

PUBLICATIONS 2006



DÉPARTEMENT D'ASTROPHYSIQUE, DE GÉOPHYSIQUE et D'OCÉANOGRAPHIE

UNIVERSITÉ DE LIÈGE

Allée du 6 août, 17 (B5c)
B-4000 Liège
BELGIUM

Tél : 32 - 4 - 366 97 79
Fax : 32 - 4 - 366 97 29

RESEARCH GROUPS

Astronomy and Theoretical Astrophysics

BOURGE P.-O.

GABRIEL M.

GREVESSE N.

GODART M.

EGGENBERGER P.

MIGLIO A.

MONTALBAN J.

MOREIRA O.

NOELS A.

PERDANG J.

SCUFLAIRE R.

SOHY S.

THÉADO S.

THOUL A.

Astrophysics and Image Processing

BORGUET B.

CHANTRY V.

DECAUWER H.

GILLON M.

LETAWE G.

LETAWE Y.

MAGAIN P.

PARMENTIER G.

SOHY S.

Extragalactic Astrophysics and Space Observations

ABSIL O.

ARPIGNY C.

BARTCZAK P.

CLAESKENS J.-F.

DEFRERE D.

DE ROP Y.

GARCET O.

HERWATS E.

HUTSEMEKERS D.

JAVAUX E.

JEAN C.

LIBBRECHT C.

MAGETTE A.

MAWET D.

NAKOS D.

POELS J.

POSPIELSZALSKA A.

RIAUD P.

SPRIMONT P.-G.

SURDEJ J.

High Energy Astrophysics

DAMERDJI Y.

DE BECKER M.

DETAL A.

GOSSET E.

LEYDER J.-C.

LINDER N.

MANFROID J.

NAZE Y.

RAUW G.

SANA H.

SWINGS J.-P.

VREUX J.-M.

Atmospheric and Planetary Physics

BLOCKX C.

BONFOND B.

COUMANS V.

COX C.

GERARD J.-C.

GRODENT D.

GUSTIN J.

HENROT A.

HUBERT B.

LAURENT J.-M.

MOUCHET A.

MUNHOVEN G.

MUNHOVEN S.

OUBERDOUS M.

SAGLAM A.

Atmospheric and Solar Spectroscopy, Molecular Spectroscopy

DEMOULIN Ph.

DUCHATELET P.

FLOCK O.

MAHIEU E.

SERVAIS Ch.

ZANDER R.

Chemical Oceanography

BORGES A.

DELILLE B.

GEILFUS N.-X.

KONE M.

SCHIETTECATTE L.-S.

SUYKENS K.

Irreversible thermomechanics

CROISIER H.

DAUBY P.C.

DESAIVE TH.

DONDLINGER M.

LEBON G.

MARGERIT J.

Physical oceanography and interdisciplinary modeling of marine systems

BECKERS J.-M.

BELOUNIS M.

BEN BOUALLEGUE Z.

DJENIDI S.

LENARTZ F.

SKLIRIS N.

STANICHNY S.

TROUPIN Ch.

VANDENBULCKE L.

VAN DER REST M.

Astronomy and Theoretical Astrophysics

- ANTONELLO E., L. MANTEGAZZA, M. RAINER AND A. MIGLIO, Probable nonradial g-mode pulsation in early A-type stars. *Astron. Astrophys.*, 445, L15-L18, 2006
- ASPLUND M., N. GREVESSE AND A.J. SAUVAL, The new solar abundances - Part I: the observations, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005*, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 76-79, 2006
- BOURGE P.-O., G. ALECIAN, A. THOUL, R. SCUFLAIRE AND S. THÉADO, Radiative forces and pulsations in β Cephei stars, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005*, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 105-108, 2006
- BOURGE P.-O. AND G. ALECIAN, Do radiative Forces in β Cephei Stars Have an Effect on the excitation of their Pulsations ?, *In Astrophysics of Variable Stars, Pecs, Hungary, 5-10 September 2005*, C. Sterken and C. Aerts (eds). *ASP Conference Series*, 349, 201, 2006
- DE CAT P., M. BRIQUET, C. AERTS, K. GOOSSENS, S. SAESEN, J. CUYPERS, K. YAKUT, R. SCUFLAIRE, M.-A. DUPRET AND MANY OBSERVERS, Analysis of Mercator data - Part I: variable B stars, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005*, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 48-51, 2006
- DUPRET M.-A., A. GRIGAHCÈNE, M. GABRIEL AND R. GARRIDO, Convection-pulsation interaction: theories and applications, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005*, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 61-64, 2006
- DUPRET M.-A., A. GRIGAHCÈNE, R. GARRIDO, J. DE RIDDER, A. MOYA, J.C. SUREZ, R. SCUFLAIRE, M. GABRIEL AND M.-J. GOUPIL, Theoretical Aspects of g-mode Pulsations in γ Doradus Stars. *Stellar Pulsation and Evolution, Villa Mondragone Monte Porzio Catone, Rome, June 19-24, 2005*, eds A.R. Walker and G. Bono. *Mem. S.A.It.*, 77, 366-371, 2006
- DUPRET M.-A., A. GRIGAHCÈNE, R. GARRIDO, J. DE RIDDER AND R. SCUFLAIRE, Application of Time-Dependent Convection models to the photometric mode identification in δ Scuti stars. *Stellar Pulsation and Evolution, Villa Mondragone Monte Porzio Catone, Rome, June 19-24, 2005*, eds A.R. Walker and G. Bono. *Mem. S.A.It.*, 77, 119-120, 2006
- DUPRET M.-A., A. GRIGAHCÈNE, R. GARRIDO, J. DE RIDDER AND R. SCUFLAIRE, Application of Time-Dependent Convection models to the photometric mode identification in γ Doradus stars. *Stellar Pulsation and Evolution, Villa Mondragone Monte Porzio Catone, Rome, June 19-24, 2005*, eds A.R. Walker and G. Bono. *Mem. S.A.It.*, 77, 121-122, 2006

- DUPRET M.-A., C. BARBAN, M.-J. GOUPIL, R. SAMADI, A. GRIGAHCÈNE AND M. GABRIEL, Theoretical damping rates and phase-lags for solar-like oscillations. Beyond the Spherical Sun: a new era of helio- and asteroseismology, 7-11 August 2006, Sheffield, U.K., *Proceedings of SOHO 18/GONG 2006/HELAS I*, edited by K. Fletcher and M. Thompson, published on CDROM, 97.1, 2006
- DUPRET M.-A., GRIGAHCÈNE, S. THÉADO, P.-O. BOURGE AND M. GABRIEL, Energetic effects in classical pulsators. Beyond the Spherical Sun: a new era of helio- and asteroseismology, 7-11 August 2006, Sheffield, U.K., *Proceedings of SOHO 18/GONG 2006/HELAS I*, edited by K. Fletcher and M. Thompson, 29.1, 2006
- DUPRET M.-A., M.-J. GOUPIL, R. SAMADI, A. GRIGAHCÈNE AND M. GABRIEL, A non-local MLT treatment fitting 3D simulations. Beyond the Spherical Sun: a new era of helio- and asteroseismology, 7-11 August 2006, Sheffield, U.K., *Proceedings of SOHO 18/GONG 2006/HELAS I*, edited by K. Fletcher and M. Thompson, published on CDROM, 78.1, 2006
- DUPRET M.-A., R. SAMADI, A. GRIGAHCÈNE, M.-J. GOUPIL AND M. GABRIEL, Non-local time-dependent treatments of convection models in A-G type stars. Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 85-88, 2006
- GODART M., R. SCUFLAIRE, A. THOUL AND A. NOELS, Polytropes as simple models of β Cephei stars. Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 117-120, 2006
- GODART M., Can beta Cephei Variables be Modelled with Polytropes ? In *Astrophysics of Variable Stars, Pecs, Hungary, 5-10 September 2005*, C. Sterken and C. Aerts (eds). *ASP Conference Series*, 349, 2006
- GRIGAHCÈNE A., M.-A. DUPRET, R. GARRIDO AND M. GABRIEL, Influence of overshooting and metallicity on the δ Scuti and γ Doradus instability strips, *Stellar Pulsation and Evolution, Villa Mondragone Monte Porzio Catone, Rome, June 19-24, 2005*, eds A.R. Walker and G. Bono. *Mem. S.A.It.*, 77, 129-130., 2006
- GRIGAHCÈNE A., M.-A. DUPRET, R. GARRIDO, M. GABRIEL AND R. SCUFLAIRE, Instability strip for pre-main-sequence stars, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005*, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 69-71, 2006

- HANDLER G., M. JERZYKIEWICZ, E. RODRÍGUEZ, K. UYTTERHOEVEN, P.J. AMADO, T.N. DOROKHOVA, N.I. DOROKHOV, E. PORETTI, J.-P. SAREYAN, L. PARRAO, D. LORENZ, D. ZSUFFA, R. DRUMMOND, J. DASZYŃSKA-DASZKIEWICZ, T. VERHOELST, J. DE RIDDER, B. ACKE, P.-O. BOURGE, A.I. MOVCHAN, R. GARRIDO, M. PAPARÓ, T. SAHIN, V. ANTOCI, S.N. UDOVICHENKO, K. CSORBA, R. CROWE, B. BERKEY, S. STEWART, D. TERRY, D.E. MKRTICHIAN AND C. AERTS, Asteroseismology of the β Cephei star 12 (DD) Lacertae: photometric observations, pulsational frequency analysis and mode identification. *Month. Not. R. Astron. Soc.*, *Month. Not. R. Astron. Soc.*, 365, 327-338, 2006
- LENAIN G., R. SCUFLAIRE, M.-A. DUPRET AND A. NOELS, The ϵ mechanism in PMS and MS δ Scuti stars, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005, edited by A. Noels and C. Aerts. Comm. in Asteroseismology, 147, 93-96, 2006*
- LENAIN G., Limit of the Convective Core in delta Scuti Stars, *In Astrophysics of Variable Stars, Pecs, Hungary, 5-10 September 2005, C. Sterken and C. Aerts (eds). ASP Conference Series, 349, 2006*
- MICHEL E., A. BAGLIN, M. AUVERGNE, C. CATALA, C. AERTS, G. ALECIAN, P. AMADO, T. APPOURCHAUX, M. AUSSELOOS, J. BALLOT, C. BARBAN, F. BAUDIN, G. BERTHOMIEU, P. BOUMIER, T. BÖHM, M. BRIQUET, S. CHARPINET, M.S. CUNHA, P. DE CAT, M.-A. DUPRET, J. FABREGAT, M. FLOQUET, Y. FRÉMAT, R. GARRIDO, R.A. GARCIA, M.-J. GOUPIL, G. HANDLER, A.-M. HUBERT, E. JANOT-PACHECO, P. LAMBERT, Y. LEBRETON, F. LIGNIÈRES, J. LOCHARD, S. MARTÍN-RUIZ, P. MATHIAS, A. MAZUMDAR, P. MITTERMAYER, J. MONTALBÁN, M. MONTEIRO, P. MOREL, B. MOSSER, A. MOYA, C. NEINER, P. NGHIEM, A. NOELS, J. OEHLINGER, E. PORETTI, J. PROVOST, J. RENAN DE MEDEIROS, J. DE RIDDER, M. RIEUTORD, T. ROCA-CORTÉS, I. ROXBURGH, R. SAMADI, R. SCUFLAIRE, J.C. SUARES, S. THÉADO, A. THOUL, T. TOUTAIN, S. TURCK-CHIÈZE, K. UYTTERHOEVEN, G. VAUCLAIR, S. VAUCLAIR, W.W. WEISS AND K. ZWINTZ, The seismology programme of Corot., *In M. Fridlund, A. Baglin, J. Lochard, L. Conroy (eds), The Corot Mission, Pre-Launch Status, Stellar Seismology and Planet Finding, SP-1306, ESA, 39-50, 2006*
- MIGLIO A., J. MONTALBÁN AND A. NOELS, Effects of "extra-mixing" processes on the periods of high-order gravity modes in main-sequence stars, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005, edited by A. Noels and C. Aerts. Comm. In Asteroseismology, 147, 89-92, 2006*
- MIGLIO A., J. MONTALBÁN, C. MACERONI, J. DE RIDDER AND F. D'ANTONA, 12 Bootis: the need for asteroseismic constraints, *Beyond the Spherical Sun: a new era of helio- and asteroseismology, 7-11 August 2006, Sheffield, U.K., Proceedings of SOHO 18/GONG 2006/HELAS I, edited by K. Fletcher and M. Thompson, ESA SP-624, 115, 2006*

