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Deflection of a vortex pair by a flat plate MONIKA NITSCHE, JASON ARCHER, University of New Mexico — We investigate the inviscid evolution of a counterrotating vortex pair in the presence of a flat plate. The plate is positioned downstream of the initial vortex pair position, centered on its trajectory. If the plate lies normal to the incoming vortex trajectory, the vortices travel around the plate and leave on the opposite side without changing direction. If the plate is inclined relative to the incoming vortex pair, the vortices are deflected and leave the plate at an angle. Changes in the outgoing angle are highly sensitive to changes in the plate inclination, which under certain conditions lead to singular behaviour. The observations are applied to separate an incoming stream of vortex pairs.

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