

## ***Interactive comment on “Episode of unusual high solar ultraviolet radiation in central Europe due to dynamical reduced stratospheric ozone in May 2005” by C. Stick et al.***

**C. Stick et al.**

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We want to thank again for your comments and wish to answer the points as follows:

- 1.) 10412,11: We changed the term "Biologically effective" into "erythemally effective" as proposed.
- 2.) 10411,15: The temperature of the instrument is not stabilized. This is now mentioned in the manuscript. Some sentences were transposed in the respective paragraph.
- 3.) 10411,17: We changed the name of the company Schreder-CMS as proposed.

4.) 10411,23: We entered PTB, Braunschweig.

5.) 10411,25: We included a reference for the "measurement routine", which describes it in detail (Steinmetz 1997).

6.) 10412,21 and Figure 2: Although the frequency distribution of ozone values may in fact not exactly be symmetrically distributed around the mean value, the deviation from the symmetry in the data sample seems very small, since the values of arithmetic mean and median do not differ more than 1.4 %. Moreover, the ratio of range to standard deviation in the sample does not significantly differ from that of a normal distribution ( $p \geq 0.1$ ) according to the result of statistic testing (Sachs 1984, David et al. 1954). All in all it seems justified to give the standard deviation as a measure of variability. Moreover, we included the mean absolute deviation from the median as a robust estimate for dispersion (Hays 1994).

#### References:

David H A, Hartley H O, Pearson E S. The distribution of the ratio, in a single normal sample, of range to standard deviation. *Biometrika* 41, 482-493, 1954.

Hays W L. *Statistics*. Harcourt Brace, Fort Worth, TX, 1994.

Sachs L. *Applied Statistics. A Handbook of Techniques*. Springer New York, 1984.

Steinmetz M. Continuous solar UV monitoring in Germany. *Photochem. Photobiol. Biology* 41, 181-187, 1997.

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