Contribution Title:	PARTICLES AND FIELDS IN THE BACKGROUND OF HIGHER-DIMENSIONAL ROTATING BLACK HOLE
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Invited speaker:	Topical session
YRS seminar:	NO

I will report on recent progress in the study of analytical properties of higher-dimensional rotating black holes. It turns out that the Myers Perry metrics, describing the higher-dimensional multi-rotating vacuum black holes with horizons of spherical topology, are very similar to the four dimensional Kerr geometry. Namely, they admit the Kerr-Schild form, are of type D, they possess enough number of hidden and explicit symmetries to allow the separation of variables for the Hamilton-Jacobi, Klein-Gordon, and Dirac equations. Some of these properties remain valid in the presence of cosmological constant and, as turned out recently, even in the presence of electromagnetic fields.