NEW LASER LINES AND FREQUENCY MEASUREMENTS OF FULLY DEUTERATED ISOTOPOMERS OF METHANOL

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We report new far-infrared laser lines generated from two fully deuterated isotopomers of methanol: $^{12}CD_3OD$ and $^{13}CD_3OD$; five from $^{12}CD_3OD$ and 22 from $^{13}CD_3OD$, which added to the previously reported far-infrared laser lines in these two molecules sums up to 300. The laser lines were mainly pumped by the 10R (regular) and 10SR (sequence) bands of a cw - CO_2 laser. We measured their frequencies, relative intensities, relative polarizations and pump offsets. The laser lines are in the spectral range from 43.697 to 719.426 μm (6 860 664.6 to 416 710.4 MHz).