

Abstract Submitted
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Plasma chemistry round robin LEANNE PITCHFORD, Laplace, CNRS and University Toulouse III — In response to the need for a community-wide activity on the assessment of plasma chemical kinetics in commonly used gases, a round robin exercise was proposed during the discussion session on LXCat at GEC 2016. A call for participation was then circulated and 12 teams responded. Participants were asked to calculate electron temperature and species concentrations using a 0D model of their choice. It was decided to start with a one-level system and a given set of cross sections and to compare predicted densities of species and transport parameters. Results were centralized and distributed anonymously to all participants who then had the opportunity to refine their calculations. After several rounds, good, but not perfect, agreement has been obtained using either a given E/N or a given power as the parameter, and assuming either Maxwellian or non-Maxwellian electron distribution. The round robin is now beginning comparisons in N₂/O₂ mixtures.

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