A Method of Chromaticity Correction without Sextupoles^{*}, <u>T. CHEN</u>, SLAC, - A new method of correcting chromaticities of circular accelerators is introduced. Instead of using two families of sextupoles, as the standard way to correct chromaticities, two pairs of TM₂₁₀ mode RF cavities are used. The betatron phase advances (both horizontal and vertical) between the two cavities are set to be a multiple of π , and a proper momentum compaction is required. With this method, sextupole nonlinear terms are eliminated. There are octupole terms left by this method. However, they are explicit and should be easy to compensate. An example lattice demonstrates the method. The power required for the RF cavities is estimated.

* Work supported by DOE contract DE-AC03-76SF00515.