Study of $Z\gamma$ Helicity Distributions at CMS IRAKLI CHAKABERIA, Kansas State University, CMS COLLABORATION — Measurement of the production of electroweak gauge bosons ($\gamma$, $W$, $Z$) provides important tests of the standard model. The production of a diboson final state at the Large Hadron Collider (LHC) can occur by quark-antiquark annihilation ($t$-channel) or by boson self-interaction ($s$-channel). The $s$-channel production provides a unique probe of triple gauge boson couplings (TGC) and the effects of new physics on these couplings. I present a study of the helicity angle distributions in the $Z\gamma$ production process at the CMS experiment at the CERN LHC and an examination of the sensitivity of these distributions to new physics.