



Part 9

Publications

9.1 Project documents

- Joly A. and F. Lalaurette, 1991:
Une proposition pour une expérience FRONTS 9x.
Centre National de Recherches Météorologiques, FASTEX Project Office, Tech. Report, 42pp.
- Joly, A. and A.J. Thorpe, 1995.
The Fronts and Atlantic Storm-Track Experiment (FASTEX), proposal to the Environment and Climate Programme. April 1996.
- Joly, A., Y. Lemaître, S. Clough, K. Commins, F.H. Sigurdsson, 1997.
The Fronts and Atlantic Storm-Track Experiment (FASTEX), first interim report. *European Commission*, ENV4-CT96-032, 61pp.
- Jorgensen D. and A. Joly, 1995:
FASTEX field programme, Operations overview.
Centre National de Recherches Météorologiques, FASTEX Project Office, Tech. Report, 55pp.
- Jorgensen D., P. Bessemoulin, S. Clough and J.A. Moore, 1996a:
FASTEX Operations Plan.
Centre National de Recherches Météorologiques, FASTEX Project Office, Tech. Report, 164pp.
- Thorpe A.J. and M.A. Shapiro, 1995:
FASTEX, Fronts and Atlantic Storm Tracks Experiment. The Science Plan.
Centre National de Recherches Météorologiques, FASTEX Project Office, Tech. Report, 25pp.

9.2 Articles published in refereed journals

- Arbogast, P., 1998:
Sensitivity to potential vorticity.
Quart. J. Roy. Meteor. Soc., **124**, 1605–1615.
- Arbogast, P. and A. Joly, 1998:
Potential vorticity inversion of a two-dimensional steady flow: application to symmetric instability.
Quart. J. Roy. Meteor. Soc., **124**, 317–339.
- Arbogast, Ph. and A. Joly, 1998:
Identification des précurseurs d'une cyclogenèse.
Compte-Rendus à l'Académie des Sciences, Sciences de la Terre et des planètes, **326**, 227–230.
- Bergot, T., G. Hello, A. Joly, and S. Malardel, 1999:
Adaptive observations: a feasibility study.
Mon. Wea. Rev., **127**, (5), 743–765.
- Fischer, C., A. Joly, and F. Lalaurette, 1998:
Error growth and kalman filtering within an idealized baroclinic flow.
Tellus, **50A**, (5), 596–615.
- Horanyi A. et A. Joly, 1996. Some aspects of the sensitivity of idealized frontal waves. *Beitr. Phys. Atmos.*, **69**, (4), 517–533.

- Joly, A., D. Jorgensen, M.A. Shapiro, A.J. Thorpe, P. Bessemoulin, K.A. Browning, J.P. Cammas, J.P. Chalon, S.A. Clough, K.A. Emanuel, L. Eymard, R. Gall, P.H. Hildebrand, R.H. Langland, Y. Lemaître, P. Lynch, J.A. Moore, P.O.G. Person, C. Snyder, R.M. Wakimoto, 1997: The Fronts and Atlantic Storm-Track Experiment (FASTEX): Scientific Objectives and Experimental Design. *Bull. Amer. Soc.*, **78**, (9), 1917–1940.
- Lebouar, E, M Petitdidier, and Y. Lemaître, 1998.
Retrieval of ageostrophic wind from a radiosounding network and a single ST radar *Quart. J. Roy. Met. Soc.*, **124**, *in press*.
- Malardel S., A.J. Thorpe et A. Joly, 1996.
Consequence of the Geostrophic Momentum Approximation on barotropic instability. *J. Atmos. Sci.*, **54**, (1), 104–112.
- Pouponneau, B., F. Ayrault, T. Bergot, and A. Joly, 1999:
The impact of aircraft data on an atlantic cyclone analysed in terms of sensitivities and trajectories.
Weather and Forecasting, **14**, (1), 67–83.
- Rivals, H., J.P. Cammas, and I.A. Renfrew, 1998:
Secondary cyclogenesis: the initiation of a frontal wave observed over the eastern atlantic.
Quart. J. Roy. Meteor. Soc., **124**, 243–267.
- Olafsson, H., 1998:
Different predictions by two NWP models of the surface pressure field northeast of iceland.
Meteorological Applications, **5**, 253–261.
- Snyder, C. and A. Joly, 1998:
Development of perturbations within growing baroclinic waves.
Quart. J. Roy. Meteor. Soc., **124**, 1961–1983.

9.3 Recently submitted articles

- Baehr, Ch., B. Pouponneau, F. Ayrault, and A. Joly, 1999:
Dynamical characterization and summary of the FASTEX cyclogenesis cases.
Quart. J. Roy. Meteor. Soc., **125**, *submitted*.
- Bergot, T., 1999:
Adaptive observations during FASTEX: a systematic survey of the impact of upstream flights.
Quart. J. Roy. Meteor. Soc., **125**, *submitted*.
- Bouniol, D., A. Protat, and Y. Lemaître, 1999:
Mesoscale dynamics of a deepening secondary cyclone (FASTEX IOP 16): three-dimensional structure retrieved from dropsonde data.
Quart. J. Roy. Meteor. Soc., **125**, *submitted*.
- Browning, K.A. and N.M. Roberts, 1999:
Mesoscale analysis of arc rainbands in a dry slot.
Quart. J. Roy. Meteor. Soc., **125**, *submitted*.
- Cammass, J.P., B. Pouponneau, G. Desroziers, P. Santurette, A. Joly, Ph. Arbogast, I. Mallet, G. Caniaux, P. Mascart, and M. Shapiro, 1999:

- Initiation, triggering and development phases of the FASTEX cyclone (IOP 17): synoptic and dynamic overview.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
- Chaboureau, J.P. and A.J. Thorpe, 1999:
Frontogenesis and the development of secondary wave cyclones in FASTEX.
Quart. J. Roy. Meteor. Soc., **125**, accepted.
 - Chaigne, E. and Ph. Arbogast, 1999:
PV inversion: a multi FASTEX case perspective.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Clough, S.A., H.W. Lean, N.M. Roberts, and R.M. Forbes, 1999:
Observations and model simulations of the FASTEX IOP 16 frontal wave – effects of sublimation.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Desroziers, G., B. Pouponneau, J.N. Thépaut, M. Janisková, and F. Veersé, 1999:
Four dimensional variational analyses of FASTEX situations. part II: use of additional observations.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Eymard, L., G. Caniaux, H. Dupuis, L. Prieur, H. Giordani, R. Troadec, and D. Bourras, 1999:
Surface fluxes in the North-Atlantic Current during the CATCH/FASTEX experiment.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Janisková, M., F. Veersé, J.N. Thépaut, G. Desroziers, and B. Pouponneau, 1999:
Four dimensional variational analyses of FASTEX situations. part I: impact of a simplified physical package in the assimilating model.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Jaubert, G., C. Piriou, S.M. Loehrer, A. Petitpa, and J.A. Moore, 1999:
The FASTEX experiment data archive.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Joly, A., K.A. Browning, P. Bessemoulin, J.P. Cammas, G. Caniaux, J.P. Chalon, S.A. Clough, R. Dirks, K.A. Emanuel, L. Eymard, R. Gall, T.D. Hewson, P.H. Hildebrand, D. Jorgensen, F. Lalauette, R.H. Langland, Y. Lemaitre, P. Mascart, J.A. Moore, P.O.G. Persson, F. Roux, M.A. Shapiro, C. Snyder, Z. Toth, and R.M. Wakimoto, 1999:
Overview of the field phase of the Fronts and Atlantic Storm-Track Experiment (FASTEX) project.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
 - Lemaître, Y., and A. Protat, 1998 :
Dynamics of a “bomb-like” deepening secondary cyclone from airborne Doppler radar.
Quart. J. Roy. Meteor. Soc., under revision.
 - Lemaître, Y., A. Protat and D. Bouniol, 1999:
Pacific and Atlantic "bomb-like" deepenings in mature phase: a comparative study. *Quart. J. Roy. Meteor. Soc.*, **125**, submitted.

- Malardel, S. and Ph. Arbogast, 1999:
Upstream and downstream development induced by vorticity anomalies: detection in FASTEX IOPs.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
- Mallet, I., Ph. Arbogast, Ch. Baehr, J.P. Cammas, and P. Mascart, 1999:
Effects of a low level precursor and frontal stability on cyclogenesis during FASTEX IOP17.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
- Mallet, I., J.P. Cammas, P. Mascart, and P. Bechtold, 1999:
Effects of cloud diabatic heating on the FASTEX cyclone (IOP 17) early development.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
- Montani, A., A.J. Thorpe, R. Buizza, and P. Uden, 1999:
Forecast skill of the ECMWF model using targeted observations during FASTEX.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
- Santurette, P., F. Lalaurette, Y. Bachimont, and G. Hello, 1999:
A review of forecast during fastex: an overview and some météo-france highlight.
Quart. J. Roy. Meteor. Soc., **125**, submitted.
- Scialom, G., A. Protat, and Y. Lemaître, 1999:
Vertical structure of a FASTEX secondary cyclone derived from dual-beam airborne radar data.
Quart. J. Roy. Meteor. Soc., **125**, submitted.

9.4 Other publications

- Amstrup, B. and X.-Y. Huang, 1998:
Impact of the additional FASTEX radiosonde observations on the HIRLAM data assimilation and forecasting system.
Technical Report 38, HIRLAM Technical Reports, Dublin, Ireland.
- Arbogast Ph., 1998.
L'inversion du tourbillon potentiel: méthodologie, application à l'étude des interactions non-linéaires dans la formation des dépressions météorologiques.
Thèse de l'Université Paul Sabatier, soutenue le 11 décembre 1998, 227pp.
- Ayrault, F., 1998:
Environnement, structure et évolution des dépressions météorologiques: réalité climatologique et modèles types.
PhD thesis, Doctorat de Université P. Sabatier, Toulouse.
328pp.
- Chaigne, E., 1998:
Application de l'inversion du tourbillon potentiel.
Master's thesis, Ecole Nationale de la Météorologie, Note de Travail n 618, Toulouse, 86pp.
- Clough, S.A., H.W. Lean, N.M. Roberts, H. Birkett, J.P. Chaboureau, R. Dixon, M. Griffiths, T.D. Hewson, and A. Montani, 1998:
A JCMM overview of FASTEX IOPS.
Technical Report 81, Joint Centre for Mesoscale Meteorology, Reading, UK.

- Fourrié, N., 1997:
Analyse dynamique de cyclogenèses sur l'Atlantique Nord au moyen d'observations satellitaires TOVS dans le cadre de la campagne FASTEX.
Master's thesis, D.E.A. Université P. et M. Curie, Méthodes Physiques en Télédétection, Paris VI.
- Joly, A., Y. Lemaître, S. Clough, K. Commins, P. Lynch, F.H. Sigurdsson, J.P. Cammas, 1998.
The Fronts and Atlantic Storm-Track Experiment (FASTEX).
Proceedings, *European Climate Science Conference*, Vienna, 19–23 Oct. 1998, 12pp.
- Lebouar E., 1997:
Etude des circulations agéostrophiques entre la basse et la haute troposphère. Leur rôle dans la formation des ondulations frontales observées pendant l'expérience FRONTS'87.
Doctorat de l'Université Paris VI, Paris, 4 décembre 1997.



