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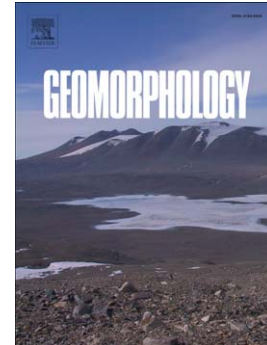
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Modelling aeolian sand transport using a dynamic mass balancing approach

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Highlights

- A new model for aeolian sand transport is proposed, based on dynamic mass balancing (DMB).
- A temporal lag in flux response to wind velocity naturally emerges in the DMB model.
- The DMB model outperforms two existing models over a range of timescales (10 Hz–10 min).
- 4s and 1 min averaging intervals are identified as best for predicting sand transport.
- Modelling sand transport with this new model could significantly improve landscape-scale studies.

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