Most of time-resolved Fourier transform spectra (TRFTS) have been observed with step-scan interferometers, and reports with continuous scan-type interferometers are limited (1, 2). In the present study, a continuously scanning FT spectrometer is applied for observing time-resolved spectra after pulse discharge, where we newly developed a method with the help of a chip computer. He-Ne laser fringe signals and a scan signal from Bruker IFS 120 HR are fed into the chip computer SX28AC (Scenix Semiconductors Inc.) with a speed of 50 MIPS, where various kinds of pulses are generated by programming, based on the He-Ne laser fringe signals. Some pulses are used for triggers of an analog-to-digital converter (ADC) mounted on a personal computer, where the first trigger coincides with the edge of a discharge pulse and the second and other ADC triggers are used for data taking with various time intervals after discharge. Then the time-resolved spectrum is obtained with a time resolution of about 5 microsecond. We applied this system to infrared emission spectra originated from pulse discharge in an Ar/hydrogen mixture. The time profile of infrared emission spectrum of the OH radical was also recorded.


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