

# Curriculum Vitae

## NATHAN PALDOR

Professor of Dynamical Meteorology and Physical Oceanography

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Date of Resume: April, 2024

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**

- 9/2020 – 9/2023 Visiting/Adjunct Professor, School of Marine Science and Policy, College of Earth, Ocean and Environment, University of Delaware, DL, USA.
- 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
- 14) Co-convener of Thematic Program on “The Dynamics of Planetary-Scale Fluid Flows”. The Erwin Schrödinger International Institute, Vienna, Austria. 11/April/23 – 2/June/23.

## **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**

<b>Post-Doc Fellows</b>	<b>Year Graduated</b>	<b>Ph.D. students</b>	<b>Year Graduated</b>	<b>M.Sc. students</b>	<b>Year Graduated</b>
Baruch Ziv	2002	Tal Berman	1999	Ann Wolf-Vecht	1990
Yair De-Leon	2018	Yona Dvorkin	2001	Tal Berman	1991
Ofer Shamir	2021	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	2024	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.

## **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. [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. <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. <http://doi.org/10.1080/03091928308209070>
5. Paldor, N. (1983b). Stability and stable modes of coastal fronts. *Geophys. Astrophys. Fluid Dyn.*, **27**, 217–228. <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. <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. <http://doi.org/10.1029/JC090iC01p00883>
8. Paldor, N. (1986). Nonlinear waves on a coupled density front. *Geophys. Astrophys. Fluid Dyn.*, **37**, 171–191. <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. <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. [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. [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. <https://doi.org/10.1080/03091929008213206>
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. <https://doi.org/10.1029/WR024i007p01111>
14. Paldor, N. and P. D. Killworth (1988). Inertial Trajectories on the Rotating Earth. *J. Atmos. Sci.*, **45**, 4013–4019. <https://doi.org/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. <https://doi.org/10.1029/WR024i010p01638>
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. [https://doi.org/10.1016/0012-821X\(89\)90140-4](https://doi.org/10.1016/0012-821X(89)90140-4)
17. Paldor, N. and M. Ghil (1990). Finite-wavelength instabilities of a coupled density front. *J. Phys. Oceanogr.*, **20**(1), 114–123. [https://doi.org/10.1175/1520-0485\(1990\)020<0114:FWIOAC>2.0.CO;2](https://doi.org/10.1175/1520-0485(1990)020<0114:FWIOAC>2.0.CO;2)
18. Paldor, N. and A. Khait (1990). A note on the use of zero potential vorticity models. *Geophys. Astrophys. Fl. Dyn.*, **51**, 27–34. <https://doi.org/10.1080/03091929008219849>

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.  
<https://doi.org/10.1029/JC095iC10p18075>
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.  
[https://doi.org/10.1061/\(ASCE\)0733-9429\(1988\)114:2\(125\)](https://doi.org/10.1061/(ASCE)0733-9429(1988)114:2(125))
21. Paldor, N. and M. Ghil (1991). Shortwave instabilities of coastal currents. *Geophys. Astrophys. Fluid Dyn.*, **58**, 225–242. <https://doi.org/10.1080/03091929108227340>
22. Nof, D., N. Paldor and S. VanGorder (1991). Abyssal Gyres. *Geophys. Astrophys. Fluid Dyn.*, **58**, 173–196. <https://doi.org/10.1080/03091929108227338>
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. <https://doi.org/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.  
[https://doi.org/10.1175/1520-0477\(1992\)073<0305:ATOEFT>2.0.CO;2](https://doi.org/10.1175/1520-0477(1992)073<0305:ATOEFT>2.0.CO;2)
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.  
[https://doi.org/10.1016/0198-0149\(92\)90075-5](https://doi.org/10.1016/0198-0149(92)90075-5)
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.  
[https://doi.org/10.1175/1520-0469\(1992\)049<2306:CTOTPI>2.0.CO;2](https://doi.org/10.1175/1520-0469(1992)049<2306:CTOTPI>2.0.CO;2)
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.  
[https://doi.org/10.1175/1520-0469\(1994\)051<3227:ANFITA>2.0.CO;2](https://doi.org/10.1175/1520-0469(1994)051<3227:ANFITA>2.0.CO;2)
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. [https://doi.org/10.1175/1520-0450\(1994\)033<1017:SOWOTR>2.0.CO;2](https://doi.org/10.1175/1520-0450(1994)033<1017:SOWOTR>2.0.CO;2)
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.  
<https://doi.org/10.1007/BF02430642>
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.  
[https://doi.org/10.1175/1520-0485\(1994\)024<2418:OTMEIA>2.0.CO;2](https://doi.org/10.1175/1520-0485(1994)024<2418:OTMEIA>2.0.CO;2)
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.  
<https://doi.org/10.1029/GM094p0251>
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.  
[https://doi.org/10.1007/3-540-59222-9\\_26](https://doi.org/10.1007/3-540-59222-9_26)
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.  
<https://doi.org/10.1017/S0022112096002339>
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.  
[https://doi.org/10.1016/S0167-2789\(97\)00015-8](https://doi.org/10.1016/S0167-2789(97)00015-8)

