
Study of structural properties of normal and aperture wide-angle projection lenses

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Modern photographic lenses are monofocal lenses, i.e. plananastigmats designed for video overhead and reproduction devices. On the values of the relative aperture these lenses refer to normal or high-aperture lenses, and on the values of the angular field in the space of subjects they refer to the wide-angle lens or a lens with a normal value of the angular field. While studying U.S. patents descriptions of optical systems of specified functional purpose were selected, different combination of compact length and back focus, which is significantly longer than the focal distance. To obtain recommendations for the development of the methods of structural synthesis of the specified class photographic lenses analysis of schemes of the selected lenses in front of paraxial region and the third order aberrations were made.

Keywords: *projection lens, reversal telephoto lens, structural circuit, aberration analysis, Seidel coefficients.*

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