Quantum Cascade Solutions
Avenue des Pâquiers 1
CH-2072 St-Blaise
T: +41 32 729 95 10
F: +41 32 729 95 19

Datasheet for #sbcw14418 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at
`http://www.alpeslasers.ch/?a=142`

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.

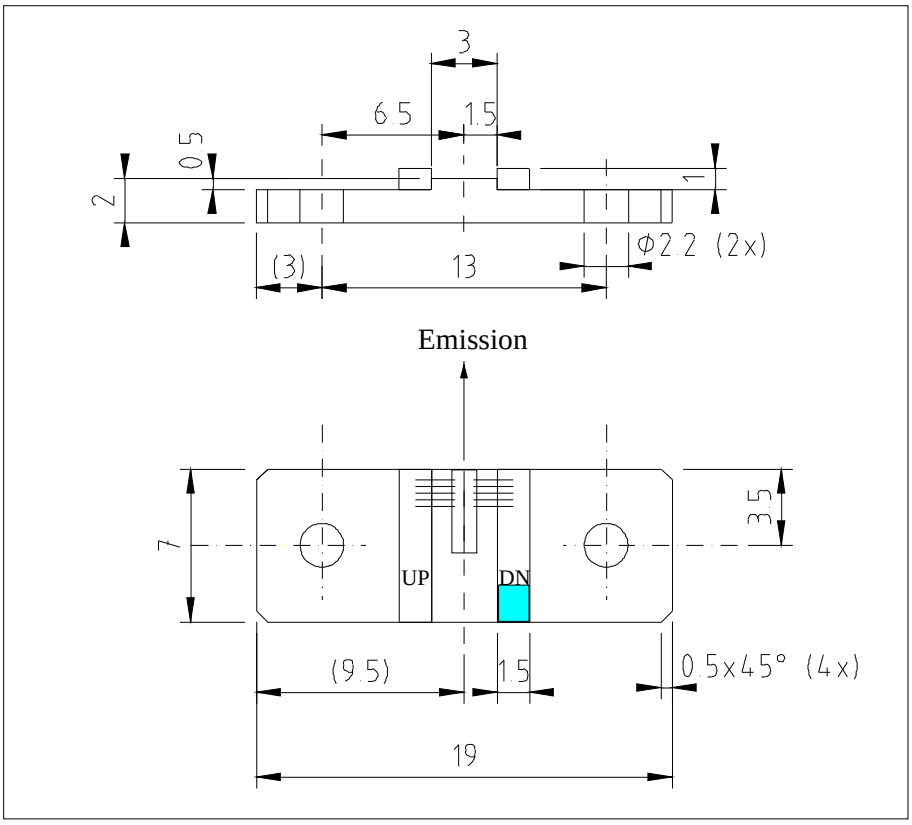

Figure 1: Mechanical and electrical interface for #sbcw14418 DN (please note that the laser is connected to the DN pad drawn in blue)

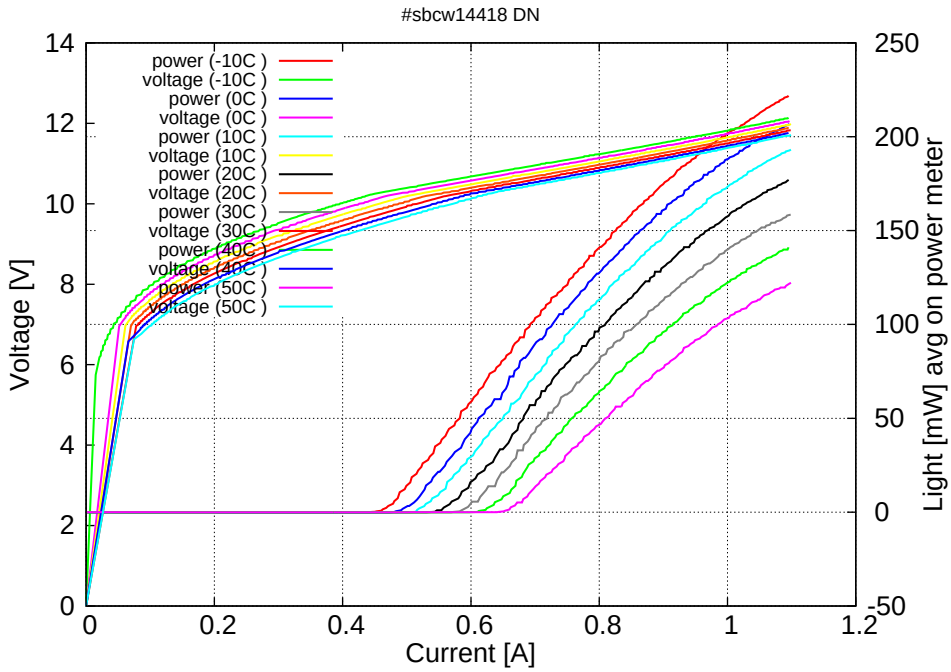

Figure 2: voltage and avg power vs current in continuous-wave operation

Note: at -20C: Ith = 0.426 A / Vth = 10.9 V (2-wires measurements). Maximum operation current: 1.200A for all temperatures.

