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Mixing of flows over interval exchange maps

We consider suspension flows over interval exchange transformations, under a roof function with logarithmic singularities. As a motivation, such flows arise as minimal components of flows on surfaces given by multi-valued Hamiltonians. We prove that if the roof function has an asymmetric logarithmic singularity, the suspension flow is strongly mixing for a full measure set of interval exchanges. This generalizes a result by Khanin and Sinai for flows over rotations of the circle. In the proof we use a recent result by Avila–Gouzel–Yoccoz.