

# Curriculum Vitae

**NATHAN PALDOR**

**Professor of Dynamical Meteorology and Physical Oceanography**

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Date of Resume: July, 2020

Languages: Hebrew, English

Citizenship: Israel, USA

## Scientific interests

- a. Geophysical Fluid Dynamics
- b. Application of linear wave theory to formulate test cases for global scale GCMs
- c. Extension of the Geostrophic Adjustment problem to continuous initial fields
- d. Wind-driven circulation in the ocean for general wind stress
- e. A Lagrangian perspective of net evaporation (evaporation minus precipitation)
- f. Circulation in semi-enclosed basins and estuaries

## Education

Summer 1983: Post-Doctoral Fellow – Woods Hole Oceanographic Inst., Summer Program in Geophysical Fluid Dynamics; Woods Hole, MA 02135

1979-1982: Ph.D. - Physical Oceanography, Graduate School of Oceanography University of Rhode Island; Kingston, RI 02881

1973-1976: M.Sc. - Applied Physics (Electro-Optics), Weizmann Institute of Science; Rehovot, 76100 Israel

1970-1973: B.Sc., Cum Laude - Mathematics and Physics, Hebrew University of Jerusalem; Jerusalem, 91904 Israel

**Ph.D. Thesis Topic:** Stable and Unstable Modes of Surface Fronts (Melvin E. Stern, Advisor)

**M.Sc. Thesis Topic:** Wave Propagation and Energy Losses in Hollow, Dielectric Waveguides (S. Shtrikman, Advisor)

## Academic Experience

1985 – Present: Department of Atmospheric Sciences, Institute of Earth Sciences; The Hebrew University of Jerusalem.

1982 – 1985: Post-Doctoral Fellow; Geo-science Group, Department of Isotope Research, The Weizmann Institute of Science; Rehovot, 76100 Israel

1976 – 1979: Research Associate; Geo-science Group, Department of Isotope Research, The Weizmann Institute of Science; Rehovot, 76100 Israel

## **Long visits and Short-Term/Adjunct Appointments**

- 1999 – 2017: Adjunct Professor Rosenstiel School of Marine and Atmospheric Sciences, University of Miami.
- Spring 2015: Visiting Professor, Department of Earth and Planetary Sciences, University of Pennsylvania, Philadelphia, Pennsylvania.
- March – Oct. 2013: Visiting Professor, Department of Earth and Planetary Sciences, Johns Hopkins University, Baltimore, Maryland
- March – Aug. 2009: Visiting Professor, Institute of Marine and Coastal Sciences, Rutgers, The State University of New Jersey, New Brunswick, New Jersey.
- 2007 – 2011: Adjunct Professor, Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- March – Oct. 1999: Visiting Professor, MPO/RSMAS/University of Miami, Miami, FL 33149
- Summers 1986 – 96: Visiting Assoc. Prof., Department of Atmospheric Sciences and Institute of Geophysics and Planetary Physics, UCLA, Los Angeles, CA 90024
- 1991 – 92: Visiting Professor, Graduate School of Oceanography, University of Rhode Island, Kingston, RI 02882
- Fall 1989: Visitor, Department of Oceanography and Institute of Geophysical Fluid Dynamics, Florida State University, Tallahassee, FL 32306

## **Professional Affiliations**

- 1) American Meteorological Society
- 2) American Geophysical Union.
- 3) European Geosciences Union

## **Public Commitments**

- 1) Member, Board of Directors Israel Oceanographic and Limnological Research (1993–96)
- 2) Associate Editor: Israel Journal of Earth Sciences (1990–92), (1 Jan. 2000 – Present)
- 3) Chair of Scientific Steering Committee for Oceanography: IOLR, Haifa (1992–1998)
- 4) Chair of Studies: Institute of Earth Sciences, The Hebrew University, Jerusalem (1994–96)
- 5) Member of the Board of Editors: Ocean Modeling (1999 – 2009)
- 6) Chairman and Convener of Environmental Physics sessions; Israel Physical Society 46<sup>th</sup> and 47<sup>th</sup> Annual Meetings, IPS2000 and IPS2001.
- 7) Member; Steering Committee of the Hydrologic Service: "Lake Kinneret Modeling" 2003-06.
- 8) Chair of Studies: Institute of Earth Sciences, Hebrew University, Jerusalem (2004–2008).
- 9) Member, National committee of the Israel Academy of Sciences on space-related research in Israel (The Israeli branch of COSPAR International). 2005 – Present.
- 10) Associate Dean – Academic Affairs; Faculty of Mathematics and Natural Sciences, the Hebrew University of Jerusalem. 2009 - 2012.
- 11) Member, Public Committee of Speaker of the House's Prize for the Environment - 2012.
- 12) Member, International COSPAR Task Force on GEO (Group on Earth Observations) 2012 – 2015
- 13) Member, Editorial Board, Journal of Marine Sciences and Engineering. 2020 - Present