- MIGLIO A., Signatures of Convective Cores in Gravity Modes, *In Astrophysics of Variable Stars, Pecs, Hungary, 5-10 September 2005*, C. Sterken and C. Aerts (eds). *ASP Conference Series*, 349, 2006
- MONTALBÁN J., A. MIGLIO, S. THÉADO, A. NOELS AND N. GREVESSE, The new solar abundances - Part II: The crisis and possible solutions, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005*, edited by A. Noels and C. Aerts. *Comm. in Asteroseismology*, 147, 80-84, 2006
- MONTALBÁN J. AND A. MIGLIO, Evolution and seismology of α Centauri, *Stellar Pulsation and Evolution, Villa Mondragone Monte Porzio Catone, Rome, June 19-24, 2005*, eds A.R. Walker and G. Bono. *Mem. S.A.It.*, 77, 472-473, 2006
- MONTALBÁN J. AND F. D'ANTONA, New light on the old problem of lithium pre-main sequence depletion: models with 2D radiative-hydrodynamical convection, *Month. Not. R. Astron. Soc.*, 370, 1823-1828, 2006
- MONTALBÁN J., Models and frequencies for alpha Cen A and B. Siamois kickoff meeting, *Paris, 15-16 may*, <http://wwwusr2.obspm.fr/siamois/kickoff/alphacen.ppt>, 2006
- MONTEIRO M.J.P.F.G., Y. LEBRETON, J. MONTALBÁN, J. CHRISTENSEN-DALSGAARD, M. CASTRO, S. DEGL'INNOCENTI, A. MOYA, I.W. ROXBURGH, R. SCUFLAIRE, A. BAGLIN, M.S. CUNHA, P. EGGENBERGER, J. FERNANDES, M.-J. GOUPIL, A. HUI-BON-HOA, M. MARCONI, J.P. MARQUES, E. MICHEL, A. MIGLIO, P. MOREL, B. PICHON, P.G. PRADA MORONI, J. PROVOST, A. RUOPPO, J.-C. SUÁREZ, M. SURAN AND T.C. TEIXEIRA, Report on the Corot Evolution and Seismic Tools Activity, *In M. Fridlund, A. Baglin, J. Lochard, L. Conroy (eds), The Corot Mission, Pre-Launch Status, Stellar Seismology and Planet Finding, SP-1306, ESA, 363-371*, 2006
- MOREIRA O., A. NOELS AND M.-A. DUPRET, Modelling intermediate mass red giants. Beyond the Spherical Sun: a new era of helio- and asteroseismology, 7-11 August 2006, Sheffield, U.K., *Proceedings of SOHO 18/GONG 2006/HELAS I*, edited by K. Fletcher and M. Thompson, published on CDROM, 31.1, 2006
- MOREIRA O., Red Giants as Asteroseismology Targets, *In Astrophysics of Variable Stars, Pecs, Hungary, 5-10 September 2005*, C. Sterken and C. Aerts (eds). *ASP Conference Series*, 349, 2006
- NOELS A. AND C. AERTS (EDS), Distant Worlds, *JENAM, Liège, July 4-7, 2005*, *Proceedings of the Asteroseismology session. Comm. in Asteroseismology*, 147, 2006
- NOELS A., C. AERTS AND J.Y. PLESSERIA, The Belgian contribution. In M. Fridlund, A. Baglin, J. Lochard, L. Conroy (eds), *The Corot Mission, Pre-Launch Status, Stellar Seismology and Planet Finding, SP-1306, ESA, 115-119*, 2006

- THÉADO S. AND M. CUNHA, Excitation of oscillations on roAp stars: the roles of He settling and winds, *Proceedings of the Asteroseismology session of JENAM, Distant Worlds, Liège, July 4-7, 2005, edited by A. Noels and C. Aerts. Comm. in Asteroseismology*, 147, 101-104, 2006
- THIRION A. AND A. THOUL, BetaDat: a Cephei database. In M. Fridlund, A. Baglin, J. Lochard, L. Conroy (eds), *The Corot Mission, Pre-Launch Status, Stellar Seismology and Planet Finding, SP-1306, ESA*, 373-375, 2006
- THOUL A. AND A. THIRION, BetaDat: a β Cephei Database, *Corot Week 10*, 5-9 June, www.obs-nice.fr/cassiopee/COROTweek10/presentations.html, 2006
- YILDIZ M., K. YAKUT, H. BAKICS AND A. NOELS, Modelling the components of binaries in Hyades: The dependence of the mixing-length parameter on stellar mass, *Month. Not. R. Astron. Soc.*, 368, 1941-1948, 2006

Papers in press or submitted

- MIGLIO A., J. MONTALBÁN AND M.-A. DUPRET, Instability strips of slowly pulsating B stars and β Cephei stars: the effect of the updated OP opacities and of the metal mixture, *Mon. Not. R. Astron. Soc.*, 375, L21-L25, 2007
- DE CAT P., M. BRIQUET, C. AERTS, K. GOOSSENS, S. SAESEN, J. CUYPERS, K. YAKUT, R. SCUFLAIRE, M.-A. DUPRET, K. UYTTERHOEVEN, HANS VAN WINCKEL, G. RASKIN, G. DAVIGNON, L. LE GUILLOU, R. VAN MALDEREN, M. REYNIERS, B. ACKE, W. DE MEESTER, J. VANAUTGAERDEN, B. VANDENBUSSCHE, T. VERHOELST, C. WAEKENS, P. DEROO, K. REYNIERS, M. AUSSELOOS, E. BROEDERS, J. DASZYNSKA-DASKIEWICZ, J. DEBOSSCHER, S. DE RUYTER, K. LEFEVER, G. DECIN, K. KOLENBERG, A. MAZUMDAR, C. VAN KERCKHOVEN, J. DE RIDDER, R. DRUMMOND, C. BARBAN, E. VANHOLLEBEKE, T. MAAS AND L. DECIN, Long term photometric monitoring with the Mercator telescope. Frequencies and mode identification of variable O-B stars, *Astron. Astrophys.*, 463, 243-249, 2007
- SCOTT P.C., M. ASPLUND, N. GREVESSE AND A.J. SAUVAL, Line formation in solar granulation. VII. CO lines and the solar C and O isotopic abundances, 456, 675-688, 2007
- MONTALBÁN J. AND M.-A. DUPRET, Effects of convection modelling on non-adiabatic seismic observables of δ Scuti stars, In *Convection in Astrophysics*, IAU Symp. 239, Prague 21-25 August 2006, *Cambridge University Press.*, in press
- MONTALBÁN J. AND F. D'ANTONA, Pre-main sequence models with convection description given by 2D-RHD numerical simulations, In *Convection in Astrophysics*, IAU Symp. 239, Prague 21-25 August 2006, *Cambridge University Press.*, in press
- MONTALBÁN J., J. NENDWICH, U. HEITER, F. KUPKA, E. PAUNZEN AND B. SMALLEY, The Effect of the microturbulence parameter on the Color-Magnitude Diagram, In *Convection in Astrophysics*, IAU Symp. 239, Prague 21-25 August 2006, *Cambridge University Press*, in press

- DUPRET M.-A., A. MIGLIO, A. GRIGAHCÈNE AND J. MONTALBÁN, Theoretical aspects of g-mode pulsations in γ Doradus stars, Vienna Workshop on the Future of Asteroseismology, September 20-22, 2006, *Asteroseismology, in press*
- BOURGE P.-O., S. THÉADO AND A. THOUL, Effects of diffusion in β Cephei stars, Vienna Workshop on the Future of Asteroseismology, September 20-22, 2006, *Asteroseismology, in press*
- DUPRET M.-A., S. THÉADO, T. BÖHM, M.-J. GOUPIL, C. CATALA AND A. GRIGAHCÈNE, Asteroseismology and energetic aspects of the Herbig Ae star HD 104237, Vienna Workshop on the Future of Asteroseismology, September 20-22, 2006, *Asteroseismology, in press*
- GODART M., Temperature gradients in the core overshooting region, Vienna Workshop on the Future of Asteroseismology, September 20-22, 2006, *Asteroseismology, in press*
- MIGLIO A., P.-O. BOURGE, J. MONTALBÁN AND M.-A. DUPRET, Instability strips of main sequence B-type stars: a parametric study of iron enhancement and the effect of the new OP opacities, Vienna Workshop on the Future of Asteroseismology, September 20-22, 2006, *Asteroseismology, in press*
- MIGLIO A., J. MONTALBÁN AND S. THÉADO, Internal structure and evolution of γ Doradus stars, Vienna Workshop on the Future of Asteroseismology, September 20-22, 2006, *Asteroseismology, in press*
- MONTALBÁN J., More Comparisons for ESTA-Task3. Solar/Stellar Models and Seismic Analysis Tools, Joint HELAS and Corot/ESTA Workshop, Porto, 20-23 November 2006. EAS publication series, M. Monteiro, C. Straka and Y. Lebreton (editors), *in press*
- SCUFLAIRE R., S. THÉADO, J. MONTALBÁN, P.-O. BOURGE, A. MIGLIO, M. GODART, A. THOUL AND A. NOELS, CLES, Code Liégeois d'Evolution Stellaire, *Astrophysics and Space Science, Corot/ESTA volume, in press*
- SCUFLAIRE R., J. MONTALBÁN, S. THÉADO, P.-O. BOURGE, A. MIGLIO, M. GODART, A. THOUL AND A. NOELS, The Liège Oscillation Code, *Astrophysics and Space Science, Corot/ESTA volume, in press*
- GREVESSE N., M. ASPLUND AND A.J. SAUVAL, The solar chemical composition, Invited review, Symposium on the Composition of Matter, Grindelwald, Switzerland, 11-15 September 2006, Space Science Series, International Space Science Institute, ed. G. Gloeckler, B. Mason, R. von Steiger, *in press*
- MAMAJEK E., D. BARRADO, Y. NAVASCUES, S. RANDICH, E. JENSEN, P. YOUNG, A. MIGLIO AND S. BARNES, A splinter session on the thorny problem of stellar ages. Cool stars 14, Pasadena, 6-11 November 2006, *ASP, in press*
- SCUFLAIRE R. AND J. MONTALBÁN, The Liège Oscillation Code. Solar/Stellar Models and Seismic Analysis Tools, Joint HELAS and Corot/ESTA Workshop, Porto, 20-23 November, *in press*

