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(54) Title: PHASE ENCODING WITH FREQUENCY SWEEP PULSED FOR MAGNETIC RESONANCE IMAGING IN INHOMOGENEOUS MAGNETIC FIELDS

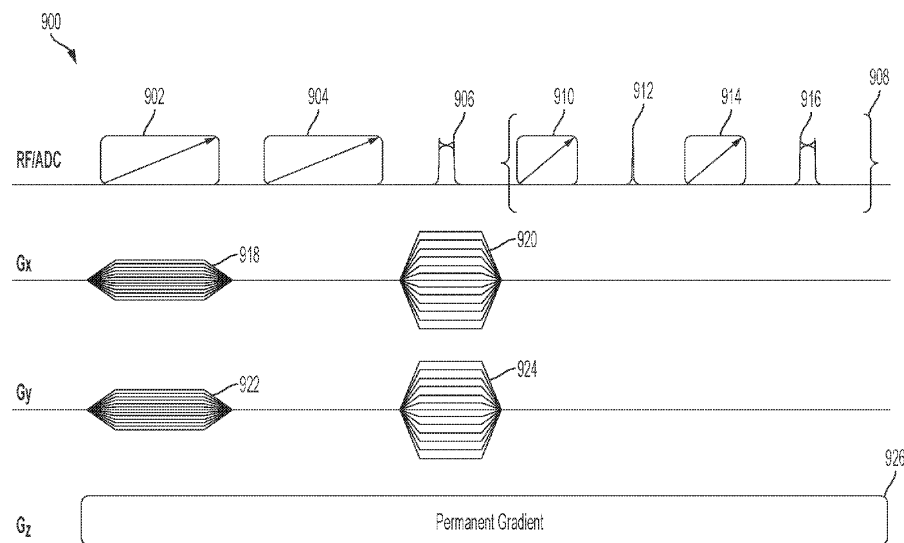


FIG. 13

(57) Abstract: Single-sided MRI apparatuses, systems, and methods are disclosed. A method can include transmitting a frequency sweep excitation pulse comprising a low-to-high frequency sweep; phase encoding during the frequency sweep excitation pulse; and tuning the amount of phase accumulated during the frequency sweep excitation pulse from adjacent slices in the slab. The frequency sweep excitation pulse can be a chirp pulse. Encoding in this way can prevent spin echoes from drifting and prevent k -space truncation in certain instances. Moreover, the resultant images can be combined more efficiently.

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