VINCENZO LEVIZZANI
FRMetS

WORK ADDRESS:

Consiglio Nazionale delle Ricerche (CNR)
Istituto di Scienze dell'Atmosfera e del Clima (ISAC)
via Gobetti 101
I-40129 Bologna
ITALY

Voice: +39-051-639-8015
Fax: +39-051-639-8132
e-mail: v.levizzani@isac.cnr.it

PAPERS IN PEER-REVIEW JOURNALS

1. Rasmussen, R. M., **V. Levizzani,** and H. R. Pruppacher, 1982: A numerical study of the heat transfer through a fluid layer with recirculating flow between concentric and eccentric spheres. *Pageoph*, **120**, 702-720.
2. Rasmussen, R. M., **V. Levizzani,** and H. R. Pruppacher, 1984: A wind tunnel and theoretical study on the melting behavior of atmospheric ice particles. II:a theoretical study for frozen drops of radius < 500 μm. *J. Atmos. Sci.*, **41**, no.3, 374-380.
3. Rasmussen, R. M., **V. Levizzani,** and H. R. Pruppacher, 1984: A wind tunnel and theoretical study on the melting behavior of atmospheric ice particles. III: experiment and theory for spherical ice particles of radius > 500 μm. *J. Atmos. Sci*., **41**, no.3, 381-388.
4. Prodi, F., **V. Levizzani**, M. Sentimenti, T. Colombo, V. Cundari, T. Zanzu, and V. Juliano, 1984: Measurements of atmospheric turbidity from a network of sun-photometers in Italy during ALPEX. *J. Aerosol. Sci*., **15**, no.5, 595-613.
5. Rasmussen, R. M., C. Walcek, H. R. Pruppacher, S. K. Mitra, J. K. Lew, **V. Levizzani**, P. K. Wang, and U. Barth, 1985: A wind tunnel investigation of the effect of an external, vertical electric field on the shape of electrically uncharged rain drops. *J. Atmos. Sci*., **42**, no.15, 1647-1652.
6. Prodi, F., L. Levi, and **V. Levizzani,** 1986: Ice accretion on fixed cylinders. *Quart. J. R. Meteor. Soc*., **112**, 1091-1109.
7. **Levizzani, V.,** and F. Prodi, 1988: Atmospheric effects of the El Chichón volcanic eruption observed by a multiwavelength sun-photometer: 1982-1985. *J. Geophys. Res*., **93**, no. D5, 5277-5286.
8. **Levizzani, V**., A. Boscolo Boscoletto, and F. Prodi, 1989: Three-dimensional single Doppler radar analysis of an occluded front. *Il Nuovo Cimento*, **12 C**, no. 2, 231-249.
9. Gambarelli, A., **V. Levizzani,** and P. Mandrioli, 1989: POLKEY: an expert system for the identification of pollen grains. *Aerobiologia*, **5**, no.1, 17-29.
10. **Levizzani, V**., F. Porcú, and F. Prodi, 1990: Operational rainfall estimation using METEOSAT Infrared imagery: an application in Italy's Arno river basin-Its potential and drawbacks. *ESA J*., **14**, no.3, 313-323.
11. Porcú, F., and **V. Levizzani,** 1992: Cloud classification using METEOSAT VIS-IR imagery. *Int. J. Remote Sensing*, **13**, 893-909.

12. Prodi, F., **V. Levizzani**, G. Santachiara, G. Carboni, A. Ventura, and G. Ravasini, 1992: Aerosol particle characterization during PACEX. *J. Aerosol Sci*., **23**, Suppl.1, S957-S960.
13. **Levizzani, V.,** and M. Setvák, 1996: Multispectral, high-resolution satellite observations of plumes on top of convective storms. *J. Atmos. Sci*., **53**, 361-369.
14. **Levizzani, V.**, F. Porcú, F. S. Marzano, A. Mugnai, E. A. Smith, and F. Prodi, 1996: Investigating a SSM/I microwave algorithm to calibrate METEOSAT infrared instantaneous rainrate estimates. *Meteorol. Appl*., **3**, 5-17.
15. **Levizzani, V.**, A. Ariatti and P. Mandrioli, 1998: WWW and the aerobiologist: Operating instructions. *Aerobiologia-Int. J. of Aerobiology*, **14**, 303-308.
16. Cervino, M., **V. Levizzani**, C. Serafini, A. Bartoloni, M. Mochi, P. Colandrea, and B. Greco, 2000: Cloud fraction within GOME footprint using a refined cloud clearing algorithm. *Adv. Space Res*., **25(5)**, 993-996.
17. Amorati, R., P. P. Alberoni, **V. Levizzani**, and S. Nanni, 2000: IR-based satellite and radar rainfall estimates of convective storms over Northern Italy. *Meteorol. Appl.*, **7**, 1-18.
18. Orsini, A., F. Calzolari, T. Georgiadis, **V. Levizzani**, M. Nardino, R. Pirazzini, R. Rizzi, R. Sozzi, and C. Tomasi, 2000: Parameterisation of surface radiation flux at an Antarctic site. *Atmos. Res*., **54**, 245-261.
19. Costa, S., P. Mezzasalma, P. P. Alberoni, and **V. Levizzani**, 2000: Mesoscale and radar analysis of the 30 June 1998 supercell. *Phys. Chem. Earth B*, **25**, 1289-1292.
20. Alberoni, P. P., **V. Levizzani**, R. Watson, A. Holt, S. Costa, and S. Nanni, 2000: The 18 June 1997 companion supercells: Multiparametric Doppler radar analysis. *Meteor. Atmos. Phys.*, **75**, 101-120.
21. Costa, S., P. Mezzasalma, **V. Levizzani**, P. P. Alberoni, and S. Nanni, 2001: Deep convection over Northern Italy: synoptic and mesoscale processes. *Atmos. Res*, **56**, 73-88.
22. Torricella, F., E. Cattani, M. Cervino, **V. Levizzani**, and M. J. Costa, 2001: Simulations of time-coincident, co-located measurements from ENVISAT-1 instruments for the characterization of tropospheric aerosol: a sensitivity study including cloud contamination effects. *Atmos. Sci. Lett*., **1**, 115-124.
23. **Levizzani, V**., J. Schmetz, H. J. Lutz, J. Kerkmann, P. P. Alberoni, and M. Cervino, 2001: Precipitation estimations from geostationary orbit and prospects for METEOSAT Second Generation. *Meteorol. Appl*., **8**, 23-41.
24. Georgiadis, T., M. Nardino, F. Calzolari, **V. Levizzani**, J. B. Ørbæk, S. Claes, and R. Pirazzini, 2001: Radiation and turbulence parameterizations at Ny-Ålesund, Svalbard Islands. *Mem. Natl. Inst. Polar Res. Japan,* **54**, 125-131.
25. Nardino, M., U. Bonafè, F. Calzolari, T. Georgiadis, **V. Levizzani**, A. Orsini, F. Ravegnani, and G. Trivellone, 2002: Recent results from the Arctic Radiation and Turbulence Interaction Study (ARTIST) project. *Il Nuovo Cimento*, **25 C**, 219-232.
26. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, A. M. Silva, and S. Melani, 2002: Aerosol characterization and optical thickness retrievals using GOME and METEOSAT satellite data. *Meteor. Atmos. Phys.*, **81**, 289-298.
27. Melani, S., E. Cattani, **V. Levizzani**, M. Cervino, F. Torricella, and M. J. Costa, 2003: Radiative effects of simulated cirrus clouds on top of a deep convective storm in METEOSAT Second Generation SEVIRI channels. *Meteor. Atmos. Phys*., **83**, 109-122.
28. **Levizzani, V.**, 2003: Satellite rainfall estimates: new perspectives for meteorology and climate from the EURAINSAT project. *Annals of Geophysics*, **46**, 363-372.
29. Melani, S., E. Cattani, F. Torricella, and **V. Levizzani**, 2003: Characterization of plumes on top of a deep convective storm using AVHRR imagery and radiative transfer simulations. *Atmos. Res*., **67-68**, 485-499.

30. Setvák, M., R. M. Rabin, C. A. Doswell III, and **V. Levizzani**, 2003: Satellite observations of convective storm top features in the 1.6 and 3.7/3.9 μm spectral bands. *Atmos. Res*., **67-68**, 607-627.
31. Costa, M. J., A. M. Silva, and **V. Levizzani**, 2003: Aerosol characterization and direct radiative forcing estimation over the ocean from satellite observations. *J. Aerosol Sci*., **33**, S1115-S1116.
32. Orlandi, A., A. Ortolani, F. Meneguzzo, F. Torricella, **V. Levizzani**, and F. J. Turk, 2004: Rainfall assimilation in RAMS by means of the Kuo parameterisation inversion: method and preliminary results. *J. Hydrol.*, **288**, 20-35.
33. Tapiador, F. J., C. Kidd, **V. Levizzani**, and F. S. Marzano, 2004: A neural networks-based PMW-IR fusion technique to derive half hourly rainfall estimates at 0.1° resolution. *J. Appl. Meteor*., **43**, 576-594.
34. Rosenfeld, D., E. Cattani, S. Melani, and **V. Levizzani**, 2004: Considerations on daylight operation of 1.6 μm vs. 3.7 μm channels on NOAA and METOP satellites. *Bull. Amer. Meteor. Soc*., **85**, 873-881.
35. Galli, C., M. Nardino, **V. Levizzani**, R. Rizzi, and T. Georgiadis, 2004: Radiative energy partition and cloud radiative forcing at a Po valley site. *Atmos. Res*., **72**, 329-351.
36. Tapiador, F. J., C. Kidd, **V. Levizzani**, and F. S. Marzano, 2004: A maximum entropy approach to satellite Quantitative Precipitation Estimation (QPE). *Int. J. Remote Sensing,* **25**, 4629-4639.
37. Costa, M. J., A. M. Silva, and **V. Levizzani**, 2004: Aerosol characterization and direct radiative forcing assessment over the ocean. Part I: Methodology and sensitivity analysis. *J. Appl. Meteor.*, **43**, 1799-1817.
38. Costa, M. J., **V. Levizzani**, and A. M. Silva, 2004: Aerosol characterization and direct radiative forcing assessment over the ocean. Part II: Application to test cases and validation. *J. Appl. Meteor.*, **43**, 1818-1833.
39. Galletti, M., P. P. Alberoni, **V. Levizzani**, and M. Celano, 2005: Assessment and tuning of the behaviour of a microphysical characterization scheme. *Adv. Geosci.*, **2**, 145-150.
40. Marzano. F. S., D. Cimini, E. Coppola, M. Verdecchia, **V. Levizzani**, F. Tapiador, and F. J. Turk, 2005: Satellite radiometric remote sensing of rainfall fields: multi-sensor retrieval techniques at geostationary scale. *Adv. Geosci*., **2**, 267-272.
41. **Levizzani, V.**, R. Ginnetti, A. G. Laing, and R. E. Carbone, 2006: Warm season precipitation climatology: first European results. *Adv. Geosci*, **7**, 15-18.
42. Torricella, F., E. Cattani, and **V. Levizzani**, 2006: Exploitation of cloud top characterization from three-channel IR measurements in a physical PMW rain retrieval algorithm. *Adv. Geosci*, **7**, 19-23.
43. Costa, M. J., B.-J. Sohn, **V. Levizzani**, and A. M. Silva, 2006: Radiative forcing of Asian dust determined from the synergized GOME and GMS satellite data – A case study. *J. Meteor. Soc. Japan*, **84**, 85-95.
44. Celano, M., P. P. Alberoni, **V. Levizzani**, and A. R. Holt, 2006: Analysis of severe convective events from two operational dual polarisation Doppler radars. *Nat. Hazards Earth Syst. Sci.*, **6**, 397-405.
45. Cattani, E., M. J. Costa, F. Torricella, **V. Levizzani**, and A. M. Silva, 2006: Influence of the aerosol particles from biomass burning on cloud microphysical properties and radiative forcing. *Atmos. Res*., **82**, 310-327.
46. Laing, A. G., R. E. Carbone, **V. Levizzani**, and J. Tuttle, 2008: The propagation and diurnal cycles of deep convection in northern tropical Africa. *Quart. J. Roy. Meteor. Soc.*, **134**, 93-109.
47. Torricella, F., E. Cattani, and **V. Levizzani,** 2008: Rain area delineation by means of multispectral cloud characterization from satellite. *Adv. Geosci.*, **17**, 43-47.
48. Kidd, C., **V. Levizzani**, F. J. Turk, and R. R. Ferraro, 2009: Satellite precipitation measurements for water resource monitoring. *J. Amer. Water Resources Ass.*, **45**, 567-579.

