Statistical Analyses of the AAVSO Light Curves of Z Camelopardalis and AH Herculis *(Abstract)*

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Abstract We examine the long-term visual AAVSO light curves of the dwarf novae Z Camelopardalis and AH Herculis. We investigate statistical properties of the light curve parameters such as outburst durations, quiescent intervals, cycle times, outburst amplitudes, etc., associated with the 335 outbursts of AH Her and 266 outbursts of Z Cam. The light curve parameters are measured on different brightness levels, including the quiescent state. Correlation analyses and long-term moving averages are done, and O–C curves are drawn. We also calculate rise and decline rates. Mean values for the light curve parameters are given. Both stars have bimodal outburst durations, and quasi-gaussian cycle times and quiescent intervals. O–C curves and long-term moving averages show long-term changes in the light curve parameters. These analyses demonstrate that some predictions of outburst models cannot be confirmed by statistical analyses for at least some individual stars. Although it is possible to understand some properties of the dwarf novae through the disk instability model, a combination of outburst models is needed to explain the similarities and dissimilarities found in the light curve analyses of the long-term light curves.