

ADD = Added chart, REV = Revised chart, DEL = Deleted chart.

No revision activity since Disc 09-2011

TERMINAL CHART NOTAMs

Chart NOTAMs for Airport UUWW

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

Work in progress on rwy 01/19, thresh rwy 01 displaced by 3379'(1030m), rwy and usable lengths reduced to 6660'(2030m); ILS DME rwy 01, PAR rwy 01 and ILS rwy 19 u/s. For details refer to temp chart 16-1 and latest NOTAMs.

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

Ufn rwy 06/24 clsd.

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

EFF 18 NOV 10 following MAX speeds shall apply: from commencing descent to FL246 280KT or 0.8M (whichever is less); 270KT from FL246m to FL98; 250KT from FL98 to TL; adhere to these speed restrictions until established on approach - if unable to comply report to ATC.

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

VNUKOVO Delivery freq 131.12MHz perm withdrawn.

General Info

Moscow, RUS

N 55° 36.0' E 37° 16.4' Mag Var: 8.7°E

Elevation: 685'

Public, IFR, Control Tower, Customs

Fuel: Jet A-1

Repairs: Minor Airframe, Minor Engine

Time Zone Info: GMT+3:00 uses DST

Runway Info

Runway 01-19 6660' x 148' asphalt

Runway 06-24 9843' x 197' asphalt

Runway 01 (14.0°M) TDZE 667'

Lights: Edge, ALS, Centerline

Displaced Threshold Distance 3379'

Runway 06 (58.0°M) TDZE 637'

Lights: Edge, ALS, Centerline

Runway 19 (194.0°M) TDZE 634'

Lights: Edge, ALS, Centerline, TDZ

Runway 24 (238.0°M) TDZE 679'

Lights: Edge, ALS, Centerline, TDZ

Communications InfoATIS **131.85**ATIS **125.875** Non-EnglishVnukovo Vport Tower **122.875**Vnukovo Ats Tower **131.8**Vnukovo Tower **129.0** SecondaryVnukovo Tower **124.4** SecondaryVnukovo Tower **119.45** SecondaryVnukovo Tower **118.3**Vnukovo Taxiing 2 Ground Control **121.7**Vnukovo Taxiing 1 Ground Control **129.0** SecondaryVnukovo Taxiing 1 Ground Control **124.4** SecondaryVnukovo Taxiing 1 Ground Control **120.45**Vnukovo Taxiing 1 Ground Control **119.45** SecondaryVnukovo Approach Control **129.0** SecondaryVnukovo 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** SecondaryVnukovo Radar **126.0**Vnukovo Radar **124.4** SecondaryVnukovo Radar **119.45****Notebook Info**

UUWW/VKO
VNUKOVO

3 DEC 10

JEPPesen

10-1P

Eff 16 Dec

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.

'AIR GROUND' communication shall be reduced to a minimum during the approach phase, the initial take-off and the climbing phase.

The flight crews must maintain the assigned SID and STAR routes, and in case of deviation from them - immediately join the assigned flight track.

1.2.2. REVERSE THRUST

Reverse thrust power with the exception reverse idle thrust is used for safety reasons only.

1.3. TAXI PROCEDURES

Taxiing on TWYs 5, 14, 15, B1, B8, M3 and M4 at reduced speed, strictly along taxi guide line.

Taxiing on TWY 14 between TWYs 13 and 15 and on TWYs B1, B8 and M4 between TWYs B1 and B2 at night or when VIS is less than 2000m, with Follow-me car only; for AN-124 available by towing only.

TWYs B3 and B6 on segments from holding positions to apron available by towing.

1.4. PARKING INFORMATION

Use of Vnukovo I stands 3 thru 5, 92 and 93 by towing.

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

Leave Vnukovo I stands and start-up points under engines power of not more than 0.42 of the rating.

Leave Vnukovo I stands 21 thru 23, 24A, 25A and 26A by towing.

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

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

Leave Vnukovo III stands 29 thru 34, 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.

UUWW/VKO
VNUKOVO

3 DEC 10

 **JEPPESEN**

10-1P1

Eff 16 Dec

MOSCOW, RUSSIA
AIRPORT BRIEFING

1. GENERAL

1.5. OTHER INFORMATION

Birds in vicinity of APT.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES

2.1.1. APPROACH PHASE

Restrictions

Noise abatement procedures shall not apply under the following conditions:

- if RWY is covered with snow, ice, slush, water, mud, rubber, oil or other substances and the friction coefficient at this is 0.4 or less;
- when ceiling is less than 150m or horizontal visibility is less than 1800m;
- when a tailwind component on RWY exceeds 2.5 m/sec;
- when wind shear is forecasted or reported or a thunderstorm situation is expected.

Great rates of descent, when leaving the holding patterns or the occupied altitude, 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.

No noise abatement procedures shall envisage the increasing of indicated air speed of descent.

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

Landing of ACFT with tailwind component of up to 5 m/sec is allowed under the following conditions:

- RWY is dry or damp;
- friction coefficient is 0.5 or more;
- crosswind component is not more than 5 m/sec.

2.2. CAT II OPERATIONS

RWYs 19 and 24 approved for CAT II operations, special aircrew and ACFT certification required.

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VNUKOVO**JEPPESEN**
22 OCT 10 **10-1P2** **Eff 1 Nov****MOSCOW, RUSSIA**
AIRPORT BRIEFING

3. DEPARTURE

3.1. START-UP & TAXI PROCEDURES**3.1.1. START-UP**

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**TAKE-OFF AND CLIMBING PHASE**

Noise abatement procedures shall not be executed at the expense of reduction of flight safety, in case of engine failure during take-off and climbing phase.

Restrictions

Take-off with tailwind component up to 5 m/sec is allowed under the following conditions:

- RWY is dry or damp;
- friction coefficient is 0.5 or more;
- crosswind component is not more than 5 m/sec.

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 not exceeding 15°.

Turns initiated between 1670 '(985') and 3640'(2955') shall be executed with a bank angle not exceeding 20°.

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

The minimum steady climb speed shall not be less than $V_2 + 10$ KT or less than prescribed in the Airplane Flight Manual if it has greater value.

Maintaining the minimum climb speed is not required if it brings to exceeding the minimum permissible angle of attack.

The reduction of engine power shall not be applied until:

- the ACFT reaches 1480 '(795');
- the established standard power mode enables with MTOW to maintain the established climb gradient of not less than 4% at the above specified speed;
- take-off flight path provides overflying of all obstacles located under the flight path with sufficient clearance both when all engines are operating normally and also taking into account possible engine failure and time period necessary for the rest engines to develop full power.

Noise abatement procedures, which envisage take-off with reduced engine power, shall not apply under the following conditions:

- if RWY is covered with snow, ice, slush, water, mud, rubber, oil or other substances and the friction coefficient at this is 0.4 or less;
- when horizontal visibility is less than 1800m;
- when a crosswind component on RWY (including gusts) exceeds 7 m/sec;
- when a tailwind component on RWY exceeds 2.5 m/sec;
- when wind shear is forecasted or reported or a thunderstorm situation is expected.

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22 OCT 10

JEPPESEN

10-1P3

Eff 1 Nov

MOSCOW, RUSSIA
AIRPORT BRIEFING

3. DEPARTURE

Special take-off and climbing procedures

During take-off from RWY 01 on take-off heading and climbing to at or above 1080'(397') with a maximum possible climb gradient proceed to 1.1NM from RWY 19 extremity with further RIGHT/LEFT turn, maintaining speed and banking which provide a flight with radius 1.6NM. When proceeding to GOTMA and BITSA, pass NDB/MKR at or or above FL49.

During departure along SID OKLIT 01D proceed to TURUG with maximum possible climb gradient.

After take-off from RWY 06 on take-off heading and climbing to not below 1300'(663') with a maximum possible climb gradient proceed to 2.2NM from RWY 24 extremity with further RIGHT turn, maintaining speed and banking which provide a flight with radius 2.4NM.

During departure along SID OKLIT 06D turning onto 350° track shall be initiated after climbing with maximum climb gradient to 1300'(663') at 1.1 NM from RWY 24 extremity, maintaining speed and banking, ensuring the flight with radius 1.9 NM.

After take-off from RWYs 19 and 24 on take-off heading and climbing to 1300'(666')/ 1340'(661') with a maximum possible climb gradient proceed to 2.2NM from RWY 01 and RWY 06 extremity with further LEFT turn (RIGHT turn when proceeding to GOTMA), maintaining speed and banking which provide a flight with radius 2.4NM.

When proceeding to GOTMA and BITSA pass NDB/MKR at or above FL49. Passing ARSEP and BITSA shall be carried out at or above FL49.

Prompt take-off procedure is introduced at the aerodrome as in accordance with the ACFT Flight Manual of the appropriate ACFT type.

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31 DEC 10 **10-2** Eff 13 Jan

MOSCOW, RUSSIA
TRANSITION

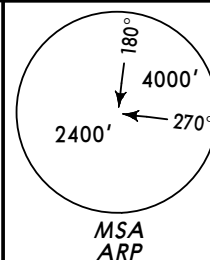
ATIS
131.85 (Russian **125.87**)
Apt Elev
685'
Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (**3285'**)

BD 1W
LEDOR 1W
TO DEDUM

BD 2W
LEDOR 2W
TO OKLIT

BD 3W
LEDOR 3W
TO UM

MF 1W
TO BITSA



TRANSITIONS

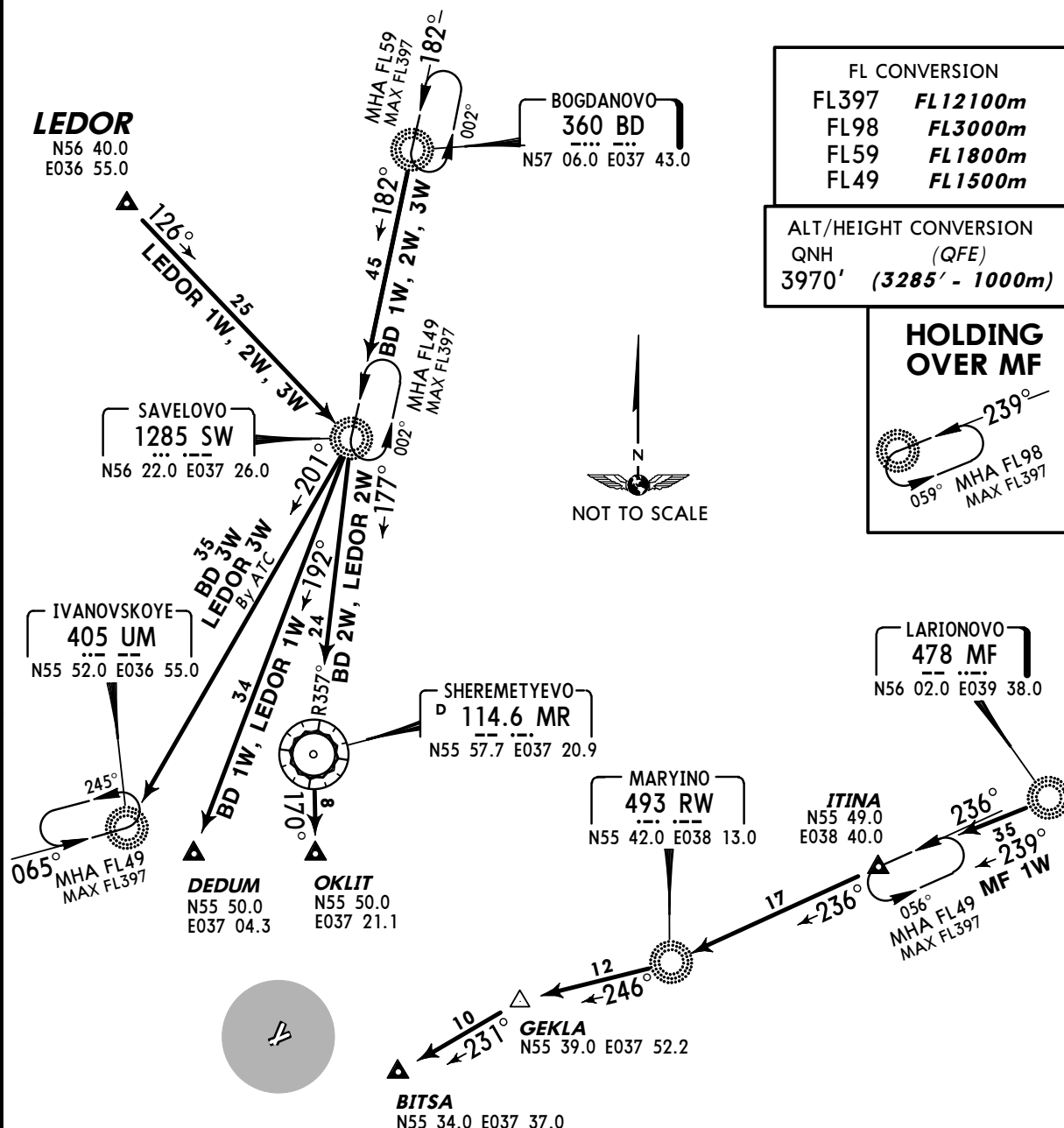
FROM NORTH & EAST

FOR BITSA STARS REFER TO CHARTS 10-2J TO 10-2Q

FOR DEDUM STARS REFER TO CHARTS 10-2B TO 10-2E, 10-2G & 10-2H

FOR OKLIT STARS REFER TO CHART 10-2F

FOR UM STARS REFER TO CHARTS 10-2B TO 10-2H

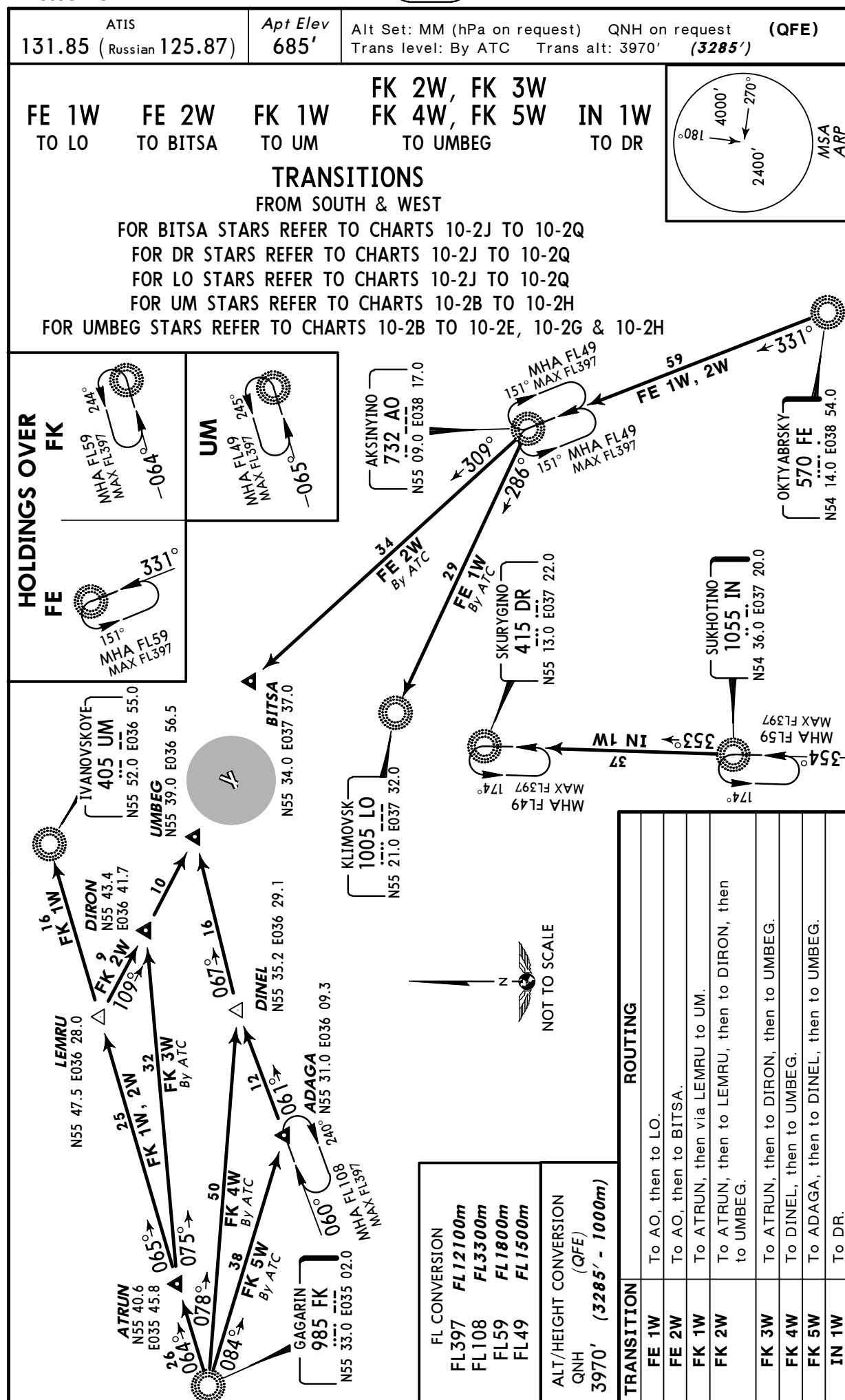


TRANSITION	ROUTING
BD 1W	To SW, then to DEDUM.
BD 2W	To SW, then to MR, then to OKLIT.
BD 3W	To SW, then to UM.
LEDOR 1W	To SW, then to DEDUM.
LEDOR 2W	To SW, then to MR, then to OKLIT.
LEDOR 3W	To SW, then to UM.
MF 1W	To ITINA, then to RW, then to GEKLA, then to BITSA.

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31 DEC 10 **(10-2A)** Eff 13 Jan

MOSCOW, RUSSIA
TRANSITION



UUWW/VKO
VNUKOVO

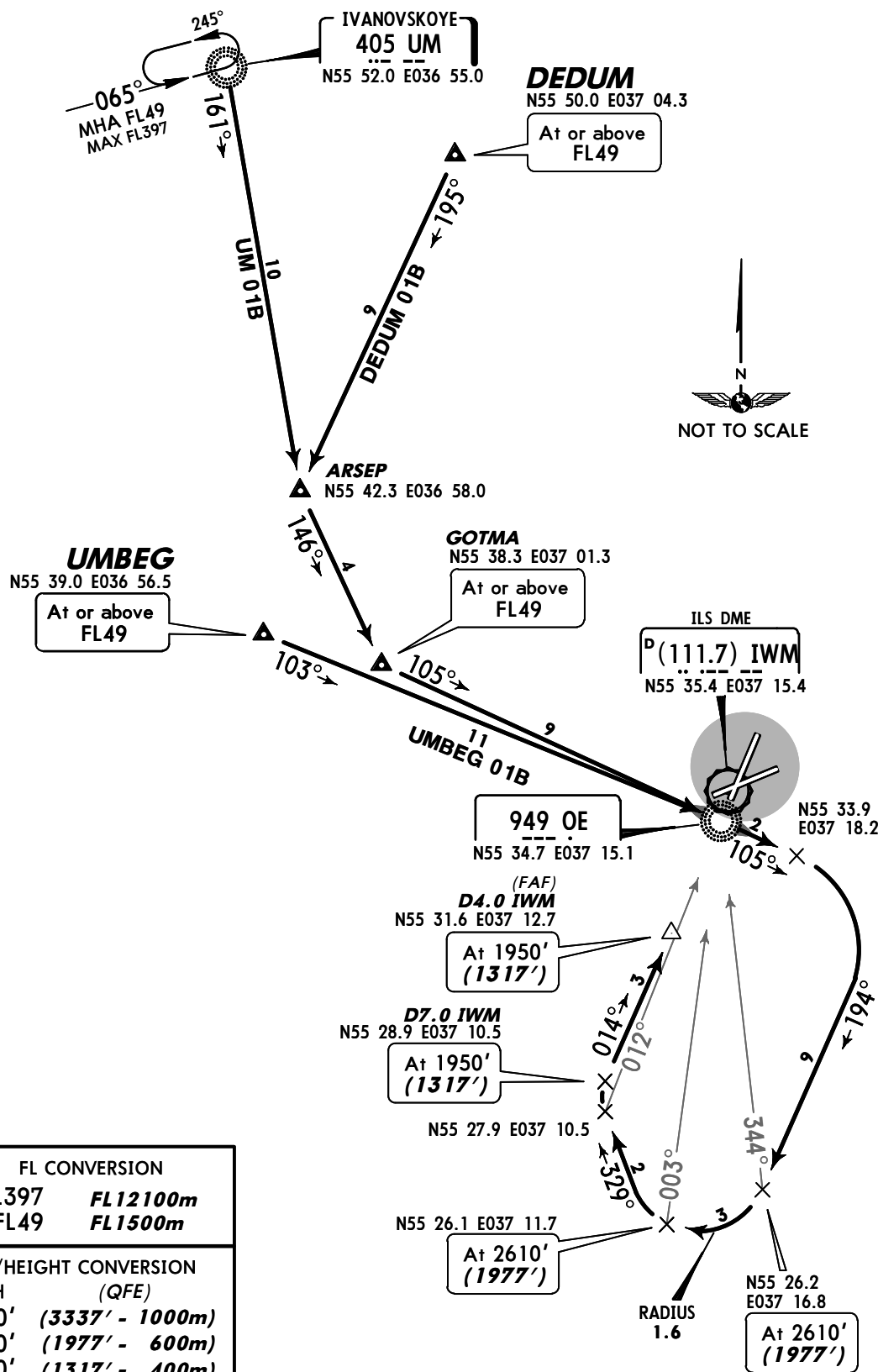
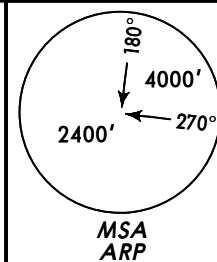
JEPPESSEN
 31 DEC 10 **10-2B** Eff 13 Jan

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' (3337')

DEDUM 01B [DEDØ1B]
IVANOVSKOYE 01B (UM 01B)
UMBEG 01B [UMBØ1B]
RWY 01 ARRIVALS
 FROM NORTH

FOR DEDUM 01K, UM 01K & UMBEG 01K REFER TO CHART 10-2C



FL CONVERSION	
FL397	FL12100m
FL49	FL1500m
ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)
1950'	(1317' - 400m)

CHANGES: Holding over UM revised.

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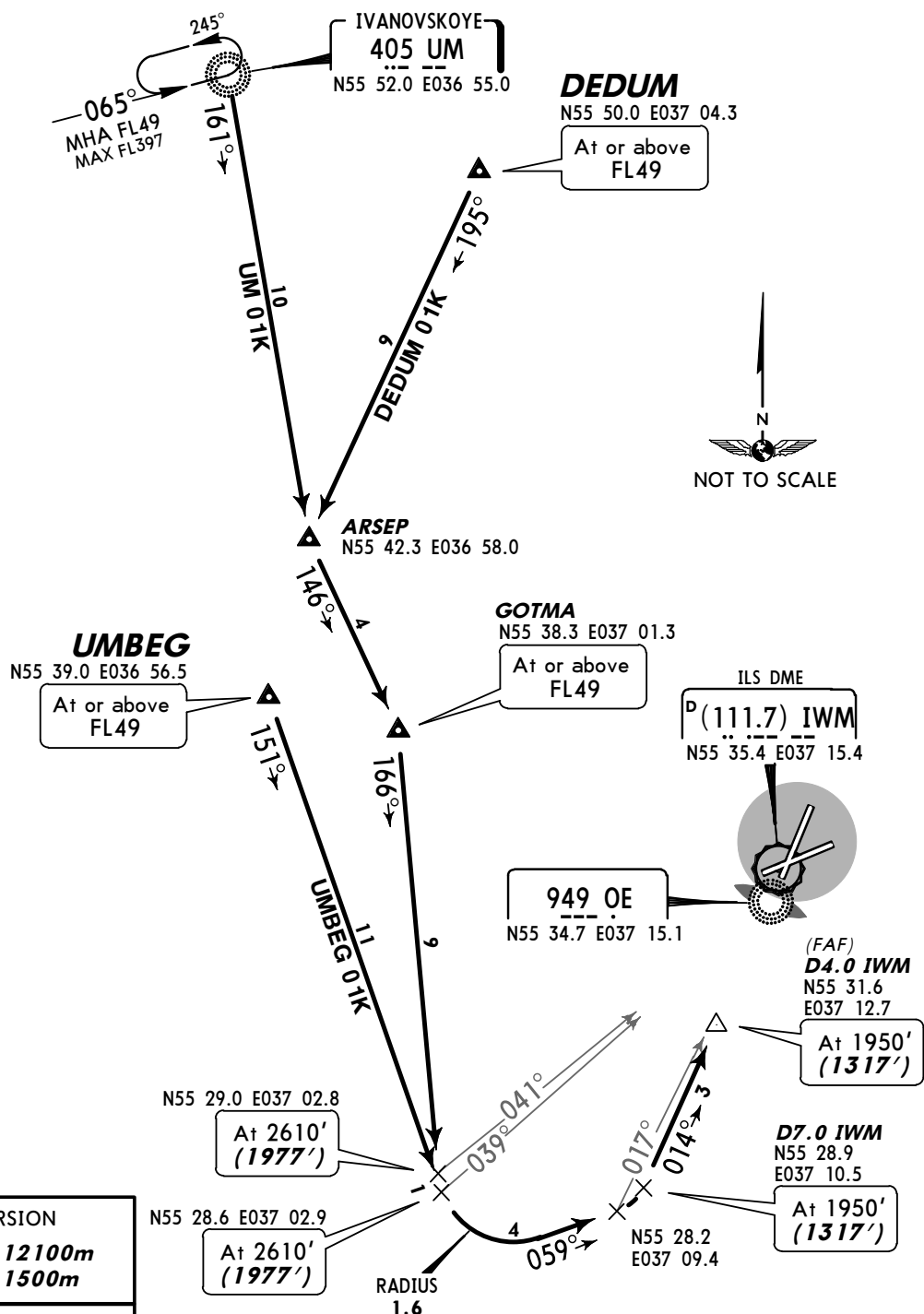
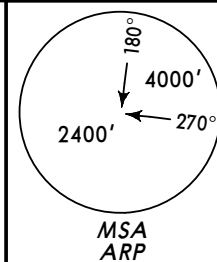
UUWW/VKO
VNUKOVO

JEPPESSEN
31 DEC 10 **10-2C** **Eff 13 Jan**

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' (**3337'**)

DEDUM 01K [DEDØ1K]
IVANOVSKOYE 01K (UM 01K)
UMBEG 01K [UMBØ1K]
RWY 01 ARRIVALS
FROM NORTH



FL CONVERSION	
FL397	FL12100m
FL49	FL1500m
ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)
1950'	(1317' - 400m)

