
Problems in the earth's surface orbital illumination systems implementation

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The article considers spacecraft-reflector characteristics, the earth's orbital illumination systems operation safety, and their deployment environmental consequences. We estimated the illumination on the earth's surface, created by spacecraft-reflector. The article determines the correlated color temperature values for reflectors with aluminum, silver, titanium, gold and copper coatings. To reduce the load on the operator's vision and the undesirable effects on the environment in the orbital illumination system, we recommend to apply various reflector metallic coatings, depending on the local time in the earth's surface illuminated region.

Keywords: orbital illumination, reflector, metal coating, correlated color temperature, ecology

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