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The Galactic Center region imaged with MAGIC and variability searches during the G2 pericenter passage

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We present the results from the Major Atmospheric Gamma Imaging Cherenkov (MAGIC) telescope of the search for TeV variability in the very high energy (VHE) gamma ray regime performed in the years 2012-2015 during the pericenter passage of the G2 gas cloud. This gas cloud orbits the Galactic Center (GC) on a highly eccentric trajectory with a pericenter distance of only a few thousand Schwarzschild radii, The GC has been monitored by MAGIC for over three years. Due to its location in the northern hemisphere, MAGIC observes the GC at large zenith angles (58-70 deg), resulting in a higher energy threshold, but an enhanced effective collection area at multi-TeV energies.
No variability was detected in the TeV regime, but these observations also gave us the opportunity to study the overall morphology of the TeV sources in the vicinity of the GC in great detail. We will discuss possible source counterparts in other wavelengths and various scenarios for the production of VHE emission in this complex region.

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