UUWW/VKO
VNUKOVO

JEPPESEN
31 DEC 10 **(10-2D)** **Eff 13 Jan**

MOSCOW, RUSSIA

STAR

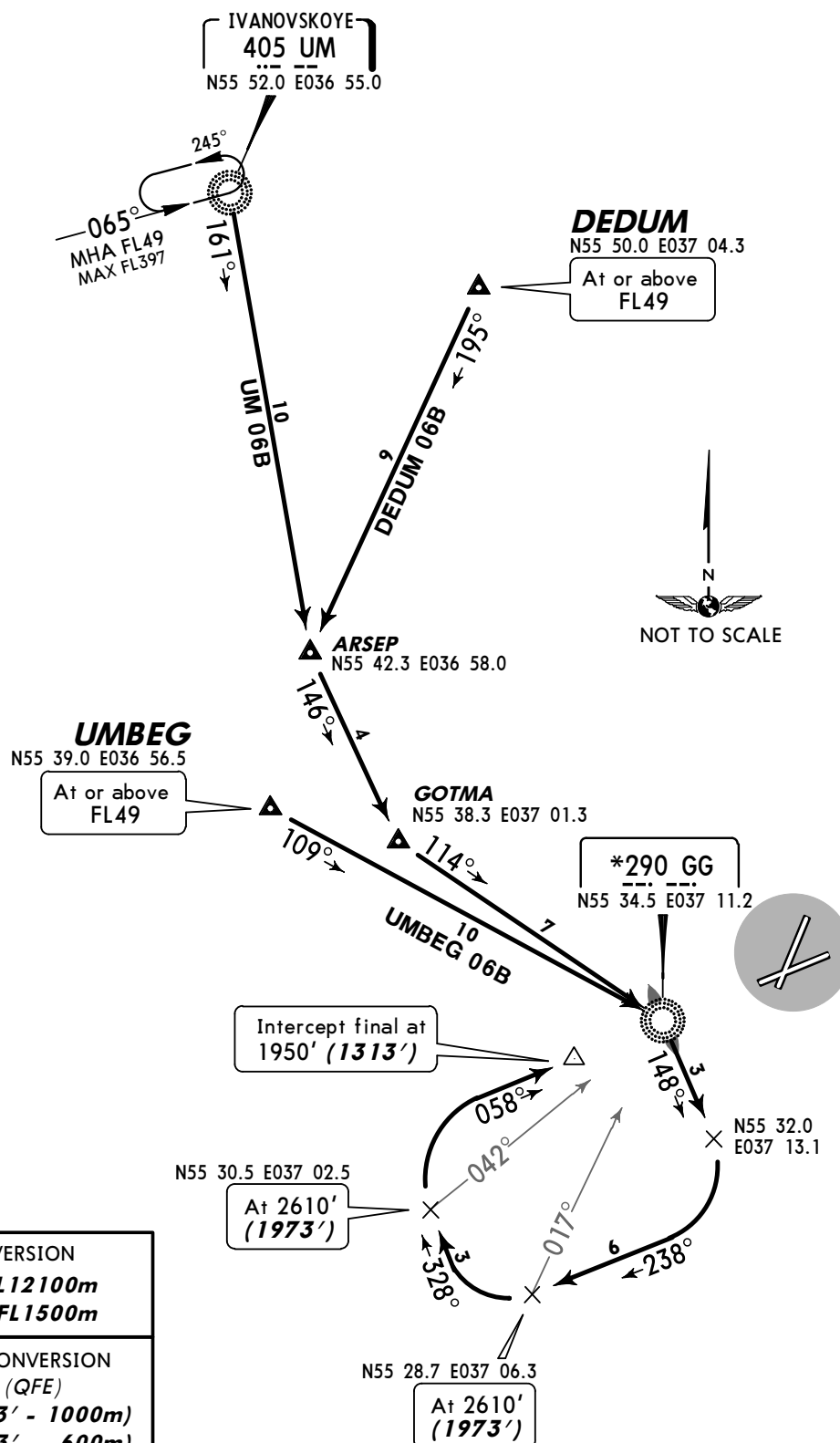
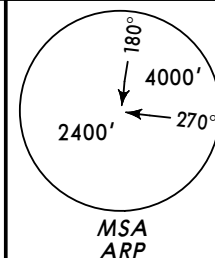
ATIS
131.85 (Russian 125.87)

Apt Elev
685'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3333')

DEDUM 06B [DEDØ6B]
IVANOVSKOYE 06B (UM 06B)
UMBEG 06B [UMBØ6B]
RWY 06 ARRIVALS
FROM NORTH

FOR DEDUM 06K, UM 06K & UMBEG 06K REFER TO CHART 10-2E



FL CONVERSION	
FL397	<i>FL12100m</i>
FL49	<i>FL1500m</i>
ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	<i>(3333' - 1000m)</i>
2610'	<i>(1973' - 600m)</i>
1950'	<i>(1313' - 400m)</i>

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JEPPESSEN
31 DEC 10 **(10-2E)** **Eff 13 Jan**

MOSCOW, RUSSIA

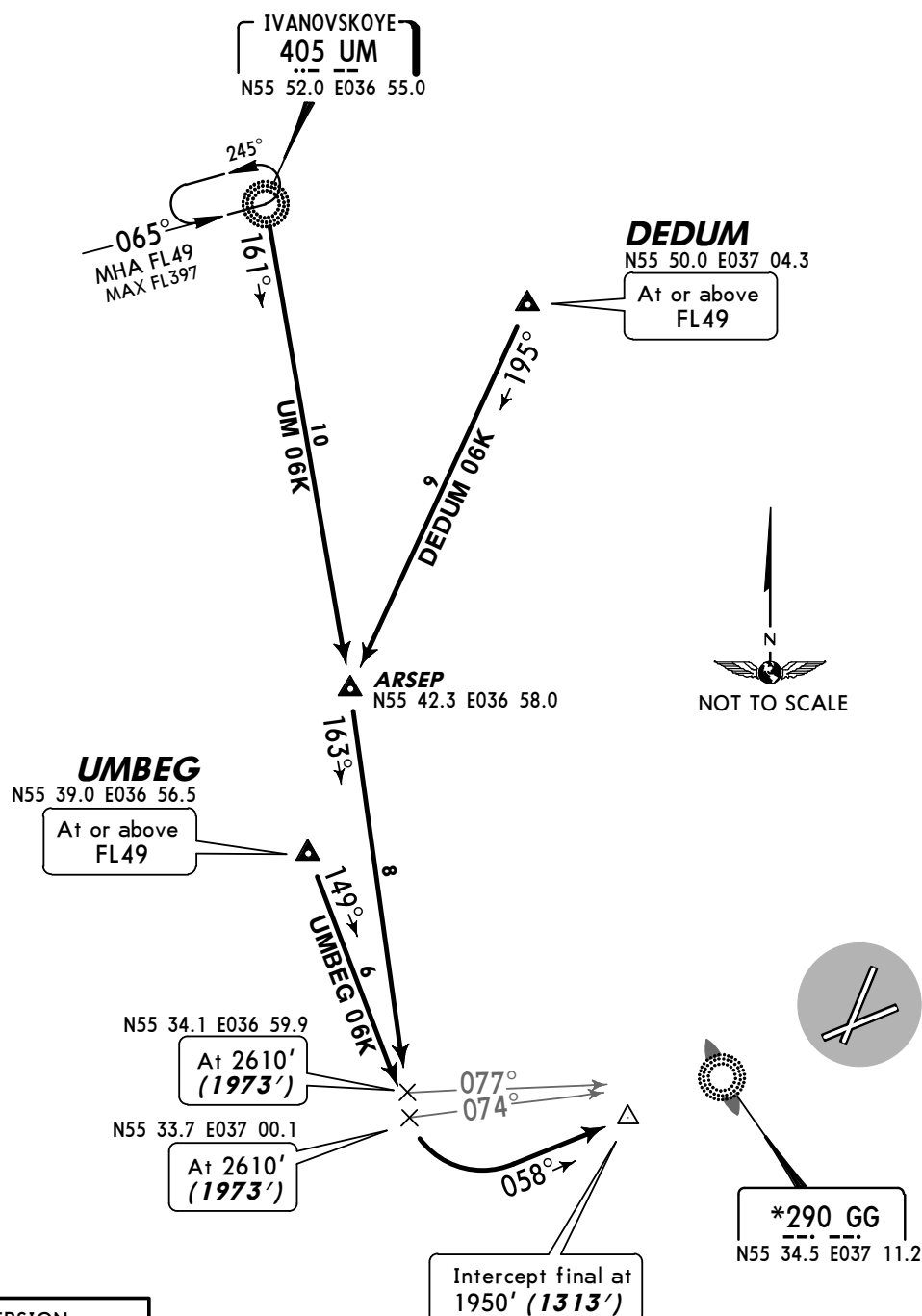
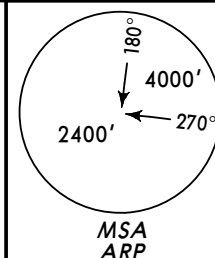
STAR

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' (3333')

DEDUM 06K [DEDØ6K]
IVANOVSKOYE 06K (UM 06K)
UMBEG 06K [UMBØ6K]
RWY 06 ARRIVALS
FROM NORTH



FL CONVERSION	
FL397	<i>FL12100m</i>
FL49	<i>FL1500m</i>
ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	<i>(3333' - 1000m)</i>
2610'	<i>(1973' - 600m)</i>
1950'	<i>(1313' - 400m)</i>

UUWW/VKO
VNUKOVO

JEPPESSEN
31 DEC 10 **(10-2F)** **Eff 13 Jan**

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')

IVANOVSKOYE 19A (UM 19A)

IVANOVSKOYE 19B (UM 19B)

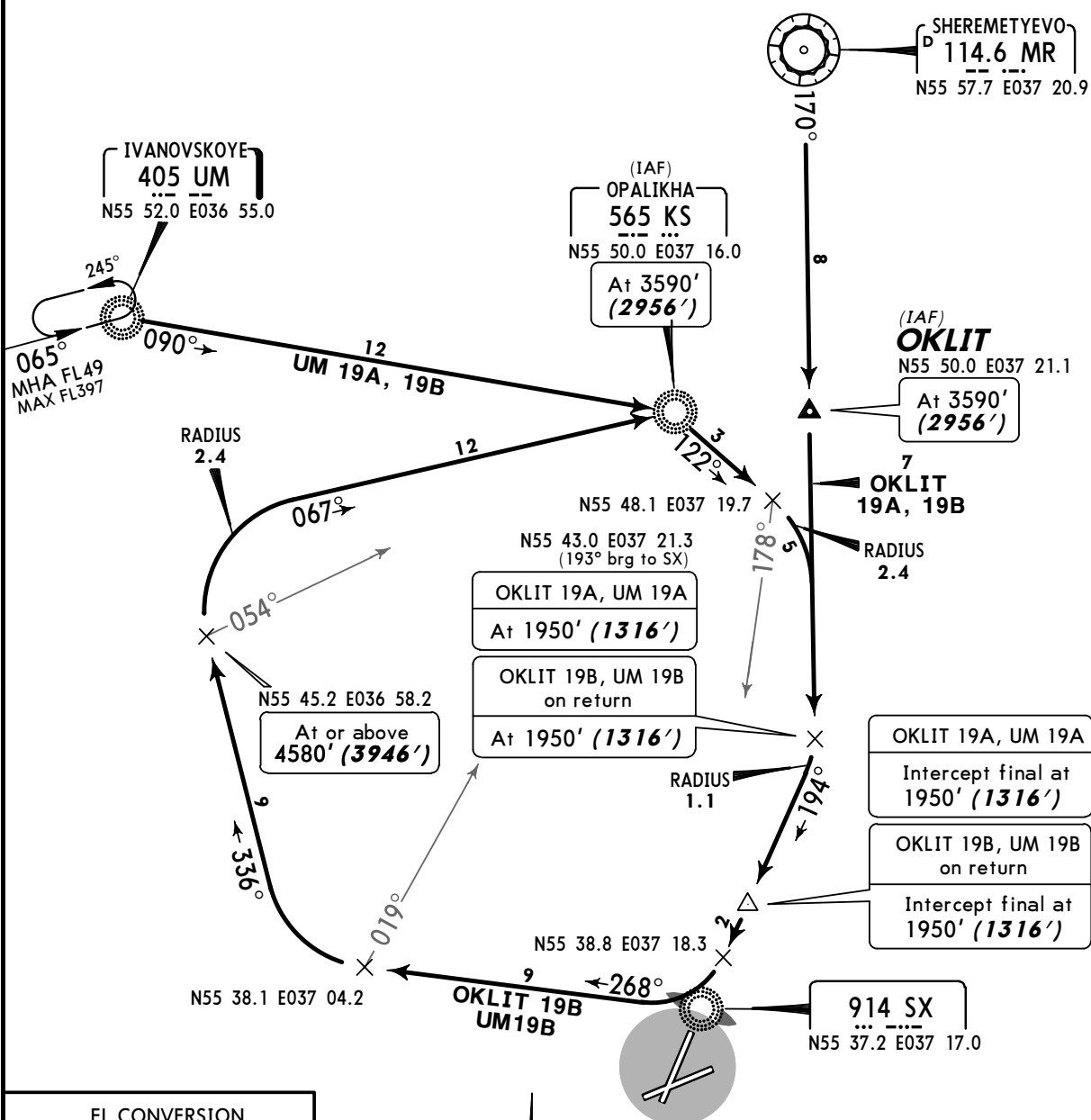
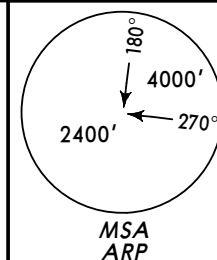
OKLIT 19A [OKL19A]

OKLIT 19B [OKL19B]

RWY 19 ARRIVALS

FROM NORTH

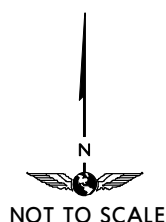
FOR DEDUM 19K, UM 19K & UMBEG 19K REFER TO CHART 10-2G



FL CONVERSION
FL397 ***FL12100m***
FL49 ***FL1500m***

ALT/HEIGHT CONVERSION
QNH (QFE)

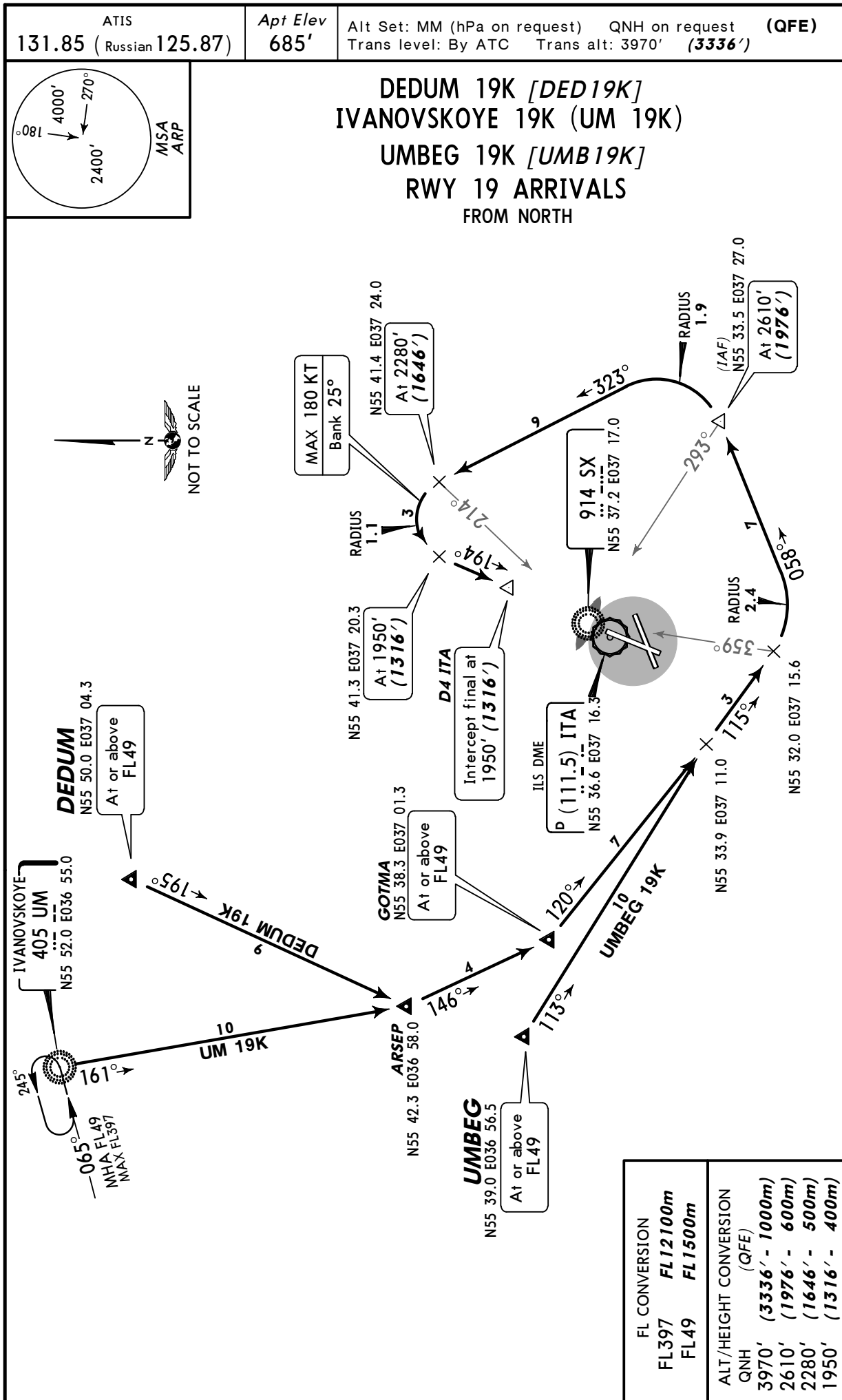
4580'	(3946' - 1200m)
3970'	(3336' - 1000m)
3590'	(2956' - 900m)
1950'	(1316' - 400m)



UUWW/VKO
VNUKOV

JEPPESEN
 31 DEC 10 **(10-2G)** Eff 13 Jan

MOSCOW, RUSSIA
STAR



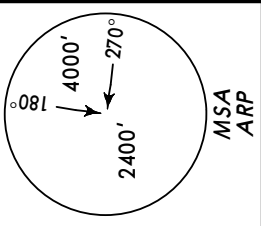
FL CONVERSION FL397 FL12100m FL49 FL1500m	ALT/HEIGHT CONVERSION (QFE) QNH 3970' (3336' - 1000m) 2610' (1976' - 600m) 2280' (1646' - 500m) 1950' (1316' - 400m)
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UUWW/VKO
VNUKOVO

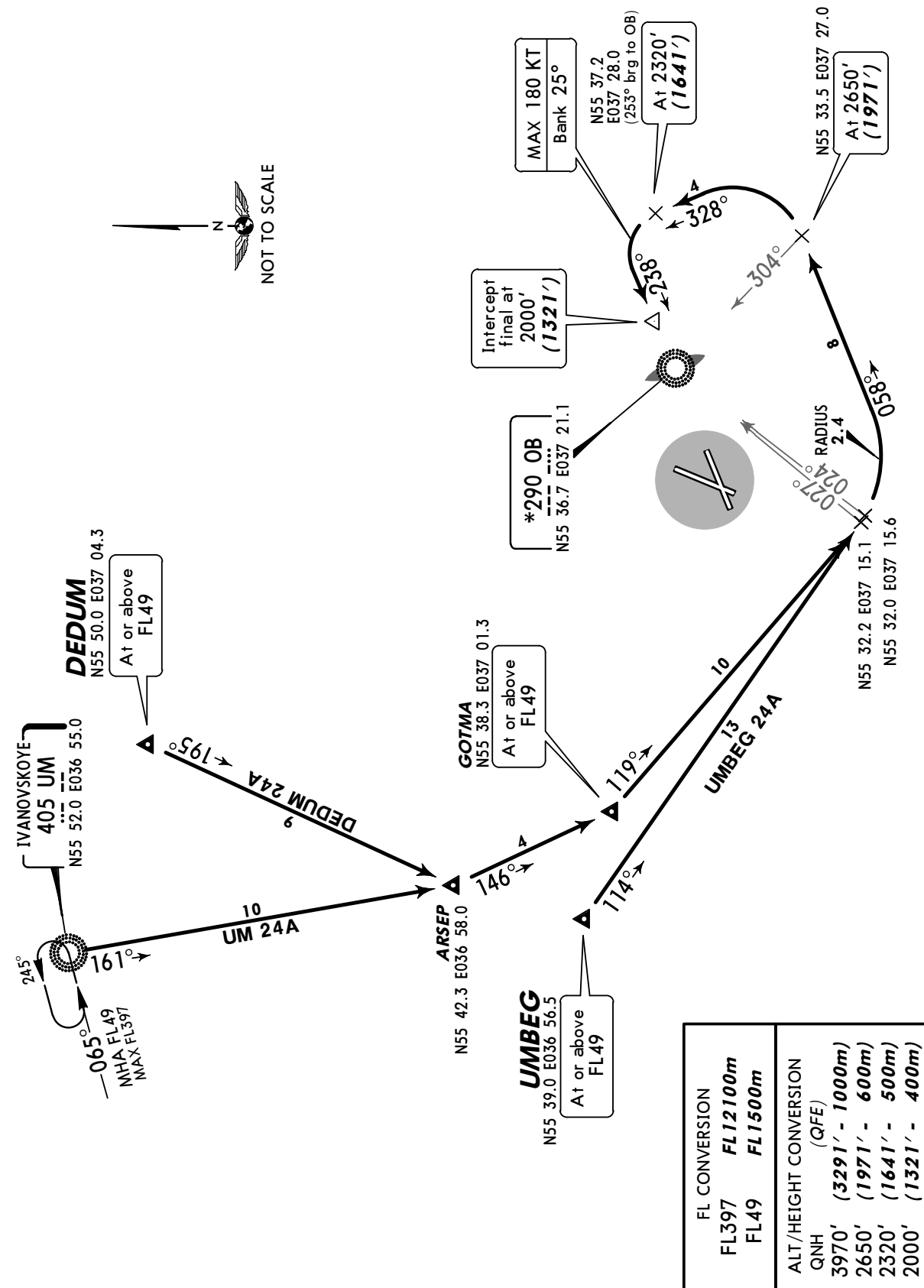
JEPPESSEN
 31 DEC 10 **(10-2H)** **Eff 13 Jan**

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' (**3291'**)



DEDUM 24A [DED24A]
IVANOVSKOYE 24A (UM 24A)
UMBEG 24A [UMB24A]
RWY 24 ARRIVALS
FROM NORTH



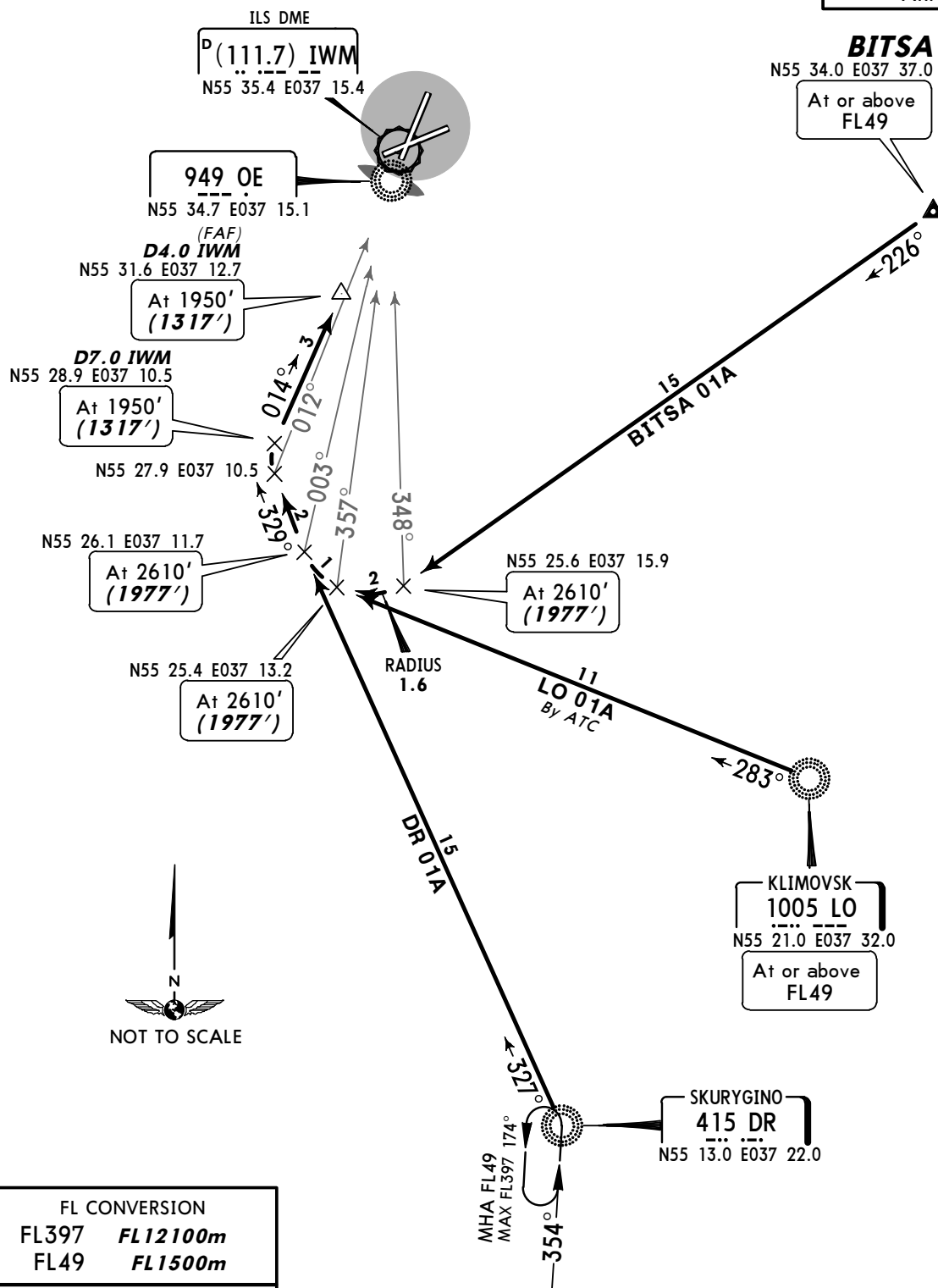
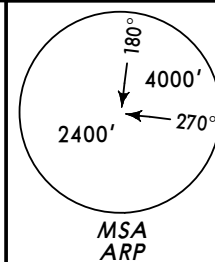
UUWW/VKO
VNUKOVO

JEPPESSEN
31 DEC 10 **10-2J** **Eff 13 Jan**

MOSCOW, RUSSIA
STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 685'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3337')	(QFE)
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**BITSA 01A [BITØ1A], KLIMOVSK 01A (LO 01A)
SKURYGINO 01A (DR 01A)
RWY 01 ARRIVALS
FROM EAST & SOUTHEAST
FOR BITSA 01I, LO 01I & DR 01I REFER TO CHART 10-2K**



FL CONVERSION	
FL397	FL12100m
FL49	FL1500m
ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)
1950'	(1317' - 400m)

CHANGES: Holding over DR revised.

