impact parameter, $b$

In simple hard sphere collision theory the distance of closest approach that would result for two particles in a collision if the particle trajectories were undeflected by the collision.

Source:
Green Book, 2nd ed., p. 56
PAC, 1991, 63, 1541 (Recommendations for nomenclature and symbolism for mass spectroscopy (including an appendix of terms used in vacuum technology). (Recommendations 1991)) on page 1555
PAC, 1996, 68, 149 (A glossary of terms used in chemical kinetics, including reaction dynamics (IUPAC Recommendations 1996)) on page 168