## **Prizes, Awards and Fellowships**

- 2014/2015 – Bogen Foundation Fellow – HU/University of Pennsylvania
- 2001 – Fellow of the Royal Meteorological Society.
- 1989, 1990, 1997, 1999 – Rector's citation for excellence in teaching; The Hebrew University.

1998 – Senior Associateship: US National Res. Council (GSFC/GISS deferred appointment)  
 1987 – The Royal Society of London/Israel Academy of Sciences Fellowship; Hooke Institute for Atmospheric Physics, University of Oxford.  
 1986 – M. Richter Young Researchers’ Award; The Hebrew University, Jerusalem.  
 1984 – The M. Marks Kennedy Fellowship, Weizmann Institute of Science.

**Outstanding Public Recognition of my Research**

1992 – Study on parting of the Red Sea (publications 23 and 27) discussed in editorials in *Science*, *NY Times*, the *Britannica* 1994 Yearbook of Science and the Future, *Public Broadcast Service* (PBS), CNN, NBC and hundreds of newspapers and television networks around the world.

**Research Grants (recent 5 years)**

Paldor, N. “The structure and trajectory of meso-scale oceanic vortices“. Eshkol Foundation of the Israel Ministry of Science and technology. 2011-2014, 180,000 NIS

**Current Graduate Students**

1. Itamar Yacoby (Ph.D. – Geophysical Fluid Dynamics, co-supervised with H. Gildor)

**Past Graduate students and Postdocs under my supervision**

| Post-Doc Fellows | Year Graduated | Ph.D. students | Year Graduated | M.Sc. students   | Year Graduated |
|------------------|----------------|----------------|----------------|------------------|----------------|
| Baruch Ziv       | 2002           | Tal Berman     | 1999           | Ann Wolf-Vecht   | 1990           |
| Yair De-Leon     | Current        | Yona Dvorkin   | 2001           | Tal Berman       | 1991           |
| Ofer Shamir      | Current        | Ori Adam       | 2011           | Emmanuel Boss    | 1991           |
|                  |                | Yair Cohen     | 2016           | Ran Weinstein    | 1999           |
|                  |                | Yair De-Leon   | 2016           | Moshe Ben-Sasson | 2004           |
|                  |                | Ofer Shamir    | 2018           | Shira Rubin      | 2006           |
|                  |                | Itamar Yacoby  | Current        | Yair De-Leon     | 2008           |
|                  |                |                |                | Yair Cohen       | 2009           |
|                  |                |                |                | Ofer Shamir      | 2011           |
|                  |                |                |                | Itamar Yacoby    | 2019           |

**Invited Talks (recent five years)**

Paldor, N. (2020). *A Lagrangian View of Evaporation from the Ocean*. International workshop on Mathematical Aspects of Geophysical Flows. University of Vienna, 19-24/January/2020.  
 Paldor, N. (2019). *Waves and Turbulence in the Atmosphere: Observations, Theory and Simulations*. International Workshop on Climate and Wave Dynamics. Eilat, Israel, 23-27/September/2019  
 Paldor, N. (2018). *How Do Large Scale Flows in the Ocean Become Geostrophic?* Open Mathematical Questions in Physical Oceanography. International Workshop on Mathematical Aspects of Physical Oceanography. Erwin Schrödinger International Institute, Vienna, 1-10/2/2018.  
 Paldor, N. (2013). A mini-course on: *Non-Harmonic Waves in Geophysical Fluid Dynamics*. International Meteorological Institute, Stockholm University, 7-11/October 2013.