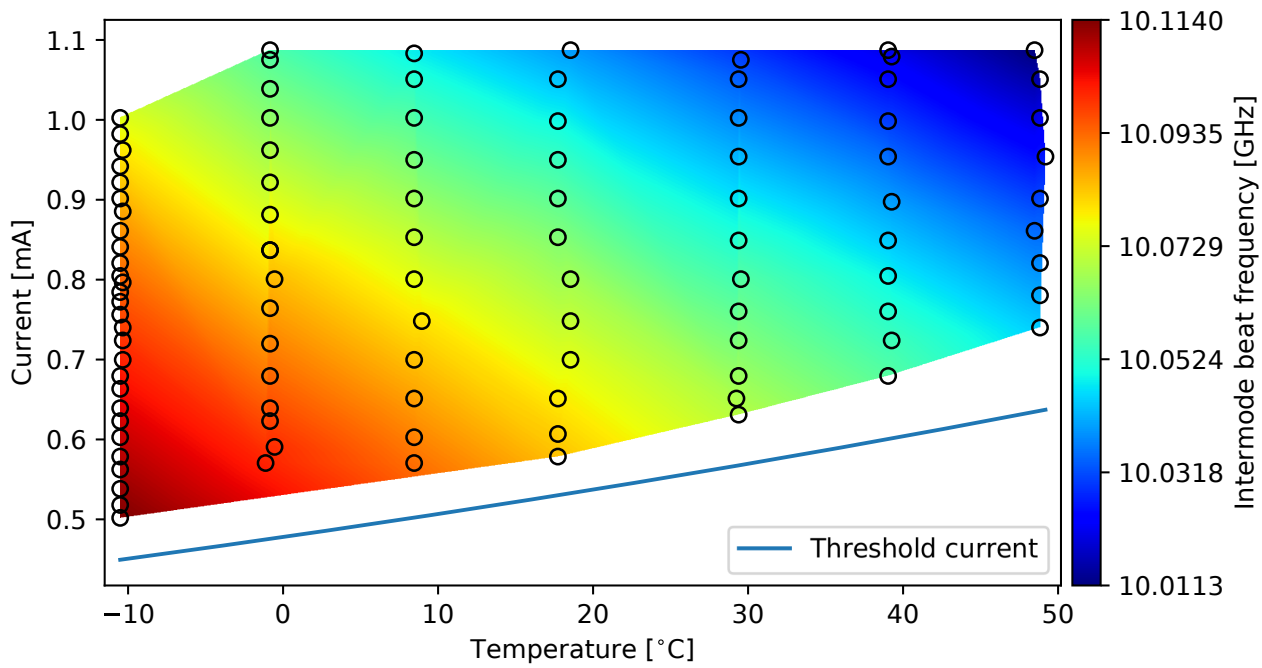

Figure 3: Zone of comb operation

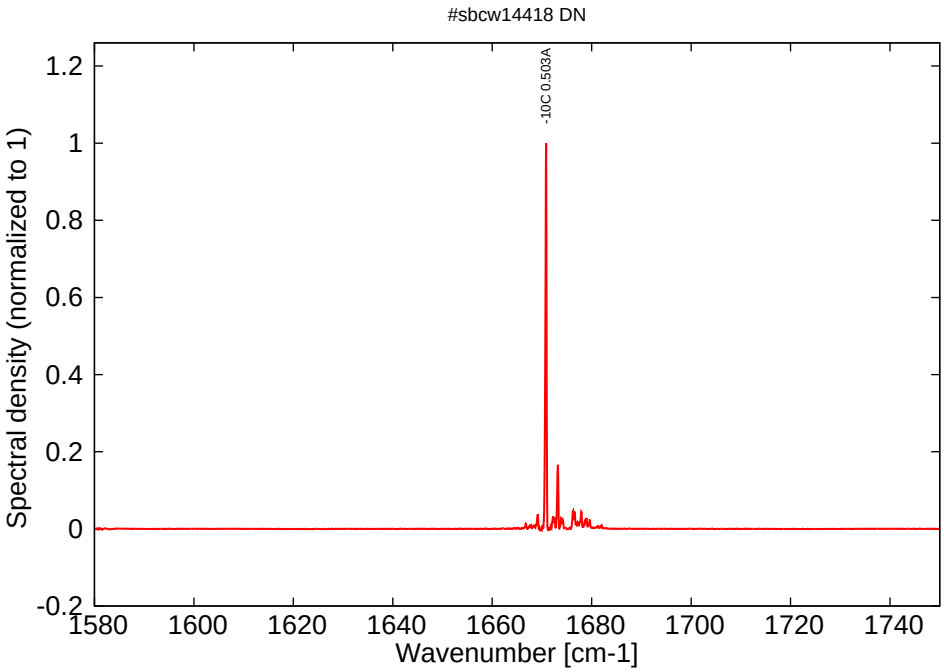

Figure 4: Spectrum at -10C at 0.50 A

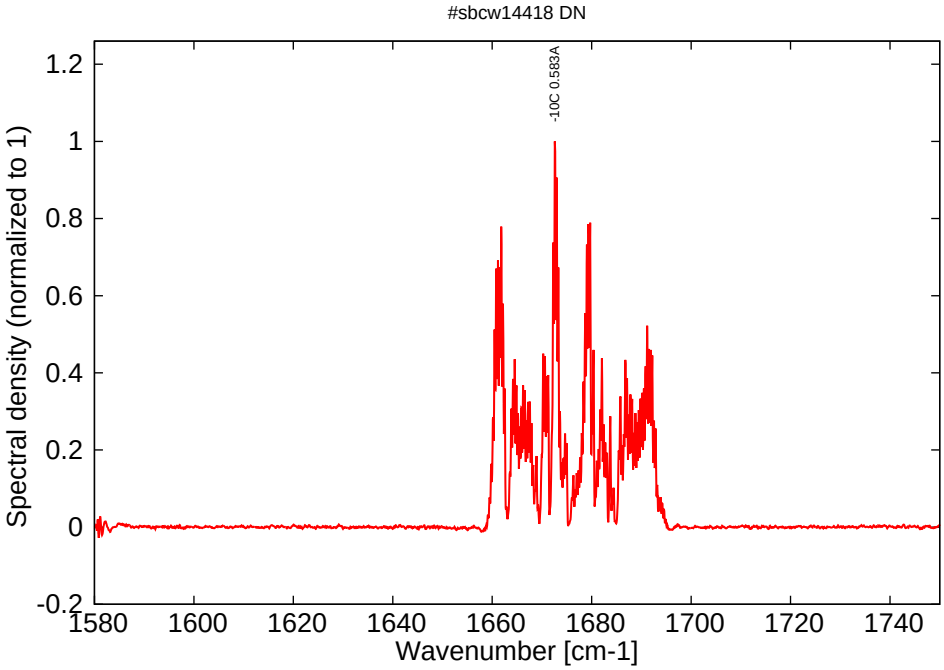

Figure 5: Spectrum at -10C at 0.58 A

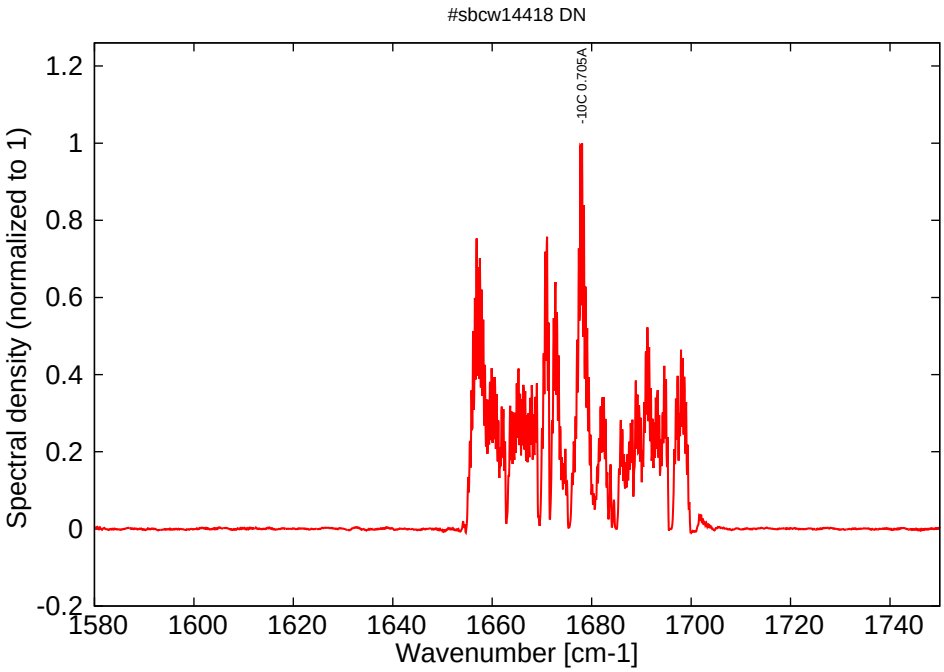

Figure 6: Spectrum at -10C at 0.70 A

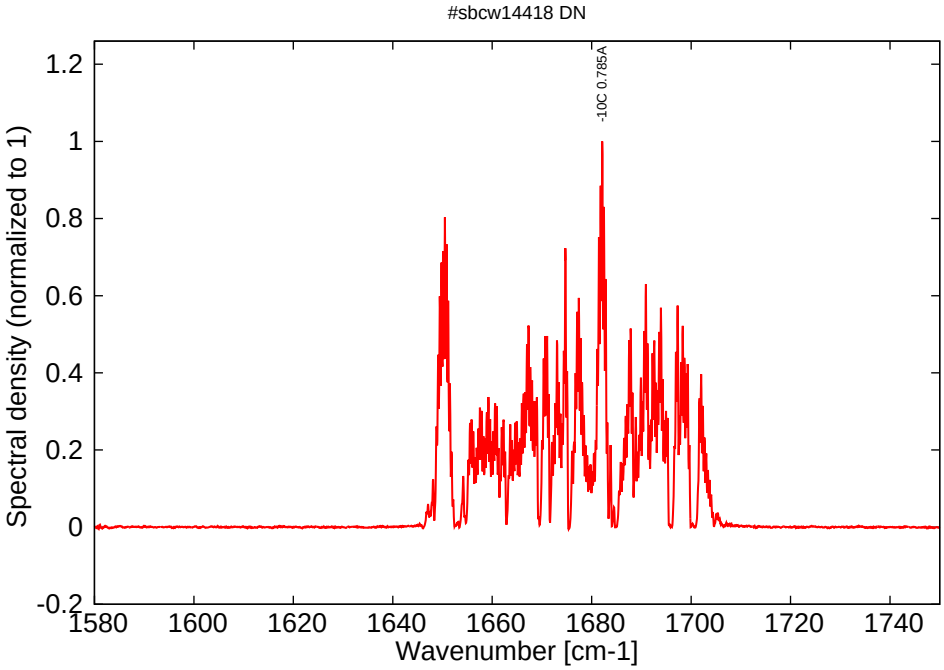

Figure 7: Spectrum at -10C at 0.79 A

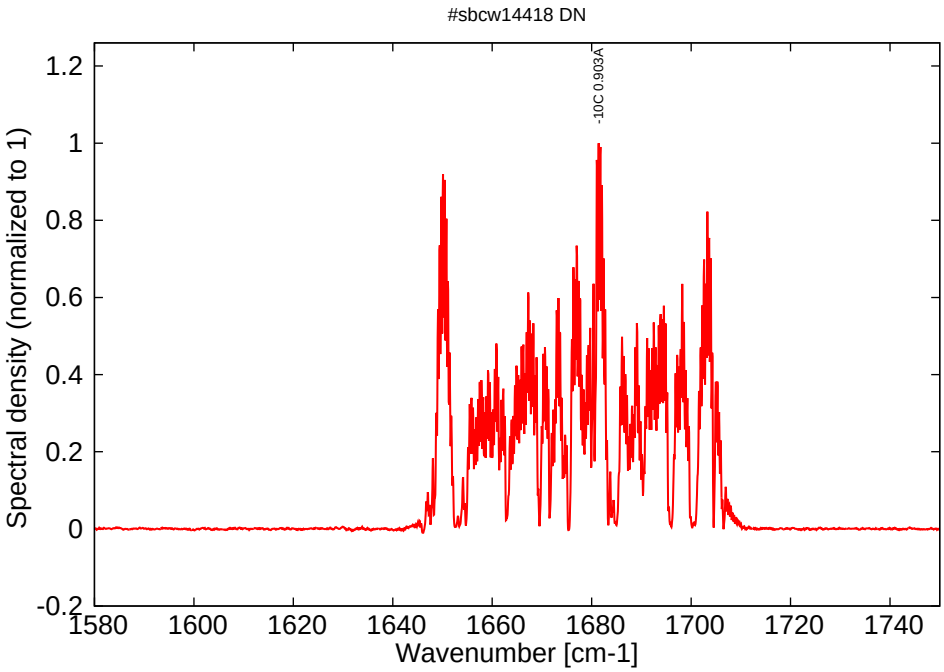

Figure 8: Spectrum at -10C at 0.90 A

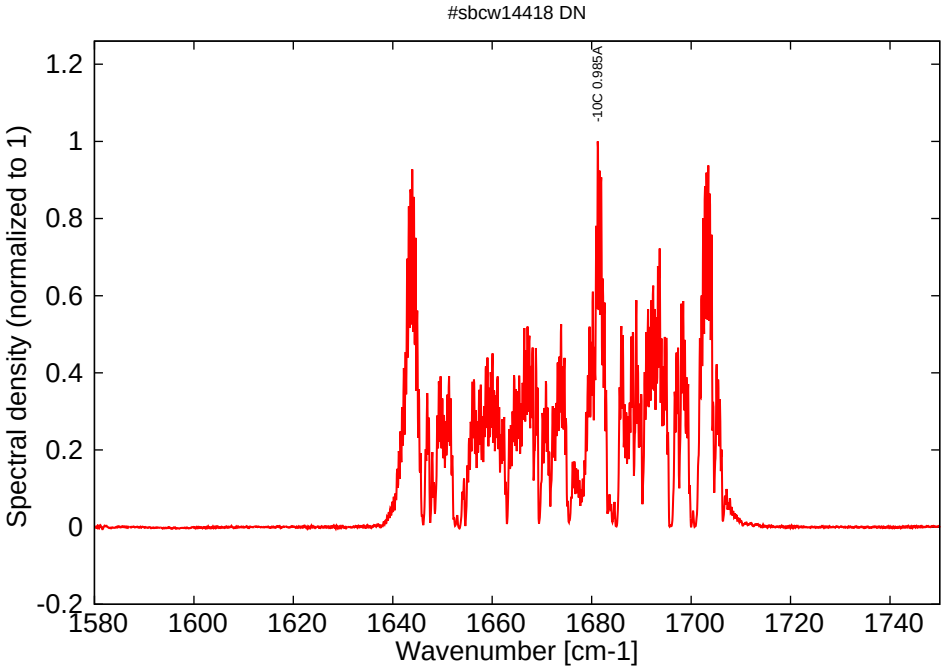

Figure 9: Spectrum at -10C at 0.99 A

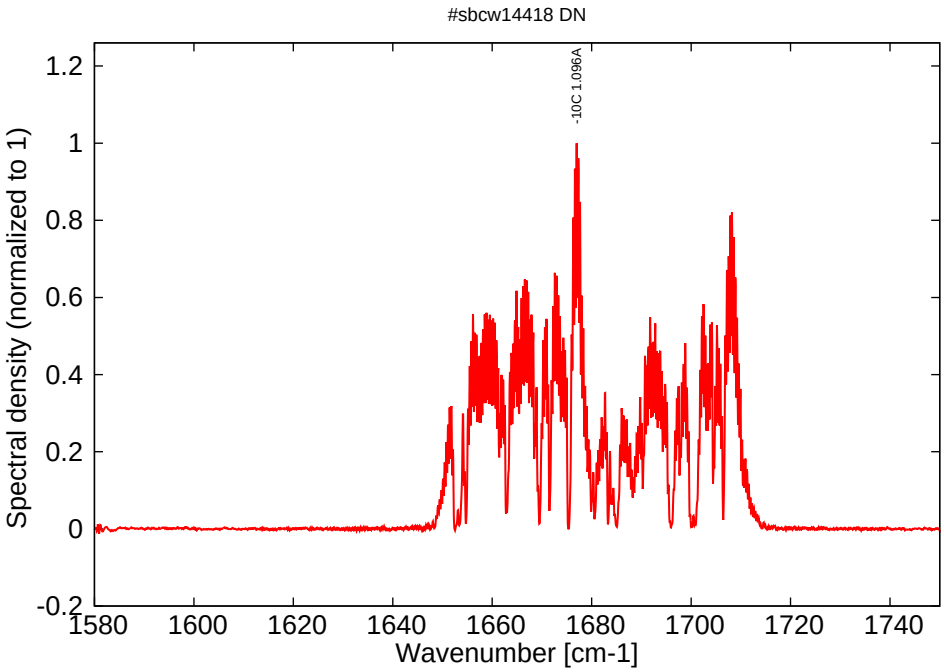

