

## Reply to Editor decision

We would like to thank Michel Van Roozendaal for the decision to publish our manuscript after the following minor revision. The public justification by the Editor reads:

*Although the first referee insists on a change of the notation used for the O<sub>2</sub>-O<sub>2</sub> collision-induced absorption (CIA), the same request is not made by the other referees. Given the fact that the O<sub>4</sub> notation is commonly used in the DOAS community and that all figures in the manuscript use this notation, I support the compromise proposed by the authors, i.e. clearly explain in the introduction the exact meaning of the CIA and the motivation to use the abbreviated O<sub>4</sub> notation in the rest of the paper. That said, and perhaps to take the compromise a step further, I'd suggest also using the exact notation (O<sub>2</sub>-O<sub>2</sub> CIA) in the title of the manuscript. In this way, it becomes clear for the readers that the authors are well aware of the particular nature of the O<sub>2</sub>-O<sub>2</sub> absorption bands.*

We have implemented the Editor's comment and changed the title to

"Assessment of laboratory O<sub>4</sub> (O<sub>2</sub>-O<sub>2</sub> collision induced) absorption cross-sections at 360 nm using atmospheric long-path DOAS observations"

Also, the abbreviation for collision-induced absorption (CIA) was added to the first sentence of the abstract for completeness.