, DOC 8168.

BITSA 2D[BITSA2D], BITSA 2E[BITSA2E]
BITSA 2F[BITSA2F]
KLIMOVSK 2D (LO 2D), KLIMOVSK 2E (LO 2E)
KLIMOVSK 2F (LO 2F)
OKLIT 2D[OKLI2D]
RWY 06 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1030'	(401' - 120m)
1290'	(661' - 200m)
2600'	(1971' - 600m)
3590'	(2961' - 900m)
3970'	(3341' - 1000m)



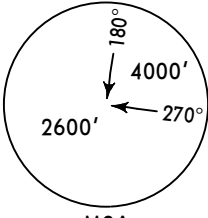
Initial climb clearance 2600' (1971')

SID	ROUTING
BITSA 2D By ATC	DER06 - WW065 (1030'+; K185-) - WNK (3970'+) - BITSA.
BITSA 2E By ATC	DER06 - WW066 (1290'+; K195-) - WW018 - BITSA.
BITSA 2F	DER06 - WW066 (1290'+; K195-) - WW067 (3590'+) - WNK - BITSA.
LO 2D By ATC	DER06 - WW065 (1030'+; K185-) - WNK (3970'+) - LO.
LO 2E By ATC	DER06 - WW066 (1290'+; K195-) - LO.
LO 2F	DER06 - WW066 (1290'+; K195-) - WW067 (3590'+) - WNK - LO.
OKLIT 2D	DER06 - WW065 (1030'+; K185-) - TURUG - OKLIT.

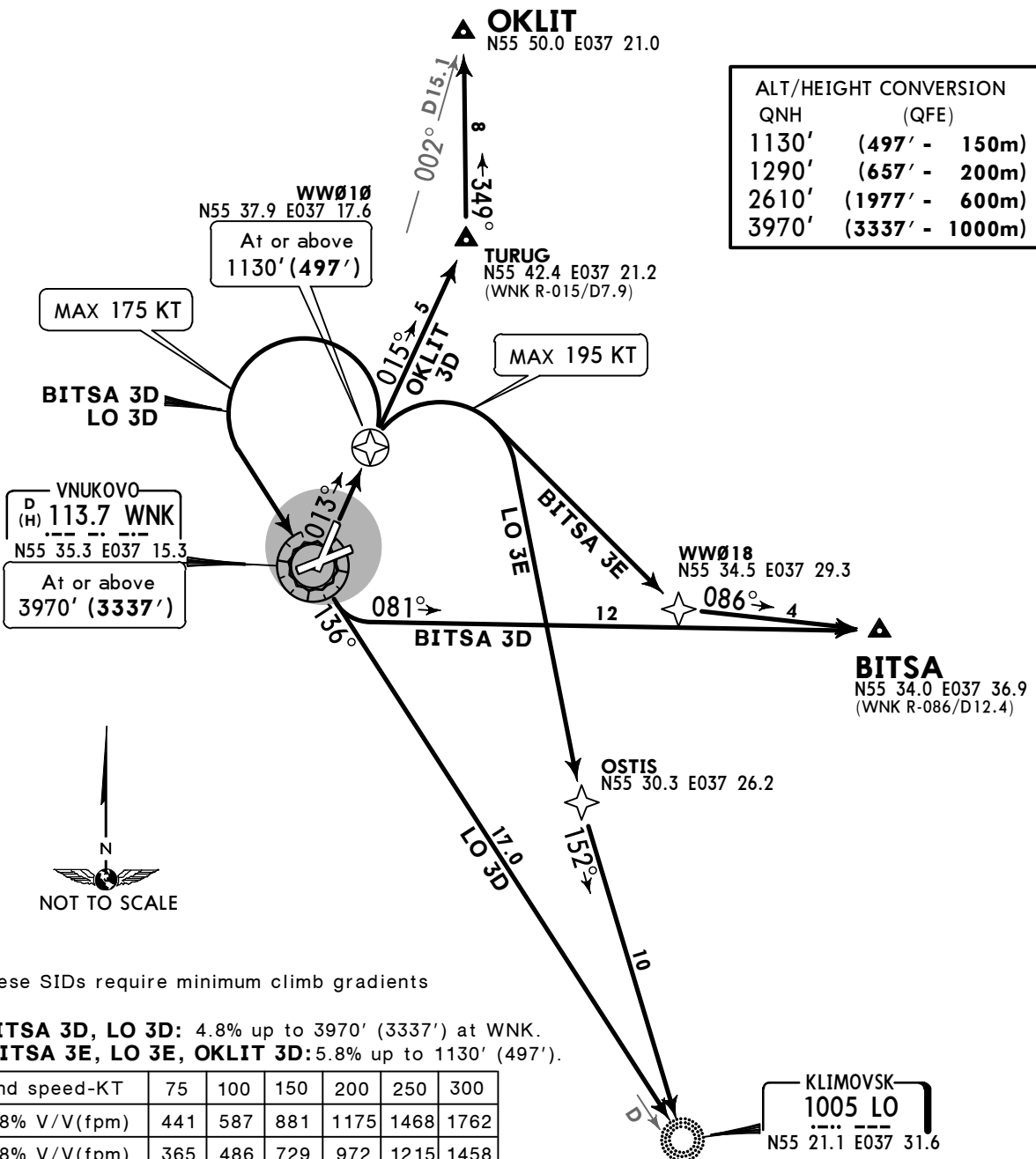
UUWW/VKO
VNUKOVO

JEPPESSEN
1 MAY 15 10-3H

MOSCOW, RUSSIA
RNAV SID

VNUKOVO Radar 126.0	Apt Elev 686'	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.	
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BITSA 3D[BITS3D] , BITSA 3E[BITS3E]
KLIMOVSK 3D (LO 3D), KLIMOVSK 3E (LO 3E)
OKLIT 3D [OKLI3D]
RWY 01 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

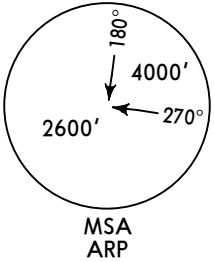


Initial climb clearance 2610' (1977')	
SID	ROUTING
BITSA 3D	DER01 - WW010 (1130'+; K175-) - WNK (3970'+) - BITSA.
BITSA 3E By ATC	DER01 - WW010 (1130'+; K195-) - WW018 - BITSA.
LO 3D	DER01 - WW010 (1130'+; K175-) - WNK (3970'+) - LO.
LO 3E	DER01 - WW010 (1130'+; K195-) - OSTIS - LO.
OKLIT 3D	DER01 - WW010 (1130'+) - TURUG - OKLIT.

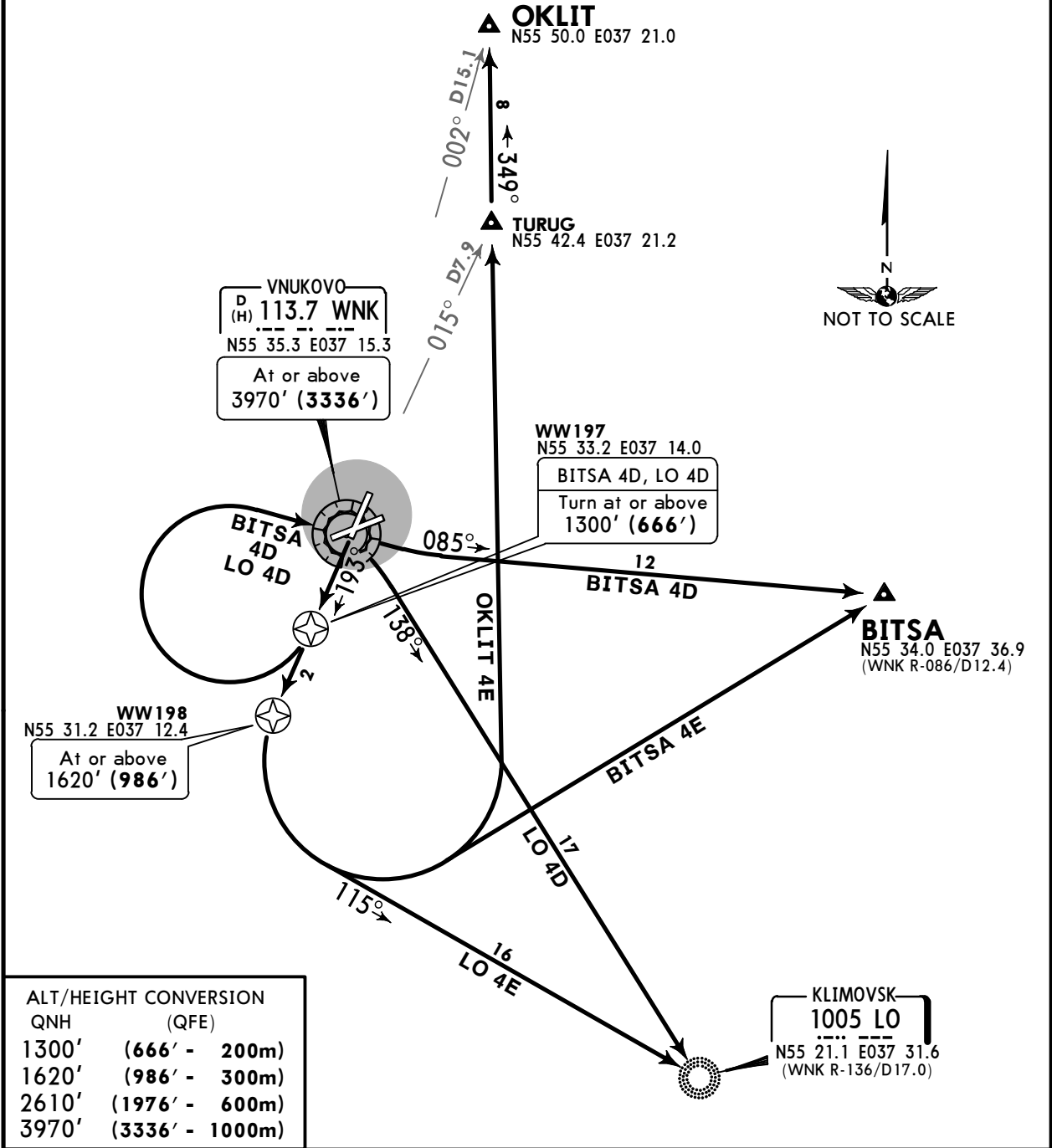
UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3J

MOSCOW, RUSSIA
RNAV SID

VNUKOVO Radar 126.0	Apt Elev 686'	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.	
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BITSA 4D [BITS4D] , BITSA 4E [BITS4E]
KLIMOVSK 4D (LO 4D), KLIMOVSK 4E (LO 4E)
OKLIT 4E [OKLI4E]
RWY 19 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

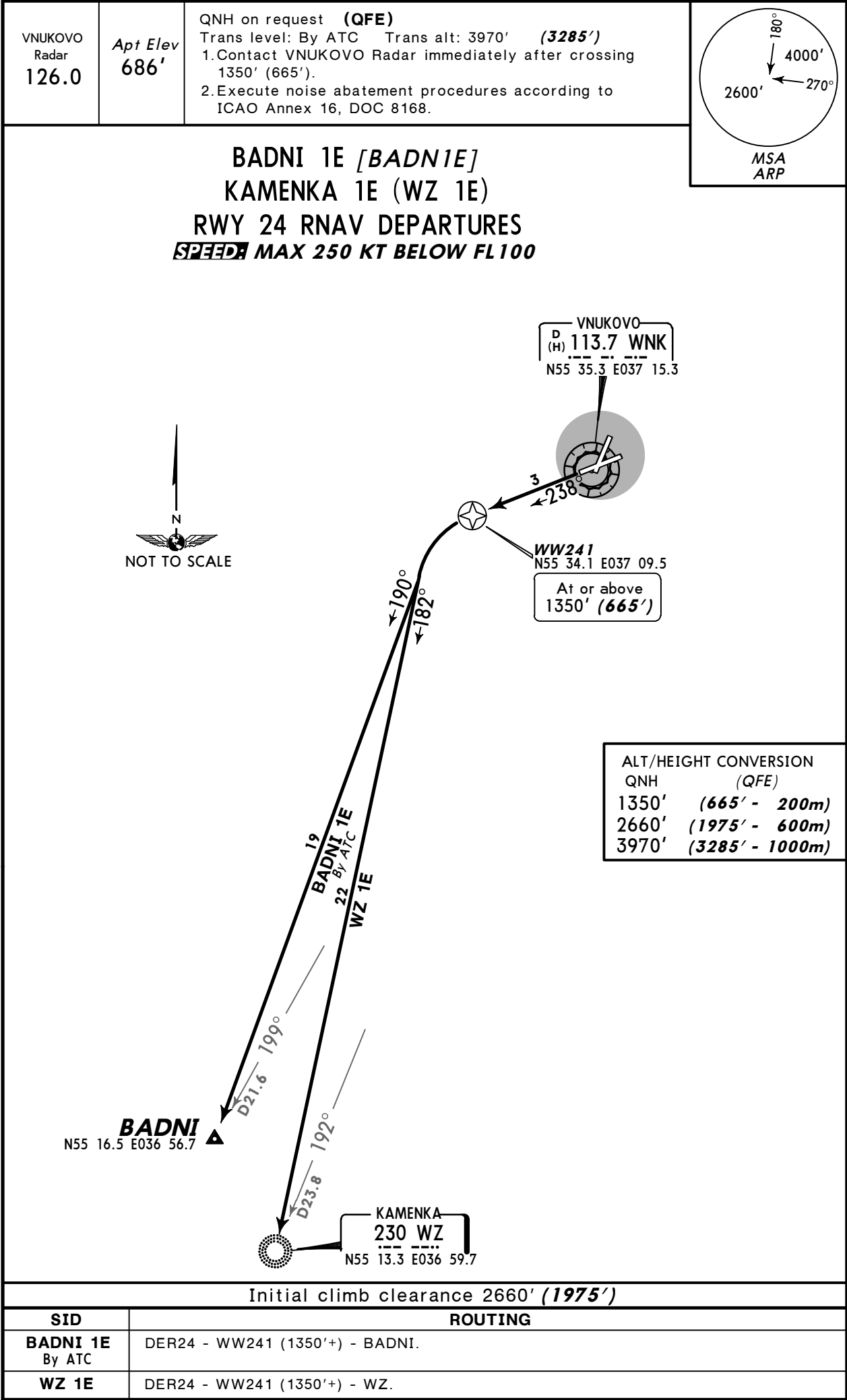


Initial climb clearance 2610' (1977')	
SID	ROUTING
BITSA 4D	DER19 - WW197 (1300'+) - WNK (3970'+) - BITSA.
BITSA 4E	DER19 - WW198 (1620'+) - BITSA.
LO 4D	DER19 - WW197 (1300'+) - WNK (3970'+) - LO.
LO 4E	DER19 - WW198 (1620'+) - LO.
OKLIT 4E By ATC	DER19 - WW198 (1620'+) - TURUG - OKLIT.

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3K Eff 27 Jun

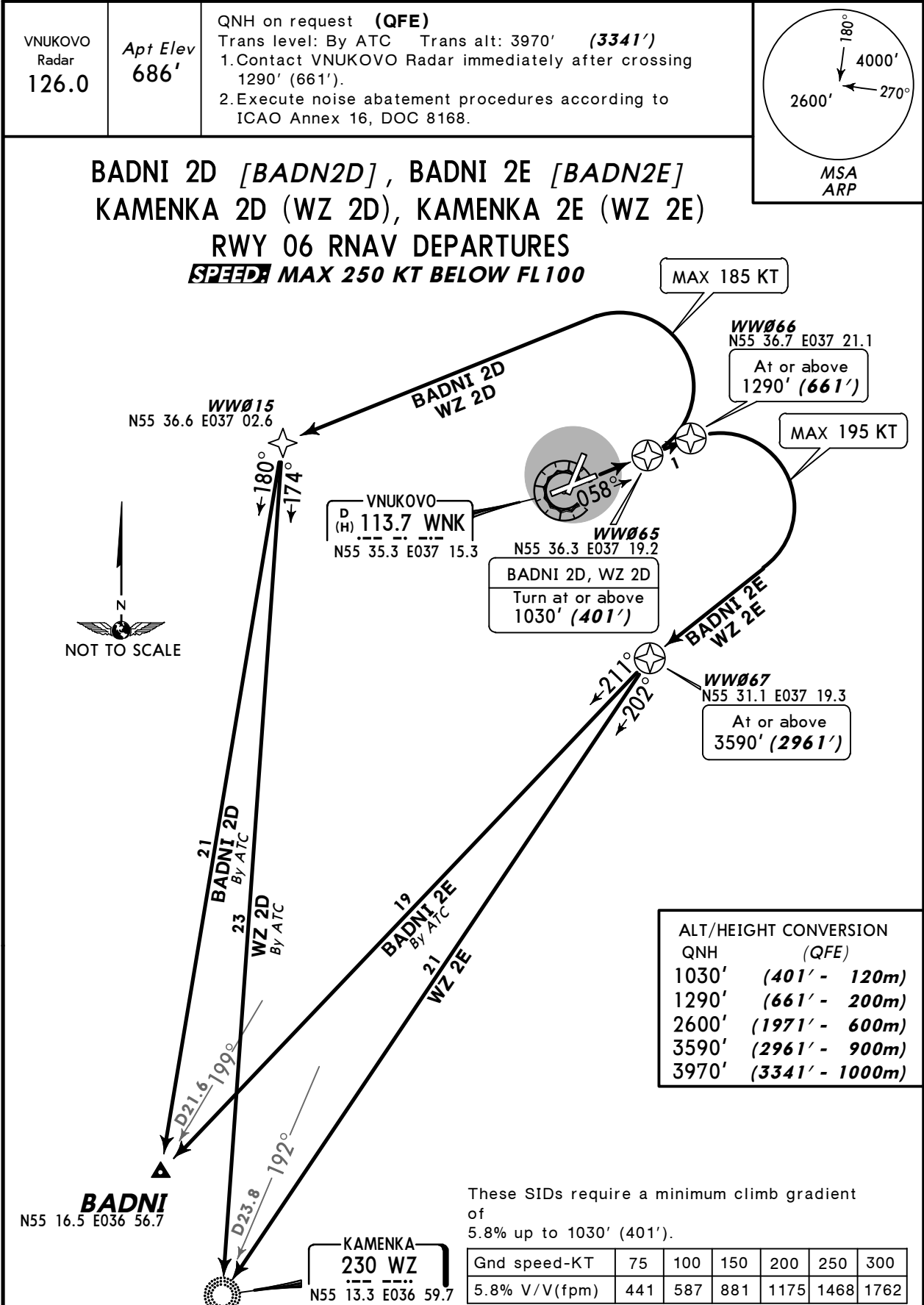
MOSCOW, RUSSIA
RNAV SID



UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3L Eff 27 Jun

MOSCOW, RUSSIA
RNAV SID

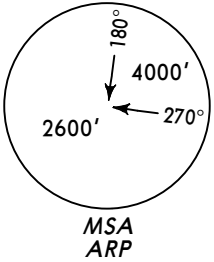


Initial climb clearance 2600' (1971')	
SID	ROUTING
BADNI 2D By ATC	DER06 - WW065 (1030'+; K185-) - WW015 - BADNI.
BADNI 2E By ATC	DER06 - WW066 (1290'+; K195-) - WW067 (3590'+) - BADNI.
WZ 2D By ATC	DER06 - WW065 (1030'+; K185-) - WW015 - WZ.
WZ 2E	DER06 - WW066 (1290'+; K195-) - WW067 (3590'+) - WZ.

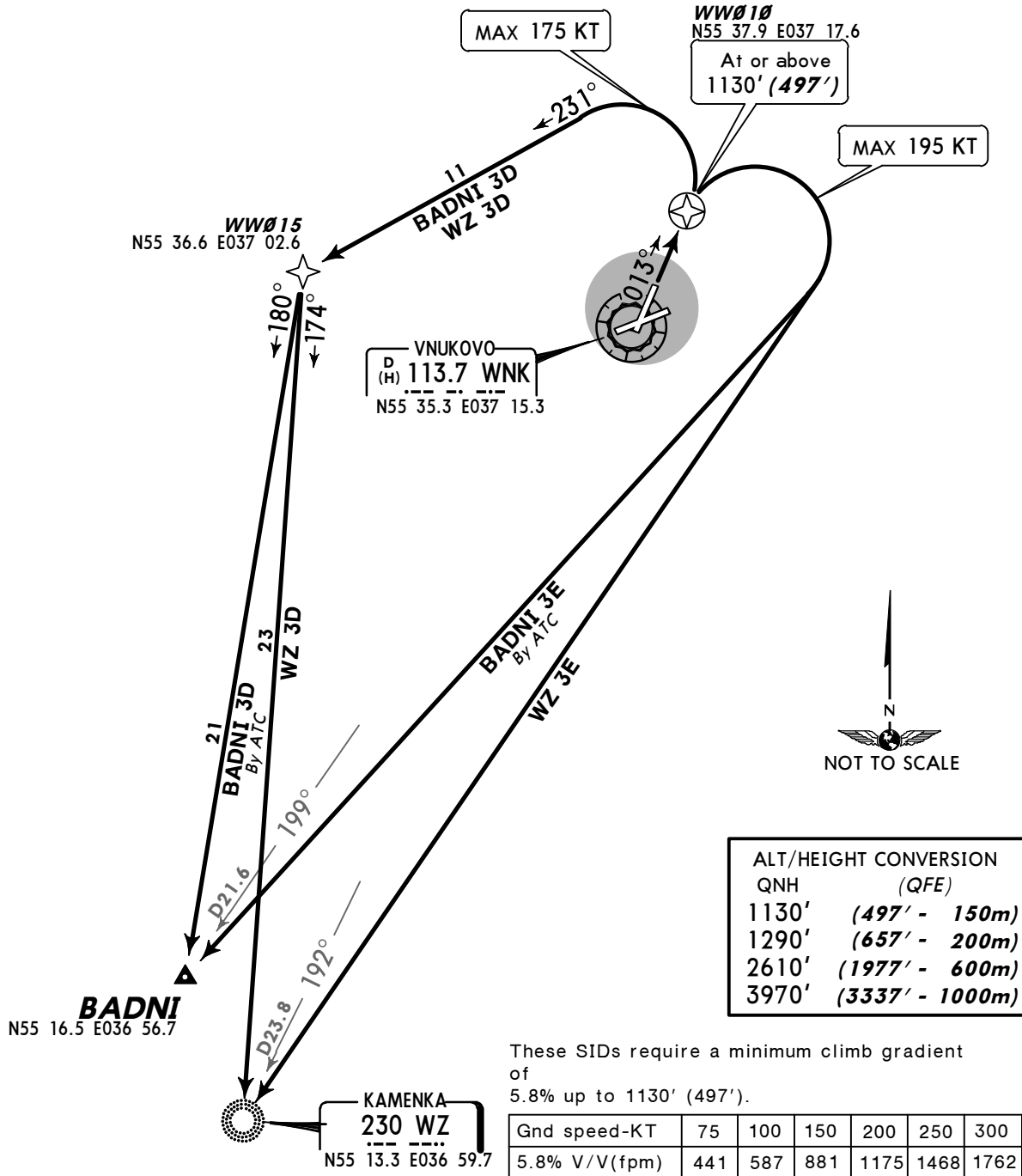
UUWW/VKO
VNUKOVO

JEPPESEN
21 MAR 14 10-3M Eff 3 Apr

MOSCOW, RUSSIA
RNAV SID

VNUKOVO Radar 126.0	Apt Elev 686'	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.	
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BADNI 3D [BADN3D], BADNI 3E [BADN3E]
KAMENKA 3D (WZ 3D), KAMENKA 3E (WZ 3E)
RWY 01 RNAV DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



Initial climb clearance 2610' (1977')	
SID	ROUTING
BADNI 3D By ATC	DER01 - WW010 (1130'+; K175-) - WW015 - BADNI.
BADNI 3E By ATC	DER01 - WW010 (1130'+; K195-) - BADNI.
WZ 3D	DER01 - WW010 (1130'+; K175-) - WW015 - WZ.
WZ 3E	DER01 - WW010 (1130'+; K195-) - WZ.

ALT/HEIGHT CONVERSION
QNH (QFE)

1300'	(666' - 200m)
1620'	(987' - 300m)
2610'	(1976' - 600m)
3970'	(3336' - 1000m)

UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3P

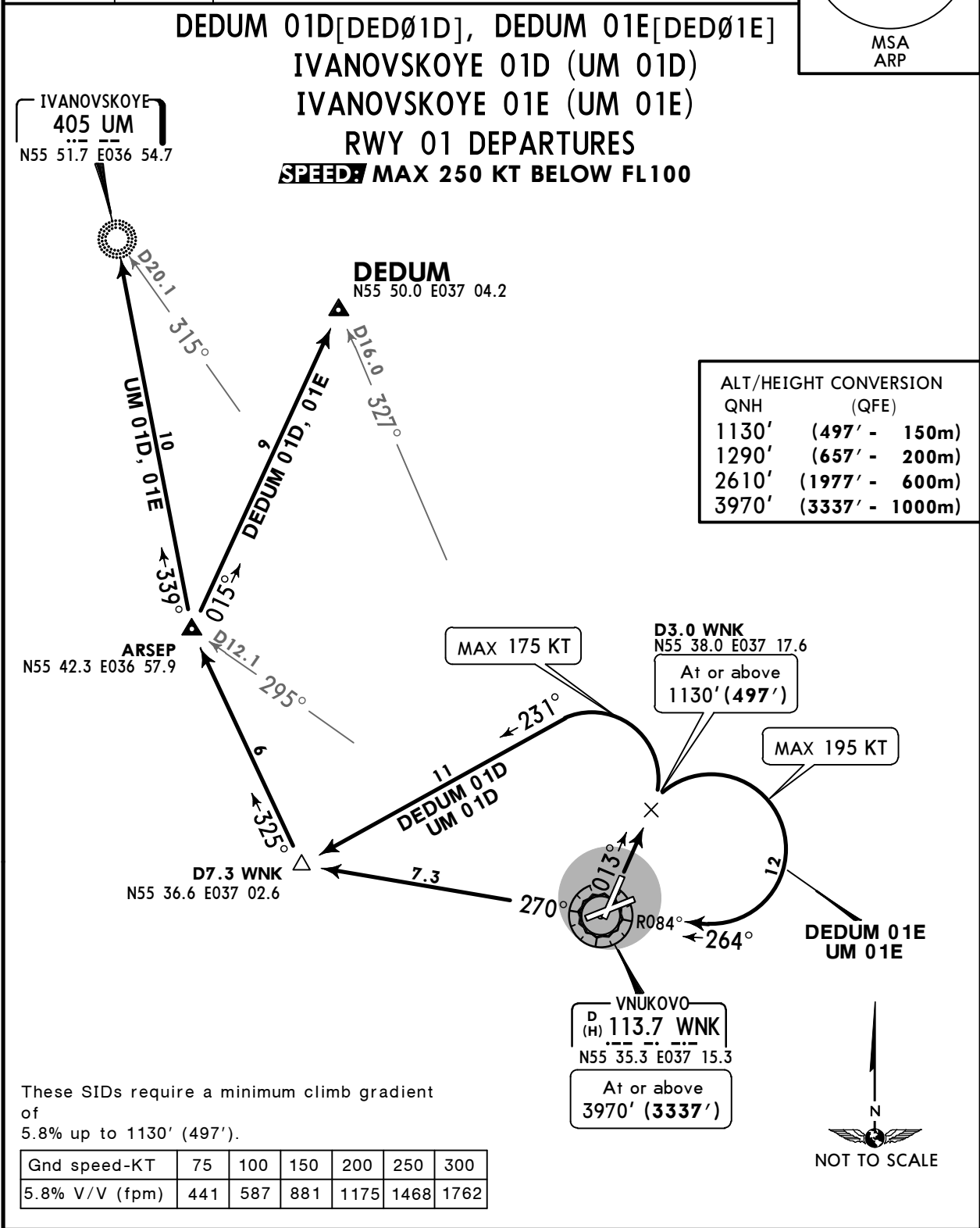
MOSCOW, RUSSIA

SID

VNUKOVO
Radar
126.0

Apt Elev
686'

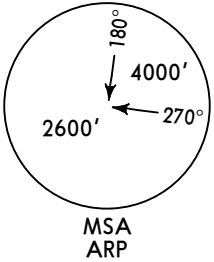
QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3337')
1. Contact VNUKOVO Radar immediately after crossing 1290' (657').
2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.