- THEADO S., Diffusion in Clés. Solar/Stellar Models and Seismic Analysis Tools, *Joint HELAS and Corot/ESTA Workshop, Porto, 20-23 November, in press*
- THOUL A., Microscopic diffusion in stellar plasmas. Solar/Stellar Models and Seismic Analysis Tools, *Joint HELAS and Corot/ESTA Workshop, Porto, 20-23 November, in press*
- BOURGE P.-O., S. THÉADO AND A. THOUL, Radiative forces on C, N, O and the N-excess in β Cephei stars, *Month. Not. R. Astron. Soc., submitted*
- BRIQUET M., T. MOREL, A. THOUL, R. SCUFLAIRE, A. MIGLIO, J. MONTALBÁN AND C. AERTS., An asteroseismic study of the β Cephei star θ Ophiuchi: constraints on core overshooting and internal rotation, *Month. Not. R. Astron. Soc., submitted*
- MIGLIO A., J. MONTALBÁN AND C. MACERONI, 12 Bootis: a test bed for extra-mixing processes in stars, *Month. Not. R. Astron. Soc., submitted*
- MONTALBÁN J. AND M.-A. DUPRET, Effects of convective outer layers on δ Scuti stars, *Astron. Astrophys., submitted*

Astrophysics and Image Processing

Published papers

- LETAWE G., MAGAIN P., COURBIN F., JABLONKA P., MEYLAN G., JAHNKE K. AND WISOTZKI L., VLT on-axis spectroscopy of quasar host galaxies, *New Astronomy Reviews* 50, 779, 2006
- GILLON M., PONT F., MOUTOU C., BOUCHY F., COURBIN F., SOHY S. AND MAGAIN P., High accuracy transit photometry of the planet OGLE-TR-113b with a new deconvolution-based method, *Astron. Astrophys.*, 459, 249, 2006
- COURBIN F., LETAWE G., MEYLAN G., MAGAIN P., JABLONKA P., JAHNKE K., WISOTZKI L., LETAWE Y. AND NORTH P., The Host Galaxies of the Brightest Quasars: Gas-Rich Galaxies, Mergers, and Young Stars, *The Messenger* 124, 32, 2006
- EIGENBROD A., COURBIN F., MEYLAN G., VUISOZ C. AND MAGAIN P., COSMOGRAIL: the COSmological MONitoring of GRAvItational Lenses. III. Redshift of the lensing galaxy in eight gravitationally lensed quasars, *Astron. Astrophys.*, 451, 759, 2006
- EIGENBROD A., COURBIN F., DYE S., MEYLAN G., SLUSE D., VUISOZ C. AND MAGAIN P., COSMOGRAIL: the COSmological MONitoring of GRAvItational Lenses. II. SDSS J0924+0219: the redshift of the lensing galaxy, the quasar spectral variability and the Einstein rings, *Astron. Astrophys.*, 451, 747, 2006

- GILLON M. AND MAGAIN P., High precision determination of the atmospheric parameters and abundances of the COROT main targets, *Astron. Astrophys.*, 448, 341, 2006
- STEINMETZ M., ZWITTER T., SIEBERT A., ... PARMENTIER G., The Radial Velocity Experiment (RAVE): First Data Release, *Astron. J.* 132, 1645, 2006
- JAKOBSSON P., HJORTH J., BURUD I., LETAWE G., LIDMAN C. AND COURBIN F., An optical time delay for the double gravitational lens system FBQ 0951+2635, *Astron. Astrophys.*, 431, 103-109, 2005, 2006

Papers in press or submitted

- CHANTRY V. AND MAGAIN P., Deconvolution of HST images of the Cloverleaf gravitational lens : detection of the lensing galaxy and a partial Einstein ring, *Astron., Astrophys.*, in press
- LETAWE G., MAGAIN P., COURBIN F., JABLONKA P., JAHNKE K., MEYLAN G. AND WISOTZKI L., On-axis spectroscopy of the host galaxies of 20 optically luminous quasars at $z \sim 0.3$, *MNRAS*, in press
- VUISOZ C., COURBIN F., SLUSE D., MEYLAN G., IBRAHIMOV M., ASFANDIYAROV I., STOOPS E., EIGENBRO, A., LE GUILLOU L., VAN WINCKEL H. AND MAGAIN P., COSMOGRAIL: the COSmological MONitoring of GRAVItational Lenses V. The time delay in SDSS J1650+4251, *Astron. Astrophys.*, in press

Extragalactic Astrophysics and Space Observations

Published papers

- ABSIL O., DEN HARTOG R., GONDOIN P., FABRY P., WILHELM R., GITTON P. AND PUECH F., Performance study of ground-based infrared Bracewell interferometers. Application to the detection of exozodiacal dust disks with GENIE, *Astron. Astrophys.*, 448, 787-800, 2006
- ABSIL O., DI FOLCO E., MÉRAND A., COUDÉ DU FORESTO V., AUGEREAU J.-C., AUFDENBERG J., KERVELLA P., RIDGWAY S., BERGER D., TEN BRUMMELAAR T., STURMANN J., STURMANN L., TURNER N. AND MCALISTER H., Circumstellar material in the Vega inner system revealed by CHARA/FLUOR, *Astron. Astrophys.*, 452, 237-244, 2006
- ABSIL O., DI FOLCO E., MERAND A., AUGEREAU J.-C., ET AL., Detection of the inner debris disk of Vega with CHARA/FLUOR, *In Advances in Stellar Interferometry, Proc. SPIE*, vol. 6268, 2006, 12 pages, 2006

- ANDREON S., QUINTANA H., TAJER M., GALAZ G. AND SURDEJ J., The Butcher-Oemler effect at $z \sim 0.35$: a change in perspective, *Mon. Not. R. Astron. Soc.* 365, 915-928, 2006
- ABSIL O. AND MAWET D., Perspectives for next generation ground- and space-based interferometers, *Proceedings of "Distant Worlds", JENAM meeting, 1-15*, 2006
- AUFDENBERG J., MÉRAND A., COUDÉ DU FORESTO V., ABSIL O., DI FOLCO E., RIDGWAY S., STURMANN J., STURMANN L. TEN BRUMMELAAR T., TURNER N., BERGER D. AND MCALISTER H., First Results from the CHARA Array. VII. Long-Baseline Interferometric Measurements of Vega Consistent with a Pole-On, Rapidly Rotating Star, *ApJ* 645, 664-675, 2006
- BARTZAK P., BREITER, S. AND JUSIEL P., Ellipsoids, material points and material segments, *Celestial Mechanics and Dynamical Astronomy* 96, 31-48, 2006
- CHAZELAS B., BRACHET F., BORDE P., MENNESSON B., OLLIVIER M., ABSIL O., LABEQUE A., VALETTE C. AND LEGER A., Instrumental Stability Requirements for Exoplanet Detection with a Nulling Interferometer. Variability Noise is a Central Issue, *Applied Optics* 45(5), 984-992, 2006
- CLAESKENS J.-F., SLUSE D., RIAUD P. AND SURDEJ J., Multi wavelength study of the gravitational lens system RXS J1131-1231: II. Lens Model and Source Reconstruction, *Astron. Astrophys.* 451, 865-879, 2006
- CLAESKENS J.-F., SMETTE A., VANDENBULCKE L. AND SURDEJ J., Identification and redshift determination of quasi-stellar objects with medium-band photometry : application to GAIA, *Mon. Not. R. Astron. Soc.* 367, 879-904, 2006
- DEFRERE D. AND RATHKE A., Pioneer Anomaly: What can we learn from LISA?, In *"Lasers, Clocks and Drag-Free: Exploration of Relativistic Gravity in Space"* Springer (October 2006), 541-567, 2006
- DEFRERE D., ABSIL O., HANOT C., DEN HARTOG R. AND FRIDLUND M., Performance study of space-based Bracewell interferometers, *Electronic proceedings of TPF/Darwin 2006 workshop*, <http://planetquest.jpl.nasa.gov/TPFDarwinConf3/confProceedings.cfm>, 2006
- GANDHI P., GARCET O., DISSEAU, PACAUD F., PIERRE M., GUEGUEN A., ALLOIN D., CHIAPPETTI L., GOSSET E., MACCAGNI D., SURDEJ J. AND VALTCHANOV I., The XMM large scale structure survey: properties and two-point angular correlations of point-like sources, *Astron. Astrophys.* 457, 393-404, 2006
- GARCET O., GANDHI P., GOSSET E., GUEGUEN A., PACAUD F., PIERRE M. AND SURDEJ J., Angular clustering of X-ray point-like sources in the XMM Large Scale Structure Survey, In *the Proceedings of the conference « The X-ray Universe 2005 »*, El Escorial, Madrid, Spain, 26-30 September 2005 (ESA SP-604, January 2006), pp. 617-618, 2006

