

INVESTIGATION OF DIGITAL IMAGES RESOLUTION IN VARIOUS SPECTRAL RANGES

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This paper presents the results of the study of image resolution changes depending on the radiation wavelength. As a test object for photographing, images of radial mires were used. The shooting was carried out with two digital cameras with fundamentally different matrices, which are used on unmanned aerial vehicles (UAVs). The photography was carried out with preset shutter speeds, which allowed us to determine the change in spectral resolution from the amount of light which is incident on the matrices. As a result of the performed study, the influence of the spectral composition of the light incident on the matrix on the image resolution of was evaluated. The resolution change in the resulting image, from the spectral composition of the light incident on the matrix during exposure, is of practical scientific interest when performing digital UAV photography in order to calculate the vegetation indices of natural and man-made landscapes.

Keywords: digital aerial photography, digital camera, resolution capacity, digital photo, luminous density, radial mires, spectral range, coloured optical glass

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