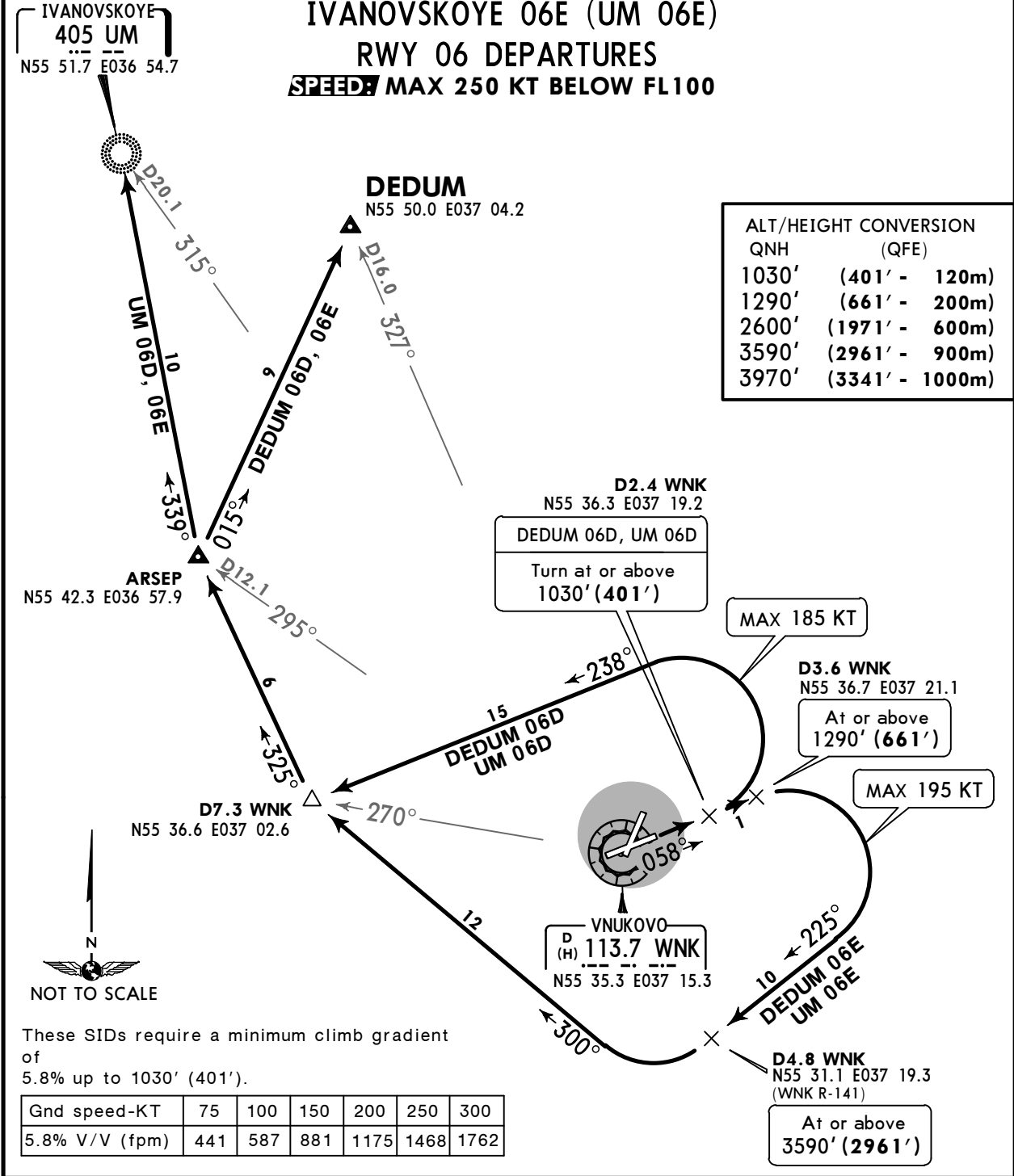
UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3Q

MOSCOW, RUSSIA
SID

VNUKOVO Radar 126.0	Apt Elev 686'	QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3341') 1. Contact VNUKOVO Radar immediately after crossing 1290' (661'). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.	
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DEDUM 06D[DED06D], DEDUM 06E[DED06E]
IVANOVSKOYE 06D (UM 06D)
IVANOVSKOYE 06E (UM 06E)
RWY 06 DEPARTURES
SPEED: MAX 250 KT BELOW FL100



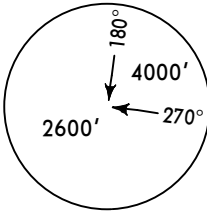
Initial climb clearance 2600'(1971')	
SID	ROUTING
DEDUM 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 238° track to D7.3 WNK, 325° track to ARSEP, then to DEDUM.
DEDUM 06E	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT, 300° track to D7.3 WNK, then to ARSEP, then to DEDUM.
UM 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 238° track to D7.3 WNK, 325° track to ARSEP, then to UM.
UM 06E	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT, 300° track to D7.3 WNK, then to ARSEP, then to UM.

UUWW/VKO
VNUKOVO

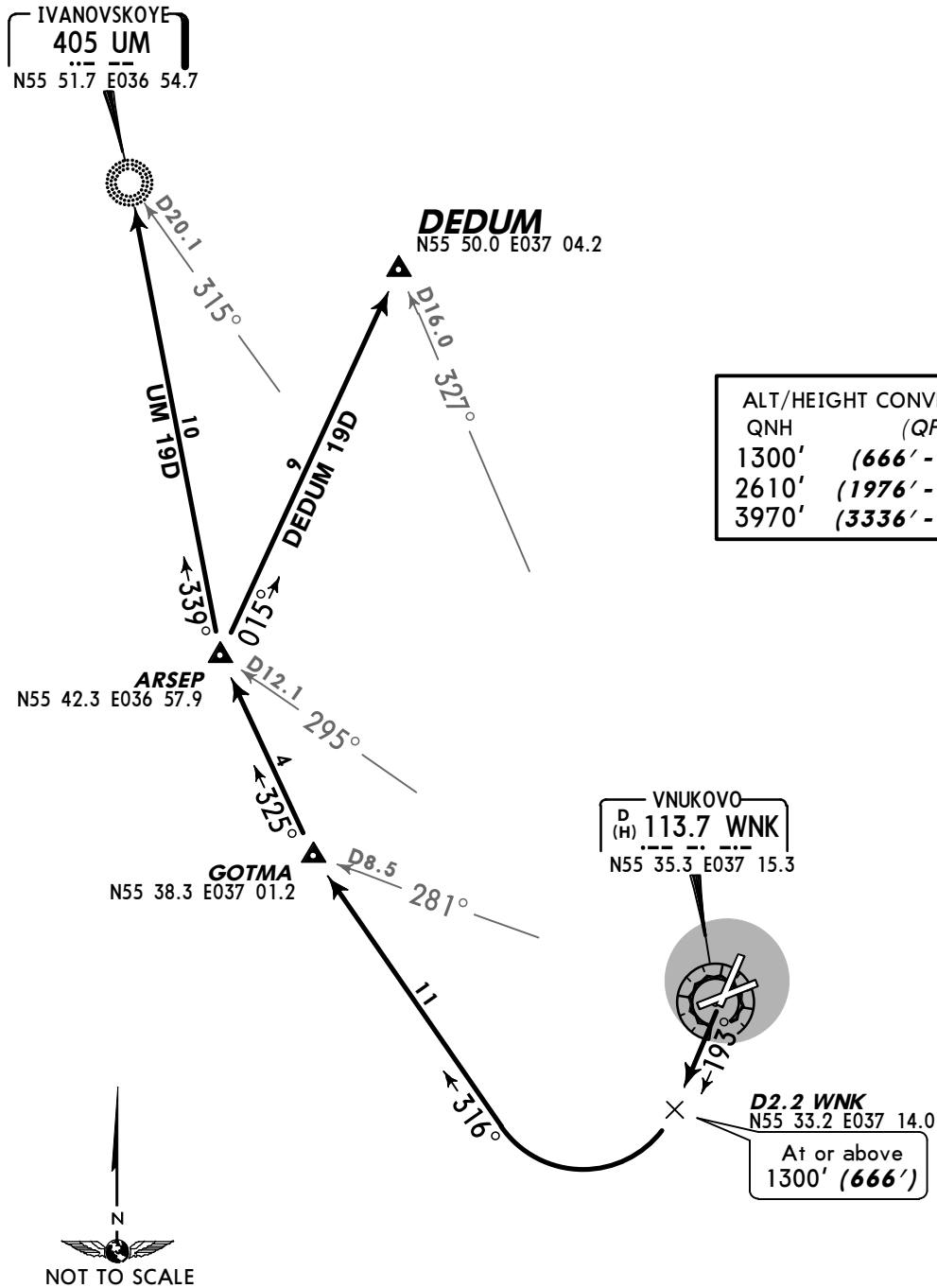
JEPPESEN
21 JUN 13 10-3S Eff 27 Jun

MOSCOW, RUSSIA

SID

VNUKOVO Radar 126.0	Apt Elev 686'	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.	 MSA ARP
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DEDUM 19D [DED19D]
IVANOVSKOYE 19D (UM 19D)
RWY 19 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



Initial climb clearance 2610' (1976')

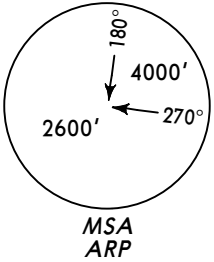
SID	ROUTING
DEDUM 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 316° track to GOTMA, 325° track to ARSEP, then to DEDUM.
UM 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 316° track to GOTMA, 325° track to ARSEP, then to UM.

UUWW/VKO
VNUKOVO

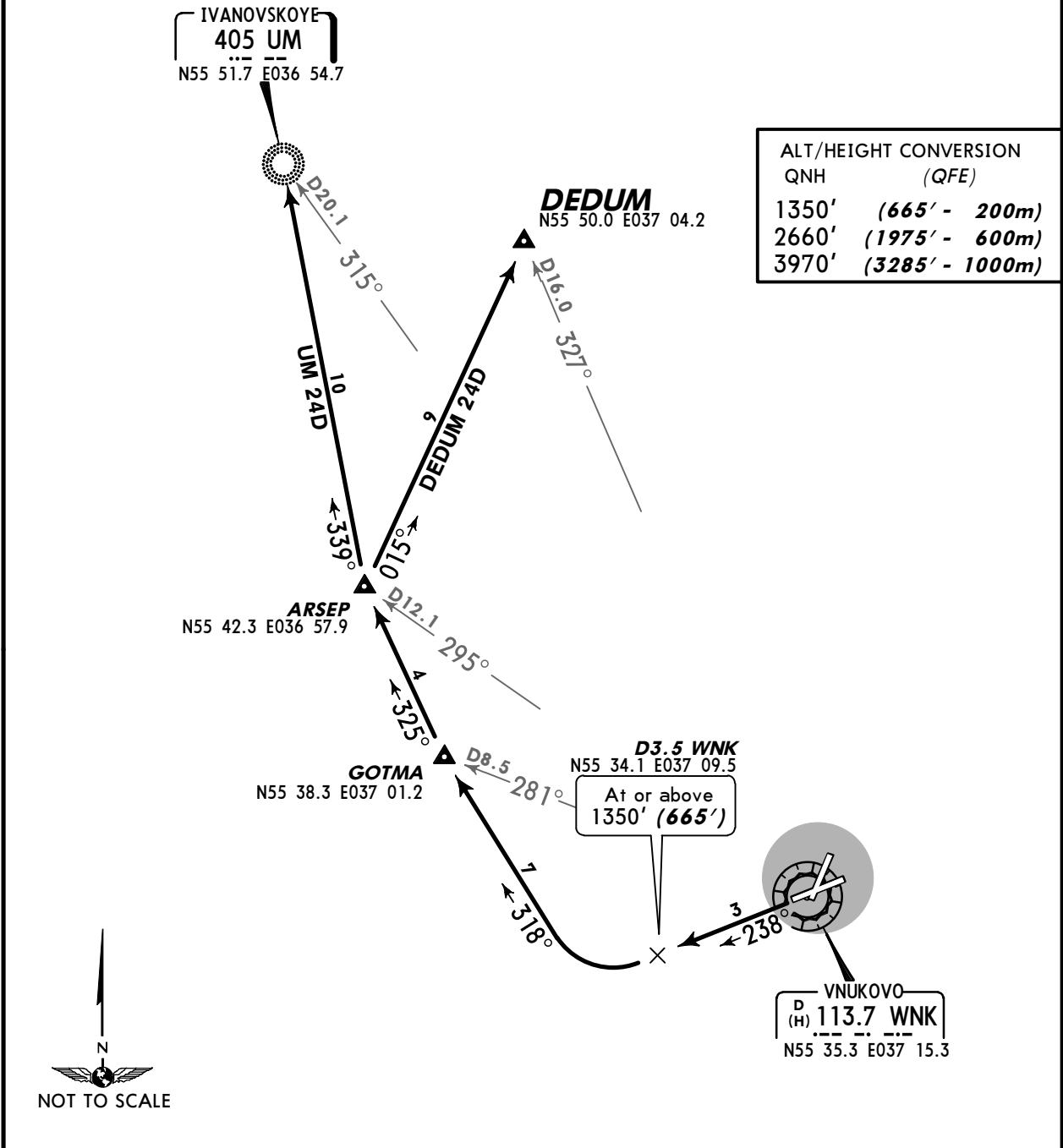
JEPPESEN
21 JUN 13 10-3T Eff 27 Jun

MOSCOW, RUSSIA
SID

VNUKOVO Radar 126.0	Apt Elev 686'	QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3285') 1. Contact VNUKOVO Radar immediately after crossing 1350' (665'). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.
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DEDUM 24D[DED24D]
IVANOVSKOYE 24D (UM 24D)
RWY 24 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100



ALT/HEIGHT CONVERSION
QNH (QFE)
1350' (665' - 200m)
2660' (1975' - 600m)
3970' (3285' - 1000m)

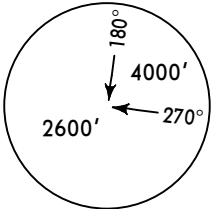
Initial climb clearance 2660' (1975')	
SID	ROUTING
DEDUM 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 318° track to GOTMA, then to ARSEP, then to DEDUM.
UM 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 318° track to GOTMA, then to ARSEP, then to UM.

UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3U

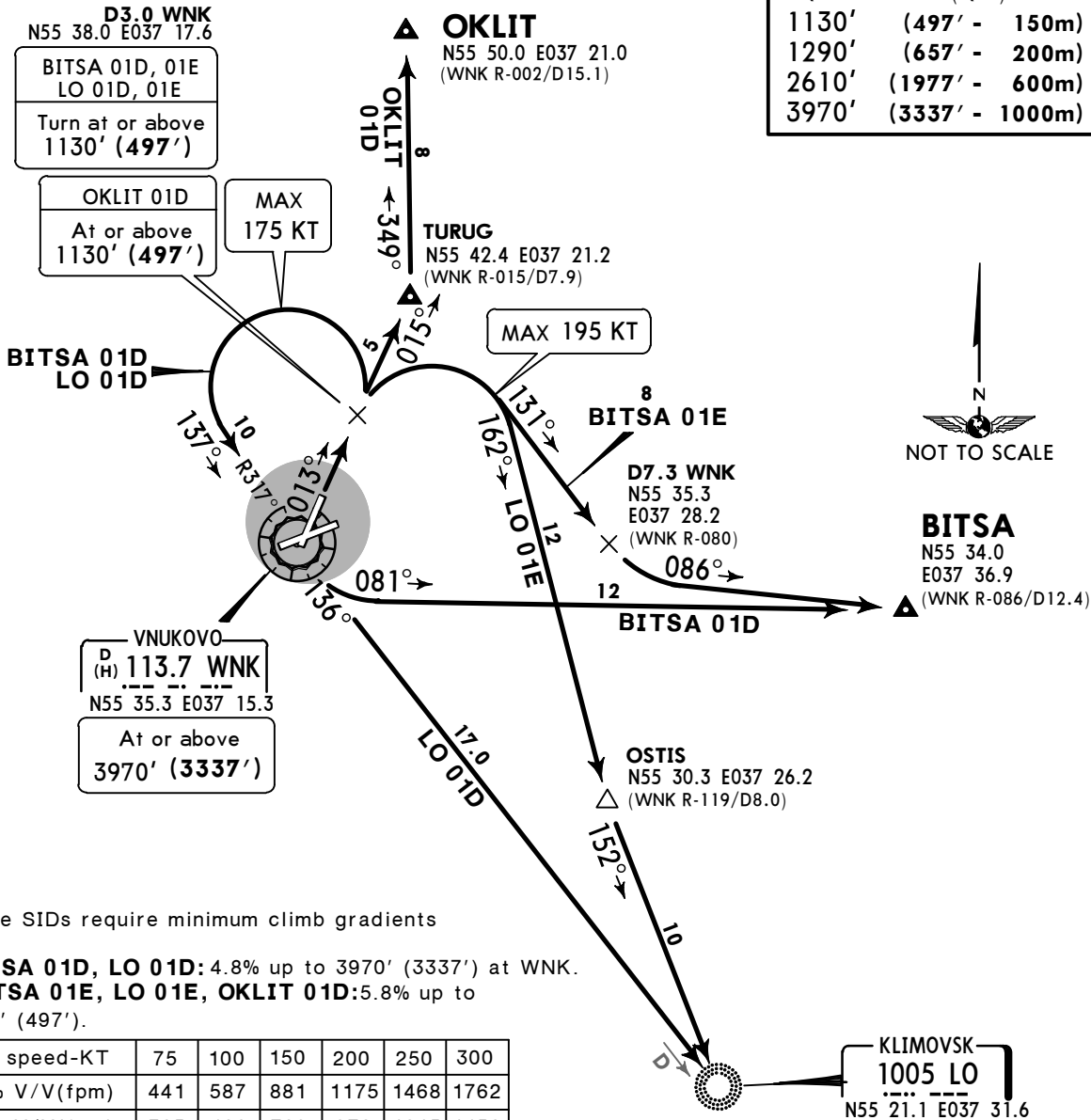
MOSCOW, RUSSIA

SID

VNUKOVO Radar 126.0	Apt Elev 686'	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.	 MSA ARP
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BITSA 01D [BITØ1D], BITSA 01E [BITØ1E]
KLIMOVSK 01D (LO 01D), KLIMOVSK 01E (LO 01E)
OKLIT 01D [OKLØ1D]
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)	



These SIDs require minimum climb gradients of
BITSA 01D, LO 01D: 4.8% up to 3970' (3337') at WNK.
BITSA 01E, OKLIT 01D: 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
4.8% V/V(fpm)	365	486	729	972	1215	1458

Initial climb clearance 2610' (1977')

SID	ROUTING
BITSA 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 137° track to WNK, 081° track to BITSA.
BITSA 01E By ATC	Climb straight ahead to D3.0 WNK, turn RIGHT, 131° track to D7.3 WNK, 086° track to BITSA.
LO 01D	Climb straight ahead to D3.0 WNK, turn LEFT, 137° track to WNK, 136° track to LO.
LO 01E	Climb straight ahead to D3.0 WNK, turn RIGHT, 162° track to OSTIS, 152° track to LO.
OKLIT 01D	Climb straight ahead to D3.0 WNK, then to TURUG, then to OKLIT.

UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3V

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

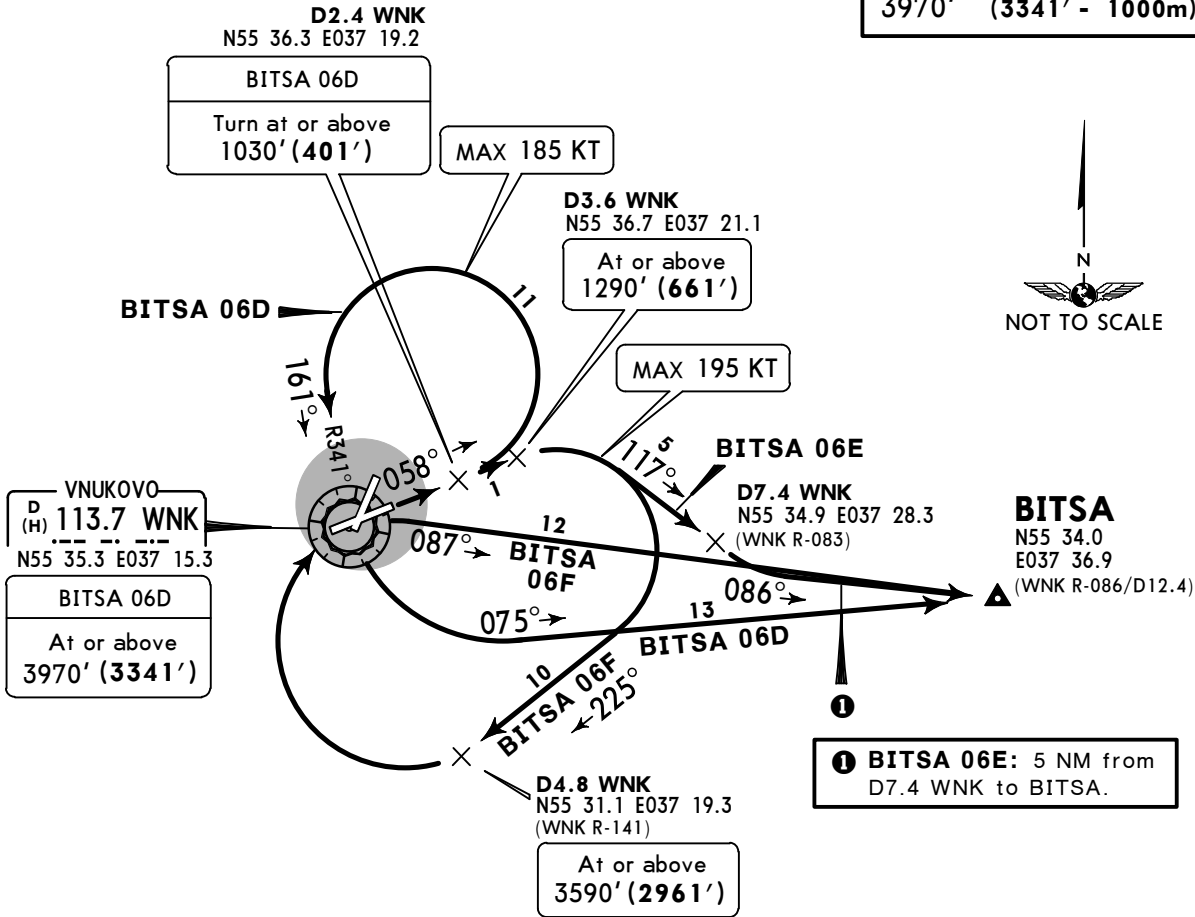
Apt Elev
686'

QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3341')
1. Contact VNUKOVO Radar immediately after crossing 1290' (661').
2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

MSA
ARP

BITSA 06D [BITØ6D], BITSA 06E [BITØ6E]
BITSA 06F [BITØ6F]
RWY 06 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION		
QNH	(QFE)	
1030'	(401' -	120m)
1290'	(661' -	200m)
2600'	(1971' -	600m)
3590'	(2961' -	900m)
3970'	(3341' -	1000m)



These SIDs require a minimum climb gradient of 5.8% up to 1030' (401').

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

Initial climb clearance 2600' (1971')

SID	ROUTING
BITSA 06D By ATC	Climb straight ahead to D2.4 WNK, turn LEFT, 161° track to WNK, turn LEFT, 075° track to BITSA.
BITSA 06E By ATC	Climb straight ahead to D3.6 WNK, turn RIGHT, 117° track to D7.4 WNK, turn LEFT, 086° track to BITSA.
BITSA 06F	Climb straight ahead to D3.6 WNK, turn RIGHT, 225° track to D4.8 WNK, turn RIGHT to WNK, 087° track to BITSA.

UUWW/VKO
VNUKOVO

JEPPESEN
21 JUN 13 10-3V1 Eff 27 Jun

MOSCOW, RUSSIA

SID

VNUKOVO
Radar
126.0

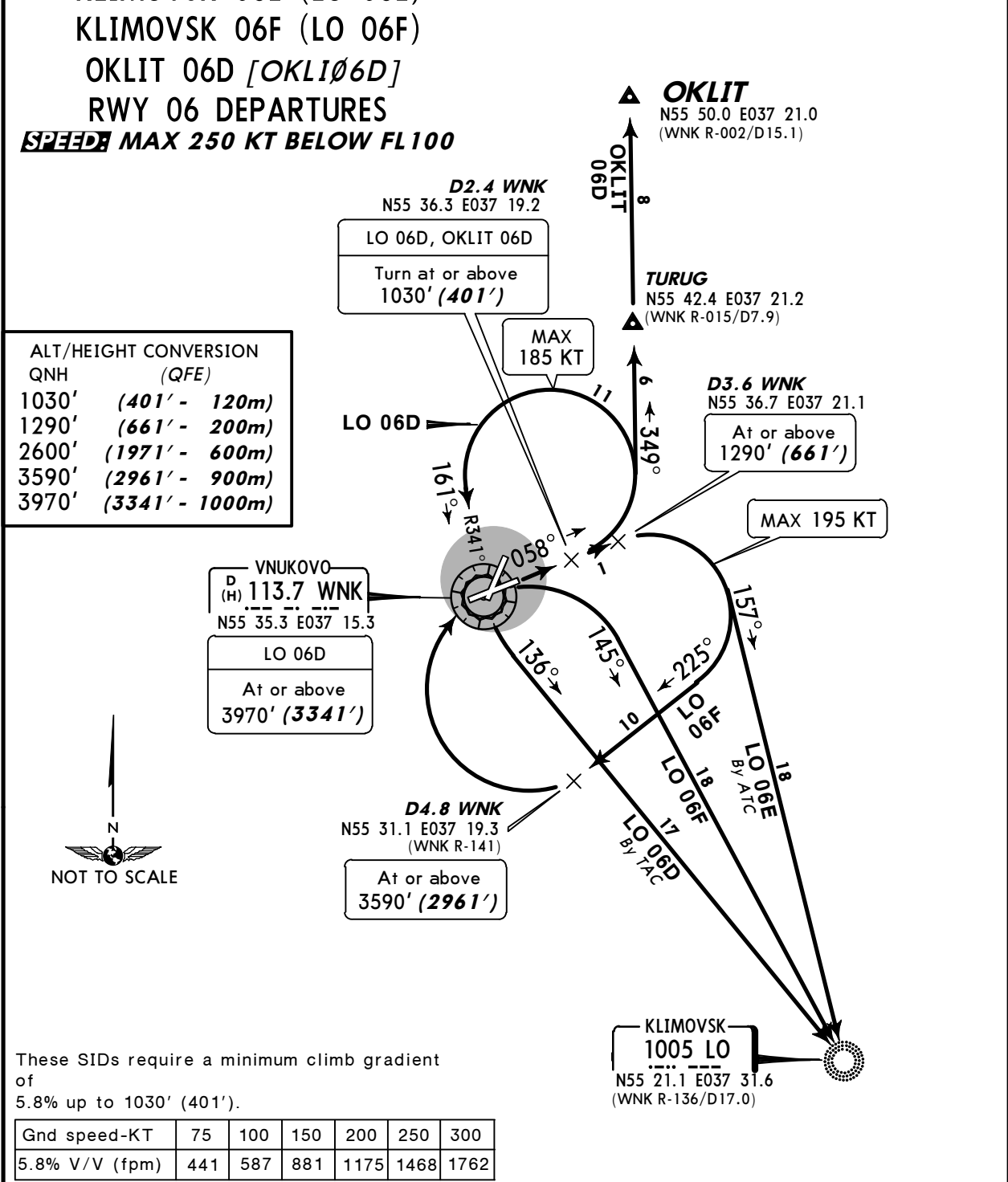
Apt Elev
686'

QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3341')
1. Contact VNUKOVO Radar immediately after crossing 1290' (661').
2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

180°
4000'
270°
2600'

MSA
ARP

KLIMOVSK 06D (LO 06D)
KLIMOVSK 06E (LO 06E)
KLIMOVSK 06F (LO 06F)
OKLIT 06D [OKLIØ6D]
RWY 06 DEPARTURES
SPEED MAX 250 KT BELOW FL100

