

CHARACTERIZED CYCLES INTEGRATION ON \mathcal{D} -MODULES AS SOLUTIONS IN
 \mathbb{L} -HOLOMORPHIC BUNDLES

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From a moduli space developed to establish the equivalences between different characteristic cycles classes; where some are objects of a complex holomorphic bundle and others elements of a sheaf of coherent \mathcal{D} -modules, are determined co-cycles that represent solutions of the field equations in the holomorphic context and Lagrangian submanifolds. The characteristic cycles of the category of Lagrangian submanifolds are solutions to the field equation on \mathbb{L} -holomorphic bundles in the space-time \mathbb{M} (as complex Riemannian manifold) with singularities. We have the following technical lemma:

Lemma 1 (F. Bulnes). *Characteristic cycles in $C(\mathcal{G})$, as Lagrangians have their equivalent in a flat space \mathbb{P}^{n+4d} , (corresponding to the spertwistor space $\mathbb{P}\mathbb{T}$), as lines bundles in $\tilde{\mathbb{P}}$. The cycles in $C(\mathcal{G})$, are solutions of the field equation on \mathbb{L} -holomorphic bundles to the space-time \mathbb{M} , which includes singularities.*