In a previous study\textsuperscript{a} we had reported air- and N\textsubscript{2}-broadening and pressure-induced shift coefficients for 46 rovibrational transitions in the $^{12}\text{C}\text{O}_2\ 00^1\rightarrow(10^00-02^01)_{\text{R}}$ and $00^1\rightarrow(00^00-02^01)_{\text{T}}$ laser bands near 10 $\mu$m. These parameters were determined from spectra recorded with the McMath-Pierce Fourier transform spectrometer (FTS) of the National Solar Observatory on Kitt Peak, Arizona. We now report similar measurements of air- and N\textsubscript{2}-broadening and shifts for the two $^{13}\text{C}\text{O}_2$ laser bands, plus new determinations of self-broadening and shifts in the $^{12}\text{C}\text{O}_2$ laser bands. These results were obtained from simultaneous analysis of 30 long-path absorption spectra using a multispectrum nonlinear least-squares technique\textsuperscript{b}. In addition to the 10 spectra of air- and N\textsubscript{2}-broadened natural CO\textsubscript{2} analyzed previously, we have included 20 new spectra recorded at room temperature and 0.005 cm$^{-1}$ resolution using the McMath-Pierce FTS. These additional spectra include two low pressure, four air-broadened and four N\textsubscript{2}-broadened spectra obtained with a 90\% $^{13}$C-enriched CO\textsubscript{2} sample and 10 self-broadened spectra obtained with a high purity natural CO\textsubscript{2} sample. The self-broadened spectra were recorded with pathlengths of 7.3, 97, 193 and 433 m and CO\textsubscript{2} pressures varying between 3 Torr and 400 Torr. The $^{13}$CO\textsubscript{2} spectra were obtained with a pathlength of 84 m with sample pressures ; 4 Torr for the low-pressure spectra and from 100 to 500 Torr for the air- and N\textsubscript{2}-broadened mixtures. By combining the spectra of $^{12}$CO\textsubscript{2} and $^{13}$CO\textsubscript{2} in the same fit we were able to obtain a consistent set of line parameters for both molecules. The results obtained for the $^{12}$CO\textsubscript{2} and $^{13}$CO\textsubscript{2} laser bands will be compared with each other, with the values in the HITRAN database\textsuperscript{c}, and with available values reported in the literature.

\textsuperscript{c}L. S. Rothman et al., \textit{JQSRT} \textbf{60}, 665-710 (1998).