## Refereed Publications - Nathan Paldor

1. Paldor, N., A. Nir and S. Lewis (1978). Use of simulation as an aid in parameter identification of a lake ecosystem., In: *Modeling, Identification and Control in Environmental Systems*. Vensteenkiste (Ed.), North Holland Publishing Company.
2. Paldor, N. and D. A. Anati (1979). Seasonal variations of temperature and salinity in the Gulf of Elat. *Deep-Sea Res.*, **26/6A**, 661–672. DOI: [https://doi.org/10.1016/0198-0149\(79\)90039-6](https://doi.org/10.1016/0198-0149(79)90039-6)
3. Stern, M. E. and N. Paldor (1983). Large amplitude long waves in shear flow. *Phys. Fluids*, 26(4), 906–919. DOI: <http://doi.org/10.1063/1.864240>
4. Paldor, N. (1983a). Linear stability and stable modes of geostrophic fronts. *Geophys. Astrophys. Fluid Dyn.*, **24**, 299–326. DOI: <http://doi.org/10.1080/03091928308209070>
5. Paldor, N. (1983b). Stability and stable modes of coastal fronts. *Geophys. Astrophys. Fluid Dyn.*, **27**, 217–228. DOI: <http://doi.org/10.1080/03091928308210127>
6. Killworth, P. D., N. Paldor and M. E. Stern (1984). Wave propagation and growth on a surface front in a two-layer geostrophic current. *J. Mar. Res.*, **42**, 761–785. DOI: <https://doi.org/10.1357/002224084788520701>
7. Killworth, P. D. and N. Paldor (1985). A model of sea-ice front instability. *J. Geophys. Res.*, **90(C1)**, 883–895. DOI: <http://doi.org/10.1029/JC090iC01p00883>
8. Paldor, N. (1986). Nonlinear waves on a coupled density front. *Geophys. Astrophys. Fluid Dyn.*, **37**, 171–191. DOI: <https://doi.org/10.1080/03091928608210095>
9. Ronen, D., M. Magaritz, N. Paldor and Y. Bachmat (1986). The behavior of groundwater in the vicinity of the water table, evidenced by specific discharge profiles. *Water Resources Res.*, **22(6)**, 1217–1224. DOI: <https://doi.org/10.1029/WR022i008p01217>
10. Paldor, N. and P. D. Killworth (1987). Instabilities of a two-layer coupled front. *Deep Sea Res.*, **34(9)**, 1525–1539. DOI: [https://doi.org/10.1016/0198-0149\(87\)90107-5](https://doi.org/10.1016/0198-0149(87)90107-5)
11. Paldor, N. (1988). Amplitude-Wavelength Relations of Nonlinear Frontal Waves on Coastal Currents. *J. Phys. Oceanogr.*, **18(5)**, 753–760. DOI: [https://doi.org/10.1175/1520-0485\(1988\)018<0753:ARONFW>2.0.CO;2](https://doi.org/10.1175/1520-0485(1988)018<0753:ARONFW>2.0.CO;2)
12. Khait, A. and N. Paldor (1988). Long, Nonlinear Oscillations of Density Fronts. *Geophys. Astrophys. Fluid Dyn.*, **42**, 175–186.
13. Ronen, D., M. Magaritz and N. Paldor (1988). Microscale haline convection – a proposed mechanism for transport at the water table region. *Water Resources Res.*, **24(7)**, 1111–1117.
14. Paldor, N. and P. D. Killworth (1988). Inertial Trajectories on the Rotating Earth. *J. Atmos. Sci.*, **45**, 4013–4019. doi: 10.1029/88WR01824
15. Gvirtzman, H., N. Paldor, M. Magaritz and Y. Bachmat (1988). Mass Exchange between Mobile Fresh Water and Immobile Saline Water in the Unsaturated Zone. *Water Resources Res.*, **24**, 1638–1644.
16. Ganor, J., A. Matthews and N. Paldor (1989). Constraints on Effective Diffusivity During Oxygen Isotope Exchange at a Marble-Schist Contact, Sifnos (Cyclades), Greece. *Earth Planet. Sci. Lett.*, **94(3/4)**, 208–216.
17. Paldor, N. and M. Ghil (1990). Finite-wavelength instabilities of a coupled density front. *J. Phys. Oceanogr.*, **20(1)**, 114–123.
18. Paldor, N. and A. Khait (1990). A note on the use of zero potential vorticity models. *Geophys. Astrophys. Fl. Dyn.*, **51**, 27–34.
19. Paldor, N. and D. Nof (1990). Linear instability of an anticyclonic vortex in a two-layer ocean. *J. Geophys. Res.*, **95(C10)**, 18,075–18,079.

