

Attivita' del 2008-2009 per Rapporto Annuale del 2010

Papers - reviewed Journals

2008

1. Hagelin, S., Masciadri, E., Lascaux, F., Stoesz, J., 2008, MNRAS, 387, 4, 1499
2. Nielsen, E., Biller, B., Close, L.M., Masciadri, E., Lenzen, R., 2008, ApJ, 674, 1, 466
3. Apai, D., Janson, M., Moro-Martin, A., Meyer, M.R., Mamajek, E.E., Masciadri, E., Henning, Th., Pascucci, I., Kim, J.S., Hillenbrand, L.A., Kasper, M., Biller, B., 2008, ApJ, 672, 2, 1196

2009

4. Lascaux, F., Masciadri E., Hagelin, S., Stoesz, J., 2009, MNRAS, 398, 849, 1093
5. Lascaux, F., Masciadri, E., Hagelin, S., MNRAS, accepted (in press)
6. Masciadri, E, Stoesz, J., Hagelin, S., Lascaux, F., MNRAS, accepted, (in press)
7. Le Moigne, P. Noilhan, J., Masciadri, E., Lascaux, F., Pietroni, I., Journal Geophysical Research, (submitted)

Papers - Non reviewed Journals

2008

1. Comparison of the atmospheric properties above Dome A, Dome C and the South Pole
Hagelin, S., Masciadri, E., Lascaux, F., Stoesz, J., SPIE, 7012, 70124A, 2008
2. Meso-NH simulations of the atmospheric flow above the Internal Antarctic Plateau
Lascaux F., E Masciadri, S. Hagelin, J. Stoesz, SPIE, 7012, 7012D, 2008
3. G-Scidar measurements of the optical turbulence at Mt. Graham with standard and high vertical resolution Optical
Stoesz, J., Masciadri, E., Egner, S., Hagelin, S., Lascaux, F., SPIE, 7012, 70121W, 2008
4. Wide-field image morphology at a mid-latitude site and at Dome C
Stoesz, J., Masciadri, E., Lascaux, F., Hagelin, S., SPIE, 7012, 70124C, 2008
5. The laser Guide star Program for the LBT

Rabien, S., Ageorges, N., Brusa, G., Brynnel, J., Busini, L., Davies, R., Deysenroth, M., Esposito, S., Gaessler, W., Genzel, R., Green, R., Haug, M., Lloyd-Hart, M., Holzl, G., Masciadri, E., Pogge, R., Quirrenbach, A., Rademacher, M., Rix, H-W., Salinari, P., Schwab, C., Stalcup, T., Storm, J., Struder, L., Thiel, M., Weigelt, G., Ziegler, J., SPIE 7015, 701515, 2008

2009

6. Adaptation of forse restore ISBA model to polar conditions

Le Moigne, P., Noilhan, J., Masciadri, E., Lascaux, F., Pietroni, I., “Optical Turbulence – Astronomy meets Meteorology”, Alghero, Sardegna, Italy, 15-18 September 2008, Edit. by E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.165-172

7. ForOT: a new approach for the optical turbulence forecasts studies applied to the ground-based astronomy

Masciadri, E., Lascaux, F., Hagelin, S., Stoesz, J., “Optical Turbulence – Astronomy meets Meteorology”, Alghero, Sardegna, Italy, 15-18 September 2008, Edit. by E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.184-195

8. HVR-GS at Mt. Graham: optical turbulence vertical distribution at standard and high resolution

Masciadri, E., Stoesz, J., Hagelin, S., Lascaux, F., Optical Turbulence – Astronomy meets Meteorology, Alghero, Sardegna, Italy, 15-18 September 2008, Edit. by E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.34-41

9. Comparison of the atmosphere above South Pole, Dome C and Dome A: first attempt

Hagelin, S., Masciadri, E., Lascaux, F., Stoesz, J., “Optical Turbulence – Astronomy meets Meteorology”, Alghero, Sardegna, Italy, 15-18 September 2008, Edit. by E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.240-247

10. The Antarctic Polar Vortex: study of winter 2005

Lascaux, F., Masciadri, E., Hagelin, S., Stoesz, J., “Optical Turbulence – Astronomy meets Meteorology”, Alghero, Sardegna, Italy, 15-18 September 2008, Edit. by E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.366-370

11. Numerical simulations of the wintertime optical turbulence in Antarctica with the mesoscale model Meso-Nh

Lascaux, F., Masciadri, E., Hagelin, S., Stoesz, J. “Optical Turbulence – Astronomy meets Meteorology”, Alghero, Sardegna, Italy, 15-18 September 2008, Edit. by E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.208-215

