

## Technical Review

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AME 20231  
12 April 2013

Here we consider the recent article of Smith, *et al.*<sup>1</sup> which describes a new aspect of thermodynamics... The physical problem of interest is motivated by.... A key model equation in this study is the ideal gas law

$$PV = n\bar{R}T. \quad (1)$$

In this equation  $P$  represents pressure,  $V$  the volume,  $n$  the number of moles,  $\bar{R}$  the universal gas constant, and  $T$  the absolute temperature.

The typical method of solving this problem is to....In many cases this is deficient because.... Hence a new method is proposed which.... The method is applied to a set of test problems. It is seen that.... The authors summarize their major conclusions as follows....

The article is generally well written.... A small deficiency is seen in that... Nevertheless the strength of this paper is its clarity in....and novelty in....Those who are interested in problems in the related fields of.... would find this paper to be useful.

## Notes

- Use the format provided here as a template; the text is entirely yours to write. Additional L<sup>A</sup>T<sub>E</sub>X documentation is online in the “links” section of the AME 20231 web page.
- Your review *must* consider a recent ( $t \geq 2012 AD$ ) and substantive article related to thermodynamics from the the journal *Nature*. The article should not be a “lite” summary article written by the editorial staff. Instead it should be a research article written by the people who conducted the research.
- One page maximum; attach a photocopy of the article itself.
- One equation minimum.
- Run your text file through a spell checker (UNIX command: `ispell filename.tex`).
- Always use complete sentences.
- Leave two spaces after a period. Leave one space after a comma.
- Give a footnote in the precise format given below. Do not be redundant with the text.
- Use commas or periods at the end of equations as appropriate.
- Do not use contractions (such as don’t).
- Minimize quotations. Try very hard to have zero quotations. When necessary, use matched pairs of single quotes, like this: “your quote here”.
- Identify all variables with words of description.
- All mathematical variables, whether within the text or in a separate equation, should be written in math mode, e.g. “When  $x = 0$ , there is a singularity.”
- English text within equations should be in text mode; use the `mbox` and `qquad` commands for this:

$$x = 1 \quad \text{when} \quad y = 0.$$

- Do not let your review become dominated by equations.

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<sup>1</sup>Smith, W. J., Jones, J. W., and Brown, W. L., 2012, An important article on some aspect of thermodynamics, *Nature*, 56(3): 1039-1059.

- Avoid simplistic or trite statements such as, “The authors have pointed the way to a method from which we can all benefit.”
- There will be an exciting prize for the review which, in the instructor’s opinion, has the most profound combination of the following qualities: importance of the reviewed paper to thermodynamics, age of the reviewed paper, lucidity of the prose of the review, and depth of understanding of the paper displayed in the review. A brief award ceremony will accompany the bestowal of the prize.