Putting the location-oriented measures to the test: New abstract cases for MesoVICT

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A number of the new spatial verification methods are primarily aimed at deciphering how well a forecast positions important features of a variable of interest (e.g., a storm, hurricane, etc.), and how well these features match spatially. While intensity within such features remains important, it is clearly of interest to capture summaries of this location-, or pattern-, specific information. The first phase of the meta verification project (the ICP) included abstract geometric cases designed to tease out information concerning how different methods inform about these types of errors. These cases were borne directly from diagrams created by Barb Brown intended to explain some of the issues with using traditional verification on higher resolution verification sets, as well as the need for more diagnostic information. As a result, they proved to be by far the most useful cases in identifying how various spatial verification methods behave. While these cases were very enlightening, it has also become clear that there are many additional situations that often arise in practice that can result in misleading, or undesirable, summaries from particular methods. Therefore, an additional series of abstract cases has been created to further test such methods. Already, several location-specific methods have been analyzed, and it is clear that no one measure provides adequate information under all scenarios. This presentation will introduce several of the new cases along with preliminary results that provide guidance for which ones could be used together to better describe forecast performance.