49. Turk, F. J., B.-J. Sohn, H.-J. Oh, E. E. Ebert, **V. Levizzani**, and E. A. Smith, 2009: Validating a rapid-update satellite precipitation analysis across telescoping space and time scales. *Meteor. Atmos. Phys.*, **105(1-2)**, 99-108.
50. Kidd, C., **V. Levizzani**, and P. Bauer, 2009: A review of satellite meteorology and climatology at the start of twenty-first century. *Progr. Phys. Geog.*, **33(4)**, 474-489.
51. Michaelides, S., **V. Levizzani**, E. N. Anagnostou, P. Bauer, T. Kasparis, and J. E. Lane, 2009. Precipitation: measurement, remote sensing, climatology and modeling. *Atmos. Res*., **94**, 512-533.
52. Laviola, S., and **V. Levizzani**, 2009: Observing precipitation by means of water vapor absorption lines: A first check of the retrieval capabilities of the 183-WSL rain retrieval method. *Italian J. Remote Sensing*, **41(3)**, 39-49.
53. Cattani, E., F. Torricella, S. Laviola, and **V. Levizzani**, 2009: On the statistical relationship between cloud optical and microphysical characteristics and rainfall intensity for convective storms over the Mediterranean**.** *Nat. Hazards Earth Syst. Sci.***, 9**, 2135-2142.
54. Costa, M. J., R. Salgado, D. Santos, **V. Levizzani**, D. Bortoli, A. M. Silva, and P. Pinto, 2010: Modelling of orographic precipitation over Iberia: A springtime case study. *Adv. Geosci.,* **25**, 103-110*.*
55. Conte, D., M. M. Miglietta, A. Moscatello, **V. Levizzani**, and S. Albers, 2010: A GIS approach to ingest Meteosat Second Generation data into the Local Analysis and Prediction System. *Environ. Model. Softw.*, **25**, 1064-1074.
56. Flossmann, A., **V. Levizzani**, and P. K. Wang, 2010: On the fundamental role of Hans Pruppacher for cloud physics and cloud chemistry. *Atmos. Res.*, **97(4)**, 393-395.
57. **Levizzani, V.**, F. Pinelli, M. Pasqui, S. Melani, A. G. Laing, and R. E. Carbone, 2010: A 10-year climatology of warm season cloud patterns over Europe and the Mediterranean from Meteosat IR observations. *Atmos. Res.*, **97(4)**, 555-576.
58. Melani, S., M. Pasqui, F. Guarnieri, A. Antonini, A. Ortolani, and **V. Levizzani**, 2010: Rainfall variability associated with the summer African monsoon: A satellite study. *Atmos. Res*., **97(4)**, 601-618.
59. Kidd, C., R. R. Ferraro, and **V. Levizzani**, 2010: The Fourth International Precipitation Working Group Workshop. *Bull. Amer. Meteor. Soc*., **91**, 1095-1099.
60. **Levizzani, V.**, S. Laviola, and E. Cattani, 2011: Detection and measurement of snowfall from space. *Remote Sensing*, **3(1)**, 145-166.
61. Laviola, S., and **V. Levizzani**, 2011: The 183-WSL fast rain rate retrieval algorithm. Part I: Retrieval design. *Atmos. Res.*, **99**, 443-461.
62. Conte, D., M. M. Miglietta, and **V. Levizzani**, 2011: Analysis of instability indexes during the development of a Mediterranean tropical-like cyclone using MSG-SEVIRI products and the LAPS model. *Atmos. Res.*, **101**, 264-279.
63. Kidd, C., and **V. Levizzani**, 2011: Status of satellite precipitation retrievals. *Hydrol. Earth Syst. Sci*., **15**, 1109-1116.
64. Laviola, S., A. Moscatello, M. Miglietta, E. Cattani, and **V. Levizzani**, 2011: Satellite and numerical model investigation of two Mesoscale Convective Systems over Central Mediterranean. *J. Hydrometeor.*, **12**, 634-649.
65. Laing, A. G., R. E. Carbone, and **V. Levizzani**, 2011: Cycles and propagation of deep convection over equatorial Africa. *Mon. Wea. Rev*., **139**, 2832-2853.
66. Thiemig, V., R. Rojas, M. Zambrano, **V. Levizzani**, and A. de Roo, 2012: Validation of satellite-based precipitation products over scarcely gauged African river basins. *J. Hydrometeor*., **13**, 1760-1783.

67. Kucera, P. A., E. Ebert, F. J. Turk, **V. Levizzani**, D. Kirschbaum, F. J. Tapiador, P. Xiang, A. Loew, and M. Borsche, 2013: Precipitation from space: Advancing Earth system science. *Bull. Amer. Meteor. Soc.*, **94**, 365-375.

68. Miglietta, M. M., S. Laviola, A, Malvaldi, D. Conte, **V. Levizzani**, and C. Price, 2013: Analysis of tropical-like cyclone over the Mediterranean Sea through a combined modeling and satellite approach. *Geophys. Res. Lett*., **40**, 2400-2405, doi:10.1002.grl.50432.

69. **Levizzani, V.**, S. Laviola, E. Cattani, and M. J. Costa, 2013: Extreme precipitation over the Island of Madeira on 20 February 2010 as seen by satellite sensors. *European J. Remote Sens*., **46**, 475-489.

70. Mugnai, A., D. Casella, E. Cattani, S. Dietrich, F. Di Paola, S. Laviola, **V. Levizzani**, G. Panegrossi, P. Sanò, D. Biron, L. De Leonibus, D. Melfi, P. Rosci, A. Vocino, F. Zauli, S. Puca, A. Rinollo, L. Milani, F. Porcù, and F. Gattari, 2013: Precipitation products from the Hydrology SAF. *Nat. Hazards Earth Syst. Sci.*, **13**, 1959-1981, doi:10.5194/nhess-13-1959-2013.

71. Laviola, S., **V. Levizzani,** E. Cattani, and C. Kidd, 2013: The 183-WSL fast rain rate retrieval algorithm. Part II: Validation using ground radar measurements. *Atmos. Res*., **134**, 77-86.

72. Rinollo, A., G. Vulpiani, S. Puca, P. Pagliara, J. Kaňák, E. Lábó, L. Okon, E. Roulin, P. Baguis, E. Cattani, S. Laviola, and **V. Levizzani**, 2013: Definition of a quality index for radar-based reference measurements in the H-SAF precipitation product validation results. *Nat. Hazards Earth Syst. Sci.*, **13**, 2695-2705, doi:10.5194/nhess-13-2695-2013.

73. Puca, S., F. Porcù, A. Rinollo, G. Vulpiani, P. Baguis, S. Balabanova, E. Campione, A. Ertürk, S. Gabellani, R. Iwański, M. Jurašek, J. Kaňák, J. Kerényi, G. Koshinchanov, G. Kozinarova, P. Krahe, B. Łapeta, E. Lábó, L. Milani, Ľ. Okon, A. Öztopal, P. Pagliara, F. Pignone, C. Rachimow, N. Rebora, E. Roulin, I. Sönmez, A. Toniazzo, D. Biron, D. Casella, E. Cattani, S. Dietrich, F. Di Paola, S. Laviola, **V. Levizzani**, D. Melfi, A. Mugnai, G. Panegrossi, M. Petracca, P. Sanò, F. Zauli, P. Rosci, L. De Leonibus, E. Agosta, and F. Gattari, 2014: The validation service of the hydrological SAF geostationary and polar satellite precipitation products. *Nat. Hazards Earth Syst. Sci.*, **14**, 871-889, doi:10.5194/nhess-14-871-2014.

74. Merino, A., L. López, J. L. Sánchez, E. García-Ortega, E. Cattani, and **V. Levizzani**, 2014: Day-time identification of summer hailstorm cells from MSG data. *Nat. Hazards Earth Syst. Sci.*, **14**, 1017-1033, doi:10.5194/nhess-14-1017-2014.

75. Brocca, L., L. Ciabatta, C. Massari, T. Moramarco, S. Hahn, S. Hasenauer, R. Kidd, W. Dorigo, W. Wagner, and **V. Levizzani**, 2014: Soil as a natural raingauge: Estimating rainfall from global satellite soil moisture data. *J. Geophys. Res*., **119**, 5128-5141, doi:10.1002/2014JD021489.

76. Cattani, E., A. Merino, and **V. Levizzani**, 2016: Evaluation of monthly satellite-derived precipitation products over East Africa. *J. Hydrometeor*., **17**, 2555-2573, doi:10.1175/JHM-D-0042.1.

77. Hatzianastassiou, N., C. D. Papadimas, C. J. Lolis, A. Bartzokas, **V. Levizzani**, J. Pnevmatikos, and V. Katsoulis, 2016: Spatial and temporal variability of precipitation over the Mediterranean Basin based on 32-year Global Precipitation Climatology Project data. Part I: Evaluation and climatological patterns. *Int. J. Climatol.*, **36**, 4741-4754, doi:10.1002/joc.4666.

78. Hatzianastassiou, N., C. D. Papadimas, C. J. Lolis, A. Bartzokas, **V. Levizzani**, J. Pnevmatikos, and V. Katsoulis, 2016: Spatial and temporal variability of precipitation over the Mediterranean Basin based on 32-year Global Precipitation Climatology Project data. Part II: Inter-annual variability and trends. *Int. J. Climatol.*, **36**, 4755-4766, doi:10.1002/joc.4665.

79. Beck, H. E., A. I. J. M. van Dijk, **V. Levizzani**, J. Schellekens, and A. de Roo, 2017: MSWEP: 3-hourly 0.25º global gridded precipitation (1979-2014) by merging gauge, satellite, and reanalysis data. *Hydrol. Earth Syst. Sci*., **21**, 589-615, doi:10.5194/hess-21-589-2017.

80. Miglietta, M. M., D. Cerrai, S. Laviola, E. Cattani, and **V. Levizzani**, 2017: Potential vorticity patterns in Mediterranean "hurricanes". *Geophys. Res. Lett*., **44**, 2537-2545, doi:10.1002/2017GL072670.

81. Tapiador, F. J., A. Navarro, **V. Levizzani**, E. García-Ortega, G. J. Huffman, C. Kidd, P. A. Kucera, C. D. Kummerow, H. Masunaga, W. A. Petersen, R. Roca, J.-L. Sánchez, W.-K. Tao, and F. J.

Turk, 2017: Global precipitation measurements for validating climate models. *Atmos. Res*., **197**, 1-20, doi: 10.1016/j.atmosres.2017.06.021.

82. Beck, H. E., N. Vergopolan, M. Pan, **V. Levizzani**, A. I. J. M. van Dijk, G. Weedon, L. Brocca, F. Pappenberger, G. J. Huffman, and E. F. Wood, 2017: Global-scale evaluation of 22 precipitation datasets using gauge observations and hydrological modeling. *Hydrol. Earth Syst. Sci*., **21**, 6201-6217, doi:10.5194/hess-2017-508.
83. Cattani, E., A. Merino, J. A. Gujarro, and **V. Levizzani**, 2018: East Africa rainfall trends and variability 1983-2015 using three long-term satellite products. *Remote Sens.*, **10**, 931, doi:10.3390/rs10060931.
84. **Levizzani, V**., C. Kidd, K. Aonashi, R. Bennartz, R. R. Ferraro, G. J. Huffman, R. Roca, F. J. Turk, and N.-Y. Wang, 2018: The activities of the International Precipitation Working Group. *Quart. J. Roy. Meteor. Soc*., **144(S1)**, 3-15, doi:10.1002/qj.3214.
85. Wenhaji Ndomeni, C., E. Cattani, A. Merino, and **V. Levizzani**, 2018: An observational study of the variability of East African rainfall with respect to sea surface temperature and soil moisture. *Quart. J. Roy. Meteor. Soc*., **144(S1)**, 384-404, doi:10.1002/qj.3255.
86. Skofronick-Jackson, G., M. S. Kulie, L. Milani, J. Munchak, N. B. Wood, and **V. Levizzani**, 2018: Satellite estimation of falling snow: A Global Precipitation Measurement (GPM) Core Observatory perspective. Submitted to *J. Appl. Meteor. Climatol*.

EDITORIALS

1. Costa, M. J., and **V. Levizzani**, 2013: Editorial GCGW-2011. *Atmos. Res*., **127**, 116.
2. Kucera, P. A., and **V. Levizzani**, 2015: Editorial Special Issue 6th Workshop of the International Precipitation Working Group. *Atmos. Res*., **163**, 1.
3. Tapiador, F. J., S. Kacimi, M. de Castro, **V. Levizzani**, D. Katsanos, and E. García-Ortega, 2015: Precipitation science: Observations, retrievals, and modeling. *Adv. Meteor.*, doi:10.1155/2015/843403.
4. Roca, R., R. Bennartz, Z. Haddad, C. Kidd, **V. Levizzani**, D.-B. Shin, and N.-Y. Wang, 2018: Preface to the Special Collection “Advances in Remote Sensing of Rainfall and Snowfall”. *Quart. J. Roy. Meteor. Soc*., **144(S1)**, 1-2, doi:10.1002/qj.3420.

INVITED LECTURES AND ARTICLES

1. **Levizzani, V.,** 1993: Satelliti e radar meteorologici nel Nowcasting. *LXXIX Congr. Naz. Soc. Italiana di Fisica*, Udine, 27 Sep.–2 Oct.
2. **Levizzani, V.**, 1998: Intense rainfall monitoring from geostationary satellites. *Prepr. 9th Conf. Satellite Meteorol. and Oceanography*, AMS, Paris, France, 25-29 May, 327-330.
3. **Levizzani, V**., 1999: Rainfall estimates from satellite data. Course on "*Methodologies for Remote Sensing and Conventional Data Merging*", Florence, 8-18 Mar.
4. **Levizzani, V.**, 1999: Convective rain from a satellite perspective: Achievements and challenges. *SAF Training Workshop-Nowcasting and Very Short Range Forecasting*, EUMETSAT, EUM P 25, Madrid, 9-11 Dec. 1998, 75-84.
5. **Levizzani, V.**, 2000: Satellite rainfall estimates: a look back and a perspective. *2000 EUMETSAT Meteorological Satellite Data Users’ Conf.*, Bologna, Italy, 29 May–2 Jun., 344-353.

