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Ivana Alexandrova* (alexandrovai@ecu.edu), 124 Austin Building, Department of Mathematics, East Carolina University, Greenville, NC 27858, and **Hideo Tamura**, Okayama University. *Resonances for Magnetic Scattering by Two Solenoidal Fields at Large Separation.*

We consider the problem of quantum resonances in magnetic scattering by two solenoidal fields at large separation in two dimensions. We study the distribution of resonances near the real axis when the distance between the centers of the two fields goes to infinity. We give a sharp lower bound on resonance widths in terms of backward amplitudes calculated explicitly for scattering by each solenoidal field. The study is based on a new type of complex scaling method. As an application, we also discuss the relation to semiclassical resonances in scattering by two solenoidal fields. This is joint work with Hideo Tamura. (Received January 19, 2010)