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On some topological properties of Fourier transforms of regular holonomic \mathcal{D} -modules. (English) [Zbl 1439.32025](#)

Can. Math. Bull. 63, No. 2, 454-468 (2020).

Summary: We study Fourier transforms of regular holonomic \mathcal{D} -modules. In particular, we show that their solution complexes are monodromic. An application to direct images of some irregular holonomic \mathcal{D} -modules will be given. Moreover, we give a new proof of the classical theorem of Brylinski and improve it by showing its converse.

MSC:

[32C38](#) Sheaves of differential operators and their modules, D -modules

[32S60](#) Stratifications; constructible sheaves; intersection cohomology (complex-analytic aspects)

[35A27](#) Microlocal methods and methods of sheaf theory and homological algebra applied to PDEs

Keywords:

\mathcal{D} -module; Fourier transform; irregular singularity

Full Text: [DOI](#)

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