Abstract Evaluation

Name of Editor: Michael Daniel

Identify the below sections in the abstract – if you identify them, copy and paste the text/summarize as instructed. In all cases, add comments if: something is missing, the text could be made clearer and/or the arguments stronger.

* Started with one or two facts that relate to the problem statement (copy them here)

Geologically recent, originally ice-rich, surface deposits on Mars have been observed down to latitudes of 30°. Their properties are latitudinally dependent, suggesting a link between their formation and climate. They may have formed in recent ice ages when water ice and dust was redistributed around Mars due to changes in its spin axis and orbit.

* Explained why these facts are important (copy line here)

Understanding these deposits could therefore be vital to a better understanding of the processes guiding martian climate history.

* Introduced the problem (rewrite the problem in your own words)

However, previous global climate models (GCMs) have not been able to properly explain the latitude dependent mantle (LDM) behavior.

* Stated the goal (copy it here)

We propose to run cutting-edge simulations, using a refined GCM that includes important overlooked processes, to understand their impact on martian climate history and the formation of the LDM.

* What is the key component? (your words)  
  New, cutting edge simulations
* What is the target? (your words)

Cloud microphysics simulations

* Explained the strategy. (copy here)

We will implement cloud microphysics, including the nucleation and growth of water ice onto dust particles, as well as radiatively active clouds (RACs), which will depend on the water ice particle size. By varying the obliquity between 15° and 35°, as it has ranged in the past 5 million years, we will examine how climate and ice distribution have varied over time.

* Stated the importance of the solution *to the subfield*  (copy here)

These simulations will revolutionize our understanding of Mars’ recent climate history and how ice may be accumulated and preserved on the surface of Mars to form features such as the LDM.

* Explained the broader implications of results to *other subfields*  (copy here)

These refinements to global climate modeling are also vital to better understand the processes driving climate changes and water distribution on Mars throughout its history.

All the steps were there! I do wonder if you could try to condense down your mock abstract a bit, as your mock abstract is 240 words vs 149 words of the original abstract. Unless you think the original abstract did not go into enough depth.