

Brylinski, J. L.

Differential operators on the flag varieties. (English) Zbl 0537.14010

Astérisque 87-88, 43-60 (1981).

[For the entire collection see [Zbl 0468.00006](#).]

Let G be a connected semi-simple algebraic group over a field of characteristic 0 and let X be the flag variety of G . The author determines the algebra structure of $\Gamma(X, \mathcal{D}_X)$, the algebra of global differential operators on X : Let $U(\mathfrak{G})$ be the enveloping algebra of the Lie-algebra of G , Z be the center of $U(\mathfrak{G})$ and I the ideal $U(\mathfrak{G}) \cdot Z(\cap(U(\mathfrak{G}) \cdot \mathfrak{G}))$. Then $\Gamma(x, \mathcal{D}_X)$ is isomorphic to $U(\mathfrak{G})/I$.

Reviewer: [F.Pauer](#)

MSC:

- [14F10](#) Differentials and other special sheaves; D-modules; Bernstein-Sato ideals and polynomials
- [14M15](#) Grassmannians, Schubert varieties, flag manifolds
- [14L35](#) Classical groups (algebraic-geometric aspects)
- [14L30](#) Group actions on varieties or schemes (quotients)
- [20G15](#) Linear algebraic groups over arbitrary fields

Cited in **1** Review
Cited in **3** Documents

Keywords:

[algebra of global differential operators on the flag variety](#); [Verma module](#)