Figure 10: Spectrum at -10C at 1.10 A

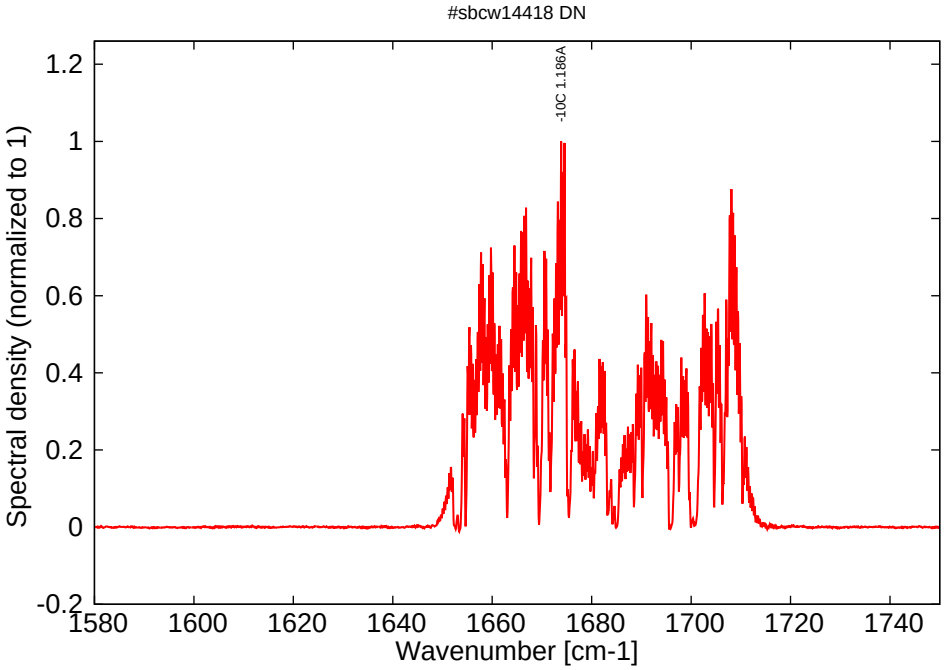

Figure 11: Spectrum at -10C at 1.19 A

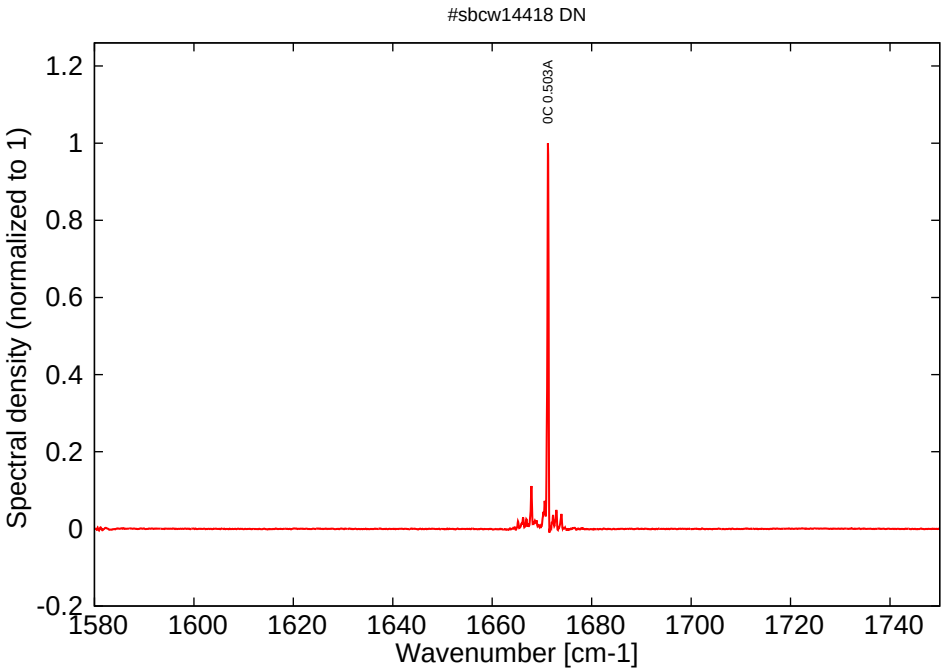

Figure 12: Spectrum at 0C at 0.50 A

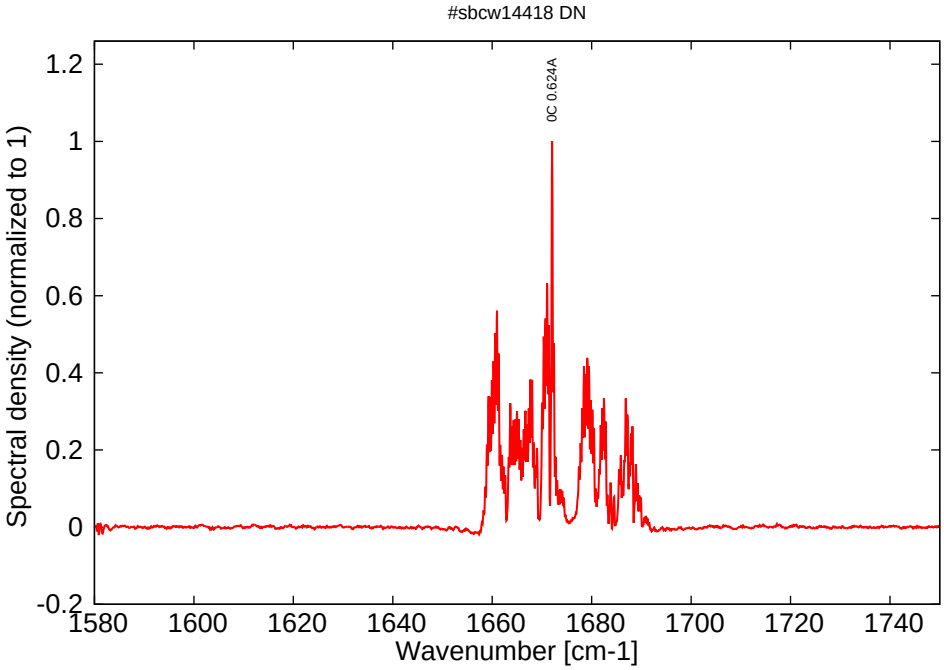

Figure 13: Spectrum at 0C at 0.62 A

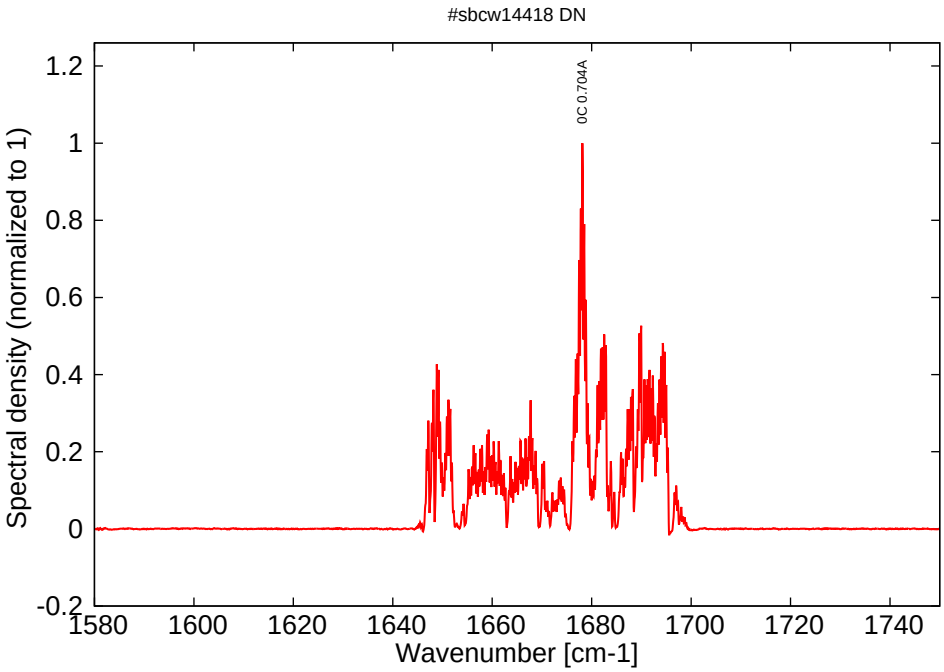

Figure 14: Spectrum at 0C at 0.70 A

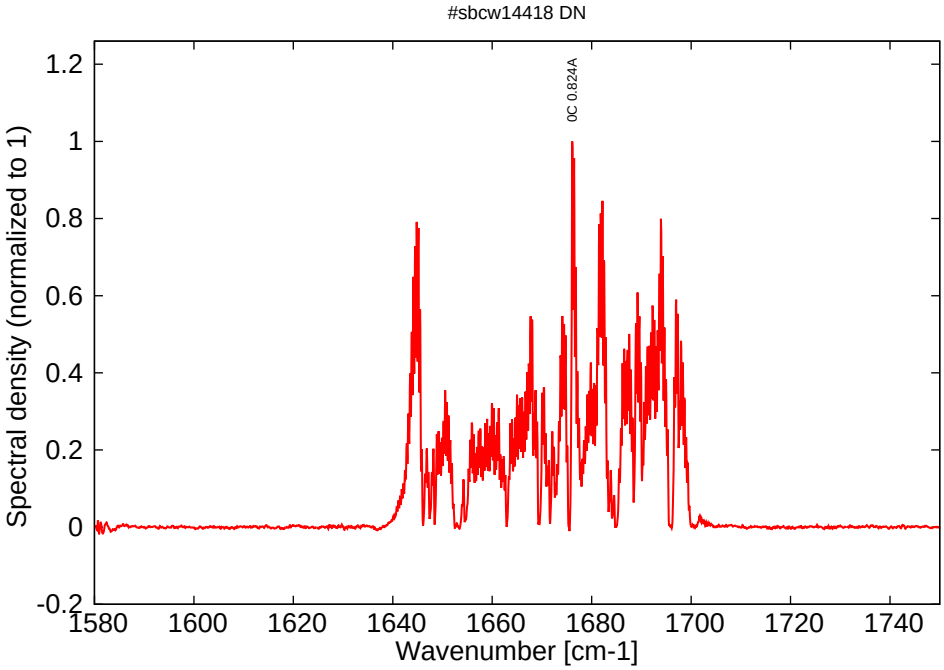

Figure 15: Spectrum at 0C at 0.82 A

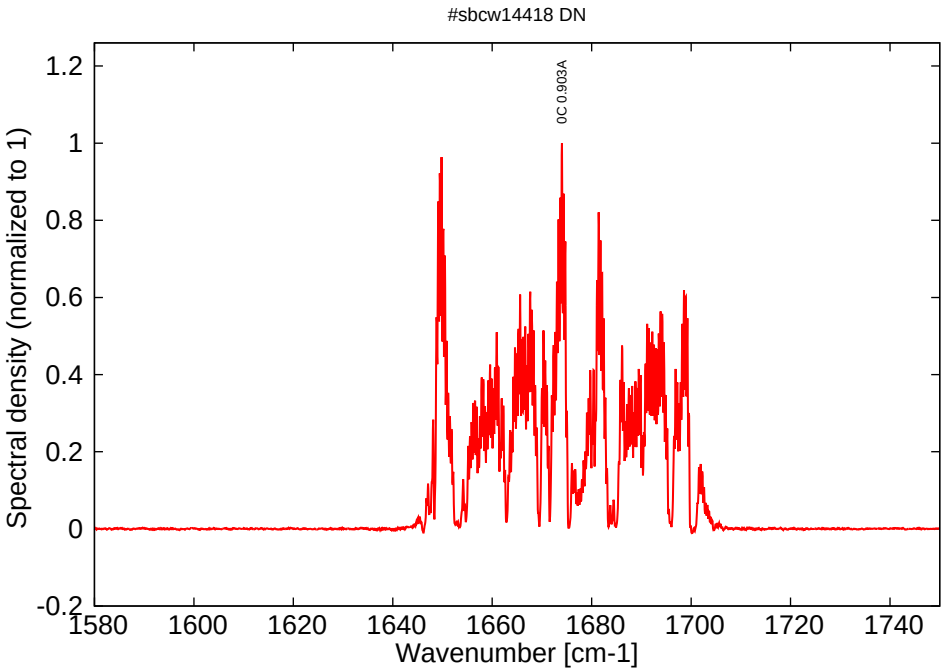

Figure 16: Spectrum at 0C at 0.90 A

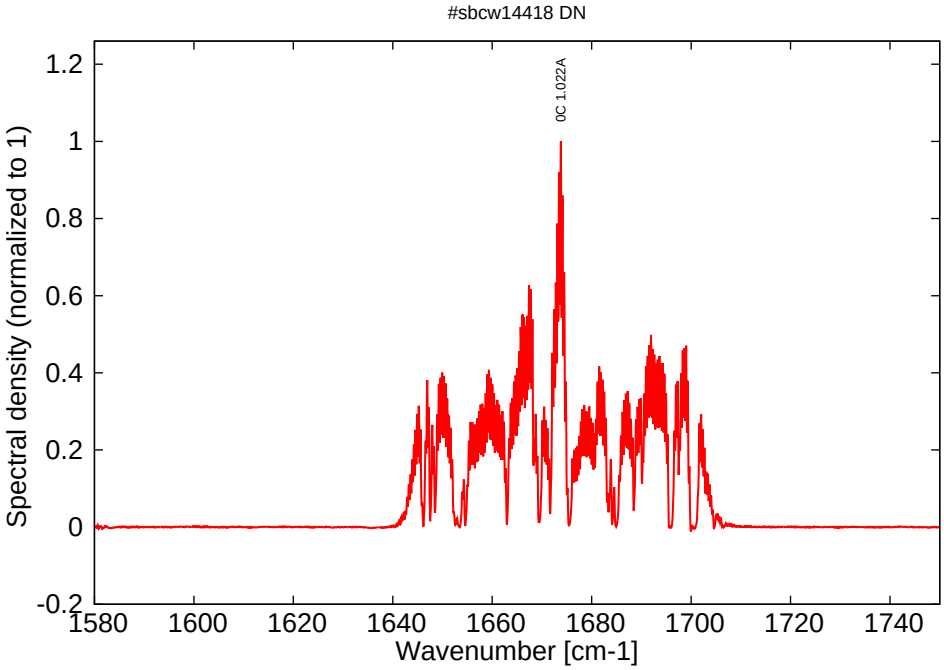

Figure 17: Spectrum at 0C at 1.02 A