6. **Levizzani, V.**, 2000: Satelliti meteorologici e precipitazioni: le frontiere scientifiche del progetto EURAINSAT. *Convegno ARNO 2000: La svolta. Il Piano di bacino dell'Arno e il sistema di allerta*. Firenze, 3-4 Nov.
7. **Levizzani, V.**, 2000: I nuovi sensori dei satelliti meteorologici e le precipitazioni. *Workshop "Il telerilevamento per il controllo dell'ambiente – Prospettive e problemi"*, Ag. Naz. per la Protezione dell'Ambiente, Roma, 13 Dec.
8. **Levizzani, V.**, 2001: EURAINSAT: European satellite rainfall activities and their potential role in future rainfall missions. *EGS XXVI General Assembly - TRMM Conference*, Nice, France, 25-30 Mar.
9. **Levizzani, V.**, P. Bauer, A. Buzzi, S. Davolio, D. E. Hinsman, C. Kidd, F. S. Marzano, F. Meneguzzo, A. Mugnai, J. P. V. Poiares Baptista, F. Porcù, F. Prodi, J. F. W. Purdom, D. Rosenfeld, J. Schmetz, E. A. Smith, F. Tampieri, F. J. Turk, and G. A. Vicente, 2001: EURAINSAT – Looking into the future of satellite rainfall estimations. *Proc. The 2001 EUMETSAT Meteorological Satellite Data Users' Conf.*, Antalya, Turkey, 1-5 Oct., 375-384.
10. **Levizzani, V**., 2002: Satellite-based methods for the detection of clouds and precipitation properties. *CHMI-EUMETSAT Workshop on Severe Convective Storms*, Praha, 21-23 Aug.
11. **Levizzani, V.**, and A. Mugnai, 2003: EURAINSAT to RAINCLOUDS: the European dimension of clouds and precipitation research. *4th EGS Plinius Conf on Mediterranean Storms*, Mallorca, 2-4 Oct., CD-ROM (ISBN 84-7632-792-7, DL PM 00178-2003).
12. **Levizzani, V.**, 2003: EURAINSAT to RAINCLOUDS: Linking clouds and precipitation studies for meteorology, hydrology and climate. *EGS-AGU-EUG Joint Assembly*, Nice, France, 6-11 Apr.
13. **Levizzani, V.**, and A. Gruber, 2003: CGMS Int'l Precipitation Working Group. *3rd GPM Workshop: Consolidating the Concept*, ESA, Noordwijk, The Netherlands, 24-26 Jun.
14. **Levizzani, V.**, 2003: Improving rainfall measurements. *Image*, **18**, 4-5.
15. **Levizzani, V**., 2003: Satellite methods for clouds and precipitation properties estimation. *EUMETSAT-UHRI Workshop on Application of MSG to Weather Nowcasting*, Kiew, 1-12 Sep.
16. **Levizzani, V.**, and J. P. V. Poiares Baptista, 2004: RAINCLOUDS: clouds and precipitation studies for meteorology, hydrology and climate. *EGU General Assembly*, Nice, 25 - 30 Apr.
17. Mugnai, A., B. Bizzarri, S. Dietrich, **V. Levizzani**, F. Porcù, F. Prodi, and E. A. Smith, 2004: Satellite observations of estreme precipitation events: status and perspectives. *6th EGU Plinius Conf. on Mediterranean Storms*, Mediterranean Sea, 17-24 Oct.
18. **Levizzani, V.**, 2005: European satellite rainfall analysis and monitoring at the geostationary scale (FP5 Project EURAINSAT). *Workshop "European Research on Flood risk management - A contribution to the concerns generated by the summer 2005 Floods in Europe"*, Brussels, 10 Oct.
19. **Levizzani, V.**, 2005: SatManu as a teaching tool: experience and indications for the future. *10 Year SatManu Celebration*, EUMETSAT, Vienna, 18 Oct.
20. **Levizzani**, **V.**, and A. Gruber, 2005: GPCP precipitation product assessment. *GRP WGDM 2005 Meeting*, Darmstadt, 14-14 Nov.
21. **Levizzani, V.**, 2006: Precipitation measurements from space. *European Conf. on Antenna and Propagation (EUCAP 2006) Proc. CD-ROM*, ESA SP-626, ISBN 92-9092-937-5.
22. **Levizzani, V.**, 2007: Clouds and precipitation as seen from space: A resource for meteorology and climate. *Climate Change in the 21st Century*, Venezia, 19 May.
23. **Levizzani, V.**, M. Masotti, R. Ginnetti, A. Laing, and R. Carbone, 2007: Analysis of warm season convective regimes over Europe using Meteosat and NCEP reanalysis data. *XXIV IUGG Meeting*, Perugia, 2-13 Jul.
24. Laing, A., R. E. Carbone, and **V. Levizzani**, 2007: Diagnosing the precipitation cycles over Africa and Europe from satellite data. *Proc. 2007 EUMETSAT Meteorological Satellite Conf. & 15th AMS Conf. on Satellite Meteorology and Oceanography*, Amsterdam, 24-28 Sep., CD-ROM EUMETSAT P.50, ISBN 92-9110-079-X, ISSN 1011-3932.

25. **Levizzani, V.**, 2008: Eventi precipitativi estremi. *Conf. Dipartimento Terra e Ambiente nell'Anno Internazionale del Pianeta Terra*, CNR, Roma, 22-23 May.
26. Carbone, R. E., and **V. Levizzani**, 2008: On the systematic occurrence of warm season precipitation episodes. *10th EGU Plinius Conf. on Mediterranean Storms*, Nicosia, 22-24 Sep.
27. **Levizzani, V.**, 2008: Overview of the available rainfall products: state of the art, operational use, research and future perspectives and applications. *1st Workshop "Rainfall estimates for crop monitoring and food security"*, EC-JRC, Ispra, 22-23 Oct.
28. **Levizzani, V.**, 2008: Precipitation estimation using Meteosat Second Generation and the International Precipitation Working Group. *1st Workshop "Rainfall estimates for crop monitoring and food security"*, EC-JRC, Ispra, 22-23 Oct.
29. **Levizzani, V.**, 2009: Estimation of precipitation using meteorological satellites. *EUMETSAT-UHMI Workshop on Satellite Applications for Nowcasting and Forecasting*, Kiev, 20-22 May.
30. **Levizzani, V.**, 2009: Alla ricerca del tempo futuro: la previsione meteorologica. In: La fisica incontra la città, Dept. of Physics, Univ. Roma Tre, 7 Oct.
31. **Levizzani, V.**, 2011: GLOWASIS – Global Water Scarcity Information Service. *Meeting of the EC Expert Group on Water Scarcity and Drought*. Venezia, 13-14 Oct.
32. **Levizzani, V.**, 2011: Observations and modeling of the hydrological cycle at CNR-ISAC. *24th Session of the Scientific Steering Group of the Global Energy and Water Cycle Experiment*, Roma, 14-18 Nov.
33. **Levizzani, V.**, 2012: Satellites and the water cycle. *ECRA Workshop "Changes in the hydrological cycle"*, CNR, Roma, 5-6 Mar.
34. **Levizzani, V.**, 2012: Satellite sensors and meteorological observations. *4th CNR-ISAC Summer School "Severe Convective Weather: Theory and Applications"*, Castro Marina, 17-21 Sep.
35. **Levizzani, V.**, 2013: Hydrology SAF precipitation products. *EUMETSAT Precipitation Week 2013*, 4-9 Feb.
36. **Levizzani, V.**, 2013: Clouds and precipitation from space. *Alpine Summer School "Climate Change and the Mountain Environment"*, Valsavarenche, 18-28 Jun.
37. **Levizzani, V.**, 2013: Theoretical/observational framework in cloud physics studies. *Summer School "Analysis and Application of Satellite Data"*, Univ. of Nanjing, China, 15-19 Jul.
38. **Levizzani, V.**, 2013: Satellite data and their use in cloud physics investigation of mesoscale systems. *Summer School "Analysis and Application of Satellite Data"*, Univ. of Nanjing, China, 15-19 Jul.
39. **Levizzani V.**, 2013: Cloud physics of severe storms using radar and satellite techniques – Case studies. *Summer School "Analysis and Application of Satellite Data"*, Univ. of Nanjing, China, 15-19 Jul.
40. **Levizzani, V.**, and A. Provenzale, 2013: Cambiamenti climatici e risorse idriche: Scenari a livello globale e nazionale. *ECOMONDO OROBLU – La gestione dell'acqua nel corso di eventi estremi e di contaminazioni repentine*. Rimini, 7 Nov.
41. **Levizzani, V.**, 2013: Il ciclo dell'acqua e il clima. Univ. Urbino, 3 Dec.
42. **Levizzani, V.**, 2014: Precipitation measurements from space. *iTaRS Summer School*, Jülich, 8-17 Sep.
43. **Levizzani, V.**, 2014: Estimating precipitation from satellite: Basic principles, sensors, retrievals, limitations. *EUMETSAT Training Workshop "Use of satellite data in nowcasting severe convection and precipitation"*, Thessaloniki, 29 Sep.- 3 Oct.
44. **Levizzani, V.**, 2014: The satellite rainfall products and their application in meteorology. *EUMETSAT Training Workshop "Use of satellite data in nowcasting severe convection and precipitation"*, Thessaloniki, 29 Sep.- 3 Oct.

45. **Levizzani, V.**, M. M. Miglietta, D. Cerrai, S. Laviola, and E. Cattani, 2015: Analysis of an intense tropical-like cyclone over the western Mediterranean Sea through a combined modeling and satellite approach. *Severe Weather and Extreme Precipitation Workshop*, Taipei, 25-27 May.
46. **Levizzani, V.**, 2016: Radar and satellite sensing of severe weather. *6th CNR-ISAC Summer School "Advances in Severe Weather Analysis: Models and Observations"*, Castro Marina, 20-24 Jun.
47. **Levizzani, V.**, E. Cattani, S. Laviola, and L. Milani, 2017: Precipitation as seen from space. *Severe Weather and Extreme Precipitation Workshop*, Taipei, 22-24 May.

POPULAR SCIENCE ARTICLES

1. **Levizzani, V.**, 2000: I nuovi satelliti meteo. *Le Scienze dossier – Il clima che cambia*, **5**, 64-71.
2. **Levizzani, V.**, 2000: I satelliti meteorologici tra passato e futuro. *Ricerca & Futuro*, **17**, 45-47.
3. **Levizzani, V.**, 2001: Satelliti e ambiente*. Aria, Ambiente & Salute*, **3**, 1-7.
4. **Levizzani, V.**, 2011: Pioggia e neve dallo spazio. *Darwin*, **42**, 42-47.
5. **Levizzani, V.**, and A. Provenzale, 2012: Water cycle science. *Public Service Review*, **15**, 134-135.
6. **Levizzani, V.**, 2015: L'utilizzo dei satelliti per il monitoraggio meteo. *Ecoscienza*, **3**, 66.
7. **Levizzani, V.**, 2017: Nubi, precipitazioni e satelliti. *Riv. Meteor. Aeronautica*, **1**, 5-18.

PROCEEDINGS OF INTERNATIONAL CONFERENCES

1. Rasmussen, R. M., **V. Levizzani,** and H. R. Pruppacher, 1982: A theoretical and wind tunnel study of the melting behavior of small and large spherical ice particles. *Prepr. Conf. Cloud Physics*, Amer. Meteor. Soc., Chicago, 15-18 Nov.
2. Prodi, F., **V. Levizzani,** and G. Casarini, 1986: Determination of the optical characteristics of atmospheric particles separated by size. *Prepr. Int. Conf. on Optical and Millimeter Wave Propagation and Scattering in the Atmosphere*, Firenze, 27-30 May, 391-392.
3. Prodi, F., and **V. Levizzani,** 1986: Meteorological nowcasting through satellite and radar image processing. *The Records of the Int. Conf. on the "Arno Project"*, 24-25 Nov., Firenze, 337-356.
4. Prodi, F., **V. Levizzani,** and T. Georgiadis 1987: Combined satellite and radar image processing in meteorological nowcasting. *Proc. 2nd Int. Cesena Agricultura Conf. on Agrometeorology*, Cesena, 8-9 Oct., 335-337.
5. **Levizzani, V.**, F. Porcú, F. Prodi, R. Carlá, and A. J. Negri, 1990: Rainfall estimation over the Arno River basin (Italy): A flood hazard case-study. *Prepr. Conf. on Operational Precipitation Estimation and Prediction*, Amer. Meteor. Soc., Anaheim, 7-8 Feb., 77-82.
6. **Levizzani, V.**, F. Porcú, and F. Prodi, 1992: METEOPIX: An integrated visualization system for very short range weather forecasting (Nowcasting). *Proc. 3rd Eurographics Workshop on "Visualization in Scientific Computing"*, Viareggio, 27-29 Apr., 326-330.
7. **Levizzani, V.**, M. Setvák, J. Krácmar, F. Porcú, and F. Prodi, 1992: Multisensor remote sensing analysis of deep convective storms' structure over continental Europe and the Mediterranean. *Proc. 11th Int. Cloud Physics Conf*., Montreal, 17-21 Aug., 1075-1078.
8. **Levizzani, V.**, F. Porcú, and F. Prodi, 1992: SATPIX: METEOSAT image processing for precipitation studies. *Proc. 9th METEOSAT Scientific Users' Meeting*, Locarno, 15-19 Sep., 45-50. 150.
9. Setvák, M., and **V. Levizzani,** 1992: Influences of NOAA and METEOSAT HRPT spatial resolution on deep convective storms cloud top observations. *Proc. 9th METEOSAT Scientific Users' Meeting*, Locarno, 15-19 Sep., 169-150.
10. Setvák, M., and **V. Levizzani,** 1993: The detection of convective storm cloud top structure by NOAA/AVHRR observations. *Proc. 6th European AVHRR Data Users' Meeting*, Belgirate, 28 Jun.-2 Jul., 215-150.
11. **Levizzani, V.**, M. Setvák, R. M. Rabin, C. A. Doswell III, and P. K. Wang, 1996: Storm top structure as seen from NOAA-AVHRR imagery: A need for interpretation. *MAP Newsletter*, **5**, 30-31.
12. Setvák, M., R. M. Rabin, **V. Levizzani,** and C. A. Doswell III, 1996: Multispectral Observations of U.S. Great Plains Storms from GOES-8. *Proc. The 1996 Meteorological Satellite Data Users' Conference **Geostationary Systems*, Vienna, Austria, 16-20 Sep., 143-150.
13. Doswell, C. A. III, R. M. Rabin, M. Setvák, and **V. Levizzani,** 1996: Multispectral GOES-8 and NOAA/AVHRR Observations of Great Plains Storms. *Proc. AMS-15th Conf. on Weather Analysis and Forecasting*, Norfolk, Virginia, 19-23 Aug., 28-31.
14. Georgiadis, T., **V. Levizzani**, and C. Tomasi, 1997: Radiation and surface fluxes measurements program at Ny-Alesund. *Proc. Workshop on Research Activities at Ny-Ålesund*, Svalbard Islands, 15 May.
15. **Levizzani, V.**, R. Amorati, P. Alberoni, S. Nanni, and R. Rizzi, 1997: Satellite and radar analysis of convective precipitation in Northern Italy. *MAP Newsletter*, **7**, 42-43.
16. **Levizzani, V.**, R. Amorati, P. Alberoni, S. Nanni, and R. Rizzi, 1997: Satellite and radar analysis of convective precipitation in Northern Italy: A cloud structure point of view. *Proc. 1997 Meteorological Satellite Data Users' Conference*, Brussels, Belgium, 29 Sep.-3 Oct., 285-292.

