Interactive comment on "Role of forcing uncertainty and model error background characterization in snow data assimilation" *by* Sujay V. Kumar et al.

Anonymous Referee #1

This paper presents a study on uncertainties and errors in terrestrial snow assimilation, and is thus within the scope of HESS. It is a well-developed concise article using clear language, and as such, it is a fine addition to the scientific knowledge. However, the experimental set-up lacks some details and references. For example, no information is given about FORCING1, FORCING2 and the 4 other forcing datasets before section 4.

Lines 57-59: This sentence is too speculative; there are many steps to reach that conclusion. Since it is part of the motivation for this article, please expand on the explanation and add references. Equation (2): Please say what the exponent "T" refers to. Line 124: Add a reference corresponding to the NOAH LSM v3.3. Lines 150 and 160: Do you mean synthetic observations? Lines 152-153: Does it mean the OL was

an ensemble run? If so, please justify/clarify. Lines 179-180: No prior information is given on the forcing datasets. Line 213: Please add reference or website. Table 1 and line 258: Is it cumulative in time? Please clarify.