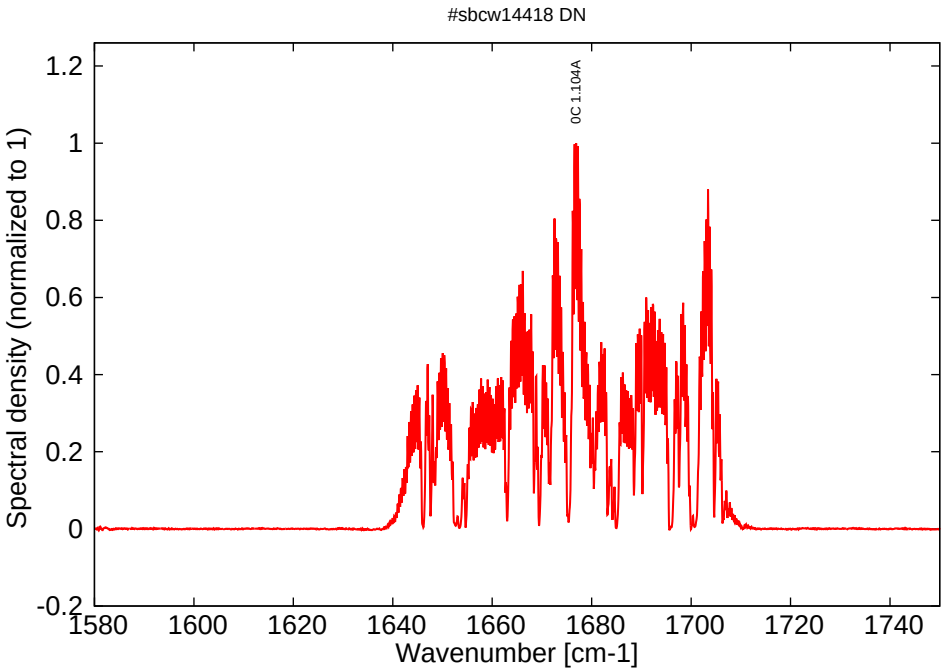

Figure 18: Spectrum at 0C at 1.10 A

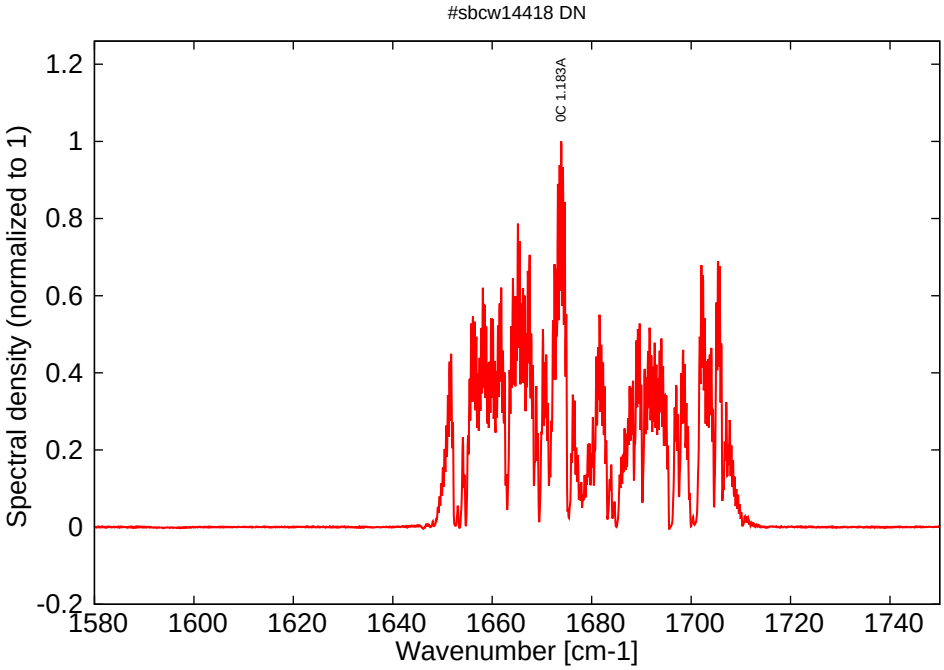

Figure 19: Spectrum at 0C at 1.18 A

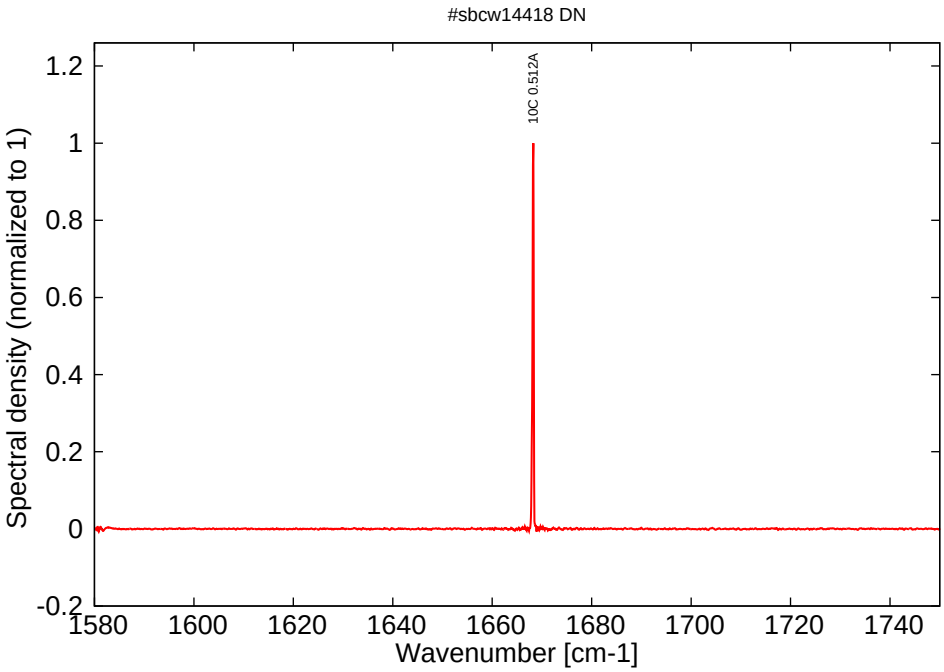

Figure 20: Spectrum at 10C at 0.51 A

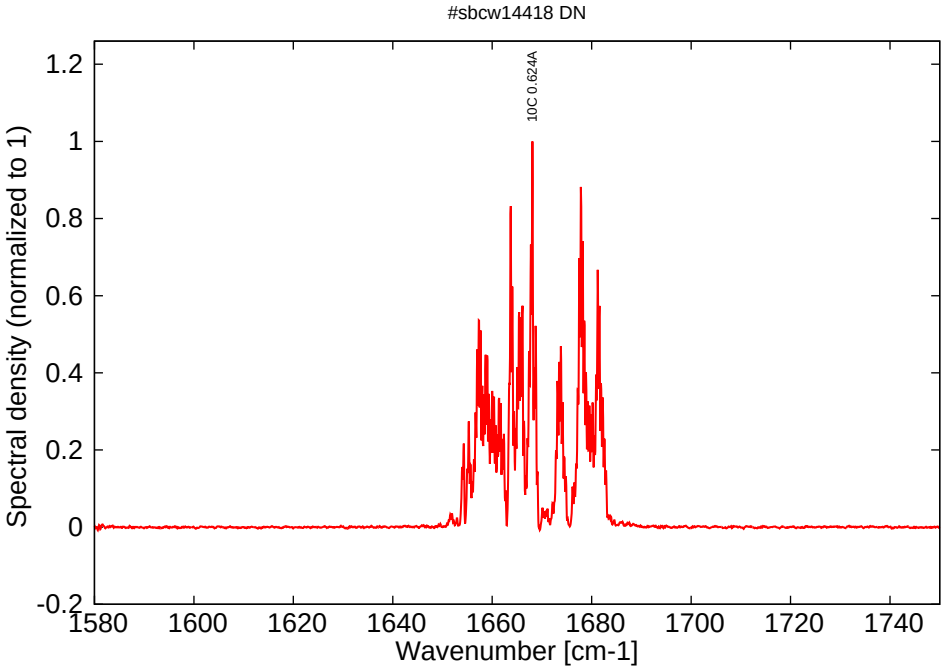

Figure 21: Spectrum at 10C at 0.62 A

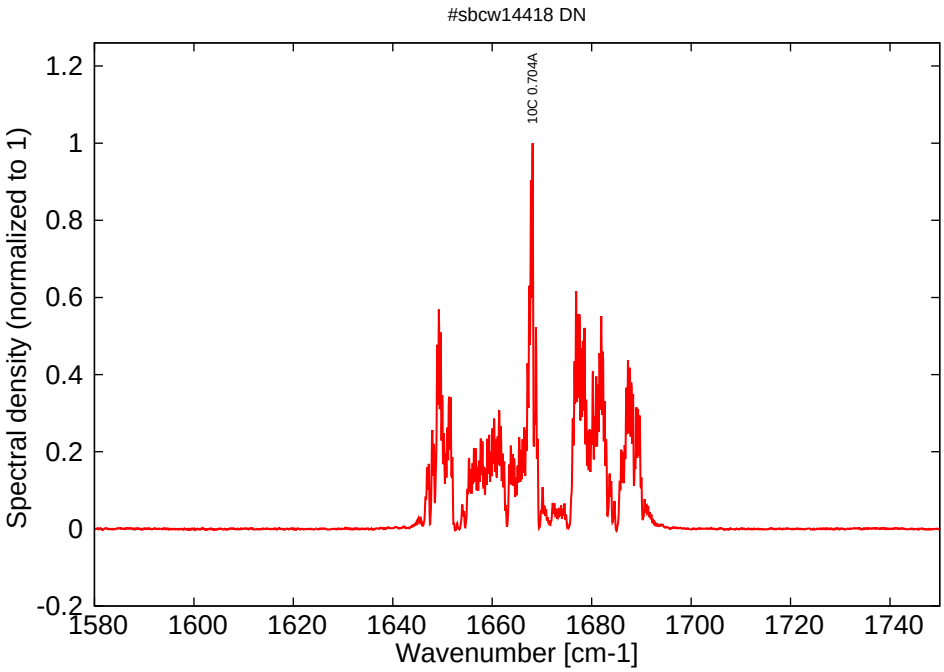

Figure 22: Spectrum at 10C at 0.70 A

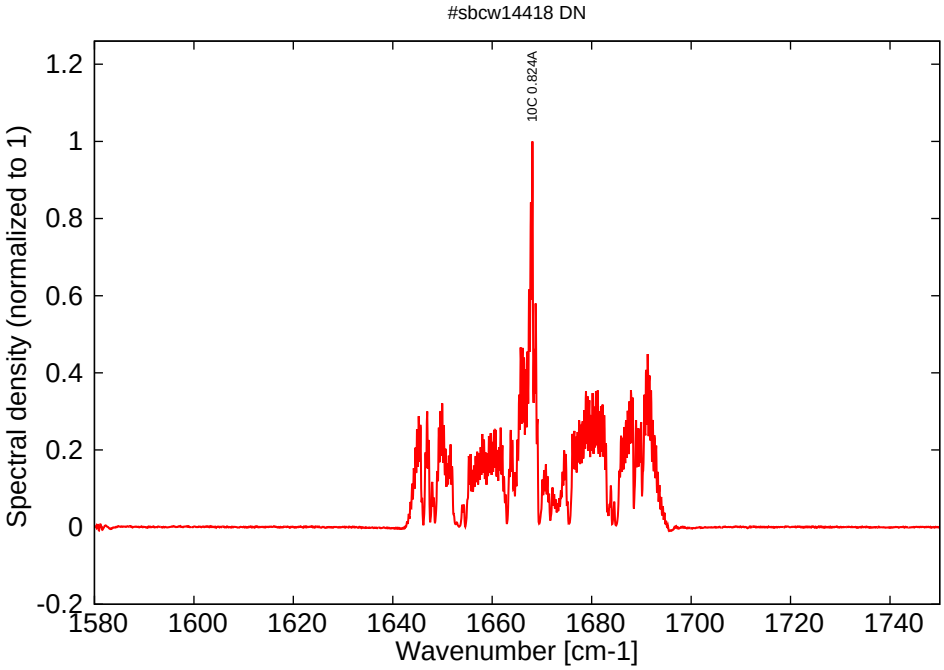

Figure 23: Spectrum at 10C at 0.82 A

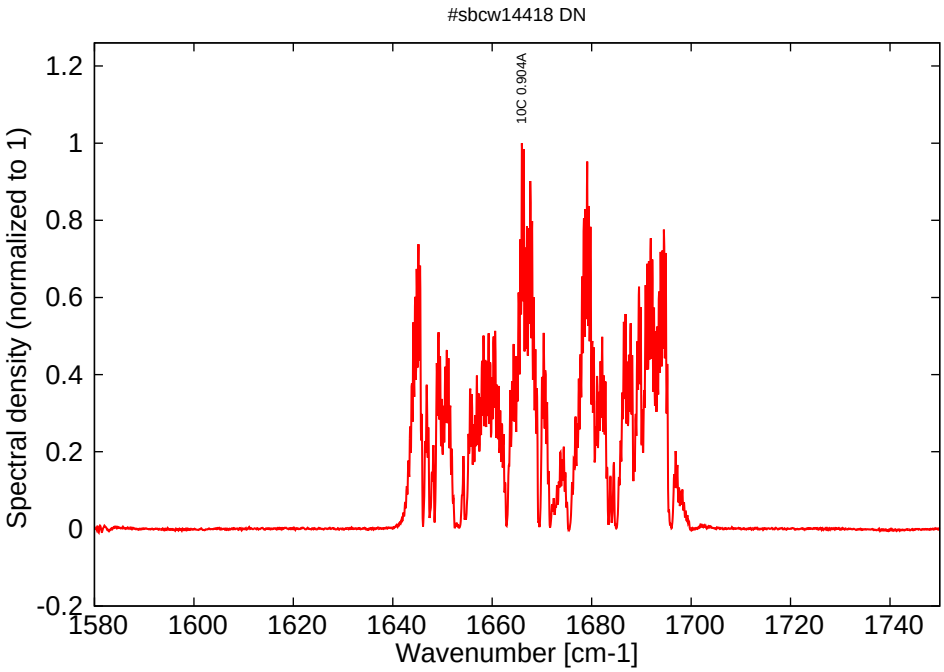

Figure 24: Spectrum at 10C at 0.90 A

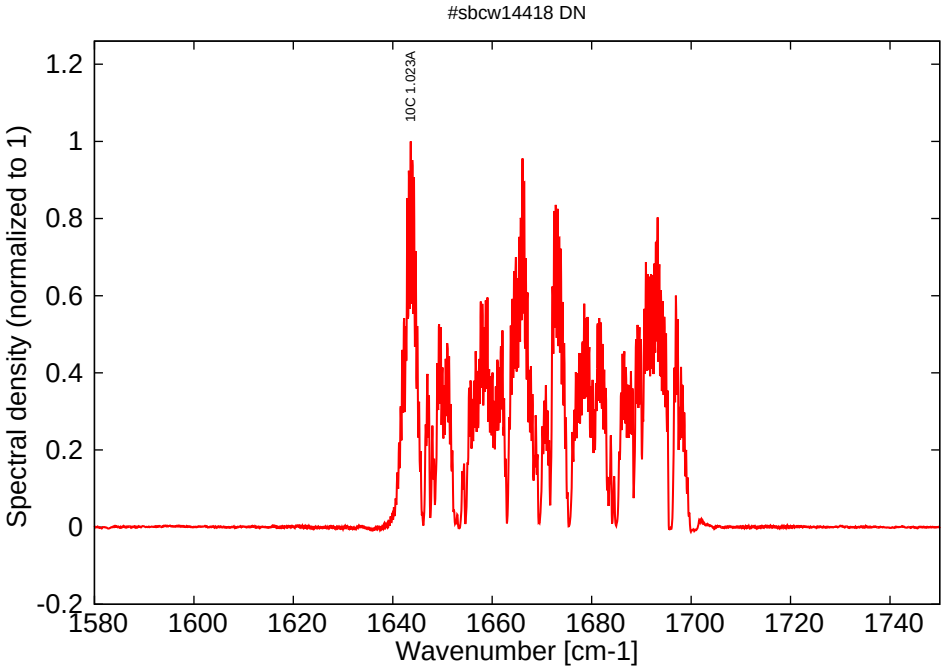

