Asteroseismology of hydrogen-deficient white dwarfs with *TESS*

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The high-quality photometric data delivered by space telescopes, such as the ongoing *TESS* spacecraft program, is revolutionizing the area of white-dwarf asteroseismology. Among the different kinds of pulsating white dwarfs, there are the ones that have O-, C- and He-rich atmospheres, and they are called pulsating PG1159 or GW Variable stars. Also, there are pulsating white dwarfs with He-rich atmospheres, called DBVs or V777 Her variable stars. Both kinds of pulsating stars are examples of H-deficient variable stars. We present an account of detailed asteroseismological analyses of GW Vir and DBV stars including the observations collected by the *TESS* mission. We processed and analyzed *TESS* observations of GW Vir and DBV stars and performed detailed asteroseismological analyses of these stars on the basis of state-of-the-art PG1159 and DB white-dwarf evolutionary models. We constrained the stellar mass of these stars by comparing the observed period spacing with the average of the computed period spacings, and, when possible, we employed the individual observed periods to search for a representative seismological model. We detected potential frequency multiplets for several target stars, which we use to identify pulsation modes as well as determine rotation periods.