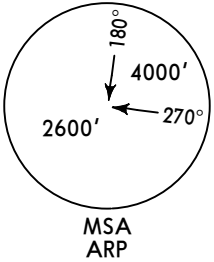


UUWW/VKO
VNUKOVO

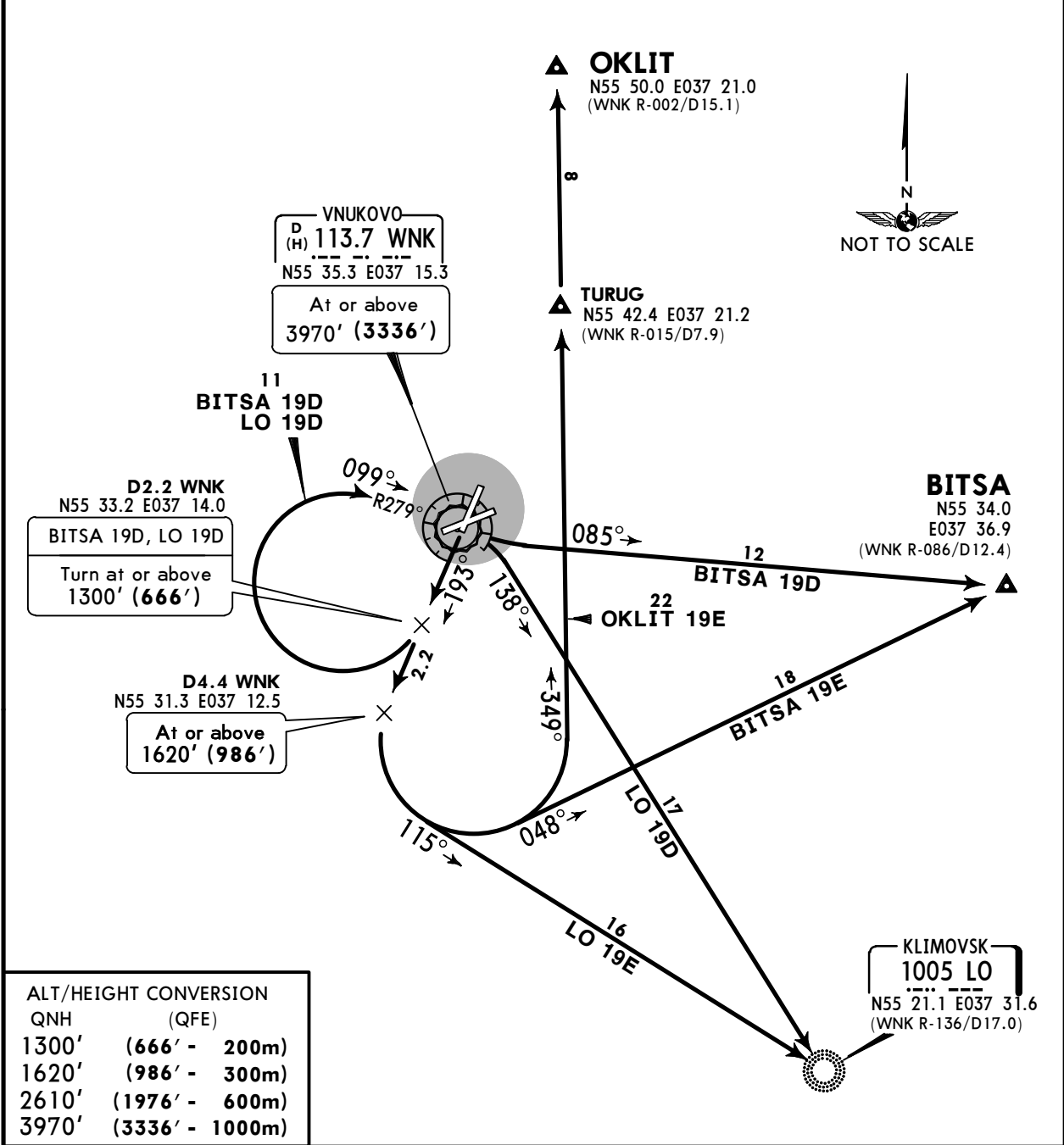
JEPPESEN
1 MAY 15 10-3W

MOSCOW, RUSSIA

SID

VNUKOVO Radar 126.0	Apt Elev 686'	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.	
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BITSA 19D[BIT19D], BITSA 19E[BIT19E]
KLIMOVSK 19D (LO 19D), KLIMOVSK 19E (LO 19E)
OKLIT 19E[OKL19E]
RWY 19 DEPARTURES
SPEED: MAX 250 KT BELOW FL100

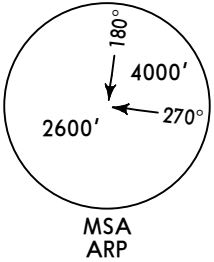


Initial climb clearance 2610' (1976')	
SID	ROUTING
BITSA 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 099° track to WNK, then to BITSA.
BITSA 19E	Climb straight ahead to D4.4 WNK, turn LEFT to BITSA.
LO 19D	Climb straight ahead to D2.2 WNK, turn RIGHT, 099° track to WNK, then to LO.
LO 19E	Climb straight ahead to D4.4 WNK, turn LEFT to LO.
OKLIT 19E By ATC	Climb straight ahead to D4.4 WNK, turn LEFT, 349° track to TURUG, then to OKLIT.

UUWW/VKO
VNUKOVO

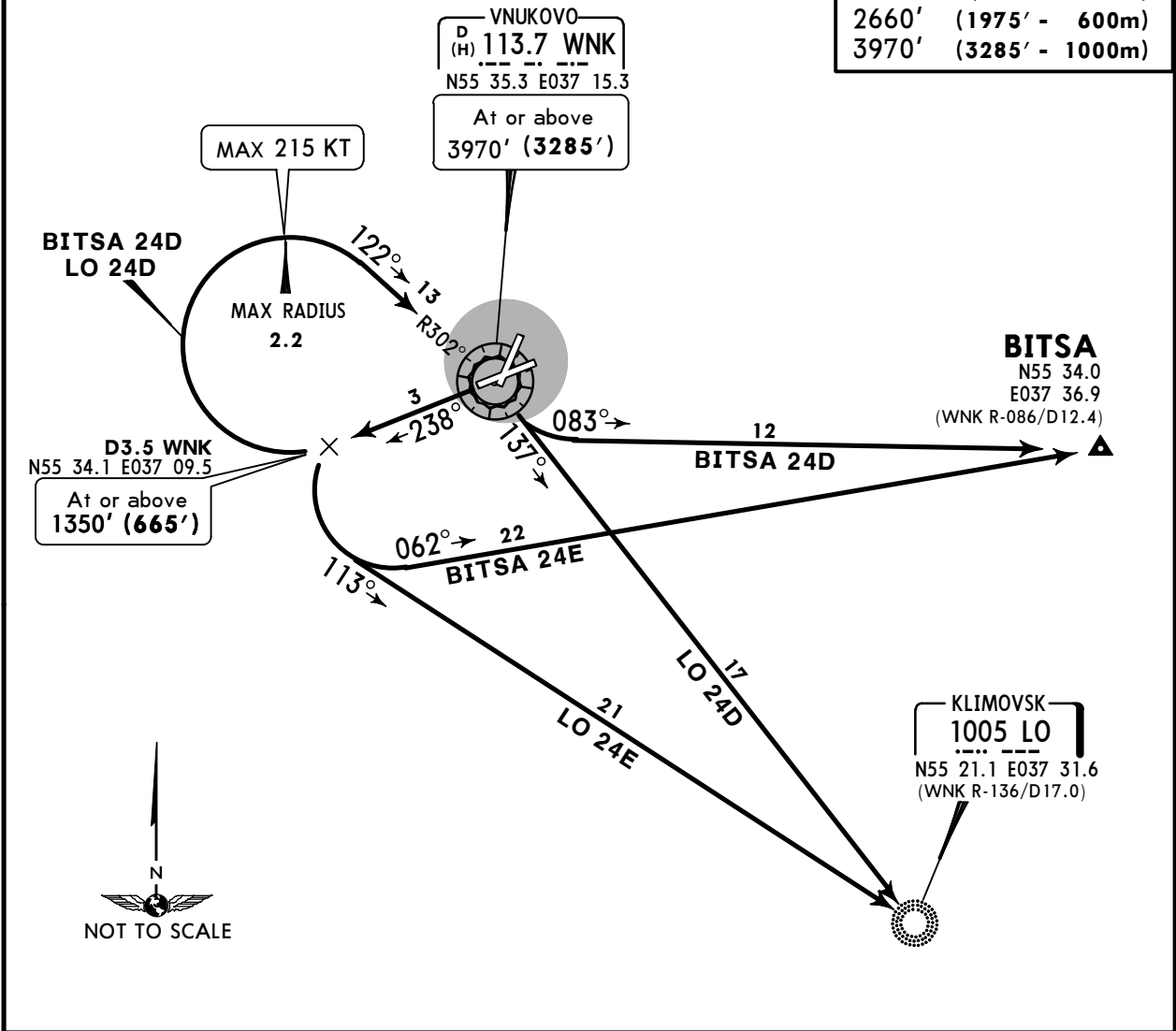
JEPPESEN
1 MAY 15 10-3X

MOSCOW, RUSSIA
SID

VNUKOVO Radar 126.0	Apt Elev 686'	QNH on request (QFE) Trans level: By ATC Trans alt: 3970' (3285') 1. Contact VNUKOVO Radar immediately after crossing 1350' (665'). 2. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.	
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BITSA 24D [BIT24D], BITSA 24E [BIT24E]
KLIMOVSK 24D (LO 24D), KLIMOVSK 24E (LO 24E)
RWY 24 DEPARTURES
~~SPEED~~ MAX 250 KT BELOW FL100

ALT/HEIGHT CONVERSION	
QNH	(QFE)
1350'	(665' - 200m)
2660'	(1975' - 600m)
3970'	(3285' - 1000m)



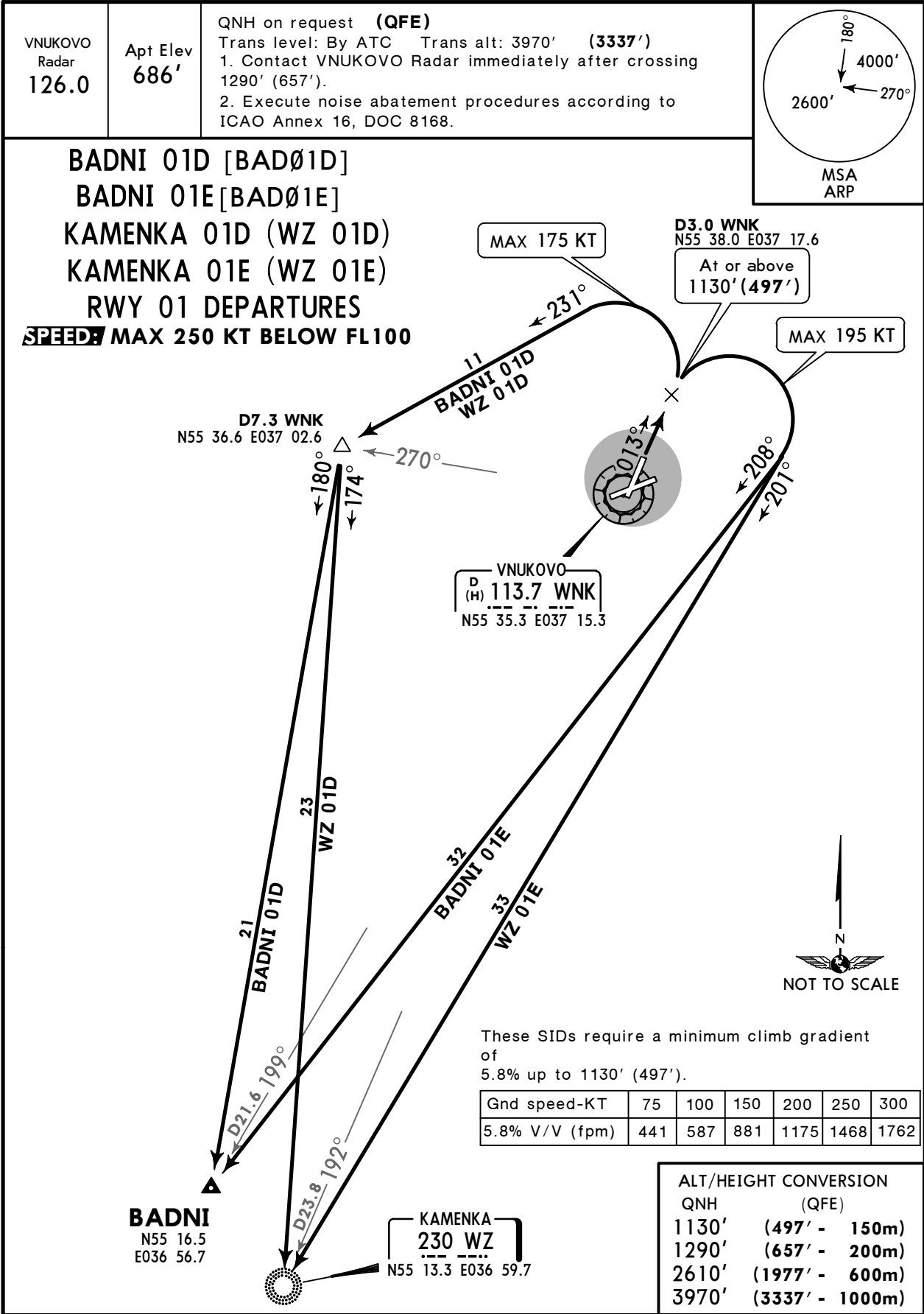
Initial climb clearance 2660' (1975')	
SID	ROUTING
BITSA 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 122° track to WNK, turn LEFT, 083° track to BITSA.
BITSA 24E By ATC	Climb straight ahead to D3.5 WNK, turn LEFT, 062° track to BITSA.
LO 24D	Climb straight ahead to D3.5 WNK, turn RIGHT, 122° track to WNK, turn RIGHT, 137° track to LO.
LO 24E By ATC	Climb straight ahead to D3.5 WNK, turn LEFT, 113° track to LO.

UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3X1

MOSCOW, RUSSIA

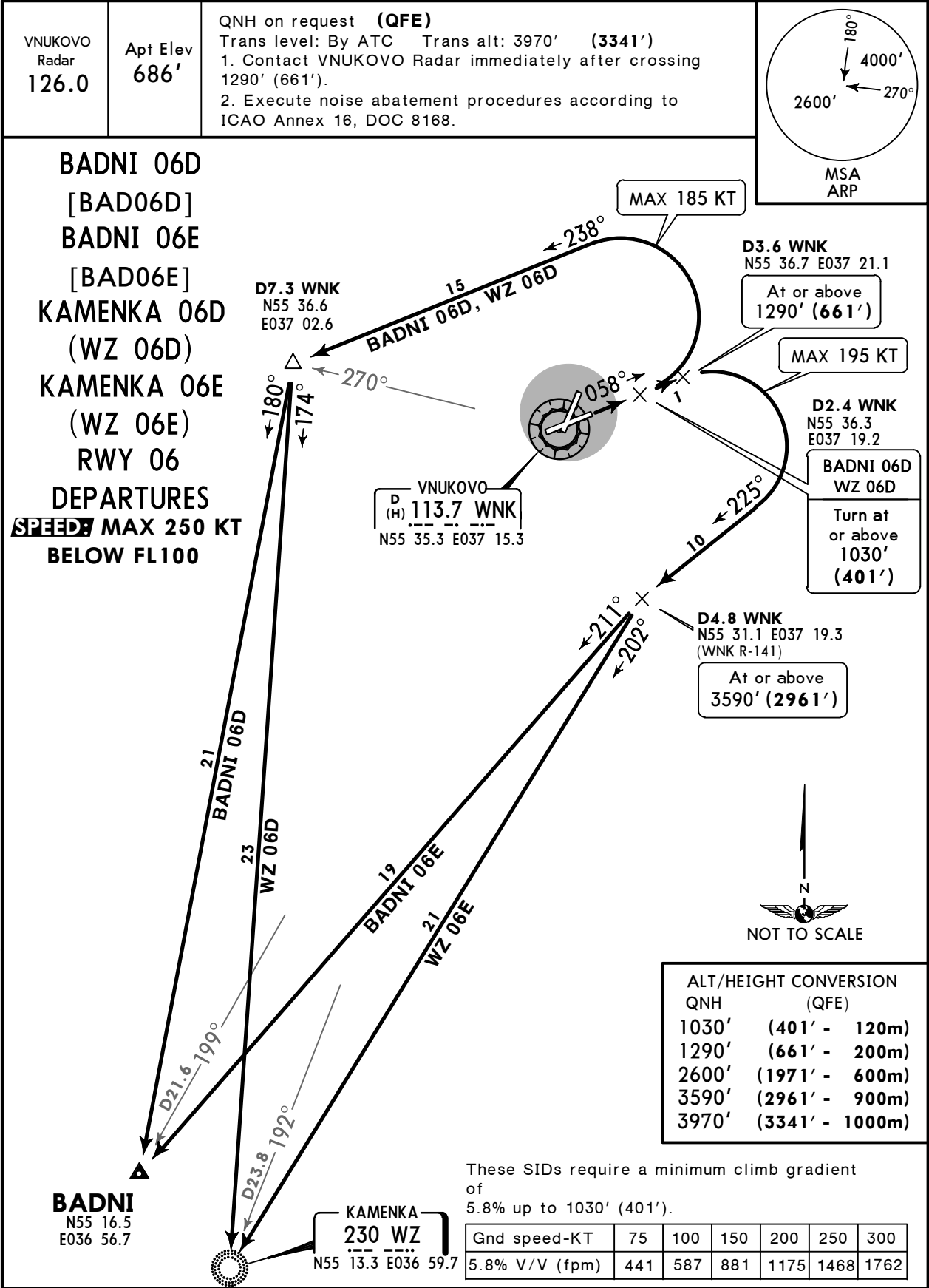
SID



UUWW/VKO
VNUKOVO

JEPPESSEN
1 MAY 15 10-3X2

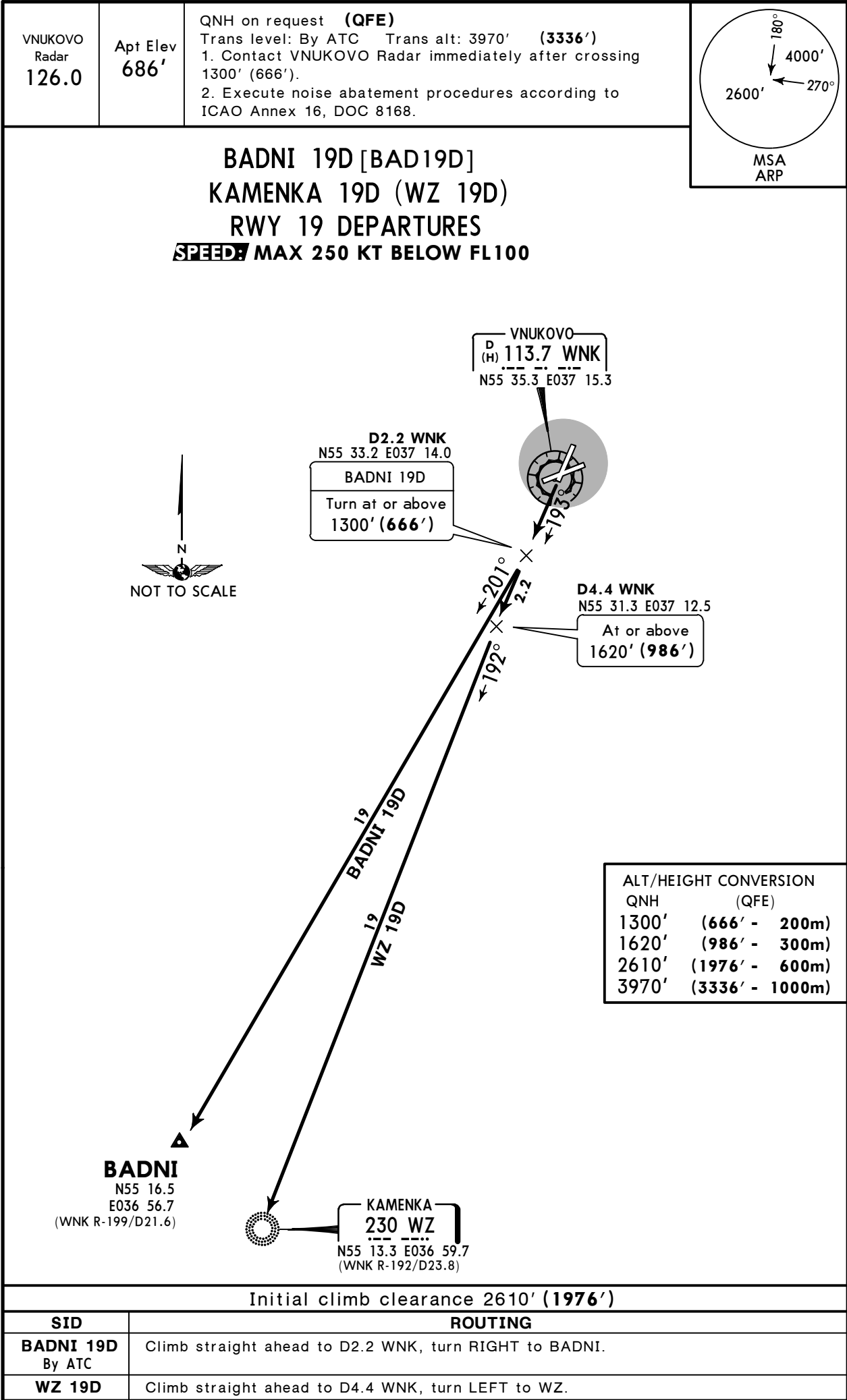
MOSCOW, RUSSIA
SID



UUWW/VKO
VNUKOVO

JEPPESEN
1 MAY 15 10-3X3

MOSCOW, RUSSIA
SID

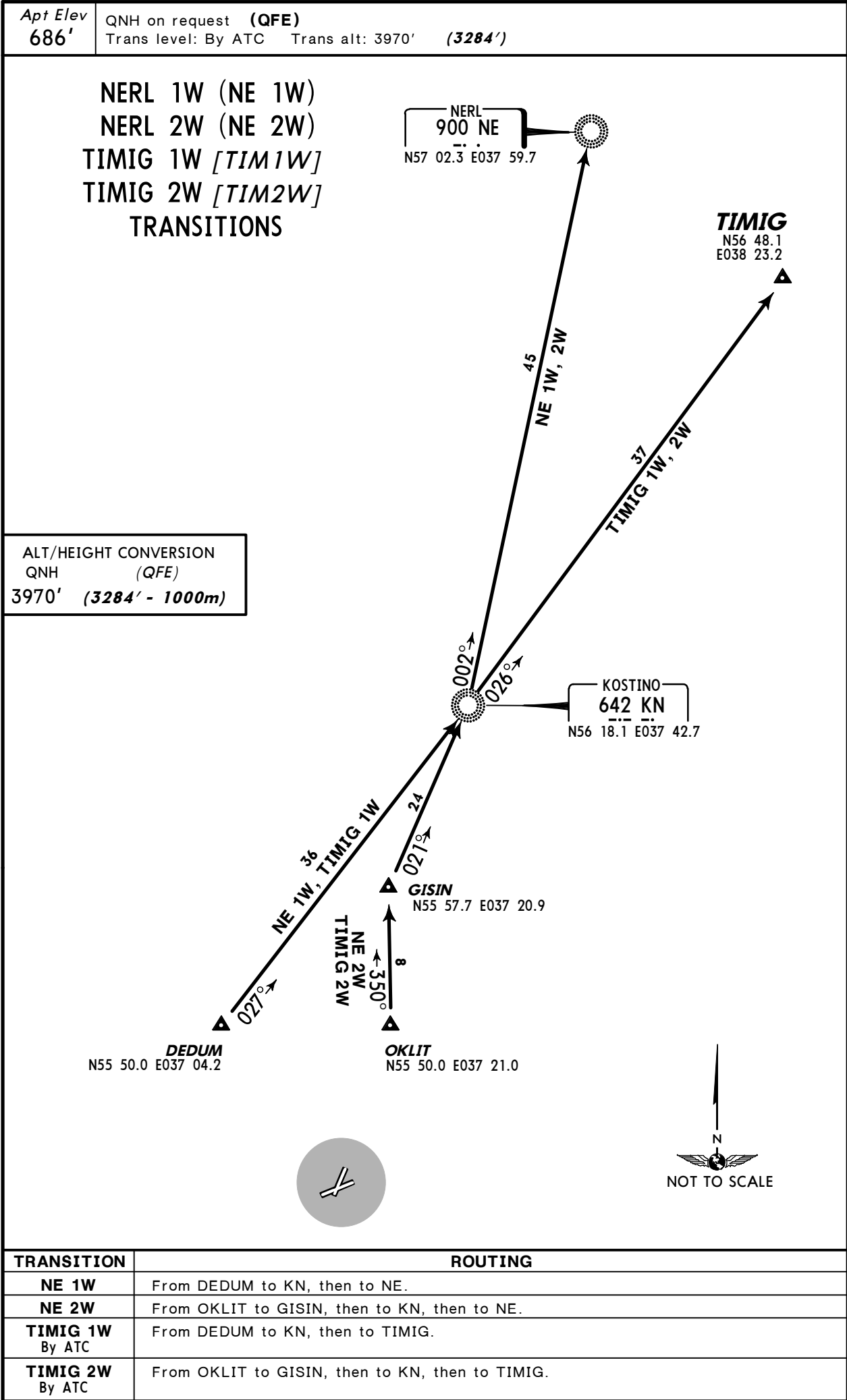


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UUWW/VKO
VNUKOVO

JEPPESEN
21 MAR 14 10-3X5 Eff 3 Apr

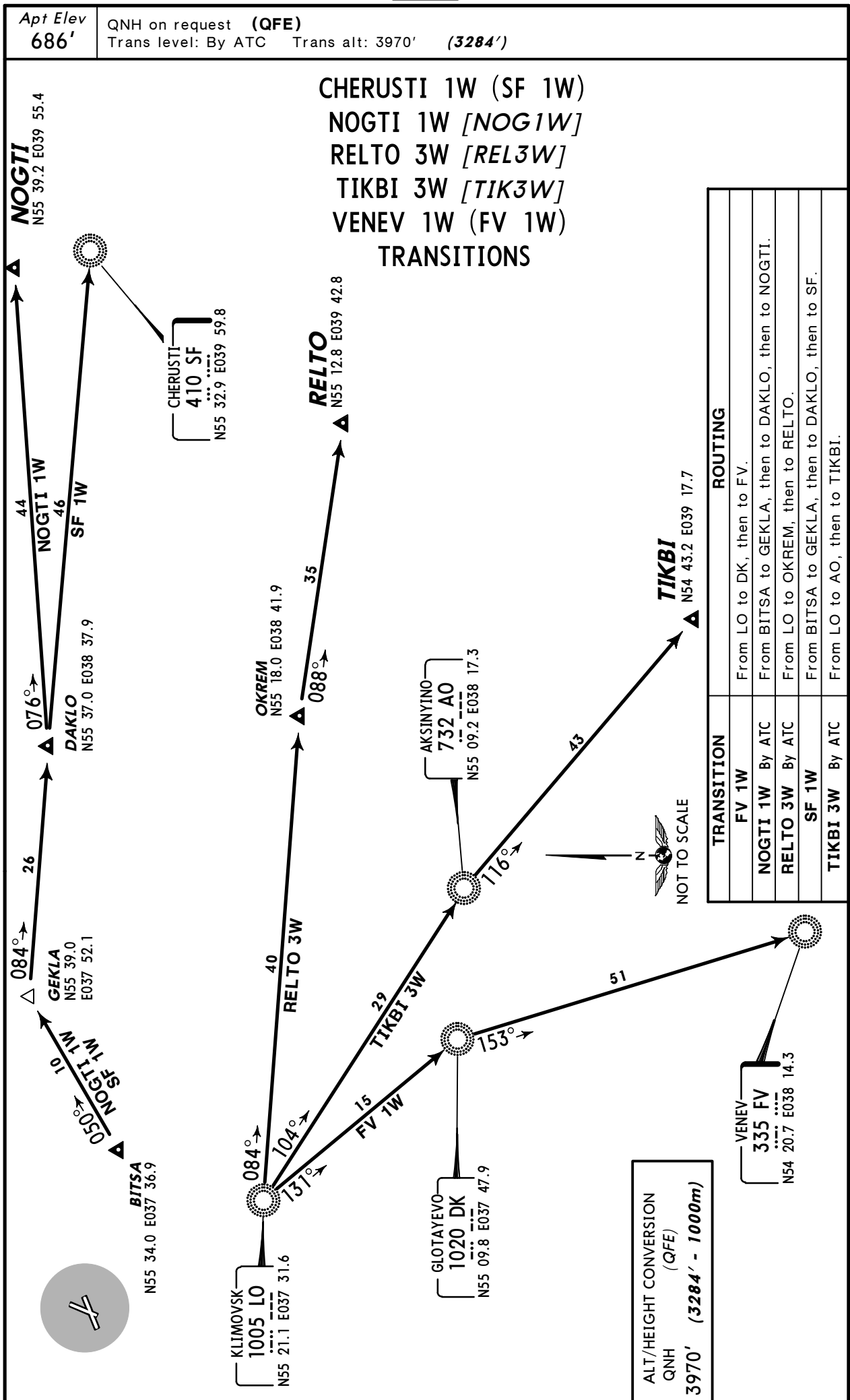
MOSCOW, RUSSIA
TRANSITION



UUWW/VKO
VNUKOVO

JEPPESSEN
21 MAR 14 10-3X6 Eff 3 Apr

MOSCOW, RUSSIA
TRANSITION



CHANGES: Transition NOGTI 1W established.

