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Poster

THE MODELING OF THE CONTINUOUS ABSORPTION OF EM RADIATION IN HYDROGEN PLASMAS WITH ELECTRON DENSITIES ABOUT $5 \cdot 10^{18}$ cm^{-3} - $1.5 \cdot 10^{19}$cm^{-3} AND TEMPERATURES ABOUT $1.6 \cdot 10^4$ K - $2.5 \cdot 10^4$ K

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In this work is examined a new modeling way of describing the continuous absorption of electromagnetic (EM) radiation in a dense partially ionized hydrogen plasma. It is shown that the obtained results give a possibility of calculating spectral absorption coefficients which characterize the relevant absorption processes in partially ionized hydrogen plasmas with electron densities about $5 \cdot 10^{18}$ cm^{-3} - $1.5 \cdot 10^{19}$cm^{-3} and temperatures about $1.6 \cdot 10^4$ K - $2.5 \cdot 10^4$ K. The calculation method is applied to the wavelength region 300 nm $< \lambda <$ 500 nm. The presented results can be of interest for dense laboratory plasmas as well as for partially ionized layers of different hydrogen stellar atmospheres. Namely the plasma of the inner layers of solar atmosphere, as well as the plasmas of partially ionized layers of some other stellar atmospheres, for example some DA and DB white dwarfs.