

## Oblique projectors in image morphology

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At the previous International conference on particle physics and astrophysics (2015) we presented the report "Estimation of reliability of linear point structures revealed in two-dimensional distributions of experimental data" [O.V. Falomkina, Yu. V. Pyatkov, et al., Estimation of reliability of linear point structures revealed in two-dimensional distributions of experimental data.// JPCS — V. 675., P. 042001 (2016).] where we discussed the results of the solution of the problem of estimation of statistical reliability of linear point structures, obtained from the experiments at the FOBOS spectrometer [H-G. Ortlepp, et al., NIM A 403 (1998) 65] dedicated to study of the spontaneous fission of the  $^{248}\text{Cm}$  and  $^{252}\text{Cf}$  nuclei in the mass correlation distribution of fission fragments. These new unusual structures bounded by magic clusters were interpreted as a manifestation of a new exotic decay called collinear cluster tri-partition (CCT)[D.V. Kamanin, Yu. V. Pyatkov, "Clusters in Nuclei - Vol.3" ed. by C. Beck, Lecture Notes in Physics 875, pp. 183-246 (2013)]. The reliability of these structures was estimated on the basis of methods of morphological image analysis [Pyt'ev Yu.P. Morphological Image Analysis. — Pattern Recognition and Image Analysis. V.3. No 1. 1993, pp. 19-28.]. To improve the quality of revealing and further estimation of linear structures statistical reliability in the mass correlation distribution of fission fragments mathematically we used the formalism of oblique projecting [Yu.P. Pytyev. Oblique Projectors and Relative Forms in Image Morphology //Computational Mathematics and Mathematical Physics, 2013, V. 53, No. 12, pp. 1916-1937]. At this report we compare the orthogonal and oblique projectors and discuss the obtained results.

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