ABSTRACT. The classical method of alternating or cyclic projections is of great importance in practice, but known to converge sometimes quite slowly. An acceleration of this method was proposed by Gubin, Polyak, and Raik in 1965, and subsequently studied by Gearhart and Koshy in 1989. Very recently, the present authors provided new estimates on the rate of convergence. Furthermore, the accelerated method was extended to handle general nonexpansive linear operators rather than just compositions of projections, and several sufficient conditions for norm convergence were obtained.

In this note, we show that the sequence produced by the accelerated method is always Fejér monotone. This allows us to establish weak convergence of the accelerated method. The question on whether or not norm convergence can be achieved in general remains open.