Interactive comment on “Actinometric measurements of NO$_2$ photolysis frequencies in the atmosphere simulation chamber SAPHIR” by B. Bohn et al.

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We thank referee #2 for the review. Specific comments are addressed below.

1. BOC is a company name (formerly Brin’s Oxygen Company Ltd). We’ll use the term "BOC gases" in a revised manuscript. The properties of the SOC radiance distribution will be explained briefly in Sect. 4.1. We already altered the corresponding paragraph in the preceding paper by Bohn and Zilken (Atmos. Chem. Phys. 5, 191-206, 2005).

2. The $j$(NO$_2$) within SAPHIR are lower than $j$(NO$_2$) outside under all conditions. Fig. 8 may be misleading because the dashed lines are showing the results from overcast conditions as indicated in the caption.
3. In Fig. 9 we will show additional $j(\text{NO}_2)$ data from filterradiometer measurements within the chamber. Basically these data confirm that local measurements of photolysis frequencies are inadequate for the simulation chamber as a whole.