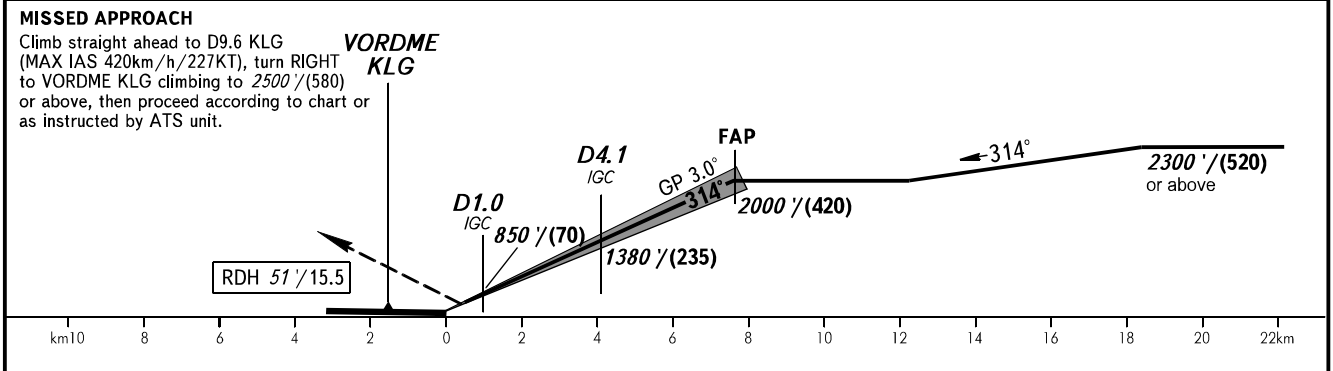
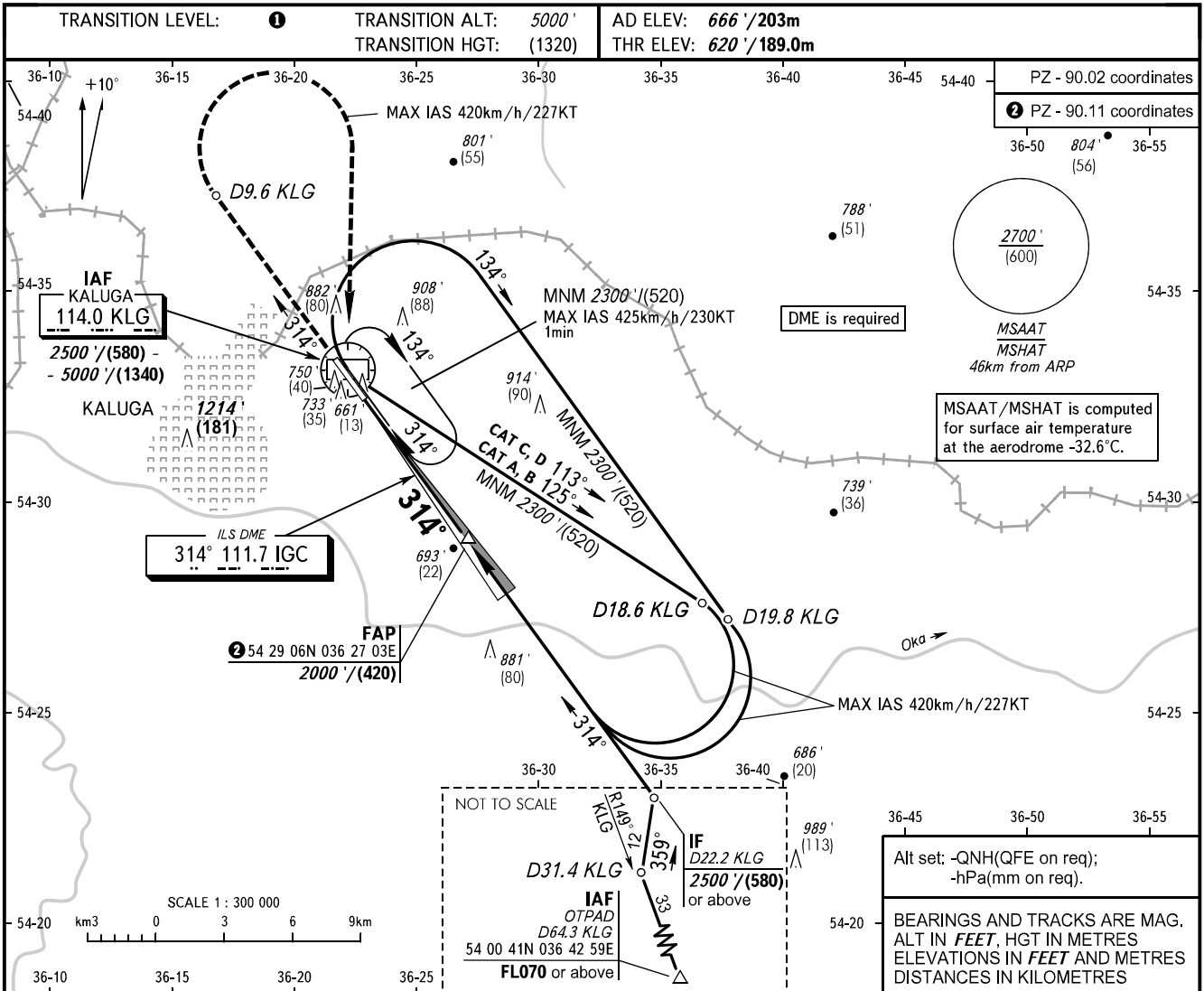


**INSTRUMENT
APPROACH
CHART - ICAO**

KALUGA TOWER 120.300

**KALUGA, RUSSIA
GRABTSEVO
ILS X CAT I RWY 31**



| OCA(H) | | A | B | C | D | 1 TRANSITION LEVEL: - FLO60 when QNH is 1013 hPa (760mm mercury column) or above; - FLO70 when QNH is 977 hPa (733mm mercury column) or above, but less than 1013 hPa (760mm mercury column); - FLO80 when QNH is less than 977 hPa (733mm mercury column). | | | | | |
|----------------------|--------------|-----------------------|-----------------------|-----------------------|-----------------------|--|--|-----|-----|------|------|
| Straight-in Approach | CAT I | 761' (141') (43) | 773' (153') (47) | 783' (163') (50) | 797' (177') (54) | | WARNING: 1. Visual manoeuvring west of AD is PROHIBITED. 2. Zero range of DME IGC is indicated at RWY 31 THR. | | | | |
| | | | | | | | | | | | |
| 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 |

CHANGE: New chart