

### 3.3.4.7 Adjustment of index map values for other durations, basin sizes and months

The convergence PMP index map, constructed as just described, presents 6-hour 518 km<sup>2</sup> values for January and February. Relationships were developed for adjusting these values for different durations, basin sizes and months. This was carried out by means of the following steps:

- (a) Six-hour incremental values of maximum  $P/M$  ratios through 72 hours were obtained for each month from Figure 3.13. These values were smoothed and expressed as percentages of the maximum 6-hour  $P/M$  ratio for February.
- (b) Durational and seasonal variations for a point, or 25.9 km<sup>2</sup>, were found from durational

(Figure 3.10) and seasonal variations of moisture (precipitable water), expressed as percentages of the 12-hour February moisture (based on maximum persisting 12-hour 1 000 hPa dewpoints) and multiplied by the percentage variation in  $P/M$  ratios (from (a)).

- (c) The areal variation (section 3.3.4.5) was then applied to the values obtained in (b) to yield a depth–area–duration relation for each month. That for December is shown in Figure 3.17.

### 3.3.5 Combination of orographic and convergence PMP

Total PMP is obtained by adding the orographic and convergence components. Throughout the development of each component, care must be exercised to minimize the possibility of over-estimating total