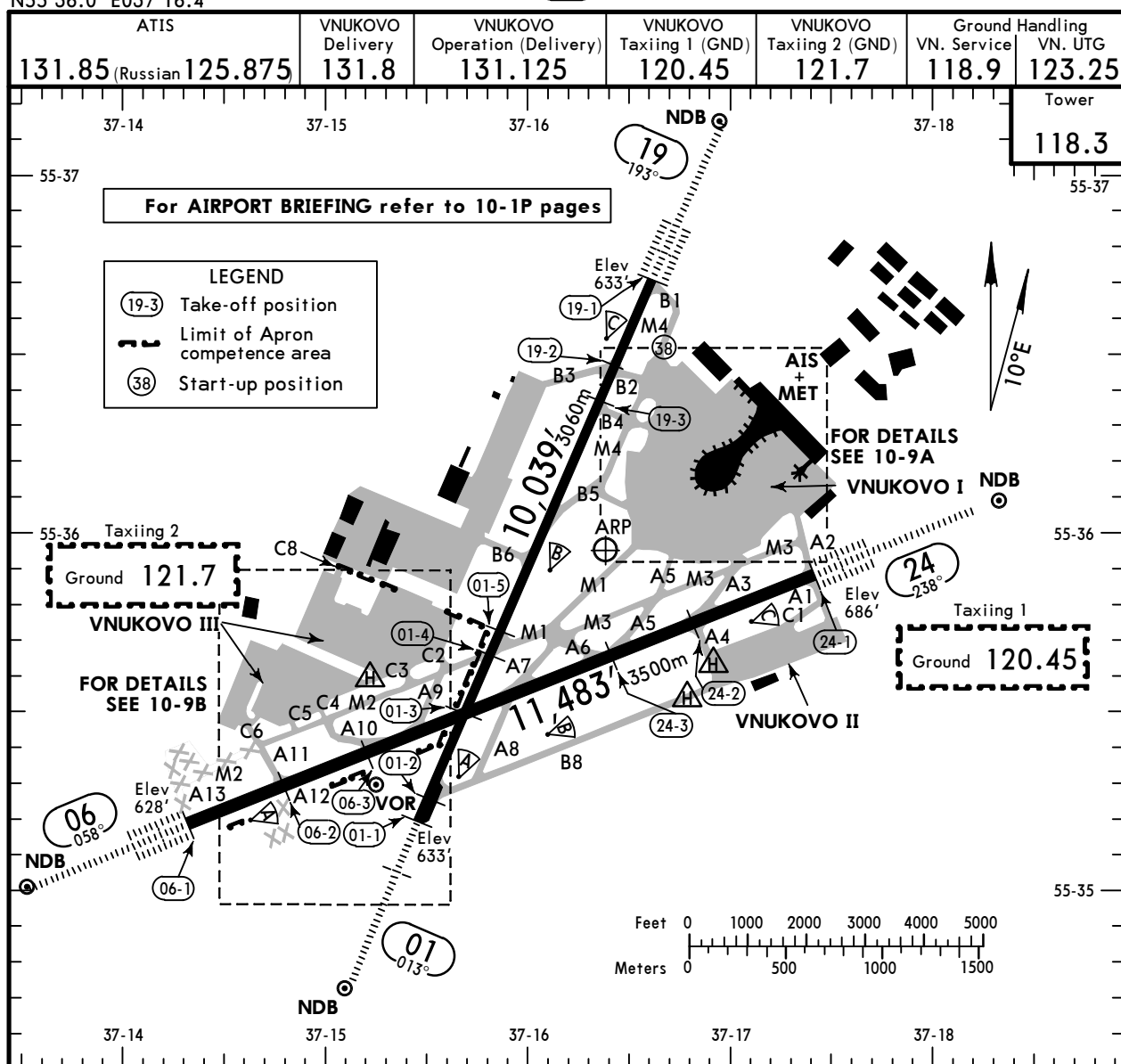
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UUWW/VKO

Apt Elev **686'**
N55 36.0 E037 16.4

JEPPESSEN

27 NOV 15

10-9
Eff 10 Dec
MOSCOW, RUSSIA
VNUKOVO


ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS				WIDTH
		Threshold	Landing Beyond	Glide Slope	TAKE-OFF	
01	HIRL (60m) CL (15m) HIALS PAPI-L (3.0°) RVR					148'
19	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L (3.0°) RVR			9128' 2782m	①	45m
① TAKE-OFF RUN AVAILABLE RWY 01: From point 01-1 10,039' (3060m) from point 01-2 9429' (2874m) from point 01-3 8091' (2466m) from point 01-4 7119' (2170m) from point 01-5 6850' (2088m) RWY 19: From point 19-1 10,039' (3060m) from point 19-2 8409' (2563m) from point 19-3 7713' (2351m)						
06	HIRL (60m) CL (15m) HIALS-II TDZ PAPI-L (3.0°) RVR			10,511' 3204m	②	197'
24				10,389' 3167m		60m
② TAKE-OFF RUN AVAILABLE RWY 06: From point 06-1 11,483' (3500m) from point 06-2 9843' (3000m) from point 06-3 8327' (2538m) RWY 24: From point 24-1 11,483' (3500m) from point 24-2 9708' (2959m) from point 24-3 8209' (2502m)						

TAKE-OFF

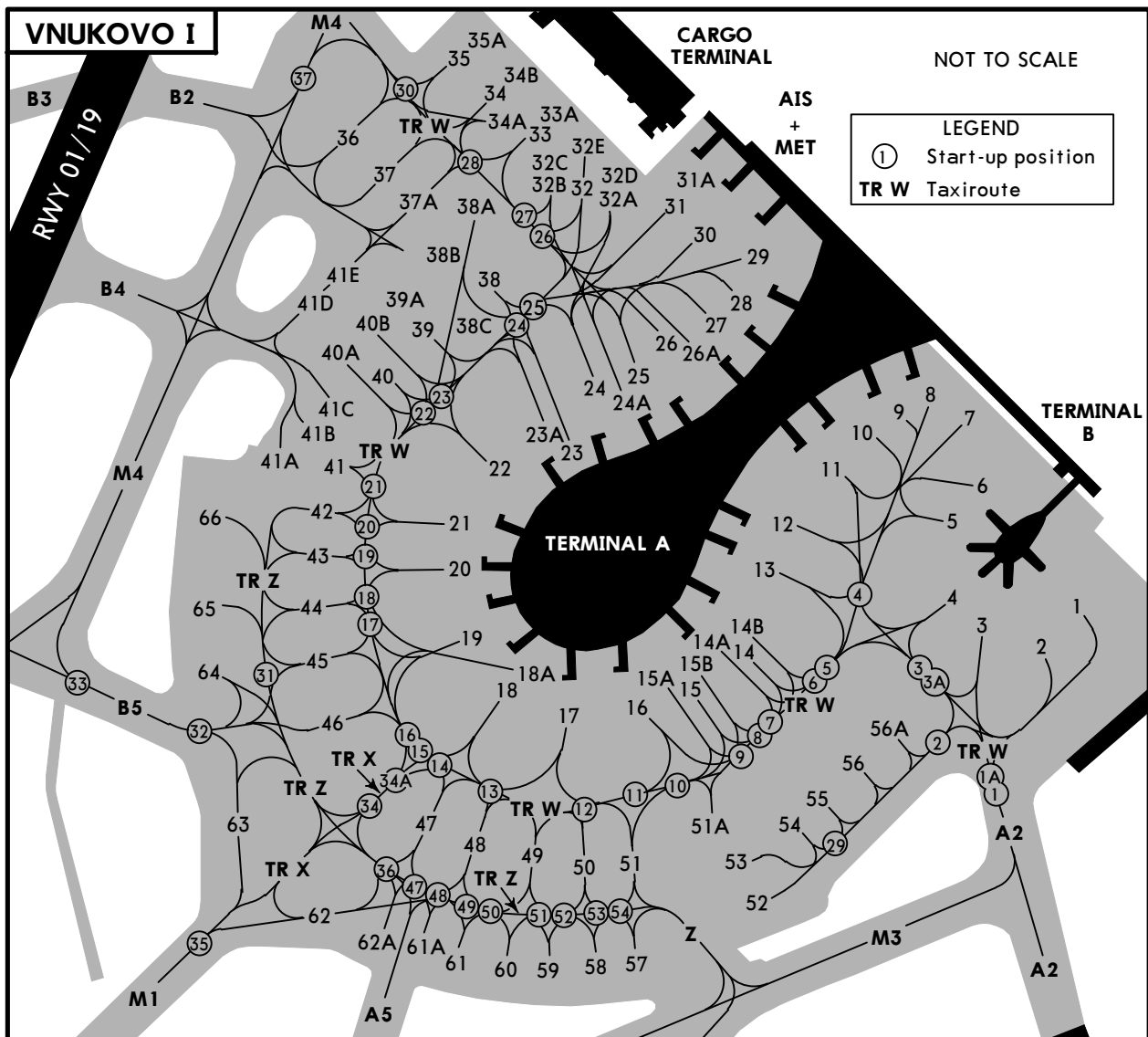
AIR CARRIER (JAA)				AIR CARRIER (FAR 121)		
All Rwys				All Rwys		
LVP must be in force		RCLM (DAY only) or RL	RCLM (DAY only) or RL	CL & RCLM any RVR out, other two req.		Adequate Vis Ref
RL & CL						
A				2 Eng		
B	200m (150m)	250m	400m	3 & 4 Eng	TDZ RVR 200m Mid RVR 200m Roll out RVR 150m	RVR 500m VIS 400m
C						
D	250m (200m)	300m				

CHANGES: None.

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27 NOV 15

10-9A

Eff 10 Dec

INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1	N55 36.2 E037 17.4	34B thru 35A	N55 36.5 E037 16.8
2	N55 36.1 E037 17.4	36, 37	N55 36.4 E037 16.7
3	N55 36.1 E037 17.3	37A	N55 36.4 E037 16.8
4 thru 7	N55 36.2 E037 17.3	38	N55 36.3 E037 16.8
8	N55 36.3 E037 17.3	38A, 38B	N55 36.4 E037 16.8
9	N55 36.3 E037 17.2	38C, 39	N55 36.3 E037 16.8
10	N55 36.2 E037 17.2	39A thru 40B	N55 36.3 E037 16.7
11 thru 13	N55 36.2 E037 17.1	42, 43	N55 36.2 E037 16.7
14	N55 36.1 E037 17.0	44	N55 36.1 E037 16.6
14A, 14B	N55 36.1 E037 17.1	45, 46	N55 36.1 E037 16.7
15 thru 15B	N55 36.1 E037 17.0	47, 48	N55 36.0 E037 16.8
16, 17	N55 36.1 E037 16.9	49, 50	N55 36.0 E037 16.9
18 thru 19	N55 36.1 E037 16.8	51	N55 36.0 E037 16.0
20 thru 22	N55 36.2 E037 16.8	52 thru 55	N55 36.0 E037 17.1
23 thru 24	N55 36.2 E037 16.9	56, 56A	N55 36.1 E037 17.2
24A	N55 36.2 E037 17.0	57	N55 35.9 E037 17.0
25 thru 27	N55 36.3 E037 17.0	58, 59	N55 35.9 E037 16.9
28, 29	N55 36.3 E037 17.1	60, 61	N55 35.9 E037 16.8
30 thru 31A	N55 36.4 E037 17.0	61A thru 62A	N55 36.0 E037 16.7
32 thru 32E	N55 36.4 E037 16.9	63	N55 36.0 E037 16.6
33	N55 36.4 E037 16.8	64, 65	N55 36.1 E037 16.5
33A	N55 36.4 E037 16.9	66	N55 36.2 E037 16.5
34, 34A	N55 36.4 E037 16.8		

CHANGES: Start-up positions.

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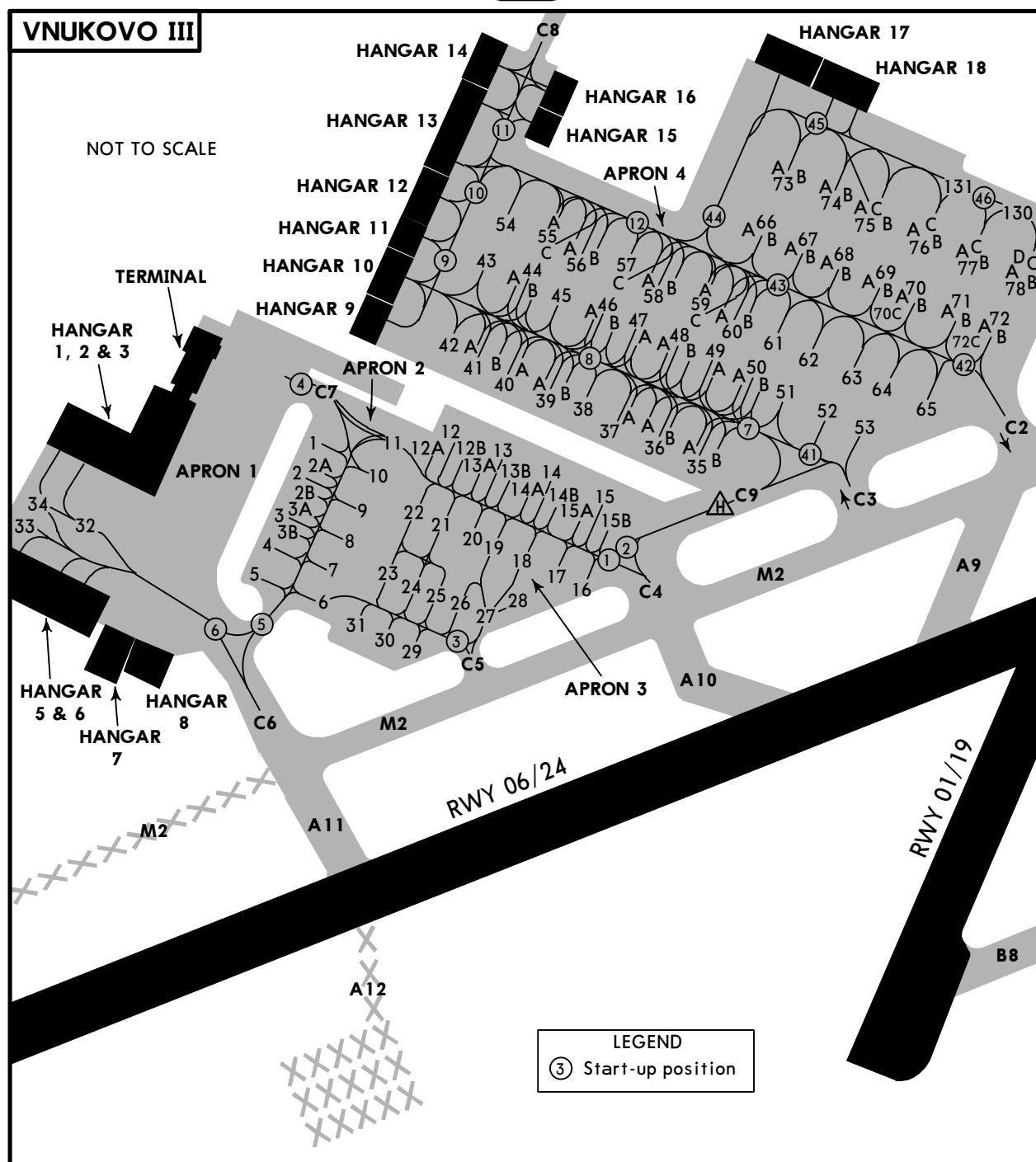
MOSCOW, RUSSIA

27 NOV 15

(10-9B)

Eff 10 Dec

VNUKOVO



INS COORDINATES

STAND No.	COORDINATES	STAND No.	COORDINATES
1 thru 9	N55 35.5 E037 14.7	67 thru 68	N55 35.8 E037 15.4
10, 11	N55 35.6 E037 14.7	68A thru 69	N55 35.7 E037 15.4
12	N55 35.6 E037 14.8	69A	N55 35.7 E037 15.5
13 thru 15	N55 35.5 E037 14.9	69B	N55 35.7 E037 15.4
16 thru 31	N55 35.5 E037 14.8	70 thru 71B	N55 35.7 E037 15.5
40 thru 44A	N55 35.7 E037 15.0	72 thru 72B	N55 35.7 E037 15.6
44B thru 46B	N55 35.7 E037 15.1	73 thru 73B	N55 35.8 E037 15.3
52	N55 35.7 E037 15.4	74 thru 75C	N55 35.8 E037 15.4
53	N55 35.6 E037 15.4	76, 76A	N55 35.7 E037 15.5
54	N55 35.8 E037 15.0	76B	N55 35.8 E037 15.5
55 thru 56B	N55 35.8 E037 15.1	77 thru 77B	N55 35.7 E037 15.5
57 thru 58B	N55 35.7 E037 15.2	78 thru 78B	N55 35.7 E037 15.6
62 thru 64	N55 35.7 E037 15.4		
65	N55 35.6 E037 15.5		
66 thru 66B	N55 35.8 E037 15.3		

CHANGES: Stands.

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27 FEB 15

10-9S
Eff 5 Mar
Standard
MOSCOW, RUSSIA
VNUKOVO

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	1080' (447')	1080' (447')	1080' (447')	1080' (447')
		R1400m	R1400m	R1400m	R1400m
	<i>ALS out</i>	R1500m	R1500m	C2100m	C2100m
	NDB ①②	1080' (447')	1080' (447')	1080' (447')	1080' (447')
		R1400m	R1400m	R1400m	R1400m
06	<i>ALS out</i>	R1500m	R1500m	C2100m	C2100m
	NDB ③	1180' (547')	1180' (547')	1180' (547')	1180' (547')
		R2000m	R2000m	C2200m	C2200m
	<i>ALS out</i>	C2700m	C2700m	C2900m	C2900m
	CAT 3A ILS	RA50' R200m	RA50' R200m	RA50' R200m	RA50' R200m
	CAT 2 ILS	730' (100')	730' (100')	730' (100')	730' (100') ④
		RA104' R300m	RA104' R300m	RA104' R300m	RA104' R300m
	ILS	830' (200')	830' (200')	830' (200')	830' (200')
	<i>FULL</i>	R550m	R550m	R550m	R550m
	<i>Limited</i>	R750m	R750m	R750m	R750m
19	<i>ALS out</i>	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ①	1100' (470')	1100' (470')	1100' (470')	1100' (470')
		R1500m	R1500m	R1500m	R1500m
	<i>ALS out</i>	R1500m	R1500m	C2200m	C2200m
	NDB ①②	1100' (470')	1100' (470')	1100' (470')	1100' (470')
		R1500m	R1500m	R1500m	R1500m
	<i>ALS out</i>	R1500m	R1500m	C2200m	C2200m
	NDB ③	1220' (590')	1220' (590')	1220' (590')	1220' (590')
		C2200m	C2200m	C2400m	C2400m
19	<i>ALS out</i>	C2900m	C2900m	C3100m	C3100m
	CAT 2 ILS	733' (100')	733' (100')	733' (100')	738' (105')
		RA105' R300m	RA105' R300m	RA105' R300m	RA111' R300m
	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

① Continuous Descent Final Approach.

② with FAF.

③ w/o FAF.

④ Widebodied acft: DA(H) 732'(102') RA106'.

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 **JEPPESEN**

27 FEB 15

10-9S1
Eff 5 Mar
Standard
MOSCOW, RUSSIA
VNUKOVO

STRAIGHT-IN RWY		A	B	C	D
19 (contd)	RNAV ①	1150' (517') R1500m	1150' (517') R1500m	1150' (517') R1600m	1150' (517') R1600m
	<i>ALS out</i>	R1500m	R1500m	C2400m	C2400m
	NDB ①②	1150' (517') R1500m	1150' (517') R1500m	1150' (517') R1600m	1150' (517') R1600m
	<i>ALS out</i>	R1500m	R1500m	C2400m	C2400m
	NDB ③	1250' (617') C2300m	1250' (617') C2300m	1250' (617') C2500m	1250' (617') C2500m
	<i>ALS out</i>	C3000m	C3000m	C3200m	C3200m
24	CAT 3A ILS	RA50' R200m	RA50' R200m	RA50' R200m	RA50' R200m
	CAT 2 ILS	786' (100') RA102' R300m	786' (100') RA102' R300m	786' (100') RA102' R300m	786' (100') RA102' R300m
	ILS	886' (200') R550m	886' (200') R550m	886' (200') R550m	886' (200') R550m
	<i>FULL</i>	R750m	R750m	R750m	R750m
	<i>Limited</i>	R1200m	R1200m	R1200m	R1200m
	<i>ALS out</i>				
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	RNAV ①	1060' (374') R1000m	1060' (374') R1000m	1060' (374') R1000m	1060' (374') R1000m
	<i>ALS out</i>	R1500m	R1500m	R1700m	R1700m
	NDB ①②	1060' (374') R1000m	1060' (374') R1000m	1060' (374') R1000m	1060' (374') R1000m
	<i>ALS out</i>	R1500m	R1500m	R1700m	R1700m
	NDB ③	1480' (794') C3100m	1480' (794') C3100m	1480' (794') C3300m	1480' (794') C3300m
	<i>ALS out</i>	C3800m	C3800m	C4000m	C4000m

① Continuous Descent Final Approach.

② with FAF.

③ w/o FAF.

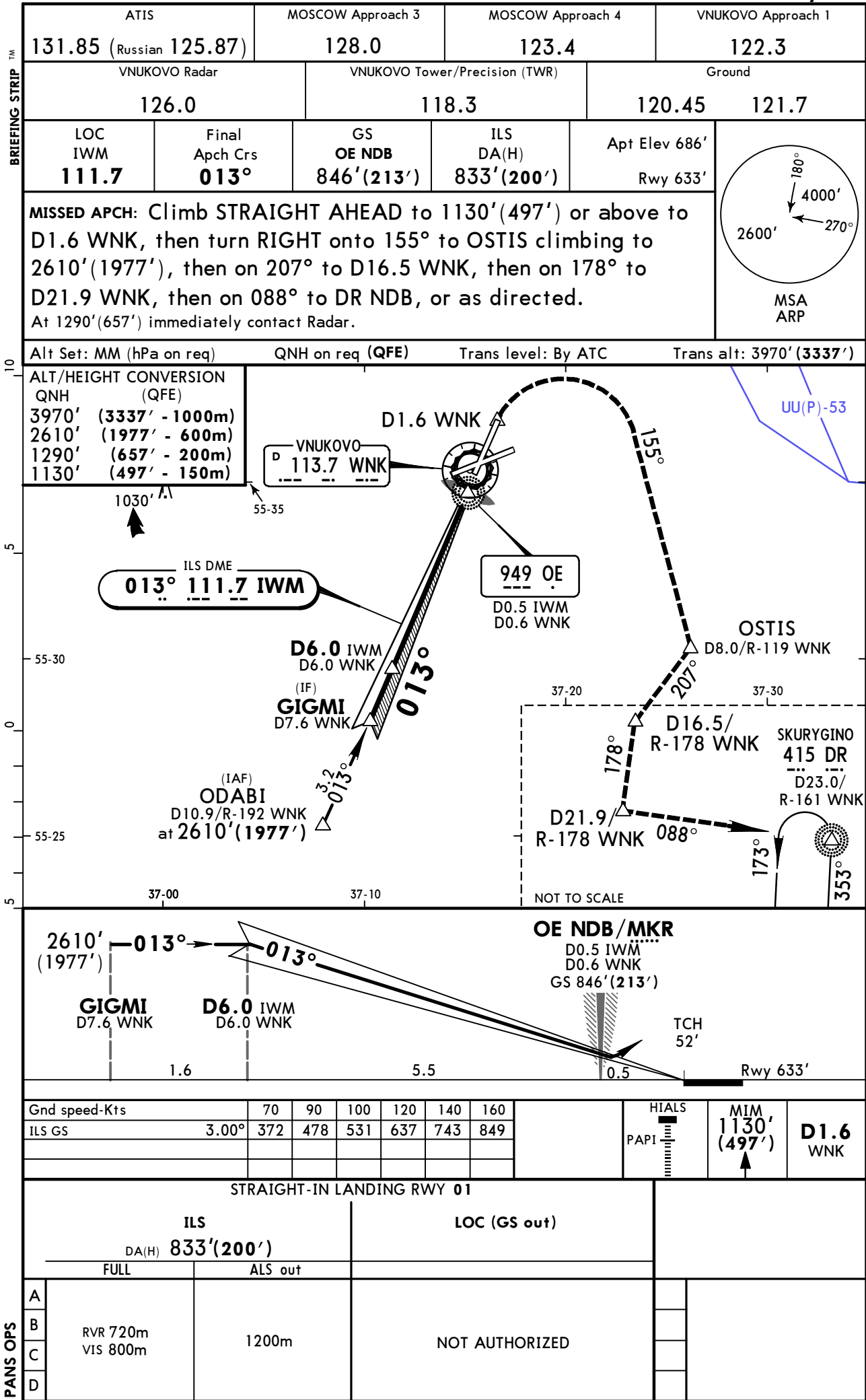
TAKE-OFF RWY 01, 06, 19, 24

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

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JEPPESSEN
9 OCT 15 11-1 Eff 15 Oct

MOSCOW, RUSSIA
ILS DME Rwy 01



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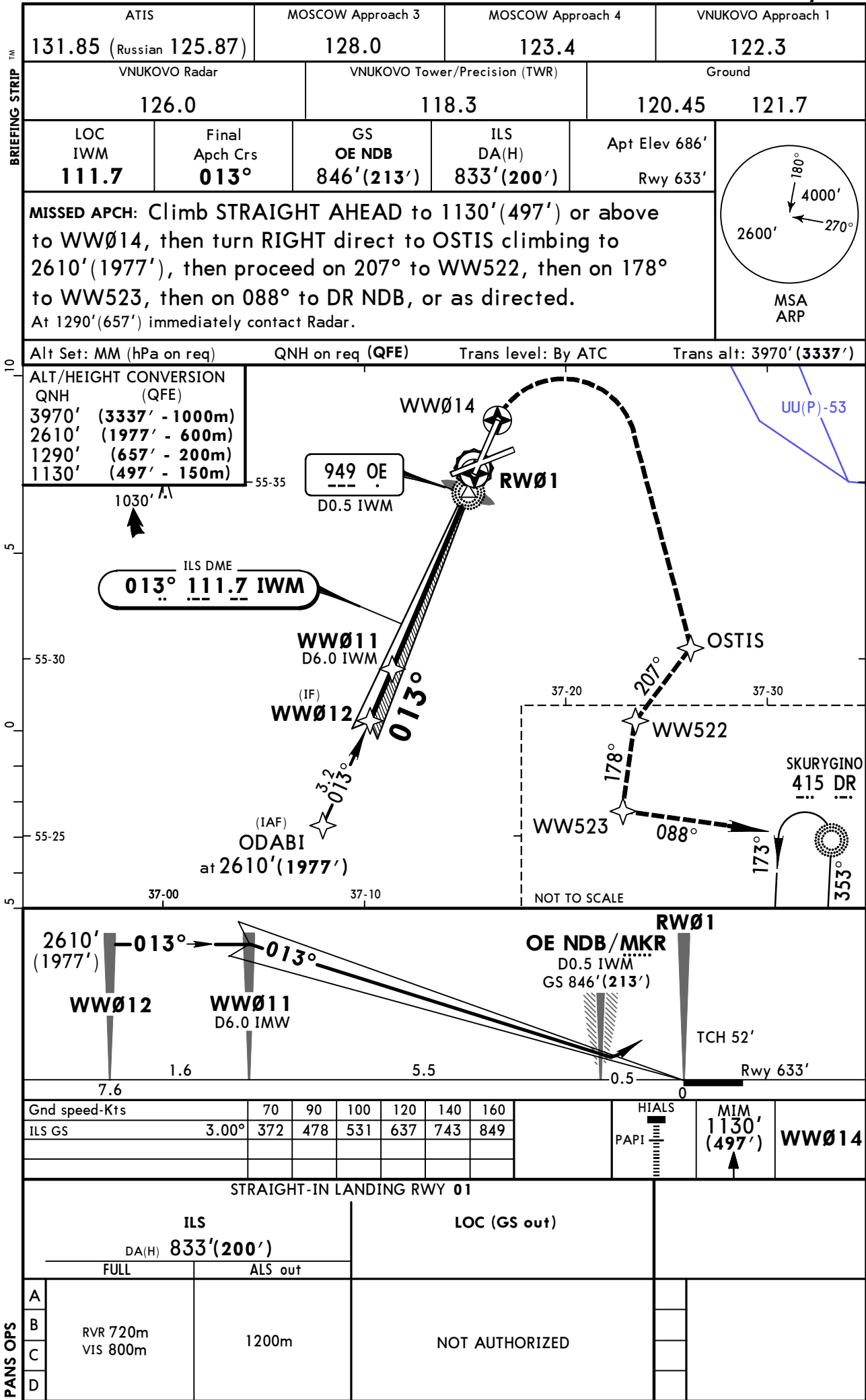
JEPPESSEN

