A trace formula for foliated flows.

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The talk will be about our progress on the study of a trace formula for foliated flows (flows on foliated manifolds that map leaves to leaves). It involves the action of the flow on some version of the reduced leafwise cohomology of every degree, whose trace must be a distribution on the real line, giving rise to a leafwise Leftchetz distribution. The trace formula describes the Leftchetz distribution in terms of local information at the fixed points and closed orbits, which are assumed to be simple. This formula was conjectured by Victor Gillemin and Christoffer Deninger, and motivated by their projects on Quantization and Arithmetic Geometry. However the definition of the distributional traces was not given in the conjecture. This is an ongoing research in collaboration with Yuri Kordyukov and Eric Leichtnam.