17. Alberoni, P. P., S. Nanni, P. Mezzasalma, and **V. Levizzani**, 1998: Analysis of two companion supercells over Northern Italy. *Proc. COST-75 – Advanced Weather Radar Systems Int. Seminar*, Locarno, Switzerland, 375-384.
18. **Levizzani, V.**, P. P. Alberoni, R. Amorati, S. Masuelli, S. Costa, K. Holmlund, J. Schmetz, and S. A. Tjemkes, 1998: Severe weather on 18 June 1997: A MAP supercell case study. *MAP Newsletter*, **9**, 16-17.
19. Alberoni, P. P., S. Costa, A. Selvini, J. McGinley, and **V. Levizzani**, 1998: Implementation and test of a mesoscale data assimilation system for Northern Italy. *MAP Newsletter*, **9**, 70-71.
20. Cervino, M., **V. Levizzani**, C. Serafini, A. Bartoloni, M. Mochi, P. Colandrea, and B. Greco, 1998: Clouds detection with GOME: A refinement of the Cloud Clearing Algorithm using ATSR-2 images. *IGARSS'98-Sensing and Managing the Environment Symposium Proc. CD-ROM*, IEEE, ISBN 0-7803-4406-5.
21. Alberoni, P. P., S. Costa, C. Cacciamani, and **V. Levizzani**, 1999: Operational implementation of LAPS: A tool for MAP POC. *MAP Newsletter*, **11**, 72-73.
22. **Levizzani, V.**, J. Schmetz, H. J. Lutz, J. Kerkmann, P. P. Alberoni, M. Cervino, and J. F. Turk, 1999: Precipitation estimates using METEOSAT Second Generation (MSG): New perspectives from geostationary orbit. *Proc. 1999 EUMETSAT Meteorological Satellite Data Users' Conf.*, Copenhagen, 6-9 Sep., 121-128.
23. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 1999: Aerosol optical thickness determination and aerosol classification: A method based on METEOSAT and GOME data. *Proc. 1999 EUMETSAT Meteorological Satellite Data Users' Conf.*, Copenhagen, 6-9 Sep., 263-269.
24. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 1999: Aerosol optical thickness and classification: Use of METEOSAT, GOME and modeled data. *EOS-SPIE Int.Symp. on Remote Sensing*, Proc. SPIE Vol. **3867**, Satellite Remote Sensing of Clouds and the Atmosphere IV, J. E. Russell. Ed., 268-279.
25. Alberoni, P. P., **V. Levizzani**, P. Mezzasalma, S. Costa, and R. Rizzi, 2000: Impact of meteorological radar and satellite data onto mesoscale analyses. *Mediterranean Storms - EGS Plinius Conf '99*, P. Claps and F. Siccardi, Eds., Editoriale Bios, 545-556.
26. Turk, F. J., G. Rohaly, J. Hawkins, E. A. Smith, A. Grose, F. S. Marzano, A. Mugnai, and **V. Levizzani**, 2000: Analysis and assimilation of rainfall from blended SSM/I, TRMM and geostationary satellite data. *Prepr. 10th Conf. on Satellite Meteorol. and Oceanography*, AMS, Long Beach, California, 9-14 Jan., 66-69.
27. Schmetz, J., K. Holmlund, **V. Levizzani**, and H. P. Roesli, 2000: On the use of rapid scans. *5th Int. Wind Workshop*, Lorne, Australia, 28 Feb.–3 Mar., 227-234.
28. **Levizzani, V.**, P. P.Alberoni, P. Bauer, L. Bottai, A. Buzzi, E. Cattani, M. Cervino, P. Ciotti, M. J. Costa, S. Dietrich, B. Gozzini, A. Khain, C. Kidd, F. S. Marzano, F. Meneguzzo, S. Migliorini, A. Mugnai, F. Porcù, F. Prodi, R. Rizzi, D. Rosenfeld, L. Schanz, E. A. Smith, F. Tampieri, F. Torricella, J. F. Turk, G. A. Vicente, and G. Zipoli, 2000: Use of the MSG SEVIRI channels in a combined SSM/I, TRMM and geostationary IR method for rapid updates of rainfall. *1st MSG-RAO Meeting*, ESA SP-452, 63-66.
29. Melani, S., E. Cattani, **V. Levizzani,** M. Cervino, F. Torricella, T. Rother, M. Hess, and K. Schmidt, 2000: Simulations of ice crystal optical properties and cloud top radiative properties on top of deep convective storms in the MSG SEVIRI VIS and IR channels. *Proc. 2000 EUMETSAT Meteorological Satellite Data Users' Conf.*, Bologna, Italy, 29 May–2 Jun., 291-298.
30. Turk, F. J., J. Hawkins, E. A. Smith, F. S. Marzano, A. Mugnai, and **V. Levizzani**, 2000: Combining SSM/I, TRMM and infrared geostationary satellite data in a near real-time fashion for rapid updates of precipitation. *Proc. 2000 EUMETSAT Meteorological Satellite Data Users' Conf.*, Bologna, Italy, 29 May – 2 Jun., 452-459.

31. Alberoni, P. P., **V. Levizzani**, T. Paccagnella, P. Patruno, S. Costa, and P. Mezzasalma, 2000: Geostationary satellite data assimilation for nowcasting purposes. *Proc. 2000 EUMETSAT Meteorological Satellite Data Users' Conf.*, Bologna, Italy, 29 May – 2 Jun., 660-667.

32. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 2000: An update of a GOME-Meteosat method for aerosol optical thickness determination and classification. *Proc. 2000 EUMETSAT Meteorological Satellite Data Users' Conf.*, Bologna, Italy, 29 May–2 Jun., 420-427.

33. Torricella, F., E. Cattani, M. Cervino, M. J. Costa, and **V. Levizzani**, 2000: Detection and characterisation of atmospheric aerosol using simulated measurements from ENVISAT-1 nadir viewing spectrometers. *Proc. 2000 EUMETSAT Meteorological Satellite Data Users' Conf.*, Bologna, Italy, 29 May–2 Jun., 428-435.

34. Santoleri, M., C. Ananasso, S. Argentini, R. Pirazzini, T. Vihma, M. Nardino, A. Orsini, F. Calzolari, T. Georgiadis, and **V. Levizzani**, 2000: A parameterization for surface and satellite data comparison over sea-ice and snow during the ARTIST project. *Proc. IGARSS 2000 – The Role of Remote Sensing in Managing the Global Environment*, CD-ROM, Honolulu, Hawaii, 24-28 Jul.

35. Nardino, M., F. Calzolari, T. Georgiadis, and **V. Levizzani**, 2000: Surface measurements during MAP-SOP: energy and radiation fluxes in Rondissone (Lago Maggiore Target Area). *ICAM 2000 – 26th Int. Conf. on Alpine Meteorology*, Österreichische Beiträge zu Meteorologie und Geophysik, Publ. Nr. 392 (CD-ROM), ISSN 1016-6254.

36. Doutriaux-Boucher, M., J. F. Turk, and **V. Levizzani**, 2000: Estimation of rain rate from a combination of METEOSAT and SSM/I data. *Rep. 4th EUMETSAT User Forum in Africa*, Kampala, Uganda, 25-29 Sep., CD_ROM, EUM P 30, ISSN 92-9110-038-2.

37. Cervino, M., F. Torricella, **V. Levizzani**, A. Bartoloni, M. Mochi, P. Colandrea, and E. Zappitelli, 2000: Validation of aerosol properties retrieved from GOME measurements. *Proc. ERS-ENVISAT Symp.*, ESA, Göteborg, Sweden, 16-20 Oct.

38. Nardino, M., A. Orsini, R. Pirazzini, F. Calzolari, T. Georgiadis, and **V. Levizzani**, 2000: Cloud radiative forcing and effects on local climate. *Proc. CD-ROM ECAC2000 – 3rd European Conference on Applied Climatology*, Pisa, Italy, 16-20 Oct.

39. Nardino, M., F. Calzolari, T. Georgiadis, **V. Levizzani**, R. Sozzi, 2000: Computation of the mixed layer height through the Gryning-Batchvarova model and comparison with experimental data during MAP-SOP. *MAP Newsletter*, **15**, 156-159.

40. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 2001: Lessons learnt from synergistic use of polar and geostationary satellite sensors for the retrieval of aerosol characteristics. *Proc. SPIE Int. Symp. on Optical Science and Technology*, S. Diego, CA, 29 Jul.–3 Aug., 17-27.

41. Costa M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 2001: Impact of SEVIRI 1.6 μμ channel on aerosol characterisation: A polar and geostationary data based method. *Proc. 2001 EUMETSAT Meteorological Satellite Data Users' Conf.*, Antalya, Turkey, 1-5 Oct., 77-83.

42. Alberoni, P. P., **V. Levizzani**, M. S. Tesini, P. Mezzasalma, S. Costa, and R. Bechini, 2001: Mesoscale analysis of the October 1998 Friuli flood event. *Mediterranean Storms: 2nd EGS Plinius Conf. 2000*, A. Mugnai, F. Guzzetti, and G. Roth, Eds. Publ. GNDCI no. 2547, 163-173.

43. **Levizzani, V**., P. Bauer, A. Buzzi, D. Hinsman, A. Khain, C. Kidd, F. S. Marzano, F. Meneguzzo, A. Mugnai, J. P. V. Poiares Baptista, F. Prodi, J. F. W. Purdom, D. Rosenfeld, J. Schmetz, E. A. Smith, F. Tampieri, F. J. Turk, G. A. Vicente, 2001: EURAINSAT: European Satellite Rainfall Analysis and Monitoring at the Geostationary Scale. *Prepr. 11th Conf. Satellite Meteorol. Oceanography*, AMS, Madison, WI, 15-18 Oct., 650-653.

44. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 2002: Lessons learnt from synergistic use of polar and geostationary satellite sensors for the retrieval of aerosol characteristics. *Proc. SPIE Int. Symp. on Optical Science and Technology*, S. Diego, CA, 29 Jul.–3 Aug., 17-27.

45. **Levizzani, V.**, and J. F. Turk, 2002: EURAINSAT: European satellite rainfall analysis and monitoring at the geostationary scale. *Mediterranean Storms: Proc. 3rd EGS Plinius Conf. 2001*, R. Deidda, A. Mugnai, and F. Siccardi, Eds., Publ. GNDCI 2560, 139-146.

46. Alberoni, P. P., E. Todini, M. Chandra, M. Lindskog, J. Koistinen, D. Bebbington, B. Codina, **V. Levizzani**, M. Bruen, D. Zrnic, A. Rossa, and P. Burlando, 2002: CARPE DIEM – Looking for an advanced use of radar data. *Open Symp. on Propagation and Remote Sensing*, URSI, CD-ROM Proc., Garmisch-Partenkirchen, 12-15 Feb.

47. Costa, M. J., B. J. Sohn, **V. Levizzani**, and A. M. Silva, 2002: Aerosol characterisation from polar and geostationary satellite data: A case study over the Yellow Sea (South Korea). *Proc. 2002 EUMETSAT Meteorological Satellite Data Users Conf.*, Dublin, 2-6 Sep., 682-689.

48. Rosenfeld, D., S. Melani, E. Cattani, and **V. Levizzani**, 2002: Considerations on daylight operation of 1.6 μm vs. 3.7 μm channels on NOAA and METOP satellites. *Proc. 2002 EUMETSAT Meteorological Satellite Data Users Conf.*, Dublin, 2-6 Sep., 64.

49. **Levizzani, V.**, D. Rosenfeld, E. Cattani, S. Melani, F. Torricella, and M. J. Costa, 2002: Multispectral observations of cloud top as a powerful tool for rainfall estimations. *1st IPWG Workshop*, Madrid, 23-27 Sep., 153-158.

50. Tapiador, F. J., C. Kidd, **V. Levizzani**, and F. S. Marzano, 2002: A neural network PMW/IR combined procedure for short term/small area rainfall estimates. *1st IPWG Workshop*, Madrid, 23-27 Sep., 159-165.

51. Turk, F. J., E. E. Ebert, H.-J. Oh, B.-J. Sohn, **V. Levizzani**, E. A. Smith, and R. Ferraro, 2002: Validation of an operational global precipitation analysis at short time scales. *1st IPWG Workshop*, Madrid, 23-27 Sep., 225-248.

52. Costa, M. J., A.M. Silva, and **V. Levizzani**, 2002: Aerosol radiative forcing assessment from polar and geostationary satellite measurements. *Proc. SPIE's Remote Sensing*, Crete, 23-27 Sep., 80-89.

53. Alberoni, P. P., E. Todini, M. Chandra, M. Lindskog, J. Koistinen, D. Bebbington, B. Codina, **V. Levizzani**, M. Bruen, N. Gustafsson, D. Zrnić, A. Rossa, and P. Burlando, 2002: CARPE DIEM: EU project. *Proc. 2nd European Conf. on Radar Meteorology (ERAD)*, Delft, 18-22 Nov., Copernicus GmbH, ISBN 3-936586-04-7, 363-369.

54. Meneguzzo, F., **V. Levizzani**, A. Orlandi, A. Ortolani, M. Pasqui, F. Torricella, and B. Gozzini, 2002: Resolution and data assimilation issues in the operational numerical forecast of basin-scale storms. *4th EGS Plinius Conf on Mediterranean Storms*, Mallorca, 2-4 Oct., CD-ROM (ISBN 84-7632-792-7, DL PM 00178-2003).

