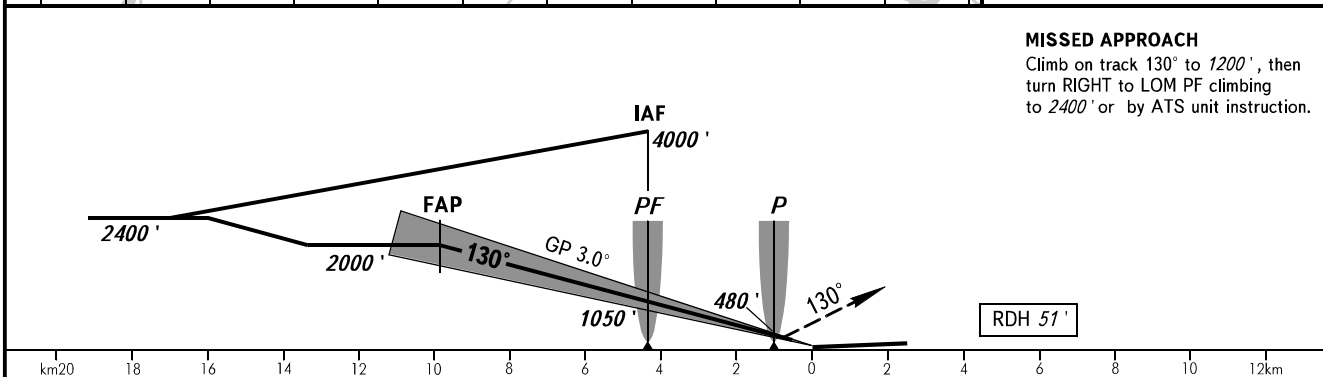
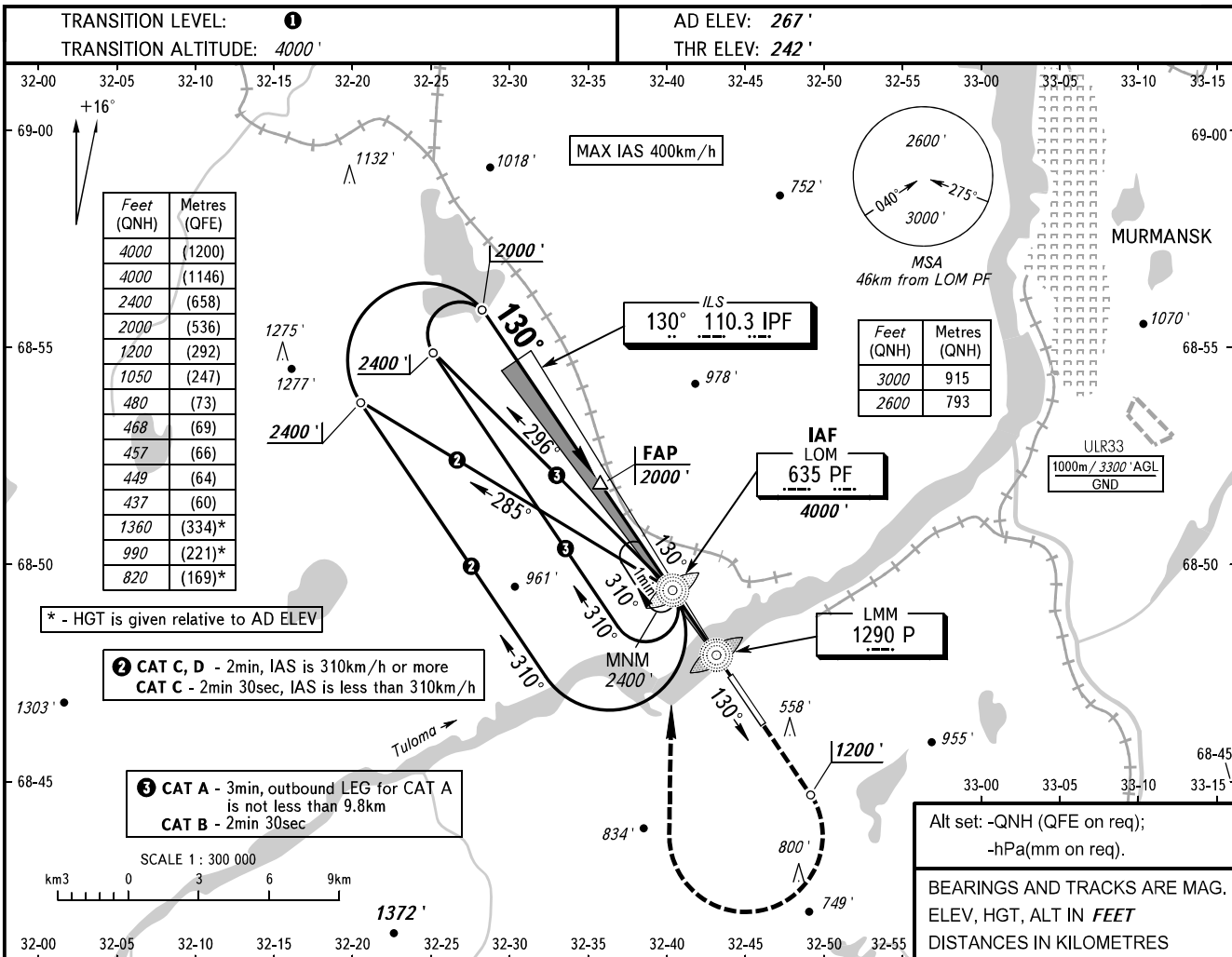


**INSTRUMENT  
APPROACH  
CHART - ICAO**

TOWER **120.300**

**MURMANSK, RUSSIA**  
MURMANSK  
ILS X RWY 13 CAT I



| OCA(H)               |              | A           | B           | C             | D             |     |     |     |     |      |      |
|----------------------|--------------|-------------|-------------|---------------|---------------|-----|-----|-----|-----|------|------|
| Straight-in Approach | <b>CAT I</b> | 437' (195') | 449' (207') | 457' (215')   | 468' (226')   |     |     |     |     |      |      |
|                      |              |             |             |               |               |     |     |     |     |      |      |
| Circling             |              | 820' (550') | 990' (730') | 1360' (1100') | 1360' (1100') |     |     |     |     |      |      |
| 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  |
|                      |              | ft/min      | 427         | 512           | 597           | 682 | 768 | 853 | 938 | 1024 | 1109 |

**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.

CHANGE: New chart