



Boulder, Colorado Ozonesonde Record: 1986 - 2014

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1. Abstract: Weekly balloon-borne ozonesonde profiles have been measured from the Marshall launch site near Boulder, Colorado since 1985. A thorough reanalysis and editing of the long-term record was completed to resolve inhomogeneities in the global long-term ozone sounding record due to changes in instrument and ozonesonde operating procedures. Nearly 1,500 Boulder ozonesonde profiles were individually reviewed and corrections applied using new editing software developed at NOAA. Total column ozone comparisons with the Boulder Dobson spectrophotometer record showed better agreement and elimination of slight step changes in the sonde time series. The seasonal total column comparison with the Boulder Dobson spectrophotometer are shown in the figures below.



Boulder (Marshall site)
ozonesonde climatology:

Spring: Mar-Apr-May

Summer: Jun-Jul-Aug

Fall: Sep-Oct-Nov

Winter: Dec-Jan-Feb

2. Charts: Seasonal total ozone column graphs comparing Dobson spectrophotometer and ozonesonde total column. The 5 year averaged profiles for each season and percentile shading is shown on the right. Ozonesonde total column is $2 \pm 6\%$ higher than the Dobson spectrophotometer during spring, summer and fall, and $1 \pm 5\%$ higher in winter.

