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# Isotopic fractionation of deuterium, carbon and nitrogen

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## Résumé

The increased sensitivity and high spectral resolution of millimeter telescopes allow the detection of an increasing number of isotopically substituted molecules in the interstellar medium. We overview and revisit the basic isotopic fractionation reactions involving D, <sup>13</sup>C and <sup>15</sup>N at the light of recent experiments and ab-initio quantum chemistry studies [1, 2, 3]. As possible consequences, we will emphasize the pathways of deuteration in moderately warm environments [4] and the uncertainties in the <sup>14</sup>N/<sup>15</sup>N ratio derivation of carbon and nitrogen containing molecules [3].

## References

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\*Intervenant