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**Sam Bardwell-Evans\*** (sambe@bu.edu), **Man-Wai Cheung**, **Hansol Hong** and **Yu-Shen Lin**. *Scattering diagrams from holomorphic discs in log Calabi-Yau surfaces.*

We construct special Lagrangian fibrations for log Calabi-Yau surfaces and scattering diagrams from Lagrangian Floer theory of the fibres. Then we prove that the scattering diagrams recover the scattering diagrams of Gross-Pandharipande-Siebert and the canonical scattering diagrams of Gross-Hacking-Keel, the two being completely algebro-geometric. The argument relies on a holomorphic/tropical disc correspondence to control the behavior of Maslov index zero holomorphic discs, allowing us to relate open Gromov-Witten invariants to log Gromov-Witten invariants in this setting, without the use of virtual techniques. (Received January 21, 2022)