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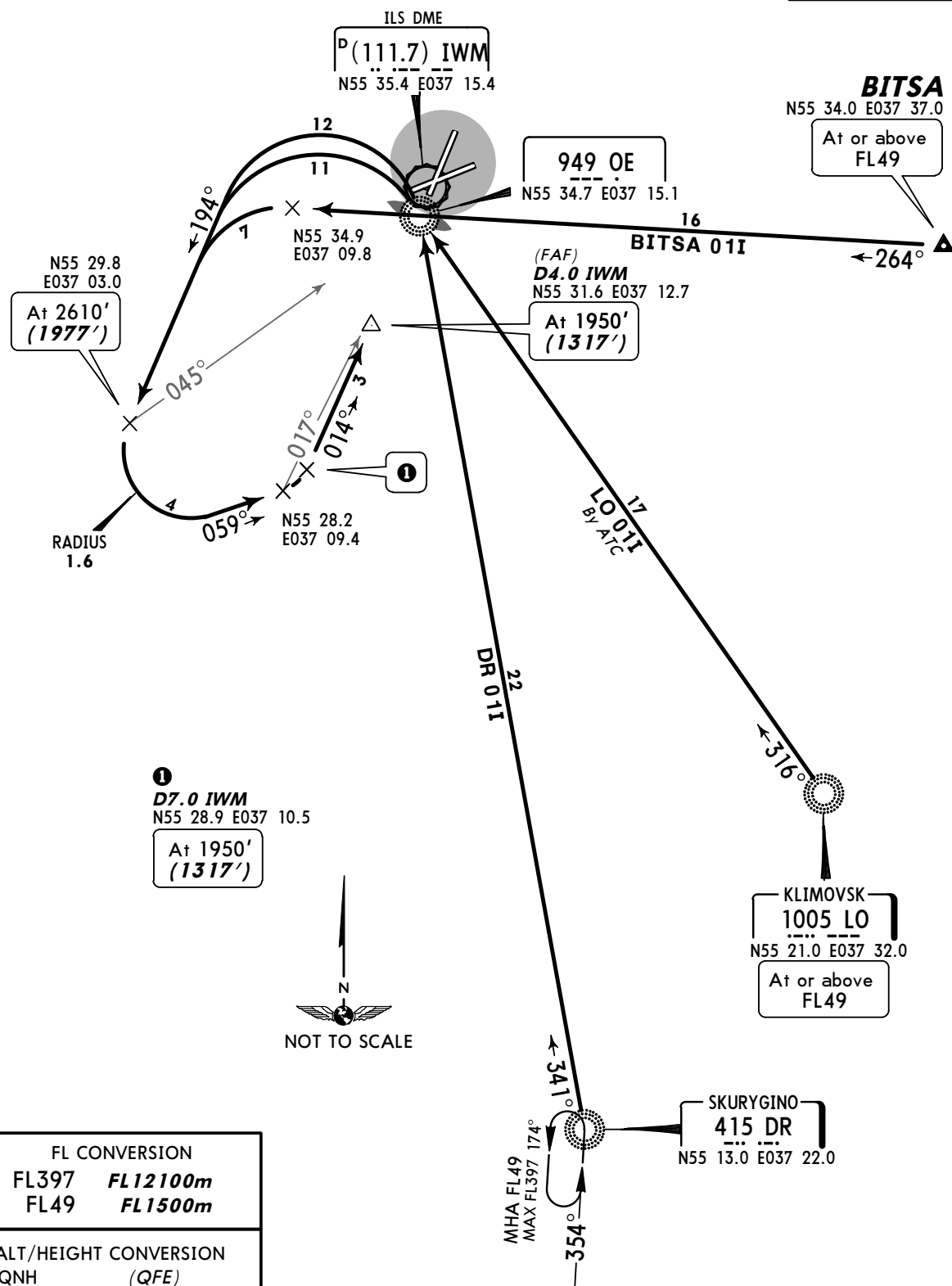
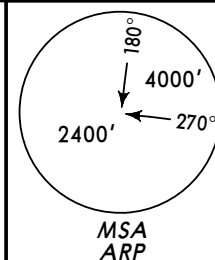
UUWW/VKO
VNUKOVO

JEPPESSEN
31 DEC 10 **10-2K** **Eff 13 Jan**

MOSCOW, RUSSIA
STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 685'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3337')	(QFE)
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BITSA 01I [BITØ1I] , KLIMOVSK 01I (LO 01I)
SKURYGINO 01I (DR 01I)
RWY 01 ARRIVALS
FROM EAST & SOUTHEAST



FL CONVERSION	
FL397	FL12100m
FL49	FL1500m
ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3337' - 1000m)
2610'	(1977' - 600m)
1950'	(1317' - 400m)

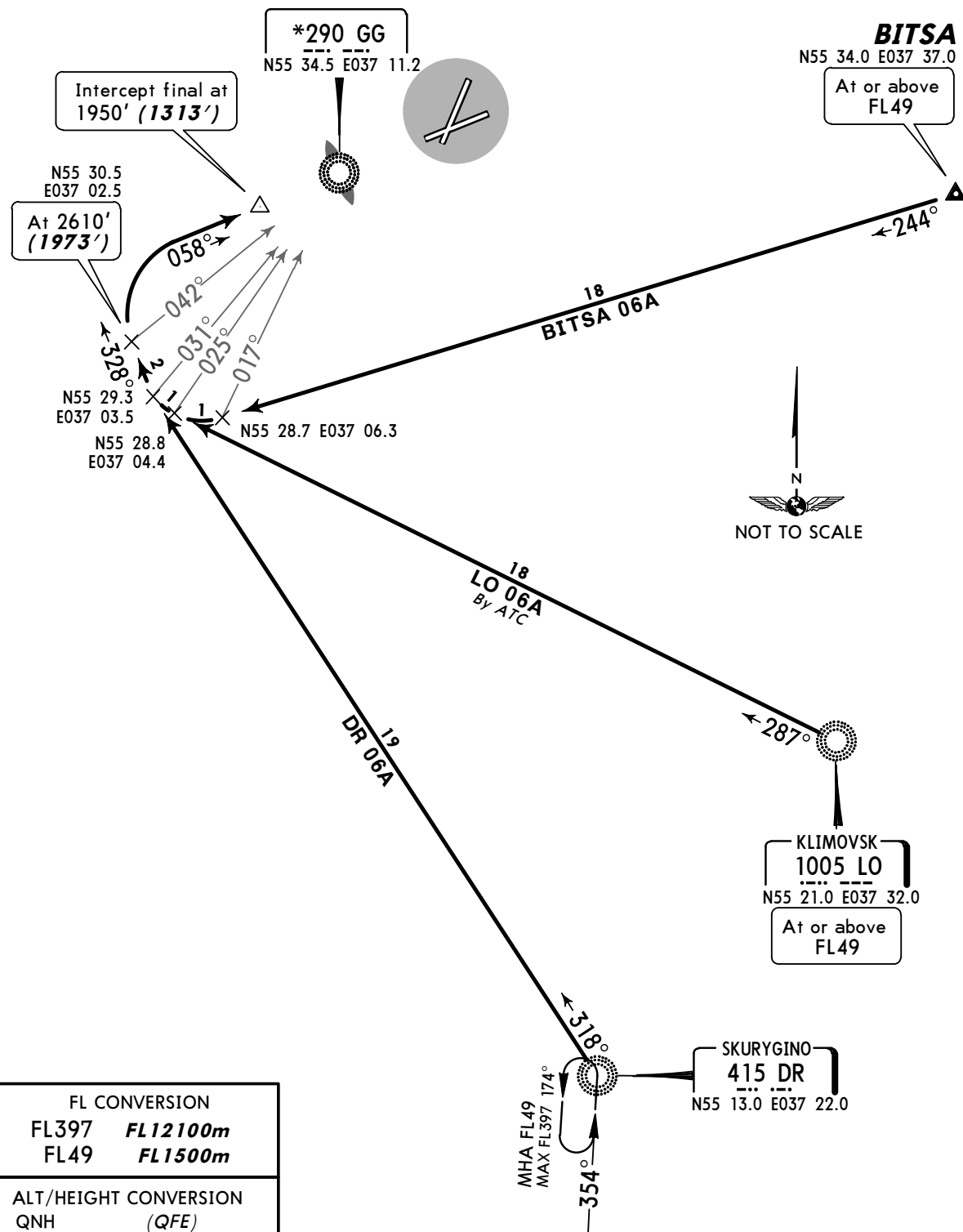
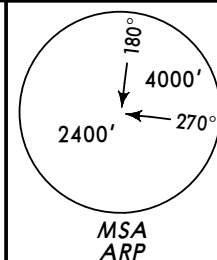
UUWW/VKO
VNUKOVO

JEPPESEN
31 DEC 10 **10-2L** **Eff 13 Jan**

MOSCOW, RUSSIA
STAR

ATIS 131.85 (Russian 125.87)	Apt Elev 685'	Alt Set: MM (hPa on request) QNH on request Trans level: By ATC Trans alt: 3970' (3333')	(QFE)
--	-------------------------	--	-------

**BITSA 06A [BITØ6A], KLIMOVSK 06A (LO 06A)
SKURYGINO 06A (DR 06A)
RWY 06 ARRIVALS
FROM EAST & SOUTHEAST
FOR BITSA 06K, LO 06I & DR 06I REFER TO CHART 10-2M**



FL CONVERSION	
FL397	FL12100m
FL49	FL1500m

ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3333' - 1000m)
2610'	(1973' - 600m)
1950'	(1313' - 400m)

UUWW/VKO
VNUKOVO

JEPPESEN
31 DEC 10 **(10-2M)** **Eff 13 Jan**

MOSCOW, RUSSIA

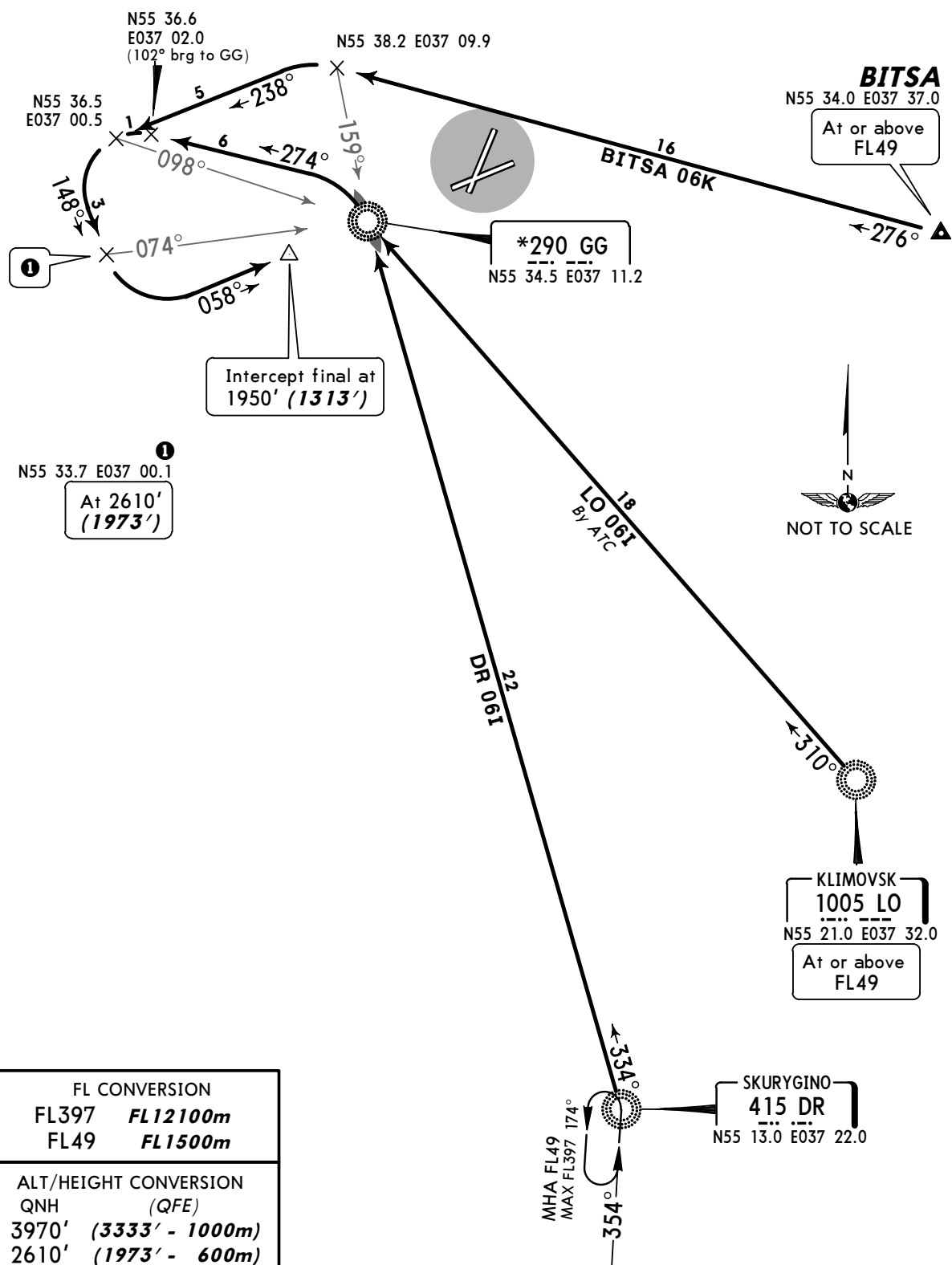
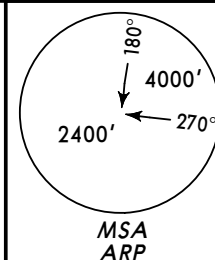
STAR

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' **(3333')**

BITSA 06K [BITØ6K] , KLIMOVSK 06I (LO 06I)
SKURYGINO 06I (DR 06I)
RWY 06 ARRIVALS
FROM EAST & SOUTHEAST



FL CONVERSION	
FL397	<i>FL12100m</i>
FL49	<i>FL1500m</i>

ALT/HEIGHT CONVERSION	
QNH	(<i>QFE</i>)
3970'	<i>(3333' - 1000m)</i>
2610'	<i>(1973' - 600m)</i>
1950'	<i>(1313' - 400m)</i>

UUWW/VKO
VNUKOVO

JEPPESSEN
31 DEC 10 **(10-2N)** **Eff 13 Jan**

MOSCOW, RUSSIA

STAR

ATIS
131.85 (Russian 125.87)

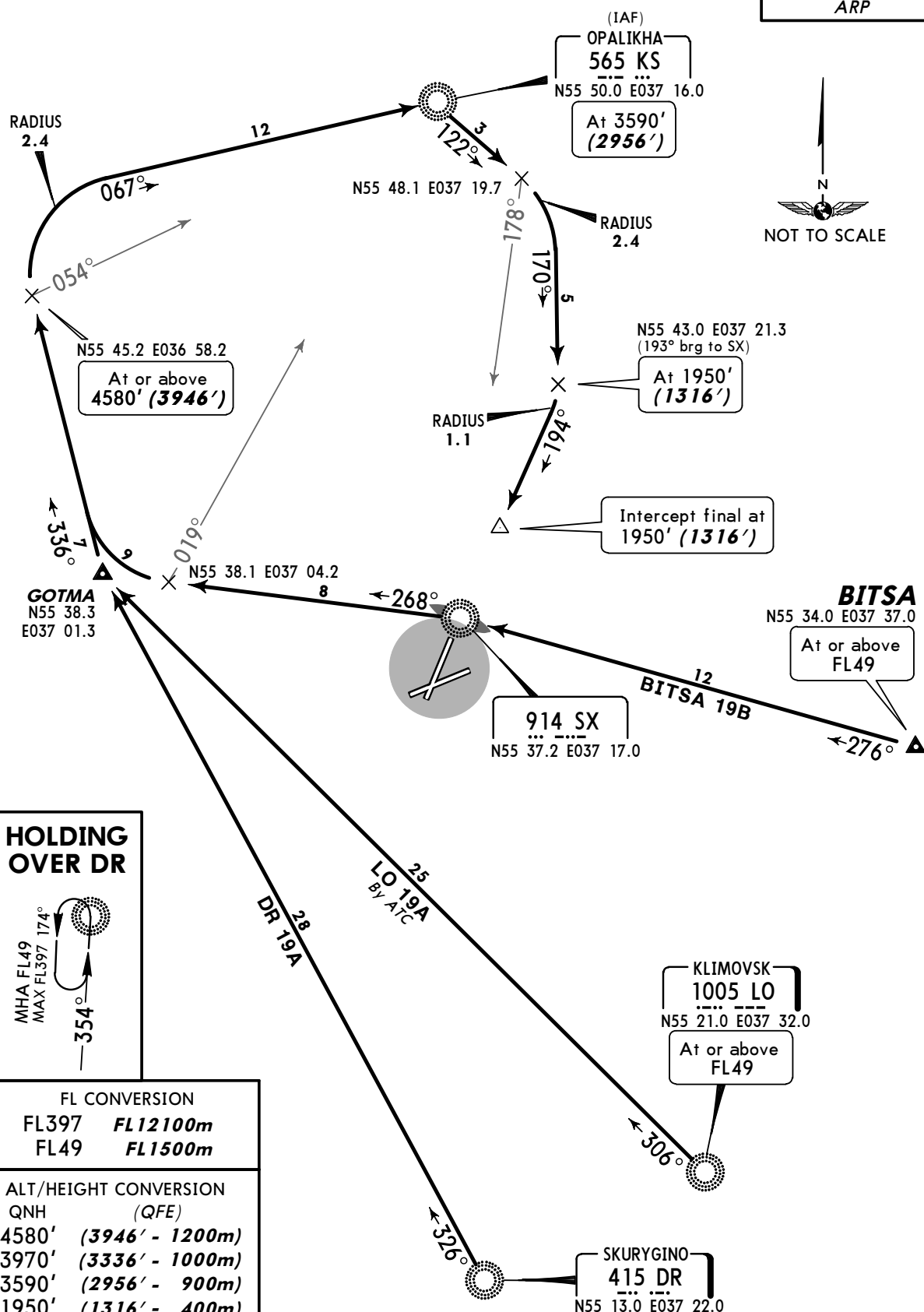
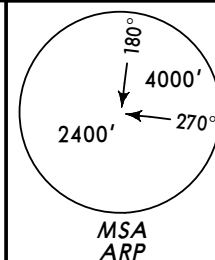
Apt Elev
685'

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

BITSA 19B [*BIT19B*] , KLIMOVSK 19A (LO 19A)
SKURYGINO 19A (DR 19A)

RWY 19 ARRIVALS FROM EAST & SOUTHEAST

FOR BITSA 19I, LO 19I, LO 19K & DR 19K REFER TO CHART 10-2P



HOLDING OVER DR



FL CONVERSION
FL397 ***FL12100m***
FL49 ***FL1500m***

ALT/HEIGHT CONVERSION
QNH (QFE)
4580' (3946' - 1200m)
3970' (3336' - 1000m)
3590' (2956' - 900m)
1950' (1316' - 400m)

CHANGES: Holding over DR revised.

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UUWW/VKO
VNUKOVO

JEPPESEN
31 DEC 10 (10-2P) Eff 13 Jan

MOSCOW, RUSSIA

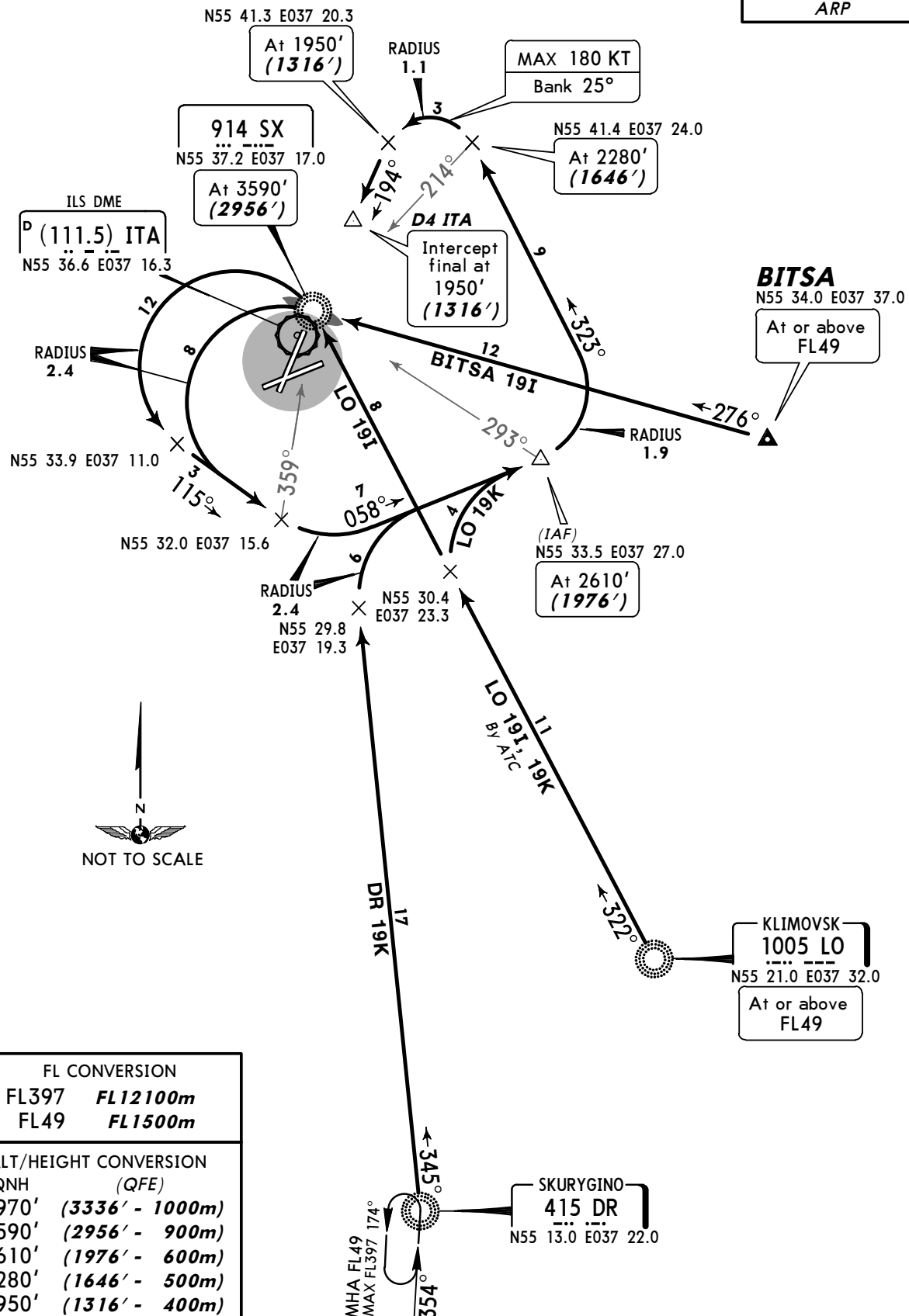
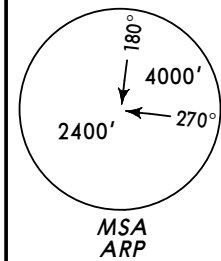
STAR

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] , KLIMOVSK 19I (LO 19I)
KLIMOVSK 19K (LO 19K), SKURYGINO 19K (DR 19K)
RWY 19 ARRIVALS
FROM EAST & SOUTHEAST



FL CONVERSION	
FL397	<i>FL12100m</i>
FL49	<i>FL1500m</i>

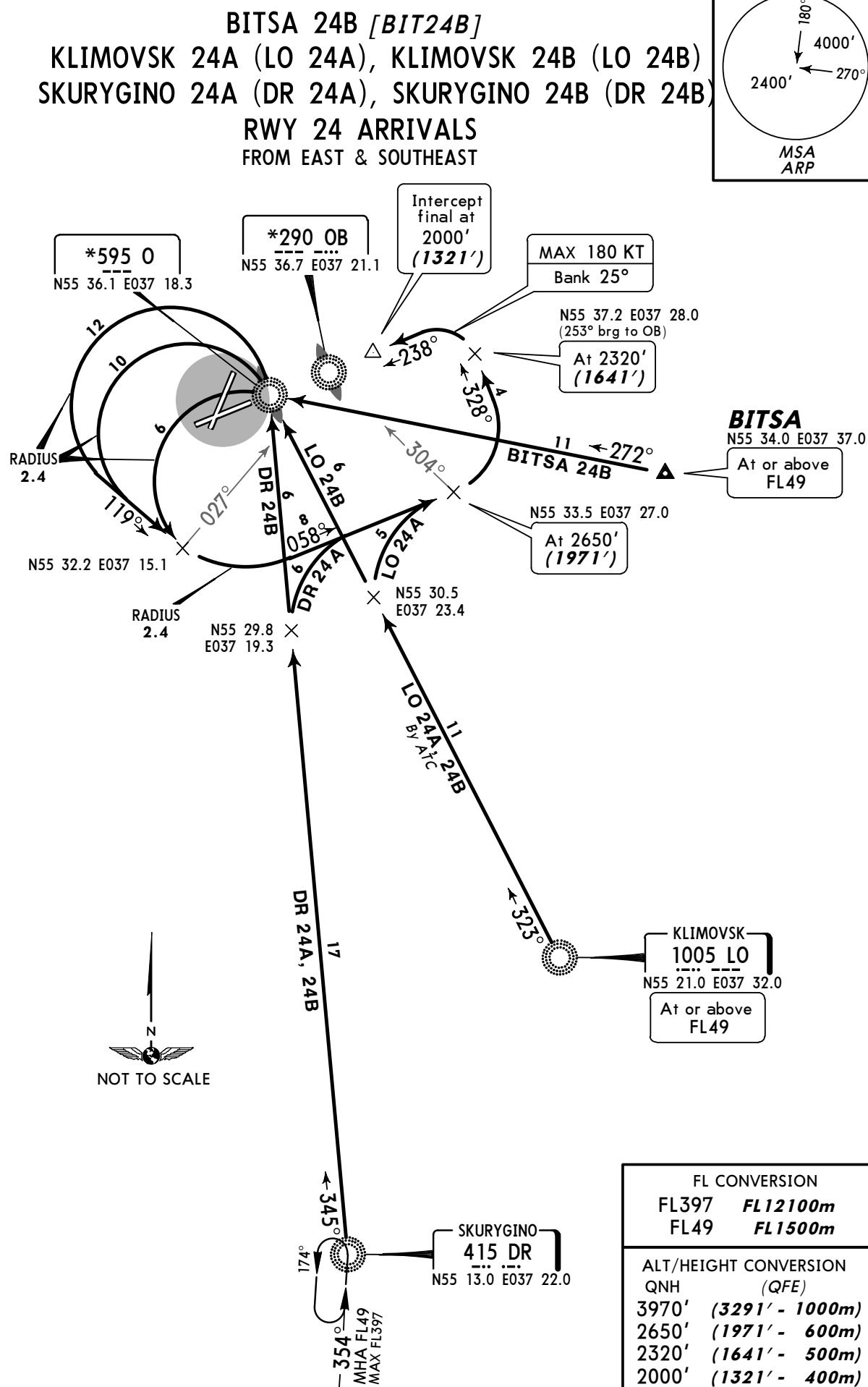
ALT/HEIGHT CONVERSION	
QNH	(<i>QFE</i>)
3970'	<i>(3336' - 1000m)</i>
3590'	<i>(2956' - 900m)</i>
2610'	<i>(1976' - 600m)</i>
2280'	<i>(1646' - 500m)</i>
1950'	<i>(1316' - 400m)</i>

UUWW/VKO
VNUKOVO

JEPPESEN
31 DEC 10 **(10-2Q)** **Eff 13 Jan**

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' (**3291'**)



UUWW/VKO
VNUKOVO

JEPPESEN
22 OCT 10 **10-3** **Eff 1 Nov**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

Apt Elev
685'

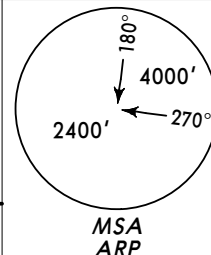
QNH on request **(QFE)**

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

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

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

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



DEDUM 01D[DEDØ1D] , DEDUM 01E[DEDØ1E] ①
IVANOVSKOYE 01D (UM 01D) , IVANOVSKOYE 01E (UM 01E) ①
RWY 01 DEPARTURES

FOR TRANSITIONS FROM DEDUM REFER TO CHART 10-3M

FOR TRANSITIONS FROM UM REFER TO CHART 10-3Q
TO NORTHWEST

IVANOVSKOYE
405 UM
N55 52.0 E036 55.0

① By ATC

DEDUM

N55 50.0 E037 04.3

ALT/HEIGHT CONVERSION

QNH (QFE)

1030' **(397' - 120m)**

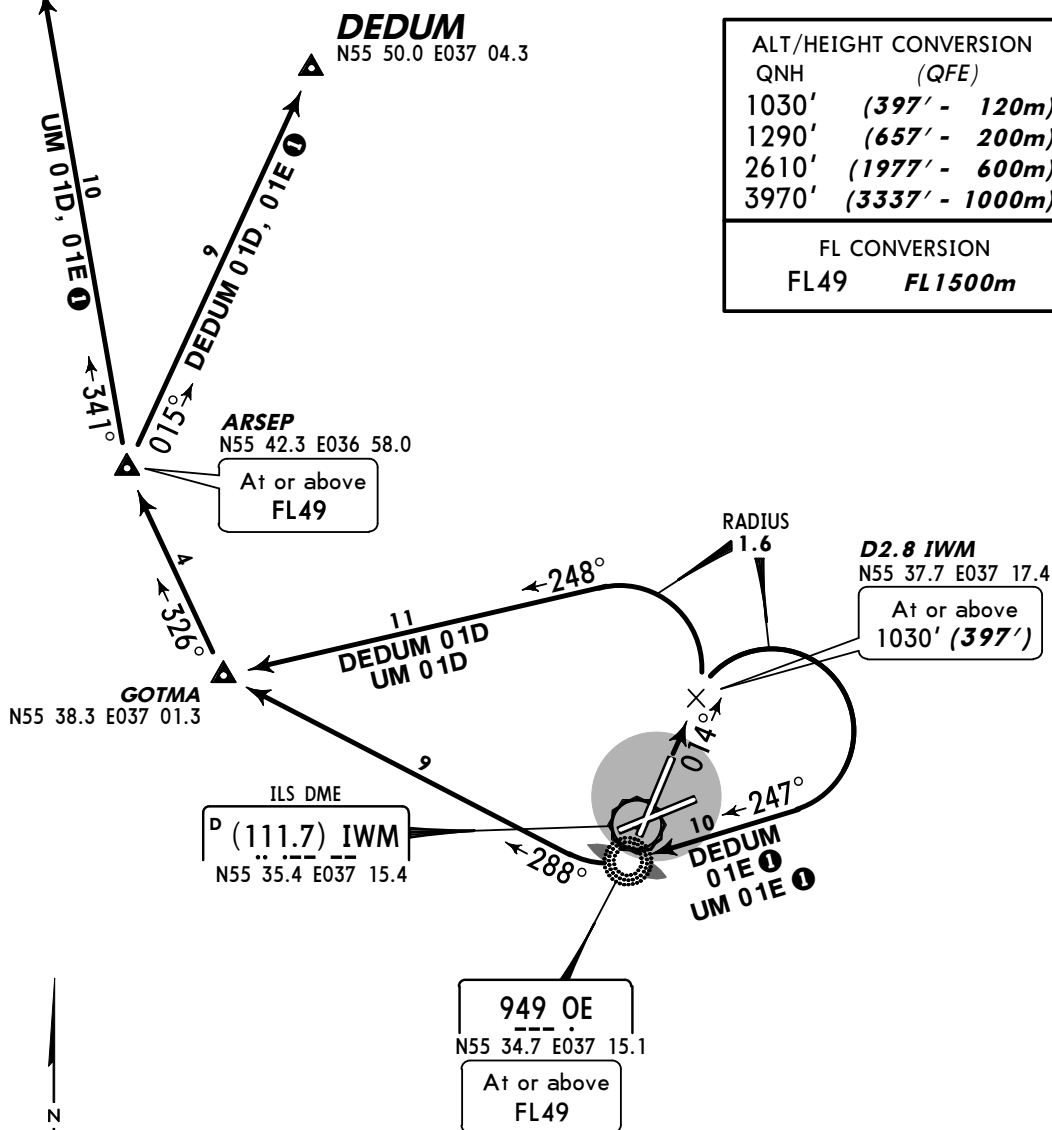
1290' **(657' - 200m)**

2610' **(1977' - 600m)**

3970' **(3337' - 1000m)**

FL CONVERSION

FL49 **FL1500m**



UUWW/VKO
VNUKOVO

JEPPESEN
22 OCT 10 **(10-3A)** **Eff 1 Nov**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

