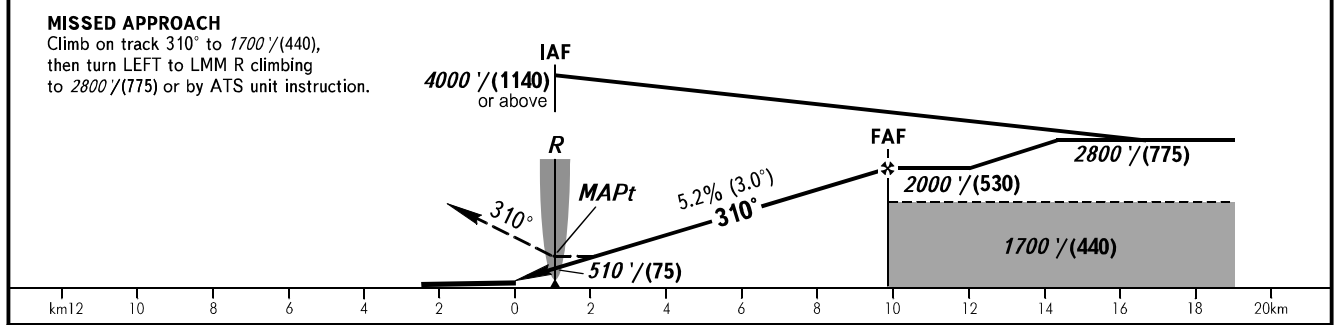
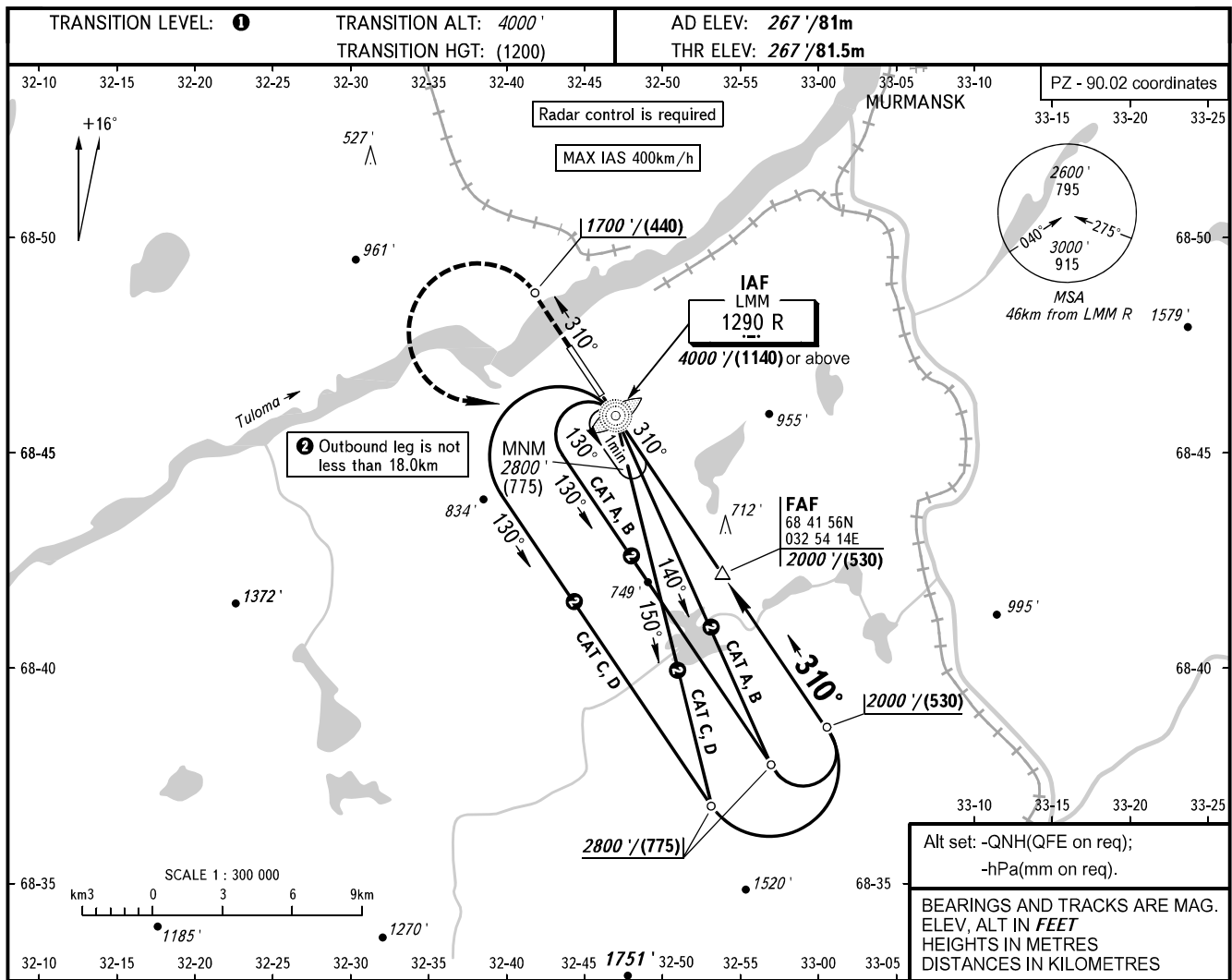


**INSTRUMENT  
APPROACH  
CHART - ICAO**

TOWER **120.300**  
RADAR **120.700**

**MURMANSK, RUSSIA**  
MURMANSK  
NDB Y RWY 31



OCA(H)	A	B	C	D
Straight-in	960' (700') (215)	960' (700') (215)	960' (700') (215)	960' (700') (215)
Approach				
Circling	960' (700') (215)	990' (730') (225)	1360' (1100') (335)	1360' (1100') (335)

MAPt at LMM R. Timing not authorized for defining MAPt.

**1** TRANSITION LEVEL:  
- FLO50 when QNH is 1013 hPa (760mm mercury column) or above;  
- FLO60 when QNH is 977 hPa (733mm mercury column) or above,  
but less than 1013 hPa (760mm mercury column);  
- FLO70 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
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