20. Paldor, N. (1990). Nonlinear Waves on Geostrophic Fronts. In: Proceedings of the Third International Symposium on Stratified Flows, February 3-5, 1987, Pasadena, California; E. J. List and G. H. Jirka, (Eds.), *Am. Soc civil Eng.*, 1124 pp, 249-255.
21. Paldor, N. and M. Ghil (1991). Shortwave instabilities of coastal currents. *Geophys. Astrophys. Fluid Dyn.*, **58**, 225–242.
22. Nof, D., N. Paldor and S. VanGorder (1991). Abyssal Gyres. *Geophys. Astrophys. Fluid Dyn.*, **58**, 173–196.
23. Ganor, J., A. Matthews and N. Paldor (1991). Diffusional isotopic exchange across an interlayered Marble-schist sequence with an application to Tinos, Cyclades, Greece. *J. Geophys. Res.*, **96(B10)**, 18073–18080. doi: 10.1029/91JB01575,
24. Nof, D. and N. Paldor (1992). Are there oceanographic explanations for the Israelites crossing of the Red Sea? *Bull. Am. Met. Soc.*, **73(3)**, 305–314.
25. Wolf-Vecht, A., N. Paldor and S. Brenner (1992). Hydrographic indications of the advection/ convection effects in the Gulf of Elat. *Deep Sea Res.* **39(7/8)**, 1393–1401.
26. Paldor, N. and E. Boss (1992). Chaotic trajectories and dispersion of Lagrangian particles in a tidally driven atmosphere. *J. Atmos. Sci.*, **49(23)**, 2306–2318.
27. Paldor, N., C.-H. Liu, R. M. Wakimoto and M. Ghil (1994). A New frontal instability: Theory and ERICA observations. *J. Atmos. Sci.*, **51(22)**, 3227–3237.
28. Nof, D. and N. Paldor (1994). Statistics of wind over the Red Sea with application to the Exodus question. *J. Appl. Met.*, **33(8)**, 1017–1025.
29. Ghil, M. and N. Paldor (1994). A model equation for nonlinear wavelength selection and amplitude evolution of frontal waves. *J. Nonlinear Sci.*, **4**, 471–496.
30. Dutkiewicz, S. and N. Paldor (1994). On the mixing enhancement in a meandering jet due to the interaction with an eddy. *J. Phys. Oceanogr.*, **24(11)**, 2418–2423.
31. Berman, T., S. Brenner and N. Paldor (1995). Salt fingering in the Cyprus Eddy. In: Double- Diffusive Convection. Brandt A. and H. J. S. Fernando (Eds.). *The American Geophysical Union, Geophysical Monographs*, **94**, 251–260.
32. Rom-Kedar, V., Y. Dvorkin and N. Paldor (1995). Chaotic motion on a rotating sphere. In: *Lévy flights and related topics in physics*. Shlesinger, Zaslavsky and Frisch (Eds). Springer- Verlag Lecture Notes in Physics. **450**, 72–87. An invited paper to the volume.
33. Boss, E., N. Paldor and L. Thompson (1996). Stability of a potential vorticity front; from quasi-geostrophy to shallow-water. *J. Fluid Mech.*, **315**, 65–83.
34. Rom-Kedar, V., Y. Dvorkin and N. Paldor (1997). Chaotic Hamiltonian dynamics of particle's horizontal motion in the atmosphere. *Physica D*, **106(3–4)**, 389–431.
35. Paldor, N. and M. Ghil (1997). Linear instability of a zonal jet on an f-plane. *J. Phys. Oceanogr.*, **27(11)**, 2361–2369.
36. Rom-Kedar, V. and N. Paldor (1997). From the Tropics to the Poles in forty days. *Bull. Am. Met. Soc.*, **78(12)**, 2779–2784.
37. Gelb, A., D. Gotllieb and N. Paldor (1997). Wind set-down relaxation on a sloping beach. *J. Comp. Phys.*, **138(2)**, 644–664.
38. Genin, A. and N. Paldor (1998). Changes in the circulation and current spectrum near the tip of the narrow, seasonally mixed, Gulf of Elat. *Israel J. Earth Sci.*, **47**, 87–92.
39. Dvorkin, Y. and N. Paldor (1999). Analytical considerations of Lagrangian Cross–Equatorial flow. *J. Atmos. Sci.*, **56(9)**, 1229–1237.
40. Ziv, B. and N. Paldor (1999). The divergence field associated with time-dependent jet streams. *J. Atmos. Sci.*, **56(12)**, 1843–1857.
41. Paldor, N. (1999). Linear instability of barotropic submesoscale coherent vortices observed in the Ocean. *J. Phys. Oceanogr.*, **29(6)**, 1442–1452.
42. Paldor, N. and V. Rom-Kedar (1999). Reply to Comments on “From the Tropics to the Poles in forty days”. *Bull. Am. Met. Soc.*, **80(5)**, 905–908.

