

Subset of papers utilising DigImage

Reference	Comments
Aitta, A. (1991): Nonlinear phenomena at an air-fluid interface in a horizontal, rotating cylinder; <i>Eur. J. Mech. B/Fluids</i> , 10 No. 2 Suppl., 175-180	Utilises image enhancement and contouring.
Barnett, S.J. (1991): <i>The dynamics of buoyant releases in confined spaces</i> ; PhD thesis, DAMTP, University of Cambridge, 166pp.	Utilises optical thickness with background correction.
Barnett, S.J. (1993): A vertical buoyant jet with high momentum in a long ventilated tunnel; <i>J. Fluid Mech.</i> 252 , 279-300	Utilises optical thickness with background correction.
Bastiaans, R.J.M (1996): <i>Large-eddy simulation of confined transitional plumes</i> ; PhD thesis, Eindhoven University of Technology, The Netherlands; 174pp.	
Brandt, A., van Heijst, G.F. & Maderich, V. (1995): Laboratory experiments on the intrusive flows and internal waves in the pycnocline; submitted to <i>J. Geophys. Res.</i>	Utilises particle tracking
Boubnov, B.M., Dalziel, S.B. & Linden, P.F. (1993): Source-sink turbulence in a stratified fluid; <i>J. Fluid Mech.</i> 261 , 273-303.	Utilises particle tracking.
Boyer, D L, Davies, P A & Guo, Y. (1996): Mixing of a two layer fluid by a rotating disk, submitted to <i>Fluid Dyn. Res.</i>	
Cenedese, C. & Dalziel, S.B. (1998a): Concentration and depth fields determined by the light transmitted through a dyed solution; <i>Proceedings of the 8th International Symposium on Flow Visualization</i> , ed. Carlomagno & Grant. ISBN 0 9533991 0 9, paper 061.	Utilises optical thickness with background correction.
Dalziel, S.B. (1992): Decay of rotating turbulence: some particle tracking experiments; <i>Appl. Scien. Res.</i> 49 , 217-244	Explains and utilises particle tracking algorithm.
Dalziel, S.B. (1993a): Decay of rotating turbulence: some particle tracking experiments; in <i>Flow visualization and image analysis</i> ; Ed. Nieuwstadt, Kluwer, Dordrecht, 27-54.	Identical to Dalziel (1992). Refereed conference proceedings containing all papers in <i>Appl. Scien. Res.</i> 49 plus additional papers not published in the special issue of the journal.
Dalziel, S.B. (1993b): Rayleigh-Taylor instability: experiments with image analysis; <i>Dyn. Atmos. Oceans</i> , 20 127-153.	Explains and utilises particle tracking. More up to date than Dalziel (1992).
Dalziel, S.B. (1994a): Perturbations and coherent flow in Rayleigh-Taylor instability; in <i>Proceedings of 4th International Workshop on the Physics of Compressible Turbulent Mixing</i> , Ed. Linden, Youngs & Dalziel, DAMTP, University of Cambridge, 32-41.	Utilises particle tracking & LIF. Unrefereed conference proceedings.
Dalziel, S.B. (1994b): Rayleigh-Taylor instability: perturbations, boundaries and growth; in <i>Preprints, 4th International Symposium on Stratified Flows Vol. 2</i> , ITG, Grenoble.	Particle tracking, quantitative LIF. Unrefereed conference proceedings.
Dalziel, S.B. & Eames, I. (1998): Resuspension by impacting bodies; <i>Proc. Thirteenth Australasian Fluid Mechanics Conference</i> , Melbourne, Australia, December 1998, 183-186.	Particle tracking & visualisation
Dalziel, S.B., Hughes, G.O. & Sutherland, B.R. (1998): Synthetic schlieren; <i>Proceedings of the 8th International Symposium on Flow Visualization</i> , ed. Carlomagno & Grant. ISBN 0 9533991 0 9, paper 062.	Synthetic schlieren for visualising internal waves

