1065-42-9 **Ravshan Ashurov*** (ashurovr@yahoo.com), Institute of Advanced Technology (ITMA), Univarsity Putra Malaysia, 43400 Serdang, Malaysia, and **Almaz Butaev**. *On the Pinsky phenomenon and the Kahane theorem.*

Let C be a smooth bounded, strongly convex symmetric set in R^n and f be a piecewise smooth function with the surface of discontinuity Γ. We consider non-spherical partial sums of n-fold Fourier integrals associated with C, i.e.

$$S_{\lambda C}f(x) = \int\limits_{\lambda^{-1}\xi\in C} \hat{f}(\xi)e^{ix\xi}d\xi,$$

where $\hat{f}$ is the Fourier transform of a piecewise smooth function f. It is well known, that if $n=2$, then the partial sums $S_{\lambda C}f(x)$ of a piecewise smooth function f converge uniformly on any compact $K \subset R^n \setminus \Gamma$, no matter how the set C and the set of discontinuity Γ of f are related. But when $n \geq 3$, however, this relation is a key factor. If C is a ball, then we have the spherical partial sums, and the relation between convergence properties of spherical partial sums and geometry of discontinuities Γ was investigated by many outstanding mathematicians: Taylor, Pinsky, Kahane, Alimov and many others. The most remarkable results here are: the Pinsky (known as the Pinsky phenomena) and Kahane theorems. In this paper we prove these theorems for general non-spherical partial sums $S_{\lambda C}f(x)$ with an arbitrary C.

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