Figure 25: Spectrum at 10C at 1.02 A

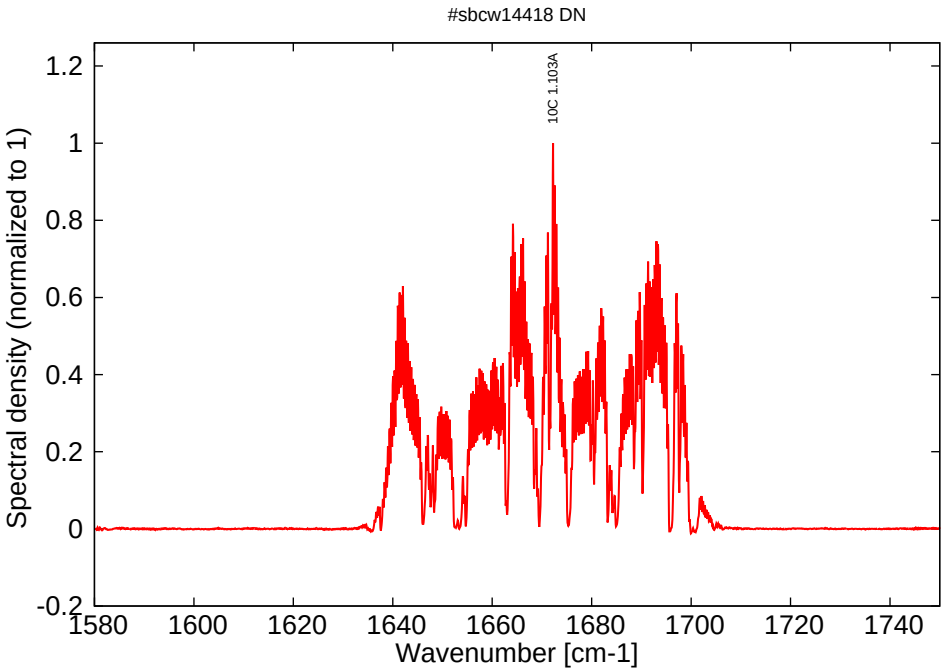

Figure 26: Spectrum at 10C at 1.10 A

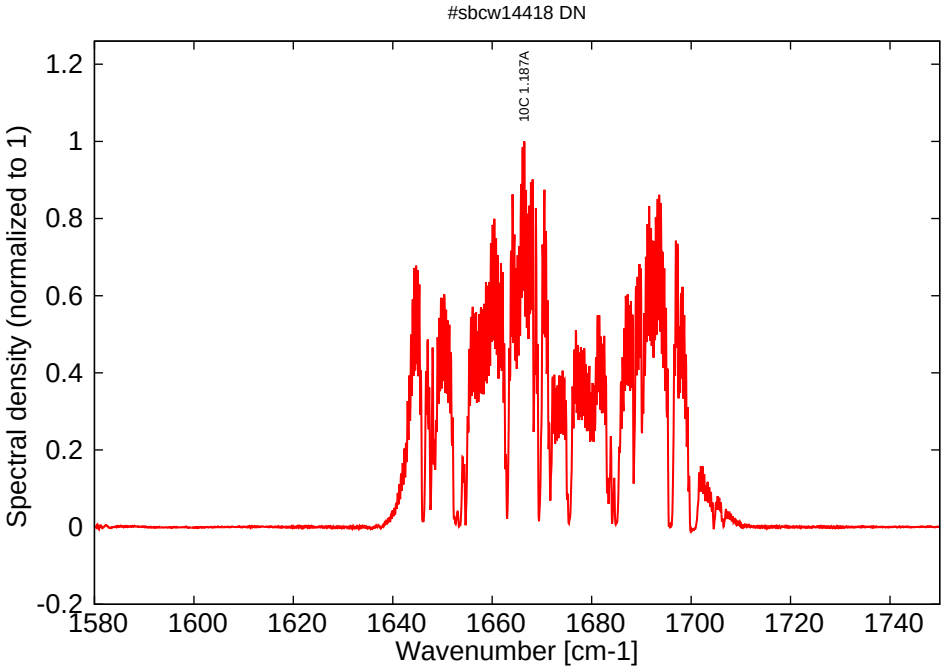

Figure 27: Spectrum at 10C at 1.19 A

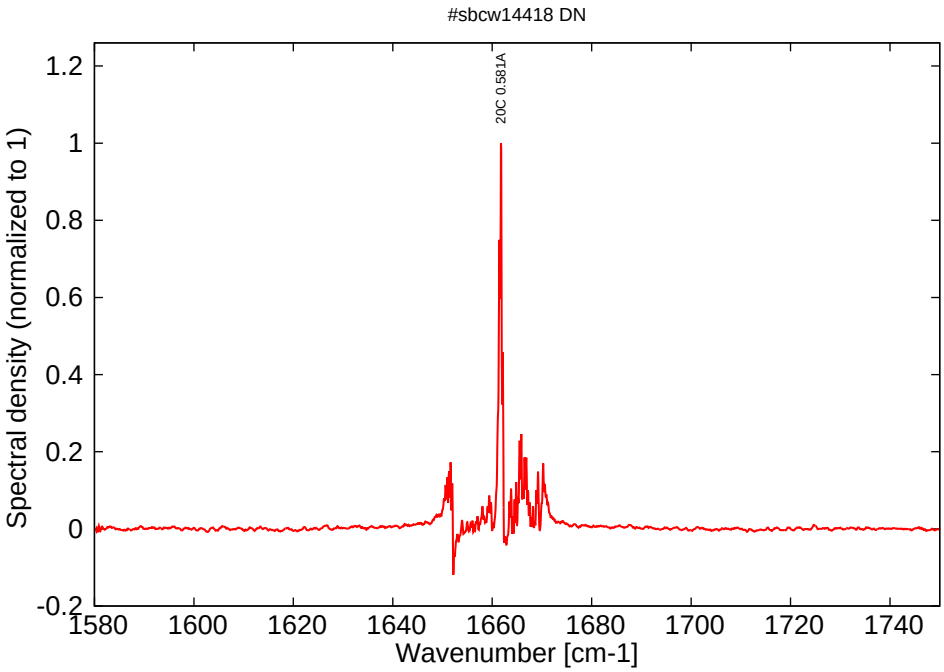

Figure 28: Spectrum at 20C at 0.58 A

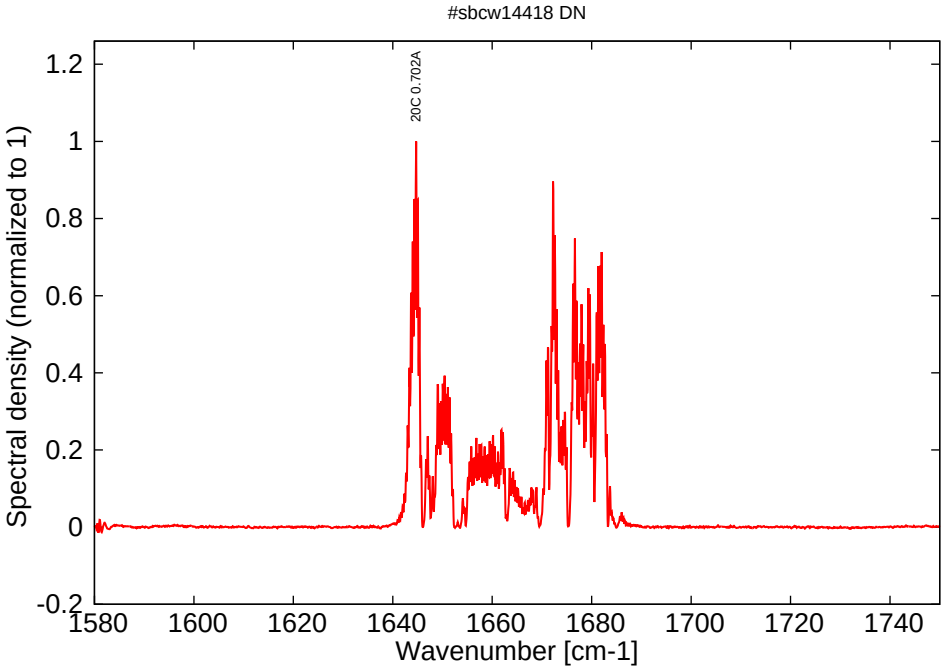

Figure 29: Spectrum at 20C at 0.70 A

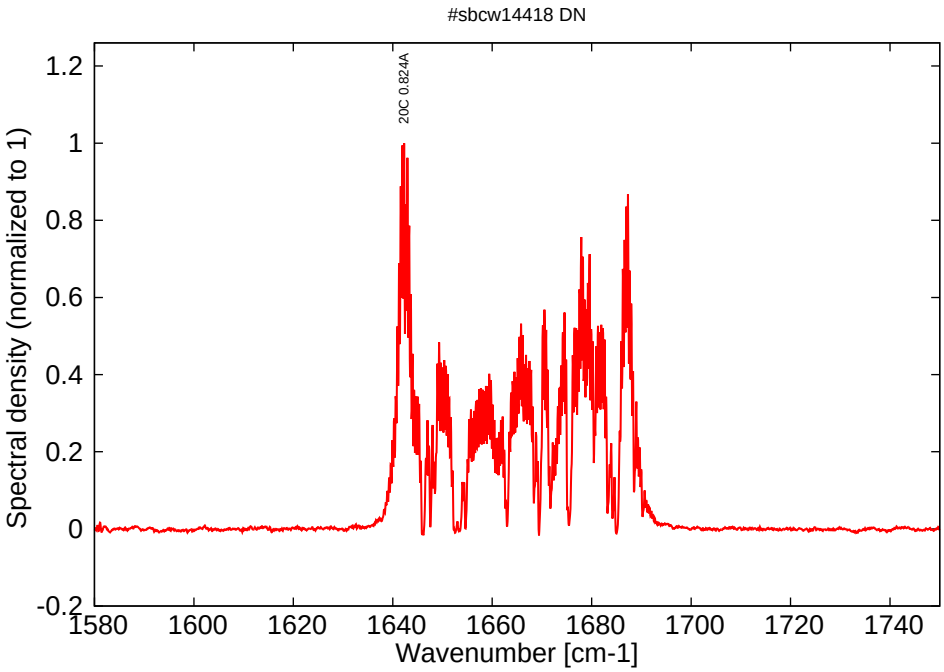

Figure 30: Spectrum at 20C at 0.82 A

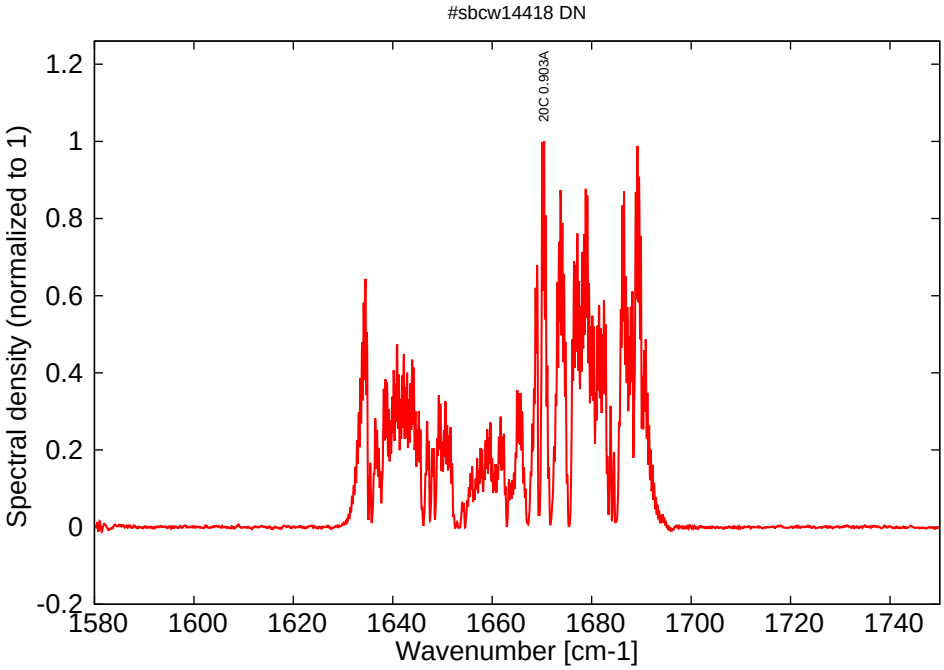

Figure 31: Spectrum at 20C at 0.90 A

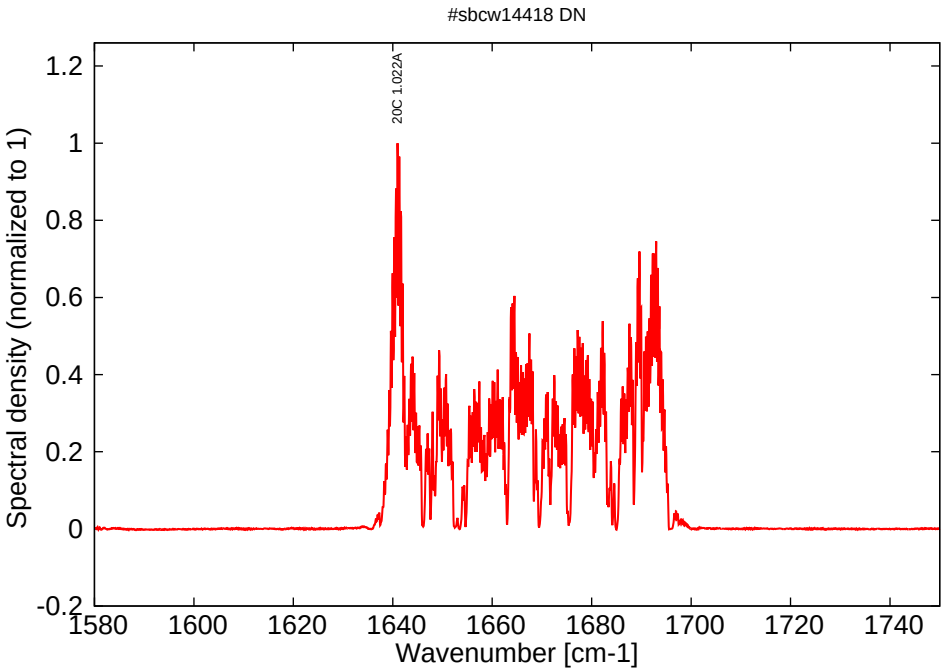

Figure 32: Spectrum at 20C at 1.02 A

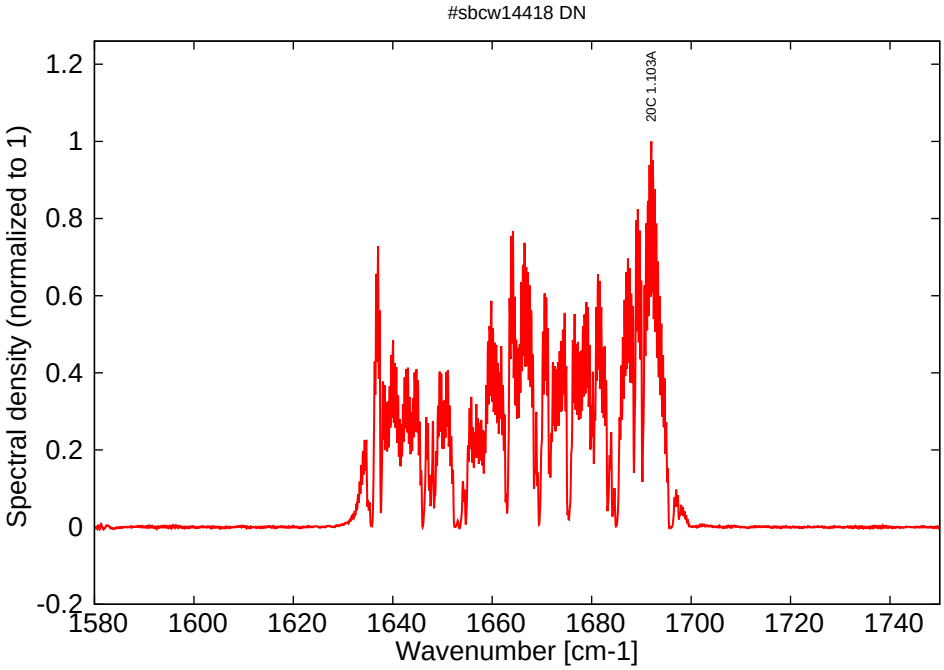