12. Optical turbulence above the Internal Antarctic Plateau

Masciadri, E., Lascaux, F., Hagelin, S., Le Moigne, P., Noilhan, J, 3rd ARENA Conference - An Astronomical Observatory at Concordia (Dome C, Antarctica), 11-15 May 2009, Frascati, Rome, Italy, 2010, EAS Publications Series, 40, 55

13. Numerical simulation of optical turbulence at low and high resolution in Antarctica with a mesoscale model

Lascaux F., E Masciadri, S. Hagelin, J. Stoesz, 3rd ARENA Conference - An Astronomical Observatory at Concordia (Dome C, Antarctica), 11-15 May 2009, Frascati, Rome, Italy, 2010, EAS Publications Series, 40, 97

14. Comparison of the atmosphere above South Pole, Dome C and Dome A: first attempt

Hagelin, S., Masciadri, E., Lascaux, F., Stoesz, J., 3rd ARENA Conference - An Astronomical Observatory at Concordia (Dome C, Antarctica), 11-15 May 2009, Frascati, Rome, Italy, 2010, EAS Publications Series, 40, 85

15. Study of the winter 2005 Antarctica polar vortex

Lascaux, F., Masciadri, E., Hagelin, S., Stoesz, J., 3rd ARENA Conference - An Astronomical Observatory at Concordia (Dome C, Antarctica), 11-15 May 2009, Frascati, Rome, Italy, EAS Publications Series, 40, 103

16. Constraints on Extrasolar Planet Populations from VLT NACO/SDI and MMT SDI and direct adaptive optics imaging surveys: giant planets are rare at large separations

Nielsen, E., Close, L.M., Biller, B., Masciadri, E., Lenzen, R..

Papers on Newsletter

1) Report on the Conference “Optical Turbulence – Astronomy meets Meteorology”

Masciadri, E., ESO Newsletter ‘The Messenger’, December 2008, 134, 53

Invited Review

1) Masciadri Elena, Optical Turbulence Modeling and Forecasts - Towards a new era for the ground-based astronomy, Chapter in a book

Book Title: The measurements and Impact of Atmospheric Turbulence and Refractivity on the propagation of extraterrestrial radiation.

Edited by Institute for Astronomy, Hawaii, US (in press)

Invited Talks (Published)

1) ForOT: a new approach for the optical turbulence forecasts studies applied to the ground-based astronomy

Masciadri, E., Optical Turbulence – Astronomy meets Meteorology, 15-18 September 2008, Alghero, Sardegna, Italy Edit. By E. Masciadri & M. Sarazin, Publ. by Imperial College Press, pp.184-195

2) Masciadri, E., Optical turbulence above the Internal Antarctic Plateau, 3rd ARENA Conference, An Astronomical Observatory at Concordia (Dome C, Antarctica), 11-15 May 2009, Frascati, Rome, Italy, EAS Publications Series, 40, 55

PI-ship di Progetti 2008 2009 - solo PI

1) ForOT (Marie Curie Excellence Grant) - PI: E. Masciadri

Progetto ottenuto nel 2005: budget totale 1.2 MEuro

300 KEuro per 2008 e 300 KEuro per il 2009.

2) ForOT@DC: Accepted by the Dome C Steering Committee (Programma Nazionale di Ricerche in Antartide - PNRA)

PI: E. Masciadri (INAF, Firenze, Italy), J.Storey (UNSW, Sydney, Australia), A. Pellegrini (PNRA, Rome, Italy). Il progetto e' stato approvato in seguito a revisione dello Steering Committee di Concordia Base e di una commissione di due referees. Il programma non si 'e potuto realizzare a causa di mancanza di fondi del PNRA.

Proposals

(1) *Proposal* accettato dal European Centre for Medium-Range Weather Forecast e dal Servizio Meteorologico dell'Aeronautica Militare Italiana.

Titolo: Simulazioni con modelli a mesoscala per applicazioni astronomiche

PI: E. Masciadri

Il progetto prevede:

- tempo CPU su supercalcolatori dello European Center for Medium-Range Weather Forecast (ECMWF)
- accesso ad archivi del centro meteo (analisi e predizioni)

(2) *Proposal* inviato al Department of Astronomy and Steward Observatory – Period 2008A (PI: E. Masciadri)

Title: Optical Turbulence characterization at Mt. Graham

Assegnate 11 nights: 21/2/2008 – 3/3/2008

(3) *Proposal* inviato al Department of Astronomy and Steward Observatory – Period 2008C (PI: E. Masciadri)

Titolo: Optical Turbulence characterization at Mt. Graham

Assegnate 11 nights: 9/11/2008 – 20/11/2008

PhD thesis

Susanna Hagelin, PhD in Fisica dell'Atmosfera, Uppsala University, Sweden, Supervisor esterno: Dr. Elena Masciadri, secondo e terzo anno, completamento previsto per la fine del 2010. Supervisor interno: Dr. Anna Rutgersson.