55. Soderman, D., F. Meneguzzo, B. Gozzini, D. Grifoni, G. Messeri, M. Rossi, S. Montagnani, M. Pasqui, A. Orlandi, A. Ortolani, E. Todini, G. Menduni, and **V. Levizzani**, 2003: Very high resolution precipitation forecasting on low cost high performance computer systems in support of hydrological modeling. *Proc. 17th Conf. on Hydrology*, AMS, Long Beach, 9-13 Feb., CD-ROM, ISBN 1-878220-63-2.Turk, F. J., E. E. Ebert, H. J. Oh, B. J. Sohn, **V. Levizzani**, E. A. Smith, and R. R. Ferraro, 2003: Validation of an operational global precipitation analysis at short time scales. *Proc. 12th Conf. Satellite Meteorology and Oceanography*, AMS, Long Beach, 9-13 Feb., CD-ROM, ISBN 1-878220-63-2.

57. Cattani, E., M. J. Costa, F. Torricella, **V. Levizzani**, and A. M. Silva, 2003: Comparison of cloud microphysical properties retrieved from different algorithms during aerosol transport events. *Proc. 2003 EUMETSAT Meteorological Satellite Data Users Conf.*, Weimar, 29 Sep.-3 Oct., 678-685.

58. Costa, M. J., E. Cattani, F. Torricella, A. M. Silva, and **V. Levizzani**, 2003: Cloud microphysical properties retrieval in the presence of strong aerosol events. *Proc. 2003 EUMETSAT Meteorological Satellite Data Users Conf.*, Weimar, 29 Sep.-3 Oct., 671-677.

59. Tapiador, F. J., C. Kidd, **V. Levizzani**, and F. S. Marzano, 2003: A merged algorithm for quantitative rainfall estimates using the thermal infrared band. *Proc. 2003 EUMETSAT Meteorological Satellite Data Users Conf.*, Weimar, 29 Sep.-3 Oct., 738-742.

60. Costa, M. J., A. M. Silva, and **V. Levizzani**, 2003: Determinação das propriedades das nuvens e aerossóis relevantes para estudos de forçamento radiativo do clima a partir de medidas de satélite. *Congr. de Pós-Gradiaçao em Ciências da Terra, Clima e Espaço da Universidade de Évora*, Évora, 2-4 Oct., 26-27.

61. Cimini, D., F. S. Marzano, G. Vulpiani, G. Giuliani, P. P. Alberoni, **V. Levizzani**, and J. F. Turk, 2004: Rainfall mapping by satellite microwave-infrared radiometric data merging: Applications to case studies over central Italy. *ACTIF Workshop on Combination of Data from Remote Sensing Technologies for Flood Forecasting*, Bologna, 24-25 Nov, Conf. CD-ROM [available ARPA-SIM, http://www.arpa.emr.it/smr/].

62. **Levizzani, V.**, and A. Gruber, 2004: The CGMS International Precipitation Working Group. *ACTIF Workshop on Combination of Data from Remote Sensing Technologies for Flood Forecasting*, Bologna, 24-25 Nov., Conf. CD-ROM [available ARPA-SIM, http://www.arpa.emr.it/smr/].

63. Costa, M. J., E. Cattani, **V. Levizzani**, and A. M. Silva, 2004: Cloud properties derived from SEVIRI and MODIS: A comparison study. *Proc. 2004 EUMETSAT Meteorological Satellite Conf.*, Prague, 31 May–4 Jun., 145-151.

64. Cattani, E., M. J. Costa, **V. Levizzani**, and A. M. Silva, 2004: Satellite observation and radiative modeling of the influence of aerosol particles from biomass burning on cloud microphysical properties. *Proc. 14th Int. Conf. on Clouds and Precipitation*, Bologna, 18-23 Jul., 32-34.

65. Costa, M. J., E. Cattani, A. M. Silva, and **V. Levizzani**, 2004: Satellite derived cloud properties relevant for cloud radiative forcing: a case study of interaction between clouds and dust aerosol particles. *Proc. 14th Int. Conf. on Clouds and Precipitation*, Bologna, 18-23 Jul., 47-50.

66. Galletti, M., P. P. Alberoni, and **V. Levizzani**, 2004: Assessment and tuning of the behavior of a microphysical characterization scheme based on radar polarimetric variables. *Proc. 14th Int. Conf. on Clouds and Precipitation*, Bologna, 18-23 Jul., 771-774.

67. Laing, A. G., R. E. Carbone, and **V. Levizzani**, 2004: Developing a warm season climatology of precipitating systems in Africa. *Proc. 14th Int. Conf. on Clouds and Precipitation*, Bologna, 18-23 Jul., 1806-1807.

68. Laing, A. G; R. E. Carbone, and **V. Levizzani**, 2004: Developing a climatology of convective precipitation patterns in Africa. *AMS Conf. Satellite Meteorol. Oceanogr.*, 13, CD-ROM.

69. **Levizzani, V**., and A. Mugnai, 2004: Rainfall measurements from space: Where are we? *Proc. 14th Int. Conf. on Clouds and Precipitation*, Bologna, 18-23 Jul., 1123-1126.

70. Torricella, F., **V. Levizzani**, and V. Poli, 2004: Applications of PMW rainfall algorithms to Mediterranean area events. *Proc. 14th Int. Conf. on Clouds and Precipitation*, Bologna, 18-23 Jul., 1171-1174.

71. Torricella, F., **V. Levizzani**, and M. Celano, 2004: Applications of a rainfall estimation technique based on MW and IR satellite data. Assessment of reliability of instantaneous rain rate maps in the Mediterranean. *Proc. 5th EGU Plinius Conf. on Mediterranean Storms*, Ajaccio, J. Testud, A. Mugnai, and J.-F. Cantucci, Eds., 421-426.

72. **Levizzani, V.**, C. Adamo, P. P. Alberoni, A. Antonini, A. Battaglia, P. Bauer, A. Buzzi, D. Capacci, C. Caracciolo, E. Cattani, M. Celano, D. Cimini, M. J. Costa, S. Davolio, S. Dietrich, M. Fantini, D. E. Hinsman, S. di Michele, G. Giuliani, M. Kästner, A. Khain, C. Kidd, J. Kidd, D. Kniveton, R. Lahav, R. Layberry, I. Lensky, P. Malguzzi, S. Mantovani, F. S. Marzano, A. Maurizi, C. M. Medaglia, S. Melani, F. Meneguzzo, G. Messeri, A. Mugnai, S. Natali, A. Orlandi, A. Ortolani, G. Panegrossi, M. Pasqui, S. Pinori, V. Poli, F. Porcù, F. Prodi, J. F. W. Purdom, D. Rosenfeld, V. Sanderson, J. Schmetz, E. A. Smith, R. Solomon, J. Steinwagner, F. Tampieri, F. J. Tapiador, A. Tassa, F. Torricella, G. J. Tripoli, F. J. Turk, G. A. Vicente, and M. G. Villani, 2004: Precipitation estimation: from the RAO to EURAINSAT and beyond. *Proc. 2nd MSG-RAO Meeting*, Salzburg, 9-10 Sep., ESA-SP-582, 113-118.

73. Gruber, A., and **V. Levizzani**, 2004: The International Precipitation Working Group (IPWG). *Proc. 2nd IPWG Workshop*, Monterey, 25-28 Oct., EUM P.44, 39-42.

74. Laing, A., R. Carbone, and **V. Levizzani**, 2005: Convective precipitation climatology for Africa. *Proc. 11th AMS Conference on Mesoscale Processes*, **11**, CD-ROM, JP3J.17.

75. Laing, A. G., **V. Levizzani**, and R. E. Carbone, 2005: The diurnal cycle and propagation of precipitating convection in Africa. *AMMA 1st Int. Conf.*, Dakar, 28 Nov. – 4 Dec.

76. Cattani, E., M. J. Costa, F. Torricella, **V. Levizzani**, and A. M. Silva, 2006: Cloud radiative forcing from SEVIRI data: possibile effects of air pollution. *Proc. 2005 EUMETSAT Meteorological Satellite Conf.*, Dubrovnik, EUMETSAT P 46, 19-23 Sep., 474-481.

77. Mugnai, A., B. Bizzarri, F. Di Paola, S. Dietrich, **V. Levizzani**, and F. Torricella, 2006: Unified framework for precipitation retrieval and analysis by means of multisensor satellite observations and cloud model simulations: Application to H-SAF. *Proc. The 2006 EUMETSAT Meteorological Satellite Conf.*, Helsinki, Finland, 12 - 16 Jun., CD-ROM EUMETSAT P.48, ISBN 92-9110-076-5, ISSN 1011-3932.

78. Laing, A. G., R. E. Carbone, and **V. Levizzani**, 2007: Propagation of convection in Africa: Implications for predictability of precipitation. *Proc. Symposium HS2004 at IUGG2007 "Quantification and Reduction of Predictive Uncertainty for Sustainable Water Resources Management"*, XXIV IUGG Meeting, Perugia, 2-13 Jul.

79. Kidd, C., R. R. Ferraro, F. J. Turk, P. Bauer, **V. Levizzani**, E. E. Ebert, and J. Janowiak, 2007: The International Precipitation Working Group. *Proc. 2007 EUMETSAT Meteorological Satellite Conf. & 15th AMS Conf. on Satellite Meteorology and Oceanography*, Amsterdam, 24-28 Sep., CD-ROM EUMETSAT P.50, ISBN 92-9110-079-X, ISSN 1011-3932.

80. Melani, S., M. Pasqui, B. Gozzini, F. Guarnieri, A. Ortolani, A. Antonini, **V. Levizzani**, and R. Ginnetti, 2007: Observed and model-simulated intraseasonal WAM variability for the 2005 rainy season. *Proc. 2007 EUMETSAT Meteorological Satellite Conf. & 15th AMS Conf. on Satellite Meteorology and Oceanography*, Amsterdam, 24-28 Sep., CD-ROM EUMETSAT P.50, ISBN 92-9110-079-X, ISSN 1011-3932.

81. Laing. A. G., R. E. Carbone, and **V. Levizzani**, 2008: Cycles of deep convection over central and southern Africa. *Prepr. 20th AMS Conference on Climate Variability and Change*, New Orleans, 20-24 Jan.

82. Melani, S., A. Antonini, **V. Levizzani**, R. Ginnetti, M. Pasqui, A. Ortolani, A. G. Laing, and R. E. Carbone, 2008: A climatology of African warm-season rainfall episodes based on a combined IR/MW precipitation estimate approach. *Prepr. 20th AMS Conference on Climate Variability and Change*, New Orleans, 20-24 Jan.

83. Laviola, S., and **V. Levizzani**, 2008: Rain retrieval using the 183 GHz absorption lines. *IEEE Proc. MicroRad 2008, 10th Specialist Meeting of Microwave Radiometry and Remote Sensing of the Environment*, Firenze, 11-14 Mar., doi: 10.1109/MICRAD.2008.4579505.

84. Laviola, S., and **V. Levizzani**, 2008: Rain retrieval using the 183-WSL algorithm. *Proc. 15th Int. Conf. on Clouds and Precipitation*, Cancun, 7-11 Jul., ICCP CD-ROM.

85. **Levizzani, V.**, F. Pinelli, R. Ginnetti, S. Melani, A. Antonini, M. Pasqui, A. Ortolani, A. G. Laing, and R. E. Carbone, 2008: Variability of warm season convective clouds over Europe and the Mediterranean. *Proc. 15th Int. Conf. on Clouds and Precipitation*, Cancun, 7-11 Jul., ICCP CD-ROM.

86. Melani, S., A. Antonini, M. Pasqui, A. Ortolani, **V. Levizzani, and** R. Ginnetti, 2008: A satellite and model study of rainfall associated with the West African Monsoon. *Proc. 15th Int. Conf. on Clouds and Precipitation*, Cancun, 7-11 Jul., ICCP CD-ROM.

87. Laviola, S., and **V. Levizzani**, 2008: Rain rate retrieval using the 183-WSL algorithm. *Proc. 2008 EUMETSAT Meteorological Satellite Conf.*, Darmstadt, 8-12 Sep., EUMETSAT P. 52, ISSN 1011-3932.

88. Kidd, C., T. Heinemann, **V. Levizzani**, and D.R. Kniveton, 2008: International Precipitation Working Group (IPWG): Inter-comparison of regional precipitation products. *Proc. 2008 EUMETSAT Meteorological Satellite Conf.*, Darmstadt, 8-12 Sep., EUMETSAT P. 52, ISSN 1011-3932.

89. Laviola, S., and **V. Levizzani**, 2008: Observing precipitation with AMSU-B opaque channels: the 183-WSL algorithm. *Proc. 4th Int. Precipitation Working Group Workshop*, Beijing, 13-17 Oct., EUMETSAT P.54, ISBN 978-92-9110-085-9, 233-243. [also available from http://www.isac.cnr.it/~ipwg/]

90. Cattani, E., F. Torricella, S. Laviola, and **V. Levizzani**, 2008: On the statistical relationship between the optical and microphysical characteristics of clouds from AVHRR and the rainfall intensity derived from a new AMSU rain algorithm. *Proc. 4th Int. Precipitation Working Group Workshop*, Beijing, 13-17 Oct., EUMETSAT P.54, ISBN 978-92-9110-085-9, 71-78. [also available from http://www.isac.cnr.it/~ipwg/]

91. Fernández Prieto, D., P. A. M. Beery, J. Benveniste, D. Courault, J. F. Cretaux, A. I. J. M. Van Dijk, P. Doell, A. Gambacorta, R. de Jeu, Y. Kerr, C. Kidd, T. Koike, W. Kustas, **V. Levizzani**, M. F. McCabe, A. Montanari, M. Menenti, E. G. Njoku, P. van Oevelen, C. Prigent, R. Roebeling, J. Schulz, Z. (Bob) Su, W. Wagner, and E. Wood, 2009: EO and water cycle science: Towards a multimission observation strategy. *Proc. Conf on Earth Observation and water cycle science: Towards a multimission observation strategy*, ESA, Frascati, 18-20 Nov., ESA-SP-674, ISBN 978-92-9221-238-4.