43. Paldor, N. and Y. Dvorkin (2000). Noise induced inter-hemispheric particle transport – Stochastic Resonance in a Hamiltonian system. *J. Atmos. Sci.*, **57(1)**, 150–157.
44. Kearns, E. D. and N. Paldor (2000). Why are the meanders of the North Atlantic Current stable and stationary? *Geophys. Res. Lett.*, **27(7)**, 1029–1033.
45. Weinstein, R., N. Paldor, A. Anati and A. Hecht (2000). Internal Seiches in the Strongly Stratified Dead Sea. *Israel J. Earth Sci.*, **49(1)**, 45–53.
46. Berman, T., N. Paldor and S. Brenner (2000). Simulation of Wind-Driven Circulation in the Gulf of Elat (Aqaba). *J. Mar. Sys.*, **26(3-4)**, 349–365.
47. Dvorkin, Y., N. Paldor and C. Basdevant (2001). Reconstructing balloon trajectories in the tropical stratosphere with a hybrid model using analyzed fields. *Q. J. Roy. Meteor. Soc.*, **127(573A)**, 975-988.
48. Paldor, N. (2001). The zonal drift associated with time-dependent particle motion on the earth. *Q. J. Roy. Meteor. Soc.*, **127(577A)**, 2435-2450.
49. Paldor N. and A. Sigalov (2001). The mechanics of inertial motion on the earth and on a rotating sphere. *Physica D*, **160(1-2)**, 29-53.
50. Paldor, N., Y. Dvorkin and C. Basdevant (2002). Improving the calculation of particle trajectories in the extra-tropical troposphere using standard NCEP fields. *Atmos. Env.*, **36/3**, 483-490.
51. Paldor, N. (2002). The transport in the Ekman surface layer on the spherical Earth. *J. Mar. Res.*, **60(1)**, 47-72.
52. Nof, D., N. Paldor and S. VanGorder (2002). The Reddy Maker. *Deep Sea Res. Part I.*, **49(9)**, 1531-1549.
53. Berman, T., N. Paldor and S. Brenner (2003). The annual SST cycle in the Eastern Mediterranean Red Sea and Gulf of Elat. *Geophys. Res. Lett.*, **30(5)**, 1261-1264.
54. Berman, T., N. Paldor and S. Brenner (2003). The Seasonality of Tidal Circulation in the Gulf of Elat. *Israel J. Earth Sci.*, **52(1)**, 11-19.
55. Paldor, N., A. Sigalov and D. Nof (2003). The mechanics of eddy transport from one hemisphere to the other. *Q. J. Roy. Meteor. Soc.*, **129(591B)**, 2011-2025.
56. Paldor, N., Y. Dvorkin, A.J. Mariano, T. Ozkogmen and E. Ryan (2004). A practical, hybrid model for predicting the trajectories of near-surface ocean drifters. *J. Tech.*, **21(8)**, 1246-1258.
57. Haza, A. C., N. Paldor and A. J. Mariano (2004). Linear instabilities of a two-layer geostrophic surface front near a wall. *J. Mar. Res.*, **62(5)**, 639-662.
58. Paldor, N. and A. Sigalov (2006). Inertial particle approximation to solutions of the Shallow Water Equations on the rotating spherical Earth. *Tellus*, **58A**, 280-292. doi:10.1111/j.1600-0870.2006.00170.x
59. Nof, D., I. McKeague and N. Paldor (2006). Is there a paleolimnological explanation for “walking on water” in the Sea of Galilee? *J. Paleolimnology*, **35(3)**, 417-439. 10.1007/s10933-005-1996-1
60. Paldor, N. and Y. Dvorkin (2006). Barotropic Instability of a Zonal Jet: From Nondivergent Perturbations on the  $\beta$ -plane to Divergent Perturbations on a Sphere. *J. Phys. Oceanogr.*, **36(12)**, 2271-2282. DOI: 10.1175/JPO2960.1
61. Paldor, N., S. Rubin and A. J. Mariano (2007). A Consistent Theory for Linear Waves of the Shallow-Water Equations on a Rotating Plane in Midlatitudes. *J. Phys. Oceanogr.*, **37(1)**, 115-128. DOI: <http://doi.org/10.1175/JPO2986.1>
62. Paldor, N. (2007). Inertial Particle Dynamics on the Rotating Earth. In: *Lagrangian Analysis and Prediction of Coastal and Ocean Dynamics*. A. Griffa, A. D. Kirwan Jr., A. J. Mariano, T. Özgökmen, and H. T. Rossby (Eds.). Cambridge Univ. Press, UK. 119-135. DOI: <http://doi.org/10.2277/0521870186>