Figure 33: Spectrum at 20C at 1.10 A

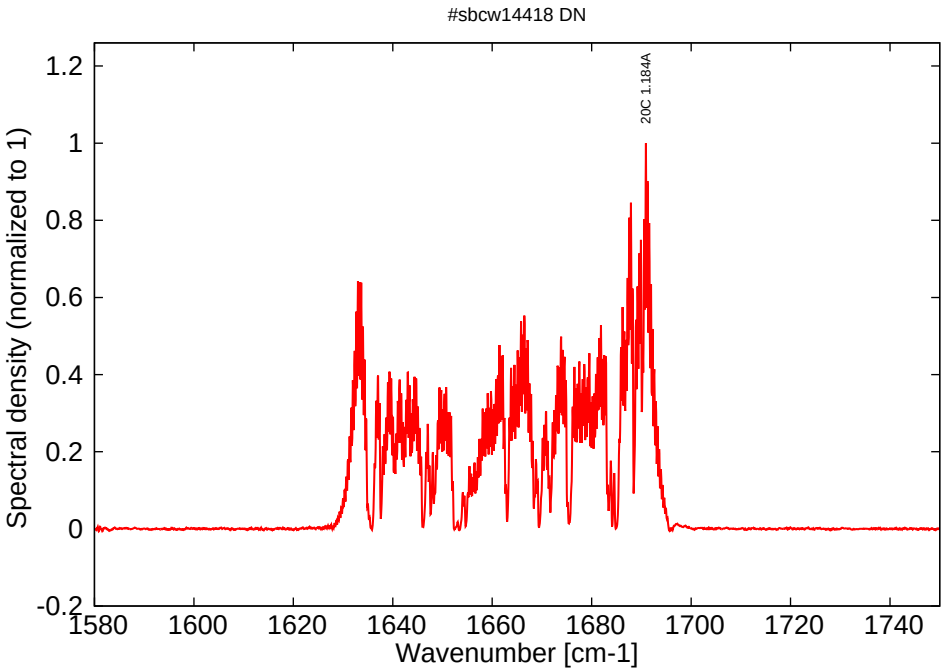

Figure 34: Spectrum at 20C at 1.18 A

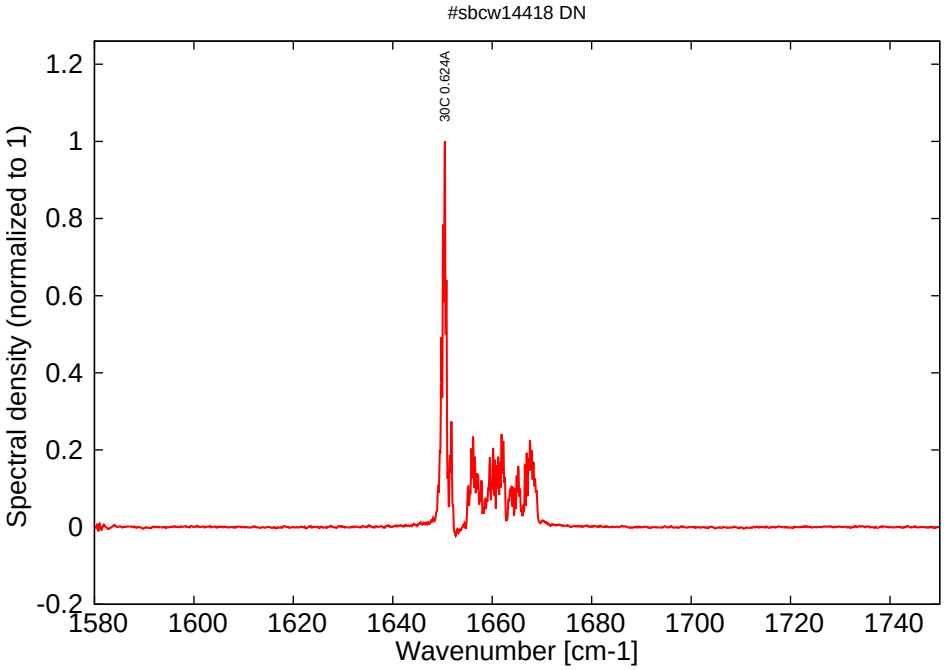

Figure 35: Spectrum at 30C at 0.62 A

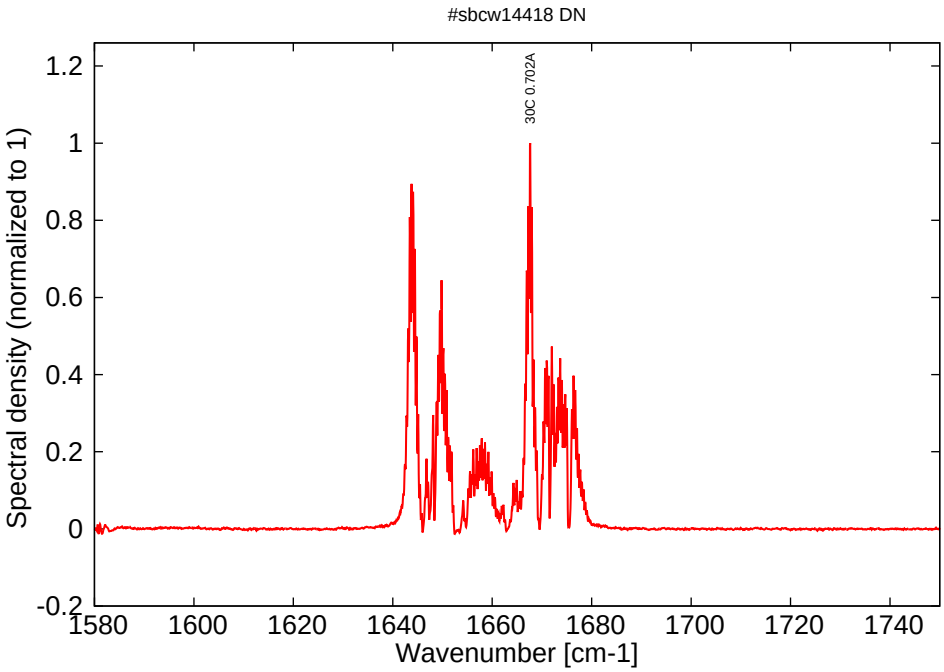

Figure 36: Spectrum at 30C at 0.70 A

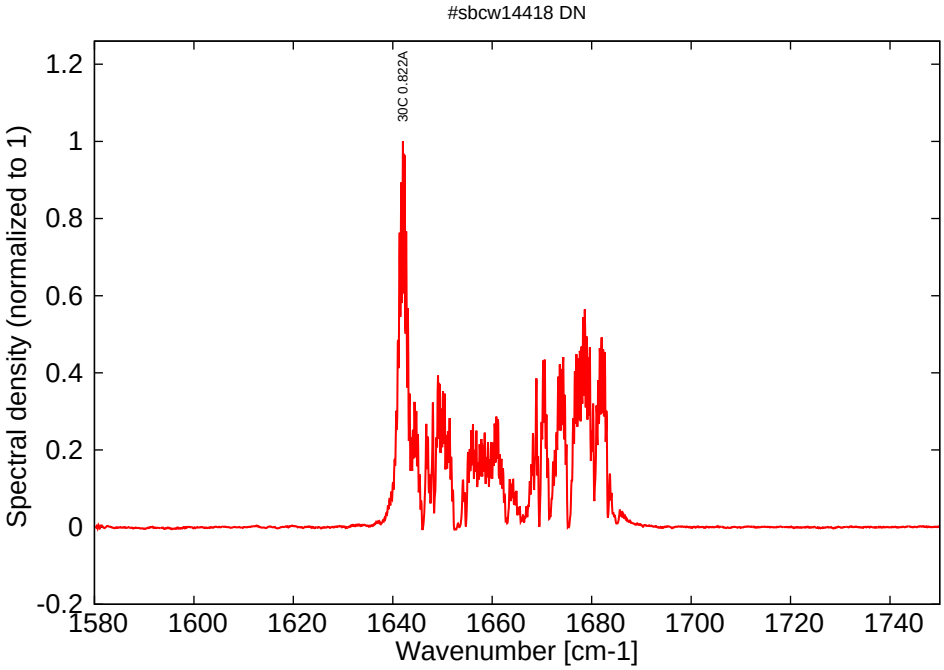

Figure 37: Spectrum at 30C at 0.82 A

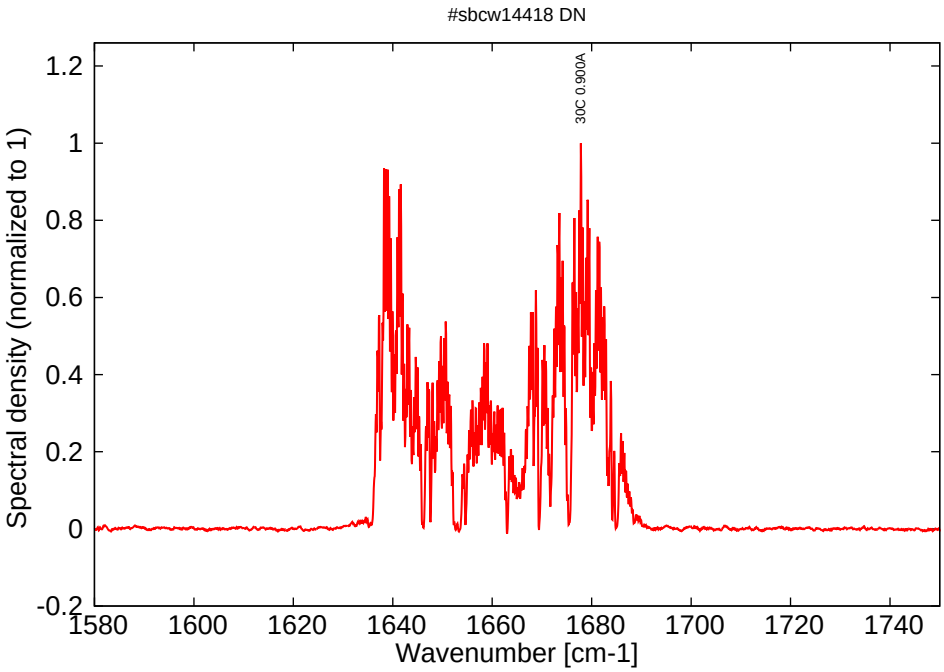

Figure 38: Spectrum at 30C at 0.90 A

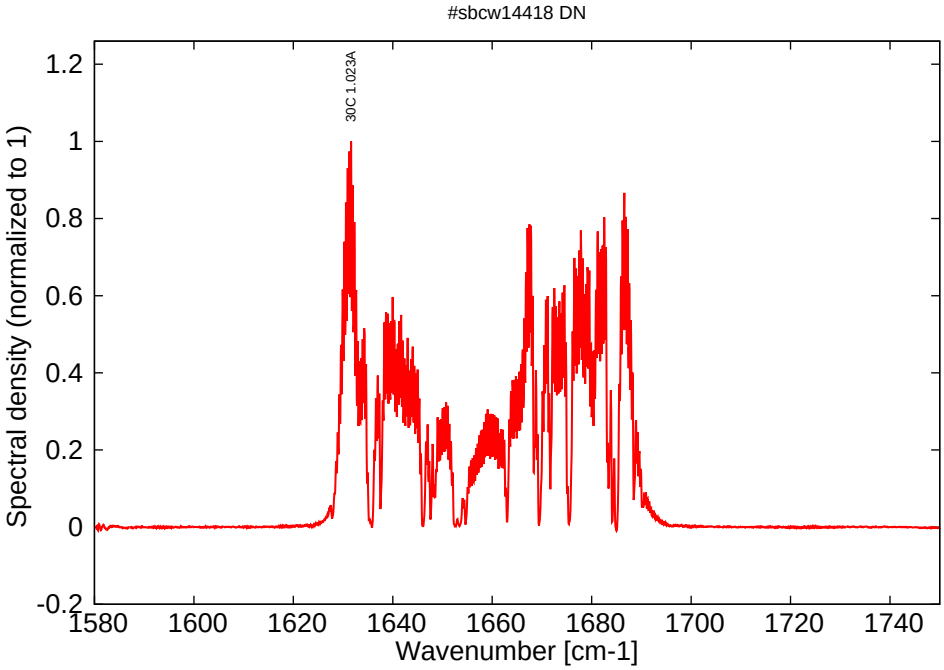

Figure 39: Spectrum at 30C at 1.02 A

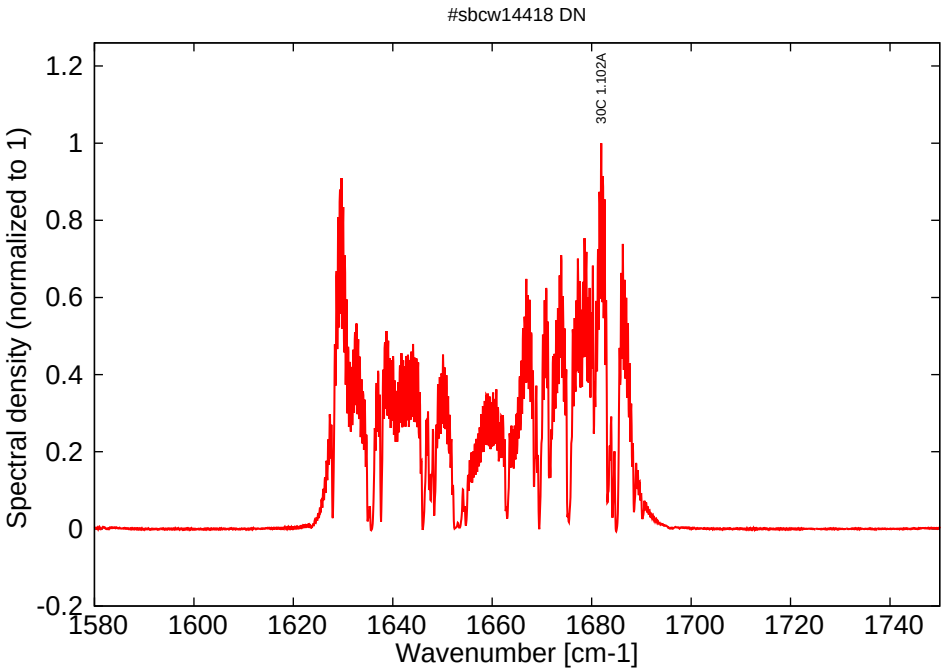

Figure 40: Spectrum at 30C at 1.10 A

