THE ZZ CETI HS 0507+043B REVISITED

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The ZZ Ceti HS 0507+043B is of special interest because it lies in a common proper motion system with HS 0507+043A, another DA white dwarf of Teff=20000 K. It lies in the middle of the instability strip and is a potentially useful pulsator to study the convection-pulsation interaction. Its pulsation spectrum has shown 10 independent frequencies and a number of linear combinations. In an effort to better constrain its internal structure, we have performed new observations of HS 0507+043B. We describe these new data obtained from mono-site as well as multi-sites campaigns between 2007 and 2010. The analysis of these data reveals a complex behavior of the pulsator, with both frequency and amplitude variations on this 1.5 year time scale. We discuss the identification of 6 multiplets and the time evolution of the frequencies and amplitudes.