

GCOS Reference Upper Air Network: The case for better observations arising from our current understanding of historical temperature trends

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The need for observations of atmospheric characteristics of reference quality is readily apparent from over two decades of intensive climate community research on the vexed issue of upper air temperature trends. This poster will highlight the challenges faced when attempting to tease out the 'truth' from historical observations and the likely presence of an irreducible level of uncertainty - or ignorance - that historical observational instrumentation and practices have imposed upon our understanding. It would be wishful thinking to assume that future observing strategies, absent of a Reference Upper Air Network, would assure an unambiguous long-term record. We may not be able to invent a time machine and rectify past mistakes but equally we are not doomed to repeat them if we learn the lessons and instigate a reference quality observations program. Such a program would do a great service to future generations of scientists.