I-C₃H₂, frown, $T_{rot} = 50.0 \text{ K}$, $N_{tot} = 1.5 \text{e} + 12 \text{ cm}^{-2}$, $v_{cen} = 12.0 \text{ km s}^{-1}$, $v_{disp} = 3.0 \text{ km s}^{-1}$ 0.06 $0.06 - E_{II} = 28.46 \text{ K}$ $E_{II} = 28.19 \text{ K}$ $E_{II} = 14.97 \text{ K}$ $\log_{10}(A_{i,j}) = -4.03$ $\log_{10}(A_{i,j}) = -4.01$ $\log_{10}(A_{i,i}) = -4.0$ 0.04 0.04 0.04 0.02 0.02 0.02 0.00 0.00 0.00 -0.02-0.02-0.02-0.04-0.04-0.04102.97002.97502.98002.98502.99002.99503.00003.005 102.97002.97502.98002.98502.99002.99503.00003.005 103.93003.93503.94003.94503.95003.95503.96003.965 104.89504.90004.90504.91004.91504.92004.92504.930 0.04 0.12 $E_U = 34.51 \text{ K}$ $E_U = 41.04 \text{ K}$ $E_U = 41.56 \text{ K}$ $\log_{10}(A_{i,j}) = -3.57$ $\log_{10}(A_{i,j}) = -3.55$ $\log_{10}(A_{i,i}) = -3.76$ 0.03 0.10 0.02 0.02 0.08 0.01 0.06 0.00 0.00 0.04 -0.010.02 -0.02-0.020.00 -0.04-0.03-0.02 $E_U = 27.94 \text{ K}$ -0.04-0.04 $\log_{10}(A_{i,j}) = -3.55$

145.49 145.50

145.51 145.52 145.53

145.54

146.85

146.86

146.87 146.88

146.89

F44 quency [GHz]

 $E_{II} = 28.19 \text{ K}$

0.04

0.02

0.00

-0.02

-0.04

-0.06

0.06

0.04

0.02

0.00

-0.02

-0.04

-0.06 -

125.87

125.88

125.89

125.90

125.91

144.16

144.15

144.17 144.18 144.19

Brightness temperature [K]

 $\log_{10}(A_{i,i}) = -4.03$