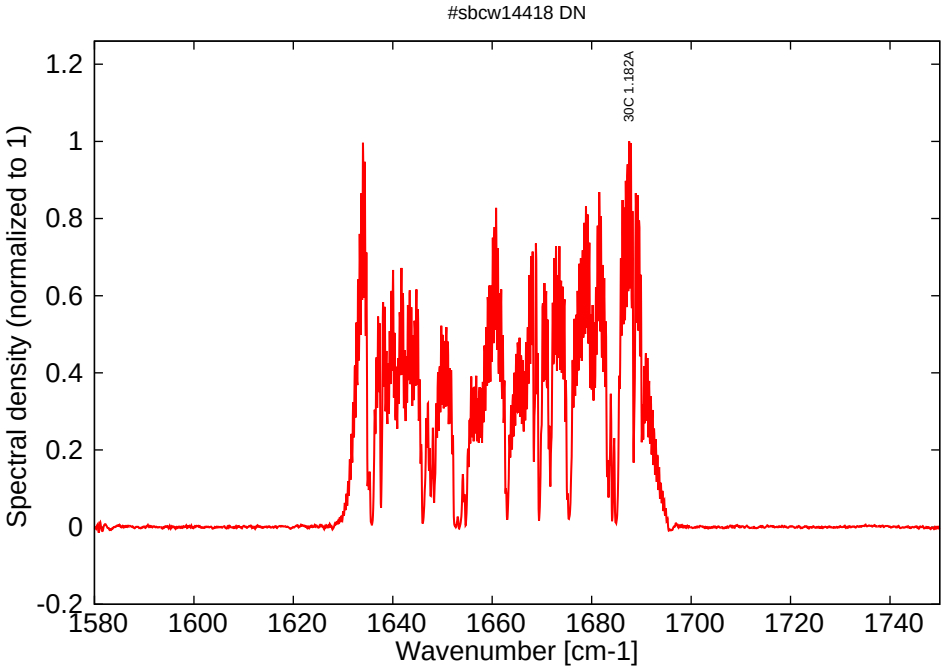

Figure 41: Spectrum at 30C at 1.18 A

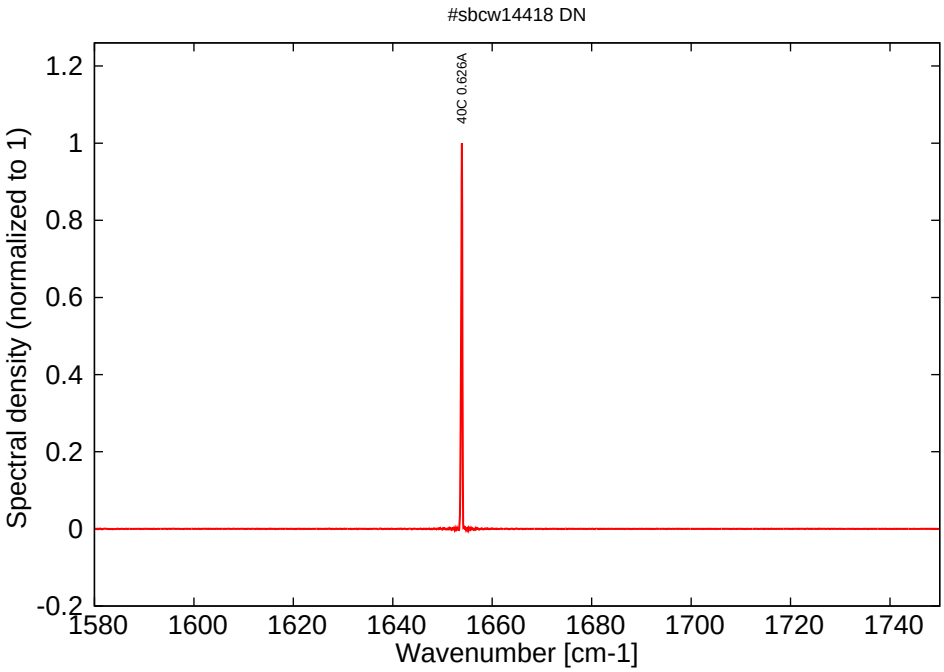

Figure 42: Spectrum at 40C at 0.62 A

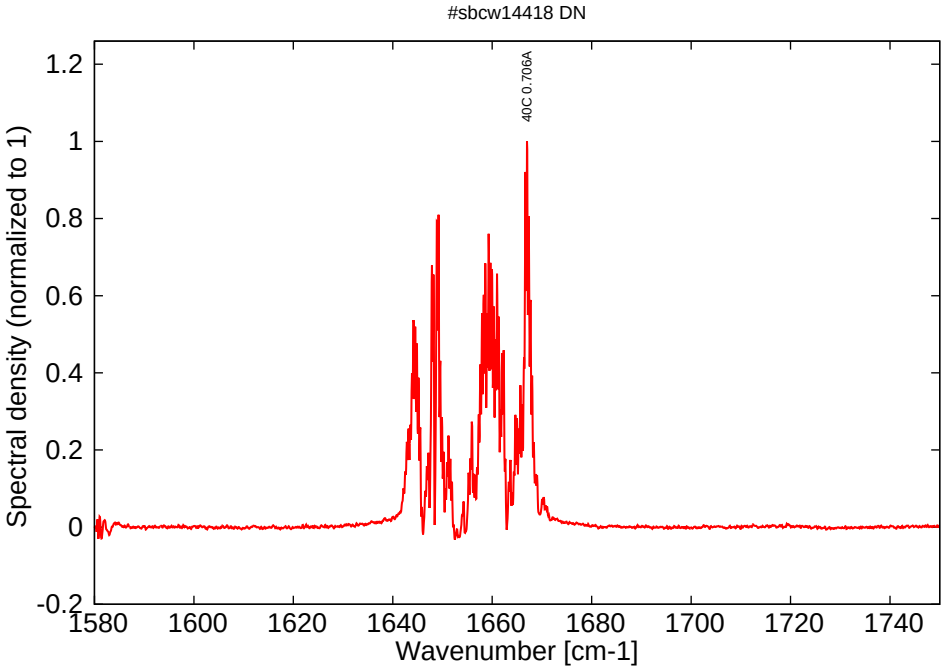

Figure 43: Spectrum at 40C at 0.71 A

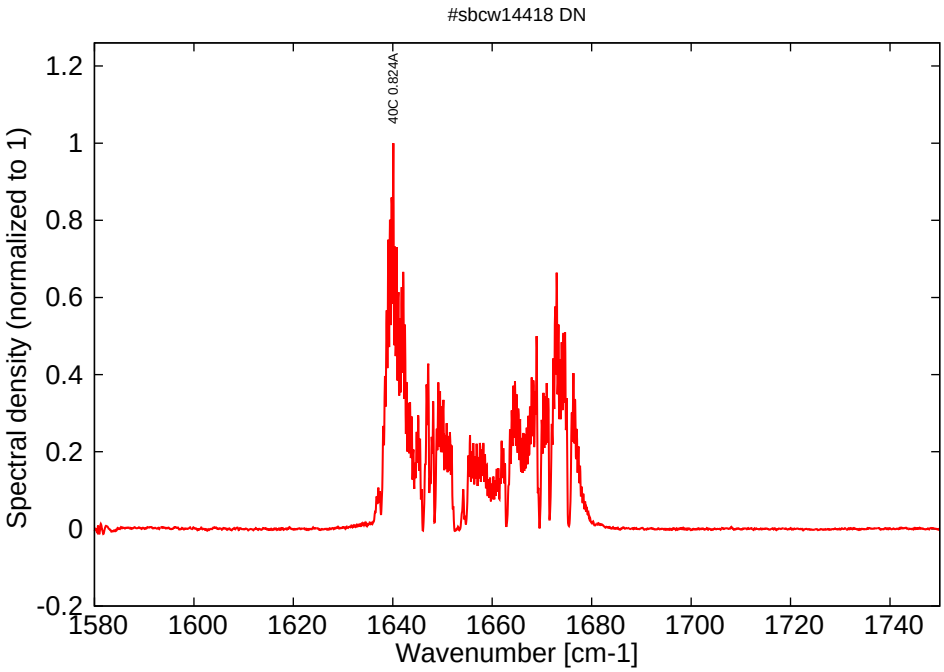

Figure 44: Spectrum at 40C at 0.82 A

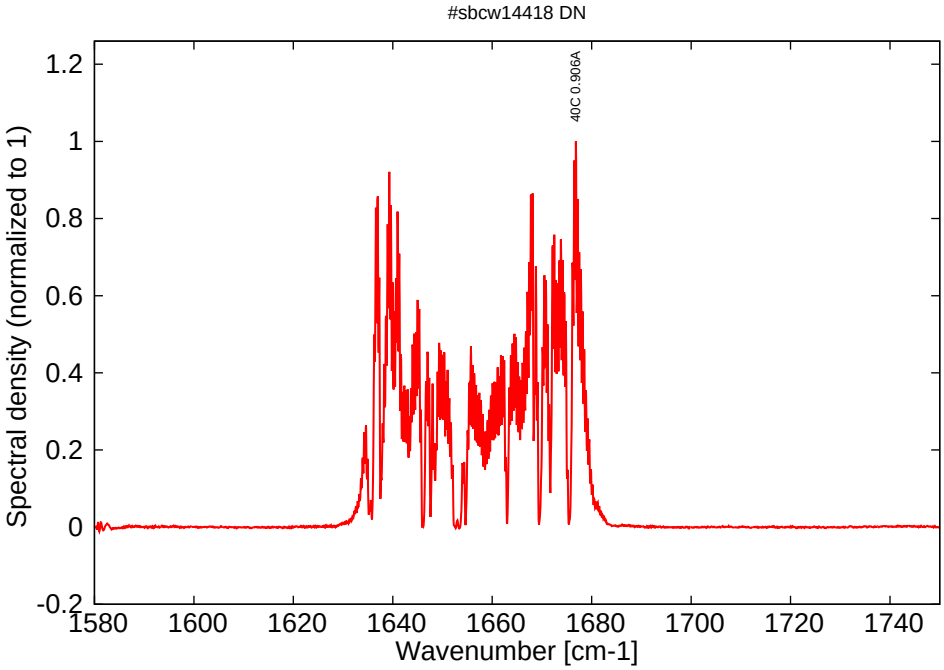

Figure 45: Spectrum at 40C at 0.91 A

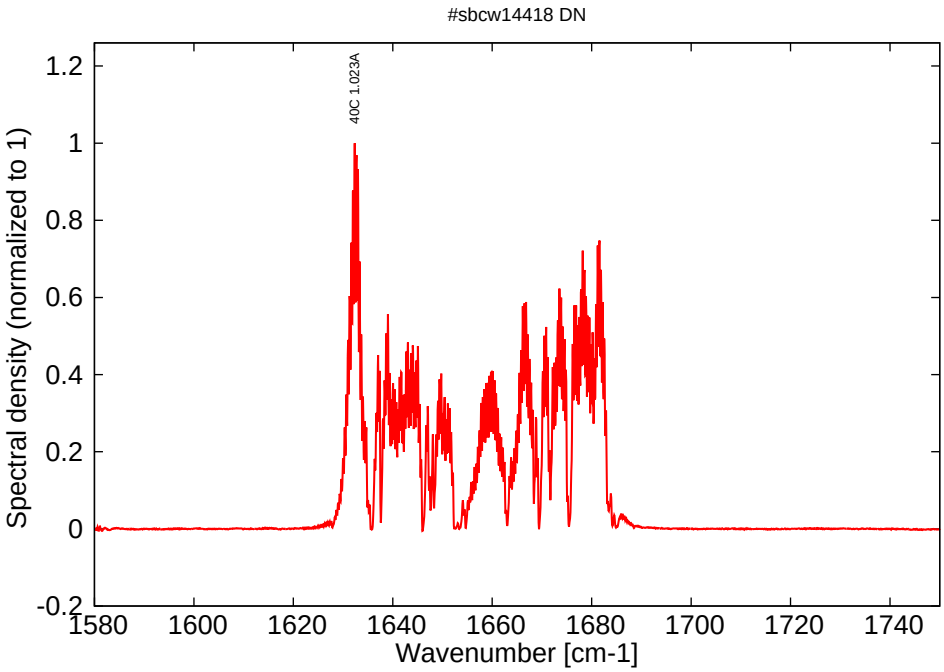

Figure 46: Spectrum at 40C at 1.02 A

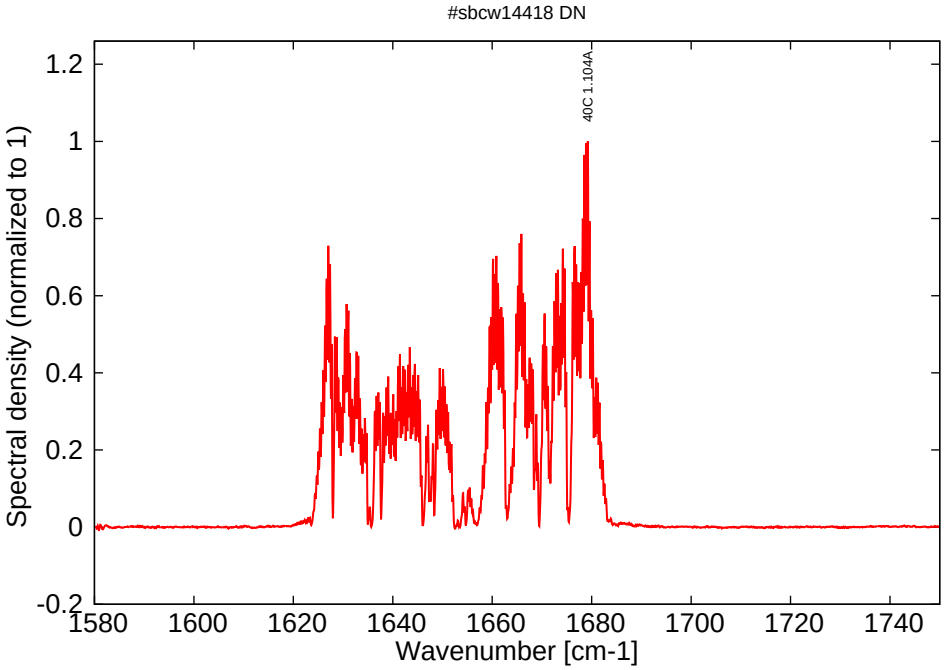

Figure 47: Spectrum at 40C at 1.10 A

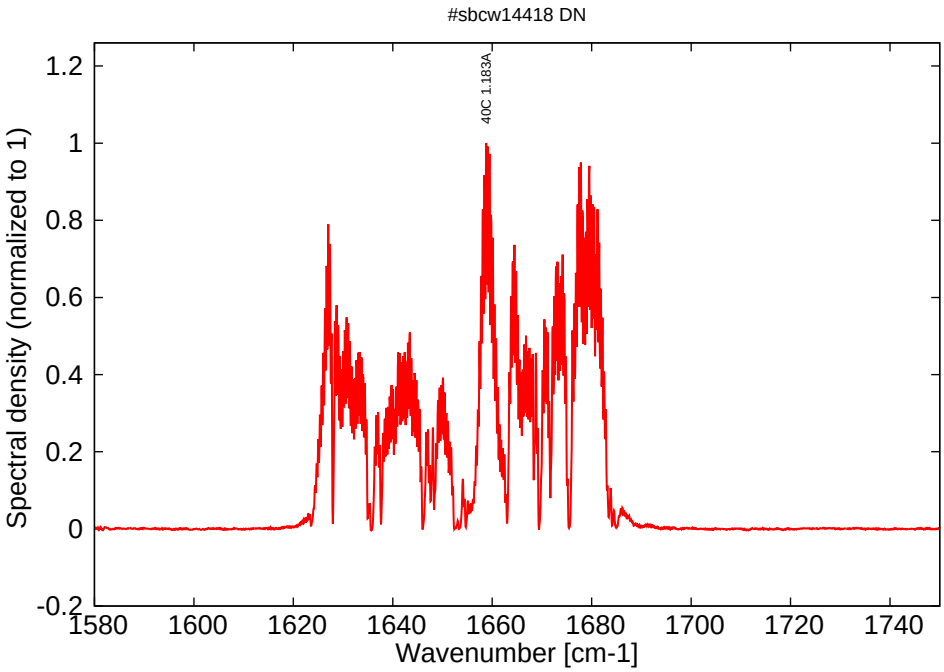