9 OCT 15

11-2

Eff 15 Oct

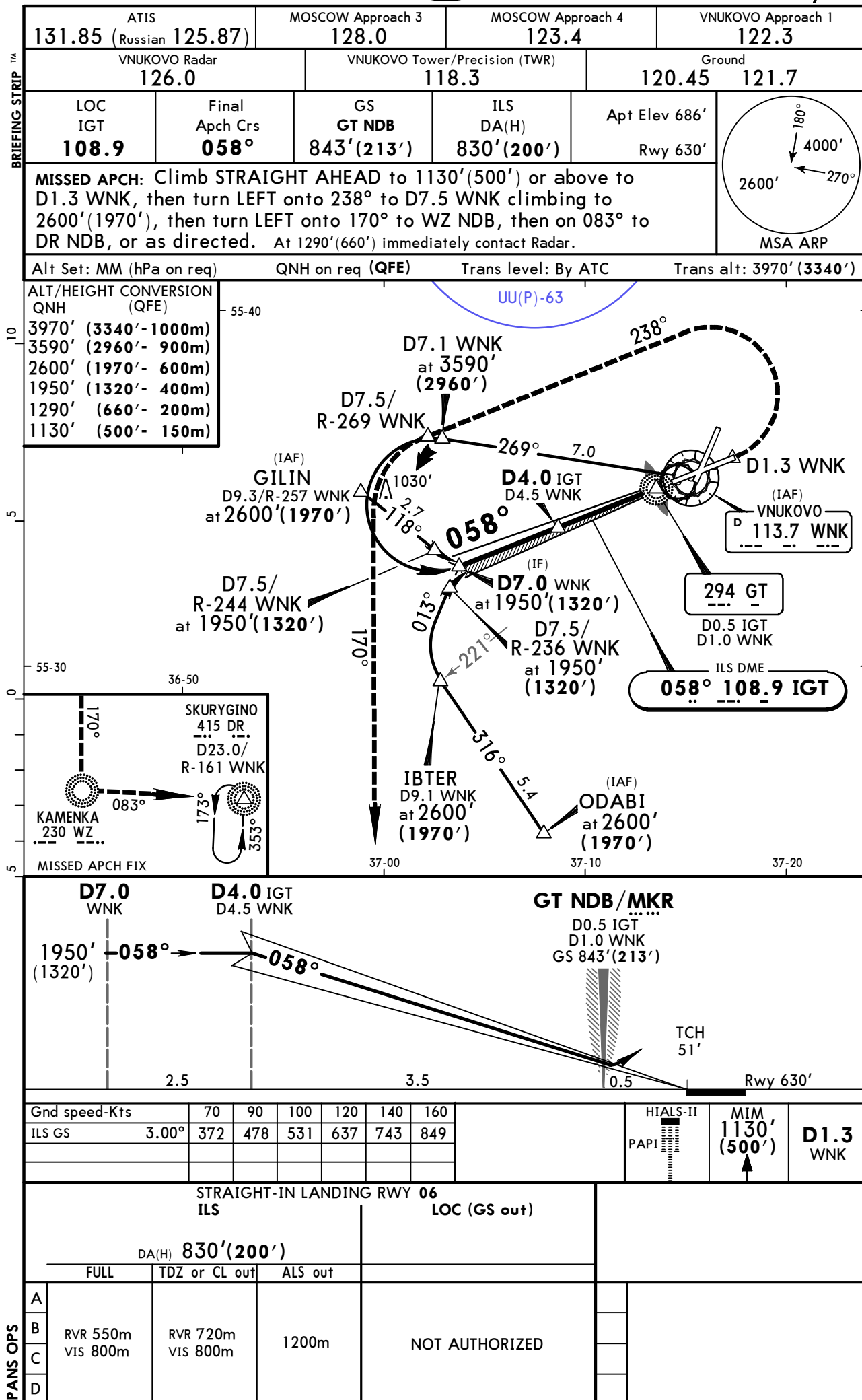
MOSCOW, RUSSIA
ILS (GNSS) Rwy 01



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JEPPESSEN
9 OCT 15 **(11-3)** **Eff 15 Oct**

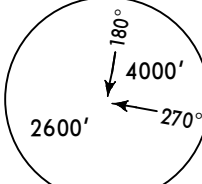
MOSCOW, RUSSIA
ILS DME Rwy 06



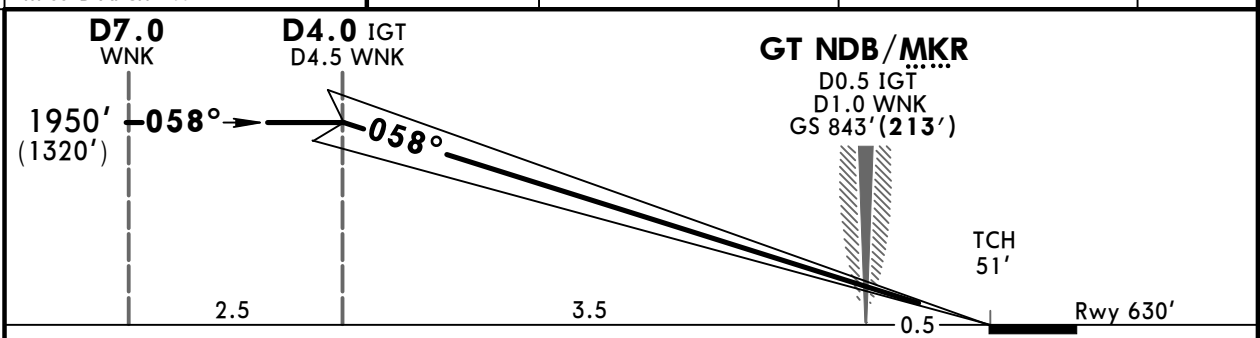
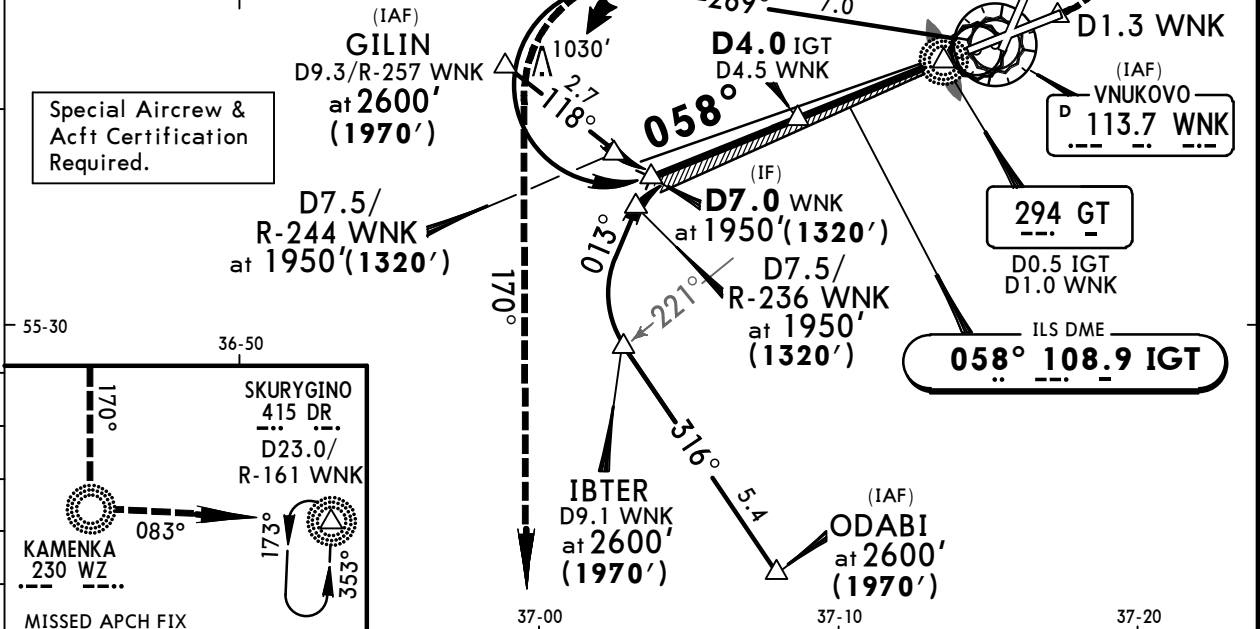
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VNUKOVO

JEPPESSEN
9 OCT 15
Eff 15 Oct 11-3A

MOSCOW, RUSSIA
CAT II ILS DME Rwy 06

ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 1 122.3	
VNUKOVO Radar 126.0		VNUKOVO Tower/Precision (TWR) 118.3		Ground 120.45 121.7	
LOC IGT 108.9	Final Apch Crs 058°	GS GT NDB 843'(213')	CAT II ILS RA 104' DA(H) 730'(100')	Apt Elev 686' Rwy 630'	
MISSED APCH: Climb STRAIGHT AHEAD to 1130'(500') or above to D1.3 WNK, then turn LEFT onto 238° to D7.5 WNK climbing to 2600'(1970'), then turn LEFT onto 170° to WZ NDB, then on 083° to DR NDB, or as directed. At 1290'(660') immediately contact Radar.					
MSA ARP					
Alt Set: MM (hPa on req)		QNH on req (QFE)	Trans level: By ATC		Trans alt: 3970' (3340')

ALT/HEIGHT CONVERSION	QNH	(QFE)
3970'	(3340' - 1000m)	
3590'	(2960' - 900m)	
2600'	(1970' - 600m)	
1950'	(1320' - 400m)	
1290'	(660' - 200m)	
1130'	(500' - 150m)	



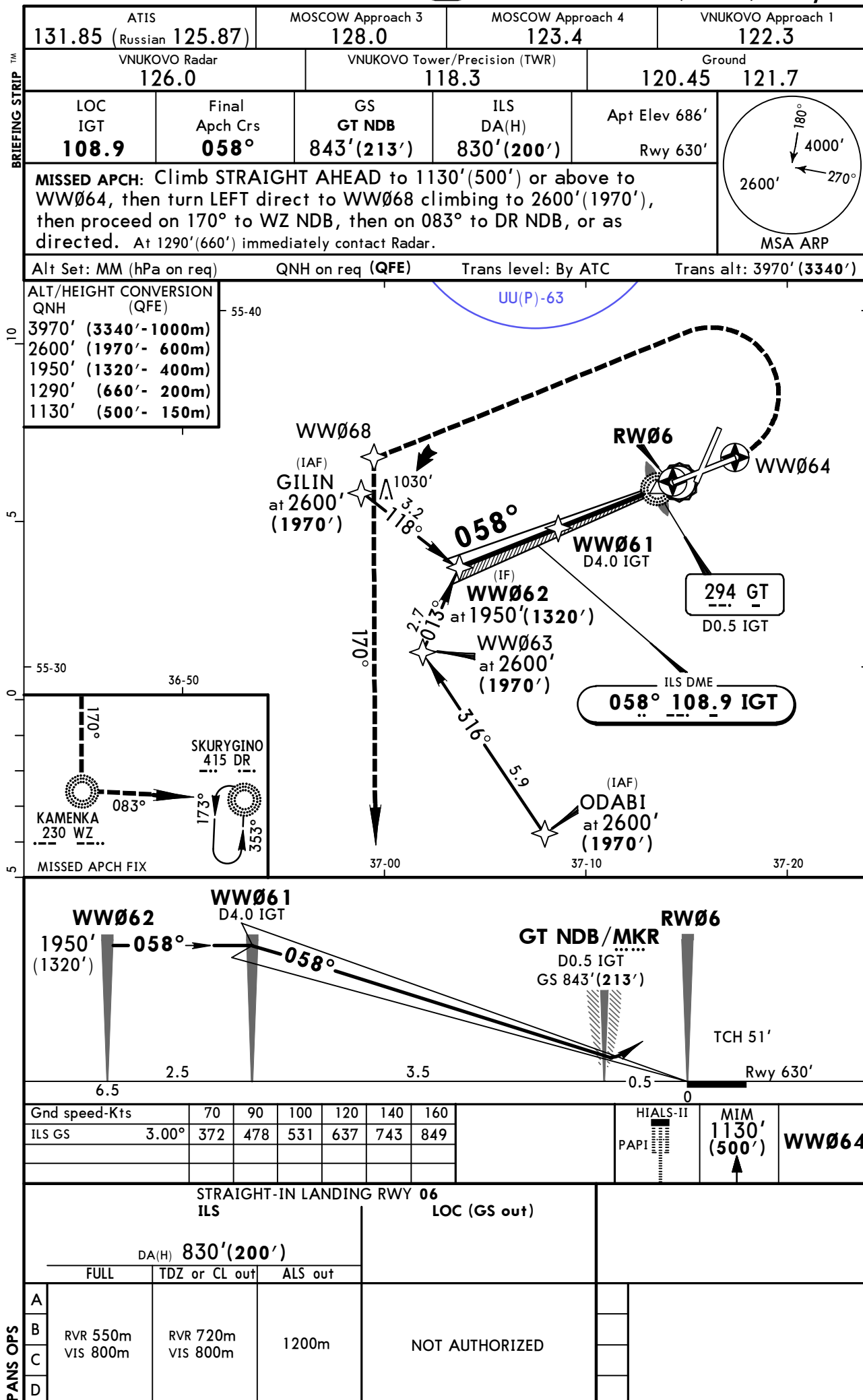
Gnd speed-Kts	70	90	100	120	140	160	HIALS-II		MIM	D1.3
GS	3.00°	372	478	531	637	743	849	PAPI	1130' (500')	WNK

STRAIGHT-IN LANDING RWY 06
CAT II ILS
RA 104'
DA(H) 730'(100') ■

RVR 300m

■ Widebodied acft: RA 106' DA(H) 732'(102')

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9 OCT 15 **(11-4)**
Eff 15 Oct
MOSCOW, RUSSIA
ILS (GNSS) Rwy 06


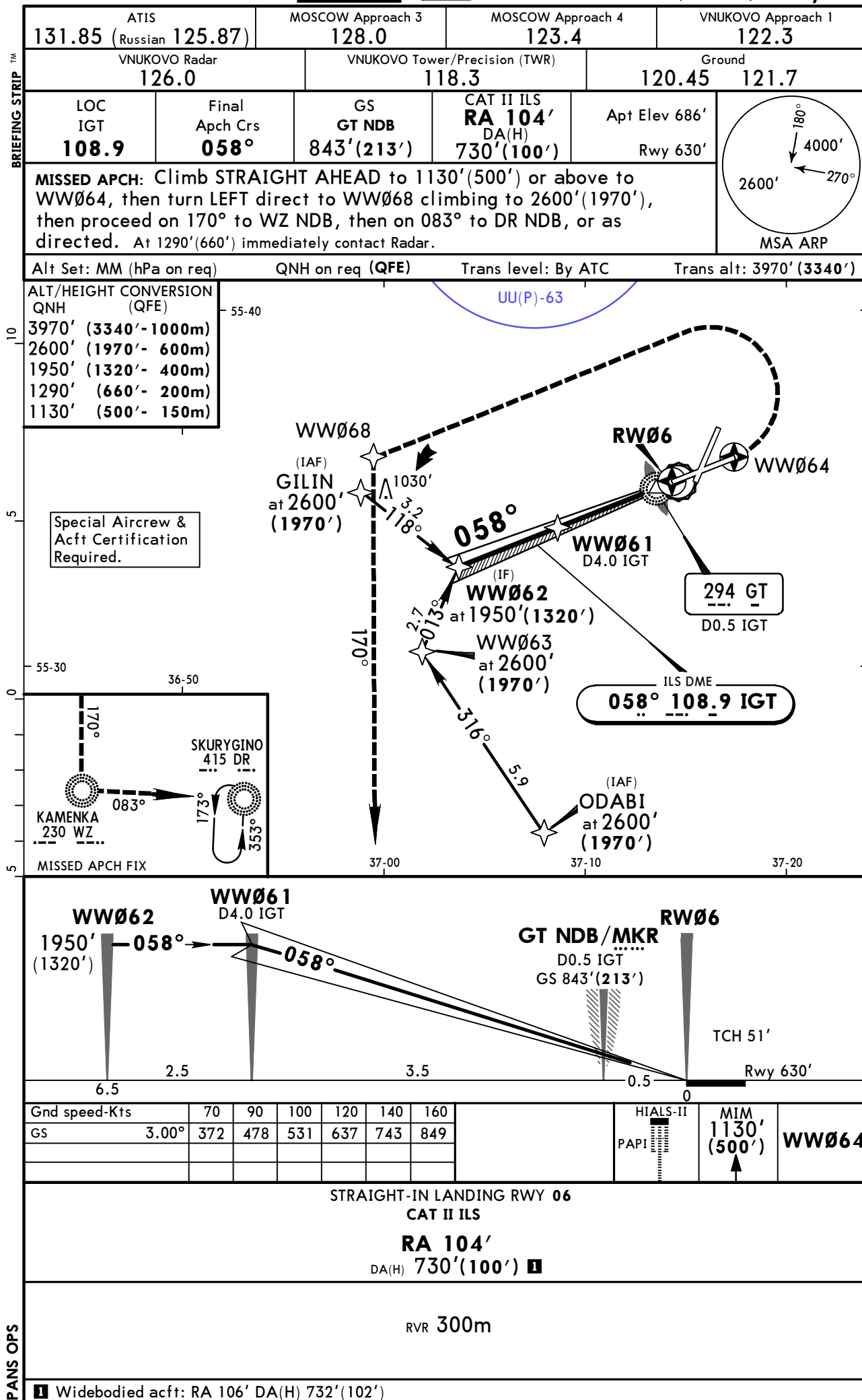
CHANGES: New procedure.

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9 OCT 15
Eff 15 Oct 11-4A

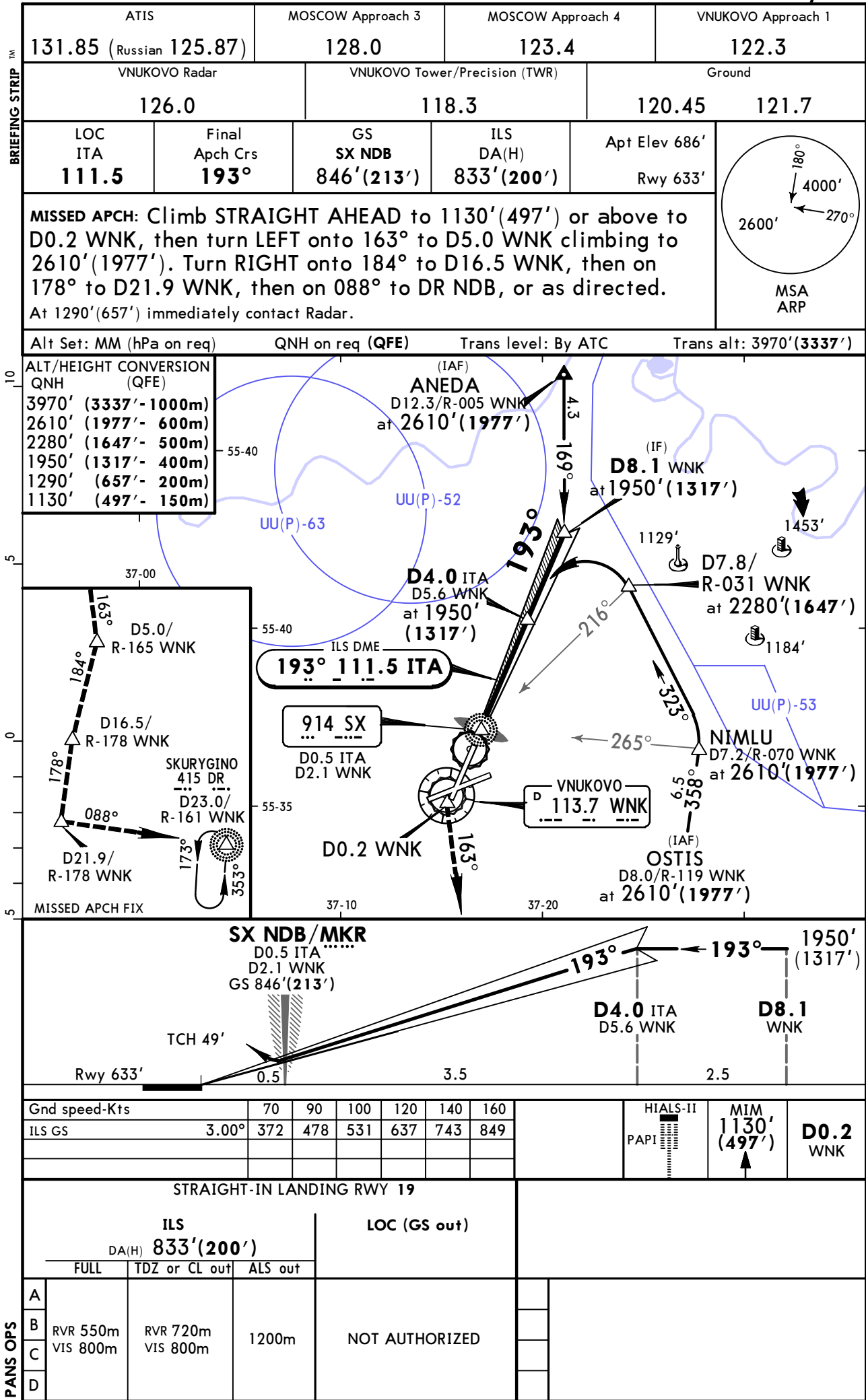
MOSCOW, RUSSIA
CAT II ILS (GNSS) Rwy 06



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VNUKOVO

JEPPESSEN
9 OCT 15 **11-5** Eff 15 Oct

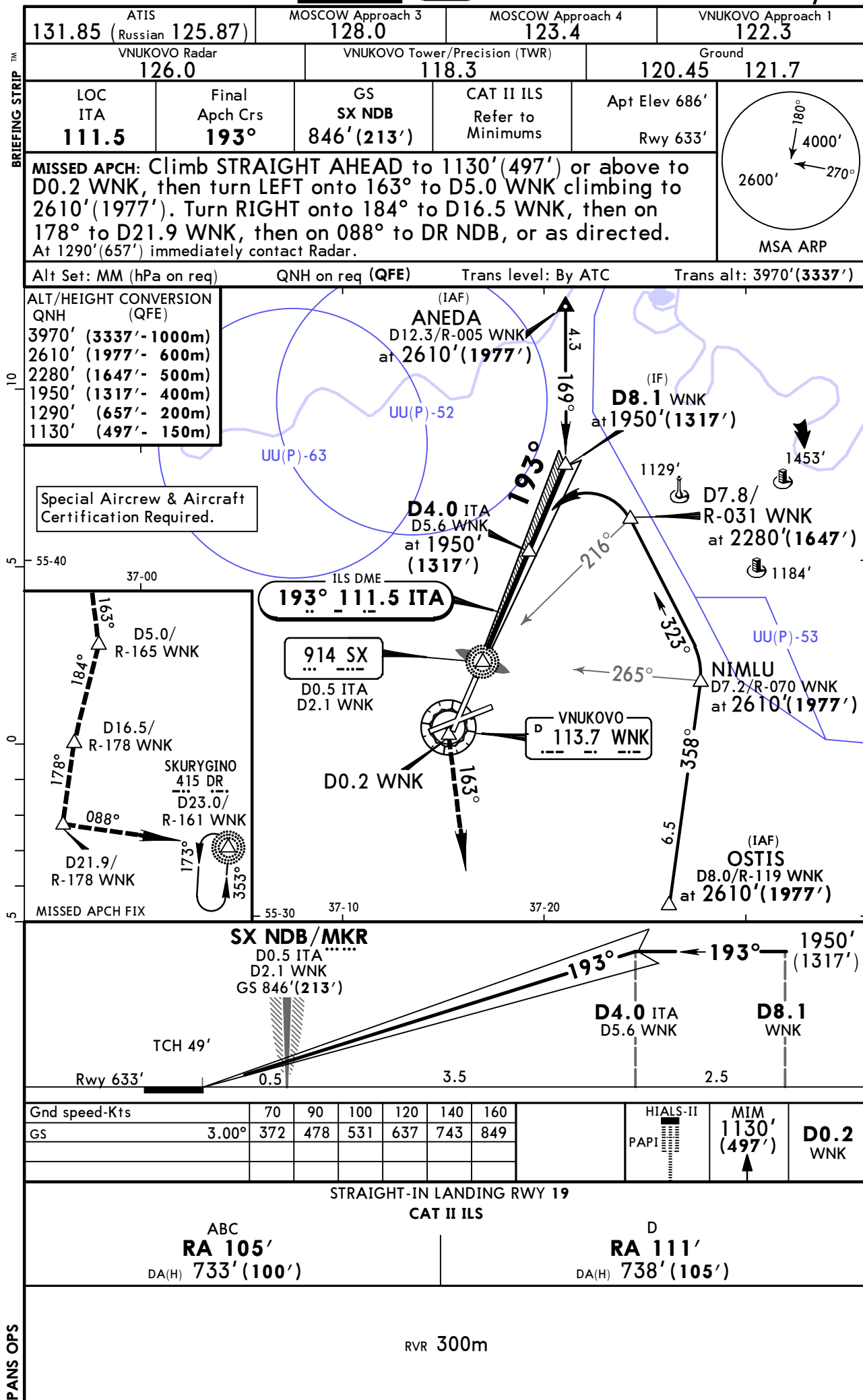
MOSCOW, RUSSIA
ILS DME Rwy 19



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VNUKOVO

JEPPESSEN
9 OCT 15
Eff 15 Oct 11-5A

MOSCOW, RUSSIA
CAT II ILS DME Rwy 19



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VNUKOVO

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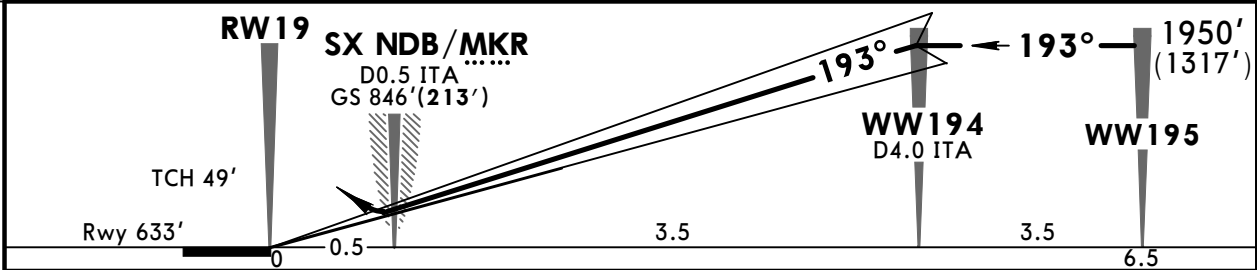
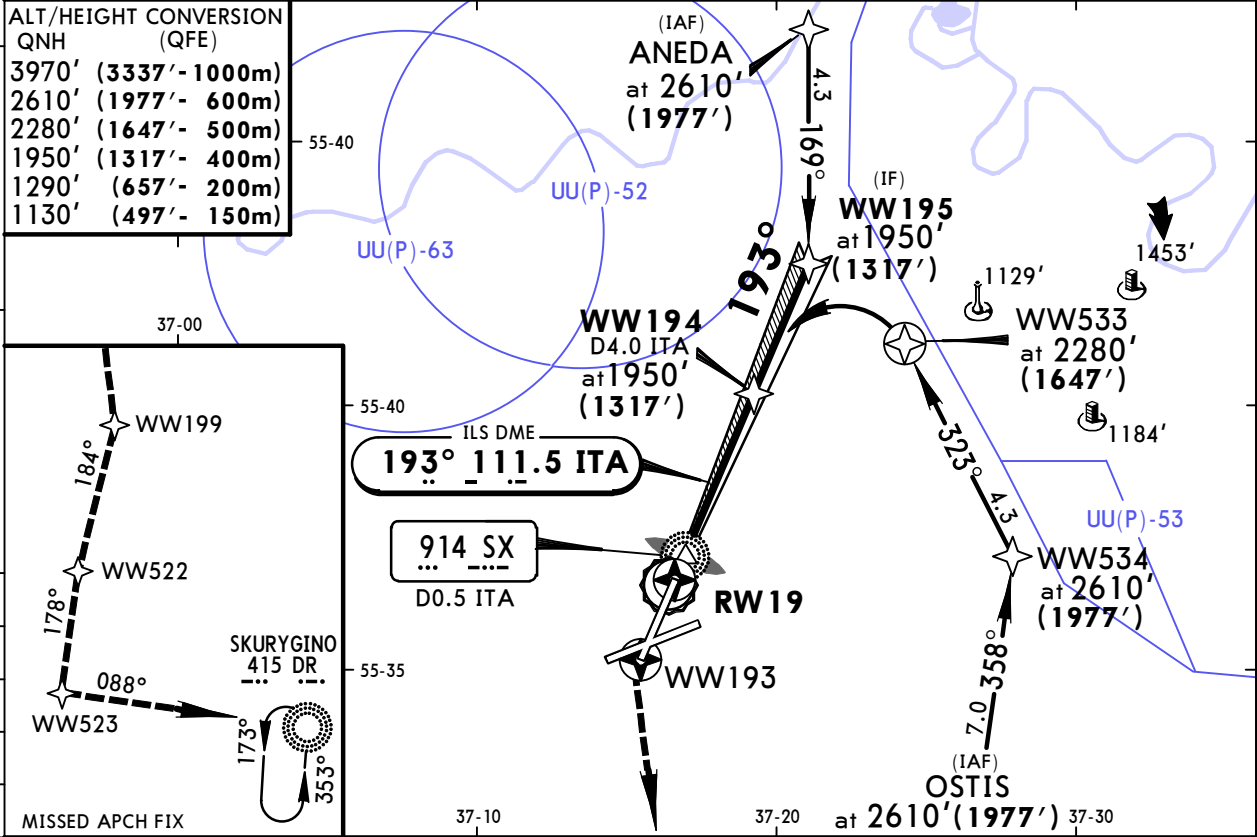
9 OCT 15 11-6

Eff 15 Oct

MOSCOW, RUSSIA
ILS (GNSS) Rwy 19

ATIS		MOSCOW Approach 3		MOSCOW Approach 4		VNUKOVO Approach 1	
131.85 (Russian 125.87)		128.0		123.4		122.3	
VNUKOVO Radar		VNUKOVO Tower/Precision (TWR)			Ground		
126.0		118.3			120.45		121.7
LOC ITA 111.5	Final Apch Crs 193°	GS SX NDB 846'(213')	ILS DA(H) 833'(200')	Apt Elev 686' Rwy 633'		180° 4000' 2600' 270° MSA ARP	
MISSED APCH: Climb STRAIGHT AHEAD to 1130'(497') or above to WW193, then turn LEFT direct to WW199 climbing to 2610'(1977'), then proceed on 184° to WW522, then on 178° to WW523, then on 088° to DR NDB, or as directed. At 1290'(657') immediately contact Radar.							