- JEHIN E., J. MANFROID, D. HUTSEMÉKERS, A. COCHRAN, C. ARPIGNY, W. JACKSON, H. RAUER, R. SCHULZ AND J.-M. ZUCCONI, Deep Impact: high-resolution optical spectroscopy with the ESO VLT and the Keck I telescope, *Astrophys. J.*, 641, L145-L148, 2006
- JORDI C., HOG E., BROWN A.G.A., LINDEGREN L., BAILER-JONES C.A.L., CARRASCO J.M., KNUDE J., STRAIZYS V., DE BRUIJNE J.H.J., CLAESKENS J.-F., DRIMMEL R., FIGUERAS F., GRENON M., KOLKA I., PERRYMAN, M.A.C., TAUTVAISIEN G., VANSEVICIUS V., WILLEMSSEN P.G., BRIDZIUS, A., EVANS D.W., FABRICIUS C., FIORUCCI M., HEITER U., KAEMPF T.A., KAZLAUSKAS A., KUCINSKAS A., MALYUTO V., MUNARI U., REYLÉ C., TORRA J., VALLENARI A., ZDANAVICIUS K., KORAKITIS R., MALKOV AND O. AND SMETTE A., The design and performance of the Gaia photometric system, *MNRAS*, 367, 290-314, 2006
- MAWET D., LENAERTS C., RIAUD P., VANDORMAEL D., LOICQ J., VERSTRAETEN D., FLEURY K., HABRAKEN S. AND SURDEJ J., Infrared achromatic phase shifters using modulated total internal reflection, *Proc. SPIE*, vol. 6268, 62682J, 2006
- MAWET D. AND RIAUD P., Subwavelength gratings for phase mask coronagraphy: the 4QZOG and AGPM coronagraphs, *In Direct Imaging of Exoplanets: Science & Techniques, IAU Colloq. 200*, 361-366, 2006
- MAWET D., RIAUD P., BAUDRAND J., BAUDOZ P., BOCCALETTI A., DUPUIS O. AND ROUAN D., The four-quadrant phase-mask coronagraph: white light laboratory results with an achromatic device, *Astron. Astrophys.*, 448, 801-808, 2006
- NAZE Y., G. RAUW, D. HUTSEMEKERS, E. GOSSET, J. MANFROID AND P. ROYER, The atypical emission-line star Hen 3-209, *Mon. Not. R. Astron. Soc.* 371, 1594-1600, 2006
- PACAUD F., PIERRE M., REFREGIER A., GUEGUEN A., STARCK J.-L., VALTCHANOV I., ALTIERI B., CHIAPPETTI L., GANDHI P., GARCET O., GOSSET E., PONMAN T.J., READ A.M., SURDEJ J., The XMM Large Scale Structure survey : the X-ray pipeline and survey selection function, *Mon. Not. R. Astron. Soc.* 372, 578-5, 2006
- PIERRE M., PACAUD F., DUC P.A., WILLIS J., ANDREON S., VALTCHANOV I., ALTIERI B., GALAZ G., GUEGUEN A., LEFÈVRE J.-P., LEFÈVRE O., PONMAN, T., PRIMONT P.-G., SURDEJ J., ADAMI, C., ALSHINO, A., BREMER M., CHIAPPETTI L., DETAL A., GARCET O., GOSSET E., JEAN C., MACCAGNI D., MARINONI C., QUINTANA H. AND READ A., The XMM-LSS survey : a complete X-ray cluster sample over the D1 CFHTLS a, *Mon. Not. R. Astron. Soc.* 372, 591-6, 2006
- RIAUD P., MAWET D., ABSIL O., BOCCALETTI A., BAUDOZ P., HERWATS E. AND SURDEJ J., Coronagraphic imaging of three weak-line T Tauri stars: evidence of planetary formation around PDS 70, *Astron. Astrophys.* 458, 317-325, 2006

- SLUSE D., CLAESKENS J.-F., ALTIERI B., CABANAC R.A., GARCET O., HUTSEMEKERS D., JEAN C., SMETTE A. AND SURDEJ J., Multi-wavelength study of the gravitational lens system RXS J113155.4-123155: I. Multi-epoch optical and near infrared imaging, *Astron. Astrophys.* 449, 539-550, 2006
- SURDEJ J., ABSIL O., BARTCZAK P., BORRA E., CHISOGNE J.-P., CLAESKENS J.-F., COLLIN B., DE BECKER M., DEFRÈRE D., DENIS S., FLEBUS C., GARCET O., JEAN C., LAMPENS P., LIBBRECHT C., MAGETTE A., MANFROID J., MAWET D., NAKOS TH., NINANE N., POELS J., POSPIESZALSKA A., RIAUD P., SPRIMONT P.-G., SWINGS J.-P., The 4m International Liquid Mirror Telescope (ILMT), *In the Proceedings of the SPIE conference, Orlando, Vol. 6267, 626704*, 2006
- SURDEJ J., CLAESKENS J.-F., SLUSE D., Gravitational lensing and anomalous redshifts, *In the proceedings of the International Colloquium "Cosmology : facts and problems", Collège de France (Paris) 8-11 June 2004, Eds. Pecker, J.-C., Narlikar, J.; Cambridge University Press, pp. 223-233* , 2006
- J. SURDEJ, D. CARO, A. DETAL EDS, Technology Roadmap for Future Interferometric Facilities, *Proceedings of the Liège International Astrophysical Workshop, 186 p.*, 2006
- VANDORMAEL D., HABRAKEN S., LOICQ J., LENAERTS C. AND MAWET D., Antireflective subwavelength patterning of IR optics, *Proc. SPIE, vol. 6395, 63950L*, 2006

Papers in press or submitted

- ABSIL O., AUGEREAU J.-C., DEN HARTOG R., HERWATS E., ET AL., GENIE: high-resolution study of debris disks, *Proceedings of The Power of Optical/IR Interferometry: Recent Scientific results and Second Generation VLTI Instrumentation, April 2006, in press*
- AKESON R., TEN BRUMMELAAR T., EISNER J., HANIFF C., KAROVSKA M., MONNIER J., MOURARD D., PERRIN G., SURDEJ J. AND TYCNER C., Current generation arrays: current status, getting the most out of them and future development, *Presented at the NOAO "Future Directions for Interferometry" Workshop, held in Tucson, AZ, November 13 –15, 2006, in press*
- BURTON M., PICCIRILLO L., ANDERSEN M., ASHLEY M., BARTLETT J., DE BERNADIS P., BOND I., CANDIDI M., CARLBERG R., EPCHTEIN N., FOSSAT E., GERVASI M., GIRAUD-HEROUD Y., HANSLMEIR A., LAWRENCE J., MANKIEWICZ L., MASI S., MCCAUGHREAN M., MOORE A., OLM I., PELOSI G., PENNYPACKER C., KJAEGAARD RASMUSSEN P., SARACENO P., SIRONI G., SORENSEN H., STOREY J., STRASSMEIER K., SURDEJ J., THEJILL P., TORII S., TRAVOUILLO T., ULLA A., VETTOLANI G., WALKER C., WALSH W., WANG L., WROCHNA G., XIANGQUN C., YUANSHENG L., YAO Y. AND ZHAO Y., AstroPoles : Astronomy from the Polar Plateaus; The astronomy program for the International Polar Year, *Poster presented during the IAU General Assembly in August 2006 (Prague), in press*

- CARPENTER K.G., ALLEN R., BENSON J., CIARDI D., DANCHI W., FORESTO V., KAROVSKA, M., MIGHELL K., MONNIER J., MOULD J., MOURARD D., STOREY J., SURDEJ J. AND SWAIN M., The Future of Space-Based Interferometry, *Presented at the NOAO "Future Directions for Interferometry" Workshop, held in Tucson, AZ, November 13 –15, 2006, in press*
- JEAN C. AND SURDEJ J., Classification of extinction laws and lens redshift estimate by means of the Principal Component Analysis, *Astron. Astrophys., in press*
- H. KAWAKITA, E. JEHIN, J. MANFROID AND D. HUTSEMEKERS, Nuclear spin temperature of ammonia in Comet 9P/Tempel 1 before and after the Deep Impact event, *Icarus, in press*
- MALBET F., KERN P.Y., BERGER J.-P., JOCOU L., GARCIA P., BUSCHER D., ROUSSELET-PERRAUT K., WEIGELT G., GAI, M., SURDEJ J., HRON J., NEUHAÜSER R., LE COARER E., LABEYE P.R., LE BOUQUIN J., BENISTY M. AND HERWATS E., VSI : a milli-arcsec spectro-imager for the VLTI, *In the Proceedings of the SPIE conference, Orlando, in press, astro-ph/0607291*
- MANFROID J., D. HUTSEMEERS, E. JEHIN, A. COCHRAN, C. ARPIGNY, W. JACKSON, K. MEECH, R. SCHULZ AND J.-M. ZUCCONI, The impact and rotational lightcurves of Comet 9P/Tempel 1, *Icarus, in press*
- MAWET D., LENAERTS C., RIAUD P., VANDORMAEL D., LOICQ J., VERSTRAETEN D., FLEURY K., HABRAKEN S. AND SURDEJ J., Infrared Achromatic Phase Shifters using Modulated Total Internal Reflection, *In the Proceedings of the SPIE conference, Orlando, in press*
- MAWET D., RIAUD P., BAUDRAND J., BOCCALETTI A., BAUDOZ P., ROUAN D., LENAERTS C. AND SURDEJ J., Achromatic optical vortex coronagraph with subwavelength gratings, *Proc. of Coronagraph Workshop, Pasadena 2006, in press*
- MAZURE A., ADAMI C., PIERRE M., LE FÈVRE O., ARNOUITS S., DUC P.A., ILBERT O., LEBRUN V., MENEUX B., PACAUD F., SURDEJ J. AND VALTCHANOV, I., Structure detection in the D1 CFHTLS deep field using accurate photometric redshifts: a benchmark, *Astron. Astrophys., in press*
- PACAUD F., PIERRE M., ADAMI C., ALTIERI B., ANDREON S., CHIAPPETTI L., DETAL A., DUC P.-A., GALAZ G., GUEGUEN A., LE FÈVRE J.-P., HERTLING G., LIBBRECHT C., PONMAN T. J., QUINTANA H., REFREGIER A., SPRIMONT P.-G., SURDEJ J., VALTCHANOV I., WILLIS J. P., ALLOIN D., BIRKINSHAW M., BREMER M. N., GARCET O., JEAN C., JONES L. R., LE FÈVRE O., MACCAGNI D., MAZURE A., PROUST D., RÖTTGERING H.J.A. AND TRINCHIERI G., The XMM-LSS survey: the C1 cluster sample over the first 5 deg² and its cosmological modelling, *Mon. Not. R. Astron. Soc., in press*
- PALACIOS D.M., G.A. SWARTZLANDER JR. AND D. MAWET, Optical Vortex Coronagraphy, *Proc. of Coronagraph Workshop, Pasadena 2006, in press*
- PIERRE M., CHIAPPETTI L., PACAUD F., GUEGUEN A., ALTIERI B. AUSSEL H., GANDHI, P., GARCET O., GOSSET E., PAIORO L., PONMAN T.J., READ

A.M., REFREGIER A., STARCK J.-L., SURDEJ J. AND VALTCHANOV I., The XMM-LSS catalogue: X-ray sources and associated optical data. Version I, *Mon. Not. R. Astron. Soc.*, *in press*

- POLLETTA M., TAJER M., MARASCHI L., TRINCHIERI G., LONSDALE C.J., CHIAPPETTI L., ANDREON S., PIERRE M., LE FÈVRE O., ZAMORANI G., MACCAGNI D., GARCET O., SURDEJ J., FRANCESCHINI A., ALLOIN D., SHUPE D.L., SURACE J. A. , FANG F., ROWAN-ROBINSON M., SMITH H. E. AND TRESSE L., Spectral Energy Distributions of Hard X-ray selected AGN in the XMDS Survey, *Astron. Astrophys.*, *in press*
- SCHNEIDER J., RIAUD P., TINETTI G., SCHMID H. M., STAM D., UDRY S., BAUDOZ P., BOCCALETTI A., GRASSET O, MAWET D., SURDEJ J. AND THE SEE-COAST TEAM, SEE-COAST: THE SUPER-EARTH EXPLORER, 2006, *SF2A ("Journées Françaises de l'Astrophysique 2006")*, D. Barret, F. Casoli, S. Collin, F. Combes, T. Contini, and L. Pagani (eds.), *in press*
- SELSIS F., B. CHAZELAS P. BORDÉ, F. BOUCHY, J.-M. GRIESSMEIER, H. LAMMER, C. SOTIN, O. GRASSET, D. EHRENREICH, C. MOUTOU, P. BARGE, M. DELEUIL, D. MAWET D. DESPOIS, M. OLLIVIER, F. BRACHET, M. DECAUDIN, J. F. KASTING AND A. LÉGER, Could we characterize hot Ocean-Planets with COROT, Kepler and Doppler velocimetry?, *Icarus*, *in press*
- SLUSE D., CLAESKENS J.-F., HUTSEMÉKERS D. AND SURDEJ J., Multi wavelength study of the gravitational lens system RXS J1131-1231: III. Long slit spectroscopy : micro-lensing probes QSO structure, *Astron. Astrophys.*, *in press*
- TAJER M., POLLETTA M., CHIAPPETTI L., MARASCHI L., TRINCHIERI G., MACCAGNI D., ANDREON S., GARCET O., SURDEJ J., PIERRE M., LE FÈVRE O., FRANCESCHINI A., LONSDALE C. J., SURACE J. A., SHUPE D. L., FANG F., ROWAN-ROBINSON M., SMITH H.E. AND TRESSE L., Obscured and unobscured AGN populations in a hard-X-ray selected sample of the XMDS survey, *Astron. Astrophys.*, *in press*

