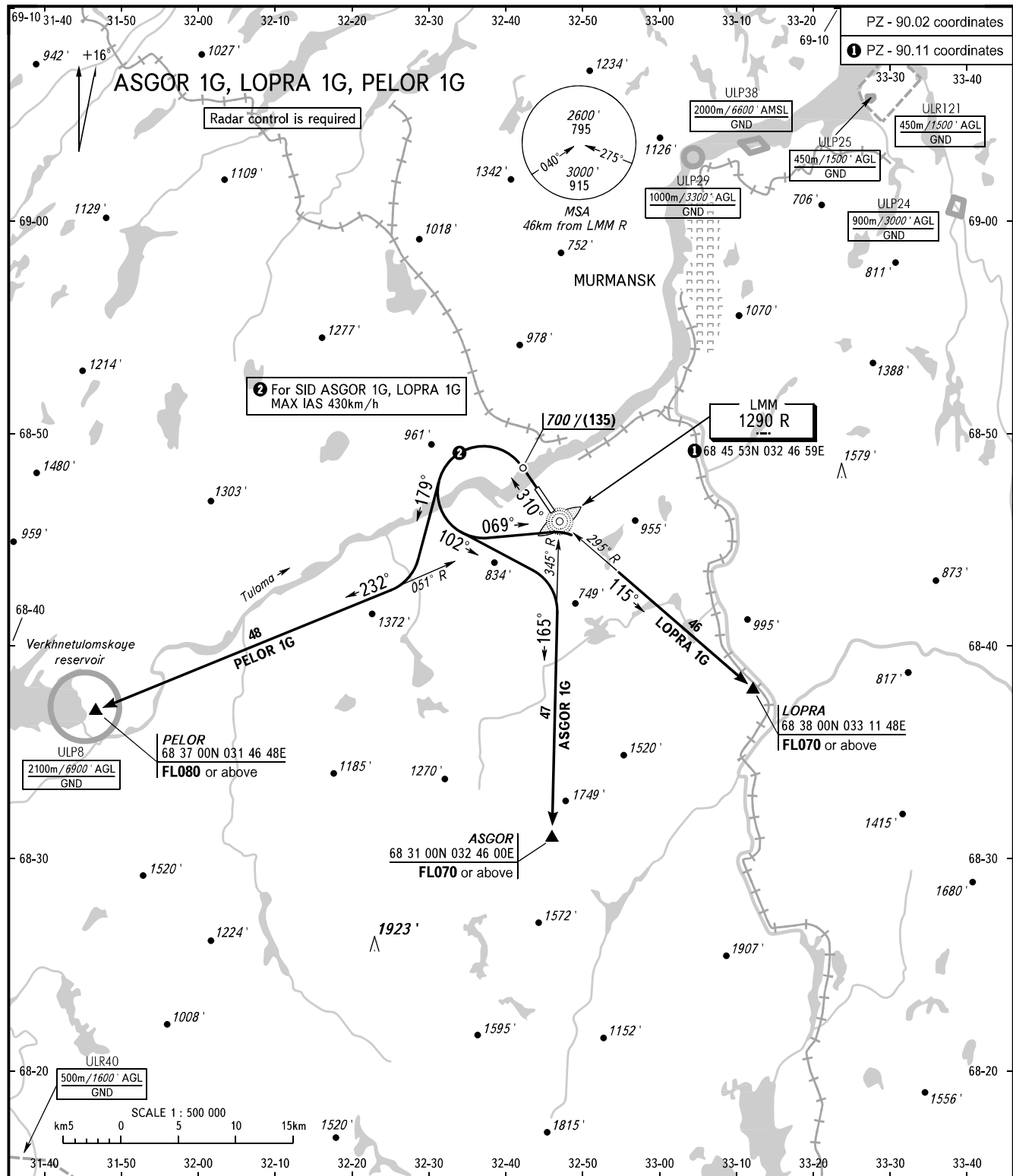


STANDARD DEPARTURE CHART  
INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE: **4000'**  
TRANSITION HEIGHT: **(1200)**

MURMANSK, RUSSIA  
MURMANSK  
RWY 31



PZ - 90.02 coordinates  
① PZ - 90.11 coordinates

② For SID ASGOR 1G, LOPRA 1G  
MAX IAS 430km/h

LMM  
1290 R  
① 68 45 53N 032 46 59E

ULP8  
2100m/6900' AGL  
GND  
PELOR  
68 37 00N 031 46 48E  
FL080 or above

ASGOR  
68 31 00N 032 46 00E  
FL070 or above

LOPRA  
68 38 00N 033 11 48E  
FL070 or above

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

- WARNING:**
- The minimum climb gradients are as follows:
    - 5.6% up to FL070 for SID LOPRA 1G;
    - 5.0% up to FL070 for SID ASGOR 1G;
    - 4.8% up to FL080 for SID PELOR 1G.
  - If unable to maintain minimum climb gradient the flight crew shall advise ATS unit.

BEARINGS AND TRACKS ARE MAGNETIC  
ALTITUDES AND ELEVATIONS IN FEET  
HEIGHTS IN METRES  
DISTANCES IN KILOMETRES

Alt set: -QNH(QFE on req);  
-hPa(mm on req).