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charge-inversion mass spectrum

Charge inversion processes of the types:

or

respectively, occuring in a collision cell (containing a gas, X) located in a field-free region preceding a magnetic and electric sector combination placed in either order, may be detected as follows. If the instrument slits are wide, and if the connections to the two sectors, appropriate to transmission of either positive or negative main-beam ions, are simply reversed, the negative or positive product ions of the two processes, respectively, will be transmitted. If the magnetic field is scanned, a spectrum of such product ions will be obtained, and this spectrum is called a charge-inversion mass spectrum. These spectra are sometimes referred to as $-E$ and $+E$ spectra, respectively. The terms '2E, E/2, $-E$ or $+E$ mass spectrum' should not be used without prior explanation of the meaning 2E, E, $+E$ or $-E$.

Source:
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 1551

