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**Homogeneous Fourier transform. (Transformation de Fourier homogène.)** (French)

Zbl 1088.11044

Bull. Soc. Math. Fr. 131, No. 4, 527-551 (2003).

Summary: In their proof of the Drinfeld-Langlands correspondence, *E. Frenkel*, *D. Gaiitsgory* and *K. Vilonen* [J. Am. Math. Soc. 15, No. 2, 367–417 (2002; Zbl 1071.11039)] make use of a geometric Fourier transformation. Therefore, they work either with  $\ell$ -adic sheaves in characteristic  $p > 0$ , or with  $\mathcal{D}$ -modules in characteristic  $0$ . Actually, they only need to consider the Fourier transforms of homogeneous sheaves for which one expects a geometric Fourier transformation over  $\mathbb{Z}$ . In this note, we propose such a homogeneous geometric Fourier transformation. It extends the geometric Radon transformation which has been studied by *J.-L. Brylinski* [Géométrie et analyse microlocales, Astérisque 140/141, 3–134 (1986; Zbl 0624.32009)].

**MSC:**

- 11G09 Drinfel'd modules; higher-dimensional motives, etc.
- 11G45 Geometric class field theory
- 11R39 Langlands-Weil conjectures, nonabelian class field theory
- 11R58 Arithmetic theory of algebraic function fields
- 14D20 Algebraic moduli problems, moduli of vector bundles
- 14F05 Sheaves, derived categories of sheaves, etc. (MSC2010)

Cited in **6** Documents

**Keywords:**

Fourier transformation; perverse sheaves; algebraic stacks

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