High Energy Astrophysics

Published papers

- BOËR M., ATTEIA J.L., DAMERDJI Y., GENDRE B., KLOTZ A. AND STRATTA G., Observation of the prompt and early afterglow of GRB 050904 by TAROT, *Gamma-ray Bursts in the Swift Era (AIP Conf.)*, 836, 271-276, 2006
- BOËR M., ATTEIA J.L., DAMERDJI Y., GENDRE B., KLOTZ A. AND STRATTA G., Detection of a Very Bright Optical Flare from the Gamma-Ray Burst GRB 050904 at Redshift 6.29, *Astrophysical Journal*, 638, L71-L74, 2006

- BYKOV A. M., KRASSILCHTCHIKOV A. M., UVAROV YU. A., LEBRUN F., RENAUD M., TERRIER R., BLOEMEN H., MCBREEN B., COURVOISIER T. J.-L., GUSTOV M. YU., HERMSEN W., LEYDER J.-C., LOZINSKAYA T.A., RAUW G. AND SWINGS J.-P., INTEGRAL detection of hard X-rays from NGC 6334: nonthermal emission from colliding winds or an AGN?, *Astron. Astrophys.*, 449, 917-923, 2006
- BYKOV A. M., KRASSILCHTCHIKOV A. M., UVAROV YU. A., KENNEA J. A., PAVLOV G. G., DUBNER G. M., GIACANI E. B., BLOEMEN H., HERMSEN W., KAASTRA J., LEBRUN F., RENAUD M., TERRIER R., DE BECKER M., RAUW G. AND SWINGS J.-P., On the Nature of the Hard X-Ray Source IGR J2018+4043, *Astrophysical Journal*, 649, L21-L24, 2006
- DE BECKER M., RAUW G., SANA H., POLLOCK A.M.T., PITTARD J.M., BLOMME R., STEVENS I.R. AND VAN LOO S., XMM-Newton observations of the massive colliding wind binary and non-thermal radio emitter CygOB2#8A [O6If + O5.5III(f)], *Monthly Notices of the Royal Astronomical Society*, 371, 1280-1294, 2006
- DE BECKER M., RAUW G., MANFROID J. AND EENENS P., Early-type stars in the young open cluster IC 1805. II. The probably single stars HD 15570 and HD 15629, and the massive binary/triple system HD 15558, *Astron. Astrophys.*, 456, 1121-1130, 2006
- GAMEN R., GOSSET E., MORRELL N., NIEMELA V., SANA H., NAZÉ Y., RAUW G., BARBÁ R. AND SOLIVELLA G., The first orbital solution for the massive colliding-wind binary HD 93162 (= WR 25), *Astron. Astrophys.*, 460, 777-782, 2006
- GOTZ D., SCHANNE S., RODRIGUEZ J., LEYDER J.-C., VON KIENLIN A., MOWLAVI N. AND MEREGHETTI S., Outburst of a new source IGR J08408-4503 detected by INTEGRAL, *The Astronomer's Telegram*, 813, 1, 2006
- GOTZ D., ISRAEL G.L., MEREGHETTI S., BALMAN S., BELLONI T., DEL SANTO M., TARANA A., BAZZANO A., FIOCCHI M., FERRIGNO C., LEYDER J.-C., PAIZIS A., SIDOLI L., POTTSCHMIDT K., WATANABE K. AND WEIDENSPONTNER G., INTEGRAL hard X-ray observations of the outburst of the AXP CXOU J164710.2-455216, *The Astronomer's Telegram*, 953, 1, 2006
- AKLOTZ A., GENDRE B., STRATTA G., ATTEIA J.L., BOËR M., MALACRINO F., DAMERDJI Y. AND BEHREND R., Continuous optical monitoring during the prompt emission of GRB 060111B, *Astron. Astrophys.*, 451, L39-L42, 2006
- KLOTZ A., BOËR M., BUCHHOLTZ G., DAMERDJI Y., EYSSERIC J., POLLAS C. AND RICHAUD Y., Searching for early optical transients of gamma-ray bursts with TAROT, *Technical status, Gamma-ray Bursts in the Swift Era (AIP Conf.)*, 836, 305-308, 2006
- KLOTZ A., DAMERDJI Y. AND VACHIER F., GRB 060121: OHP optical limits, *GRB Coordinates Network Circular*, 4582, 1, 2006

- LEYDER J.-C. AND RAUW G., Searching for continuum γ -ray emission from OB associations with INTEGRAL, some preliminary results, *Populations of High Energy Sources in Galaxies (Proc. IAU Symp.)*, 230, 338-339, 2006
- LINDER N., RAUW G., POLLOCK A.M.T. AND STEVENS I.R., The XMM-Newton view of Plaskett's star and its surroundings, *Month. Not. Astron. Soc.*, 370, 1623-1632, 2006
- MARTINS F., TRIPPE S., PAUMARD T., OTT T., GENZEL R., RAUW G., EISENHAEUER F., GILLESSEN S., MANESS H. AND ABUTER R., GCIRS 16SW: A Massive Eclipsing Binary in the Galactic Center, *ApJ*, 649, L103-L106, 2006
- NAZÉ Y., Spectroscopy of Massive Stars, *Bulletin de la Société Royale des Sciences Liège*, 75, 20-61, 2006
- NAZÉ Y., BARBIERI C., SEGAFREDO A., RAUW G. AND DE BECKER M., New light on the peculiar star HD 108, *Information Bulletin on Variable Stars*, 5693, 1-4, 2006
- NAZÉ Y., RAUW G., WALBORN N.R. AND HOWARTH I.D., The peculiar Of?p stars HD 108 and HD 191612: the X-ray view, *The X-ray Universe 2005, ESA SP-604*, 99-100, 2006
- NAZÉ Y., RAUW G., HUTSEMÉKERS D., GOSSET E., MANFROID J. AND ROYER P., The atypical emission-line star Hen3-209, *Month. Not. Astron. Soc.*, 371, 1594-1600, 2006
- RAUW G., X-ray emission from early-type stars : new results and new challenges, *The X-ray Universe 2005, ESA SP-604*, 7-14, 2006
- RAUW G., POLLOCK A.M.T. AND NAZÉ Y., High Resolution X-ray Spectroscopy of Early-Type Stars, *High Resolution X-ray Spectroscopy: towards XEUS and Con-X*, 10p, 2006
- SANA H., GOSSET E., RAUW G., SUNG H. AND VREUX J.-M., An XMM-Newton view of the young open cluster NGC 6231. I. The catalogue, *Astron. Astrophys.*, 454, 1047-1063, 2006
- SANA H., GOSSET E., RAUW G. AND VREUX J.-M., An exceptional X-ray view of the young open cluster NGC 6231: what XMM-Newton has taught us, *The X-ray Universe 2005, ESA SP-604*, 21-26, 2006
- SANA H., GOSSET E. AND RAUW G., The OB binary HD152219: a detached, double-lined, eclipsing system, *Month. Not. Astron. Soc.*, 371, 67-80, 2006
- SANA H., RAUW G., NAZÉ Y., GOSSET E. AND VREUX J.-M., An XMM-Newton view of the young open cluster NGC 6231 - II. The OB star population, *Month. Not. Astron. Soc.*, 372, 661-678, 2006
- SOLDI S., WALTER R., ECKERT D., BALMAN S., BAZZANO A., BECKMANN V., BELLONI T., BOGGS S., CAPITANIO F., CHENEVEZ J., DEL SANTO M.,

DIEHL R., DONNARUMMA I., GOLDONI P., GOTZ D., LEYDER J.-C., MEREGHETTI S., PAIZIS A., POTTSCHMIDT K., SIDOLI L., TARANA A., TUELLER J., WATANABE K. AND WEIDENSPOINTNER G., IGR J17497-2821: a new hard X-ray transient detected by INTEGRAL, *The Astronomer's Telegram*, 885, 1, 2006

- SWINGS J.-P., Around and about "Europe's Quest for the Universe", *The Messenger*, 126, 49, 2006
- SWINGS J.-P., A Grandfather's Question: Why Have these Stars Been Called B[e]s?, *Stars with the B[e] Phenomenon (ASP Conf.)*, 355, 3-12, 2006
- SWINGS J.P. ET DEMOULIN P., La protection du ciel nocturne, *Cahiers de l'Urbanisme*, 59-60, 59-63, 2006

Papers in press or submitted

- BLOMME R., DE BECKER M., RUNACRES M.C., VAN LOO S. AND SETIA GUNAWAN D.Y.A., Non-thermal radio emission from O-type stars. II. HD 167971, *Astron. Astrophys.*, *in press*
- GENDRE B., GALLI A., CORSI A., KLOTZ A., PIRO L., STRATTA G., BOËR M. AND DAMERDJI Y., The Gamma-ray burst 050904 : evidence for a termination shock ?, *Astron. Astrophys.*, *in press*
- LEYDER J.-C., WALTER R., LAZOS M., MASETTI N. AND PRODUIT N., Hard X-ray flares in IGR J08408-4503 unveil clumpy stellar winds, *Astron. Astrophys.*, *in press*
- NAZÉ Y., RAUW G., POLLOCK A.M.T., WALBORN N.R. AND HOWARTH I.D., Towards an understanding of the Of?p star HD191612: Phase-resolved multiwavelength observations, *Month. Not. Astron. Soc.*, *in press*
- RAUW G., MANFROID J., GOSSET E., NAZÉ Y., SANA H., DE BECKER M., FOELLM I. C. AND MOFFAT A.F.J., Early-type stars in the core of the young open cluster Westerlund 2, *Astron. Astrophys.*, *in press*
- SANA H., RAUW G. AND GOSSET E., Constraining the fundamental parameters of the O-type binary CPD-41°7733, *ApJ*, *in press*

Atmospheric and Planetary Physics

Published papers

- BONFOND B., J.-C. GÉRARD AND D. GRODENT, Study of the Io footprint short timescale variability, *Proceedings of the XVIII Rencontres de Blois*, 2006

