

Software fills in missing satellite data

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Recently developed Ohio State University software is helping scientists obtain a more complete view of the environment from satellites orbiting the Earth.

Noel Cressie, an Ohio State professor of statistics, said maps depicting the thickness of the ozone layer, for instance, frequently contain blank spots where a satellite wasn't able to record data on a particular day.

Cressie, director of the university's Program in Spatial Statistics and Environmental Sciences, and colleagues found a way to use data from the rest of a map, as well as from previous days, to fill in the blank spots.

"Right now, from a statistical point of view, people can either fill in these maps well, but not very fast -- or fill them in fast, but not very well," Cressie said. "We do it well and we do it fast."

By his estimate, if someone were to try to complete an ozone map in as statistically precise manner as possible, processing one day's worth of data could take 500 years. He said the Ohio State software does the job in about three minutes.

The research is to appear in an upcoming issue of the journal *Environmental and Ecological Statistics*.

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