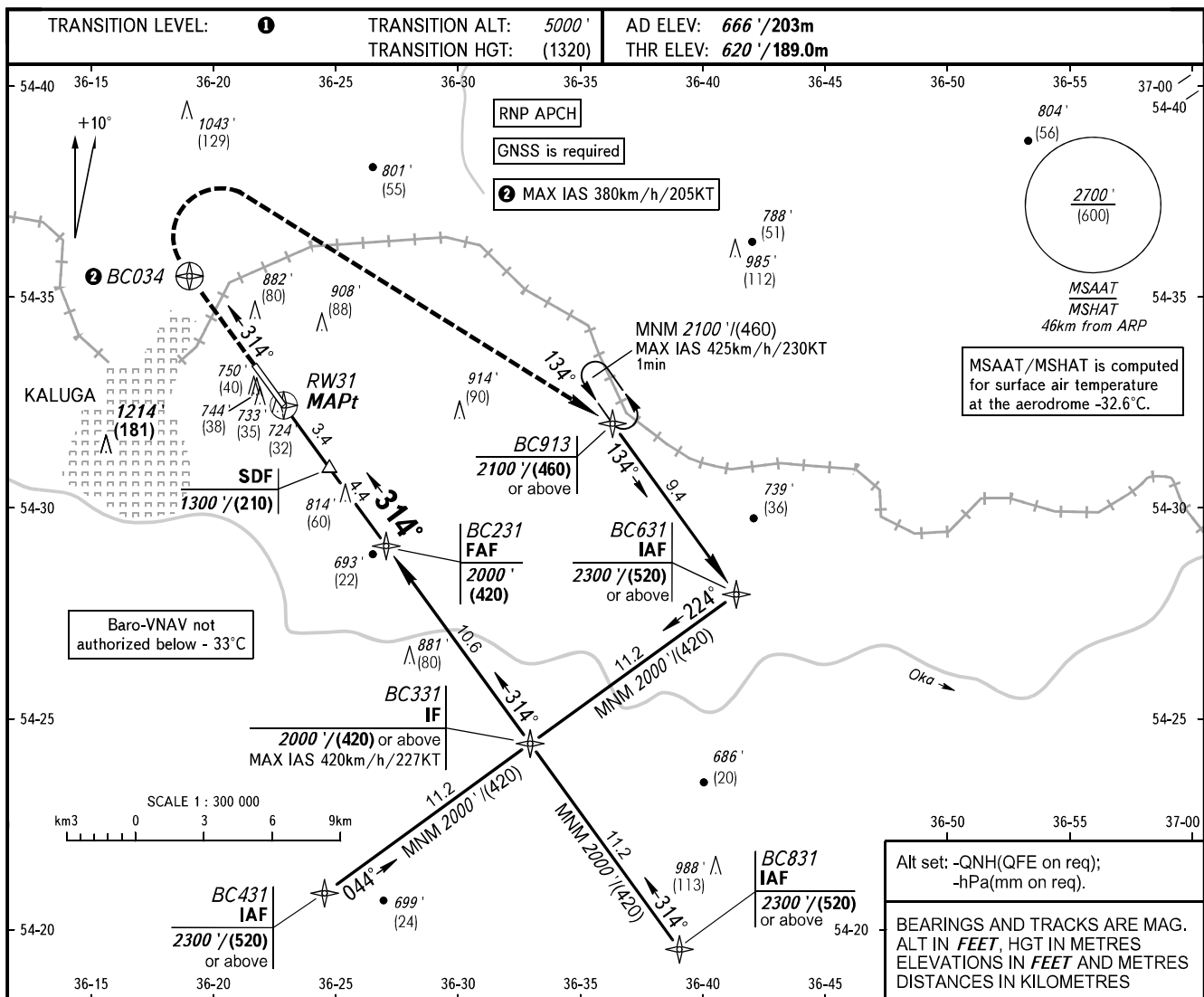


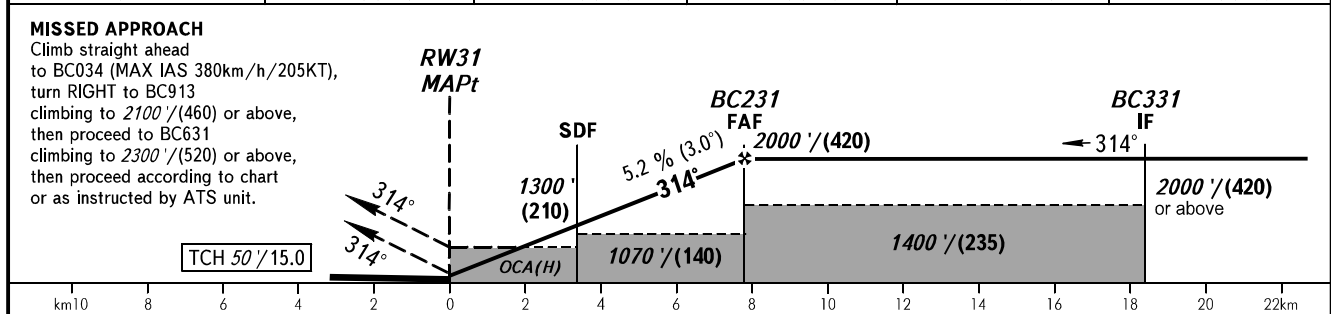
**INSTRUMENT
APPROACH
CHART - ICAO**

KALUGA TOWER 120.300

KALUGA, RUSSIA
GRABTSEVO
RNP RWY 31



DIST to RW31	2.0	3.0	5.0	7.0	7.8
ALTITUDE/HEIGHT	1015'/(120)	1185'/(175)	1525'/(275)	1870'/(385)	2000'/(420)



OCA(H)		A	B	C	D						
Straight-in Approach	LNAV	980' (360') (110)	980' (360') (110)	980' (360') (110)	980' (360') (110)						
	LNAV VNAV	865' (245') (75)	875' (254') (78)	896' (275') (84)	911' (291') (89)						
	Circling	1180' (520') (160)	1210' (550') (170)	1310' (650') (200)	1360' (700') (220)						
GROUND SPEED		km/h	150	180	210	240	270	300	330	360	390
RATE OF DESCENT		kt	81	97	113	130	146	162	178	194	211
		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

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.

CHANGE: MAX IAS BC331