- BROSCH N., J. DAVIES, M.C. FESTOU AND J.-C. GÉRARD, A view to the future: ultraviolet studies of the solar system, *Astrophysics and Space Science*, 303,103-122, doi: 10.1007/s10509-005-9027-2, 2006
- CHEDDADI R., G. VENDRAMIN, T. LITT, L. FRANÇOIS, M. KAGEYAMA, S. LORENTZ, J.-M. LAURENT, J.-L. DE BEAULIEU, L. SADORI, A. JOST AND D. LUNT, Imprints of glacial refugia in the modern genetic diversity of *Pinus sylvestris*, *Global Ecology and Biogeography*, 15, 271-282, 2006
- COUMANS V., J.-C. GÉRARD, B. HUBERT AND M. MEURANT, Global auroral proton precipitation observed by IMAGE-FUV: noon and midnight brightness dependence on solar wind characteristics and IMF orientation, *J. Geophys. Res. (Space Physics)*, 111, A05210, doi:10.1029/2005JA011317, 2006
- FRANÇOIS L., M. GHISLAIN, D. OTTO AND A. MICHEELS, Late Miocene vegetation reconstruction with the CARAIB model, *Palaeogeogr. Palaeoclim., Palaeoecol.*, 238, 302-320, 2006
- GÉRARD J.-C., A. SAGLAM, D. GRODENT AND J.T. CLARKE, Morphology of the ultraviolet Io footprint emission and its control by Io's location, *J. Geophys. Res. (Space Physics)*, 111, A04202, doi: 10.1029/2005JA011327, 2006
- GÉRARD J.-C., D. GRODENT, D. MITCHELL, W. KURTH, E. BUNCE, S.W.H. COWLEY AND J.T. CLARKE, Saturn's auroral morphology and activity during quiet magnetospheric conditions, *J. Geophys. Res. (Space Physics)*, 111, A12210, doi:10.1029/2006JA011965, 2006
- GODDERIS Y., L.M. FRANÇOIS, A. PROBST, J. SCHOTT, D. MONCOULON, D. LABAT AND D. VIVILLE, Modelling weathering processes at the catchment scale with the WITCH numerical model, *Geochim. Cosmochim. Acta* 70, 1128-1147, 2006
- GRODENT D., J.-C. GÉRARD, J. GUSTIN, B.H. MAUK, J.E.P. CONNERNEY AND J.T. CLARKE, Europa's FUV auroral tail on Jupiter, *Geophys. Res. Lett.*, 33, L06201, doi: 10.1029/2005GL025487, 2006
- GUSTIN J., S.W.H. COWLEY, J.-C. GÉRARD, G. R. GLADSTONE, D. GRODENT AND J.T. CLARKE, Characteristics of Jovian morning bright FUV aurora from HST/STIS imaging and spectral observations, *J. Geophys. Res. (Space Physics)*, 111, A09220, doi:10.1029/2006JA011730, 2006
- HUBERT B., M. PALMROTH, T.V. LAITINEN, P. JANHUNEN, S.E. MILAN , A. GROCOTT, S.W.H. COWLEY, T. PULKKINEN AND J.-C. GERARD, Compression of the Earth's magnetotail by interplanetary shocks directly drives transient magnetic flux closure, *Geophys. Res. Lett.*, 33, L10105, doi: 10.1029/2006GL026008, 2006
- HUBERT B., S.E. MILAN , A. GROCOTT, C. BLOCKX, S.W.H. COWLEY AND J.-C. GÉRARD, Dayside and nightside reconnection rates inferred from IMAGE-FUV and SuperDARN data, *Geophys. Res. (Space Physics)*, 111, A03217, doi: 10.1029/2005JA011140, 2006

- KÖHLER P., H. FISCHER, J. SCHMITT AND G. MUNHOVEN, On the application and interpretation of Keeling plots in paleo climate research - Deciphering $\delta^{13}\text{C}$ of atmospheric CO_2 measured in ice cores, *Biogeosciences*, 3, 539-556, 2006
- MELIN, H., S. MILLER, T. STALLARD, C. SMITH AND D. GRODENT, Estimated energy balance in the Jovian upper atmosphere during an auroral heating event, *Icarus*, 181,256-265, doi:10.1016/j.icarus.2005.11.004, 2006
- MIKALOFF FLETCHER, S.E., N. GRUBER, A.R. JACOBSON, S.C. DONEY, S. DUTKIEWICZ, M. GERBER, M. FOLLOWS, F. JOOS, K. LINDSAY, D. MENEMENLIS, A. MOUCHET, S. A. MÜLLER AND J.L. SARMIENTO, Inverse estimates of anthropogenic CO_2 uptake, transport, and storage by the ocean, *Global Biogeochem. Cycles*, 20, doi: 10.1029/2005GB002530, 2006
- MILAN S.E., J.A. WILD, B. HUBERT, C.M. CARR, E.A. LUCEK, J.M. BOSQUED, J.F. WATERMANN AND J.A. SLAVIN, Flux closure during a substorm observed by Cluster, Double Star, IMAGE FUV, SuperDARN, and Greenland magnetometers, *Ann. Geophys.*, 24, 751, 2006
- MUNHOVEN G., Interactive comment on “On the application and interpretation of Keeling plots in paleo climate research – deciphering delta ^{13}C of atmospheric CO_2 measured in ice cores”, by P. Köhler et al. *Biogeosciences Discussions* 3, S330–S338, 2006
- PROVAN G., M. LESTER, S.W.H. COWLEY, A. GROCOTT, S.E. MILAN AND B. HUBERT, Modulation of dayside reconnection by solar wind pressure pulses during Northward IMF, *J. Geophys. Res. (Space Physics)*, 110, doi:10.1029/2004JA010980, 2006

Papers in press

- BLOCKX C., J-C GÉRARD, V. COUMANS, B. HUBERT AND M. MEURANT, A comparison between FUV remote sensing of magnetotail stretching and the T01 model during quiet conditions and growth phases, *Annales Geophys.*, in press
- FAVRE E., L. FRANÇOIS, R. CHEDDADI, A. JOST, M. KAGEYAMA, L. THÉVENOD AND J.-P. SUC, Messinian végétation maps of the Mediterranean région using models and interpolated pollen data, *Geobios.*, in press
- GODDERIS Y., Y. DONNADIEU, C. DESSERT, B. DUPRE, F. FLUTEAU, L.M. FRANÇOIS, J. MEERT, A. NEDELEC AND G. RAMSTEIN, Coupled modeling of global carbon cycle and climate in the Neoproterozoic: links between Rodinia breakup and major glaciations, *C.R. Geosciences*, in press
- HUBERT B., M. PALMROTH, S.E. MILAN, A. GROCOTT, P. JANHUNEN, K. KAIRISTIE, C. BLOCKX, S.W.H. COWLEY, T. PULKKINEN AND J.-C. GÉRARD, Monitoring the dayside and nightside reconnection during various auroral events using IMAGE-FUV and SuperDARN data, *Proc. of the 8th International Conference on Substorms, Banff*, in press

- MEURANT M., C. BLOCKX, E. SPANSWICK, E. DONOVAN, B. HUBERT, J.-C. GERARD, V. COUMANS AND M.G. CONNORS, EL - a possible indicator to monitor the magnetic field stretching at global scale during substorm expansive phase: statistical study, *J. Geophys. Res.*, *in press*
- MIKALOFF FLETCHER, S.E., N. GRUBER, A.R. JACOBSON, S.C. DONEY, S. DUTKIEWICZ, M. GERBER, M. GLOOR, M. FOLLOWS, F. JOOS, K. LINDSAY, D. MENEMENLIS, A. MOUCHET, S.A. MÜLLER AND J.L. SARMIENTO, Inverse estimates of the oceanic sources and sinks of natural CO₂ and their implied oceanic transport, *Global Biogeochem. Cycles*, *in press*
- MILAN S.E., B. HUBERT AND M. HAIRSTON, On the storm-time expansion of the auroral oval to low latitudes, *Ann. Geophys.*, *in press*
- MILAN S.E., G. PROVAN, B. HUBERT AND M.R. HAIRSTON, Transient auroral features associated with lobe reconnection, *Ann. Geophys.*, *in press*
- NICHOLS J.D., E.J. BUNCE, J.T. CLARKE, S.W.H. COWLEY, J.-C. GÉRARD, D. GRODENT AND W.R. PRYOR, Response of Jupiter's UV auroras to interplanetary conditions as observed by the Hubble Space Telescope during the Cassini fly-by campaign, *J. Geophys. Res.*, *in press*
- UTESCHER T., B. ERDEI, L. FRANÇOIS AND V. MOSBRUGGER, Tree diversity in the Miocene forests of Western Eurasia, *Palaeogeogr. Palaeoclim. Palaeoecol.*, *in press*
- BADMAN S.V., S.W.H. COWLEY, J.-C. GÉRARD AND D. GRODENT, A statistical analysis of the location and width of Saturn's southern auroras, *in press*
- LAURENT J.-M., L. FRANÇOIS, A. BAR-HEN, L. BEL AND R. CHEDADDI, European Bioclimatic Affinity Groups : data-model comparisons, *Global. Planet. Change* (special issue), *in press*
- BONFOND B., J.-C. GÉRARD, D. GRODENT AND J. SAUR, The ultraviolet Io footprint short timescale dynamics, *Geophys. Res. Lett.*, *submitted*
- RIOTTE J., Y. GODDERIS, S. LORENZ, F. CHABAUX, L.M. FRANÇOIS AND G. MUNHOVEN, Modelling the continental weathering contribution to the oceanic uranium budget, *Earth Planet. Science Letters*, *submitted*
- GRUBER N., M. GLOOR, S.E. MIKALOFF FLETCHER, T. TAKAHASHI, S.C. DONEY, M. GERBER, A.R. JACOBSON, K. LINDSAY, D. MENEMENLIS, A. MOUCHET AND J.L. SARMIENTO, Toward consistent estimates of the oceanic sources and sinks for atmospheric CO₂, *Global Biogeochem. Cycles*, *submitted*
- MOUCHET A. AND E. DELEERSNIJDER, The leaky funnel model, a metaphor of the ventilation of the World Ocean, *Tellus*, *submitted*
- MUNHOVEN G., Glacial-interglacial rain ratio changes: implications for atmospheric CO₂ and ocean-sediment interaction, *Deep-sea Research II*, *submitted*

- NAJJAR R.G., X. JIN, F. LOUANCHI, O. AUMONT, K. CALDEIRA, S.C. DONEY, J.-C. DUTAY, M. FOLLOWS, N. GRUBER, F. JOOS, K. LINDSAY, E. MAIER-REIMER, R.J. MATEAR, K. MATSUMOTO, A. MOUCHET, J.C. ORR, G.-K. PLATTNER, J.L. SARMIENTO, R. SCHLITZER, M.F. WEIRIG, Y. YAMANAKA AND A. YOOL, Impact of circulation on export production, dissolved organic matter and dissolved oxygen in the ocean: Results from OCMIP-2. *Global Biogeochem. Cycles*, *submitted*
- PLATTNER G.-K., R. KNUTTI, F. JOOS, T.F. STOCKER, V. BROVKIN, E. DRIESSCHAERT, S. DUTKIEWICZ, M. EBY, N.R. EDWARDS, T. FICHEFET, C. JONES, M.F. LOUTRE, H.D. MATTHEWS, A. MOUCHET, S.A. MÜLLER, S. NAWRATH, A. SOKOLOV, K. STRASSMANN AND A. WEAVER, Long-term projections of climate change commitment. *Cl. Dyn.*, *submitted*