63. Erlick, C., N. Paldor and B. Ziv (2007). Linear waves in a symmetric equatorial channel. *Q. J. Roy. Meteor. Soc.*, **133(624)**, 571-577. DOI: <http://doi.org/10.1002/qj.44>
64. Rubin, S., B. Ziv and N. Paldor (2007). Tropical Plumes over Eastern North Africa as a source of rain in the Middle East. *Month. Wea. Rev.*, **135(12)**, 4135-4148.
65. Nof, D., I. McKeague and N. Paldor (2007). Was there ice along the shore of the Sea of Galilee during the last 12,000?—Reply to a comment by Prange et al. (2007) and a comment by Friedman (2007). *J. Paleolimnology*. **38(4)**, 597-600.
66. Heifetz, E., N. Paldor, Y. Oreg, A. Stern and I. Merksamer (2007). Higher order corrections for Rossby waves in a zonal channel on the  $\beta$ -plane. *Q. J. Roy. Meteor. Soc.*, **133(628)**, 1893-1898, DOI: <http://doi.org/10.1002/qj.144>.
67. Rubin, S., N. Paldor and B. Ziv (2007). On the dominance of changes in planetary angular momentum in large scale Extra-tropical flows. *Geophys. Res. Lett.*, **34**, L23814, DOI: <http://doi.org/10.1029/2007GL031145>
68. Paldor, N. (2008). Non-divergent 2D vorticity dynamics and the Shallow Water Equations on the rotating Earth. In: *IUTAM symposium on Hamiltonian Dynamics, Vortex Structures and Turbulence. Proceedings of the IUTAM symposium held in Moscow, 25-30 August, 2006*. A.V. Borisov, V. V. Kozlov, I. S. Mamaev and M. A. Sokolovskiy (Eds.). Springer-IUTAM bookseries. **6**, 177-187.
69. Paldor, N. and A. Sigalov (2008). A unified theory of linear waves of the Shallow Water Equations on a rotating plane. In: *IUTAM symposium on Hamiltonian Dynamics, Vortex Structures and Turbulence. Proceedings of the IUTAM symposium held in Moscow, 25-30 August, 2006*. A.V. Borisov, V. V. Kozlov, I. S. Mamaev and M. A. Sokolovskiy (Eds.). Springer-IUTAM bookseries. **6**, 403-413.
70. Paldor, N. (2008). On the estimation of trends in annual rainfall using paired gauge observations. *J. Appl. Met. Clim.*, **47(6)**, 1814-1818.
71. Paldor, N., S. Rubin and A. J. Mariano (2008). Reply to: On "A Consistent Theory for Linear Waves of the Shallow-Water Equations on a Rotating Plane in Midlatitudes" by Poulin F. J. and K. Rowe (2008). *J. Phys. Oceanogr.*, **38(9)**, 2118-2119.
72. Paldor, N. and A. Sigalov (2008). Trapped waves on the Mid-latitude  $\beta$ -plane. *Tellus*, **60A**, 742-748. DOI: <https://doi.org/10.1111/j.1600-0870.2008.00332.x>
73. Ben-Sasson, M., S. Brenner and N. Paldor (2009). Estimating air-sea heat fluxes in semi-enclosed basins: The case of the Gulf of Elat (Aqaba). *J. Phys. Oceanogr.*, **39(1)**, 185-202.
74. Adam, O. and N. Paldor (2009). Global circulation in an axially symmetric shallow water model forced by equinoctial differential heating. *J. Atmos. Sci.*, **66(5)**, 1418-1433. <https://doi.org/10.1175/2008JAS2685.1>
75. Paldor, N., Y. Dvorkin and E. Heifetz (2009). Divergent versus non-divergent perturbation of piecewise uniform shear flows on the  $f$ -plane. *J. Phys. Oceanogr.*, **39(7)**, 1685-1699.
76. Paldor, N. and J. R. E. Lutjeharms (2009). Why is the stability of the Agulhas Current geographically bi-modal? *Geophys. Res. Lett.*, **36**, L14604, <https://doi.org/10.1029/2009GL038445>.
77. De-Leon, Y. and N. Paldor (2009). Linear waves in Mid-latitudes on the rotating spherical Earth. *J. Phys. Oceanogr.*, **39(12)**, 3204-3215.
78. Cohen, Y., N. Paldor and J. Sommeria (2010). Laboratory experiments and a non-harmonic theory for topographic Rossby waves over a linearly sloping bottom on the  $f$ -plane. *J. Fluid Mech.*, **645**, 479-496.
79. De-Leon, Y., C. Erlick and N. Paldor (2010). The eigenvalue equations of equatorial waves on a sphere. *Tellus*, **62A**, 62-70.

