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Decreasing trends in extreme ozone events across the United States

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This work presents a comprehensive regional trend analysis of surface ozone observations across the contiguous United States, using 25 years of data from 62 rural monitoring sites, and based on quantile regression and change point analysis. We highlight that the ozone exceedance events (based on the daily maximum 8-hour average and a threshold of 70 ppb) in recent years (2017-2021) are largely diminished compared to two decades ago (1995-2003) in the eastern US and across much of the western US. Ozone exceedance events in recent years are mainly observed in California during the fire season. Results based on thresholds of 60, 50 and 35 ppb will also be discussed.