

LIDAR DIRECTORY FORM

LIDAR RESEARCHER: José António Rodrigues

RESEARCH ASSOCIATES:

MAILING ADDRESS:

IPFN-UAlg, Physics Department
FCT - University of Algarve
Campus de Gambelas
PT-8005-139 Faro
Portugal

TELEPHONE NUMBER: (+351) 289800900 ext 7632

FAX NUMBER: (+351) 289800066

E-MAIL ADDRESS: 'Jose A. Rodrigues' <jarod@ualg.pt>

WEB SITE: <http://www.ipfn-ualg.ualg.pt/>

DATE: 21 April 2009

LIDAR LOCATION (CITY, COUNTRY, LAT., LONG.): Faro, Portugal, 37.045N,
7.971W

SITE ELEVATION: 27m

PARAMETER(S) OR CONSTITUENT(S) MEASURED: Aerosols: elastic backscatter
coefficient

RESEARCH OBJECTIVES AND SPONSOR: Climatological studies. Portuguese
Ministry of Education and Sciences

MEASUREMENT TECHNIQUE: Elastic backscatter

MEASUREMENT RANGE: 1.0 km to 10 km

VERTICAL RESOLUTION: 15 m

FREQ. OF MEASUREMENT (EXPECTED): 3 times/week

MEASUREMENT TIMES (EXPECTED): 13:00 UTC and sunset

LASER TYPE AND WAVELENGTH (s): Nd:YAG Quantel Brilliant at 1064 nm and 532 nm

LASER ENERGY/PULSE: 110 mJ

PULSE REPETITION RATE: 10 Hz

RECEIVER SIZE AND CONFIGURATION: Parabolic off-axis 12 cm diameter

DETECTORS USED: Photomultiplier FEU-84 e Perkin Elmer APD C30956E-TC

SIGNAL PROCESSING: Analog

ANALOG-TO-DIGITAL CONVERTER: 14 bits 10 MHz

COMPUTER: PC

PLATFORM (if applicable):

PUBLICATIONS (5 recent and/or significant):

Matthais, V., Freudenthaler, V., Amodeo, A., Balin, I., Balis, D., Bösenberg, J., Chaikovskiy, A., Chourdakis, G., Comerón, A., Delaval, A., de Tomasi, F., Eixmann, R., Hågård, A., Komguem, L., Kreipl, S., Matthey, R., Rizi, V., Rodrigues, J.A., Wandinger, U., Wang, X. (2004). Aerosol lidar intercomparisons in the framework of the EARLINET project: 1. Instruments. *Applied Optics*, 43:961-976.

Böckmann, C., Wandinger, U., Ansmann, A., Bösenberg, J., Amiridis, V., Boselli, A., Delaval, A., De Tomasi, F., Frioud, M., Grigorov, I.V., Hågård, A., Horvat, M., Iarlori, M., Komguem, L., Kreipl, S., Larchevêque, G., Matthias, V., Papayannis, A., Pappalardo, G., Rocadenbosch, F., Rodrigues, J. A., Schneider, J., Shcherbakov, V. (2004). Aerosol Lidar Intercomparison in the Framework of the EARLINET Project. 2. Aerosol Backscatter Algorithms. *Applied Optics*, 43:977-989.

Matthias, V., Freudenthaler, V., Amodeo, A., Balin, I., Balis, D., Bösenberg, J., Chaikovskiy, A., Chourdakis, G., Comerón, A., Delaval, A., de Tomasi, F., Eixmann, R., Hågård, A., Komguem, L., Kreipl, S., Matthey, R., Rizi, V., Rodrigues, J.A., Wandinger, U., Wang, X. (2004). Aerosol lidar intercomparisons in the framework of the EARLINET project: 1. Instruments: erratum. *Applied Optics*, 43:2578-2579.

Estellés, V., Utrillas, M. P., Martínez-Lozano, J. A., Alcántara, A., Alados-Arboledas, L., Olmo, F.J., Lorente, J., de Cabo, X., Cachorro, V., Horvath, H.,

Labajo, A., Sorbías, M., Díaz, J.P., Díaz, A. M., Silva, A.M., Elías, T., Pujadas, M., Rodrigues, J. A., Cañada, J., García Y. (2006). Intercomparison of spectroradiometers and Sun photometers for the determination of the aerosol optical depth during the VELETA-2002 field campaign. *Journal of Geophysical Research- Atmospheres*, 111:D1:D17207,1-D17207,15.

Díaz, A. M., García, O. E., Díaz, J. P., Expósito, F. J., Utrillas, M. P., Martínez-Lozano, J. A., Alados-Arboledas, L., Olmo, F. J., Lorente, J., Cachorro, V., Horvath, H., Labajo, A., Sorribas, M., Vilaplana, J. M., Silva, A. M., Elías, T., Pujadas, M., Rodrigues, J. A., González, J. A. (2007). Aerosol radiative forcing efficiency in the UV region over southeastern Mediterranean: VELETA2002 campaign. *Journal of Geophysical Research- Atmospheres* 112:D6:D06213,1-D06213,12.

COMMENTS:

PICTURES: