

3C01: ANALYSIS OF NO STRUCTURE IN A METHANE-AIR EDGE FLAME.

*Habib N. Najm, Denise Ponganis, Jens Prager  
Sandia National Laboratories, USA*

**Comment by Suresh Aggarwal, University of Illinois at Chicago, USA**  
[ska@uic.edu](mailto:ska@uic.edu)

Very interesting study on the NO characteristics in an edge flame. I have two comments. The first is that the NO<sub>x</sub> mechanisms are still not highly predictive, especially with respect to prompt NO.

The second is that your conclusions regarding the dominance of prompt and thermal NO in different flame regions may be dependent on the edge flame structure, which can be modified by changing many parameters including mixture fraction gradient. You may want to qualify your important observations/conclusions in view of these two comments.

**Reply by Habib Najm**  
[hnnajm@ca.sandia.gov](mailto:hnnajm@ca.sandia.gov)

Regarding the first comment, I would submit that our work did not address the validity of NO<sub>x</sub> mechanisms against experimental data. Rather, we focused on analysis of NO chemistry within existing chemical mechanisms.

As to the second comment, yes, of course, our conclusions, like those of any study, are to be qualified by the conditions explored. A more general study spanning a range of operating conditions would be needed to further extend the analysis results, and explore how they might be different over a wide range of conditions.