Estimation of atmospheric correction coefficient by Digital single-lens reflex camera

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I search for atmospheric correction coefficients and the brightness of the night sky by Digital single-lens reflex camera. Then, I plan to estimate the density and the radius of aerosol.
Many researchers estimate the brightness of the night sky use SQM. On the other hand, researchers who estimate the starlight reduction by the atmosphere use telescope. However, there are few researches using Digital single-lens reflex camera. In my research, I photograph the night sky continuously and do the photometry of many stars with the altitude by an image analytical software. I made a graph of star magnitudes and air mass and estimated atmospheric correction coefficients. In fact, however, there are some graphs which their coefficient are minus. I will present the result and remaining problems.

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