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)
2280'	(1647' - 500m)
1950'	(1317' - 400m)
1290'	(657' - 200m)
1130'	(497' - 150m)



Gnd speed-Kts	70	90	100	120	140	160		MIM 1130' (497')	WW193
ILS GS	3.00°	372	478	531	637	743			

STRAIGHT-IN LANDING RWY 19						
ILS			LOC (GS out)			
DA(H) 833'(200')						
FULL	TDZ or CL out	ALS out				
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED		
B						
C						
D						

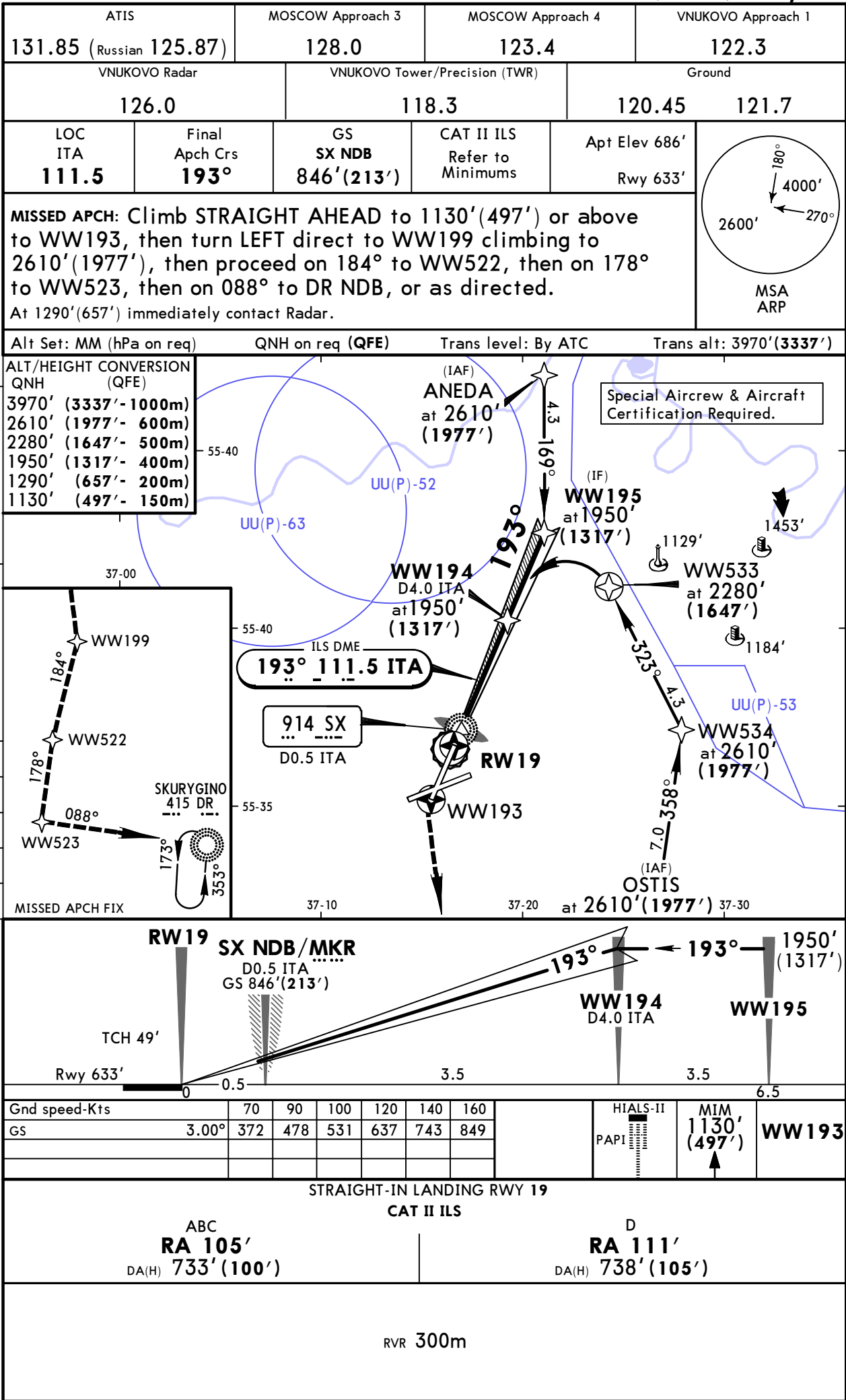
CHANGES: New procedure.

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9 OCT 15
Eff 15 Oct 11-6A

MOSCOW, RUSSIA
CAT II ILS (GNSS) Rwy 19



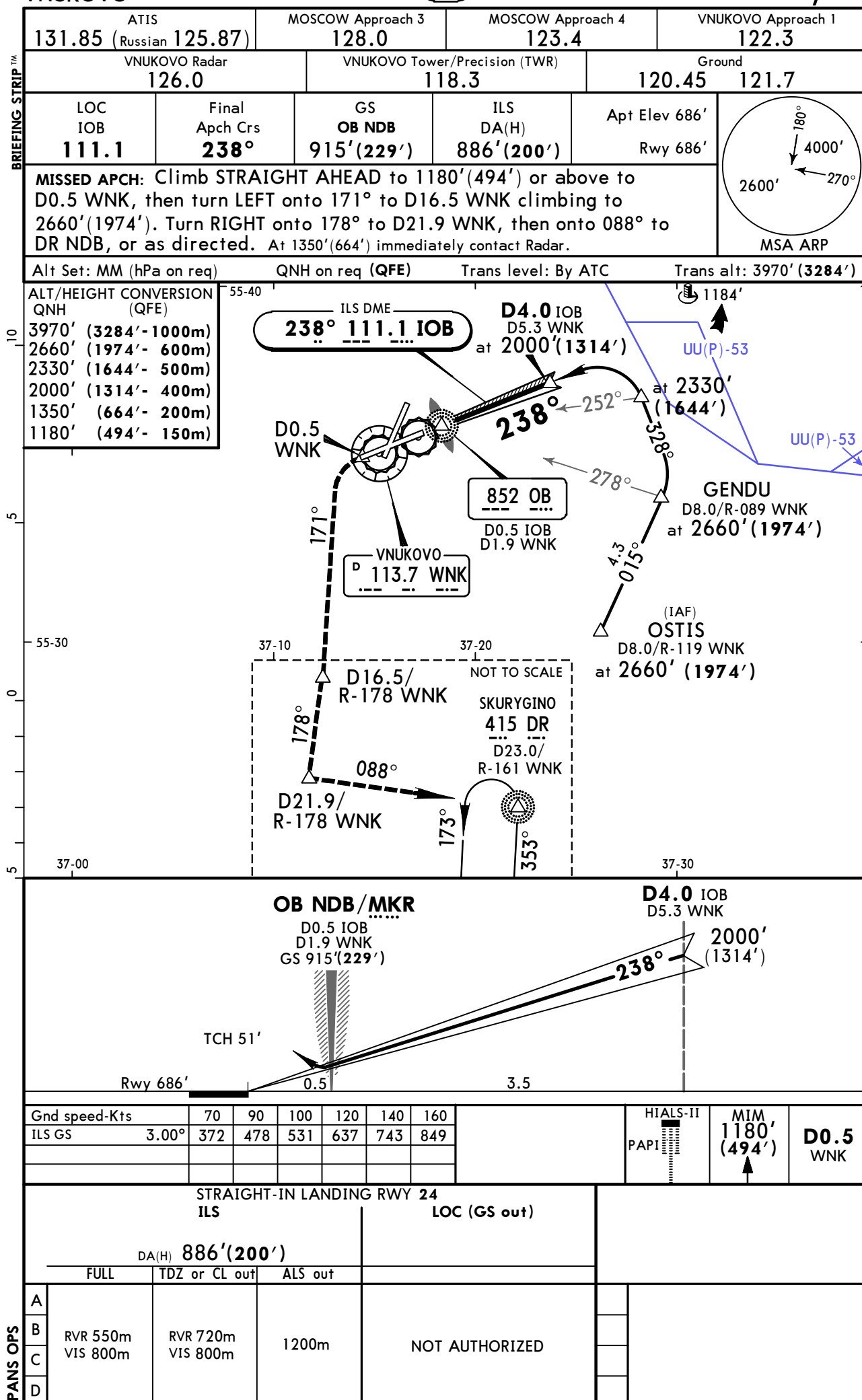
CHANGES: New procedure.

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9 OCT 15

(11-7)

Eff 15 Oct
MOSCOW, RUSSIA
ILS DME Rwy 24


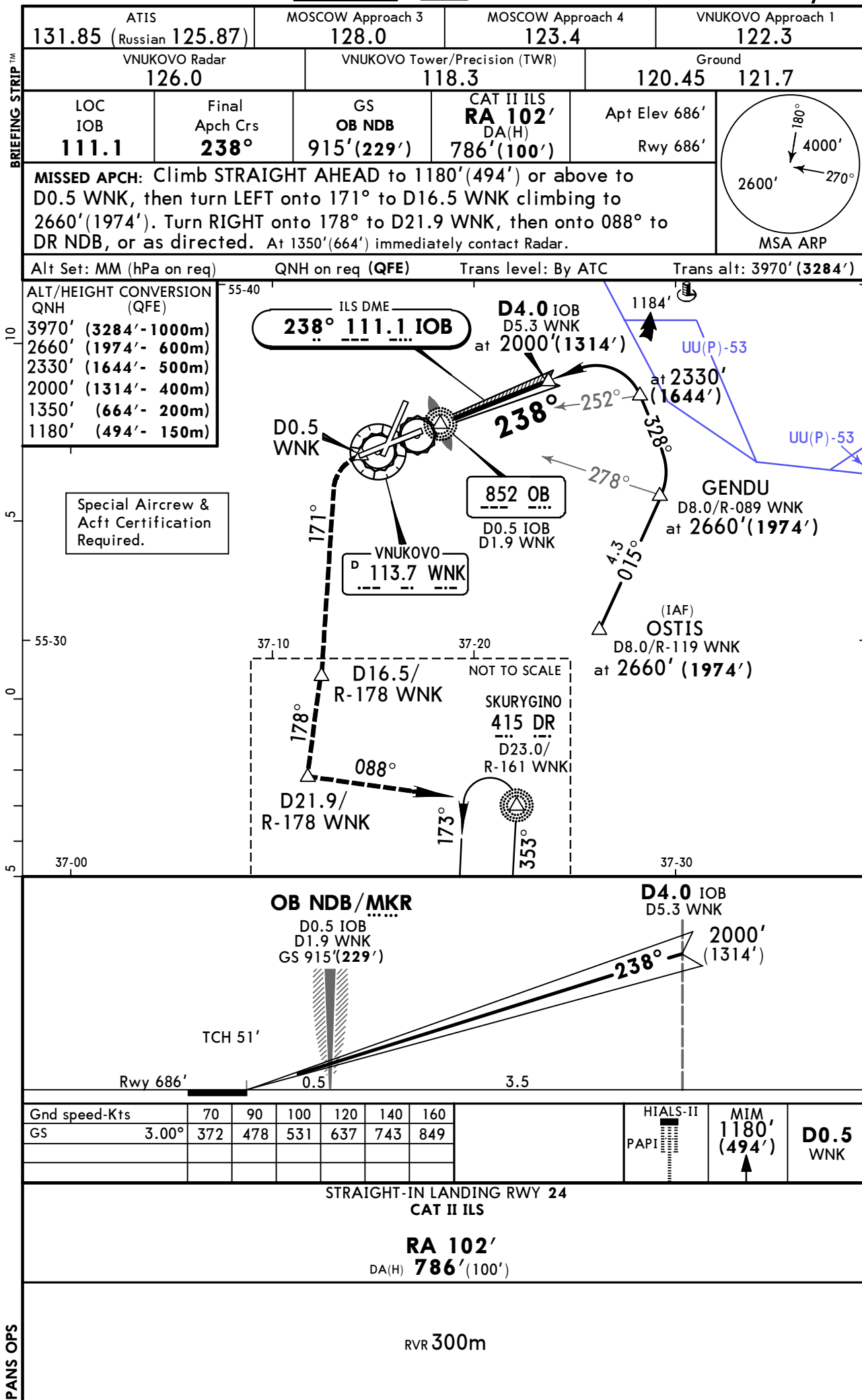
CHANGES: Chart reindexed.

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9 OCT 15
Eff 15 Oct 11-7A

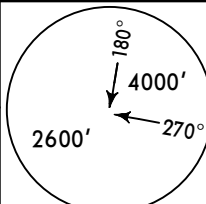
MOSCOW, RUSSIA
CAT II ILS DME Rwy 24



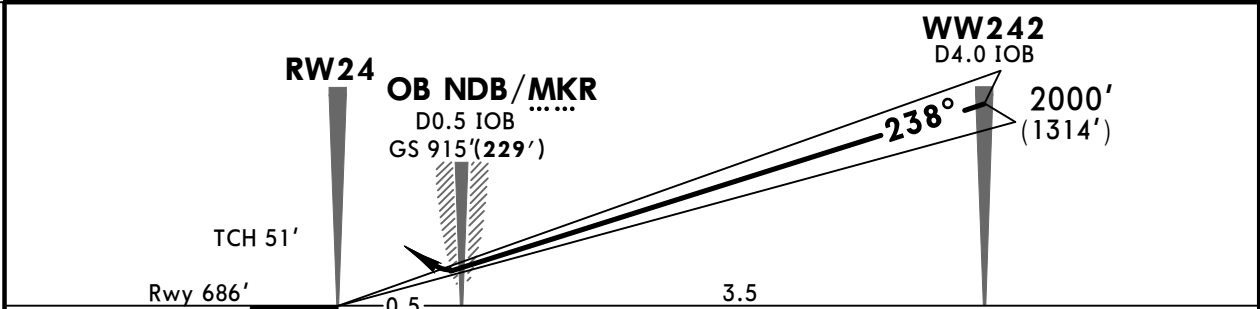
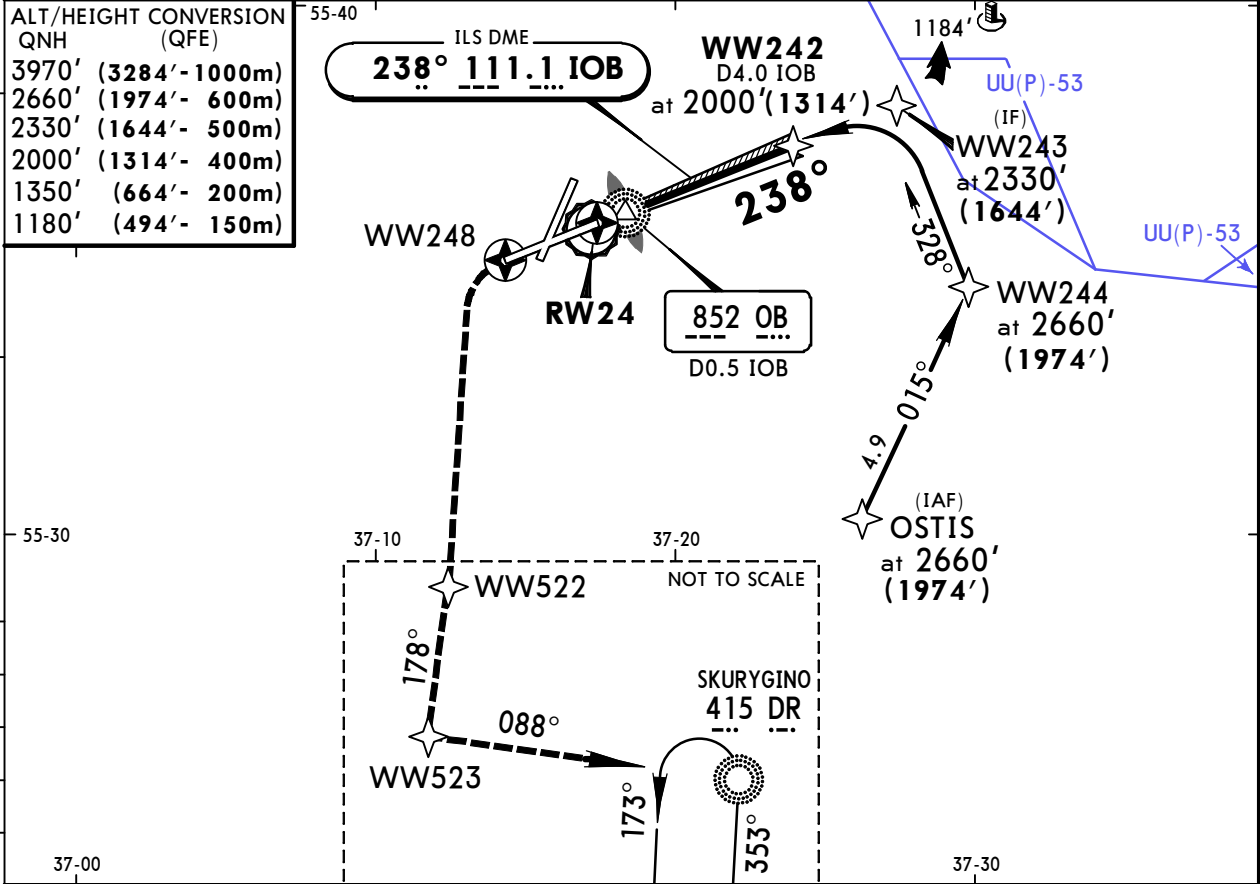
UUWW/VKO
VNUKOVO

JEPPESSEN
9 OCT 15
Eff 15 Oct (11-8)

MOSCOW, RUSSIA
ILS (GNSS) A Rwy 24

ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 1 122.3	
VNUKOVO Radar 126.0		VNUKOVO Tower/Precision (TWR) 118.3			Ground 120.45 121.7		
LOC IOB 111.1	Final Apch Crs 238°	GS OB NDB 915'(229')	ILS DA(H) 886'(200')	Apt Elev 686' Rwy 686'			
MISSED APCH: Climb STRAIGHT AHEAD to 1180'(494') or above to WW248, then turn LEFT direct to WW522 climbing to 2660'(1974'), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350'(664') immediately contact Radar.							
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC		Trans alt: 3970' (3284')	

ALT/HEIGHT CONVERSION QNH (QFE)	
3970'	(3284' - 1000m)
2660'	(1974' - 600m)
2330'	(1644' - 500m)
2000'	(1314' - 400m)
1350'	(664' - 200m)
1180'	(494' - 150m)



Gnd speed-Kts	70	90	100	120	140	160			MIM 1180' (494')	WW248
ILS GS	3.00°	372	478	531	637	743				

STRAIGHT-IN LANDING RWY 24				LOC (GS out)		
ILS						
DA(H) 886'(200')						
FULL		TDZ or CL out	ALS out			
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTHORIZED		
B						
C						
D						

UUWW/VKO
VNUKOVO

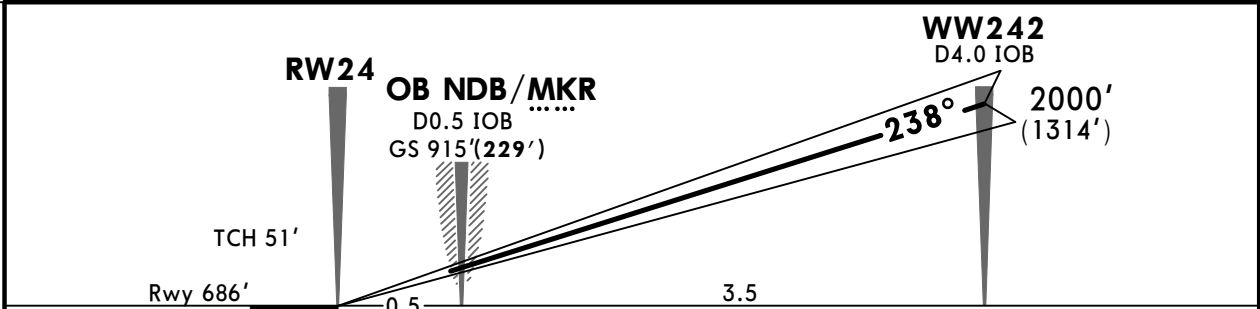
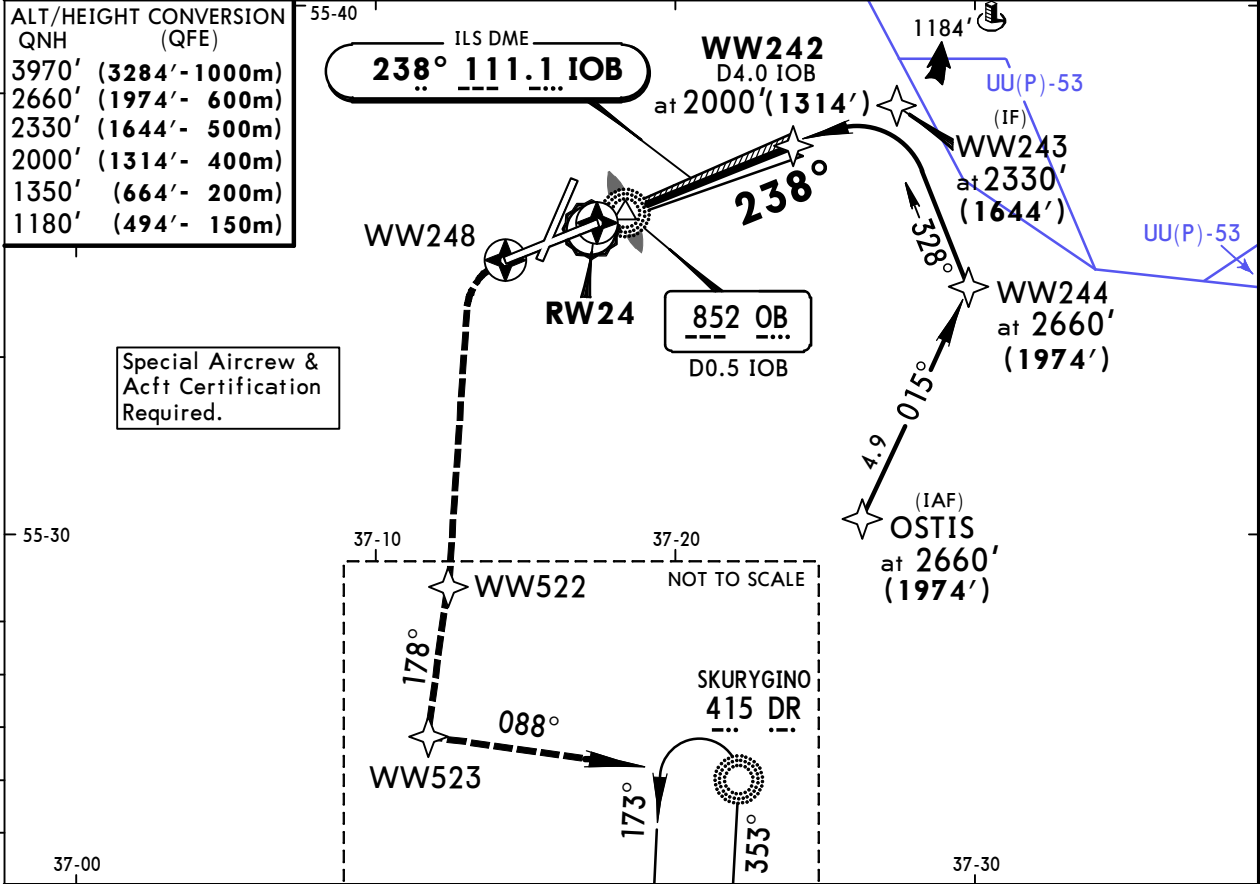
9 OCT 15
Eff 15 Oct

11-8A

MOSCOW, RUSSIA
CAT II ILS (GNSS) A Rwy 24

ATIS 131.85 (Russian 125.87)	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 1 122.3
VNUKOVO Radar 126.0	VNUKOVO Tower/Precision (TWR) 118.3	Ground 120.45 121.7	
LOC IOB 111.1	Final Apch Crs 238°	GS OB NDB 915'(229')	CAT II ILS RA 102' DA(H) 786'(100')
Apt Elev 686' Rwy 686'			MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1180'(494') or above to WW248, then turn LEFT direct to WW522 climbing to 2660'(1974'), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350'(664') immediately contact Radar.			
Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970'(3284')

ALT/HEIGHT CONVERSION QNH (QFE)
3970' (3284'- 1000m)
2660' (1974'- 600m)
2330' (1644'- 500m)
2000' (1314'- 400m)
1350' (664'- 200m)
1180' (494'- 150m)



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II		MIM	WW248
GS	3.00°	372	478	531	637	743	849	PAPI	1180' (494')	

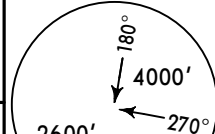
STRAIGHT-IN LANDING RWY 24
CAT II ILS
RA 102'
DA(H) 786'(100')

