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Tomoki Ohsawa* (tomoki@utdallas.edu), 800 W Campbell Rd, Richardson, TX 75080. *The Lie–Poisson dynamics of N point vortices.*

We show that the symplectic reduction of the dynamics of N point vortices on the plane by the special Euclidean group $\mathrm{SE}(2)$ yields a Lie–Poisson equation for relative configurations of the vortices. Specifically, we combine symplectic reduction by stages with a dual pair associated with the reduction by rotations to show that the $\mathrm{SE}(2)$ -reduced space with non-zero angular impulse is a coadjoint orbit. (Received August 20, 2018)