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- Dalziel, S.B., Hughes, G.O. & Sutherland, B.R. (1998): Whole field density measurements by 'synthetic schlieren'; submitted to *Experiments in Fluids*.
- Dalziel, S.B., Linden, P.F. & Youngs, D.L. (1996): Rayleigh-Taylor instability: resolving the differences between experiments and simulations; in *The Proceedings of 5th International Workshop on the Physics of Compressible Turbulent Mixing*, Ed. Young, Glimm & Boston; World Scientific, Singapore; 321-330.
- Dalziel, S.B., Linden, P.F. & Boubnov, B.M. (1995): Experiments on turbulence in stratified rotating flows; in *Mixing in Geophysical Flows*, Ed. Redondo & Metais; CIMNE, Barcelona; 195-208.
- Dalziel, S.B., Linden, P.F. & Boubnov, B.M. (1996): Experiments on turbulence in stratified rotating flows; in *Waves and Nonlinear Processes in Hydrodynamics*, Ed. Grue, Gjevik and Weber, Kluwer Academic Publishers; 317-330.
- Dalziel, S.B., Linden, P.F. & Youngs, D.L. (1996): Rayleigh-Taylor instability: resolving the differences between experiments and simulations; in *The Proceedings of 5th International Workshop on the Physics of Compressible Turbulent Mixing*, Ed. Young, Glimm & Boston; World Scientific, Singapore; 321-330.
- Dalziel, S.B., Linden, P.F. & Youngs, D.L. (1999): Self-similarity and internal structure of turbulence induced by Rayleigh-Taylor instability; *J. Fluid Mech.* **399**, 1-48.
- Dalziel, S.B., Linden, P.F. & Youngs, D.L. (1997): Self-similarity and internal structure of turbulence induced by Rayleigh-Taylor instability; in *Proceedings of 6th International Workshop on the Physics of Compressible Turbulent Mixing*, Ed. G. Jourdan & L. Houas; 145-151.
- Davies, P A, Guo, Y, Folkard, A M & Boyer, D L. (1996): The flow generated in a stratified fluid by the motion of a flat horizontal disk, in *Waves and Nonlinear Processes in Hydrodynamics* Ed. Grue, Gjevik and Weber, Kluwer Academic Publishers, 331-341.
- Davies, P A & Osborne, M C. (1999): A laboratory technique for generating a rotating, two layer stratified channel flow, *Experiments in Fluids* **26**, 404-414.
- Drayton, M.J. (1993): *Eulerian and Lagrangian studies of inhomogeneous turbulence generated by an oscillating grid*, PhD thesis, DAMTP, University of Cambridge, 154pp.
- Drayton, M.J. & Dalziel, S.B. (1997): Relationships between Eulerian and Lagrangian integral scales in inhomogeneous turbulence; submitted to *J. Fluid Mech.*
- Eames, I. & Dalziel, S.B. (2000): Resuspension of dust by the flow around a sphere impacting a wall *J. Fluid Mech.* **403**, 305-328.
- Gilmour, P. (1994): PhD thesis, Scott Polar Research Institute, University of Cambridge.
- Gilmour, U.P. & Woods, A.W. (1994): Mixing experiments on fluid released near the closed end of a two-dimensional channel; *J. Hazardous Materials* **36**, 227-247.
- Hacker, J. (1996): *Gravity currents in rotating channels*, PhD thesis, DAMTP, University of Cambridge, 262pp.

Synthetic schlieren for visualising internal waves

Particle tracking, quantitative LIF. Unrefereed conference proceedings.

Utilises particle tracking. Unrefereed conference proceedings.

Utilises particle tracking. Unrefereed conference proceedings.

Corrected LIF, fractal dimension, power spectra

Corrected LIF, fractal dimension, power spectra

Corrected LIF, fractal dimension, power spectra

Utilises particle tracking. Eulerian and Lagrangian measurements.

Utilises particle tracking. Eulerian and Lagrangian measurements.

Utilises particle tracking

Utilises optical thickness with background correction.

Utilises optical thickness with background correction.