Apt Elev
685'

QNH on request **(QFE)**

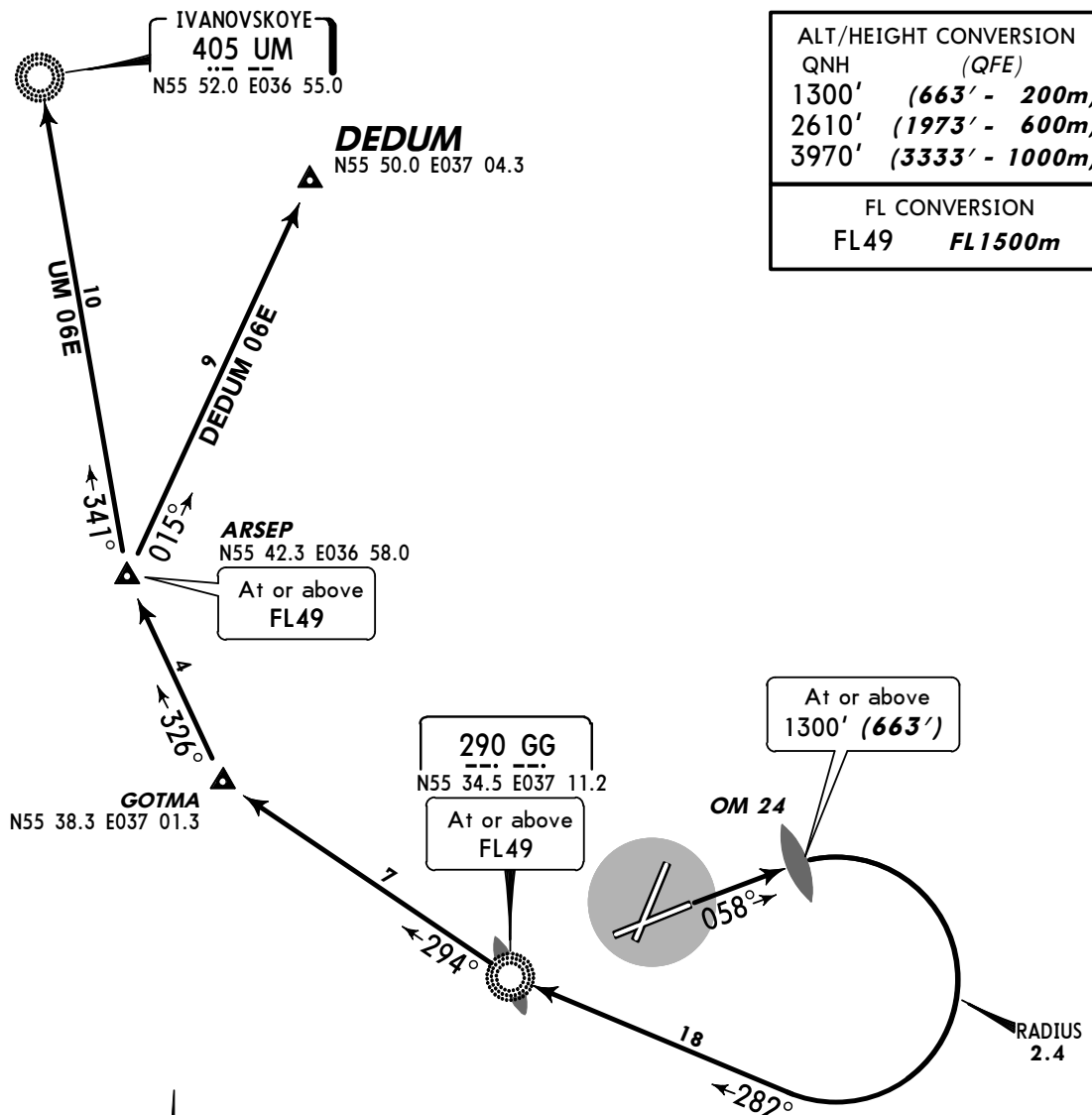
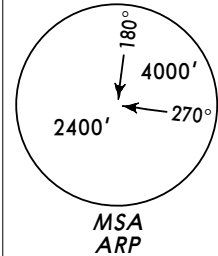
Trans level: By ATC Trans alt: 3970' **(3333')**

1. Contact VNUKOVO Radar immediately after crossing 1300' **(663')**.

2. Initial climb clearance 2610' **(1973')**.

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

DEDUM 06E [DEDØ6E]
IVANOVSKOYE 06E (UM 06E)
RWY 06 DEPARTURES
FOR TRANSITIONS FROM DEDUM REFER TO CHART 10-3M
FOR TRANSITIONS FROM UM REFER TO CHART 10-3Q
TO NORTHWEST



UUWW/VKO
VNUKOVO

JEPPESEN
17 DEC 10 **(10-3B)**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

Apt Elev
685'

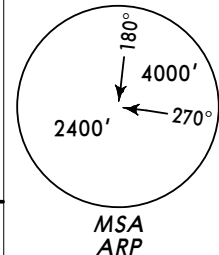
QNH on request **(QFE)**

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

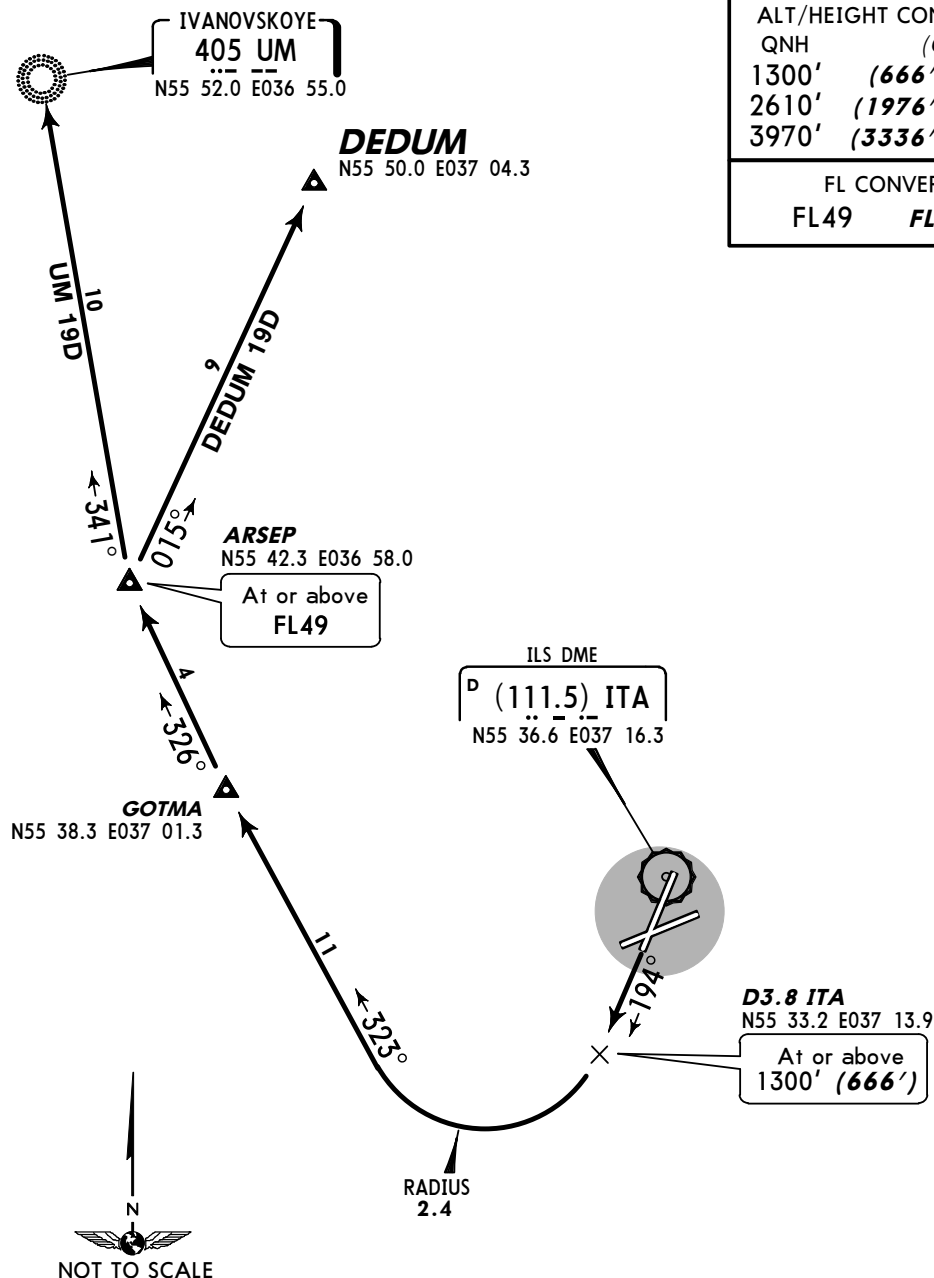
1. Contact VNUKOVO Radar immediately after crossing 1300' **(666')**.

2. Initial climb clearance 2610' **(1976')**.

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



DEDUM 19D [DED 19D]
IVANOVSKOYE 19D (UM 19D)
RWY 19 DEPARTURES
FOR TRANSITIONS FROM DEDUM REFER TO CHART 10-3M
FOR TRANSITIONS FROM UM REFER TO CHART 10-3Q
TO NORTHWEST



ALT/HEIGHT CONVERSION

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

FL CONVERSION

FL49 **FL1500m**

UUWW/VKO
VNUKOVO

JEPPESEN
17 DEC 10 **(10-3C)**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

Apt Elev
685'

QNH on request **(QFE)**

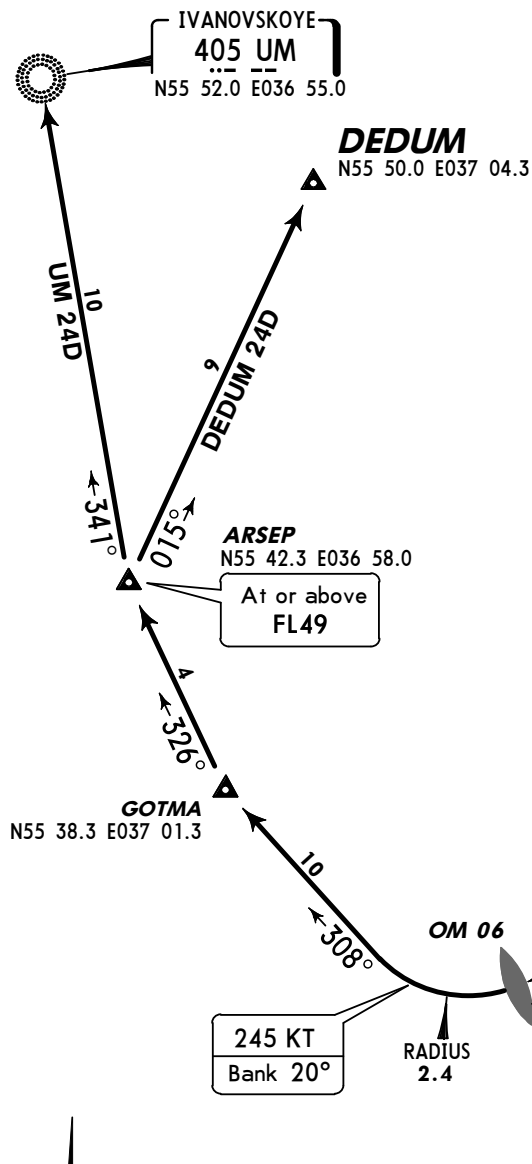
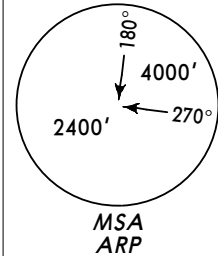
Trans level: By ATC Trans alt: 3970' **(3291')**

1. Contact VNUKOVO Radar immediately after crossing 1340' **(661')**.

2. Initial climb clearance 2650' **(1971')**.

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

DEDUM 24D [DED24D]
IVANOVSKOYE 24D (UM 24D)
RWY 24 DEPARTURES
FOR TRANSITIONS FROM DEDUM REFER TO CHART 10-3M
FOR TRANSITIONS FROM UM REFER TO CHART 10-3Q
TO NORTHWEST



ALT/HEIGHT CONVERSION

QNH	(QFE)
1340'	(661' - 200m)
2650'	(1971' - 600m)
3970'	(3291' - 1000m)

FL CONVERSION

FL49 **FL1500m**



UUWW/VKO
VNUKOVO

JEPPESEN
22 OCT 10 **(10-3D)** **Eff 1 Nov**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

Apt Elev
685'

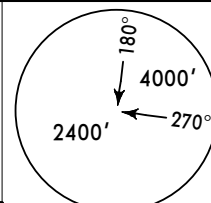
QNH on request **(QFE)**

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

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

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

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



MSA
ARP

BITSA 01D [BITØ1D] , KLIMOVSK 01E (LO 01E)

OKLIT 01D [OKLØ1D]

BITSA 01E [BITØ1E]

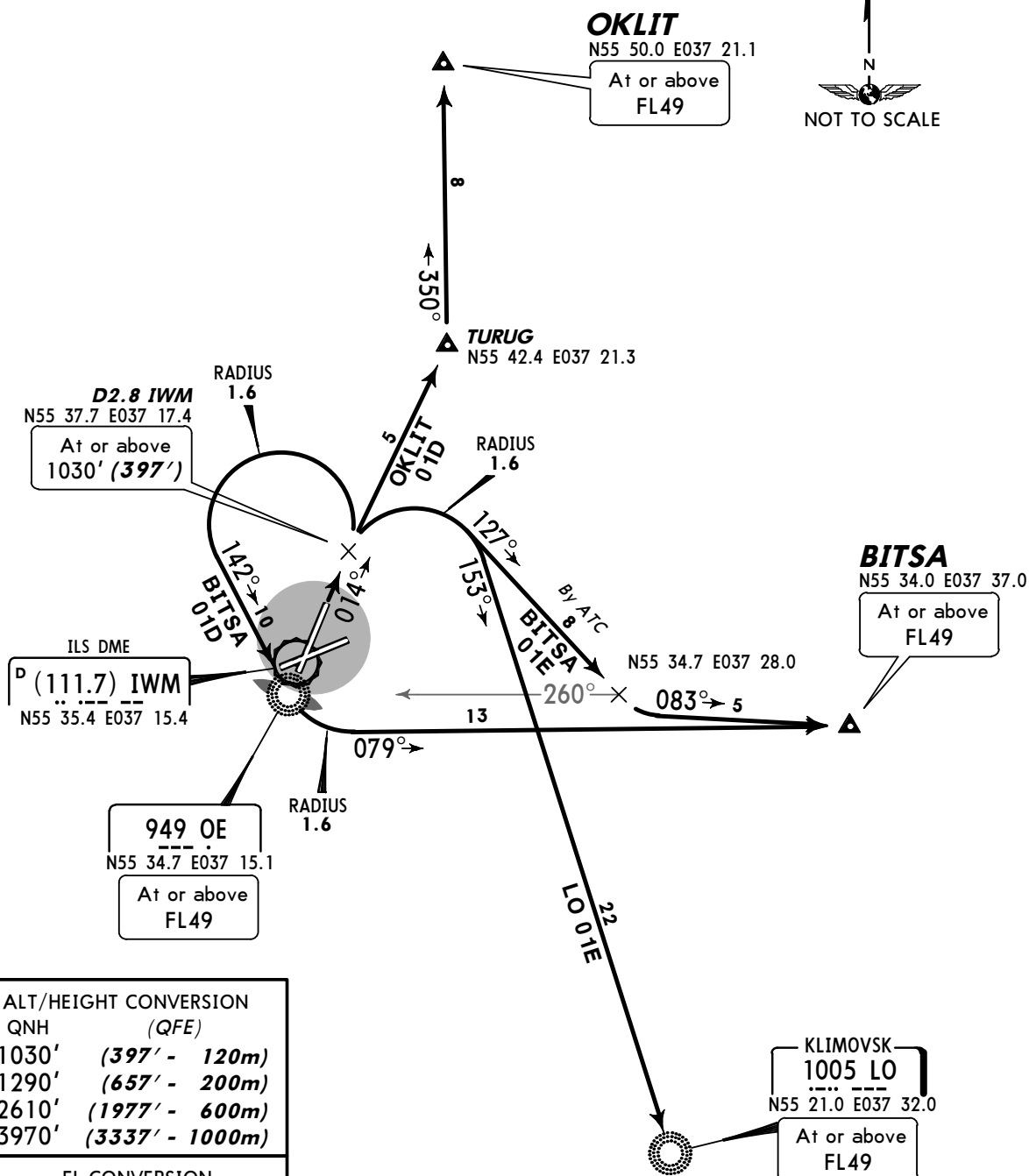
BY ATC

RWY 01 DEPARTURES

FOR TRANSITIONS FROM BITSA & LO REFER TO CHART 10-3N

FOR TRANSITIONS FROM OKLIT REFER TO CHART 10-3M

TO NORTH, EAST & SOUTHEAST



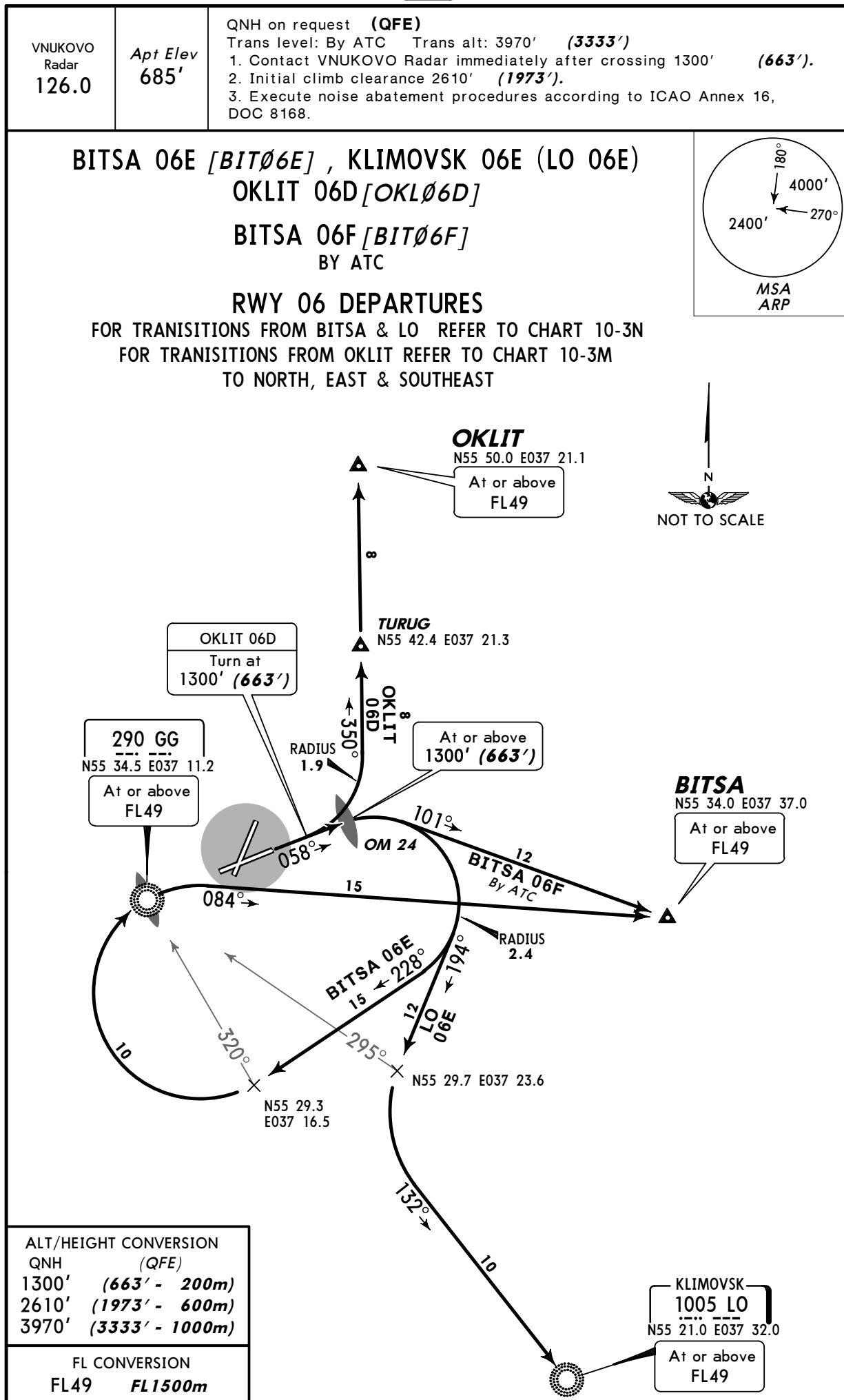
ALT/HEIGHT CONVERSION	
QNH	(QFE)
1030'	(397' - 120m)
1290'	(657' - 200m)
2610'	(1977' - 600m)
3970'	(3337' - 1000m)

FL CONVERSION
FL49 **FL1500m**

UUWW/VKO
VNUKOVO

JEPPESEN
22 OCT 10 **(10-3E)** **Eff 1 Nov**

MOSCOW, RUSSIA
SID



UUWW/VKO
VNUKOVO

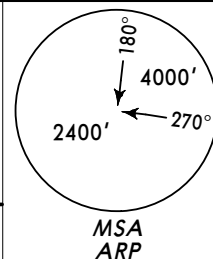
JEPPESEN
 17 DEC 10 **(10-3F)**

MOSCOW, RUSSIA
SID

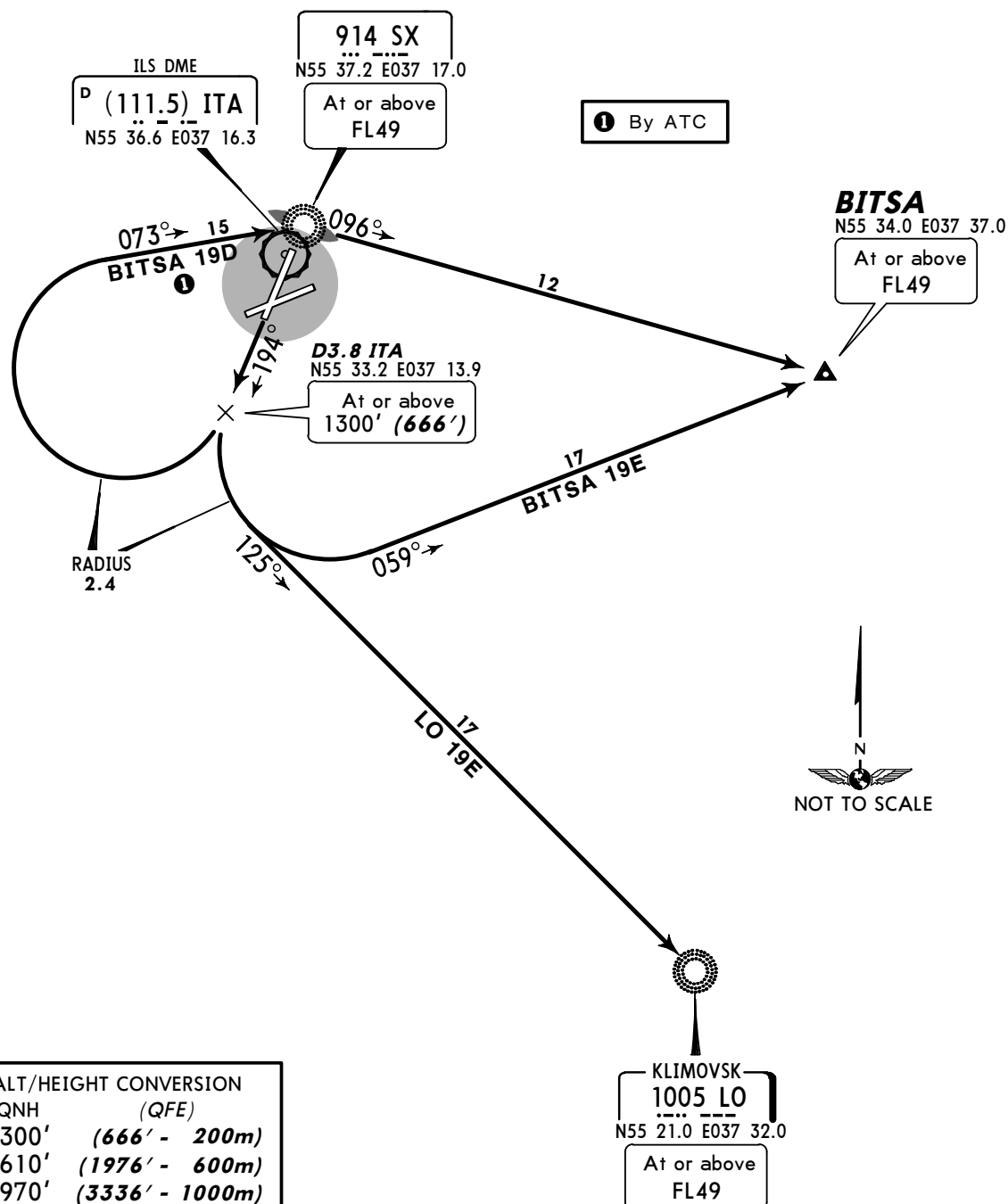
VNUKOVO
 Radar
 126.0

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. Initial climb clearance 2610' **(1976')**.
 3. Execute noise abatement procedures according to
 ICAO Annex 16, DOC 8168.



