A Spectroscopic Abundance Study of Dwarf Cepheid V1719 Cygni

Chulhee Kim¹, Kozo Sadakane²

¹Department of Earth Science Education, Chonbuk National University, KOREA, ²Astronomical Institute, Osaka Kyoiku University, JAPAN

Abstract

Spectroscopic CCD observations were carried out for V1719 Cygni and the spectrum in the visual region is analysed relative to the Sun with a line-blanketed convective model atmosphere. Adopted atmospheric parameters are : an effective temperature $\langle T_{\text{eff}} \rangle = 7000$ K, a surface gravity logg = 3.4. Although our result is dependent on microturbulent velocity and damping constant, it was found that Mg in V1719 Cygni is nearly solar, or underabundent by 0.2 to 0.3 dex according to the analysis of 5172.684 Å MgI line which is relatively free from blending. This is inconsistent with the previous photometric result where V1719 Cygni was known as an abnormally metal rich variable. Because the analysis was given to the single magnesium line which is not a good metallicity indicator and S/N ratio was low due to poor seeing condition, the investigation for iron lines in blue region is undertaken.