RVR 300m

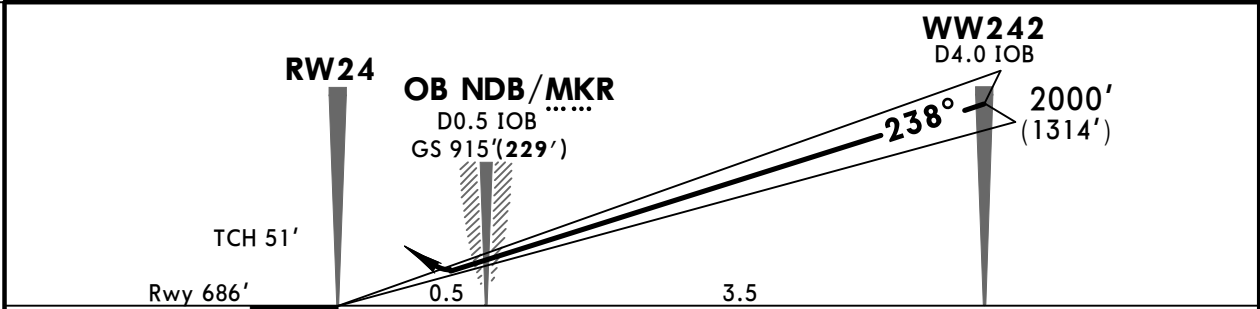
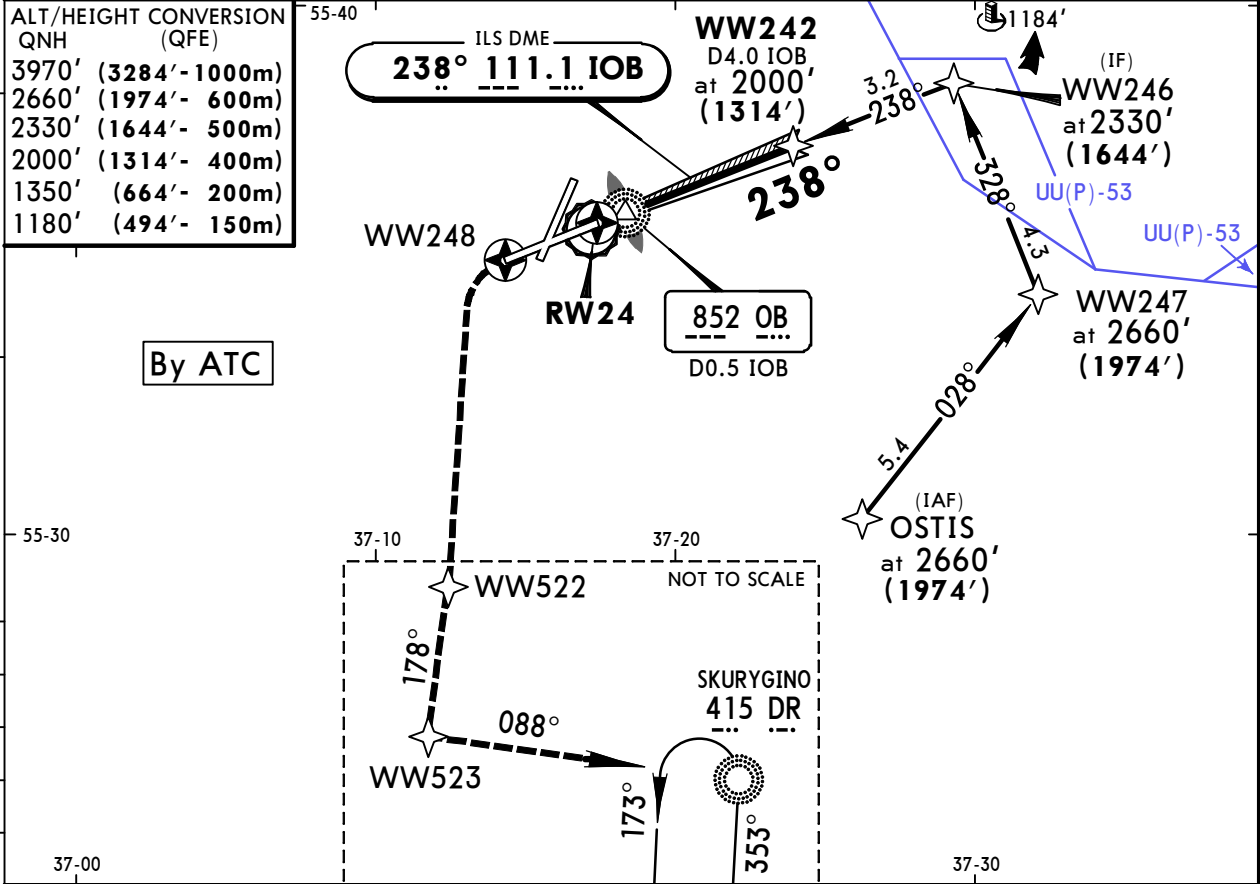
UUWW/VKO
VNUKOVO

JEPPESSEN
9 OCT 15
Eff 15 Oct (11-9)

MOSCOW, RUSSIA
ILS (GNSS) B Rwy 24

ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 1 122.3	
VNUKOVO Radar 126.0			VNUKOVO Tower/Precision (TWR) 118.3			Ground 120.45 121.7	
LOC IOB 111.1	Final Apch Crs 238°	GS OB NDB 915'(229')	ILS DA(H) 886'(200')	Apt Elev 686' Rwy 686'			
MISSED APCH: Climb STRAIGHT AHEAD to 1180'(494') or above to WW248, then turn LEFT direct to WW522 climbing to 2660'(1974'), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350'(664') immediately contact Radar.							
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3284')							

ALT/HEIGHT CONVERSION QNH (QFE)
3970' (3284' - 1000m)
2660' (1974' - 600m)
2330' (1644' - 500m)
2000' (1314' - 400m)
1350' (664' - 200m)
1180' (494' - 150m)



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II		
ILS GS	3.00°	372	478	531	637	743	849	MIM 1180' (494')	WW248

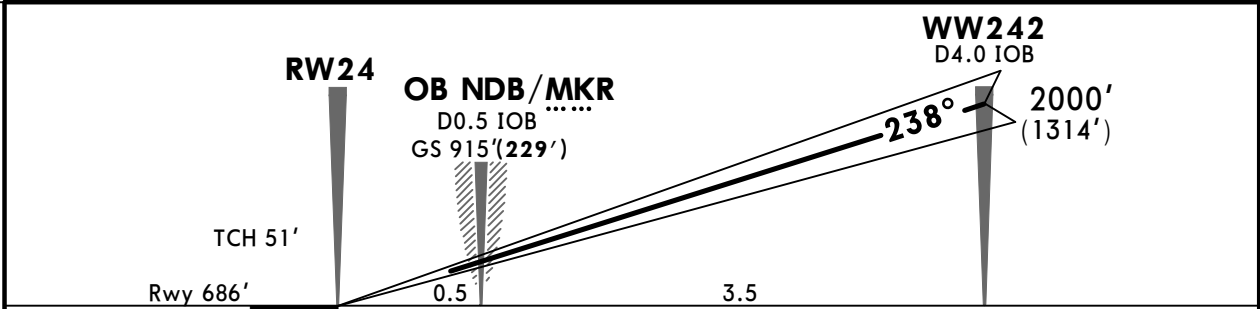
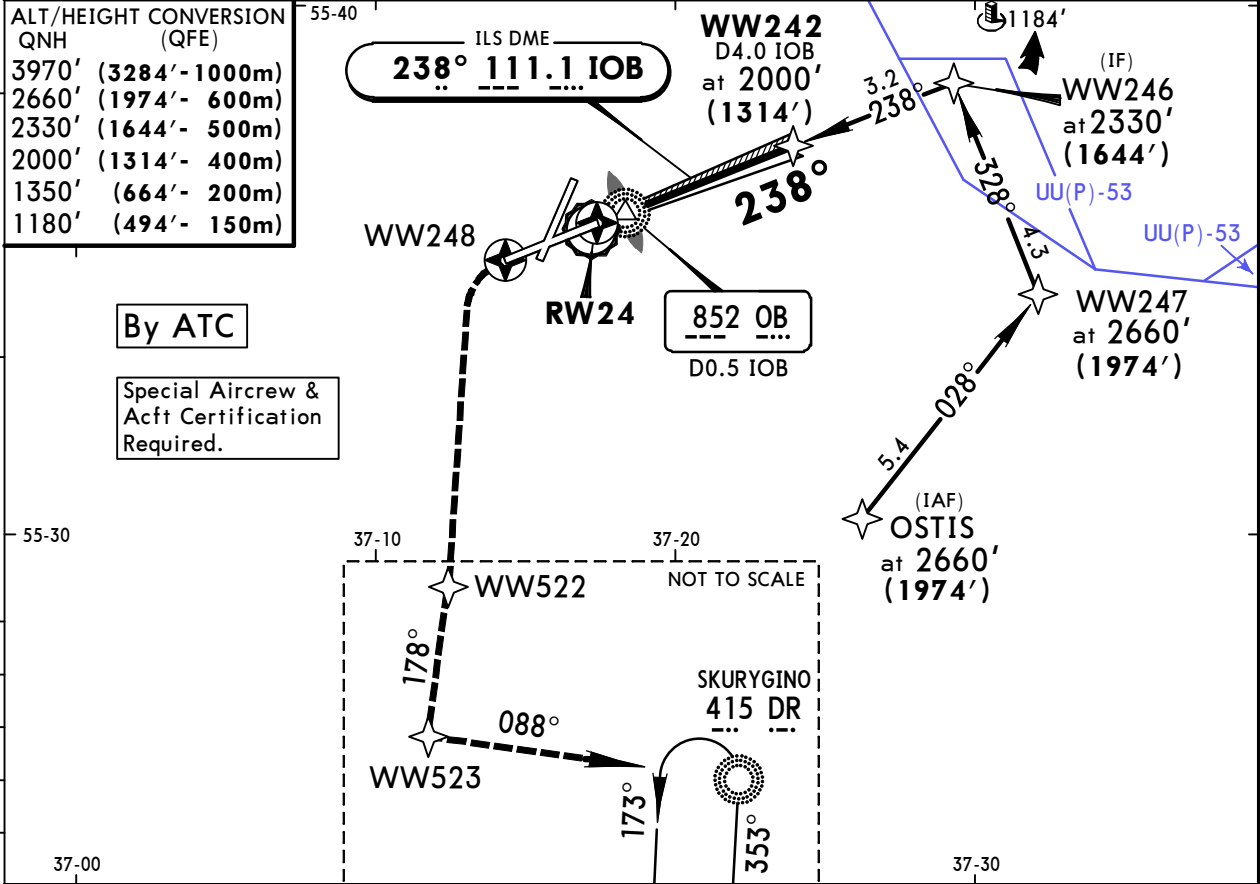
STRAIGHT-IN LANDING RWY 24				LOC (GS out)			
ILS							
DA(H) 886' (200')							
FULL		TDZ or CL out	ALS out				
A							
B	RVR 550m	RVR 720m	1200m	NOT AUTHORIZED			
C	VIS 800m	VIS 800m					
D							

UUWW/VKO
VNUKOVO

JEPPESSEN
9 OCT 15
Eff 15 Oct 11-9A

MOSCOW, RUSSIA
CAT II ILS (GNSS) B Rwy 24

ATIS 131.85 (Russian 125.87)	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 1 122.3
VNUKOVO Radar 126.0	VNUKOVO Tower/Precision (TWR) 118.3	Ground 120.45 121.7	
LOC IOB 111.1	Final Apch Crs 238°	GS OB NDB 915' (229')	CAT II ILS RA 102' DA(H) 786' (100')
Apt Elev 686' Rwy 686'			MSA ARP
MISSED APCH: Climb STRAIGHT AHEAD to 1180' (494') or above to WW248, then turn LEFT direct to WW522 climbing to 2660' (1974'), then proceed on 178° to WW523, then on 088° to DR NDB, or as directed. At 1350' (664') immediately contact Radar.			
Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970' (3284')



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II		
GS	3.00°	372	478	531	637	743	849	MIM	WW248
								1180' (494')	

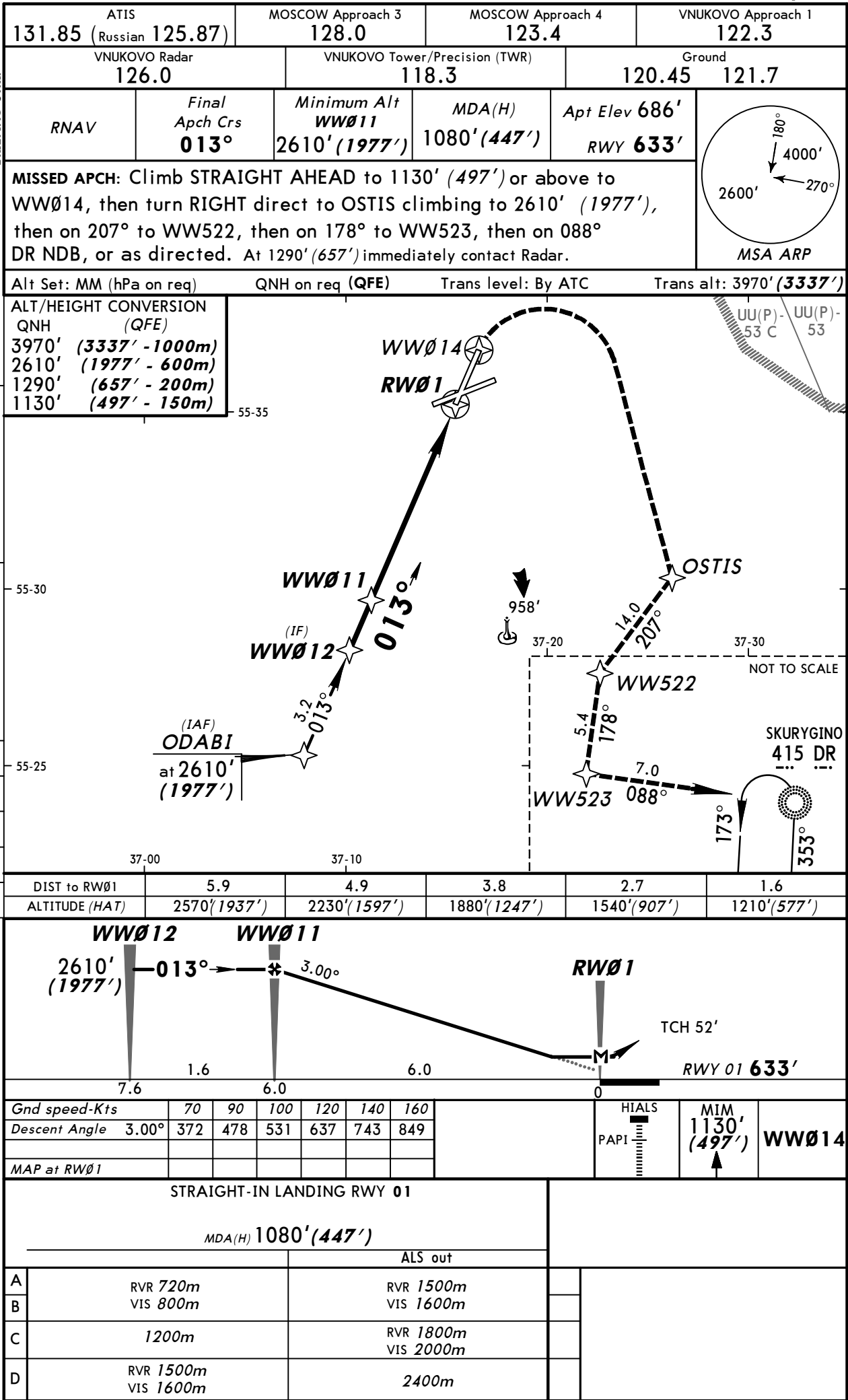
STRAIGHT-IN LANDING RWY 24
CAT II ILS
RA 102'
DA(H) 786' (100')

RVR 300m

UUWW/VKO
VNUKOVO

JEPPESSEN
21 MAR 14 (12-1)

MOSCOW, RUSSIA
RNAV (GNSS) Rwy 01



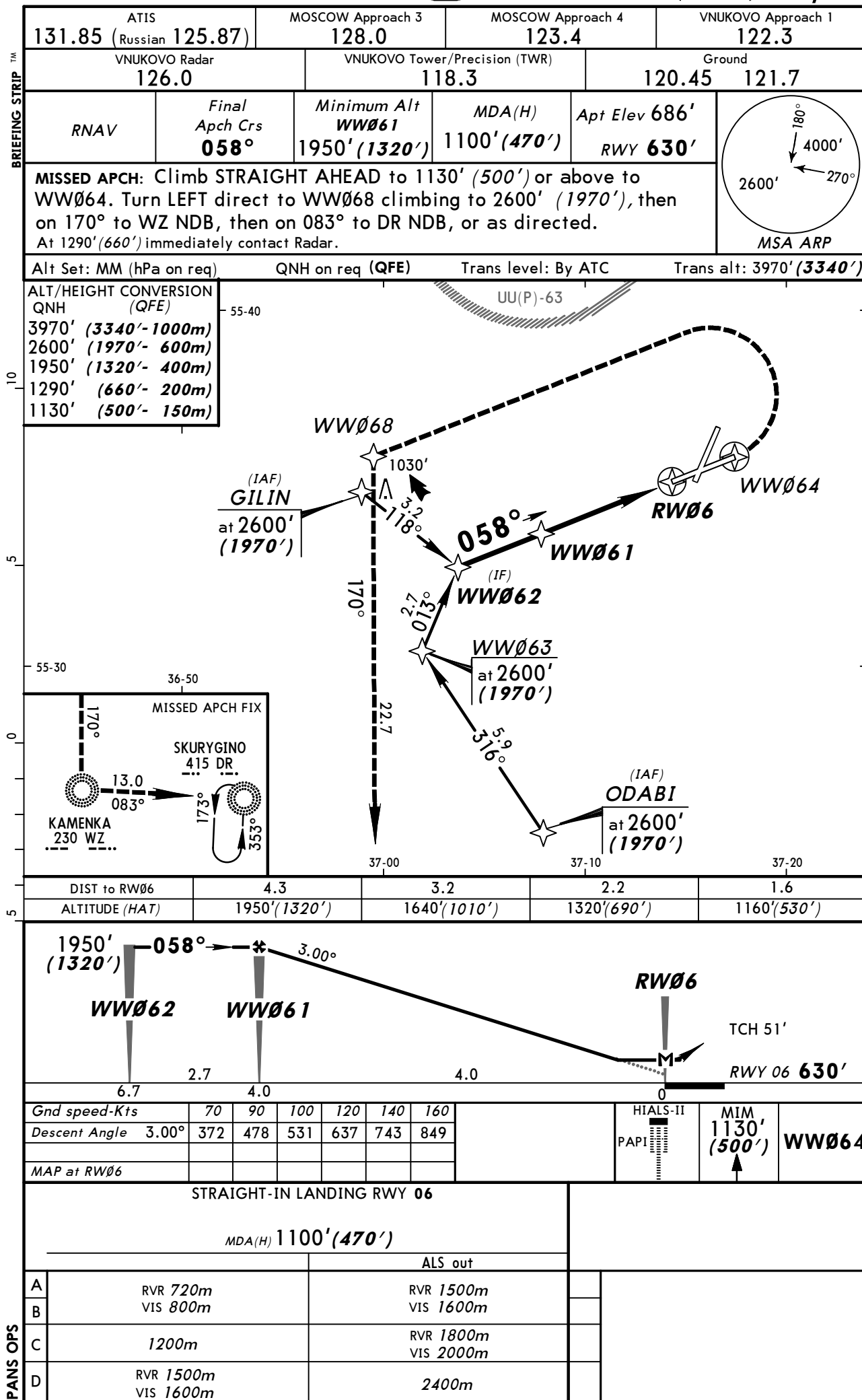
UUWW/VKO
VNUKOVO

JEPPESSEN

21 MAR 14 (12-2)

Eff 3 Apr

MOSCOW, RUSSIA
RNAV (GNSS) Rwy 06

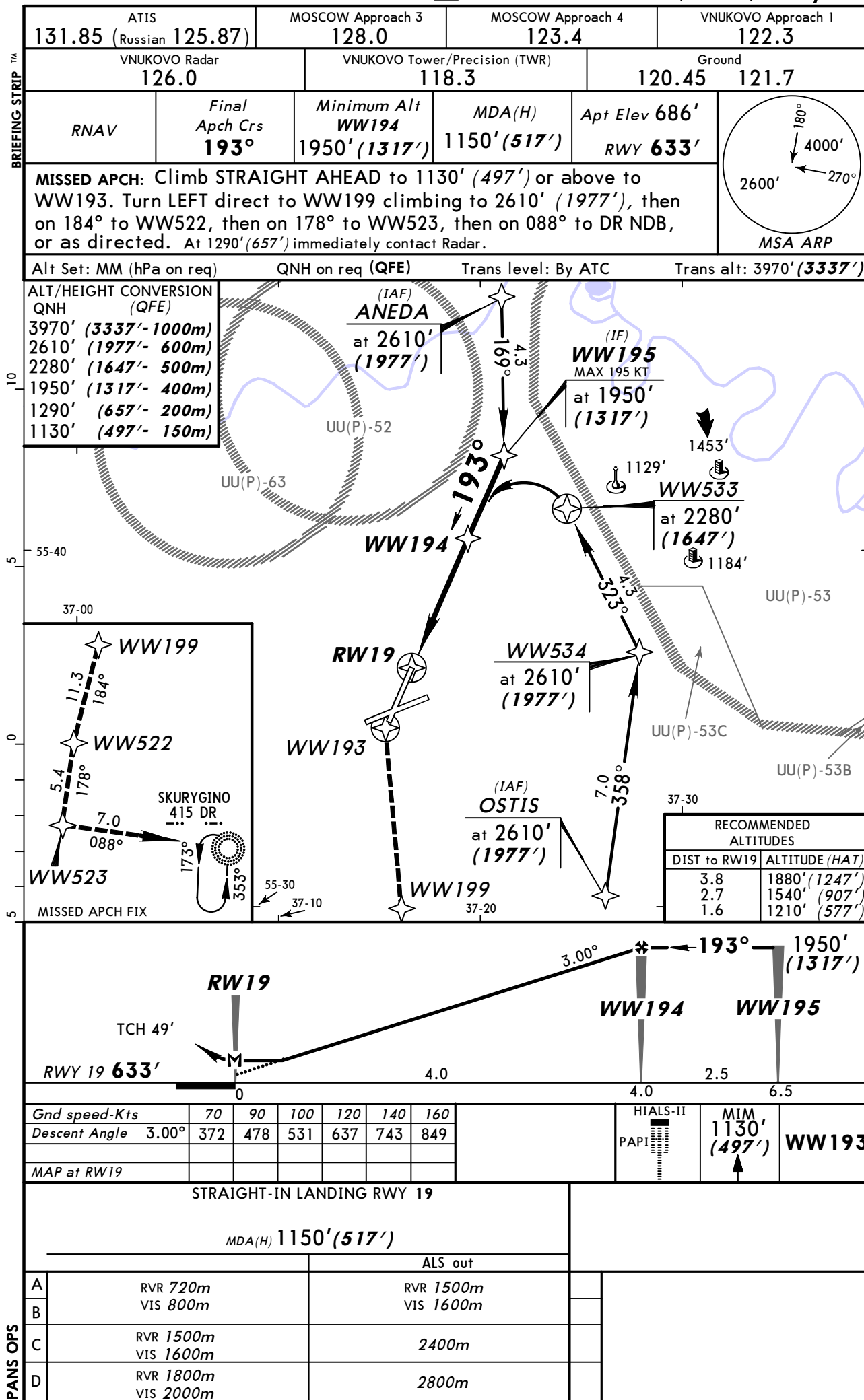


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VNUKOVO
JEPPESSEN

21 MAR 14

(12-3)

Eff 3 Apr

MOSCOW, RUSSIA
RNAV (GNSS) Rwy 19


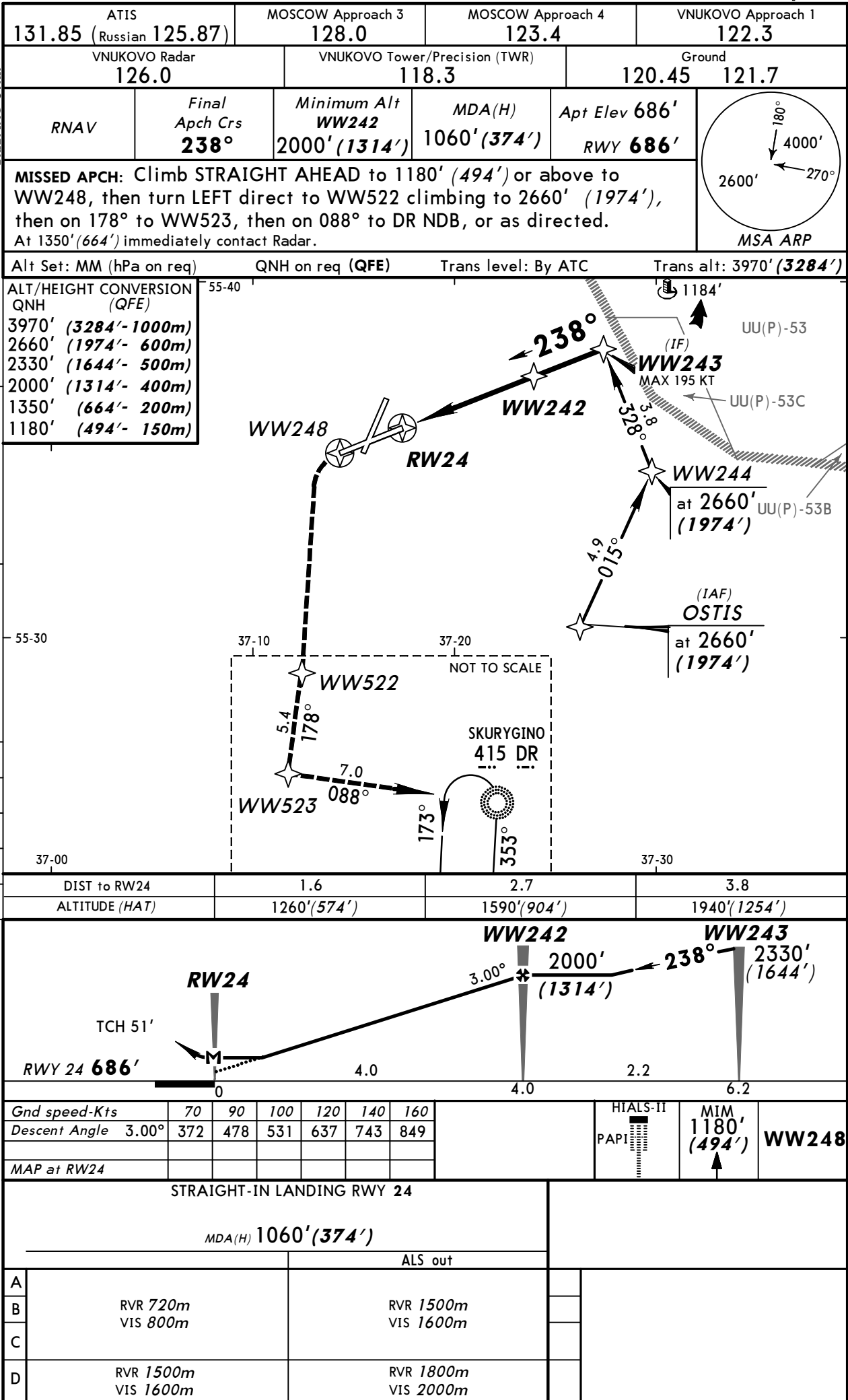
CHANGES: Procedure. TCH.