Atmospheric and Solar Spectroscopy, Molecular Spectroscopy

Published papers

- DILS B., M. DE MAZIÈRE, J. F. MÜLLER, T. BLUMENSTOCK, M. BUCHWITZ, R. DE BEEK, P. DEMOULIN, P. DUCHATELET, H. FAST, C. FRANKENBERG, A. GLOUDEMANS, D. GRIFFITH, N. JONES, T. KERZENMACHER, I. KRAMER, E. MAHIEU, J. MELLQVIST, R. L. MITTERMEIER, J. NOTHOLT, C. P. RINSLAND, H. SCHRIJVER, D. SMALE, A. STRANDBERG, A. G. STRAUME, W. STREMMER, K. STRONG, R. SUSSMANN, J. TAYLOR, M. VAN DEN BROEK, V. VELAZCO, T. WAGNER, T. WARNEKE, A. WIACEK AND S. WOOD, Comparisons between SCIAMACHY and ground-based FTIR data for total columns of CO, CH₄, CO₂ and N₂O, *Atmos. Chem. Phys.*, *6*, 1953-1976, 2006
- HASE F., P. DEMOULIN, A. J. SAUVAL, G. C. TOON, P. BERNATH, A. GOLDMAN, J. W. HANNIGAN AND C. RINSLAND, An empirical line-by-line model for the infrared solar transmittance spectrum from 700 to 5000 cm⁻¹, *J. Quant. Spectrosc. Radiat. Transfer*, *102*, 450-463, 2006
- MAHIEU E., R. ZANDER, P. DEMOULIN, P. DUCHATELET, C. SERVAIS, M. DE MAZIERE AND C.P. RINSLAND, FTIR Observations at the Jungfraujoch Station: Long-term Monitoring of the Troposphere and Validation of Space-based Sensors, *to appear in Tropospheric Sounding from Space, ACCENT-TROPOSAT-2 in 2005-6*, J. Burrows and P. Borrell, Eds., 2006
- MYHRE G., F. STORDAL, I. GAUSEMEL, C.J. NIELSEN AND E. MAHIEU, Line-by-line calculations of thermal infrared radiation representative for global conditions: CFC-12 as an example, *J. Quant. Spectrosc. Radiat. Transfer*, *97*, 317-331, 2006

- NASSAR R., P.F. BERNATH, C.D. BOONE, C. CLERBAUX, P.F. COHEUR, G. DUFOUR, L. FROIDEVAUX, E. MAHIEU, J.C. MCCONNELL, S.D. MCLEOD, D.P. MURTAGH, C.P. RINSLAND, K. SEMENIUK, R. SKELTON, K.A. WALKER AND R. ZANDER, A global inventory of stratospheric chlorine in 2004, *J. Geophys. Res.*, *111*, D22312, doi:10.1029/2006JD007073, 2006
- NASSAR R., P.F. BERNATH, C.D. BOONE, S.D. MCLEOD, R. SKELTON, K.A. WALKER, C.P. RINSLAND AND P. DUCHATELET, A global inventory of stratospheric fluorine in 2004 based on Atmospheric Chemistry Experiment Fourier Transform Spectrometer (ACE-FTS) measurements, *J. Geophys. Res.*, *111*, D22313, doi:10.1029/2006JD007395, 2006
- NOTHOLT J., H. BINGEMER, H. BERRESHEIM, J. HOLTON, A. KETTLE, E. MAHIEU AND S. MONTZKA, Precursor Gas Measurements, Chapter 2 of the Assessment of Stratospheric Aerosol Properties (ASAP), Edited by L. Thomason and Th. Peter, WCRP-124, WMO/TD-No. 1295, SPARC Report No. 4, 2006
- RINSLAND C.P., C.D. BOONE, P.F. BERNATH, E. MAHIEU, R. ZANDER, G. DUFOUR, C. CLERBAUX, S. TURQUETY, L. CHIOU, J.C. MCCONNELL, L. NEARY AND J.W. KAMINSKY, First space-based observations of formic acid (HCOOH): Atmospheric Chemistry Experiment austral spring 2004 and 2005 Southern Hemisphere tropical-mid-latitude upper tropospheric measurements, *Geophys. Res. Lett.*, *33*, L23804, doi:10.1029/2006GL027128, 2006
- RINSLAND C.P., A. GOLDMAN, J.W. ELKINS, L.S. CHIOU, J.W. HANNIGAN, S.W. WOOD, E. MAHIEU AND R. ZANDER, Long-term trend of CH₄ at northern mid-latitudes: Comparisons between ground-based infrared solar and surface sampling measurements, *J. Quant. Spectrosc. Radiat. Transfer*, *97*, 457-466, 2006
- RINSLAND C.P., E. MAHIEU, R. ZANDER, R. NASSAR, P. BERNATH, C. BOONE AND L.S. CHIOU, Long-Term Stratospheric Carbon Tetrafluoride (CF₄) Increase Inferred from 1985-2004 Infrared Space-based Solar Occultation Measurements, *Geophys. Res. Lett.*, *33*, L02808, doi:10.1029/2005GL024709, 2006

Papers in press or submitted

- CLERBAUX C., D.M. CUNNOLD, J. ANDERSON, A. ENGEL, P.J. FRASER, E. MAHIEU, A. MANNING, J. MILLER, S.A. MONTZKA, R. NASSAR, R. PRINN, S. REIMANN, C.P. RINSLAND, P. SIMMONDS, D. VERDONIK, R. WEISS, D. WUEBBLES AND Y. YOKOUCHI, Long-lived compounds, Chapter 1 of WMO Scientific Assessment of Ozone Depletion: 2006, WMO Report No. 50, pp. I-1 to I-63, World Meteorological Organization, P.O. Box 2300, Geneva 2, CH 1211, Switzerland, in press, 2007
- GOLDMAN A., R.H. TIPPING, Q. MA, C.D. BOONE, P.F. BERNATH, P. DEMOULIN, F. HASE, M. SCHNEIDER, J.W. HANNIGAN, M.T. COFFEY AND C.P. RINSLAND, On the line parameters for the X¹Σ_g⁺ (1-0) infrared quadrupolar transitions of ¹⁴N₂, *J. Quant. Spectrosc. Radiat. Transfer*, *103*, 168-174, 2007.

- HÖPFNER M., T. VON CLARMANN, H. FISCHER, B. FUNKE, N. GLATTHOR, U. GRABOWSKI, S. KELLMANN, M. KIEFER, A. LINDEN, M. MILZ, T. STECK, G.P. STILLER, P. BERNATH, C. E. BLOM, TH. BLUMENSTOCK, C. BOONE, K. CHANCE, M.T. COFFEY, F. FRIEDL-VALLON, D. GRIFFITH, J.W. HANNIGAN, F. HASE, N. JONES, K.W. JUCKS, C. KEIM, A. KLEINERT, W. KOUKER, G.Y. LIU, E. MAHIEU, J. MELLQVIST, S. MIKUTEIT, J. NOTHOLT, H. OELHAF, C. PIESCH, T. REDDMANN, R. RUHNKE, M. SCHNEIDER, A. STRANDBERG, G. TOON, K.A. WALKER, T. WARNEKE, G. WETZEL, S. WOOD AND R. ZANDER, Validation of MIPAS ClONO₂ measurements, *J. Atmos. Chem. Phys.*, 7, 257-281, 2007.
- RINSLAND C.P., A. GOLDMAN, J.W. HANNIGAN, S.W. WOOD, L.S. CHIOU AND E. MAHIEU, Long-term trends of tropospheric carbon monoxide and hydrogen cyanide from analysis of high resolution infrared solar spectra, *Quant. Spectrosc. Radiat. Transfer*, 104, 40-51, 2007.
- RINSLAND C.P., R. NASSAR, C.D. BOONE, P.F. BERNATH, L.S. CHIOU, D.K. WEISENSTEIN, E. MAHIEU AND R. ZANDER, Spectroscopic detection of COClF in the tropical and mid-latitude lower stratosphere, *J. Quant. Spectrosc. Radiat. Transfer*, in press, 2007.
- VIGOUROUX C., M. DE MAZIÈRE, Q. ERRERA, S. CHABRILLAT, E. MAHIEU, P. DUCHATELET, S. WOOD, D. SMALE, S. MIKUTEIT, T. BLUMENSTOCK, F. HASE AND N. JONES, Comparisons between ground-based FTIR and MIPAS N₂O and HNO₃ profiles before and after assimilation in BASCOE, *Atmos. Chem. Phys.*, 7, 377-396, 2007.

Chemical Oceanography

Published papers

- BARRÓN C., C.M. DUARTE, M. FRANKIGNOULLE AND A.V. BORGES, Organic carbon metabolism and carbonate dynamics in a Mediterranean seagrass (*Posidonia oceanica*) meadow, *Estuaries and Coasts*, 29(3), 417-426, 2006
- BORGES A.V., L.-S. SCHIETTECATTE, G. ABRIL, B. DELILLE AND F. GAZEAU, Carbon dioxide in European coastal waters, Estuarine, *Coastal and Shelf Science*, 70(3), 375-387s, 2006
- BORGES A.V., L.-S. SCHIETTECATTE, G. ABRIL, B. DELILLE AND F. GAZEAU, Carbon dioxide in European coastal waters, *Geophysical Research Abstracts*, Vol. 8, 05270, 2006
- BOUILLON S., F. DEHAIRS, L.-S. SCHIETTECATTE AND A.V. BORGES, Biogeochemistry of the Tana estuary and delta (northern Kenya), *Limnology and Oceanography*, 52(1), 45-59, 2006

