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Lauder's multi-decadal ozone measurements: intercomparison and trends

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The atmospheric research station at Lauder, New Zealand, is the only site with co-located vertical ozone profile measurements using all five NDACC standard techniques: ozonesonde, LIDAR, FTIR, microwave radiometry, and Dobson Umkehr. Surface level ozone is also measured using a TEI. Each of these methods have known advantages and limitations. Given this unique suite of multi-decadal ozone time-series, we present an intercomparison of the different techniques and a methodology of how these observational methods can be used to quantify uncertainties in the respective time-series. A comparison of their trends is also explored.