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JEPPESSEN
21 MAR 14
Eff 3 Apr 12-4

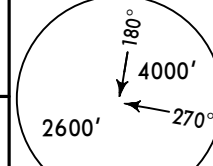
MOSCOW, RUSSIA
RNAV (GNSS) A Rwy 24



UUWW/VKO
VNUKOVO

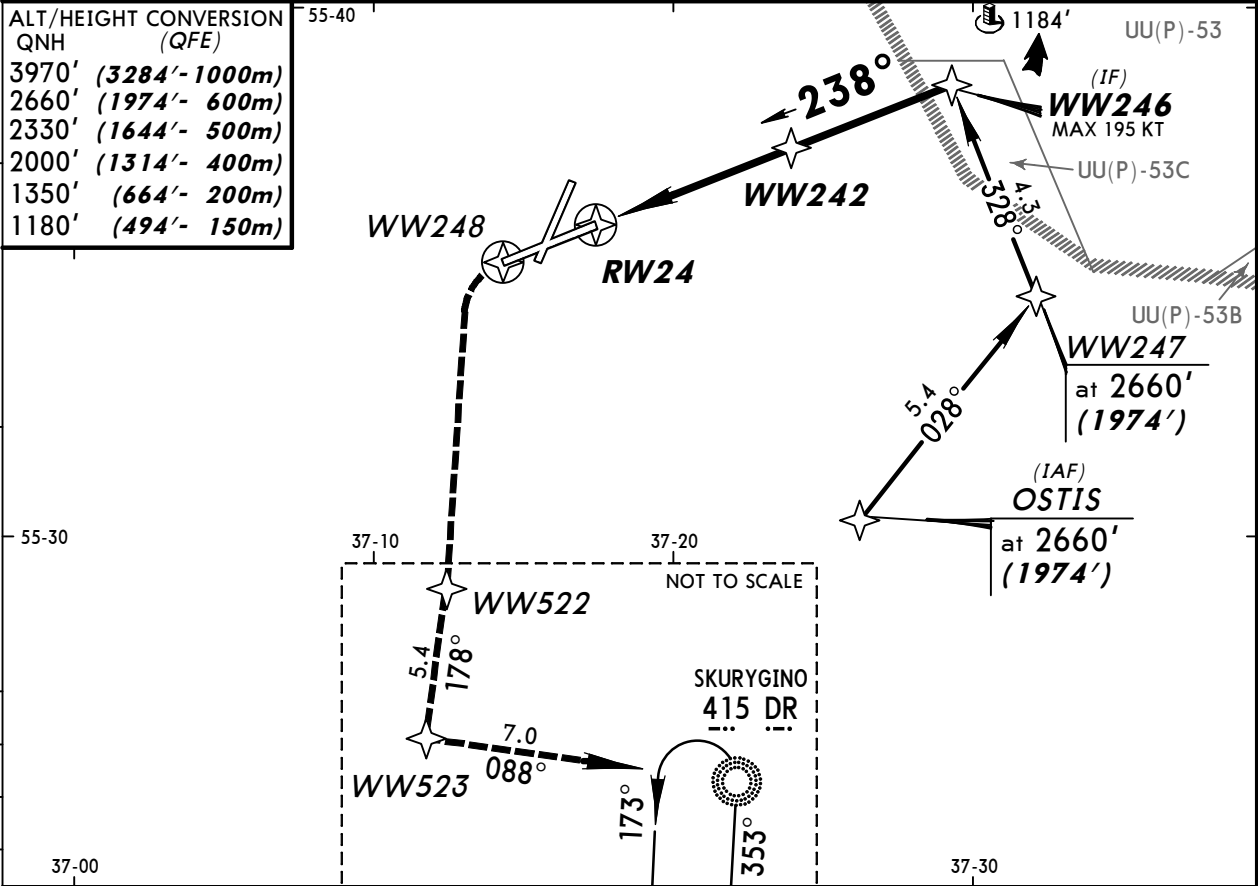
JEPPESSEN
13 DEC 13 (12-5)

MOSCOW, RUSSIA
RNAV (GNSS) B Rwy 24

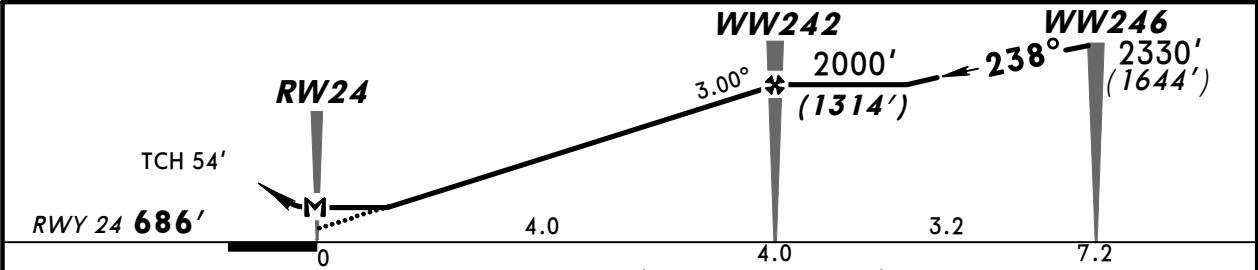
ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 122.3	
VNUKOVO Radar 126.0		VNUKOVO Precision (PAR) 118.3		VNUKOVO Tower 118.3		Ground 120.45 121.7	
RNAV	Final Apch Crs 238°	Minimum Alt WW242 2000' (1314')	MDA(H) 1060' (374')	Apt Elev 686' RWY 686'			
MISSED APCH: Climb STRAIGHT AHEAD to 1180' (494') or above to WW248, then turn LEFT direct to WW522 climbing to 2660' (1974'). Then onto 178° to WW523, then onto 088° to DR NDB, or as directed. At 1350' (664') immediately contact Radar.						MSA ARP	

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3284')

ALT/HEIGHT CONVERSION QNH (QFE)
3970' (3284' - 1000m)
2660' (1974' - 600m)
2330' (1644' - 500m)
2000' (1314' - 400m)
1350' (664' - 200m)
1180' (494' - 150m)



DIST to RW24	1.6	2.7	3.8
ALTITUDE (HAT)	1260' (574')	1590' (904')	1940' (1254')



Gnd speed-Kts	70	90	100	120	140	160	HTALS-II PAPI		1180' (494')	WW248
Descent Angle 3.00°	372	478	531	637	743	849				
MAP at RW24										

STRAIGHT-IN LANDING RWY 24							
MDA(H) 1060' (374')							
				ALS out			
A							
B	RVR 720m VIS 800m			RVR 1500m VIS 1600m			
C							
D	RVR 1500m VIS 1600m			RVR 1800m VIS 2000m			

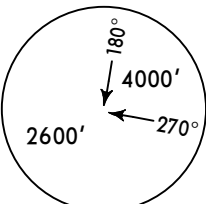
CHANGES: Minimums.

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UUWW/VKO
VNUKOVO

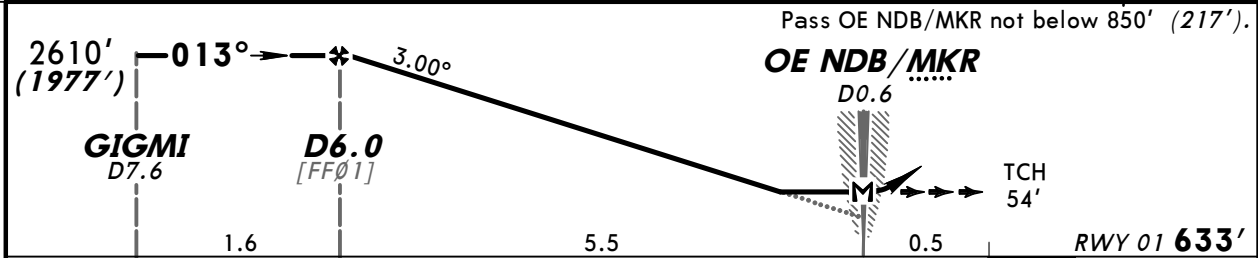
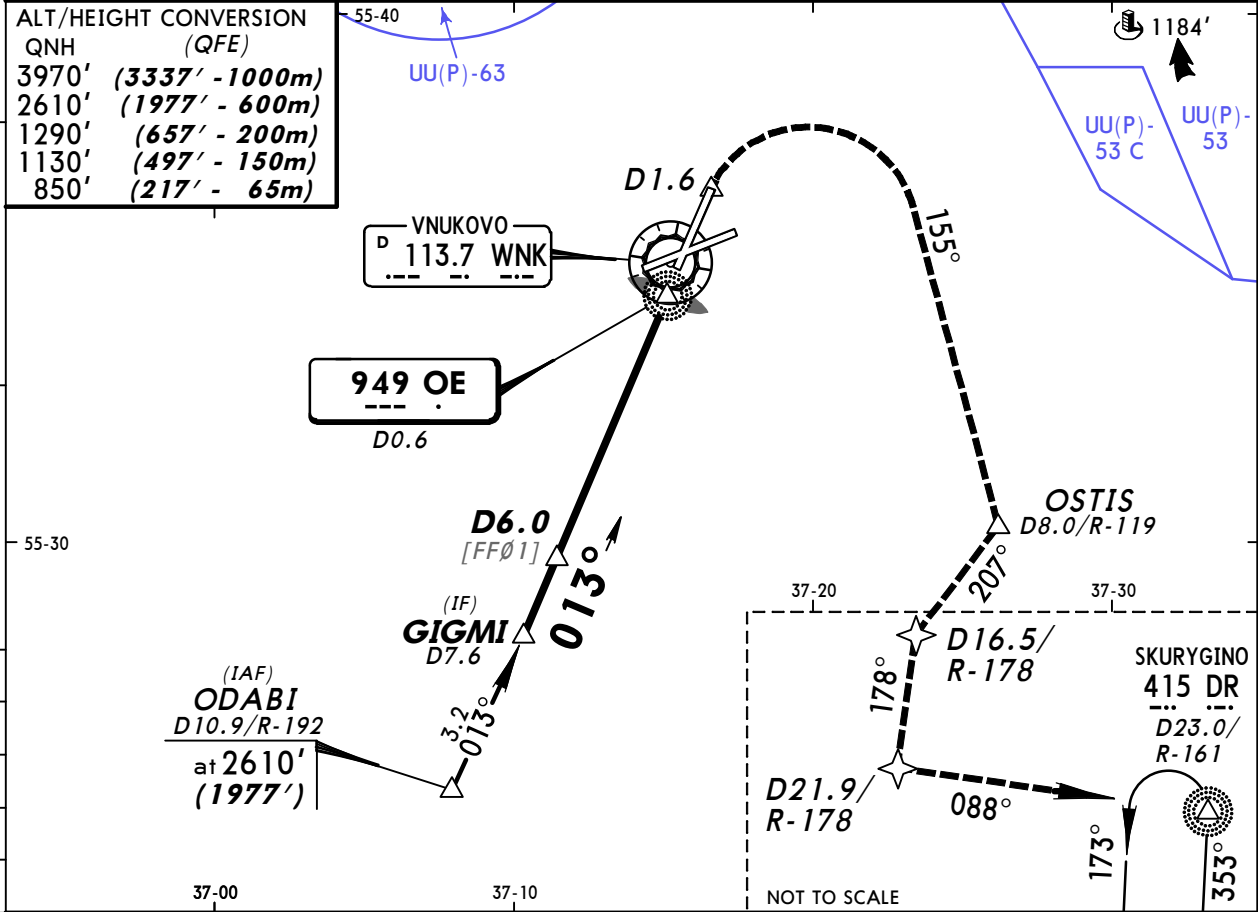
JEPPESSEN
6 MAR 15 (16-1)

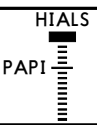
MOSCOW, RUSSIA
NDB/MKR Rwy 01

ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 122.3	
VNUKOVO Radar 126.0		VNUKOVO Precision (PAR) 118.3		VNUKOVO Tower 118.3		Ground 120.45 121.7	
NDB OE 949	Final Apch Crs 013°	Minimum Alt D6.0 2610' (1977')	MDA(H) (CONDITIONAL) 1080' (447')	Apt Elev 686' RWY 633'		 MSA ARP	
MISSED APCH: Climb STRAIGHT AHEAD to 1130' (497') or above to D1.6, turn RIGHT onto 155° to OSTIS climbing to 2610' (1977'), then onto 207° to D16.5. Then onto 178° to D21.9, then onto 088° to DR NDB, or as directed. At 1290' (657') immediately contact Radar.							

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

ALT/HEIGHT CONVERSION QNH (QFE)	
3970'	(3337' - 1000m)
2610'	(1977' - 600m)
1290'	(657' - 200m)
1130'	(497' - 150m)
850'	(217' - 65m)



Gnd speed-Kts	70	90	100	120	140	160		1130' (497')	D1.6
Descent Angle	3.00°	372	478	531	637	743			
MAP at OE NDB/MKR/D0.6									

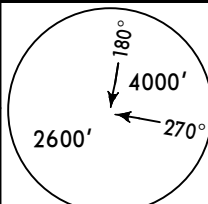
STRAIGHT-IN LANDING RWY 01				
With FAF MDA(H) 1080' (447')		W/o FAF MDA(H) 1180' (547')		
ALS out		ALS out		
A	1200m	RVR 1500m VIS 1600m	1200m	RVR 1500m VIS 1600m
B		RVR 1800m VIS 2000m		2400m
C				
D	RVR 1800m VIS 2000m	2400m	2400m	2800m

UUWW/VKO
VNUKOVO

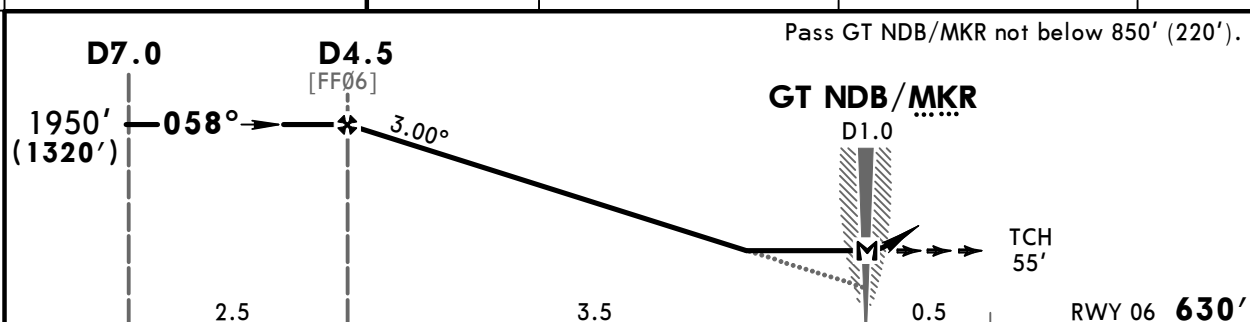
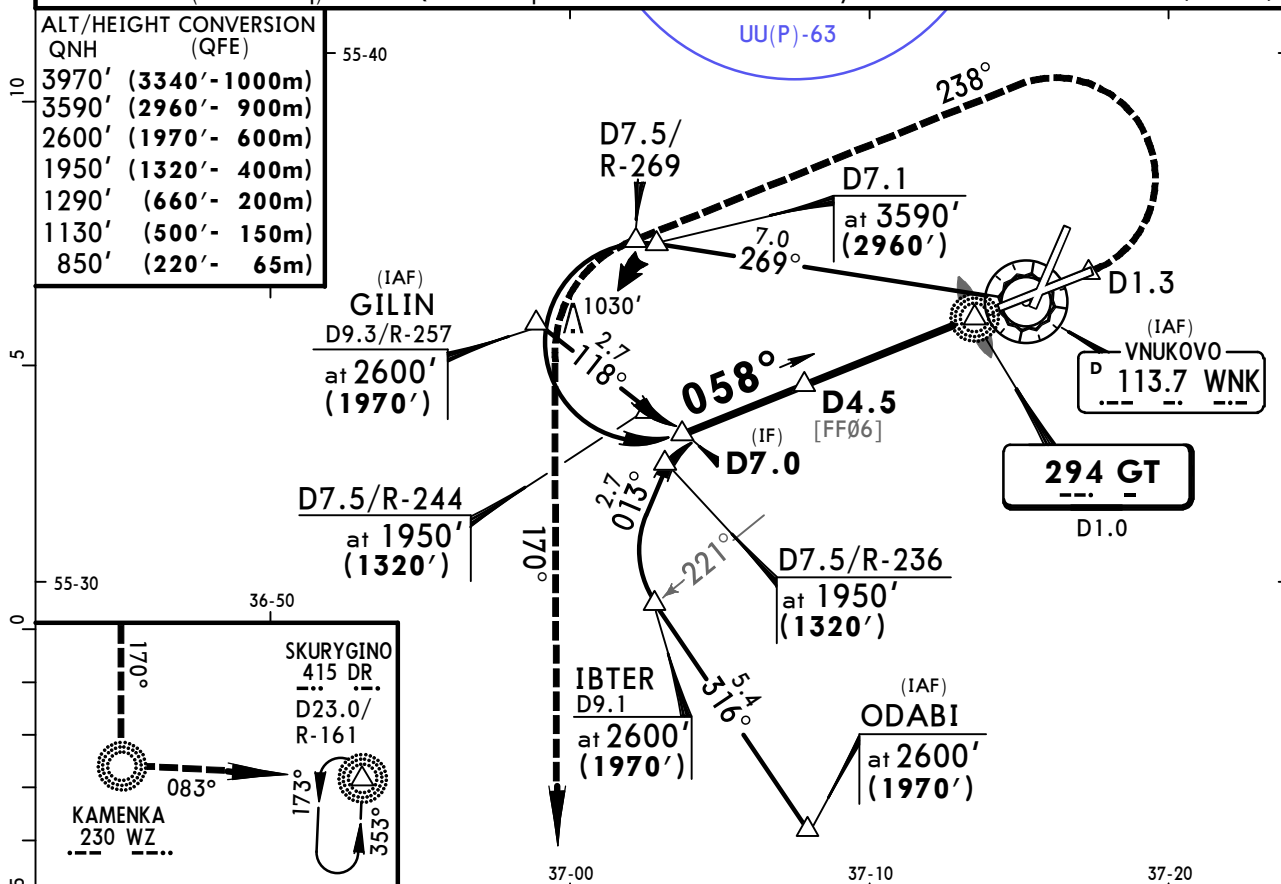
JEPPESSEN
6 MAR 15 **(16-2)**

MOSCOW, RUSSIA
NDB/MKR Rwy 06

BRIEFING STRIP™

ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 122.3	
VNUKOVO Radar 126.0		VNUKOVO Precision (PAR) 118.3		VNUKOVO Tower 118.3		Ground 120.45 121.7	
NDB GT 294	Final Apch Crs 058°	Minimum Alt D4.5 1950' (1320')	MDA(H) (CONDITIONAL) 1100' (470')	Apt Elev 686' RWY 630'			
MISSED APCH: Climb STRAIGHT AHEAD to 1130' (500') or above to D1.3, turn LEFT onto 238° to D7.5 climbing to 2600' (1970'), then turn LEFT onto 170° to WZ NDB. Then onto 083° to DR NDB, or as directed. At 1290'(660') immediately contact Radar.							
			MSA ARP				

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3340')



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI 	1130' (500') ↑	D1.3
Descent Angle	3.00°	372	478	531	637	849			
MAP at GT NDB/MKR/D1.0									

STRAIGHT-IN LANDING RWY 06				
With FAF		W/o FAF		
MDA(H) 1100' (470')		MDA(H) 1220' (590')		
ALS out		ALS out		
A	1200m	RVR 1500m	1200m	RVR 1500m
		VIS 1600m		VIS 1600m
B	1200m	RVR 1800m	RVR 1500m	2400m
		VIS 2000m		
C	1200m	2400m	2400m	2800m
D	RVR 1800m VIS 2000m	2400m	2400m	2800m

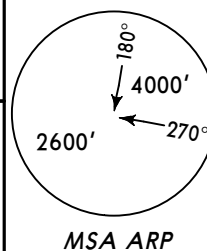
CHANGES: Additional fix added.

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MOSCOW, RUSSIA
NDB/MKR Rwy 19

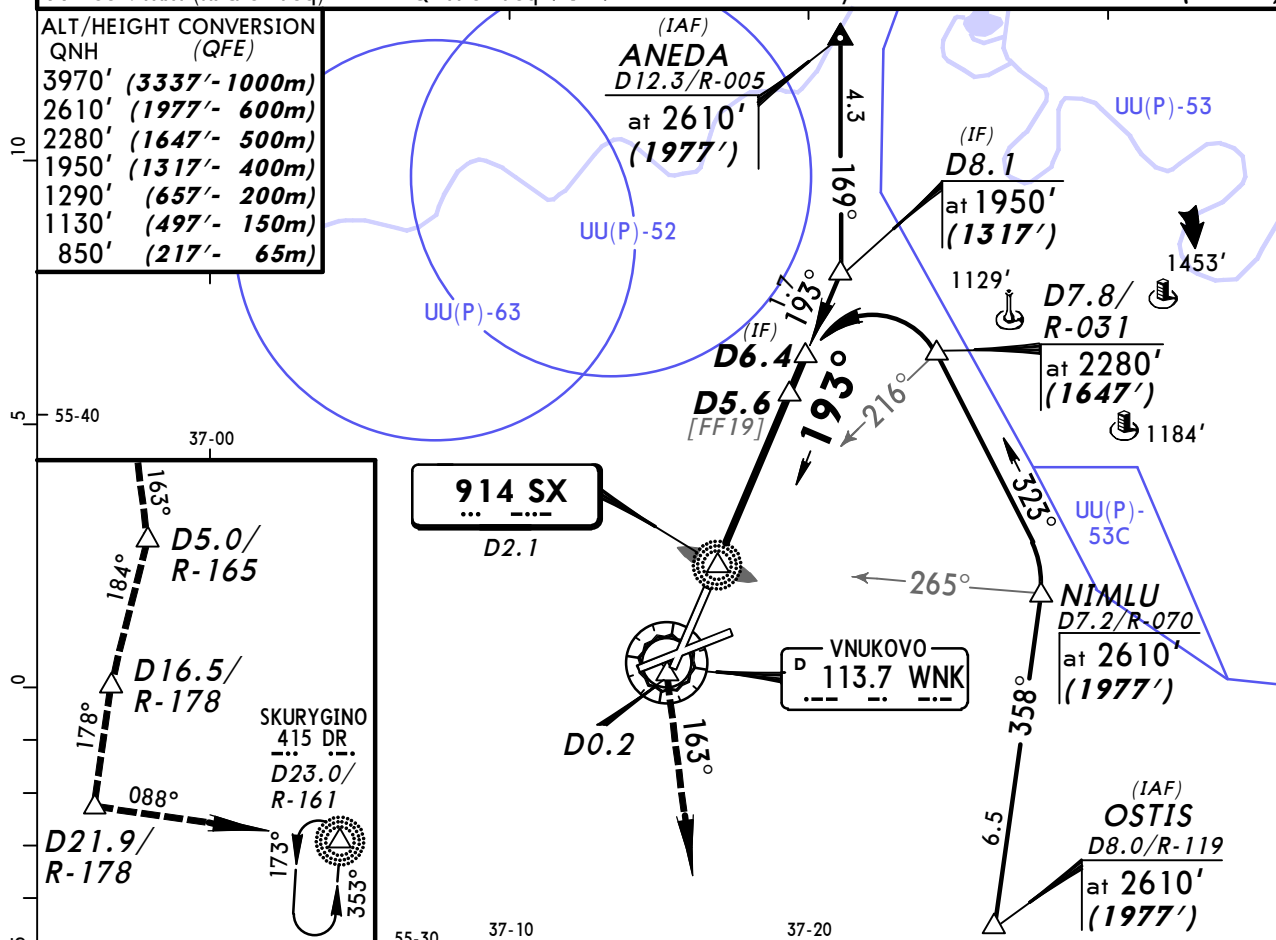
ATIS 131.85 (Russian 125.87)		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOV Approach 122.3	
VNUKOV Radar 126.0		VNUKOV Precision (PAR) 118.3		VNUKOV Tower 118.3		Ground 120.45 121.7	
NDB SX 914	Final Apch Crs 193°	Minimum Alt D5.6 1950' (1317')	MDA(H) (CONDITIONAL) 1150' (517')	Apt Elev 686' RWY 633'			

MISSED APCH: Climb STRAIGHT AHEAD to 1130' (497') or above to D0.2, turn LEFT onto 163° to D5.0 climbing to 2610' (1977'). Turn RIGHT onto 184° to D16.5, then onto 178° to D21.9, then onto 088° to DR NDB, or as directed. At 1290' (657') immediately contact Radar.

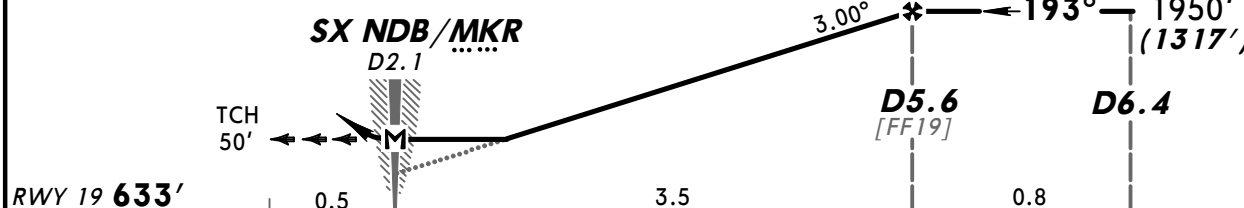


Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970' (3337')
--------------------------	---------------------------	---------------------	-----------------------------------

ALT/HEIGHT CONVERSION	
QNH	(<i>QFE</i>)
3970'	(3337'- 1000m)
2610'	(1977'- 600m)
2280'	(1647'- 500m)
1950'	(1317'- 400m)
1290'	(657'- 200m)
1130'	(497'- 150m)
850'	(217'- 65m)



Pass SX NDB/MKR not below 850' (217').



<i>Gnd speed-Kts</i>	70	90	100	120	140	160		D0.2
<i>Descent Angle</i> 3.00°	372	478	531	637	743	849		
<i>MAP at SX NDB/MKR/D2.1</i>								

STRAIGHT-IN LANDING RWY 19

With FAF MDA(H) 1150' (517')			W/o FAF MDA(H) 1250' (617')		
		ALS out			ALS out
A	1200m	RVR 1500m VIS 1600m	1200m	RVR 1500m VIS 1600m	
B					
C	RVR 1500m VIS 1600m	2400m	RVR 1800m VIS 2000m	2800m	
D	2400m	2800m	2800m	3200m	

CHANGES: Additional fix added.

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JEPPESSEN
6 MAR 15 **(16-4)**

MOSCOW, RUSSIA
NDB/MKR Rwy 24

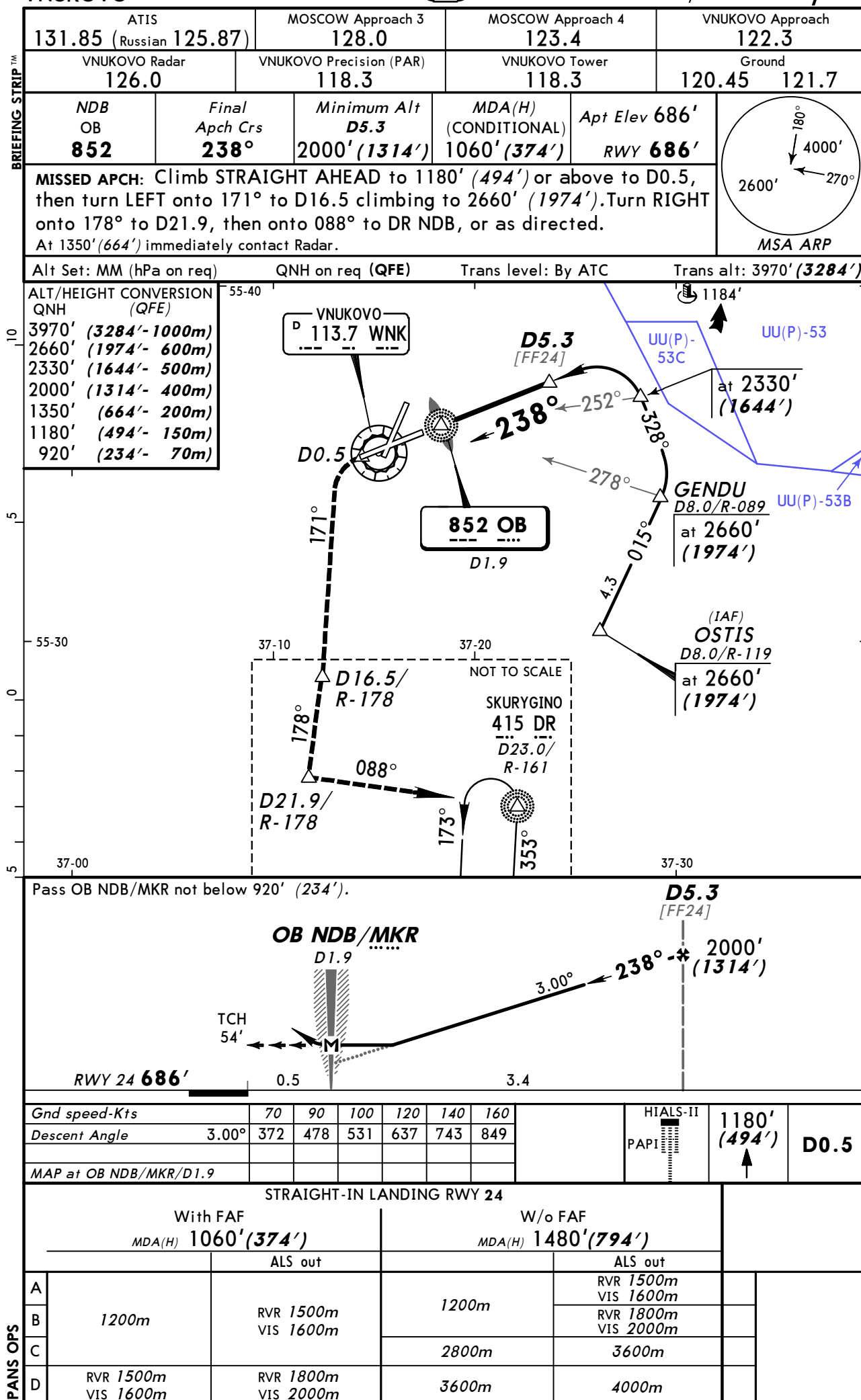


Chart changes since cycle 26-2015

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

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE
MOSCOW, (VNUKOVO - UUWW)				

TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport UUWW