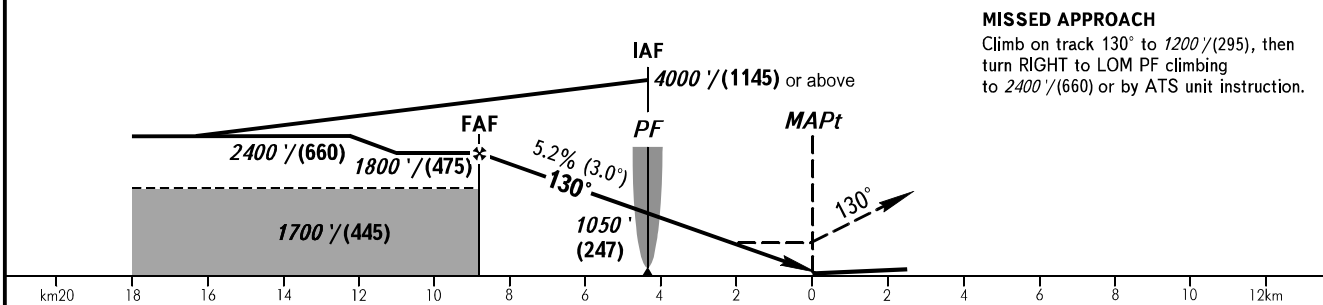
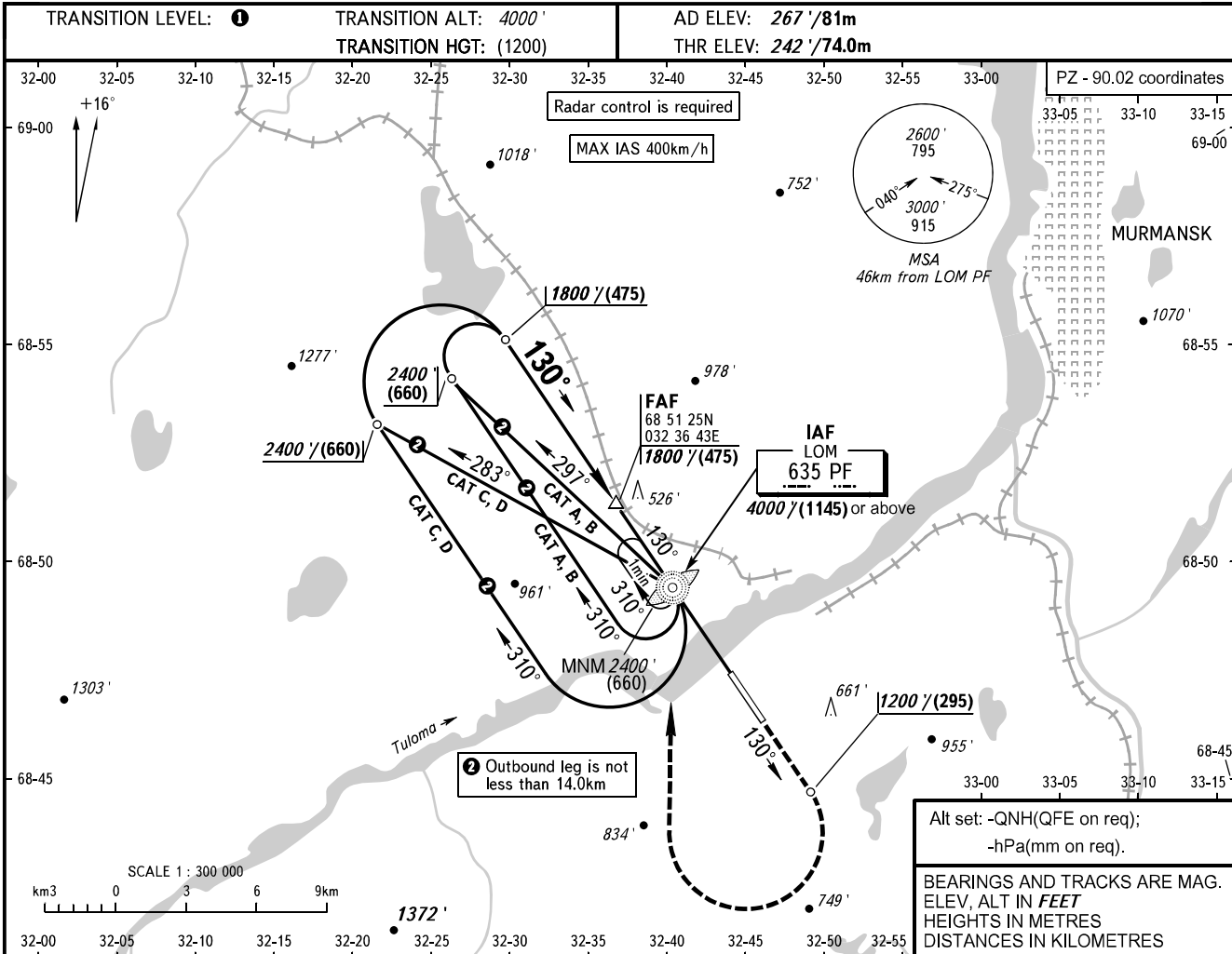


**INSTRUMENT
APPROACH
CHART - ICAO**

TOWER	120.300
RADAR	120.700

MURMANSK, RUSSIA
MURMANSK
NDB Z RWY 13



OCA(H)	A	B	C	D
Straight-in Approach	810' (570') (175)	780' (540') (165)	780' (540') (165)	780' (540') (165)
Circling	840' (570') (175)	990' (730') (225)	1360' (1100') (335)	1360' (1100') (335)

① TRANSITION LEVEL:
- FL050 when QNH is 1013 hPa (760mm mercury column) or above;
- FL060 when QNH is 977 hPa (733mm mercury column) or above,
but less than 1013 hPa (760mm mercury column);
- FL070 when QNH is less than 977 hPa (733mm mercury column).

WARNING
Visual manoeuvring to the north-east of the AD is prohibited.

GROUND SPEED	km/h	150	180	210	240	270	300	330	360	390
FAF-MAPt 8840m	min:sec	3:31	2:56	2:31	2:12	2:00	1:46	1:36	1:28	1:22
RATE OF DESCENT	m/s	2.2	2.6	3.0	3.5	3.9	4.3	4.8	5.2	5.6
RATE OF DESCENT	ft/min	427	512	597	682	768	853	938	1024	1109