

**INSTRUMENT
APPROACH
CHART - ICAO**

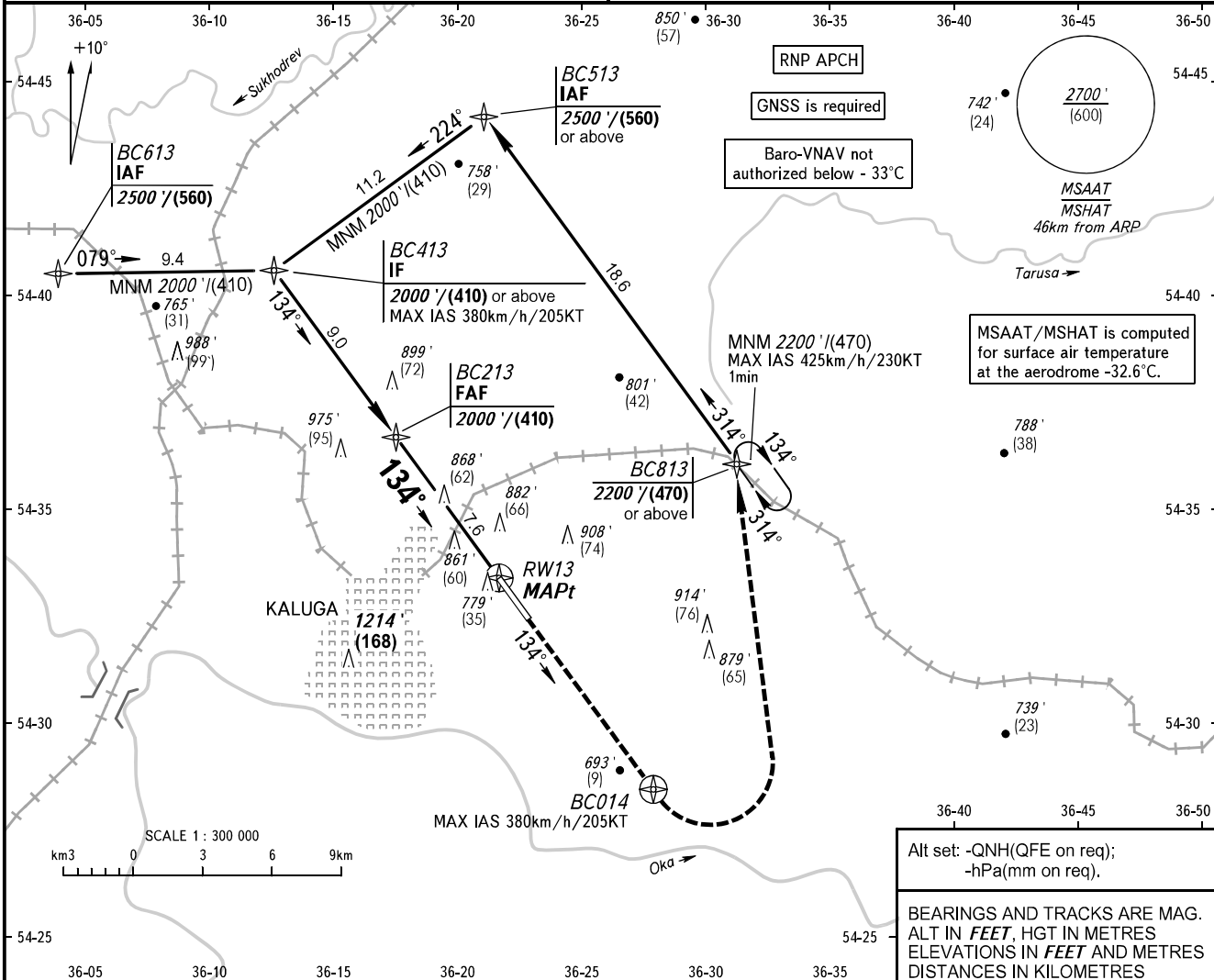
KALUGA TOWER 120.300

**KALUGA, RUSSIA
GRABTSEVO
RNP RWY 13**

TRANSITION LEVEL: **1**

TRANSITION ALT: 5000'
TRANSITION HGT: (1320)

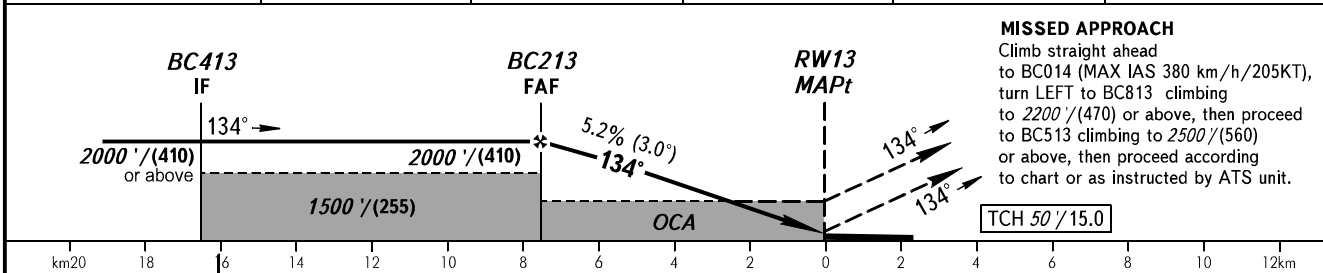
AD ELEV: 666' / 203m
THR ELEV: 666' / 203.0m



Alt set: -QNH(QFE on req);
-hPa(mm on req).

BEARINGS AND TRACKS ARE MAG.
ALT IN FEET, HGT IN METRES
ELEVATIONS IN FEET AND METRES
DISTANCES IN KILOMETRES

DIST to RW13	7.5	7.0	5.0	3.0	2.0
ALTITUDE/HEIGHT	2000' / (410)	1910' / (380)	1570' / (275)	1230' / (175)	1060' / (125)



MISSED APPROACH
Climb straight ahead to BC014 (MAX IAS 380 km/h/205KT), turn LEFT to BC813 climbing to 2200' / (470) or above, then proceed to BC513 climbing to 2500' / (560) or above, then proceed according to chart or as instructed by ATS unit.

TCH 50 / 15.0

OCA(H)		A	B	C	D
Straight-in Approach	LNAV	1120' (450') (140)	1120' (450') (140)	1120' (450') (140)	1120' (450') (140)
	LNAV VNAV	992' (326') (100)	1002' (336') (103)	1012' (346') (106)	1022' (356') (109)
Circling		1180' (520') (160)	1210' (550') (170)	1310' (650') (200)	1360' (700') (220)

1 TRANSITION LEVEL:
- FL060 when QNH is 1013 hPa (760mm mercury column) or above;
- FL070 when QNH is 977 hPa (733mm mercury column) or above, but less than 1013 hPa (760mm mercury column);
- FL080 when QNH is less than 977 hPa (733mm mercury column).

WARNING
Visual manoeuvring west of AD is PROHIBITED.

GROUND SPEED	km/h	150	180	210	240	270	300	330	360	390
	kt	81	97	113	130	146	162	178	194	211
RATE OF DESCENT	m/s	2.2	2.6	3.0	3.5	3.9	4.3	4.8	5.2	5.6
	ft/min	427	512	597	682	768	853	938	1024	1109

CHANGE: NIL