BITSA 19D [BIT19D] ①, BITSA 19E [BIT19E]
KLIMOVSK 19E (LO 19E)
RWY 19 DEPARTURES
 FOR TRANSITIONS FROM BITSA & LO REFER TO CHART 10-3N
 TO EAST & SOUTHEAST



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

FL CONVERSION
 FL49 **FL1500m**

UUWW/VKO
VNUKOVO

JEPPESEN
17 DEC 10 **(10-3G)**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

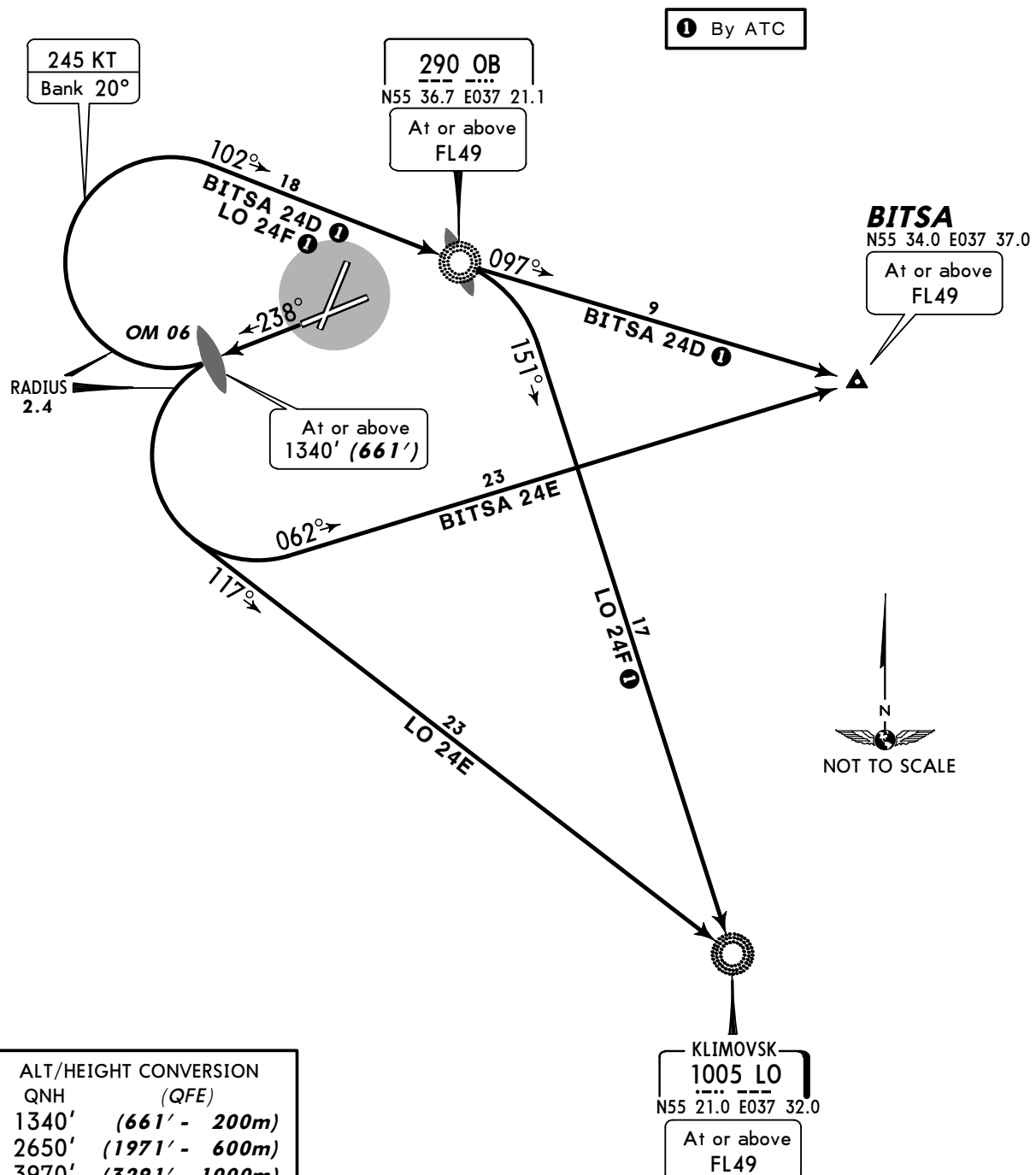
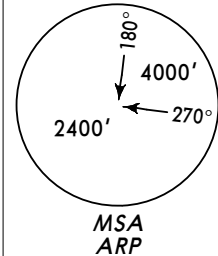
Apt Elev
685'

QNH on request **(QFE)**

Trans level: By ATC Trans alt: 3970' **(3291')**

1. Contact VNUKOVO Radar immediately after crossing 1340' **(661')**.
2. Initial climb clearance 2650' **(1971')**.
3. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

BITSA 24D [BIT24D] ① , BITSA 24E [BIT24E]
KLIMOVSK 24E (LO 24E) , KLIMOVSK 24F (LO 24F) ①
RWY 24 DEPARTURES
FOR TRANSITIONS FROM BITSA & LO REFER TO CHART 10-3N
TO EAST & SOUTHEAST



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1340'	(661' - 200m)
2650'	(1971' - 600m)
3970'	(3291' - 1000m)

FL CONVERSION
FL49 **FL1500m**

UUWW/VKO
VNUKOVO

JEPPESEN
22 OCT 10 **(10-3H)** **Eff 1 Nov**

MOSCOW, RUSSIA

SID

VNUKOVO
Radar
126.0

Apt Elev
685'

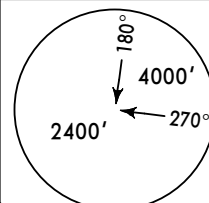
QNH on request **(QFE)**

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

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

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

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



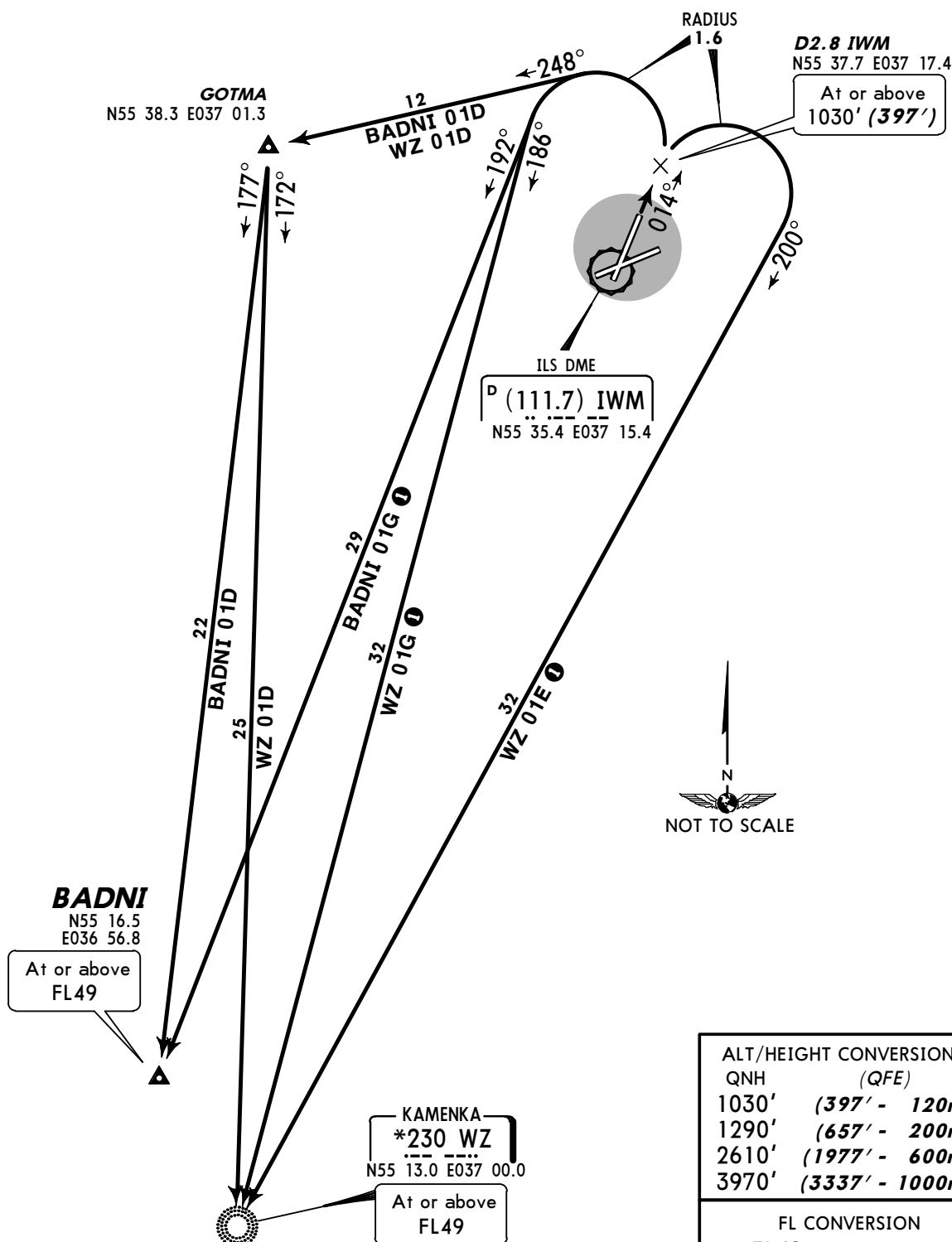
MSA
ARP

BADNI 01D [BADØ1D] , BADNI 01G [BADØ1G] ①
KAMENKA 01D (WZ 01D) , KAMENKA 01E (WZ 01E) ①
KAMENKA 01G (WZ 01G) ①

RWY 01 DEPARTURES

FOR TRANSITIONS FROM BADNI & WZ REFER TO CHART 10-3P
TO SOUTHWEST

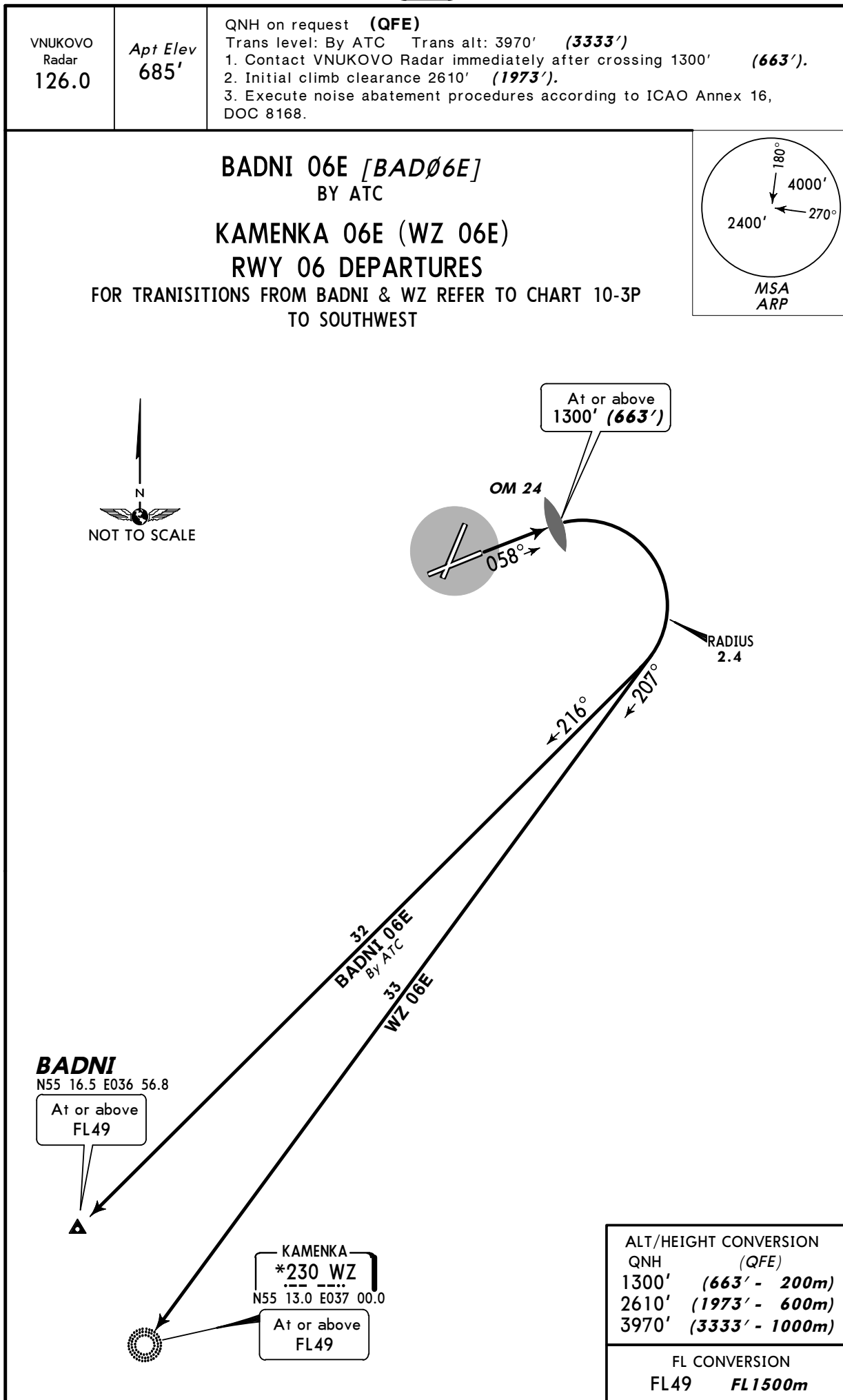
① By ATC



UUWW/VKO
VNUKOVO

JEPPESEN
 22 OCT 10 **10-3J** **Eff 1 Nov**

MOSCOW, RUSSIA
SID



UUWW/VKO
VNUKOVO

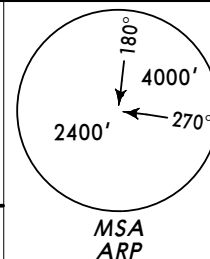
JEPPESEN
17 DEC 10 **(10-3K)**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

Apt Elev
685'

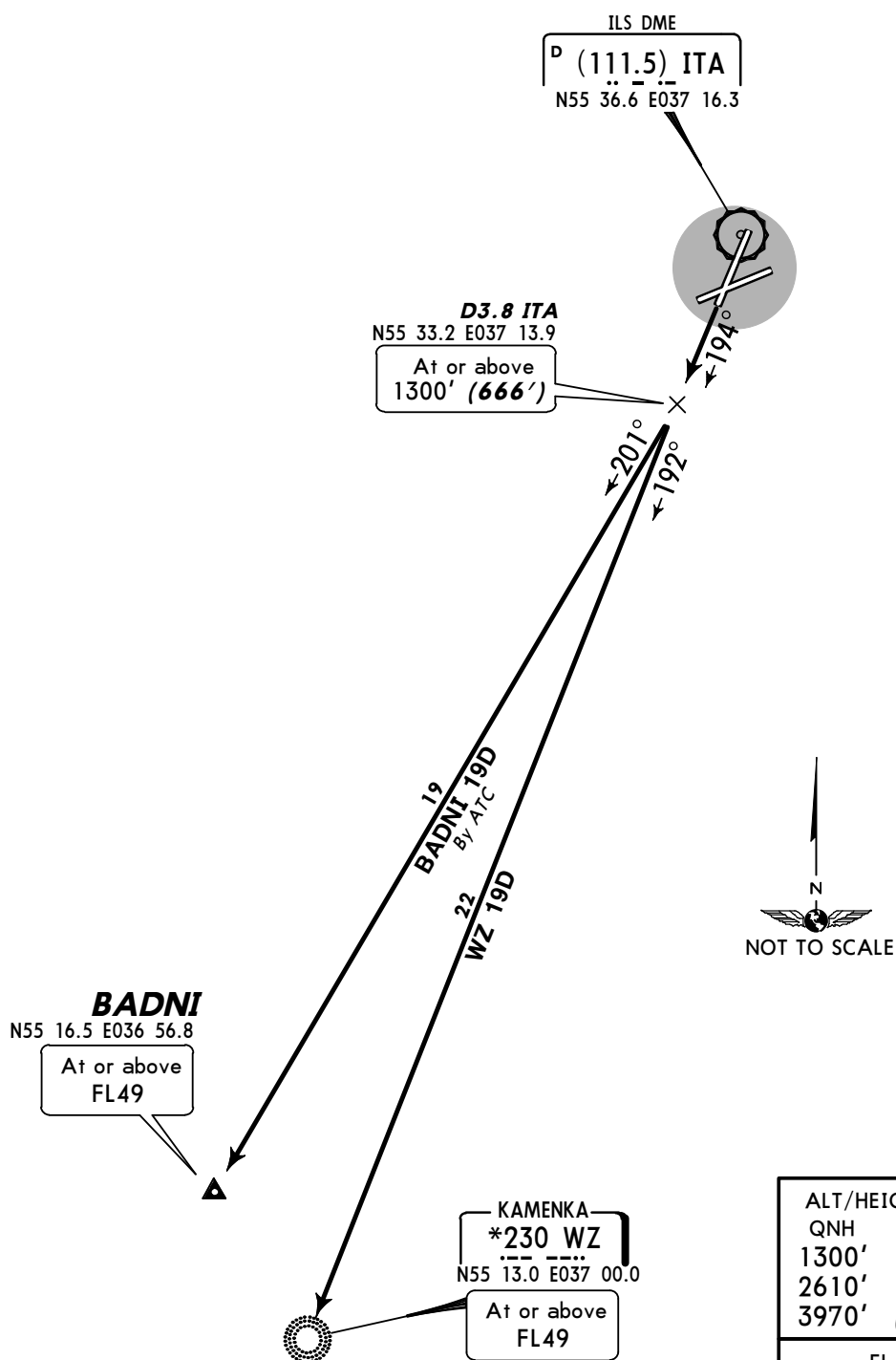
QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970' **(3336')**
1. Contact VNUKOVO Radar immediately after crossing
1300' **(666')**.
2. Initial climb clearance 2610' **(1976')**.
3. Execute noise abatement procedures according to
ICAO Annex 16, DOC 8168.



BADNI 19D [BAD19D]
BY ATC

KAMENKA 19D (WZ 19D)
RWY 19 DEPARTURES

FOR TRANSITIONS FROM BADNI & WZ REFER TO CHART 10-3P
TO SOUTHWEST



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

FL CONVERSION
FL49 **FL1500m**

UUWW/VKO
VNUKOVO

JEPPESEN
17 DEC 10 **(10-3L)**

MOSCOW, RUSSIA
SID

VNUKOVO
Radar
126.0

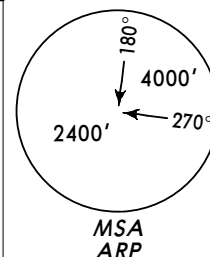
Apt Elev
685'

QNH on request **(QFE)**

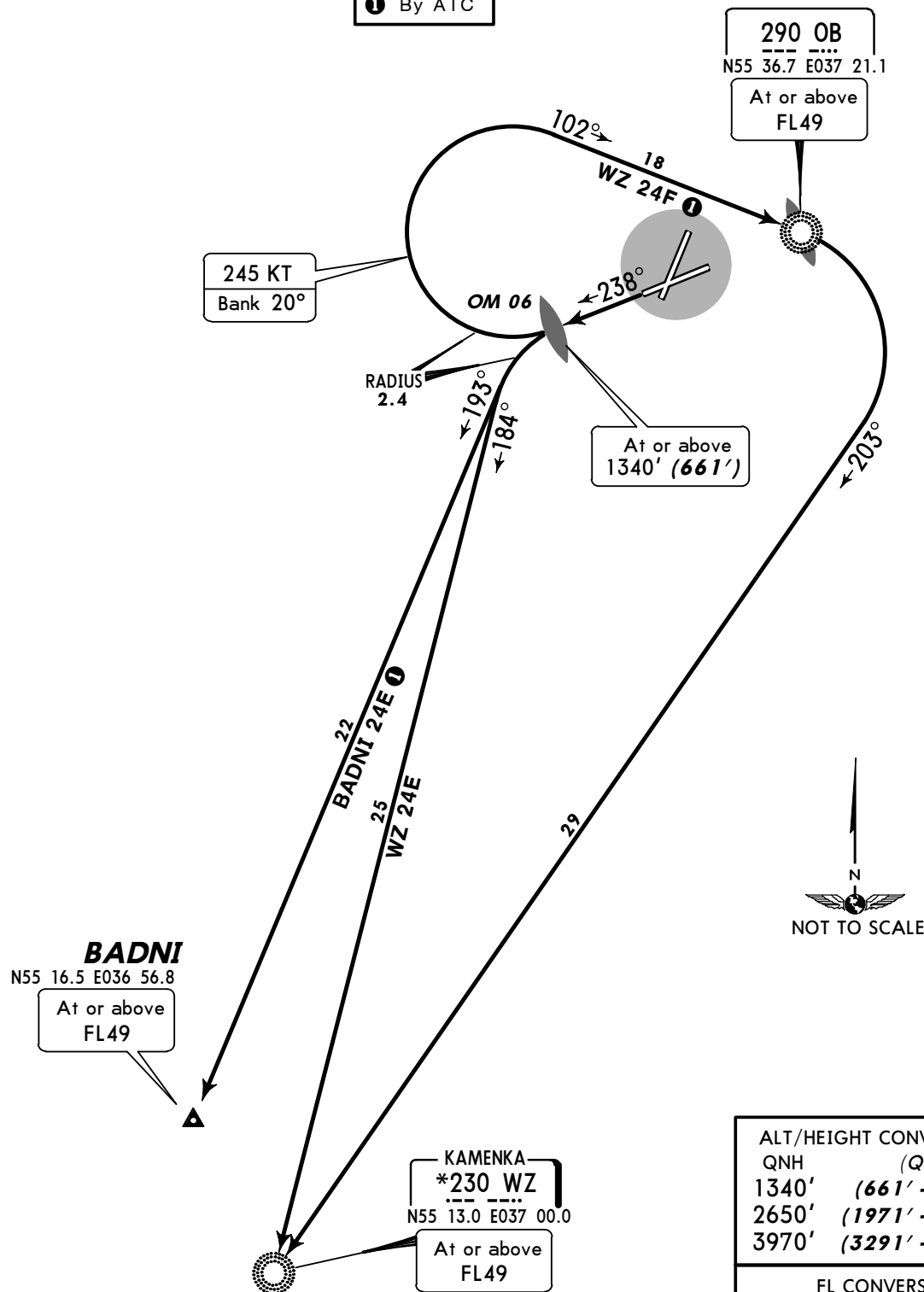
Trans level: By ATC Trans alt: 3970' **(3291')**

1. Contact VNUKOVO Radar immediately after crossing 1340' **(661')**.
2. Initial climb clearance 2650' **(1971')**.
3. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.

BADNI 24E [BAD24E] ① , KAMENKA 24E (WZ 24E)
KAMENKA 24F (WZ 24F) ①
RWY 24 DEPARTURES
FOR TRANSITIONS FROM BADNI & WZ REFER TO CHART 10-3P
TO SOUTHWEST



① By ATC



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1340'	(661' - 200m)
2650'	(1971' - 600m)
3970'	(3291' - 1000m)

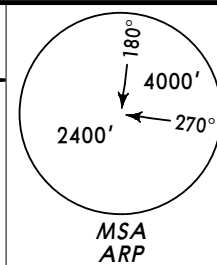
FL CONVERSION	
FL49	FL1500m

UUWW/VKO
VNUKOVO

JEPPESEN
 22 OCT 10 **(10-3M)** **Eff 1 Nov**

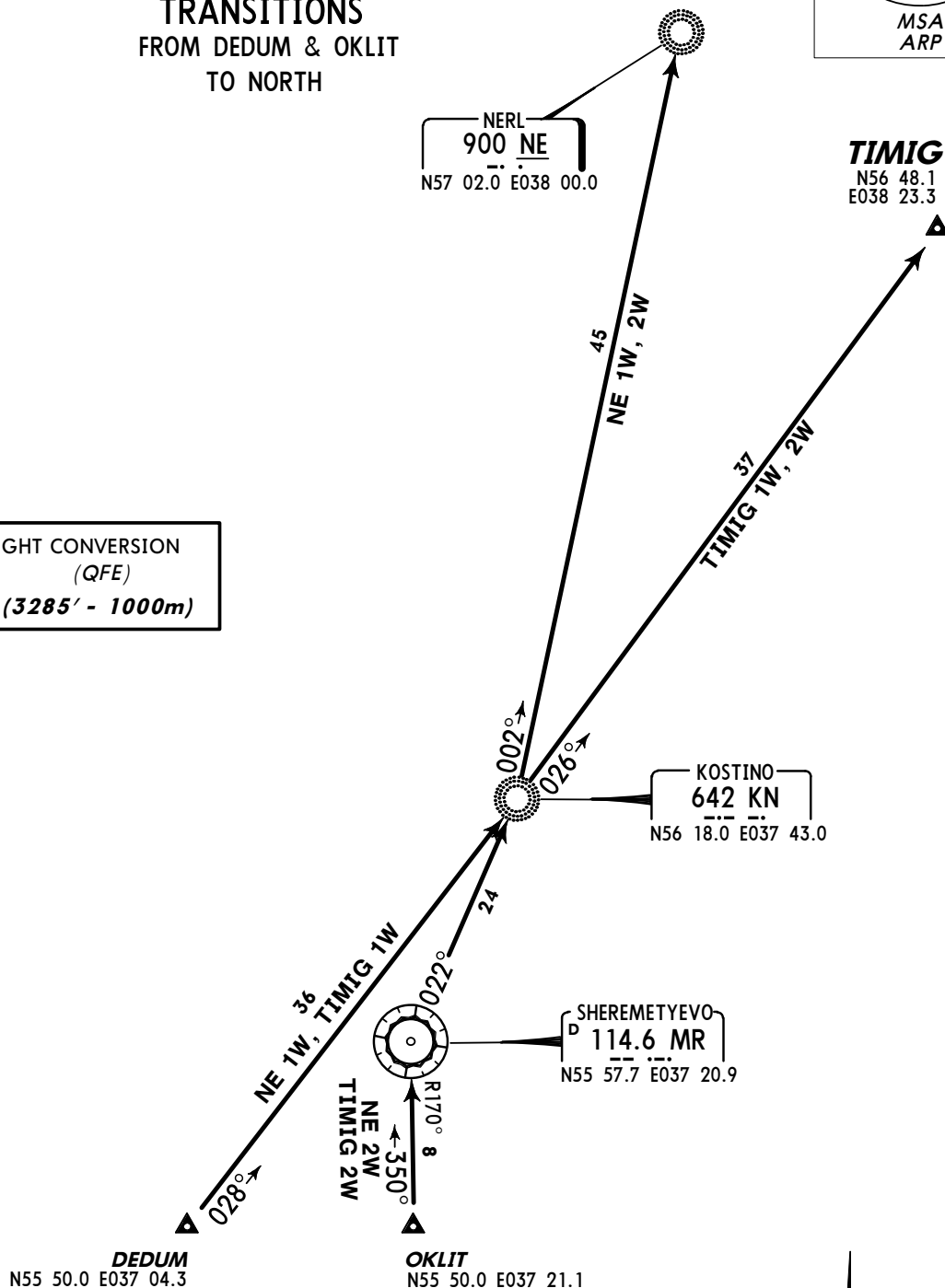
MOSCOW, RUSSIA
TRANSITION

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



NE 1W, NE 2W
TIMIG 1W [TIM1W], TIMIG 2W [TIM2W]
TRANSITIONS
FROM DEDUM & OKLIT
TO NORTH

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



TRANSITION	ROUTING
NE 1W	From DEDUM to KN, then to NE.
NE 2W	From OKLIT to MR, then via KN to NE.
TIMIG 1W	From DEDUM to KN, then to TIMIG.
TIMIG 2W	From OKLIT to MR, then via KN to TIMIG.

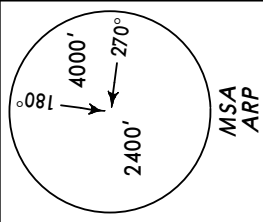
UUWW/VKO
VNUKOVO

JEPPESSEN
22 OCT 10 **(10-3N)** **Eff 1 Nov**

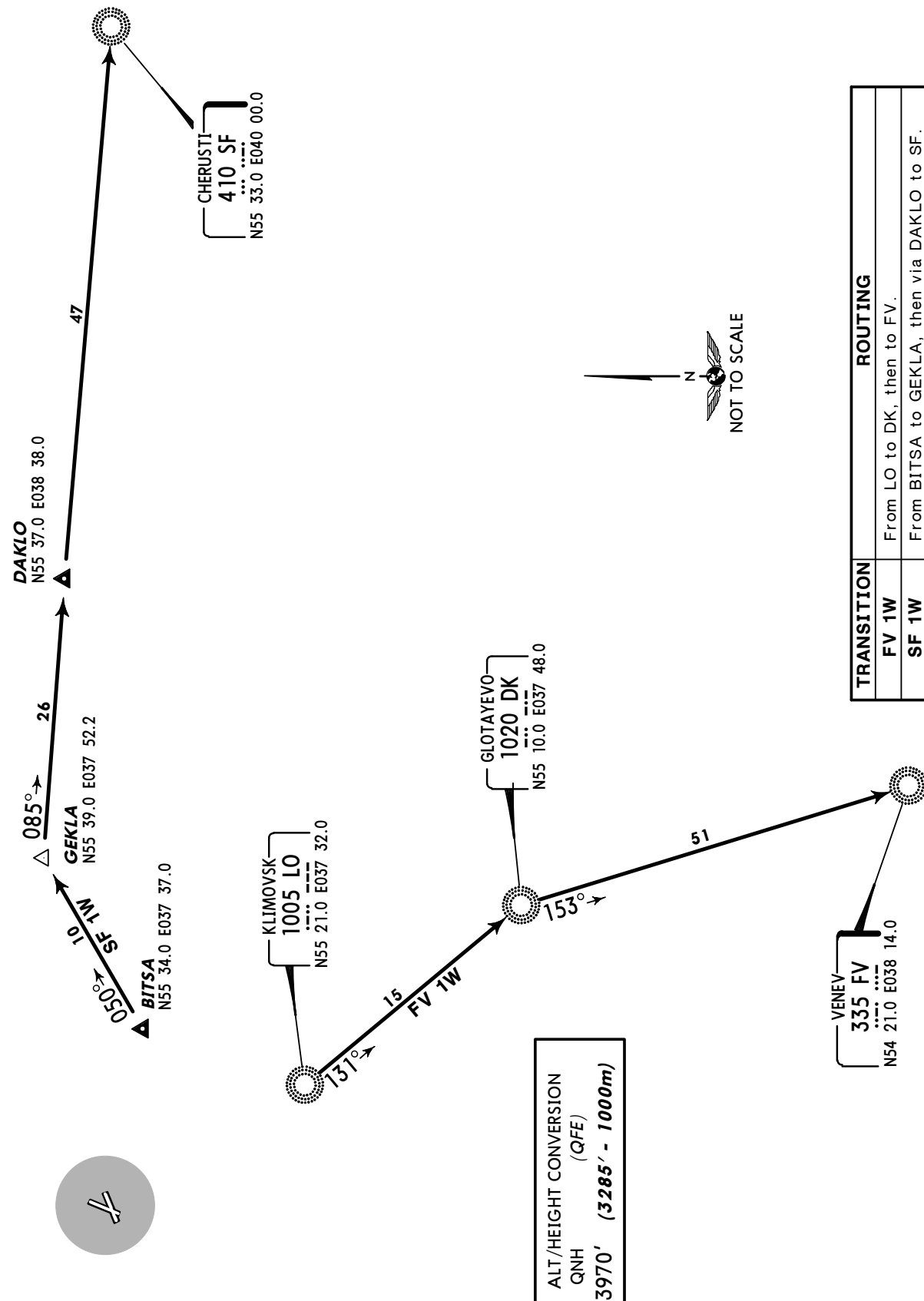
MOSCOW, RUSSIA
TRANSITION

Apt Elev
685'

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



FV 1W, SF 1W
TRANSITIONS
FROM BITSA & LO
TO EAST & SOUTHEAST



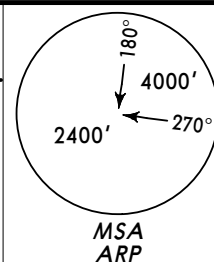
TRANSITION	ROUTING
FV 1W	From LO to DK, then to FV.
SF 1W	From BITSA to GEKLA, then via DAKLO to SF.

