

ROYAL OBSERVER CORPS - NUCLEAR REPORTING CELLSINITIAL PREDICTION TEMPLATES

1. The Initial Prediction Templates (IPTs) are based on those used in the simplified fallout prediction system laid down in Annex D (D of A) to NATO STANAG (Standardisation Agreement) 2103 and their use and application may be requested as part of an additional requirement.

2. The system requires information on the effective wind speeds and their downwind directions for a number of ranges of weapon powers or yield groups and this is supplied by the Meteorological Office in the form of telegraph broadcasts of EFFECTIVE DOWNWIND FORECASTS as described in Annex AQ.

3. The equipment required for the construction of Initial Prediction Templates is as follows:

a. One IPT Protractor (HQ ROC Drawing No 1315 dated 1982) mounted on hardboard and covered with clear film.

b. Red, green and blue CHINAGRAPH pencils.

c. A straight edge or rule.

d. A supply of acetate sheets as templates in the following sizes:

1. 50 x 50 cm or 20" x 20" (G Zone 1 - Up to 200 Km)

2. 50 x 70 cm or 20" x 28" (G Zone 1 - 200 to 300 Km)

3. 50 x 90 cm or 20" x 36" (G Zone 1 - 300 to 400 Km)

4. 50 x 110 cm or 20" x 44" (G Zone 1 - 400 to 500 Km)

5. 50 x 140 cm or 20" x 56" (G Zone 1 - 500 to 640 Km)

e. The following is to be permanently drawn on the reverse side of all templates in STAEDTLER LUMOCOLOR:

A centre line in RED

A G range cloud circle in RED

A F range cloud circle in GREEN

A D range cloud circle in BLUE

4. Instructions for the use of the Protractor are:

a. Affix the appropriate size of template to the Protractor with tape or large clips lining up the centre line and Ground Zero cross.

b. Take up the appropriate Effective Downwind Forecast giving the bearing and wind speed for the D, F and G weapon ranges.

c. Take up a red chinagraph pencil and locate the G range windspeed on the upper half of the Protractor, working from the top left.

- d. Move down the located wind speed line and mark the point at which the red ZONE 1 Distance line is intersected. If the wind speed line covers a range of speeds at a point, the intersection mark is to be interpolated accordingly, the higher speed requiring the longer Zone 1 line.
 - e. Repeat the procedure on the lower half of the Protractor and join the two marks to the tangent point of the G range cloud circle.
 - f. Draw a curved line, freehand, between the two points to complete the prediction plume up to Zone 1.
 - g. Locate the value of the bearing on the bearing ring (note that these bearings are reversed) and draw a red line from GZ to the bearing value. Add an arrow head and 'N' letter if desired.
 - h. H + 1. + 2 + 3 lines may be added freehand if desired, mentally doubling and trebling the wind speed.
5. Without moving the template, repeat the above procedure for F range in green and D range in blue. Each prediction plume should lie exactly within the other but be smaller. If the bearings differ, then there will be three different north points all in a different colour. If the bearings are all the same or within three degrees of each other, then only one north line is required labelled G, F and D.

INITIAL PREDICTION TEMPLATES FOR WIND SPEEDS LESS THAN 8 KPH

6. The three Initial Prediction Templates required for wind speeds less than 8 KPH are to be discs, cut from card at least 1.5 mm thick, the radii of which are to be - 66 mm for the D yield group, 96 mm for the F yield group and 156 mm for the G yield group, each punched with a central hole, approximately 5 mm diameter. Allowance has been made for the width of the pencil line in determining these diameters. Each of these templates is to be clearly marked with the yield group letter and the range of weapon powers to which it refers.