

Interactive comment on “Brown carbon absorption in the red and near infrared spectral region” by András Hoffer et al.

Anonymous Referee #1

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General comments The experimental study presented by authors expands the spectral range of measured spectral absorption of the brown carbon (BrC) up to 950 nm, while previous studies have been limited by only visible range (up to 652 nm). This result one may seem new and useful, but somewhat particularistic, but in fact it is significant. The existent assumption while estimating atmosphere absorption is neglecting of the BrC particles absorption at wavelengths 700nm and more. Moreover some used models haven't included absorption by BrC particles. On the base of obtained data authors put forward the reasons that the contribution of BrC to global aerosol absorption is likely higher than previously estimated, implying a more significant role of biomass burning in global radiative forcing and regional radiative effects.

The paper is written clearly, each paragraph in this research is justified. The list of references demonstrates the authors' appropriate knowledge of the state of the art in

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the problem.

The paper is recommended to be published. I would like to recommend only one minor, but may be important addition.

Specific comments

The most important experimental results of this research is the measured data of BrC tar ball absorption including partially the near IR range. From my point of view it would be necessary to make these data available to the readers. Nevertheless the only Angstrom exponent in the double logarithmic scale is given (Fig.3). It is very scarce, somewhat qualitative, presentation, and it is not only because of a used scale. The Angstrom exponent taken over so large range isn't a very accurate characteristic of spectral behavior (See for instance presentation of the AERONET data). May be more informative way is to include the experimental spectral absorption data as tables.

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