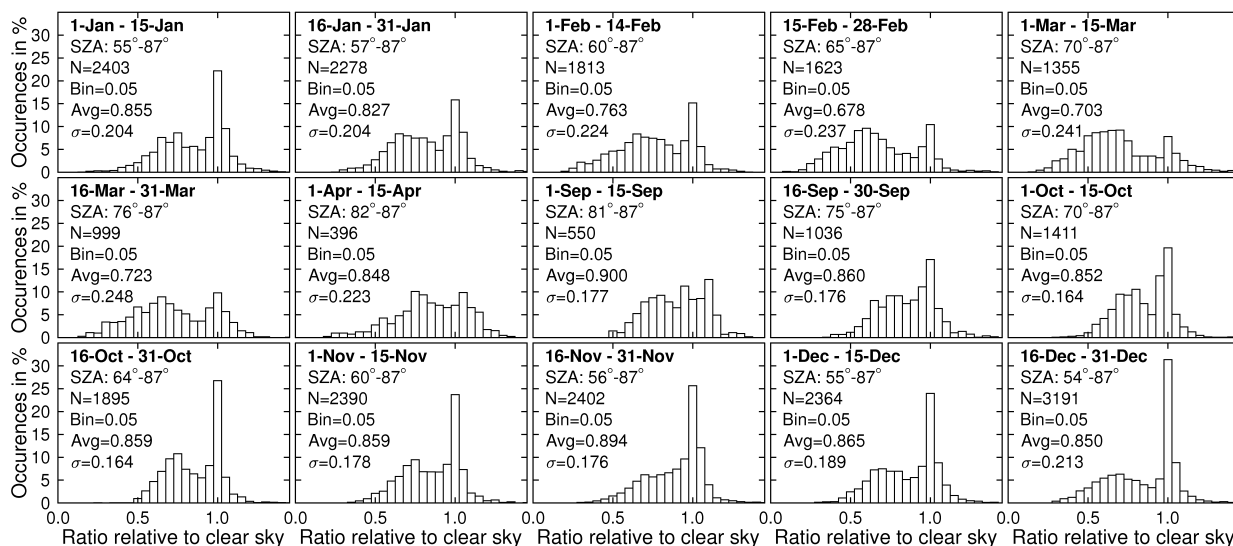
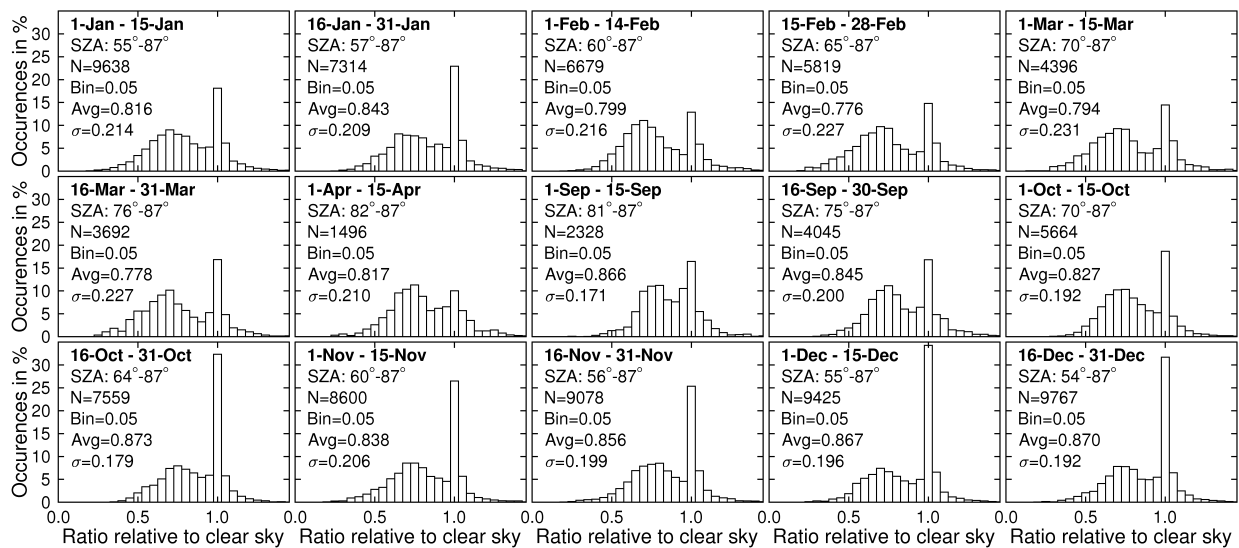


### **Distributions of Transmittance: Integral 400 – 600 nm**

Figures 1 and 2 show frequency distributions of atmospheric transmittance  $T(t)$  for the integral 400 – 600 nm. Transmittance is defined as ratio of observed irradiance to the expected clear sky value. Figure 1 was calculated from measurements of the years 1989 – 1996; Figure 2 is based on data of the years 1997 – 2004. A comparison of the two figures demonstrates significant difference for data of the months February and March. A similar analysis for the integral 342.5 – 347.5 nm can be found in the main paper. Interpretation given for the 342.5 – 347.5 nm integral can also be applied to the 400 – 600 nm integral.



**Figure 1:** Frequency distributions of the ratio of spectral irradiance integrated over 400 – 600 nm to the associated clear sky irradiance calculated from measurements of the years 1989 - 1996. Each of the 15 plots refers to a different two-week period as indicated in the top left corner of each plot. SZA-range, number of data points N, width of the histogram columns (Bin), average (Avg), and standard deviation ( $\sigma$ ) of the distributions are also indicated.



**Figure 2:** Same as Figure 1, but for period 1997-2004.