Utilises optical thickness with background correction

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- Hacker, J., Linden, P.F. & Dalziel, S.B. (1994): Mixing in lock-release gravity currents; in *Proceedings of the 4th International Symposium on Stratified Flow* Vol. 3, ITG, Grenoble. Utilises optical thickness with background correction.
- Hacker, J., Linden, P.F. & Dalziel, S.B. (1995): Mixing in lock-release gravity currents; *Dyn. Atmos. Oceans* **24**, 183-195. Identical to Hacker *et al.* (1994) but refereed and published in special issue of journal.
- Hacker, J.N., Linden, P.F. & Dalziel, S.B. (1998a): Eddy-generated mean flows in a rotating stratified fluid; submitted to *Nature*. Utilises particle tracking.
- Hacker, J.N., Linden, P.F. & Dalziel, S.B. (1998b): The evolution of forced quasi-two-dimensional vortices in a stratified fluid: symmetries, pattern formation and symmetry breaking; submitted to the *UNESCO volume of selected papers of the Knostantin Fedorov Memorial Symposium on Fronts and Related Phenomena*, St. Petersburg, May 1998. Utilises particle tracking.
- Hewitt, R.E., Davies, P.A., Duck, P.W. & Foster, M.R. (1999): Spin-up of stratified rotating flows at large Schmidt number: experiment and theory; *J. Fluid Mech.* **389**, 169-207. Utilises particle tracking.
- Holford, J.M. (1994): *The evolution of a front*; PhD thesis, DAMTP, University of Cambridge, 206pp. Utilises particle tracking and optical thickness.
- Holford, J.M. & Dalziel, S.B. (1996): Measurements of layer depth in a two-layer flow; *Appl. Scien. Res.* **56**, 191-207. Utilises particle tracking and optical thickness.
- Holford, J.M. & Linden, P.F. (1997): The development of layers in a stratified fluid; to appear in *Proceedings of the IMA conference on stably stratified flows: mixing and dispersion in stably stratified flows* Enhanced shadowgraph and particle tracking
- Hughes, G.O. (1996): *Aspects of mixing in stratified flows*, PhD thesis, DAMTP, University of Cambridge, 227pp. Utilises optical thickness with background correction and Synthetic Schlieren
- Jacobs, P., Guo, Y. & Davies, P.A. (1999): Boundary currents over shelf and slope topography, *J. Marine Systems* **19**, 137-158 Utilises particle tracking.
- Kulkarni, R. & Cooper, P. (1995): Fluid flow in an enclosure with colliding boundary layers; in *Proceedings of the Twelfth Australasian Fluid Mechanics Colloquium*, University of Sydney, 45-48. Utilises particle tracking spliced together from more than one view point.
- Lane-Serff, G.F. (1993): Investigation of the fractal structure of jets and plumes; *J. Fluid Mech.* **249**, 521-534. Utilises fractal dimension and time series features.
- Linden, P.F., Boubnov, B.M. & Dalziel, S.B. (1994): Source-sink turbulence in a rotating, stratified fluid; *J. Fluid Mech* **298**, 81-112. Utilises particle tracking. Follows on from Boubnov, Dalziel & Linden.
- Linden, P.F., Dalziel, S.B., Drayton, M.J. & Boubnov, B.M. (1995): Experiments on turbulence and dispersion in a rotating stratified fluid; in *Proceedings of the Twelfth Australasian Fluid Mechanics Colloquium*, University of Sydney, 279-282. Utilises particle tracking for Eulerian and Lagrangian measurements
- Linden, P.F. & Redondo, J.M. (1991): Molecular mixing in Rayleigh-Taylor instability. Part 1: global mixing; *Phys. Fluids A* **3**, 1269-1277. Utilises fractal dimension calculation and background removal.
- Linden, P.F., Redondo, J.M. & Youngs, D.L. 1994 Molecular mixing in Rayleigh-Taylor instability. *J. Fluid Mech.* **265**, 97-124. Utilises background removal.

