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(54) Title: SYSTEM AND METHOD FOR SIMULTANEOUS ANALYSIS OF MULTIPLE CHARGED PARTICLES WITH A CHARGE DETECTION MASS SPECTROMETER

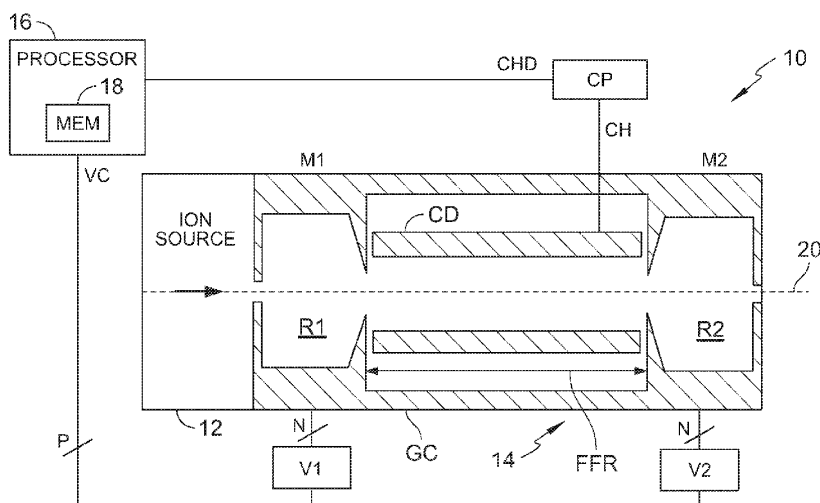


FIG. 1

(57) Abstract: A system and method are provided for recovering charged particle measurement information in the operation of a charge detection mass spectrometer in which multiple ions are trapped and simultaneously measured. The recovered charged particle measurement information illustratively includes charged particle measurement information for at least some of the ions having oscillation frequencies that overlap with oscillation frequencies of others of the multiple trapped ions. One example charged particle recovery process operates on charged particle measurement information in which the overlapping oscillation frequencies are discernible from one another, and another operates on charged particle measurement information in which the overlapping oscillation frequencies are indiscernible from one another. The charge detection mass spectrometer may be operated using either or both of the charged particle

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