80. Adam, O. and N. Paldor (2010). Global circulation in an axially symmetric shallow water model forced by off-equatorial differential heating. *J. Atmos. Sci.*, **67(4)**, 1275-1286. <https://doi.org/10.1175/2008JAS2685.1>
81. Nof, D. and N. Paldor (2010). The cave resonator and the Parker Turner cave collapse problem. *Safety Science*, **48(5)**, 607-614. <https://doi.org/10.1016/j.ssci.2010.01.010>
82. Adam, O. and N. Paldor (2010). On the role of viscosity in ideal Hadley circulation models. *Geophys. Res. Lett.* **37**, L16801, <https://doi.org/10.1029/2010GL043745>.
83. Paldor, N. (2010). On spurious instabilities on the  $\beta$ -planes with no mean flows. *Ann. Geophys.*, **28**, 1737-1739. <https://doi.org/10.5194/angeo-28-1737-2010>
84. Paldor, N. and A. Sigalov (2011). An Invariant Theory of the Linearized Shallow Water Equations with Rotation and its application to a sphere and a plane. *Dyn. Atmos. Ocean*, **51**, 26-44. <https://doi.org/10.1016/j.dynatmoce.2010.10.001>
85. De-Leon Y. and N. Paldor (2011). Zonally propagating wave solutions of Laplace Tidal Equations in a baroclinic ocean of an aqua-planet. *Tellus*, **63A**, 348-353. <https://doi.org/10.1111/j.1600-0870.2010.00490.x>
86. Ashkenazy, Y., N. Paldor and Y. Zarmi (2011). On the meridional structure of extra-tropical Rossby waves. *Tellus*, **63A**, 817-827. <https://doi.org/10.1111/j.1600-0870.2011.00516.x>
87. Nof, D., V. Zharkov, J. Ortiz, N. Paldor and E. Chassignet (2011). The arrested Agulhas retroflexion. *J. Mar. Res.* **69**, 659-691. <https://doi.org/10.1357/002224011799849453>
88. Paldor, N., Y. Dvorkin and D. Nof (2011). Linear instability of uniform shear zonal currents on the  $\beta$ -plane. *J. Mar. Res.* **69**, 693-704. <https://doi.org/10.1357/002224011799849327>
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## **Books**

Paldor, N. (2015). *Shallow Water Waves on the Rotating Earth*. SpringerBriefs in Earth System Sciences. 77 pp. DOI 10.1007/978-3-319-20261-7, ISBN: 978-3-319-20260-0 (Print) 978-3-319-20261-7 (eBook)

## **Publications under review in refereed journals**

- S1. Constantin, A., D. G. Dritschel and N. Paldor (2020). An algorithm for computing the deflection angle of surface ocean currents relative to the wind direction. *Math. Geos.*
- S2. De-Leon, Y., I. Fouxon, C. I. Garfinkel and N. Paldor (2020). Planetary, Inertia-gravity and Kelvin waves on the  $f/\beta$ -plane in the presence of a uniform zonal flow. *Quart. J. Roy. Met. Soc.*
- S3. Yacoby, I., H. Gildor and N. Paldor (2020). Geostrophic adjustment on the  $f$ -plane: symmetric versus anti-symmetric initial conditions and boundary effects. *J. Fluid. Mech.*
- S4. Gianchandani, K., H. Gildor and N. Paldor (2020). On the role of domain aspect ratio in the westward intensification of wind-driven surface ocean circulation. *Ocean Sci.*