



Estimation of probable maximum precipitation for southwest basin (Iran)

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The probable maximum precipitation (PMP) is the greatest depth of precipitation for a given duration that is physically possible over a given size storm area at a particular geographical location at a certain time of the year. Hydrologists use a PMP magnitude together with its spatial and temporal distributions for the catchments of a dam to calculate the probable maximum flood (PMF). In this study the synoptic (physical) method has been compared with statistical method (e. g. the Hershfield's) for calculate PMP in southwest stations of Iran.. In this study also PMP estimations were obtained by statistical analysis (Hershfield's Methods) of the series of annual maximum 24h precipitation amounts. The results of statistical method show a correlation between the point PMP and the mean annual precipitation which is significant. We found that PMP estimates by statistical method are well comparable with values of obtained by the synoptic (physical) method for different durations. Results also shows that limited transposition of statistical methods gives higher estimates, in comparisons with synoptic method.

Keyword: Probable maximum precipitation, synoptic, Hershfield's method, Depth-Area-Duration (DAD), Dew point Temperature.