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*Experiments "Fixing" Ground-Level Ozone*

A quality control study of Canadian ground-level ozone measurements shows that its autocovariances are time-dependent. The data are nongaussian, have both real and instrumental outliers, plus numerous missing values. In this situation, quality control tools need to be adapted because most assume approximate stationarity. Dividing the ozone series by the solar ultraviolet insolation largely removes the annual components but the ratio is still periodically correlated. The data are also coherent over large distances, e.g., between Kejimikujik, NS and the Experimental Lakes, ON. We show how both these features can be used to help restore missing sections.