

References

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Paper 1 Elucidated Rolling Diffusion Models

```
@article{cachay2025elucidated,  
  title={Elucidated Rolling Diffusion Models for Probabilistic Forecasting of  
    Complex Dynamics},  
  author={Cachay, Salva R{"u}hling and Aittala, Miika and Kreis, Karsten and  
    Brenowitz, Noah and Vahdat, Arash and Mardani, Morteza and Yu, Rose},  
  journal={{ArXiv} preprint {ArXiv}:2506.20024},  
  year={2025},  
  doi={10.48550/arXiv.2506.20024}  
}
```

[[CAK⁺25](#)]

Paper 2 DiffDA

```
@article{huang2024diffda,  
  title={{DiffDA}: A Diffusion Model for Weather-scale Data Assimilation},  
  author={Huang, Langwen and Gianinazzi, Lukas and Yu, Yuejiang and D{"u}ben,  
    Peter D. and Hoefler, Torsten},  
  journal={{ArXiv} preprint {ArXiv}:2401.05932},  
  year={2024},  
  doi={10.48550/arXiv.2401.05932}  
}
```

[[HGY⁺24](#)]

Paper 3 Deep Learning-Based Aerosol and Ocean Data Retrieval

```
@inproceedings{wang2025aerosol,  
  title={Deep Learning-Based Aerosol and Ocean Data Retrieval from Satellite  
    Polarimeter Measurements},  
  author={Wang, Lingxiao and Stamnes, Snorre and Hassan, Sunzid and Isiani,  
    Alexander and Sturdivant, Cheston and Le, Hoang My and Mahmud, Khan  
    Raqib},  
  booktitle={{IEEE} SoutheastCon},  
  year={2025},  
  pages={1542--1547},  
  doi={10.1109/SoutheastCon56624.2025.10971488}  
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[[MCH⁺25](#)]

Paper 4 Transformers

```
@article{vaswani2017attention,  
  title={Attention Is All You Need},  
  author={Vaswani, Ashish and Shazeer, Noam and Parmar, Niki and Uszkoreit,  
    Jakob},  
  journal={ArXiv preprint ArXiv:1706.03762},  
  year={2017},  
  doi={10.48550/arXiv.1706.03762}  
}
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@article{manshausen2025generative,
  title={Generative Data Assimilation of Sparse Weather Station Observations at Kilometer Scales},
  author={Manshausen, Peter and Cohen, Yair and Harrington, Peter and Pathak, Jaideep and Pritchard, Mike S. and Garg, Piyush and Mardani, Morteza and Kashinath, Karthik and Byrne, Simon and Brenowitz, Noah D.},
  journal={Journal of Advances in Modeling Earth Systems},
  volume={17},
  number={10},
  pages={e2024MS004505},
  year={2025},
  doi={10.1029/2024MS004505}
}
```

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- [CAK⁺25] Salva Rühling Cachay, Miika Aittala, Karsten Kreis, Noah Brenowitz, Arash Vahdat, Morteza Mardani, and Rose Yu. Elucidated rolling diffusion models for probabilistic forecasting of complex dynamics. *ArXiv preprint ArXiv:2506.20024*, 2025.
- [HGY⁺24] Langwen Huang, Lukas Gianinazzi, Yuejiang Yu, Peter D. Düben, and Torsten Hoefler. DiffDA: A diffusion model for weather-scale data assimilation. *ArXiv preprint ArXiv:2401.05932*, 2024.
- [MCH⁺25] Peter Manshausen, Yair Cohen, Peter Harrington, Jaideep Pathak, Mike S. Pritchard, Piyush Garg, Morteza Mardani, Karthik Kashinath, Simon Byrne, and Noah D. Brenowitz. Generative data assimilation of sparse weather station observations at kilometer scales. *Journal of Advances in Modeling Earth Systems*, 17(10):e2024MS004505, 2025.
- [VSP⁺17] Ashish Vaswani, Noam Shazeer, Niki Parmar, Jakob Uszkoreit, Llion Jones, Aidan N. Gomez, Lukasz Kaiser, and Illia Polosukhin. Attention is all you need. *ArXiv preprint ArXiv:1706.03762*, 2017.
- [WSH⁺25] Lingxiao Wang, Snorre Stamnes, Sunzid Hassan, Alexander Isiani, Cheston Sturdivant, Hoang My Le, and Khan Raqib Mahmud. Deep learning-based aerosol and ocean data retrieval from satellite polarimeter measurements. In *IEEE SoutheastCon*, pages 1542–1547, 2025.