UNCERTAINTIES IN THE CHEMICAL MODELING OF HOT CORES

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Chemical modeling involves a large number of reactions with rate coefficients that can be quite uncertain. The errors in the rates have some repercussions on the abundances computed by chemical models. Taking into account these uncertainties is the only rigorous way to compare models with observations, which also have uncertainties. Although comparisons of this type have been undertaken in other fields such as planetary atmospheric photochemistry, this has never been done systematically for astrochemistry. We have made a general study of the consequencies of the uncertainties in chemical rates on the abundances predicted by chemical models. In addition, we have developed a method to identify the reactions that contribute the most to uncertainties in predicted abundances. In this contribution, we will present our results for warm gas-phase chemistry, with a specific application to sulphur chemistry in hot molecular cores.