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- Linden, P.F. & Simpson, J.E. (1990): Continuous two-dimensional releases from an elevated source; *J. Loss Prev. Process Ind.* **3**, 82-87. Utilises basic image enhancement.
- Linden, P.F. & Simpson, J.E. (1994): Continuous releases of dense fluid from an elevated point source in a cross-flow; in *Mixing and transport in the environment*, Ed. K.J. Beven, P.C. Chatwin & J.H. Millbank; Wiley; 401-418 Utilises image enhancement and background removal.
- McGuinness, D.S., Zhang, X. & Boyer, D.L. (1994): Laboratory modeling of narrow current-topography interactions in a rotating stratified fluid; in *Preprints, 4th International Symposium on Stratified Flows* Vol. **1**, ITG, Grenoble. Utilises particle tracking
- Osborne, M C & Davies P A. (1996): Pycnocline elevation by islands; *Proc. 2nd Int'l Conf Hydrodynamics* Ed. A T Chwang, J H W Lee & D Y C Leung, 865-890, Balkema, Rotterdam ISBN 90 5410860 6, University of Hong Kong, December 1996. Utilises particle tracking
- Redondo, J.M. & Cantalapiedra, I.R. (1993): Mixing in horizontally heterogeneous flows; *Appl. Scien. Res.* **51**, 217-222. Utilises image enhancement and background removal.
- Redondo, J.M. & Linden, P.F. (1990): Geometrical observation of turbulent density interfaces; *Proc. IMA Conf. on Deforming Surfaces*, Ed. Hunt, Dritschel & Perkins, Oxford University Press. Utilises fractal dimension calculation.
- Redondo, J.M. & Linden, P.F. (1993): Mixing produced by Rayleigh-Taylor instability; *Proc. 3rd IMA Conf. on Stably Stratified Flows*, Ed. King & Mobbs, Oxford University Press. Utilises fractal dimension calculation and background removal.
- Redondo, J.M. & Linden, P.F. (1994): The fractal dimension of stratified turbulence; *Physics of Fluids*, submitted. Utilises fractal dimension calculation.
- Redondo, J.M., Rodriguez, A., Bahia, E. & Stive, M. (1994): Image analysis of surf zone hydrodynamics; **to be in proceedings?** Utilises FFT, time series and fractal dimension.
- Redondo, J.M. & Yague, C. (1994): Plume entrainment in stratified flows; in *Plumes and jets in turbulent environments*, Ed. P. Davies & J. Neves, Kluwer Academic Publishers Optical thickness
- Rooij, F. de (1996): *Self-organisation and dispersion in geophysical turbulence*; Thesis, Fluid dynamics laboratory, Eindhoven University of Technology, The Netherlands; 71pp Particle tracking
- Rooij, F. de, Linden, P.F. & Dalziel, S.B. (1997): Experimental investigations of quasi-two-dimensional vortices in a stratified fluid with source-sink forcing; *J. Fluid Mech.* **383**, 249-283. Particle tracking
- Sillekens, J.J.M. (1995): *Laminar mixed convection in ducts*, PhD thesis, Eindhoven University of Technology, The Netherlands; 167pp. Particle tracking and temperature measurements (using thermochromatic liquid crystals)
- Sutherland, B.R., Dalziel, S.B., Hughes, G.O. & Linden, P.F. (1998): Laboratory observations of internal waves; *Proc. Thirteenth Australasian Fluid Mechanics Conference*, Melbourne, Australia, December 1998, 855-858. Synthetic schlieren
- Sutherland, B.R., Dalziel, S.B., Hughes, G.O. & Linden, P.F. (1999): Visualisation and Measurement of internal waves by "synthetic schlieren". Part 1: Vertically oscillating cylinder; *J. Fluid Mech.* **390**, 93-126. Synthetic schlieren
- Sutherland, B.R., Hughes, G.O., Dalziel, S.B. & Linden, P.F. (1998): Internal waves revisited; to appear in *Dyn. Atmos. Oceans*. Synthetic schlieren

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- Velasco Fuentes, O.U. (1994): *Two-dimensional vortices with background vorticity*; PhD thesis, Fluid dynamics laboratory, Eindhoven University of Technology, The Netherlands; 165pp. Particle tracking.
- Verlaan, B. (1996): *Concentration measurements using DigImage*, internal report No. R-1407-S, Eindhoven University of Technology, The Netherlands; 42pp. Analyses the use of dye for concentration measurements with both attenuation and fluorescence approaches.
- Vos, J.C. de (1994): *A thousand golden ten orbits*; Research Memorandum FEW 654, Faculty of Economics and Business Administration, Tilburg University, The Netherlands. Particle tracking of balls in a variant of roulette to determine if it is a game of chance or a game of skill