UUWW/VKO
VNUKOVO

JEPPESEN
 22 OCT 10 **(10-3P)** **Eff 1 Nov**

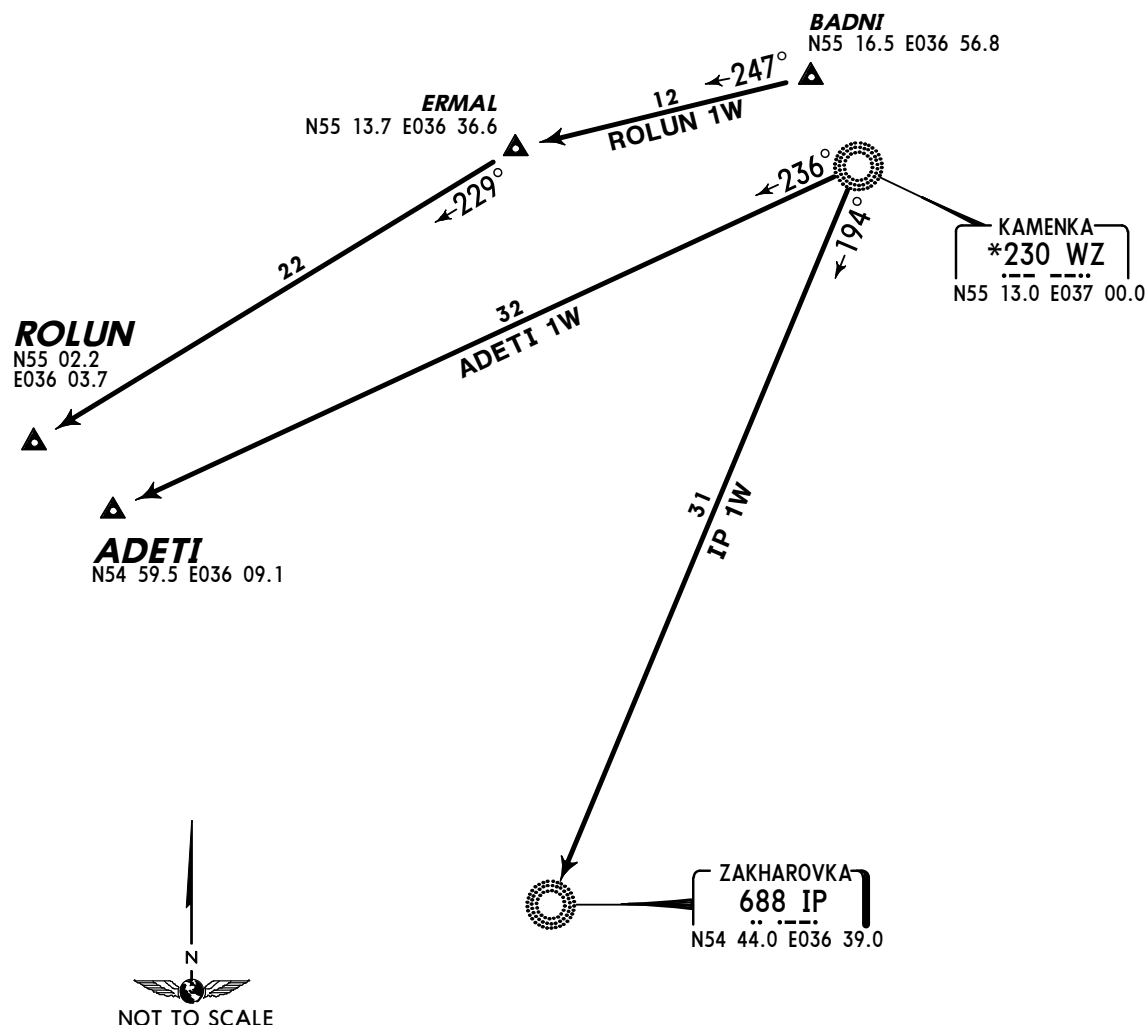
MOSCOW, RUSSIA
TRANSITION

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



ADETI 1W [ADE1W], IP 1W
ROLUN 1W [ROL1W]
TRANSITIONS
 FROM BADNI & WZ
 TO SOUTH & SOUTHWEST

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



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

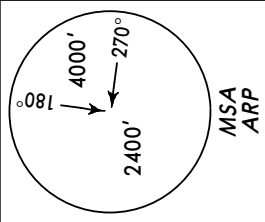
UUWW/VKO
VNUKOVO

JEPPESEN
22 OCT 10 **10-3Q** **Eff 1 Nov**

MOSCOW, RUSSIA
TRANSITION

Apt Elev
685'

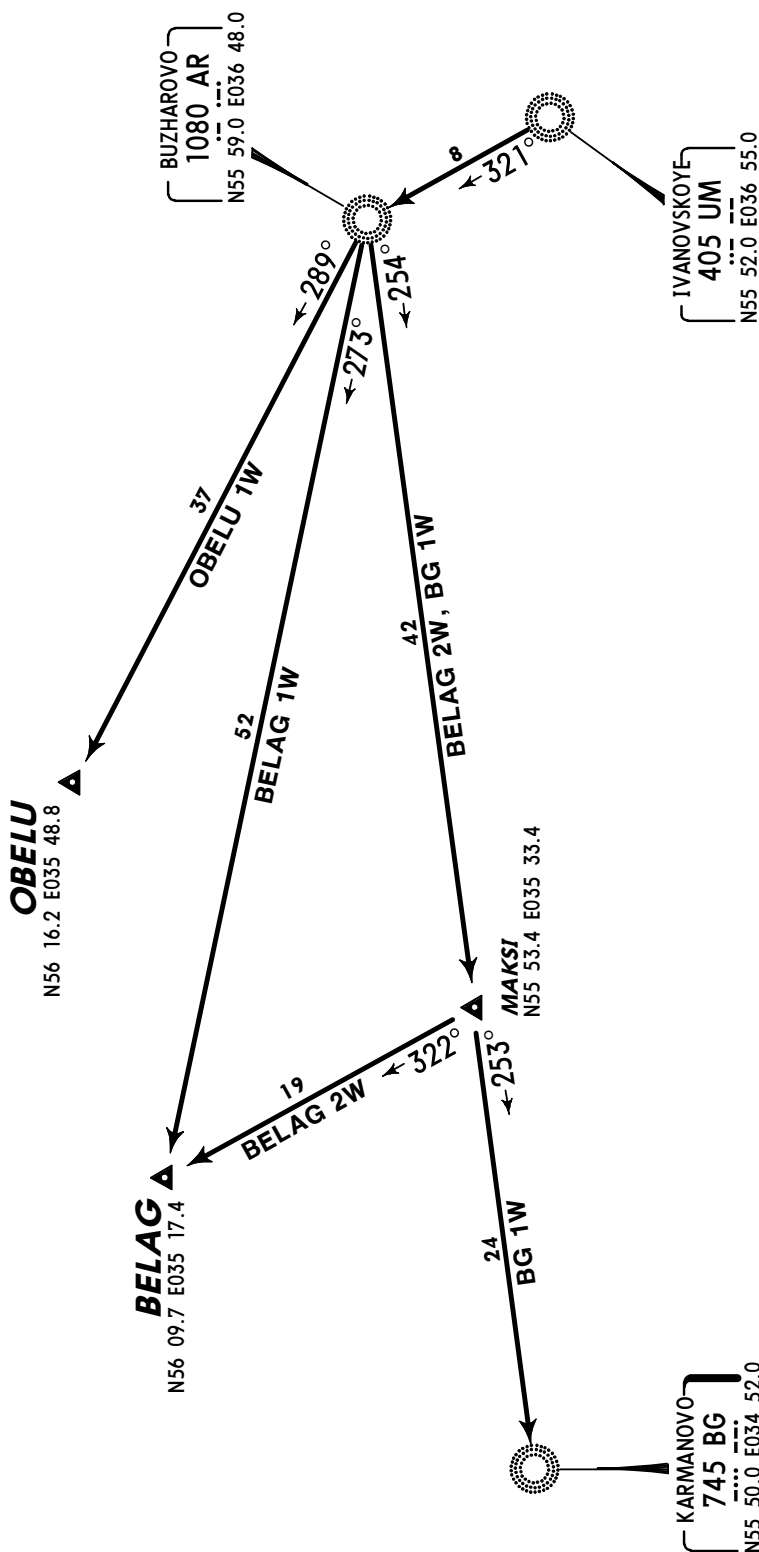
QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970' **(3285')**



BELAG 1W [BEL1W], BELAG 2W [BEL2W]
BG 1W, OBEU 1W [OBE1W]
TRANSITIONS
FROM UM
TO WEST



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



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 via MAKSI to BG.
OBEU 1W	From UM to AR, then OBEU.

UUWW/VKO

Apt Elev **685'**
N55 36.0 E037 16.4



JEPPESEN

28 JAN 11

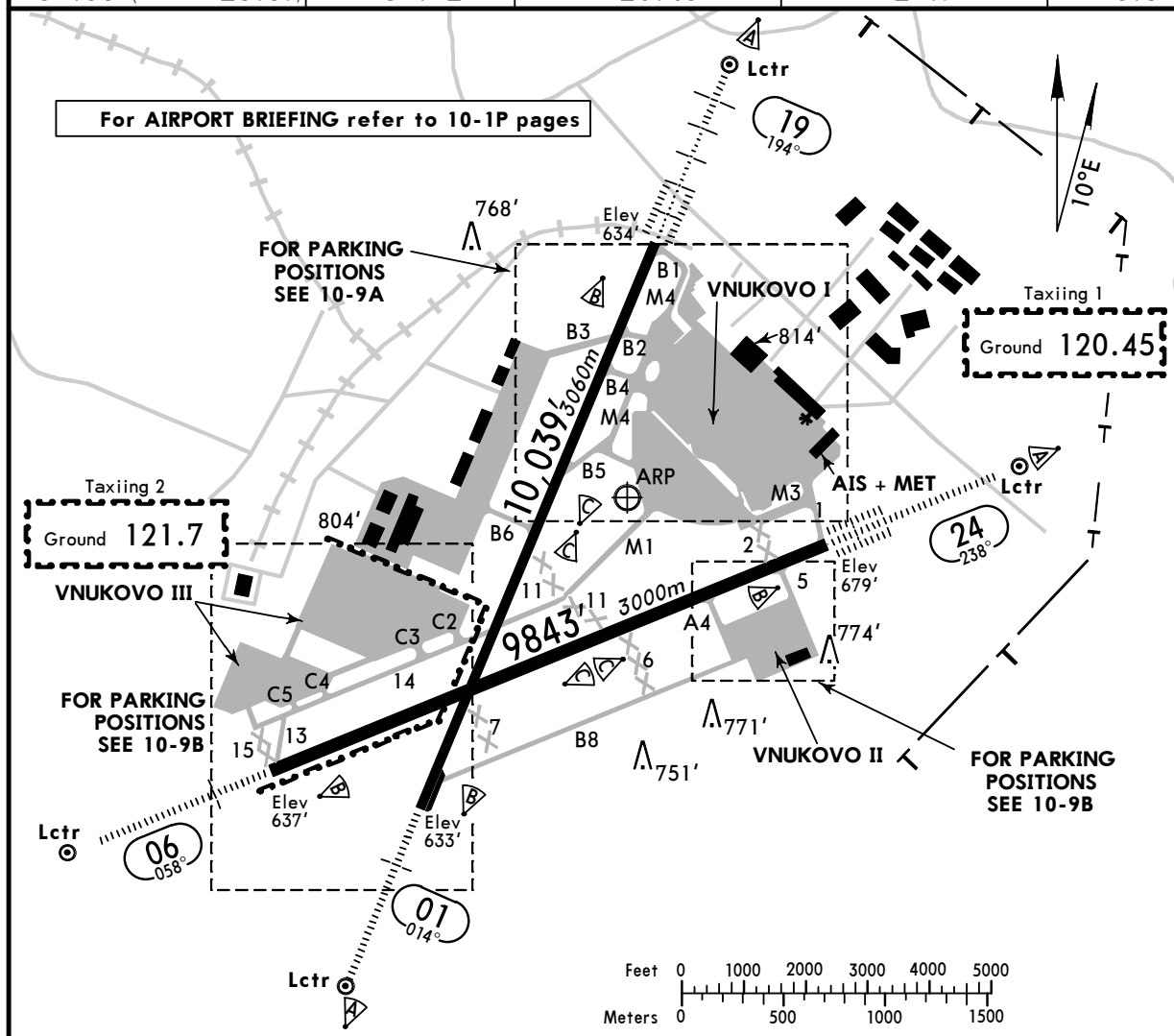
10-9

Eff 31 Jan

MOSCOW, RUSSIA

VNUKOVO

ATIS	VNUKOVO Delivery	Taxiing 1 (GND)	Taxiing 2 (GND)	Start (TWR)
131.85 (Russian) 125.87	131.12	120.45	121.7	118.3



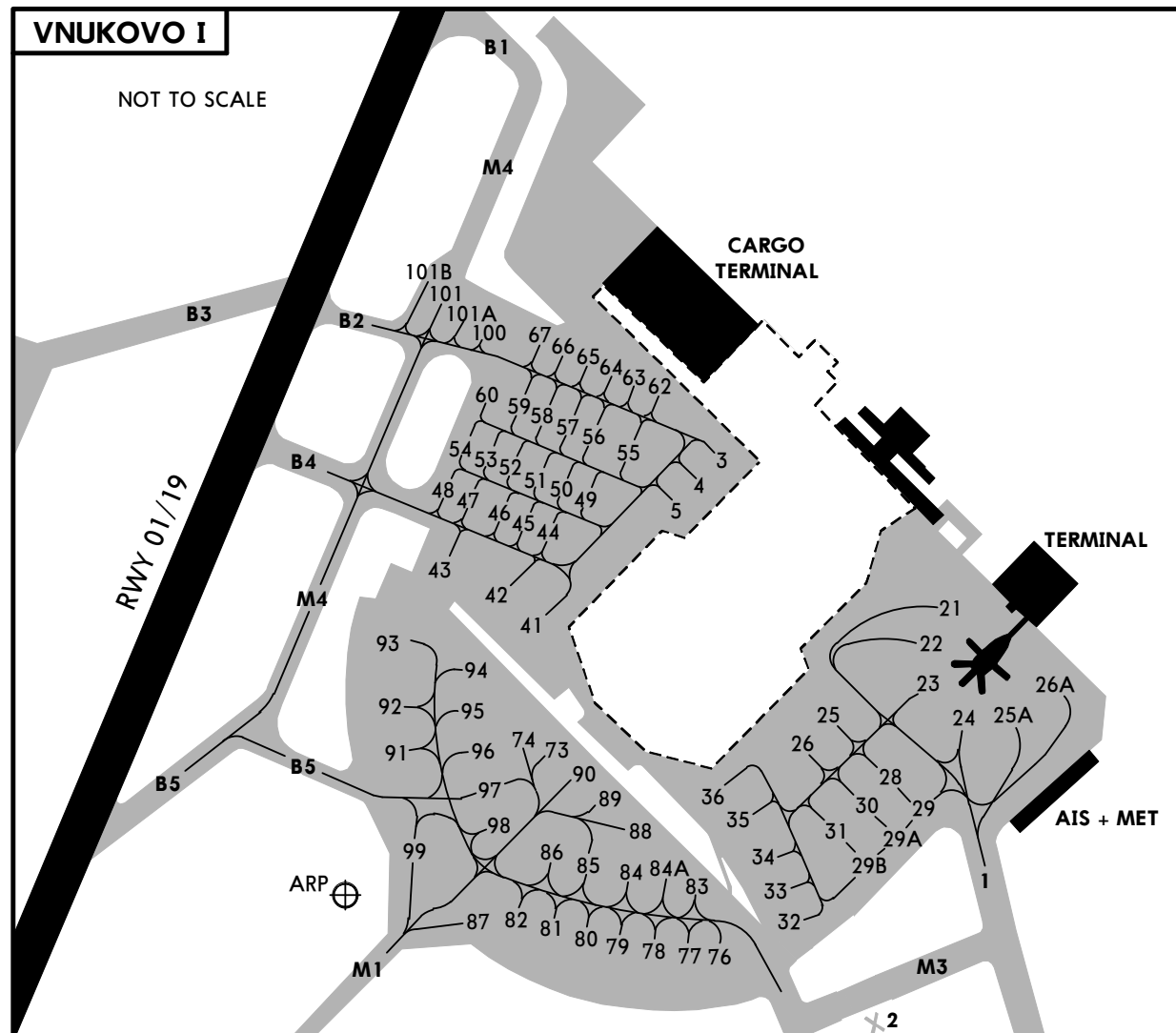
ADDITIONAL RUNWAY INFORMATION

ADDITIONAL RUNWAY INFORMATION			USABLE LENGTHS			
RWY			LANDING BEYOND		TAKE-OFF	WIDTH
			Threshold	Glide Slope		
01	HIRL (60m) CL(15m) HIALS PAPI-L(3.00°)	RVR		9067' 2764m	①	148'
19	HIRL (60m) CL(15m) HIALS-II TDZ PAPI-L(3.00°)	RVR				45m
① TORA	RWY 01: From rwy head 10,039'(3060m) rwy 06/24 int 8045'(2452m) twy 14/M1 int 6936'(2114m) RWY 19: From rwy head 10,039'(3060m) twy B2 int 8317'(2535m) twy B4 int 7661'(2335m)					
06	HIRL (60m) CL(15m) HIALS PAPI-L(2.73°)	RVR		8567' 2611m	②	197'
24	HIRL (60m) CL(15m) HIALS-II TDZ PAPI-L(3.00°)	RVR		8749' 2667m		60m
② TORA	RWY 06: From rwy head 9843'(3000m) rwy 01/19 int 6398'(1950m)					

TAKE-OFF

	AIR CARRIER			AIR CARRIER (FAR 121)			
	Rwy 06/24 LVP must be in force	All Rwys LVP must be in force			Rwy 06/24	Rwy 01/19	
	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL		CL & RCLM any RVR out, other two req.	Adequate Vis Ref	Adequate Vis Ref
A	200m (150m)	250m	400m	2 Eng	TDZ RVR 200m Mid RVR 200m Roll out RVR 150m	RVR 500m VIS 400m	RVR 500m VIS 400m
B							
C							
D	250m (200m)	300m		3 & 4 Eng			

UUWW/VKO

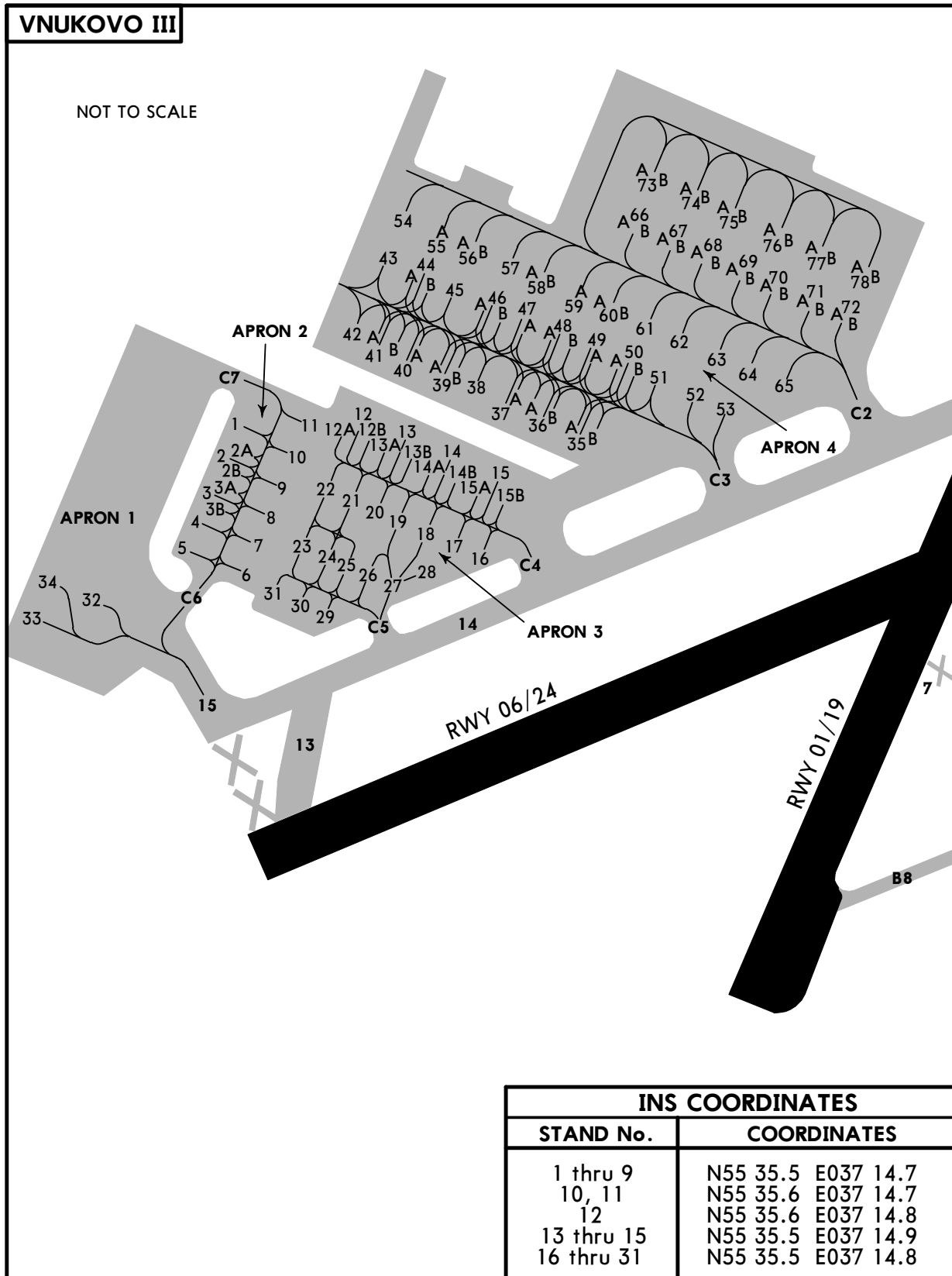
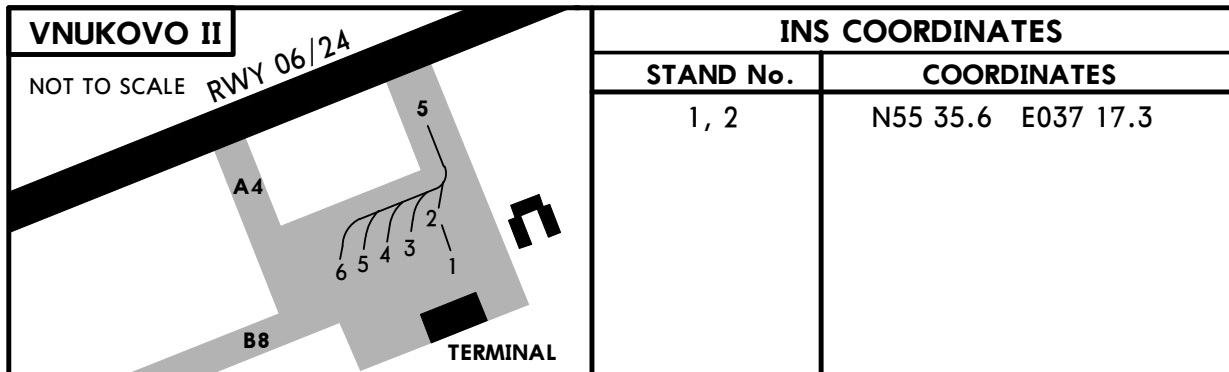
JEPPESEN
28 JAN 11 **(10-9A)** Eff 31 Jan**MOSCOW, RUSSIA**
VNUKOVO**INS COORDINATES**

STAND No.	COORDINATES		STAND No.	COORDINATES	
3	N55 36.3	E037 17.1	59, 60	N55 36.4	E037 16.7
4	N55 36.3	E037 17.0	62 thru 64	N55 36.4	E037 16.9
5	N55 36.3	E037 16.9	65 thru 67	N55 36.4	E037 16.8
21 thru 24A	N55 36.2	E037 17.3	73	N55 36.1	E037 16.8
25	N55 36.1	E037 17.2	74	N55 36.1	E037 16.7
25A	N55 36.2	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, 81	N55 36.0	E037 16.8
29	N55 36.1	E037 17.3	82	N55 36.0	E037 16.7
29A, 29B	N55 36.0	E037 17.2	83 thru 84A	N55 36.0	E037 16.9
30	N55 36.1	E037 17.2	85, 86	N55 36.0	E037 16.8
31 thru 33	N55 36.0	E037 17.1	87	N55 36.0	E037 16.7
34	N55 36.0	E037 17.0	88	N55 36.1	E037 16.9
35, 36	N55 36.1	E037 17.0	89, 90	N55 36.1	E037 16.8
41	N55 36.2	E037 16.8	91	N55 36.1	E037 16.5
42	N55 36.2	E037 16.7	92, 93	N55 36.2	E037 16.5
43	N55 36.2	E037 16.6	94	N55 36.2	E037 16.7
44	N55 36.2	E037 16.8	95	N55 36.2	E037 16.6
45 thru 47	N55 36.3	E037 16.7	96 thru 98	N55 36.1	E037 16.7
48	N55 36.3	E037 16.6	99	N55 36.0	E037 16.6
49 thru 51	N55 36.3	E037 16.8	100	N55 36.4	E037 16.7
52 thru 54	N55 36.3	E037 16.7	101, 101A	N55 36.5	E037 16.7
55	N55 36.3	E037 16.9	101B	N55 36.5	E037 16.6
56 thru 58	N55 36.4	E037 16.8			

