



WESTERN REGION TECHNICAL ATTACHMENT
NO. 87-08
February 17, 1987

USE OF PODS IN WARNING VERIFICATION

The attached description of a new verification statistic, PODS, was excerpted from a new report issued by NSSFC. It is called the National Severe Storms Forecast Center, Quarterly Report. All warning offices should have received a copy. It is recommended reading for those with warning responsibility. Warning offices should also have received NSSFC Tech Memo 15 by Jack Hales that is referred to in the attachment. It is excellent reading.

USE OF THE PODS IN WARNING VERIFICATION

Beginning with the 1987 final warning verification statistics there will be a new addition to the usual numbers. In an effort to shift the emphasis toward service evaluation the probability of detection of significant events (PODS) will be computed for each station. A significant event is defined as follows:

- F2 or greater tornado
- Wind gust 65kt or greater
- Hail 2in diameter or greater
- Damage of \$50,000 or more
- Any of the above events that results in 1 or more fatalities / or 3 or more injuries

NSSFC Tech Memo 15 which was just distributed to all offices shows that the current severe event climatological data base is unrepresentative of the actual distribution of severe weather. As a result the current statistics heavily favor an office that is able to effectively gather post warning severe reports. There is a wide range of effort in this type of activity. Many stations either do not have the luxury of resources necessary to pursue this effort or have such a scarcity of population that it is extremely difficult to develop public contacts.

NSSFC Tech Memo 15 also suggests the FAR (false alarm ratio) can be a rather misleading and in some cases a disappointing statistic. Many warnings that appear to be bad forecasts very likely do verify and provide a valuable service to the public, but because of the inability of the local office to come up with a report, the FAR is raised. This can discourage the proper action of issuing a warning for fear of not being able to obtain ground truth.

The PODS should minimize this shortcoming of the system as it does not penalize one for taking the proper action in a warning situation.

Included in NSSFC Tech Memo 15 are the PODS for the 1983-1985 period. By using these values in conjunction with 1986 values in the final verification run, a station can see how its warning procedures are improving.