35. Paldor, N. and M. Ghil (1997). Linear instability of a zonal jet on an f-plane. *J. Phys. Oceanogr.*, **27(11)**, 2361–2369. [https://doi.org/10.1175/1520-0485\(1997\)027<2361:LIOAZJ>2.0.CO;2](https://doi.org/10.1175/1520-0485(1997)027<2361:LIOAZJ>2.0.CO;2)
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. [https://doi.org/10.1175/1520-0477\(1997\)078<2779:FTTTTP>2.0.CO;2](https://doi.org/10.1175/1520-0477(1997)078<2779:FTTTTP>2.0.CO;2)
37. Gelb, A., D. Gotlieb and N. Paldor (1997). Wind set-down relaxation on a sloping beach. *J. Comp. Phys.*, **138(2)**, 644–664. <https://doi.org/10.1006/jcph.1997.5837>
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. <https://doi.org/10.1560/G72J-CYHM-D202-FJY2>.
39. Dvorkin, Y. and N. Paldor (1999). Analytical considerations of Lagrangian Cross-Equatorial flow. *J. Atmos. Sci.*, **56(9)**, 1229–1237. [https://doi.org/10.1175/1520-0469\(1999\)056<1229:ACOLCE>2.0.CO;2](https://doi.org/10.1175/1520-0469(1999)056<1229:ACOLCE>2.0.CO;2)
40. Ziv, B. and N. Paldor (1999). The divergence field associated with time-dependent jet streams. *J. Atmos. Sci.*, **56(12)**, 1843–1857. [https://doi.org/10.1175/1520-0469\(1999\)056<1843:TDFAWT>2.0.CO;2](https://doi.org/10.1175/1520-0469(1999)056<1843:TDFAWT>2.0.CO;2)
41. Paldor, N. (1999). Linear instability of barotropic submesoscale coherent vortices observed in the Ocean. *J. Phys. Oceanogr.*, **29(6)**, 1442–1452. [https://doi.org/10.1175/1520-0485\(1999\)029<1442:LIOBSC>2.0.CO;2](https://doi.org/10.1175/1520-0485(1999)029<1442:LIOBSC>2.0.CO;2)
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. [https://doi.org/10.1175/1520-0477\(1997\)078<2779:FTTTTP>2.0.CO;2](https://doi.org/10.1175/1520-0477(1997)078<2779:FTTTTP>2.0.CO;2)
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. [https://doi.org/10.1175/1520-0469\(2000\)057<0150:NIPTS>2.0.CO;2](https://doi.org/10.1175/1520-0469(2000)057<0150:NIPTS>2.0.CO;2)
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. <https://doi.org/10.1029/1999GL010508>
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. [https://doi.org/10.1016/S0924-7963\(00\)00045-2](https://doi.org/10.1016/S0924-7963(00)00045-2)
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. <https://doi.org/10.1002/qj.49712757314>
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. <https://doi.org/10.1002/qj.49712757713>
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. [https://doi.org/10.1016/S0167-2789\(01\)00341-4](https://doi.org/10.1016/S0167-2789(01)00341-4)
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. [https://doi.org/10.1016/S1352-2310\(01\)00305-3](https://doi.org/10.1016/S1352-2310(01)00305-3)
51. Paldor, N. (2002). The transport in the Ekman surface layer on the spherical Earth. *J. Mar. Res.*, **60(1)**, 47–72. <https://doi.org/10.1357/002224002762341249>
52. Nof, D., N. Paldor and S. VanGorder (2002). The Reddy Maker. *Deep Sea Res. Part I.*, **49(9)**, 1531–1549. [https://doi.org/10.1016/S0967-0637\(02\)00040-7](https://doi.org/10.1016/S0967-0637(02)00040-7)

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. <https://doi.org/10.1029/2002GL015860>
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. <https://doi.org/10.1560/G72J-CYHM-D202-FJY2>
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. <https://doi.org/10.1256/qj.02.157>
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. [https://doi.org/10.1175/1520-0426\(2004\)021<1246:APHMFP>2.0.CO;2](https://doi.org/10.1175/1520-0426(2004)021<1246:APHMFP>2.0.CO;2)
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. <https://doi.org/10.1357/0022240042387574>
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. <https://doi.org/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. <https://doi.org/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. <http://doi.org/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. <http://doi.org/10.1175/JPO2986.1>
62. Paldor, N. (2007). Inertial Particle Dynamics on the Rotating Earth. In: A. Griffa, A. D. Kirwan Jr., A. J. Mariano, T. Özgökmen, and H. T. Rossby (Eds.), *Lagrangian Analysis and Prediction of Coastal and Ocean Dynamics*. 119-135. Cambridge Univ. Press, UK. <http://doi.org/10.1017/CBO9780511535901.006>
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## **Books**

Paldor, N. (2015). *Shallow Water Waves on the Rotating Earth*. SpringerBriefs in Earth System Sciences. 77 pp. <https://doi.org/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. De-Leon, Y., C. I. Garfinkel and N. Paldor (2024). The effect of vertical temperature gradient on the equivalent depths in thin atmospheric layers. *Atmos. Sci. Lett.*