UUWW/VKO

JEPPESEN
3 DEC 10 **10-9B** Eff 16 Dec

MOSCOW, RUSSIA
VNUKOVO



UUWW/VKO

 **JEPPESEN**

16 JUL 10

10-9S**Eff 29 Jul****MOSCOW, RUSSIA**
VNUKOVO**Standard**

STRAIGHT-IN RWY		A	B	C	D
01	ILS	833'(200')	833'(200')	833'(200')	833'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	NDB ①	1400'(767') R1500m	1400'(767') R1500m	1400'(767') C2400m	1400'(767') C2400m
	PAR	856'(223') R750m	866'(233') R750m	876'(243') R750m	886'(253') R750m
	ALS out	R1200m	R1200m	R1300m	R1300m
06	ILS	837'(200')	837'(200')	837'(200')	837'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	NDB	1390'(753') C2900m	1390'(753') C2900m	1390'(753') C3100m	1390'(753') C3100m
	ALS out	C3700m	C3700m	C3900m	C3900m
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')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	NDB ①	1410'(776') R1500m	1410'(776') R1500m	1410'(776') C2400m	1410'(776') C2400m
	PAR	857'(223') R750m	867'(233') R750m	877'(243') R750m	887'(253') R750m
	ALS out	R1200m	R1200m	R1300m	R1300m
24	CAT 2 ILS	779'(100')	779'(100')	779'(100')	779'(100')
		RA111' R350m	RA111' R350m	RA111' R350m	RA111' R350m
	ILS	879'(200')	879'(200')	879'(200')	879'(200')
	FULL	R550m	R550m	R550m	R550m
	Limited	R750m	R750m	R750m	R750m
	ALS out	R1200m	R1200m	R1200m	R1200m
	LOC	NOT AUTH	NOT AUTH	NOT AUTH	NOT AUTH
	NDB	1590'(911') C3800m	1590'(911') C3800m	1590'(911') C4000m	1590'(911') C4000m
	ALS out	C4500m	C4500m	C4700m	C4700m

① Continuous Descent Final Approach

UUWW/VKO

JEPPESEN

16 JUL 10

10-9S1

Eff 29 Jul

Standard
MOSCOW, RUSSIA
VNUKOVO

TAKE-OFF RWY 01, 06, 19, 24

	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	125m	150m	200m	250m	400m	500m	
B							
C							
D	150m	200m	250m	300m			

UUWW/VKO

 **JEPPESEN**

16 JUL 10

10-9X**Eff 29 Jul****JAA MINIMUMS****MOSCOW, RUSSIA**
VNUKOVO

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			
	NDB	1400' (767')	1400' (767')	1400' (767')	1400' (767')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
	PAR	856' (223')	866' (233')	876' (243')	886' (253')
		R600m	R600m	R600m	R650m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1200m
06	ILS	837' (200')	837' (200')	837' (200')	837' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
	NDB	1390' (753')	1390' (753')	1390' (753')	1390' (753')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
	CAT 2 ILS	734' (100')	734' (100')	734' (100')	734' (100')
		RA 105' R350m	RA 105' R350m	RA 105' R350m	RA 105' 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			
	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
24	CAT 2 ILS	779' (100')	779' (100')	779' (100')	779' (100')
		RA 111' R350m	RA 111' R350m	RA 111' R350m	RA 111' R350m
	ILS	879' (200')	879' (200')	879' (200')	879' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT AUTHORIZED			
	NDB	1590' (911')	1590' (911')	1590' (911')	1590' (911')
		R1200m	R1400m	R1400m	R1800m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m

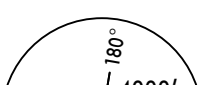
TAKE-OFF RWY 01, 06, 19, 24

	Approved Operators	LVP must be in Force			
		HIRL, CL & mult. RVR req	RL, CL & mult. RVR req	RL & CL	RCLM (DAY only) or RL
A					
B					
C					
D					

UUWW/VKO
VNUKOVO

JEPPESSEN
22 OCT 10
Eff 1 Nov (11-1) ILS D

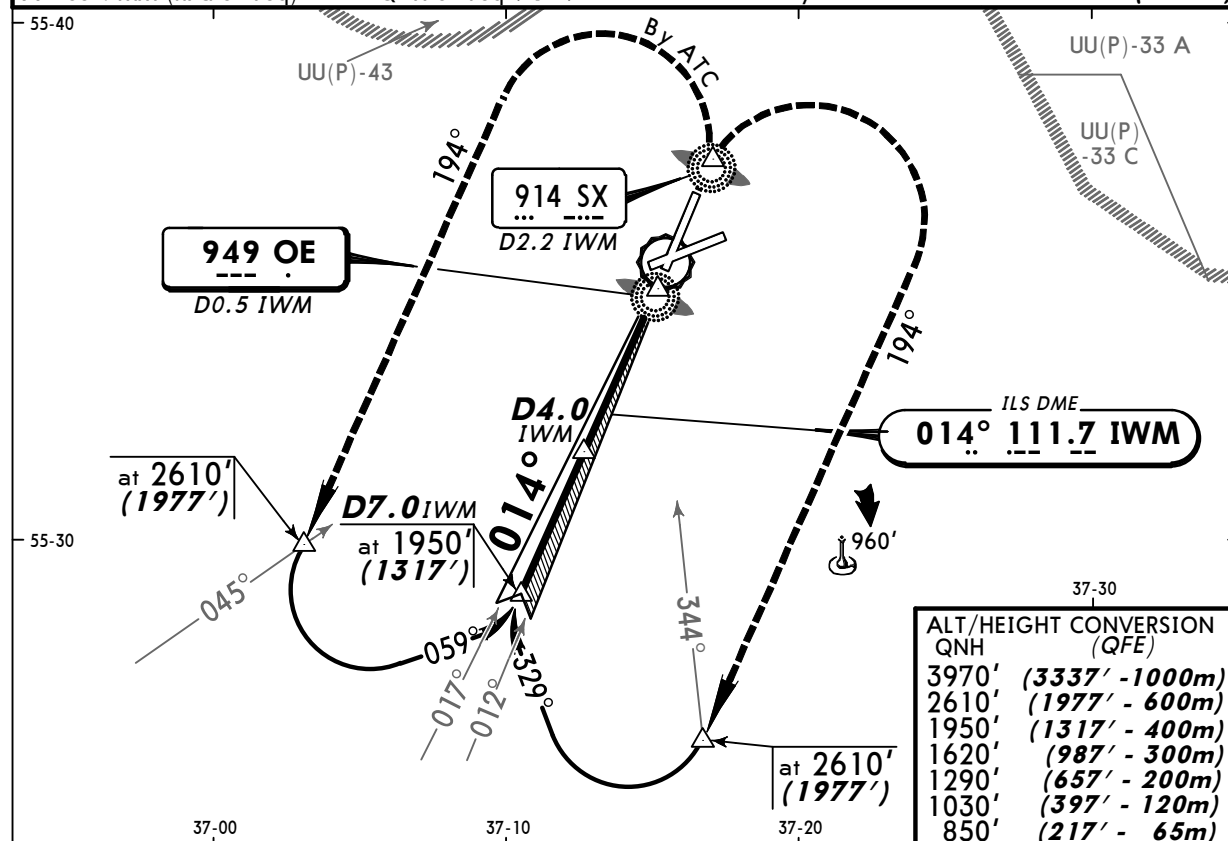
MOSCOW, RUSSIA
NDB/MKR Rwy 01

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 Tower (PAR) 118.3		VNUKOVO Start (TWR) 118.3		Ground 120.45 121.7	
LOC IWM 111.7	Final Apch Crs 014°	GS D4.0 IWM 1945'(1312')	ILS DA(H) 833'(200')	Apt Elev 685'			
NDB OE 949		Minimum Alt D4.0 IWM 1950'(1317')	NDB MDA(H) 1400'(767')			RWY 633'	

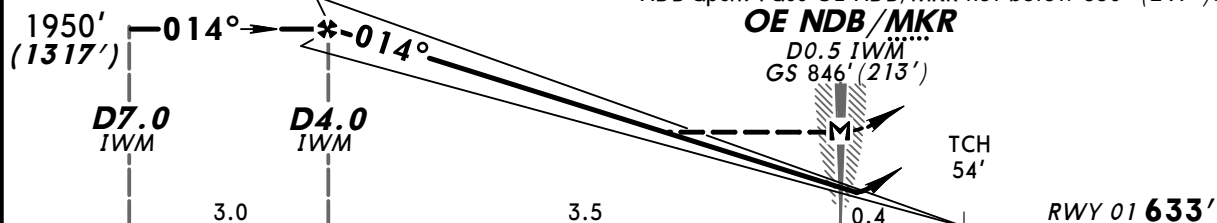
MISSED APCH: ILS: Climb to 1030' (397') or above. After passing SX NDB/MKR turn RIGHT onto 194° climbing to 2610' (1977'), then according to chart. At 1290' (657') immediately contact Radar. NDB: Climb STRAIGHT AHEAD to 1620' (987'). After passing SX NDB/MKR turn RIGHT onto 194° climbing to 2610' (1977'), then according to chart. On Missed Approach immediately contact Radar.

MSA
Airport

Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970' (3337')
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NDB apch: Pass OE NDB/MKR not below 850' (217').



<i>Gnd speed-Kts</i>	70	90	100	120	140	160		Refer to Missed Apch above
<i>ILS GS or NDB Desc Angle 3.00°</i>	377	484	538	646	753	861		
<i>MAP at OE NDB/MKR</i>								

STRAIGHT-IN LANDING RWY 01

ILS		LOC		NDB	
DA(H) 833'(200')		(GS out)		MDA(H) 1400'(767')	
FULL		ALS out		ALS out	
A	RVR 720m VIS 800m	1200m	NOT AUTH	1200m	RVR 1500m VIS 1600m
B					
C				2800m	3600m
D				3600m	4000m

CHANGES: Procedure.

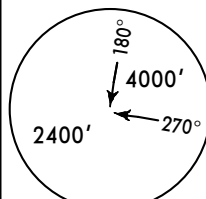
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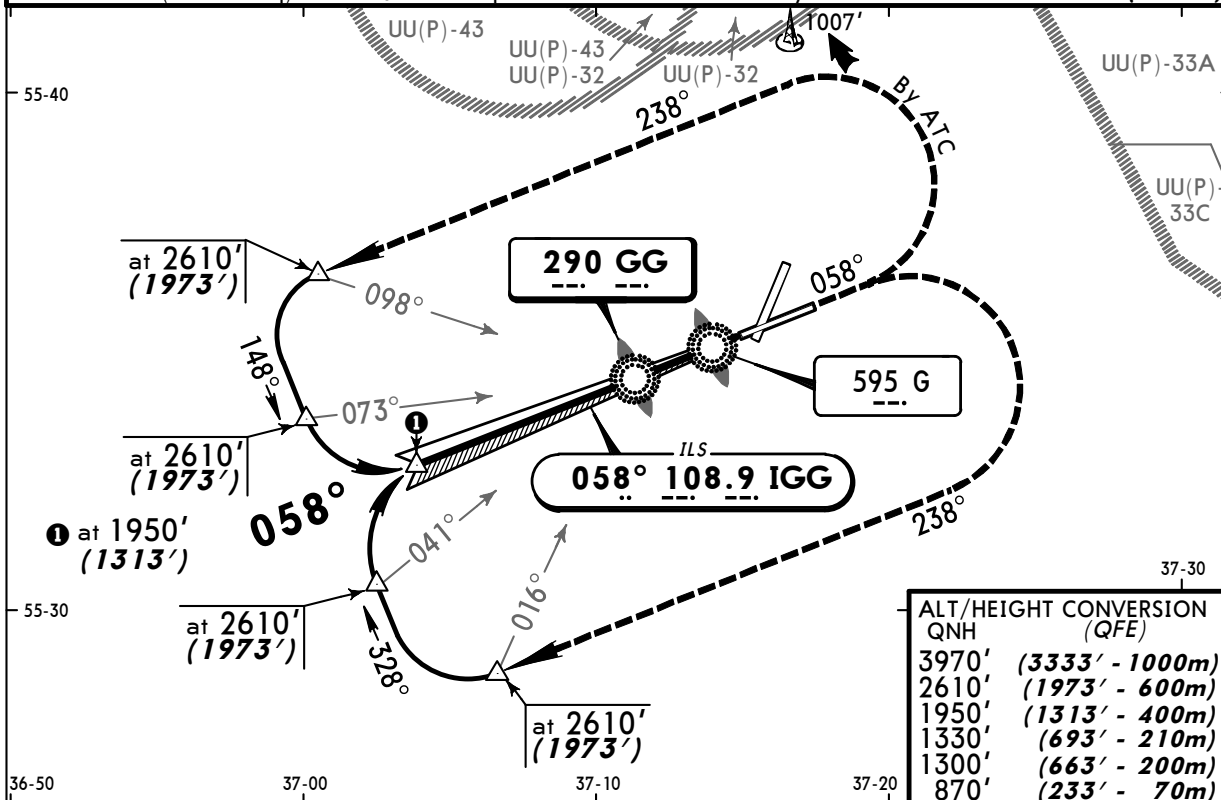
UUWW/VKO
VNUKOVO

JEPPesen
22 OCT 10
Eff 1 Nov **(11-2)**

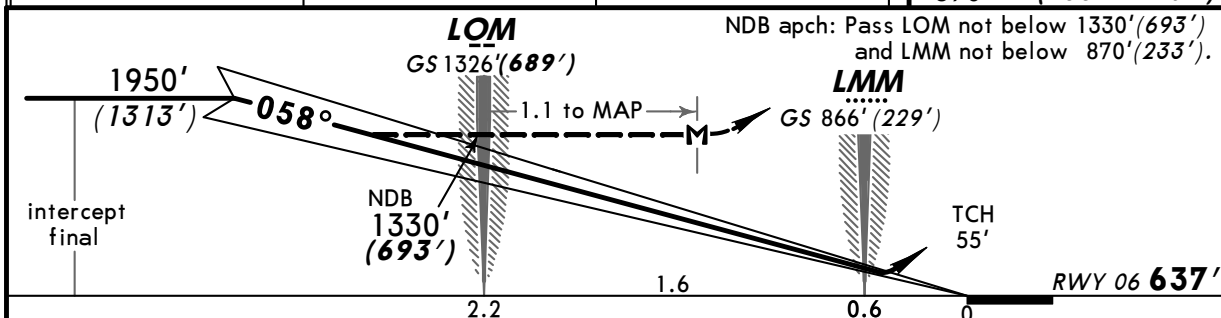
MOSCOW, RUSSIA
ILS or 2 NDB Rwy 06

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 Tower (PAR) 118.3		VNUKOVO Start(TWR) 118.3		Ground 120.45 121.7			
LOC IGG 108.9	Final Apch Crs 058°	GS LOM 1326' (689')	ILS DA(H) 837' (200')	Apt Elev 685' RWY 637'					
NDB GG 290		Minimum Alt LOM 1330' (693')	NDB MDA(H) 1390' (753')						
MISSED APCH: Climb on 058° to 1300' (663'), then turn RIGHT onto 238° climbing to 2610' (1973'), then as directed. At 1300' (663'), immediately contact Radar.								MSA Airport	
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC					
				Trans alt: 3970' (3333')					



ALT/HEIGHT CONVERSION	QNH	(QFE)
3970'	(3333' - 1000m)	
2610'	(1973' - 600m)	
1950'	(1313' - 400m)	
1330'	(693' - 210m)	
1300'	(663' - 200m)	
870'	(233' - 70m)	



Gnd speed-Kts	70	90	100	120	140	160	HIALS		1300' (663') on	058°	238°	2610' (1973')
ILS GS or NDB Desc Angle 2.73°	340	437	486	583	681	778	PAPI					
LOM to MAP	1.1	0:57	0:44	0:40	0:33	0:28	0:25					

STRAIGHT-IN LANDING RWY 06							
ILS			LOC (GS out)	NDB			
DA(H)837'(200')				MDA(H)1390'(753')			
FULL		ALS out			ALS out		
A	RVR 720m VIS 800m	1200m	NOT AUTH	1200m	RVR 1800m VIS 2000m		
B							
C				2800m	3600m		
D				3600m	4000m		

PANS OPS

UUWW/VKO
VNUKOVO

JEPPesen
22 OCT 10
Eff 1 Nov

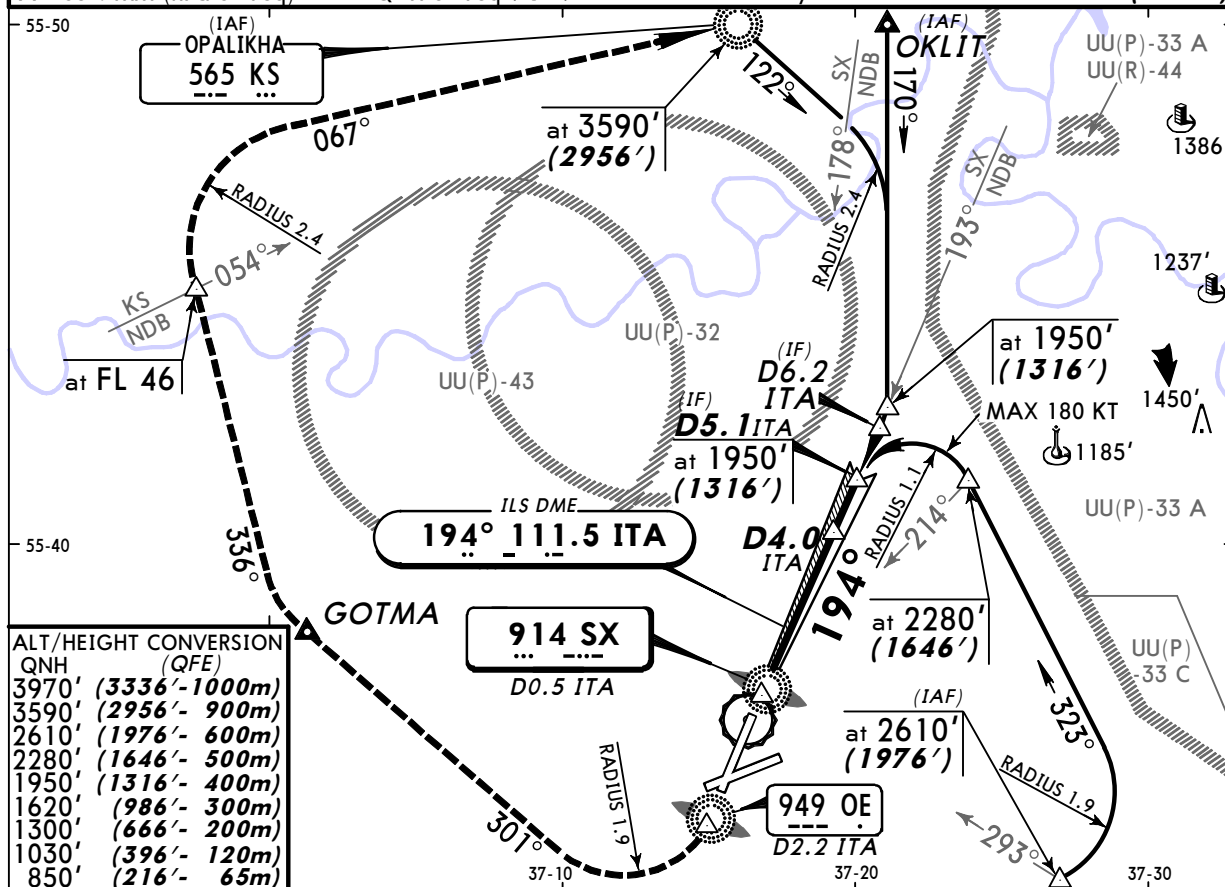
MOSCOW, RUSSIA
11-3 ILS DME or NDB/MKR Rwy 19

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 Tower (PAR) 118.3	VNUKOVO Start(TWR) 118.3	Ground 120.45 121.7
LOC ITA 111.5	Final Aptch Crs 194°	GS D4.0 ITA 1950' (1316')	ILS DA(H) 834' (200')
NDB SX 914		Minimum Alt D4.0 ITA 1950' (1316')	NDB MDA(H) 1410' (776')
			Apt Elev 685'
			RWY 634'

MISSED APCH: ILS: Climb STRAIGHT AHEAD to 1030' (396') or above. After passing OE MKR/NDB, turn RIGHT (MAX 185 KT) onto 301° climbing to 3590' (2956') to GOTMA, then according to chart. At 1300' (666') immediately contact Radar. NDB: Climb STRAIGHT AHEAD to 1620' (986') or above. After passing OE NDB/MKR turn RIGHT onto 301° climbing to 3590' (2956') to GOTMA, then according to chart. On Missed Approach immediately contact Radar.

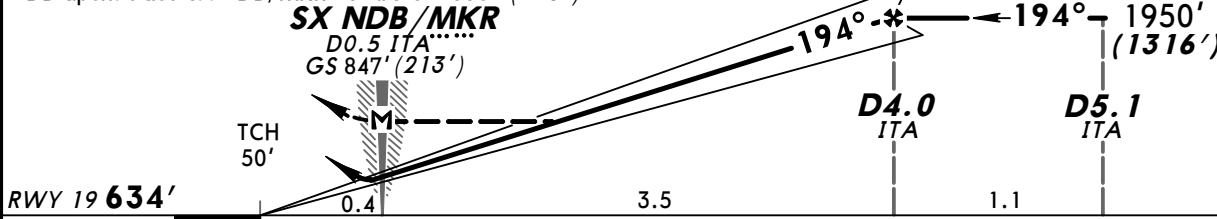
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3336')



ALT/HEIGHT CONVERSION

QNH	(QFE)
3970' (3336' - 1000m)	
3590' (2956' - 900m)	
2610' (1976' - 600m)	
2280' (1646' - 500m)	
1950' (1316' - 400m)	
1620' (986' - 300m)	
1300' (666' - 200m)	
1030' (396' - 120m)	
850' (216' - 65m)	

NDB apch: Pass SX NDB/MKR not below 850' (216').



Gnd speed-Kts	70	90	100	120	140	160		HIALS-II	
ILS GS or								PAPI	
NDB Desc Angle 3.00°	377	484	538	646	753	861			Refer to Missed Apch above
MAP at SX NDB/MKR									

STRAIGHT-IN LANDING RWY 19									
ILS				LOC (GS out)		NDB			
DA(H) 834' (200')						MDA(H) 1410' (776')			
FULL		TDZ or CL out		ALS out				ALS out	
A									
B	RVR 550m		RVR 720m					RVR 1500m	
C	VIS 800m		VIS 800m					VIS 1600m	
D									

CHANGES: Procedure.

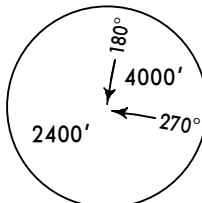
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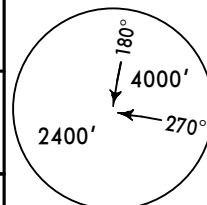
UUWW/VKO
VNUKOVO

JEPPesen
22 OCT 10
Eff 1 Nov **(11-3A)**

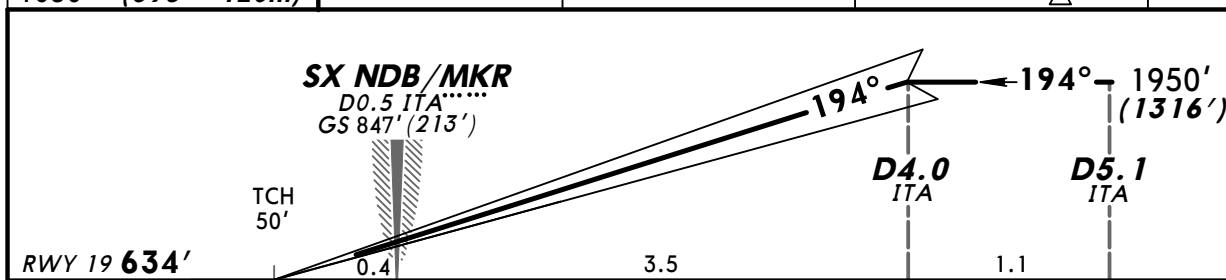
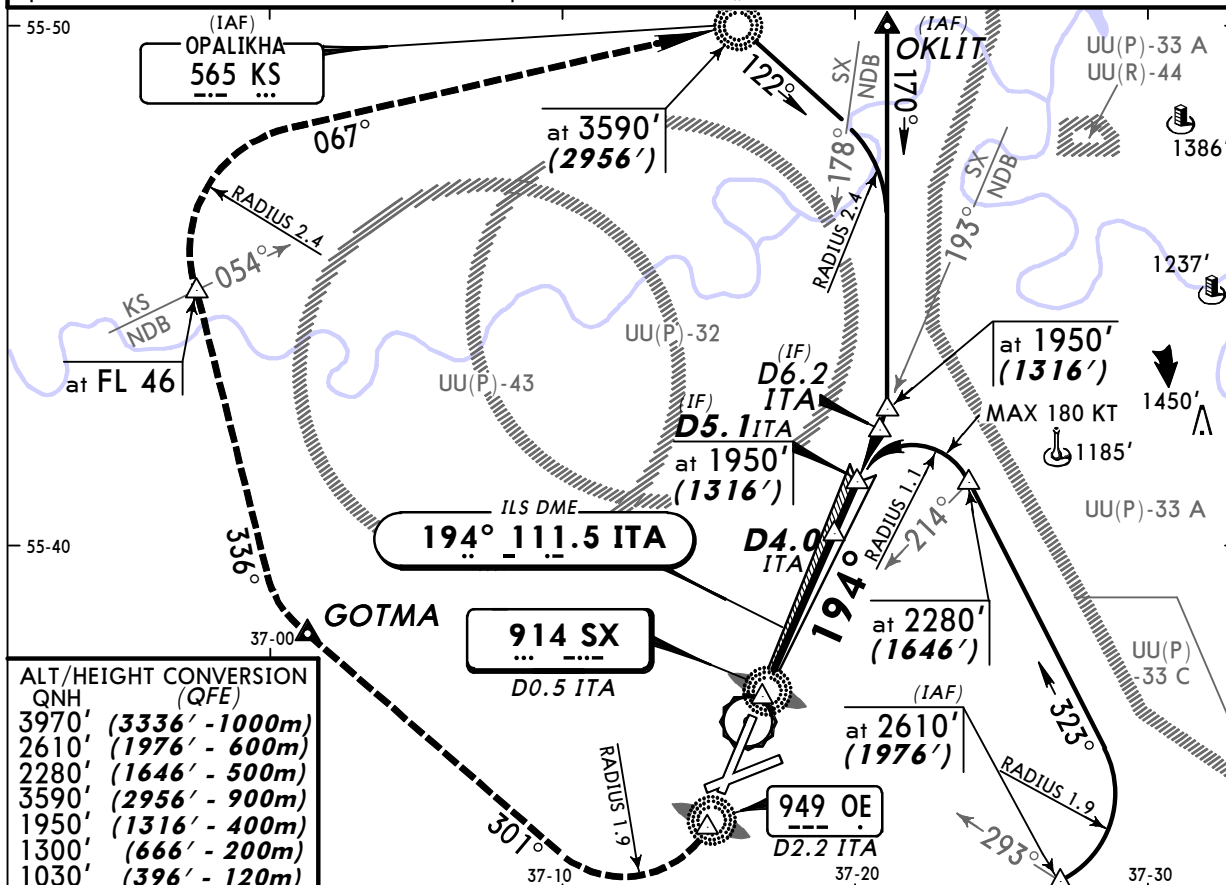
MOSCOW, RUSSIA
CAT II ILS DME Rwy 19

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 Tower (PAR)		VNUKOVO Start (TWR)		Ground	
126.0		118.3		118.3		120.45 121.7	
LOC ITA 111.5	Final Apch Crs 194°	GS D4.0 ITA 1950' (1316')	CAT II ILS RA 105' DA(H) 734' (100')		Apt Elev 685' RWY 634'		
MISSED APCH: Climb STRAIGHT AHEAD to 1030' (396') or above. After passing OE MKR/NDB, turn RIGHT (MAX 185 KT) onto 301° climbing to 3590' (2956') to GOTMA, then according to chart. At 1300'(666') immediately contact Radar.							
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3336')							
Special Aircrew & Aircraft Certification Required.							