- BOZEC Y., H. THOMAS, L.-S. SCHIETTECATTE, A.V. BORGES, K. ELKALAY AND H.J.W. DE BAAR, Assessment of the processes controlling the seasonal variations of dissolved inorganic carbon in the North Sea, *Limnology and Oceanography*, 51(6), 2746–2762, 2006
- DELILLE B., D. LANNUZEL, V. SCHOEMANN, C. LANCELOT, J.T.M. DE JONG, B. TILBROOK, D. DELILLE, A.V. BORGES AND J.-L. TISON, Can sea ice-specific biogeochemical processes support significant air-ice CO₂ fluxes?, *Geophysical Research Abstracts*, Vol. 8, 07040, 2006
- GAZEAU F., J. J. MIDDELBURG, M. LOIJENS, J.-P. VANDERBORGHT, M.-D. PIZAY AND J.-P. GATTUSO, Planktonic primary production in estuaries: a comparison of the ¹⁴C, O₂ and ¹⁸O methods, *Aquatic Microbial Ecology*, 46, 95–106, 2006
- KÜHN W., J. PÄTSCH, A.V. BORGES, Y. BOZEC, L.-S. SCHIETTECATTE AND H. THOMAS, Air-sea exchange of nitrogen and carbon over the Northwest-European Continental Shelf, *Geophysical Research Abstracts*, Vol. 8, 08071, 2006
- LANNUZEL D., L. CHOU, J. DE JONG, J.-L. TISON, B. DELILLE AND V. SCHOEMANN, Pack ice: a significant source of Fe to Antarctic surface waters?, *Geophysical Research Abstracts*, Vol. 8, 08918s, 2006
- SCHIETTECATTE L.-S., F. GAZEAU, C. VAN DER ZEE, N. BRION AND A.V. BORGES, Time series of the partial pressure of carbon dioxide (2001-2004) and preliminary inorganic carbon budget in the Scheldt plume (Belgian coast waters), *Geochemistry, Geophysics, Geosystems (G3)*, 7, Q06009, doi:10.1029/2005GC001161, 2006
- SCHIETTECATTE L.-S., F. GAZEAU, C. VAN DER ZEE, N. BRION AND A.V. BORGES, Time series of the partial pressure of carbon dioxide (2001-2004) and preliminary inorganic carbon budget in the Scheldt plume (Belgian coastal waters), *Geophysical Research Abstracts*, Vol. 8, 07238s, 2006
- TISON J.-L., F. BRABANT, B. DELILLE, V. SCHOEMANN, S. BECQUEVORT, T. WORBY AND G. DIECKMANN, Temporal evolution of gas properties in decaying summer first-year sea ice in the western Weddell Sea (Antarctica): links to biological activity, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract C31B-08, 2006
- ZEMMELINK H.J., B. DELILLE, J.L. TISON, E.J. HINTSA, L. HOUGHTON AND J.W.H. DACEY, CO₂ deposition over the multi year ice of the western Weddell Sea, *Geophysical Research Letters*, 33, L13606, doi:10.1029/2006GL026320s, 2006

Papers in press or submitted

- ÁLVAREZ-SALGADO X.A., A.V. BORGES, F.G. FIGUEIRAS AND L. CHOU, Carbon and nutrient fluxes and budget in the NW Iberian upwelling system, In: Carbon and Nutrient Fluxes in Global Continental Margins, *Atkinson L., K.-K. Liu, R. Quinones & Talaue-McManus (Eds)*, in press

- DELILLE B., B. JOURDAIN, A.V. BORGES, J.-L. TISON AND D. DELILLE, Biogas (CO₂, O₂, dimethylsulfide) dynamics in Spring Antarctic fast ice, *Limnology and Oceanography*, in press
- PAQUAY F.S., F.T. MACKENZIE AND A.V. BORGES, Carbon dioxide dynamics in rivers and coastal waters of the “Big Island” of Hawaii, USA, during baseline and heavy rain condition, *Aquatic Geochemistry*, in press
- ROCHELLE-NEWALL E.J., C. WINTER, C. BARRÓN, A.V. BORGES, C.M. DUARTE, M. ELLIOTT, M. FRANKIGNOULLE, F. GAZEAU, J.J. MIDDELBURG, M.-D. PIZAY AND J.-P. GATTUSO, An artificial neural network analysis of factors controlling ecosystem metabolism in the coastal ocean, *Ecological Applications*, in press
- SCHIETTECATTE L.-S., H. THOMAS, Y. BOZEC AND A.V. BORGES, High temporal coverage of carbon dioxide measurements in the Southern Bight of the North Sea, *Marine Chemistry*, in press
- THOMAS H., Y. BOZEC, H. LENHAR, A. MOLL, J. PÄTSCH, H. DE BAAR, K. ELKALAY, L.-S. SCHIETTECATTE, M. FRANKIGNOULLE AND A.V. BORGES, Carbon and nutrient budgets of the North Sea, In: Carbon and Nutrient Fluxes in Global Continental Margins, *Atkinson L., K.-K. Liu, R. Quinones & Talaue-McManus (Eds)*, in press

Irreversible thermomechanics

Published papers

- DAUBY P.C., TH. DESAIVE, H. CROISIER AND P. KOLH, Standing waves in the FitzHugh-Nagumo model of cardiac electrical activity, *Virtual Journal of Biological Physics Research*, 11(5), 5 pages, 2006
- DAUBY P.C., TH. DESAIVE, H. CROISIER AND P. KOLH, Standing waves in the FitzHugh-Nagumo model of cardiac electrical activity, *Physical Review E*, 73, 021908, 2006
- DELANAYE P., B. LAMBERMONT, J.-M. DOGNE, B. DUBOIS, A. GHUYSEN, N. JANSSEN, TH. DESAIVE, P. KOLH, V. D'ORIO AND J.-M. KRZESINSKI, Confirmation of high cytokine clearance by hemofiltration with a cellulose triacetate membrane with large pores: an in vivo study, *The International Journal of Artificial Organs*, 29, 944-948, 2006
- DESAIVE TH., N. JANSSEN, F. PÉTERS, A. GHUYSEN, B. LAMBERMONT, L. PIÉRARD, V. D'ORIO, P. KOLH, P. GÉRARD, J.-M. DOGNÉ, R. LIMET, D. SERTEYN, P. LEROY AND P.C. DAUBY, Dynamics of spontaneous ventricular fibrillation in acutely ischemic pigs, *Europace*, 8 suppl. 1, 178P/32, 2006

- HENNENBERG M., B. WEYSSOW, S. SLAVTCHEV, TH. DESAIVE AND B. SCHEID, Steady flows of a laterally heated ferrofluid layer: Influence of inclined strong magnetic field and gravity level, *Physics of Fluids*, 18-9, 10, 2006
- LAMBERMONT B., P. DELANAYE, J.M. DOGNÉ, A. GHUYSEN, N. JANSSEN, B. DUBOIS, TH. DESAIVE, P. KOLH, V. D'ORIO AND J.-M. KRZESINSKI, Large pore membrane hemofiltration increases cytokines clearance and improves right ventricular-vascular coupling during endotoxic shock in pigs, *Artificial organs*, 30 (7), 560-564, 2006
- LEBON G., TH. DESAIVE AND P.C. DAUBY, Two-fluid diffusion as a model for heat transport at micro and nanoscales, *Proceedings of 7th Int. Meeting on Thermodiffusion*, 6 pp, San Sebastian, 29-05 to 02/06/06, 2006
- LEBON G., TH. DESAIVE AND P.C. DAUBY, An unified extended thermodynamic description of diffusion, thermodiffusion, suspensions and porous media, *Journal of Applied Mechanics*, 73, n°1, 16-20, 2006

Papers in press or submitted

- CROISIER H. AND P.C. DAUBY, Continuation and bifurcation analysis of a periodically forced excitable system, *J. Theor. Biol.*, in press
- DONDLINGER M., J. MARGERIT AND P.C. DAUBY, Extended Galerkin-Eckhaus method in nonlinear thermoconvection, *Journal of Non-Equilibrium Thermodynamics*, in press
- LANOYE L., P. SEGERS, V. TCHANA-SATO, S. ROLIN, J.-M. DOGNE, A. GHUYSEN, B. LAMBERMONT, J. HANSON, TH. DESAIVE, P. VERDONCK, V. D'ORIO AND P. KOLH, Hemodynamics and Ventriculo-Arterial Coupling in an Acute Pig Model of Ischemia-Reperfusion, *Experimental Physiology*, in press
- MARGERIT J., M. DONDLINGER AND P.C. DAUBY, On the use of Galerkin-Eckhaus method to study the nonlinear regime of Marangoni-Bénard instabilities in an evaporating liquid layer, *European Physical Journal B*, in press

Physical oceanography and interdisciplinary modeling of marine systems

Published papers

- BARTH A., A. ALVERA-AZCÁRATE, J.-M. BECKERS AND M. RIXEN, Coupling a two-way nested primitive equation model and a statistical SST predictor of the Ligurian Sea via data assimilation, *Ocean Modelling*, 13 (3-4) - 255-270, 2006

- BECKERS J.-M., A. BARTH AND A. ALVERA-AZCÁRATE, DINEOF reconstruction of clouded images including error maps. Application to the sea-surface temperature around Corsican island, *Ocean Sciences*, 2 - 183-199, 2006
- DELEERSNIJDER E., J.-M. BECKERS AND E. DELHEZ, The residence time of settling particles in the surface mixed layer, *Environmental Fluid Dynamics*, 6 - 25-42, 2006
- RAICK C., J.-M. BECKERS, K. SOETAERT AND M. GRÉGOIRE, Can principal component analysis be used to predict the dynamics of a strongly non-linear marine biogeochemical model?, *Ecological Modelling*, 196 - 345-364, 2006
- SKLIRIS N. AND S. DJENIDI, Plankton dynamics controlled by hydrodynamic processes near a submarine canyon off NW Corsican coast: a numerical modelling study, *Continental Shelf Research*, 26, 11, 1336-1358, 2006
- VANDENBULCKE L., A. BARTH, M. RIXEN, A. ALVERA AZCARATE, Z. BEN BOUALLEGUE AND J.-M. BECKERS, Study of the combined effects of data assimilation and grid nesting in ocean models – application to the Gulf of Lions, *Ocean Science*, 2, 213-222, 2006

Papers in press or submitted

- ALVERA-AZCÁRATE A., A. BARTH, J.-M. BECKERS AND R. WEISBERG, Multivariate reconstruction of missing data in sea surface temperature, chlorophyll and wind satellite fields., *Journal of Geophysical Research*, in press
- ALVERA-AZCÁRATE A., J.-M. BECKERS, M. RIXEN AND L. VANDENBULCKE, Forecast verification of a 3D model of the Ligurian Sea. The use of discrete wavelet transforms in the skill assessment of spatial forecasts, *Journal of Marine Systems*, in press
- BARTH A., A. ALVERA-AZCÁRATE, J.-M. BECKERS, M. RIXEN AND L. VANDENBULCKE, Multigrid state vector for data assimilation in a two-way nested model of the Ligurian Sea., *Journal of Marine Systems*, in press
- BECKERS J.-M., E. ACHTERBERG AND CH. BRAUNGARDT, Comparaison of high spatial resolution trace metal distribution with model simulations for surface waters of the Gulf of Cadiz, *Estuarine, Coastal and Shelf Science*, in press
- DELEERSNIJDER E., J.-M. BECKERS AND E. DELHEZ, On the behaviour of the residence time at the bottom of the mixed layer, *Environmental Fluid Mechanics*, in press
- LENARTZ F., C. RAICK, K. SOETAERT AND M. GREGOIRE, Application of an Ensemble Kalman filter to a 1-D coupled hydrodynamic-ecosystem model of the Ligurian Sea, *Journal of Marine Systems*, in press

- TIGNY V., A. OZER, G. DE FALCO, M. BAROLI AND S. DJENIDI, Relationship between the evolution of the shoreline and the *Posidonia oceanica* meadow limit: application to a Sardinian coastal zone, *Journal of Coastal Research*, *in press*
- WHITE L., J.-M. BECKERS, E. DELEERSNIJDER AND V. LEGAT, Comparaison of free-surface and rigid-lid finite element models of barotropic stability, *Ocean Dynamics*, *in press*