92. Kidd, C., and **V. Levizzani**, 2009: Status of satellite precipitation retrievals. *Proc Conf on Earth Observation and water cycle science: Towards a multimission observation strategy*, ESA, Frascati, 18-20 Nov., ESA-SP-674, ISBN 978-92-9221-238-4.

93. Laviola, S., S. D'Aurizio, E. Cattani, and **V. Levizzani**, 2010. Characterization of snow-covered terrains and detection of snowfall by using the 183-WSL retrieval method. *Proc. 4th Int. Precipitation Working Group Workshop*, Hamburg, 11-15 Oct., ISSN1614-1199, 170-181. [also available from http://www.isac.cnr.it/~ipwg/]

94. Laviola, S., **V. Levizzani**, E. Cattani, and C. Kidd, 2012: First validation of retrieved rain rates and snow covered mask of the 183-WSL retrieval method. *IEEE Proc. MicroRad 2012, 12th Specialist Meeting of Microwave Radiometry and Remote Sensing of the Environment*, Villa Mondragone, 5-9 Mar., doi: 10.1109/MicroRad.2012.6185242.

95. Panegrossi, G., D. Casella, E. Cattani, S. Dietrich, S. Laviola, **V. Levizzani**, A. Mugnai, P. Sanò, D. Biron, L. De Leonibus, D. Melfi, P. Rosci, A. Vocino, F. Zauli, L. Milani, F. Porcù, S. Puca, A. Rinollo, and F. Gattari, 2012: Precipitation products from the Hydrology SAF. *Proc. 2012 EUMETSAT Meteorological Satellite Conf.*, Sopot, 3-7 Sep. [available at https://www.eumetsat.int/cs/idcplg?IdcService=GET_FILE&dDocName=pdf_conf_p61_s4_09_mugnai_v&allowInterrupt=1&noSaveAs=1&RevisionSelectionMethod=LatestReleased]

96. Davolio, S., A. Buzzi, P. Malguzzi, D. Mastrangelo, S. Laviola, **V. Levizzani**, A. Lighezzolo, and E. Muñoz, 2012: Analyses of heavy precipitation events over Ligurian region. *Proc. Congreso Argentino de Teledeteccion*, Cordoba, 18-21 Sep., 18-21.

97. Dietrich, S., **V. Levizzani**, A. Mugnai, D. Casella, E. Cattani, S. Laviola, G. Panegrossi, and P. Sanò, 2013: Satellite-based precipitation measurements in Europe: The algorithms for H-SAF. *Proc. Int. Workshop on Terrestrial Water Cycle Observation and Modeling from Space: Innovation and Reliability of Data Products*, Beijing, 26-30 Apr. [http://watglobs.csp.escience.cn/dct/page/1]

98. Laviola, S., J. Dong, C. Kongoli, H. Meng, R. Ferraro, and **V. Levizzani**, 2015: An intercomparison of two passive microwave algorithms for snowfall detection over Europe. *IGARSS Geosci. Remote Sensing Symp*. 2015, Milano, 26-31 Jul., 886-889, doi:10.1109/IGARSS.2015.7325907

99. Huffman, G. J., R. Ferraro, C. Kidd, **V. Levizzani**, and F. J. Turk, 2016: Requirements for a robust precipitation constellation. *14th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment*, *MicroRad 2016*, Espoo, 11-14 Apr., doi: 10.1109/MICRORAD.2016.7530500.

PARTICIPATION TO INTERNATIONAL CONFERENCE WITHOUT PROCEEDINGS

1. Rambaldi, S., F. Prodi, and **V. Levizzani,** 1988: Ballistic model for cylindrical ice accretion. *XIII General Assembly European Geophys. Soc.*, Bologna, 21-25 Mar.
2. **Levizzani, V.**, F. Porcú, and F. Prodi, 1989: Satellite investigation of clouds and cloud structure. Lecture at the *Workshop on Remote Sensing Techniques with Applications to Agriculture, Water and Weather Resources*, ICTP, Trieste, 27 Feb.-21 Mar.
3. **Levizzani, V.,** 1989: Satellite rainfall estimate and analysis. Lecture at *Workshop on Remote Sensing Techniques with Applications to Agriculture, Water and Weather Resources*, ICTP, Trieste, 27 Feb.-21 Mar.
4. Mandrioli, P., A. Gambarelli, and **V. Levizzani,** 1989: Computer-aided identification of pollen grains. *Joint Canadian and Panamerican Symposium on Aerobiology & Health*, Ottawa, 7-9 Jun.
5. **Levizzani, V.**, F. Porcú, and F. Prodi, 1990: Satellite rainfall estimation on the Arno river basin: Potentialities and drawbacks. *Workshop on "The role of radar in the Arno project: Related problems and research opportunities"*, Firenze, 20-23 Nov.
6. **Levizzani, V.**, F. S. Marzano, A. Mugnai, F. Porcú, F. Prodi, F. Siccardi, and E. A. Smith, 1993: Multisensor analysis of heavy rainfall events over northern Italy. *XVIII General Assembly European Geophys. Soc*., Wiesbaden, 3-7 May.
7. Mugnai, A., **V. Levizzani**, F. S. Marzano, F. Porcú, F. Prodi, and E. A. Smith, 1994: Rainfall estimation using combined SSM/I and METEOSAT measurements. *7th AMS Conf.on Satellite Meteorology and Oceanography*, Monterey, CA, 6-10 Jun.
8. Dominguez, E., J. Emberlin, M. Fornaciari, G. Frenguelli, C. Galan, R. Gallop, S. Jäger, **V. Levizzani**, P. Mandrioli, B. Romano, A. Velasco, and A. L. Zanotti, 1996: AEROBIOLOGY INTERNATIONAL: A new powerful tool for a growing community. *Compostela Aerobiology 96: 1st European Symposium on Aerobiology*, Santiago de Compostela, Spain, 11-13 Sep.
9. Alberoni, P. P., S. Costa, T. Paccagnella, P. Patruno, and **V. Levizzani**, 1999: Test and implementation of a mesoscale data assimilation chain for very short range forecast purposes. *IUGG99 - The 22nd General Assembly of the International Union of Geodesy and Geophysics*, Birmingham, 18-30 Jul.
10. Pirazzini, R., M. Nardino, F. Calzolari, **V. Levizzani**, T. Georgiadis, T. Vihma, and B. Cheng, 2000: Effects of cloud forcing on surface radiative fluxes at Ny-Ålesund (Svalbard) during the ARTIST experiment. *EGS – 25th General Assembly*, Nice, 25–29 Apr.
11. Costa, M. J., M. Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 2000: Tropospheric aerosol characterisation: from GOME towards an ENVISAT perspective. *ERS-ENVISAT Symp.*, ESA, Göteborg, Sweden, 16-20 Oct.
12. Cervino, M., F. Torricella, **V. Levizzani**, A. Bartoloni, M. Mochi, P. Colandrea, and E. Zappitelli, 2000: Validation of aerosol properties retrieved from GOME measurements. *ERS-ENVISAT Symp.*, ESA, Göteborg, Sweden, 16-20 Oct.
13. Costa, M. J., M.Cervino, E. Cattani, F. Torricella, **V. Levizzani**, and A. M. Silva, 2001: Aerosol characterisation from combined use of polar and geostationary satellites. *Proc. APMG 2001: 2º Simpósio de Meteorologia e Geofísica da APMG; 3º Encontro Luso-Espanhol de Meteorologia*,Évora, Portugal, 12-15 Feb.
14. Alberoni, P.P., P. Mezzasalma, **V. Levizzani**, T. Paccagnella, P. Patruno, and F. Nerozzi, 2001: Use of geostationary satellite data into an assimilation scheme for mesoscale forecasting. *The 2001 EUMETSAT Meteorological Satellite Data Users' Conf.*, Antalya, Turkey, 1-5 Oct.
15. Marzano, F. S., J. F. Turk, and **V. Levizzani**, 2001: Statistical integration of satellite passive microwave and infrared data for high-temporal sampling and retrieval of rainfall. *Proc. Specialist Meeting on Microwave Remote Sensing*, Boulder, CO, 6-8 Nov.

16. Cervino, M., **V. Levizzani**, C. M. Scavuzzo, M. A. Lamfri, and S. Masuelli, 2002: Clouds and aerosol: monitorino and modeling using SAC-C MMRS. *29th Int. Symp. on Remote Sensing of Environment*, Buenos Aires, 8-12 Apr.

17. Costa, M. J.; M. Cervino; **V. Levizzani**, and A. M. Silva, 2002: Combined use of polar and geostationary satellite sensors for aerosol characterization over the ocean. *EGS – 25th General Assembly*, Nice, 21 - 26 Apr.

18. **Levizzani, V.**, R. Amorati, P. P. Alberoni, S. Pinori, S. Dietrich, C. Adamo, A. Mugnai, F. Iocca, L. Guerrieri, J. F. Turk, G. J. Tripoli, and E. A. Smith, 2002: Multisensor studies of heavy precipitation events during MAP SOP. *European Conf. on Severe Storms*, Praha, 26-30 Aug.

19. **Levizzani, V.**, 2002: A few thoughts on satellite rainfall estimations. *WWRP Int. Conf. on Quantitative Precipitation Forecasting (QPF)*, Reading, 2-6 Sep.

20. **Levizzani, V**., F. Torricella, R. Amorati, F. J. Turk, F. Meneguzzo, and P. P. Alberoni, 2002: MW-IR satellite rainfall measurements over Northern Italy for the monitoring of heavy rains. *WWRP Int. Conf. on Quantitative Precipitation Forecasting (QPF)*, Reading, 2-6 Sep.

21. Galli, C., M. Nardino, T. Georgiadis, and **V. Levizzani**, 2003: Radiative energy partition and cloud radiative forcing at a Po Valley site. *EGS-AGU-EUG Joint Assembly*, Nice, Apr.

22. **Levizzani, V.**, 2003: RAINCLOUDS: understanding more about cloud processes in the GPM era. *3rd GPM Workshop: Consolidating the Concept*, ESA, Noordwijk, The Netherlands, 24-26 Jun.

23. Kidd, C., **V. Levizzani**, F. J. Tapiador, and V. Sanderson, 2003: Combined measurements of precipitation from MSG and SSM/I observations. *Proc. 2003 EUMETSAT Meteorological Satellite Data Users Conf.*, Weimar, 29 Sep.-3 Oct., 404.

24. Dietrich, S., **V. Levizzani**, F. Meneguzzo, A. Mugnai, F. Porcù, C. Adamo, A. Antonini, S. Di Michele, C. Medaglia, G. Messeri, A. Orlandi, A. Papa, M. Pasqui, S. Pinori, F. Torricella, 2004: Satellite-based precipitation measurements in the Applied Research in Meteo-hydrology (RAM) project: considerations and preliminary results. *ACTIF Workshop on Combination of Data from Remote Sensing Technologies for Flood Forecasting*, Bologna, 24-25 Nov, Conf. CD-ROM [available ARPA-SIM, http://www.arpa.emr.it/smr/].

25. **Levizzani, V**., and all EURAINSAT scientists, 2003: EURAINSAT: European satellite rainfall analysis and monitoring at the geostationary scale. *ACTIF Workshop on Combination of Data from Remote Sensing Technologies for Flood Forecasting*, Bologna, 24-25 Nov, Conf. CD-ROM [available ARPA-SIM, http://www.arpa.emr.it/smr/].

26. Costa, M. J., E. Cattani, A. M. Silva, **V. Levizzani**, A. M. Ramos, F. C. Conde, and J. Corte-Real, 2004: The Portuguese forest fires in summer 2003 and its possible influence on cloud properties: a study based on satellite data. *Seminar IGBP 2004 "Global Change and Sustainability"*, 15-17 Apr., Univ. of Évora, Portugal.

27. Melani, S., A. Antonini, **V. Levizzani**, A. Ortolani, and F.J. Turk, 2004: Intense precipitation over the Mediterranean area: what do we look at and expect with MSG? *EGU 1st General Assembly*, Nice, 25 - 30 Apr.

28. **Levizzani, V.**, and A. Mugnai, 2004: RAINCLOUDS: clouds and precipitation studies for meteorology, hydrology and climate. *EGU 1st General Assembly*, Nice, 25 - 30 Apr.

29. Torricella, F., E. Cattani, **V. Levizzani**, and V. Poli, 2004: A multi-approach analysis of the November 2002 intense precipitation event over the northern Italy. *Proc. 2004 EUMETSAT Meteorological Satellite Conf.*, Prague, 31 May – 4 Jun., 240.

30. Hannesen, R., **V. Levizzani**, and C. Mazzetti, 2004: Integrating different precipitation measurements for improved flood forecasting. *European Workshop on New Tools for Flood Forecasting and Warning*. Helsinki, 22-23 Jun.

31. Celano, M., P. P. Alberoni, **V. Levizzani**, and A. R. Holt, 2005: Analysis of severe convective events from two operational dual polarisation Doppler radars. *EGU General Assembly*, Vienna, 24-29 Apr.

32. **Levizzani, V.**, 2005: Clouds and precipitation: what do we know in order to forecast extremes? *WMO Workshop on Climatic Analysis and Mapping for Agriculture*, Bologna, 17-17 Jun.

33. Kidd, C., E. E. Ebert, A. Gruber, J. Janowiak, and **V. Levizzani**, 2005: Initial results from the European IPWG validation site. *R. Met. Soc. Conf.*, Exeter, 11-16 Sep.

34. Laing, A., J. Tuttle, R. Carbone, and **V. Levizzani**, 2005: Developing a climatology of convective precipitating patterns in Africa. *5th GEWEX Int. Scientific Conf.*, Costa Mesa, CA, 20-24 Jun.