Figure 48: Spectrum at 40C at 1.18 A

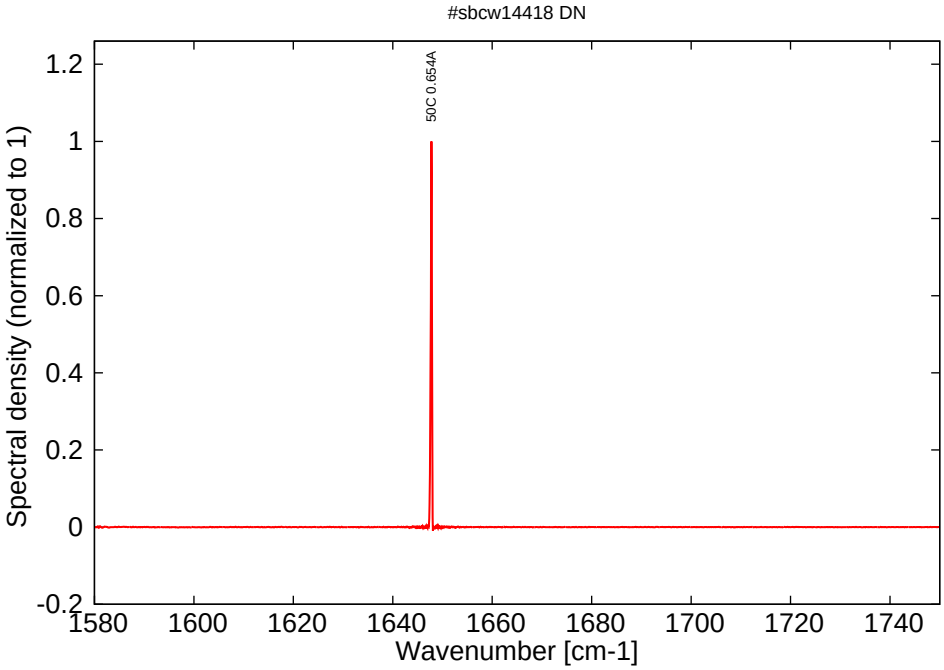

Figure 49: Spectrum at 50C at 0.65 A

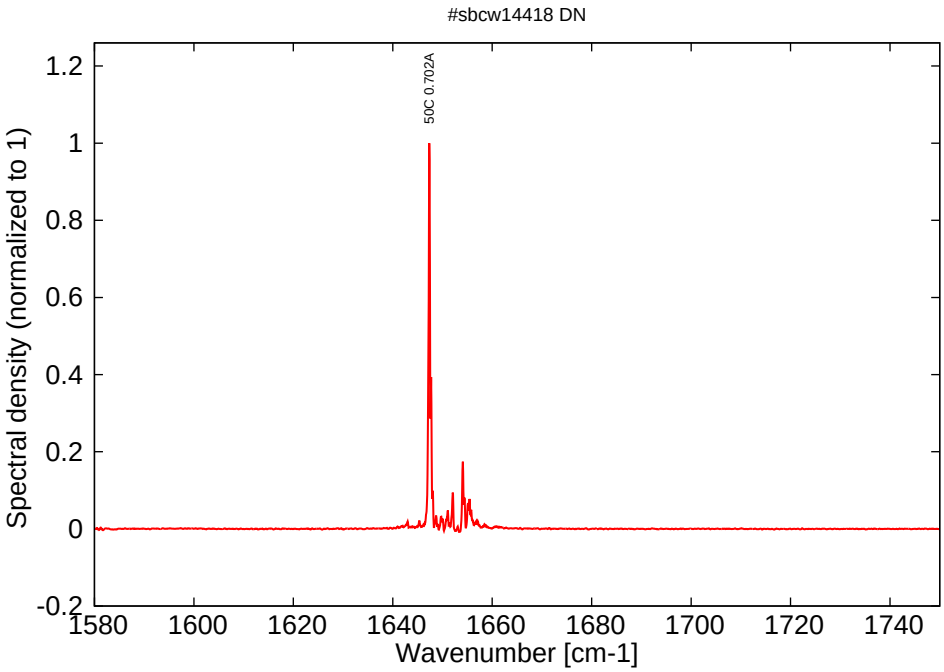

Figure 50: Spectrum at 50C at 0.70 A

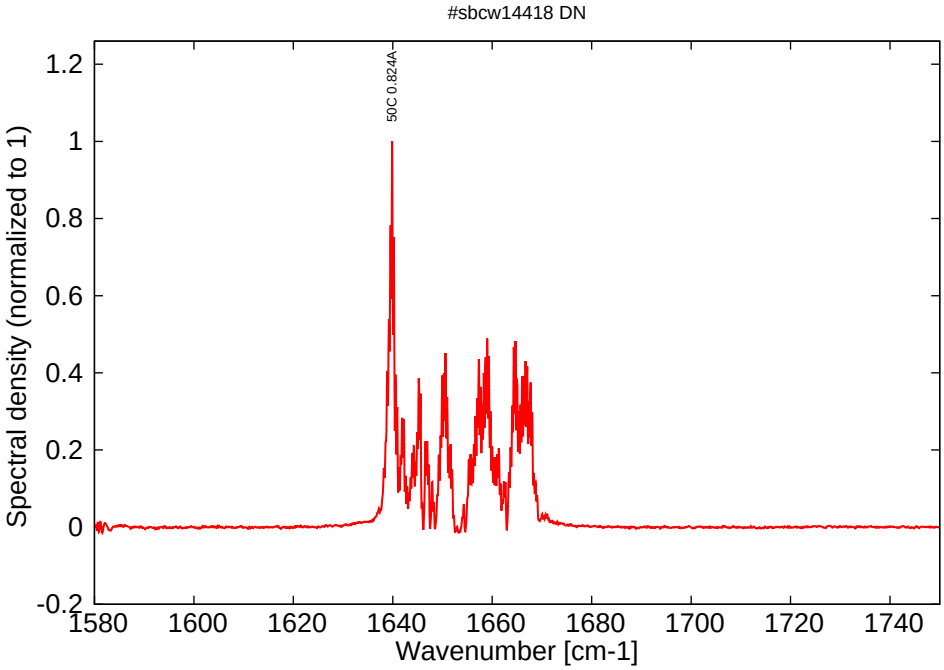

Figure 51: Spectrum at 50C at 0.82 A

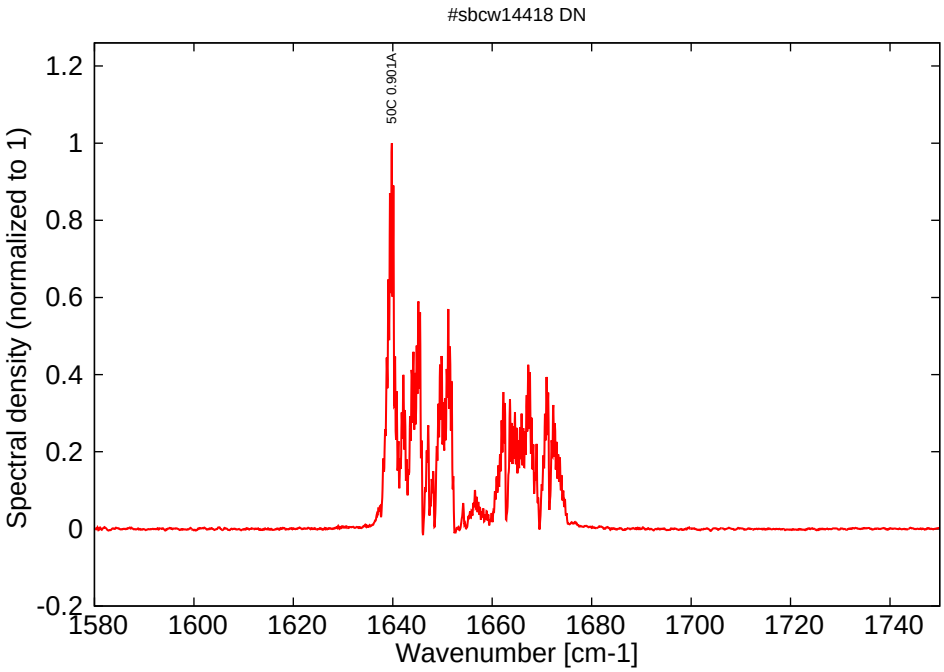

Figure 52: Spectrum at 50C at 0.90 A

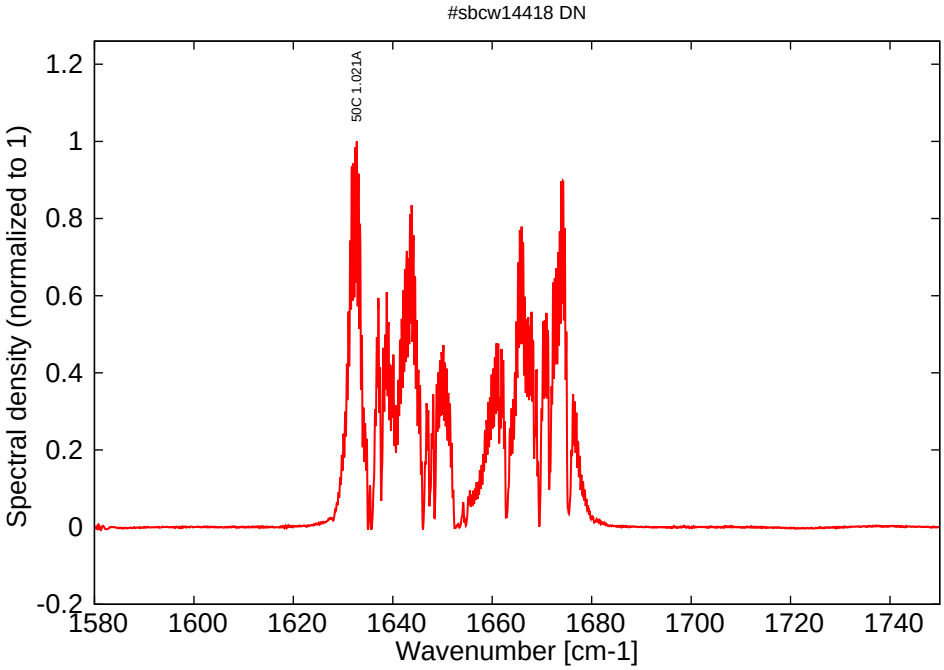

Figure 53: Spectrum at 50C at 1.02 A

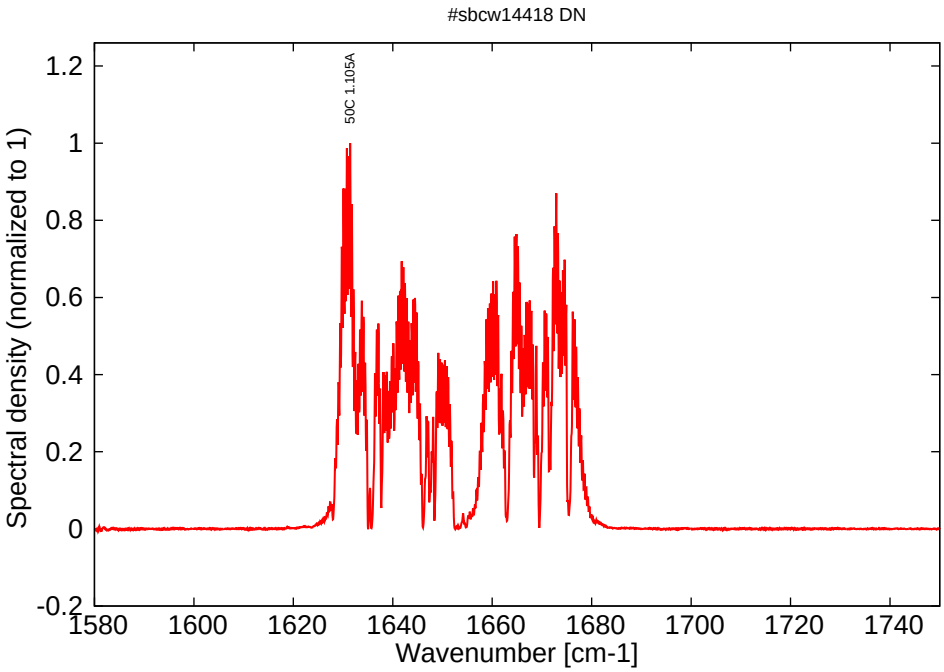

Figure 54: Spectrum at 50C at 1.10 A

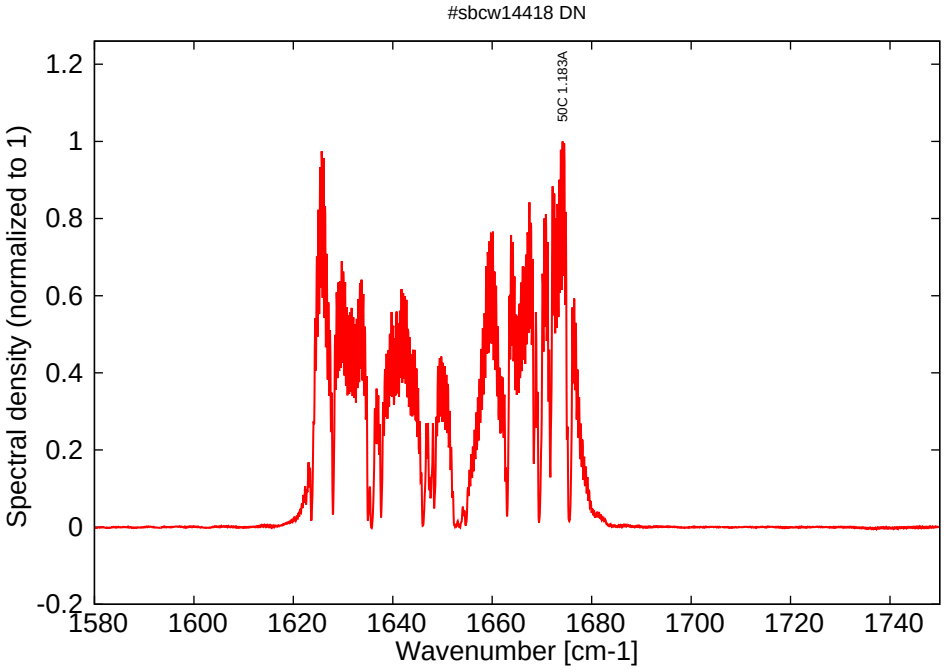

Figure 55: Spectrum at 50C at A