

§ 73.153

equation for  $E(\phi, \alpha)_{th}$ , shall be tabulated on the page on which the horizontal plane pattern is plotted. Where sector augmentation has been employed in designing the modified pattern, the direction of maximum augmentation (i.e., the central azimuth of augmentation) shall be indicated on the horizontal plane pattern for each augmented sector, and the limits of each sector shall also be shown. Field values within an augmented sector, computed prior to augmentation, shall be depicted by a broken line.

(4) There shall be submitted, for each modified standard pattern, complete tabulations of final computed data used in plotting the pattern. In addition, for each augmented sector, the central azimuth of augmentation, span, and radiation at the central azimuth of augmentation ( $E(\phi, \alpha)_{aug}$ ) shall be tabulated.

(5) The parameters used in computing the modified standard pattern shall be specified with realistic precision. Following is a list of the maximum acceptable precision:

- (i) Central Azimuth of Augmentation: to the nearest 0.1 degree.
- (ii) Span: to the nearest 0.1 degree.
- (iii) Radiation at Central Azimuth of Augmentation: 4 significant figures.
- (e) Sample calculations for a modified standard pattern follow. First, assume the existing standard pattern in § 73.150(c). Then, assume the following augmentation parameters:

| Augmentation number | Central azimuth | Span | Radiation at central azimuth |
|---------------------|-----------------|------|------------------------------|
| 1 .....             | 110             | 40   | 1,300                        |
| 2 .....             | 240             | 50   | 52                           |
| 3 .....             | 250             | 10   | 130                          |

Following is a tabulation of part of the modified standard pattern:

| Azimuth   | 0        | 30     | 60     | Vertical angle |
|-----------|----------|--------|--------|----------------|
| 0 .....   | 28.86    | 68.05  | 72.06  | .....          |
| 105 ..... | 1,299.42 | 872.14 | 254.21 | .....          |
| 235 ..... | 39.00    | 35.74  | 38.71  | .....          |
| 247 ..... | 100.47   | 66.69  | 32.78  | .....          |

[46 FR 11992, Feb. 12, 1981, as amended at 56 FR 64862, Dec. 12, 1991; 66 FR 20756, Apr. 25, 2001]

§ 73.153 Field strength measurements in support of applications or evidence at hearings.

In the determination of interference, groundwave field strength measurements will take precedence over theoretical values, provided such measurements are properly taken and presented. When measurements of groundwave signal strength are presented, they shall be sufficiently complete in accordance with § 73.186 to determine the field strength at 1 mile in the pertinent directions for that station. The antenna resistance measurements required by § 73.186 need not be taken or submitted.

[44 FR 36037, June 20, 1979, as amended at 56 FR 64862, Dec. 12, 1991]

§ 73.154 AM directional antenna partial proof of performance measurements.

(a) A partial proof of performance consists of at least 8 field strength measurements made on each of the radials that includes a monitoring point. If the directional pattern has fewer than 4 monitored radials, the partial proof shall include measurements on those radials from the latest complete proof of performance which are adjacent to the monitored radials.

(b) The measurements are to be made within 3 to 15 kilometers from the center of the antenna array. When a monitoring point as designated on the station authorization lies on a particular radial, one of the measurements must be made at that point. One of the following methods shall be used for the partial proof:

(1) Measurement points shall be selected from the points measured in latest full proof of performance provided that the points can be identified with reasonable certainty, and that land development or other factors have not significantly altered propagation characteristics since the last full proof. At each point, the licensee shall measure directional field strength for comparison to either the directional or the nondirectional field strength measured at that point in the last full proof.

(2) In the event that a meaningful comparison to full proof measurements cannot be made, the licensee shall