35. Rosenfeld, D., **V. Levizzani**, I. Lensky, and E. Cattani, 2005: Observing cloud-aerosol interactions with METEOSAT-8. *Proc. 2005 EUMETSAT Meteorological Satellite Conf.*, Dubrovnik, 19-23 Sep.

36. Carbone, R. E., A. Laing, T. D. Keenan, C-C. Wang, T-J Chen, **V. Levizzani**, and L. Zamboni, 2005: Conditions associated with warm season rainfall over five continents. *7th Plinius Conf. on Mediterranean Storms*, Rethymnon, Crete, 5-7 Oct.

37. Mugnai, A., C. Adamo, F. Baordo, B. Bizzarri, S. Dietrich, **V. Levizzani**, C. M. Medaglia, S. Pinori, F. Porcù, F. Prodi, E. A. Smith, F. Torricella, and G. J. Tripoli, 2005: A full approach for the exploitation of multisensor satellite observations of extreme precipitation events. *7th Plinius Conf. on Mediterranean Storms*, Rethymnon, Crete, 5-7 Oct.

38. Laing, A., R. E. Carbone, and **V. Levizzani**, 2006: A satellite-based climatology of convective precipitation episodes over Africa. *14th Conf. Satellite Meteor. and Oceanography*, Amer. Meteor. Soc., Atlanta, 30 Jan.-2 Feb. 2006, P2.18.

39. Laing, A., **V. Levizzani**, and R. E. Carbone, 2006: The diurnal cycle and propagation of deep convective clouds in Africa. *27th Conf. Tropical Meteor.*, Amer. Meteor. Soc., Monterey CA, Apr. 2006, P10.13.

40. **Levizzani, V.**, A. G. Laing, and R. E. Carbone, 2006: Warm season convective precipitation climatology over Europe and Africa. *EGU General Assembly*, Vienna, 2-7 Apr.

41. Kidd, C., E. E. Ebert, J. Janowiak, J. Turk, and **V. Levizzani**, 2006: Validation of satellite and model estimates of precipitation: results from the International Precipitation Working Group. *EGU General Assembly*, Vienna, 2-7 Apr.

42. Melani, S., A. Antonini, G. Giuliani, **V. Levizzani**, A. Orlandi, A. Ortolani, and G. Maracchi, 2006: Validation of a MSG-based satellite rainfall estimation algorithm over the Euro-African area. *EGU General Assembly*, Vienna, 2-7 Apr.

43. Laing, A., R. Carbone, and **V. Levizzani**, 2006: The diurnal cycles and propagation of deep convection in Africa*, 2nd Int'l. Symp. On Quantitative Precipitation Forecasting and Hydrology*, Boulder, CO, 5-8 Jun.

44. **Levizzani, V.**, M. Masotti, R. Ginnetti, M. Pasqui, S. Melani, A. G. Laing, and R. E. Carbone, 2007: Variability of warm-season clouds over Europe. *EGU General Assembly*, Vienna, 15-20 Apr.

45. Metzger, S., J. Lelieveld, U. Blahak, H. Noppel, K. Beheng, D. Rosenfeld, A. Khain, E. Cattani, and **V. Levizzani**, 2007: Aerosol/cloud feedbacks with the most recent version of the German weather forecast model (COSMO LM). *EGU General Assembly*, Vienna, 15-20 Apr.

46. Mugnai, A., B. Bizzarri, D. Casella, D. Capacci, E. Cattani, F. Di Paola, S. Dietrich, **V. Levizzani**, F. Porcù, F. Prodi, P. Sanò, and F. Torricella, 2007: The EUMETSAT Satellite Application Facility in support to Operational Hydrology and Water Management (H-SAF): Precipitation retrieval algorithms and precipitation products. *EGU General Assembly*, Vienna, 15-20 Apr.

47. **Levizzani, V.**, M. Masotti, R. Ginnetti, S. Melani, A. Antonini, M. Pasqui, A. Ortolani, A. G. Laing, and R. E. Carbone, 2007: Variability of warm season convective clouds over Europe and the Mediterranean. *9th EGU Conf. on Mediterranean Storms*, Varenna, 10-13 Sep.

48. Melani, S., M. Pasqui, **V. Levizzani**, A Ortolani, and A. Antonini, 2007: Analysis of a stationary deep convective storm: detecting a V – Shape feature through GEO-LEO satellites. *Proc. 4th European Conf. on Severe Storms*, Trieste, 10-14 Sep.

49. Kidd, C, R. R. Ferraro, F. J. Turk, P. Bauer, **V. Levizzani**, E. E. Ebert, J. Janowiak, 2007: The International Precipitation Working Group. *EUMETSAT Meteorological Satellite Conf.* and *15th AMS Satellite Meteorology & Oceanography Conf.*, Amsterdam, 24 - 28 Sep.

50. Melani, S., A. Antonini, **V. Levizzani**, R. Ginnetti, M. Pasqui, A. Ortolani, A. G. Laing, and R.E. Carbone, 2007: A four-years (2004-2007) climatology of West African precipitation episodes as derived from a combined IR/MW rainfall estimate technique. *2nd Int. AMMA Conf.*, Karlsruhe, 26-30 Nov.

51. Torricella, F., E. Cattani, and **V. Levizzani**, 2007: The blended MW-IR precipitation technique: Improving the rain areas delineation by means of SEVIRI. *1st Workshop of the Satellite Application Facility on Support to Operational Hydrology and Water Management*, Roma, 16-18 Oct.

52. **Levizzani, V.**, C. Kidd, R. Ferraro, P. Bauer, F. J. Turk, E. Ebert, and J. Janowiak, 2007: The International Precipitation Working Group – Present and future of precipitation estimation from satellite. *1st Workshop of the Satellite Application Facility on Support to Operational Hydrology and Water Management*, Roma, 16-18 Oct.

53. Laviola, S., and **V. Levizzani**, 2008: Rain rate retrieval using the 183-WSL algorithm. *EGU General Assembly*, Vienna, 13-18 Apr.

54. Laing, A., R. E. Carbone, and **V. Levizzani**, 2008: Cycles of deep convection over central and southern Africa. *28th Conf. Hurricanes and Tropical Meteor.*, Amer. Meteor. Soc., Orlando, FL, 28 Apr-2 May.

55. Carbone, R. E., **V. Levizzani**, T. D. Keenan, A. G. Laing and C. C. Wang, 2008: A comparative study of warm season precipitation occurrence over Africa, Australia, East Asia, Europe and the United States. *EGU General Assembly*, Vienna, 13-18 Apr.

56. Hatzianastassiou, N., C. D. Papadimas, C. Lolis, A. Bartzokas, **V. Levizzani** and J. Pnevmatikos, 2008: Spatial and temporal variation of precipitation over the Mediterranean Basin based on Global Precipitation Climatology Project satellite data. *10th EGU Plinius Conf. on Mediterranean Storms*, Nicosia, 22-24 Sep.

57. Laviola, S., **V. Levizzani**, M. Miglietta, and A. Moscatello, 2008: Satellite and numerical model investigation of two Mesoscale Convective Systems over Central Mediterranean. *10th EGU Plinius Conf. on Mediterranean Storms*, Nicosia, 22-24 Sep.

58. Torricella, F., E. Cattani, **V. Levizzani**, and S. Laviola, 2008: On the statistical relationship between the optical and microphysical characteristics of warm topped clouds from AVHRR and the rainfall intensity derived from AMSU. *10th EGU Plinius Conf. on Mediterranean Storms*, Nicosia, 22-24 Sep.

59. **Levizzani, V.**, F. Pinelli, R. Ginnetti, S. Melani, A. Antonini, M. Pasqui, A. Ortolani, A. G. Laing, and R. E. Carbone, 2008: Variability of warm season convective clouds over Europe and the Mediterranean. *Proc. 2008 EUMETSAT Meteorological Satellite Conf.*, Darmstadt, 8-12 Sep.

60. Costa, M.-J., D. Santos, R. Salgado, **V. Levizzani**, F. Pinelli, D. Bortoli, and A.M. Silva, 2009. Modelling of orographic precipitation over Portugal and effects on the surrounding regions. *EGU General Assembly*, Vienna, 19-24 Apr.

61. Kidd, C., **V. Levizzani**, R. R. Ferraro, E. Ebert, J. Janowiak, 2009: Satellite precipitation estimates for hydrological applications. *EGU General Assembly*, Vienna, 19-24 Apr.

62. Laviola, S., E. Cattani, F. Marra, **V. Levizzani**, and C. Kidd, 2009: On the rainfall retrieval with the 183-WSL algorithm over Northern Europe. *EGU General Assembly*, Vienna, 19-24 Apr.

63. van Oevelen, P. J., P. Arkin, R. Adler, and **V. Levizzani**, 2009: Global precipitation research in the framework of GEWEX: Future challenges and overview. *EGU General Assembly*, Vienna, 19-24 Apr.

64. Melani, S., M. Pasqui, A. Antonini, A. Ortolani, and **V. Levizzani**, 2009: The synergy of GEO-LEO satellite observations in analysing enhanced-V features on top of severe storms. *ECSS 2009*, Landshut, 12-16 Oct.

65. Laviola, S., and **V. Levizzani**, 2009: Using the 183-WSL high-frequency algorithm to infer rain rates from satellite and identify snow on the ground and aloft. *EO and Water Cycle Science: Towards a Water Cycle Multi-Mission Observation Strategy*, ESA-ESRIN, Frascati, 18-20 Nov.

66. Mugnai, A., S. Dietrich, **V. Levizzani**, D. Casella, E. Cattani, F. Di Paola, M. Formenton, S. Laviola, and P. Sanò, 2009: Precipitation retrieval from satellite within EUMETSAT's H-SAF. *EO and Water Cycle Science: Towards a Water Cycle Multi-Mission Observation Strategy*, ESA-ESRIN, Frascati, 18-20 Nov.

67. Mugnai, A., S. Dietrich, **V. Levizzani**, D. Casella, E. Cattani, F. Di Paola, M. Formenton, S. Laviola, and P. Sanò, 2010: Precipitation retrieval from satellite within H-SAF. *EUMETSAT 2nd H-SAF Workshop*, Zakopane, 16-18 Mar.

68. Conte, D., M. M. Miglietta, S. Laviola, and **V. Levizzani**, 2010: Comparison of LAPS analyses with EUMETSAT products for the characterization of cloud cover and instability indices in Mediterranean tropical-like cyclones. *4th HyMEX Workshop*, Bologna, 8-10 Jun.

69. Mugnai, A., S. Dietrich, V. Levizzani, D. Casella, E. Cattani, F. Di Paola, M. Formenton, S. Laviola, and P. Sanò, 2010: Precipitation retrieval from satellite within EUMETSAT's H-SAF. *4th HyMEX Workshop*, Bologna, 8-10 Jun.

70. Prodi, F., D. Capacci, D. Casella, E. Cattani, M. De Rosa, S. Dietrich, F. Di Paola, M. Formenton, S. Laviola, **V. Levizzani**, G.P. Marra, F.S. Marzano, L. Milani, A. Mugnai, F. Porcù, P. Sanò, M.L. Tampellini, 2010: Precipitation retrieval and nowcasting from satellite within project "Nowcasting-PROSA" of the Italian Space Agency. *IPC10, Int. Precipitation Conf.*, Coimbra, 23-25 Jun.

71. Mugnai, A., S. Dietrich, **V. Levizzani**, D. Casella, E. Cattani, F. Di Paola, M. Formenton, S. Laviola, and P. Sanò. 2010: Precipitation retrieval from satellite with EUMETSAT's H-SAF. *12th Plinius Conf. On Mediterranean Storms*, Corfu, 1-4- Sep.

72. Conte, D., M. M. Miglietta, S. Laviola, **V. Levizzani**, and S. Albers, 2010: Comparison of LAPS analyses with EUMETSAT products for the characterization of cloud cover and instability indices in Mediterranean tropical-like ciclone. *LAPS Users' Workshop*, Boulder, CO, 25-27 Oct.

73. Mugnai, A., **V. Levizzani**, S. Dietrich, D. Biron, D. Casella, E. Cattani, L. De Leonibus, F. Di Paola, M. Formenton, S. Laviola, D. Melfi, S. Puca, P. Sanò, F. Zauli, 2011: Precipitation products from the Hydrology SAF. *30th EUMETSAT STG Science Working Group Meeting*, Darmstadt, 14-15 Mar.

74. Laviola, S., E. Cattani, and **V. Levizzani**, 2011; Rainfall estimations and characterization of snow-covered terrains: Validation of the new version of the 183-WSL retrieval method. *EGU General Assembly*, Vienna, 3-8 Apr.

75. Mugnai, A., S. Dietrich, **V. Levizzani**, D. Casella, E. Cattani, F. Di Paola, M. Formenton, S. Laviola, P. Sanò, L. De Leonibus, F. Zauli, D. Biron, D. Melfi, F. Porcù, and S. Puca, 2011: Precipitation products from the Hydrology SAF. *13th EGU Plinius Conf. on Mediterranean Storms*, Savona, 7-9 Sep.

76. Lane, A., E. E. Ebert, P. Kucera, **V. Levizzani**, and F. J. Turk, 2011: Space-based precipitation datasets: Opening new frontiers in atmospheric and hydrologic applications. *2nd Asia/Oceania Meteorological Satellite Users' Conf.*, Tokyo, 6-9 Dec.

77. Purdom, F. J. W., P. Kucera, B. Lapeta, and **V. Levizzani**, 2011: The International Precipitation Working Group (IPWG). *2nd Asia/Oceania Meteorological Satellite Users' Conf.*, Tokyo, 6-9 Dec.

78. Westerhoff, R., **V. Levizzani**, F. Pappenberger, A. de Roo, R. D. Lange, W. Wagner, M. F. Bierkens, M. Ceran, A. Weerts, S. Sinclair, G. Miguez-Macho, E. Langius, and the GLOWASIS Team, 2011: FP7 GLOWASIS – A new collaborative project aimed at pre-validation of a GMES Global Water Scarcity Information Service. *AGU Fall Meeting*, 5-11 Dec.

