

MAGNETIC FIELDS PRODUCED BY CURRENTS 93 ionization process removes one electron from the particle, leaving it with a net positive charge of  $+e$ . The mass  $m$  of the detected ions can be expressed in terms of  $r$ ,  $B$ , and by recalling that the radius of the path followed by a particle of charge  $+e$  is  $r = mv/eB$ :  
 $eB$  (9.5)