

The authors would like to thank the editor for their comments and exceptional rapid reply. We are happy that our updates to section 2 and others have improved readability.

In working with the minor revision below the authors have also found some spelling and grammatical errors, that have been corrected.

Minor revision suggestion:

The revised title, "A novel model of the dynamics of Dansgaard-Oeschger events as seen in the ice-core record," is an improvement, but I recommend a slight refinement for clarity. Consider rephrasing it as: "A novel conceptual model for Dansgaard-Oeschger event dynamics based on ice-core data."

*The title has been revised as suggested.*

Although the authors have stated that each acronym is introduced with the full name, I agree with Reviewer 2 that a table of acronyms would be useful for readers, especially given the technical nature of the paper. This would help in quick referencing and improve accessibility for a general audience.

*A table of the eight acronyms utilised in the text have been added before the introduction.*

While the authors replaced "NOISE" with the symbol  $\sigma W$ , it would still be helpful to briefly explain the role of noise earlier in the manuscript (possibly in Section 2.2). This would avoid forcing readers to jump ahead to Section 2.3.5 for a detailed explanation.

*To keep section 2.2 light on technical details we have added the line " The factor  $dW$  is Gaussian noise added at each timestep scaled by  $\sigma$ . This represents the internal climatic variability and can lead to noise-induced tipping. See the end of Sect. 2.3.5 and Sect. 3.1 for more details on the properties of the noise" This gives the reader the necessary information to understand the rest of the paper.*

The placement of figure captions should be consistent, especially regarding the alignment of axes and label fonts, e.g. label fonts in Fig 1 and Fig 4 are much smaller than those in other figures.

*We have increased the size of labels on fig 1 and 4.*