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*Harvey-Lawson's sparks and Deligne cohomology*

Cheeger-Simons' differential characters are applied in many areas of mathematics and physics. To unify different approaches to differential characters, Harvey and Lawson introduced the theory of spark complexes. This homological machinery is then used to define  $\bar{\partial}$  sparks which is a complex analogue of differential characters. Deligne cohomology can be realized as a subring of the ring of  $\bar{\partial}$  sparks. I will give a brief introduction to this theory and give a construction of Chern classes in Deligne cohomology through Harvey-Lawson's  $\bar{\partial}$  sparks.