MSA Airport



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	1030' (396')	on 194°	301°	185 KT MAX
GS	3.00°	377	484	538	646	753	PAPI	↑		RT	

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

RVR 350m

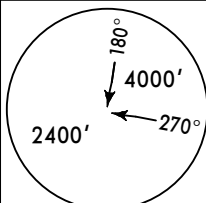
PANS OPS

UUWW/VKO
VNUKOVO

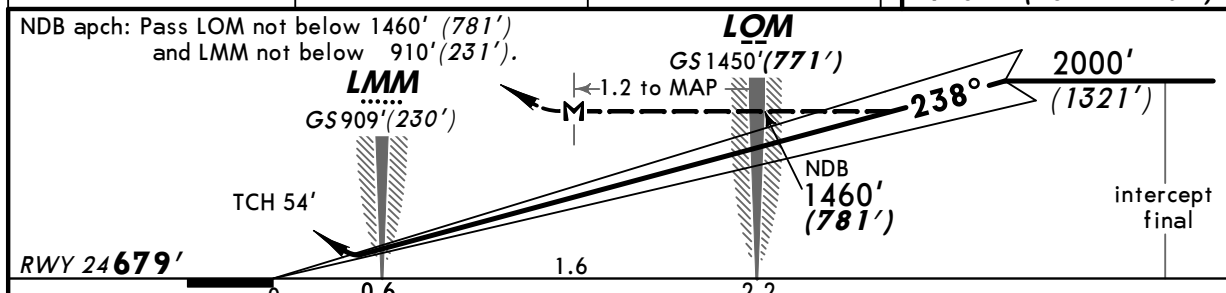
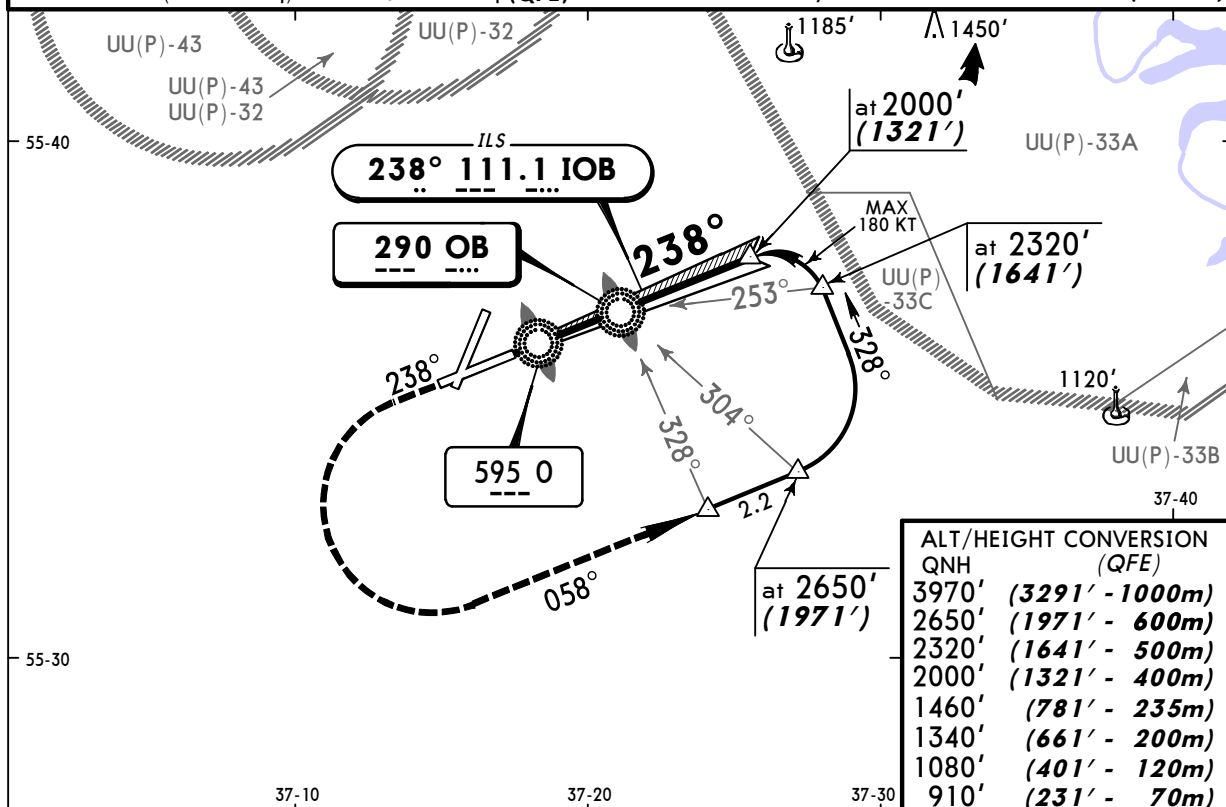
JEPPesen
16 JUL 10 **(11-4)** Eff 29 Jul

MOSCOW, RUSSIA
ILS or 2 NDB Rwy 24

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 Tower (PAR) 118.3		VNUKOVO Start(TWR) 118.3		Ground 120.45 121.7			
LOC IOB 111.1	Final Apch Crs 238°	GS LOM 1450'(771')	ILS DA(H) 879'(200')	Apt Elev 685' RWY 679'					
NDB OB 290		Minimum Alt LOM 1460'(781')	NDB MDA(H) 1590'(911')						
MISSED APCH: Climb on 238° to 1080' (401'), then turn LEFT onto 058° climbing to 2650' (1971'), then according to chart. At 1340' (661'), immediately contact Radar.								MSA Airport	

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (**3291'**)



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II		1080' (401') on 238°	058°	2650' (1971')
ILS GS or NDB Desc Angle 3.00°	377	484	538	646	753	861	PAPI		↑	LT	↑
LOM to MAP	1.2	1:02	0:48	0:43	0:36	0:31	0:27				

STRAIGHT-IN LANDING RWY 24												
ILS					LOC (GS out)	NDB						
DA(H) 879'(200')						MDA(H) 1590'(911')						
FULL		TDZ or CL out	ALS out					ALS out				
A	RVR 550m VIS 800m		RVR 720m VIS 800m		1200m		NOT AUTH		3200m			
B												
C									3600m	4400m		
D									4400m	4800m		

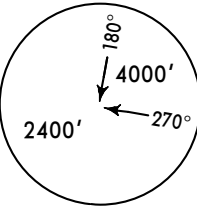
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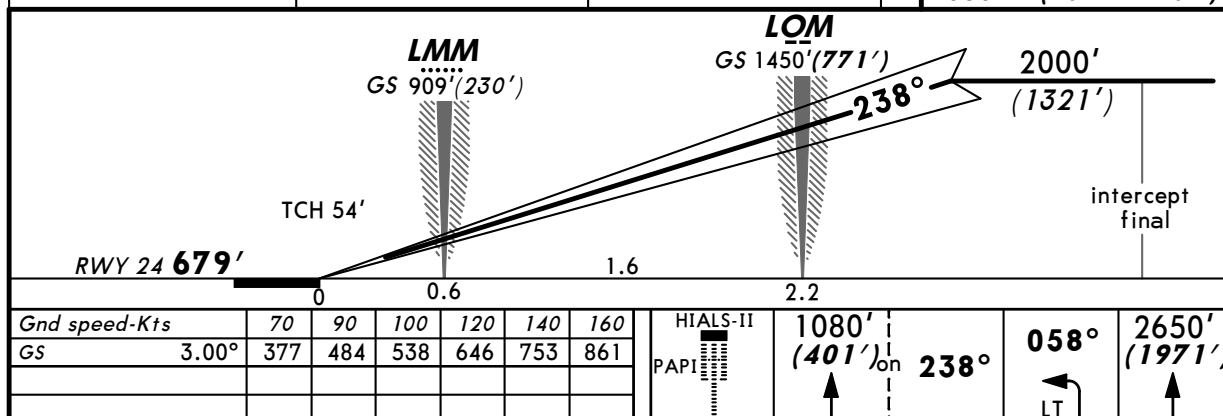
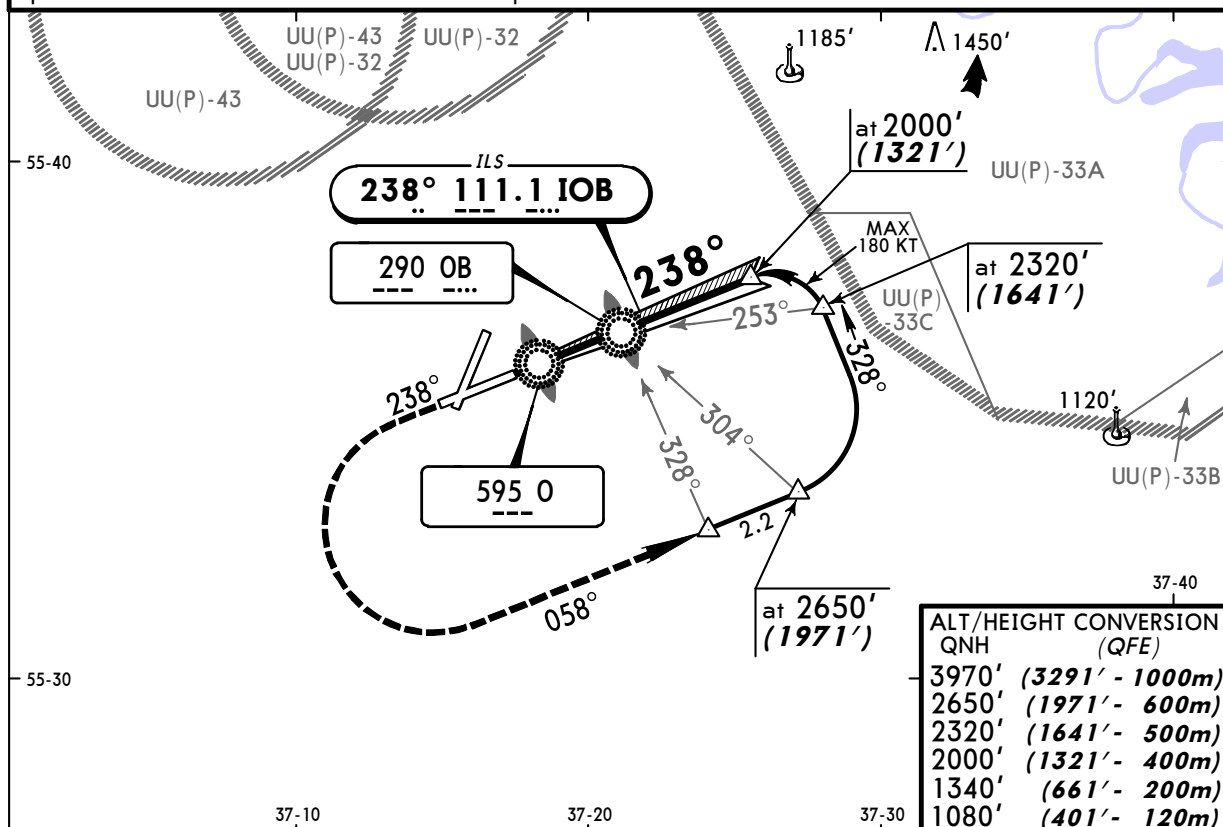
UUWW/VKO
VNUKOVO

JEPPesen
16 JUL 10 **(11-4A)** **Eff 29 Jul**

MOSCOW, RUSSIA
CAT II ILS Rwy 24

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 Tower (PAR)		VNUKOVO Start (TWR)		Ground	
126.0		118.3		118.3		120.45 121.7	
LOC IOB 111.1	Final Apch Crs 238°	GS LOM 1450' (771')	CAT II ILS RA 111' DA(H) 779' (100')		Apt Elev 685' RWY 679'		 MSA Airport
MISSED APCH: Climb on 238° to 1080' (401'), then turn LEFT onto 058° climbing to 2650' (1971'), then according to chart. At 1340' (661'), immediately contact Radar.							
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3291')							
Special Aircrew & Aircraft Certification Required.							



STRAIGHT-IN LANDING RWY 24
CAT II ILS
ABCD
RA 111'
DA(H) 779' (100')

RVR 350m

PANS OPS

UUWW/VKO
VNUKOVO

29 APR 11

JEPPESSEN

(16-1)

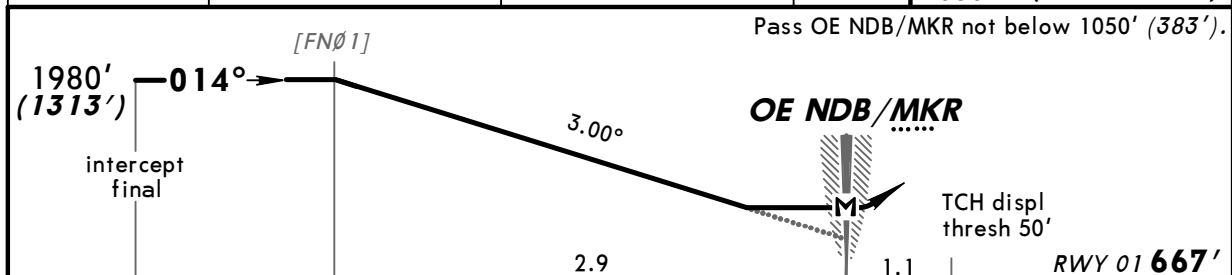
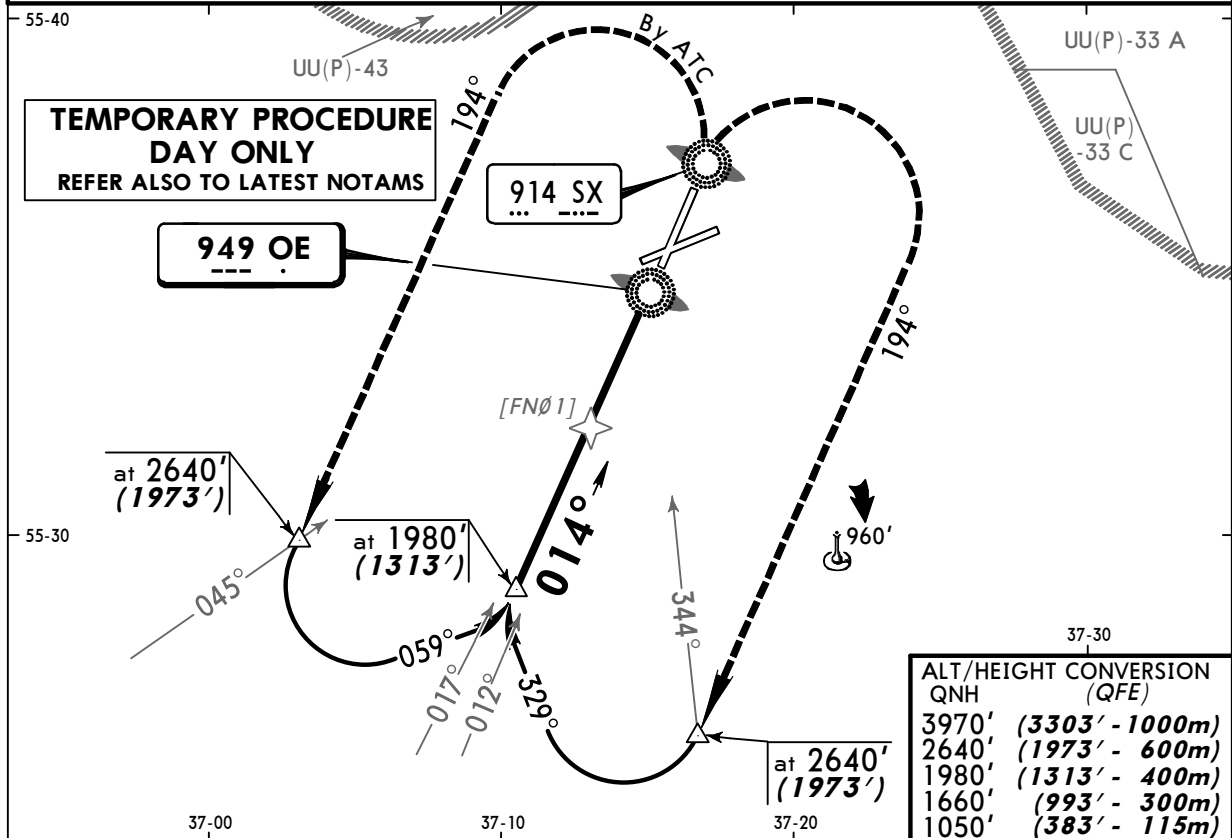
MOSCOW, RUSSIA
NDB/MKR Rwy 01

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 Tower 118.3		VNUKOVO Precision(PAR) 118.3		Ground 120.45 121.7	
NDB OE 949	Final Apch Crs 014°	Minimum Alt No FAF	MDA(H) 1430' (763')	Apt Elev 685' RWY 667'			

MISSED APCH: Climb **STRAIGHT AHEAD** to 1660' (993').
After passing SX NDB/MKR turn **RIGHT** onto 194° climbing to 2640' (1973'), then according to chart.
On Missed Approach immediately contact Radar.

MSA Airport

Alt Set: MM (hPa on req) QNH on req (**QFE**) Trans level: By ATC Trans alt: 3970' (**3303'**)

<i>Gnd speed-Kts</i>	70	90	100	120	140	160	1660' (993') ↑ SX NDB/ MKR 914 ↗ RT onto 194°
<i>Descent Angle 3.00°</i>	372	478	531	637	743	849	
<i>MAP at OE NDB/MKR</i>							

STRAIGHT-IN LANDING RWY 01

$MDA_{(H)} 1430' (763')$

PANS OPS

A	2000m	
B		
C	3600m	
D	4000m	

CHANGES: New temporary procedure.

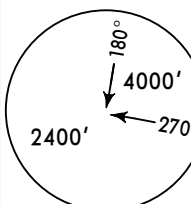
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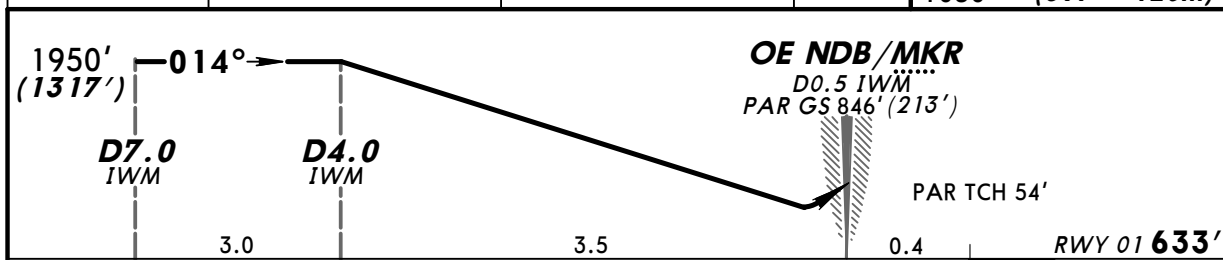
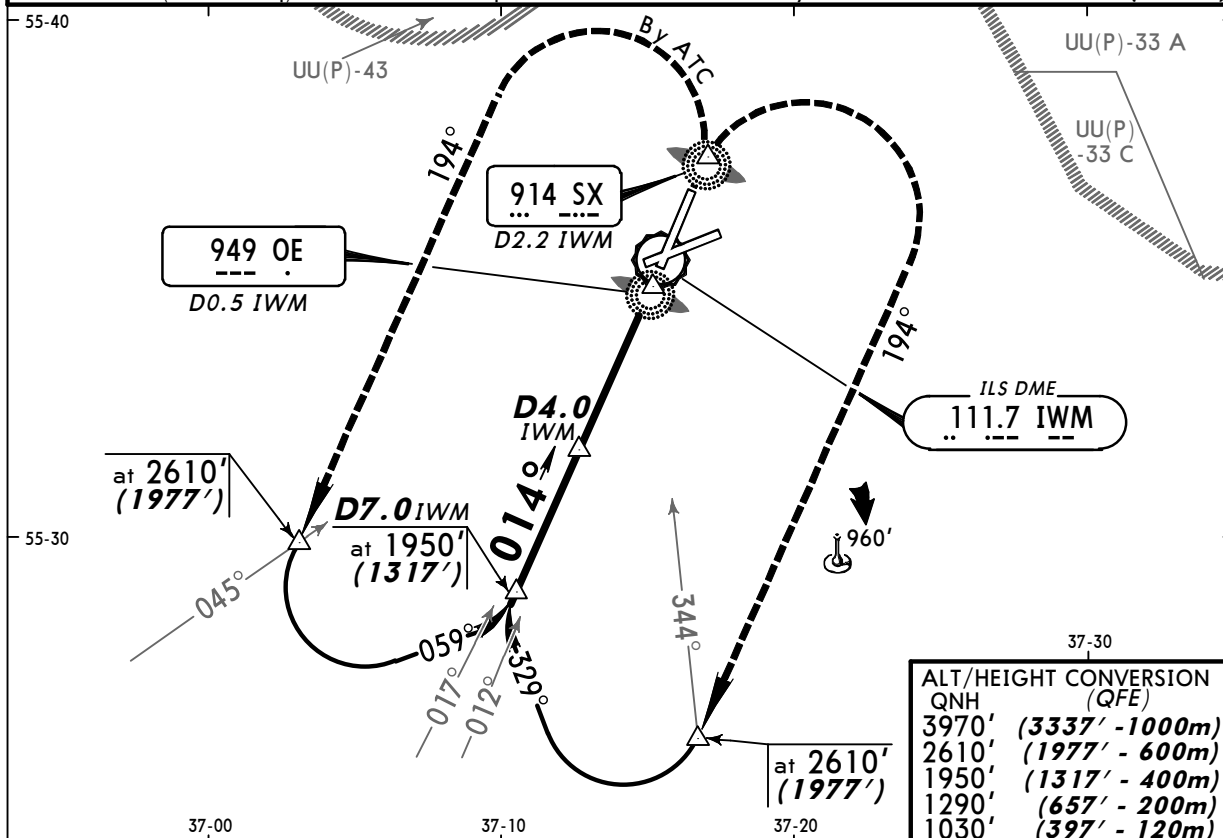
UUWW/VKO
VNUKOVO

JEPPesen
22 OCT 10 **(18-1)** **Eff 1 Nov**

MOSCOW, RUSSIA
PAR Rwy 01

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 Tower (PAR) 118.3	VNUKOVO Start(TWR) 118.3	Ground 120.45 121.7
RADAR	Final Apch Crs 014°	PAR GS D4.0 IWM 1950' (1317')	PAR DA(H) Refer to Minimums
Apt Elev 685' RWY 633'			 MSA Airport
MISSED APCH: Climb to 1030' (397') or above. After passing SX NDB/MKR turn RIGHT onto 194° climbing to 2610' (1977'), then according to chart. At 1290' (657') immediately contact Radar.			
Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970' (3337')



Gnd speed-Kts	70	90	100	120	140	160	HIALS	1030' (397')	SX 914	194° RT	2610' (1977')
PAR GS	3.00°	377	484	538	646	753	PAPI	↑			↑

STRAIGHT-IN LANDING RWY 01							
DA(H)		A: 856'(223') B: 866'(233')		C: 876'(243') D: 886'(253')			
		ALS out					
A	RVR 720m VIS 800m		1200m				
B							
C							
D							

PANS OPS

UUWW/VKO
VNUKOVO

22 OCT 10

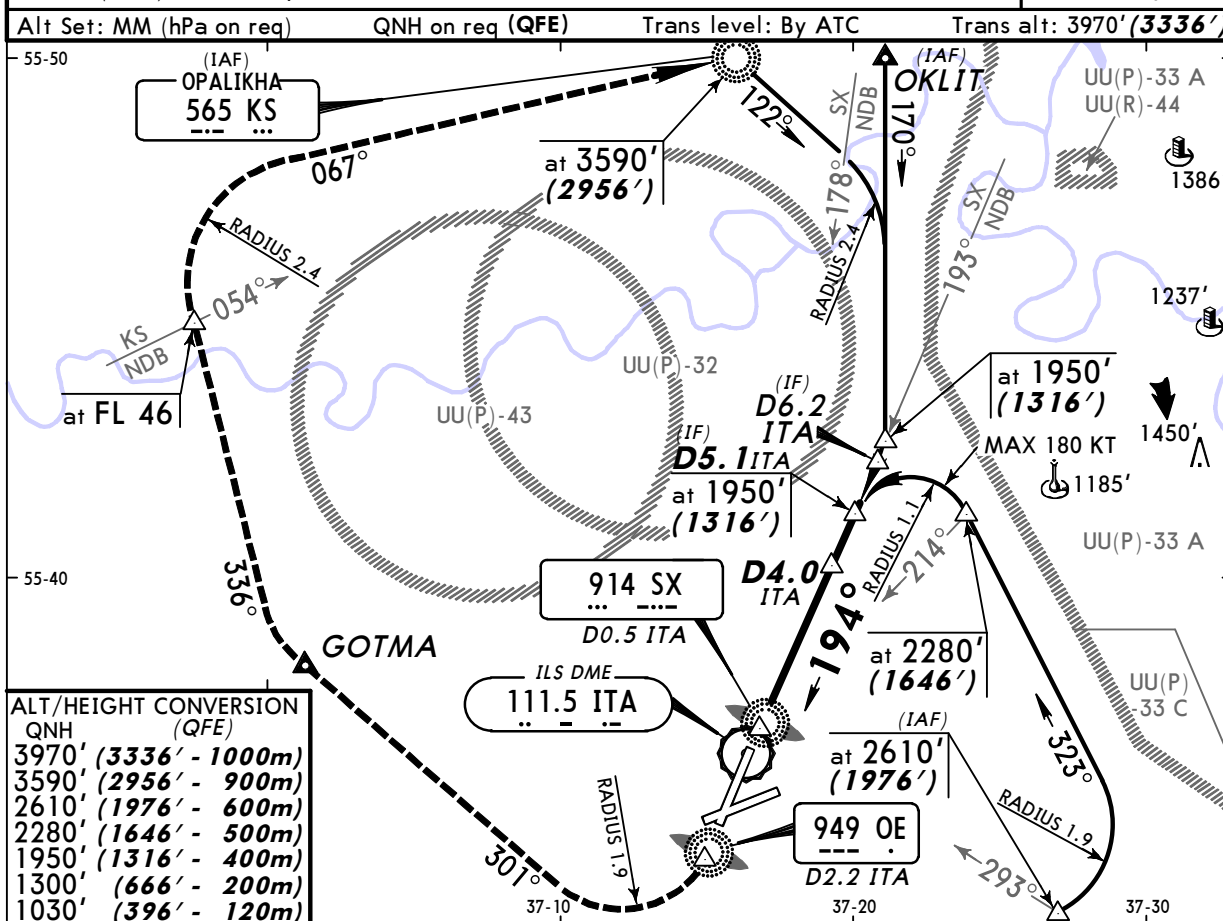
(18-2)

Eff 1 Nov

MOSCOW, RUSSIA
PAR Rwy 19

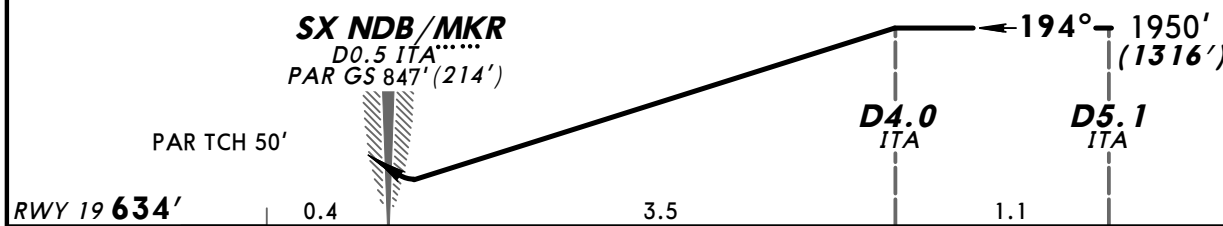
BRIEFING STRIP

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 Tower (PAR) 118.3	VNUKOVO Start(TWR) 118.3	Ground 120.45 121.7
RADAR	Final Apch Crs 194°	PAR GS D4.0 ITA 1950' (1316')	PAR DA(H) Refer to Minimums
		Apt Elev 685'	RWY 634'
MISSED APCH: Climb STRAIGHT AHEAD to 1030' (396') or above. After passing OE MKR/NDB, turn RIGHT (MAX 185 KT) onto 301° climbing to 3590' (2956') to GOTMA, then according to chart. At 1300' (666') immediately contact Radar.			
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3336')			



ALT/HEIGHT CONVERSION

QNH (QFE)	
3970' (3336' - 1000m)	
3590' (2956' - 900m)	
2610' (1976' - 600m)	
2280' (1646' - 500m)	
1950' (1316' - 400m)	
1300' (666' - 200m)	
1030' (396' - 120m)	



Gnd speed-Kts	70	90	100	120	140	160	
PAR GS	3.00°	377	484	538	646	753	861

HIALS-II

PAP1

1030'

(396')_{on}

194°

301°

RT

185 KT
MAX

STRAIGHT-IN LANDING RWY 19 A: 857' (223') C: 877' (243') B: 867' (233') D: 887' (253')			
	TDZ or CL out	ALS out	
A			
B	RVR 550m VIS 800m	RVR 720m VIS 800m	
C			
D	RVR 720m VIS 800m		

PANS OPS