79. Laviola, S., A. Moscatello, M. M. Miglietta, E. Cattani, and **V. Levizzani**, 2012: A satellite and numerical model combined approach to study extreme rain events over the Mediterranean basin. *EGU General Assembly*, Vienna, 22-27 Apr.

80. Thiemig, V., R. Rojas, **V. Levizzani**, and A. De Roo, 2012: Validation of satellite-based precipitation estimates over different African River Basins. *EGU General Assembly*, Vienna, 22-27 Apr.

81. Mugnai, A., D. Biron, D. Casella, E. Cattani, L. De Leonibus, S. Dietrich, S. Laviola, **V. Levizzani**, D. Melfi, G. Panegrossi, M. Petracca, F. Porcù, S. Puca, A. Rinollo, P. Sanò, and F. Zauli, 2012: Precipitation products from EUMETSAT's Satellite Application Facility on Support to Operational Hydrology and Water Management (H-SAF). *4th TRMM and GPM Int. Sci. Conf*, Tokyo, 13-16 Nov.

82. Cattani, E., S. Laviola, **V. Levizzani**, and R. Westerhoff, 2012: Satellite precipitation products in the frame of the GLOWASIS Project, a GMES Global Water Scarcity Information Service. *Conf. CeTeM-AIT*, Bari, 4-5 Dec.

83. Laviola, S., E. Cattani, and **V. Levizzani**, 2012: Application of microwave high frequencies for the evaluation of cloud properties and retrieval of precipitation rates. *Conf. CeTeM-AIT*, Bari, 4-5 Dec.

84. Cattani, E., C. Acquistapace, S. Laviola, and **V. Levizzani**, 2013: Satellite-based VIS/IR multispectral screening of precipitating clouds: A case study during summer at mid-latitudes. *EGU General Assembly*, Vienna, 7-12 Apr.

85. **Levizzani, V.**, S. Laviola, E. Cattani, and M. J. Costa, 2013: Extreme precipitation on the island of Madeira on 20 February 2010 as seen by satellite passive microwave sounders. *EGU General Assembly*, Vienna, 7-12 Apr.

86. Pasqui, M., S. Melani, F. Pasi, B. Gozzini, M. Gaetani, E. Di Giuseppe, and **V. Levizzani**, 2013: Retrospective analysis of synoptic favourable conditions for deep convective events in the Mediterranean Sea. *ECSS2013*, Helsinki, 3-7 Jun.

87. Miglietta, M. M., S. Laviola, D. Mastrangelo, A. Malvaldi, D. Conte, and **V. Levizzani**, 2013: Analysis of tropical-like cyclones over the Mediterranean Sea through a combined modeling and satellite approach. *EMS&ECAM Conf.*, Reading, 9-13 Sep.

88. Laviola, S., **V. Levizzani**, E. Cattani, and C. Kidd, 2013: Validation of the 183-WSL retrieval method using ground radar measurements. *6th Int. Workshop for GPM Ground Validation*, Roma, 5-7 Nov.

89. Brocca, L., L. Ciabatta, C. Massari, W. Dorigo, S. Hahn, S. Hasenauer, R. Kidd, T. Moramarco, **V. Levizzani**, and W. Wagner, 2014: Soil as a natural raingauge: Estimating rainfall from global satellite soil moisture data. *EGU General Assembly*, Vienna, 27 Apr.–2 May.

90. Cattani, E., A. Merino Suances, and **V. Levizzani**, 2014: Evaluation of six satellite rainfall products over the Great Horn of Africa. *EGU General Assembly*, Vienna, 27 Apr.–2 May.

91. Laviola, S., M. Valeri, M. M. Miglietta, and **V. Levizzani**, 2014: Multi-sensor approach for a satellite detection and characterization of Mediterranean hurricanes: A case study. *EGU General Assembly*, Vienna, 27 Apr.–2 May.

92. Merino, A., L. Lopez, J. L. Sanchez, E. Garcia-Ortega, E. Cattani, and **V. Levizzani**, 2014: Daytime identification of summer hailstorm cells from MSG data. *EGU General Assembly*, Vienna, 27 Apr.–2 May.

93. Brocca, L., L. Ciabatta, C. Massari, T. Moramarco, S. Hahn, S. Hasenauer, W. Dorigo, R. Kidd, W. Wagner, and **V. Levizzani**, 2014: Estimating rainfall from global satellite soil moisture data: Recent improvements and applications. *Satellite Soil Moisture Validation & Application Workshop*, Amsterdam, 10-11 Jul.

94. Cattani, E., A. Merino Suances, and **V. Levizzani**, 2014: Analysis of satellite monthly precipitation time series over East Africa. *7th Int. Scientific Conf. on the Global Water and Energy Cycle*, The Hague, 14-17 Jul.

95. Miglietta, M. M., G. Modugno, S. Laviola, and **V. Levizzani**, 2014: An intense tropical-like cyclone in the Western Mediterranean basin: Numerical simulations and satellite analysis. *14th EMS/10th ECAC*, Prague, 6-10 Oct.

96. Cattani, E., A. Merino Suances, C. Wenhaji, and **V. Levizzani**, 2014: Analysis of satellite monthly precipitation time series over East Africa. *7th Workshop IPWG*, Tsukuba, 17-21 Nov.

97. Gabriele, S., S. Laviola, **V. Levizzani**, M. M. Miglietta, L. Baldini, S. Dietrich, S. Federico, and G. P. Marra, 2014: Analysis and investigation of extreme rainfall events combining different data sources. *7th Workshop IPWG*, Tsukuba, 17-21 Nov.

98. Laviola, S., J. Beauchamp, R. Ferraro, and **V. Levizzani**, 2015: Two passive microwave prototype methods for hail detection. *EGU General Assembly*, Vienna, 12-17 Apr.

99. Barrera, D., S. Masuelli, S. Laviola, and **V. Levizzani**, 2015: Implementación y validación del algoritmo 183-WSL sobre el sur de Sudamérica, para la estimación satelital operative de precipitación. *CONGREMET 2015*, Mar del Plata, 26-29 May.

100. Miglietta, M. M., D. Cerrai, S. Laviola, E. Cattani, **V. Levizzani**, W. Kim, S. K. Park, C. Cassardo, A. Ricchi, and S. Carniel, 2015: Analysis of an intense tropical-like cyclone over the western Mediterranean Sea through a combined modeling and satellite approach. *ECSS2015*, Wiener Neustadt, 14-18 Sep.

101. Laviola, S., J. Beauchamp, R. Ferraro, and **V. Levizzani**, 2015: Passive microwave approaches to hailstorm detection. *2015 EUMETSAT Meteorological Satellite Conf.*, Toulouse, 21-25 Sep.

102. Cattani, E., C. Wenhaji Ndomeni, A. Merino, and **V. Levizzani**, 2015: Characterization of the precipitation over East Africa during last decades. *Earth Observation for Water Cycle Science*, Frascati, 20-23 Oct.

103. Marra, A. C., D. Casella, P. Sanò, G. Panegrossi, M. Petracca, S. Dietrich, and **V. Levizzani**, 2015: Analysis and comparison of global precipitation datasets with gridded products from passive microwave retrieval algorithms in the GPM era. *Earth Observation for Water Cycle Science*, Frascati, 20-23 Oct.

104. Derin, Y., E. Anagnostou, J. Kalogiros, M. Anagnostou, A. C. Marra, G. Panegrossi, **V. Levizzani**, E. Cattani, D. Casella, and P. Sanò, 2015: Passive microwave rainfall error analysis using high-resolution X-band dual-polarization radar observations in complex terrain. *AGU Fall Meeting*, S. Francisco, 14-18 Dec.

105. Laviola, S., J. Beauchamp, R. Ferraro, and **V. Levizzani**, 2016: Prototype methods for hail detection based on passive microwave high frequencies. *14th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment*, *MicroRad 2016*, Espoo, 11-14 Apr.

106. Cattani, E., C. Wenhaji Ndomeni, A. Merino, and **V. Levizzani**, 2016: Analysis of satellite precipitation over East Africa during the last decades. *EGU General Assembly*, Vienna, 17-22 Apr.

107. Laviola, S., M. M. Miglietta, D. Cerrai, E. Cattani, and **V. Levizzani**, 2016: Potential vorticity patterns in Mediterranean “hurricanes”. *EGU General Assembly*, Vienna, 17-22 Apr.

108. Beck, H. E., A. I. J. M. van Dijk, **V. Levizzani**, J. Schellekens, and A. de Roo, 2016: MSWEP: Multi-source weighted-ensemble precipitation. *EGU General Assembly*, Vienna, 17-22 Apr.

109. Beck, H. E., A. I. J. M. van Dijk, **V. Levizzani**, J. Schellekens, D. Miralles, B. Martens, and A. de Roo, 2016: MSWEP: Multi-source weighted-ensemble precipitation. *8th IPWG & 5th IWSSM Joint Workshop*, Bologna, 3-7 Oct.

110. Cattani, E., A. Merino, C. Wenhaji Ndomeni, J. A. Guijarro, and **V. Levizzani**, 2016: East Africa precipitation during recent decades. *8th IPWG & 5th IWSSM Joint Workshop*, Bologna, 3-7 Oct.

111. Kidd, C., E. E: Ebert, J. Janowiak, F. J. Turk, D. Vila, M. Sapiano, S. Shige, E. de Coning, R. Ferraro, **V. Levizzani**, and P. Arkin, 2016: The IPWG intercomparison effort. *8th IPWG & 5th IWSSM Joint Workshop*, Bologna, 3-7 Oct.

112. Wenhaji Ndomeni, C., E. Cattani, A. Merino, and **V. Levizzani**, 2016: An observational study of the variability of East Africa rainfall linked to sea surface temperature and soil moisture. *8th IPWG & 5th IWSSM Joint Workshop*, Bologna, 3-7 Oct.

113. Beck, H. E., A. de Roo, F. Pappenberger, A. I. M. Van Dijk, **V. Levizzani**, G. J. Huffman, and E. F. Wood, 2016: 3-hourly 0.25° global precipitation by merging gauge, satellite, and weather model data. *AGU Fall Meeting*, S. Francisco, 12-16 Dec.

114. Beck, H. E., A. I. J. M. van Dijk, **V. Levizzani**, J. Schellekens, D. G. Miralles, B. Martens, and A. de Roo, 2017: 3-hourly 0.1° fully global precipitation (1979–present) by merging gauge, satellite, and weather model data. *EGU General Assembly*, Vienna, 23-28 Apr.

115. Milani, L., M. S. Kulie, G. Skofronick-Jackson, S. J. Munchak, N. B. Wood, and **V. Levizzani**, 2017: Global snowfall: A combined CloudSat, GPM, and reanalysis perspective. *EGU General Assembly*, Vienna, 23-28 Apr.

116. Beck, H. E., N. Vergopolan, M. Pan, **V. Levizzani**, A. I. J. M. van Dijk, G. P. Weedon, L. Brocca, F. Pappenberger, G. J. Huffman, and E. F. Wood, 2018: Global-scale evaluation of 22 precipitation datasets using gauge observations and hydrological modeling. *EGU General Assembly*, Vienna, 8-13 Apr.

117. Cattani, E., A. Merino, and **V. Levizzani**, 2018: Precipitation trends in East Africa from an ensemble of IR-based satellite products. *9th IPWG Workshop*, Seoul, 5-9 Nov.

118. Kidd, C., S. Shige, D. Vila, B. Maseko, R. R. Ferraro, V. Singh, A. K. Mitra, A. Kumar, S. K. Mukherjee, M. Sapiano, E. de Coning, **V. Levizzani**, E. E. Ebert, J. Janowiak, F. J. Turk, and P. A. Arkin, 2018: Intercomparisons over Europe and beyond. *9th IPWG Workshop*, Seoul, 5-9 Nov.

NATIONAL CONFERENCES AND ARTICLES ON NATIONAL JOURNALS

1. Prodi, F., **V. Levizzani,** and G. Santachiara, 1983: Rimozione di particelle in nubi miste: modellistica dei meccanismi ed esperimenti di laboratorio*. Congr. Istitutivo del Gruppo Nazionale di Fisica dell'Atmosfera e dell'Oceano del C.N.R.*, L'Aquila, 24-28 Jan.
2. Gambarelli, A., **V. Levizzani**, D. Bertolani Marchetti, and F. Prodi, 1985: Misure in laboratorio della velocitá terminale di caduta di granuli pollinici. *LXXXI Congr. Societá Botanica Italiana*, Torino, 8-10 Oct., *Giornale Botanico Italiano*, 119, n.1-2 Supplemento 2, 141-142.
3. **Levizzani, V.**, M. Pioppi, and F. Prodi, 1986: Studio dell'aerosol atmosferico mediante la rete nazionale di fotometri solari multispettrali FISBAT. *III Congr. Gruppo Nazionale di Fisica dell'Atmosfera e dell'Oceano del C.N.R.*, Roma, 22-24 Sep.
4. **Levizzani, V.**, and F. Prodi, 1986: Effetti atmosferici dell'eruzione di El Chichon osservati con fotometro solare multispettrale (1982-1985). *LXXII Congr. Naz. Soc. Italiana di Fisica*, Padova, 2-7 Oct.
5. Prodi, F., and **V. Levizzani,** 1988: Previsione meteorologica con elaborazione coordinata di immagini radar e satellite (Nowcasting). *Workshop su "Metodologie e tecnologie avanzate per lo studio dell'ambiente atmosferico e dell'interfaccia aria-mare"*, Como, 14-15 Mar., *Boll. Geofisico*, **I/90**, 51-68.
6. Carlá, R., **V. Levizzani,** and F. Prodi, 1989: Stima delle precipitazioni da satellite: studio di un evento di piena del fiume Arno. *Acqua-Aria*, **10**, 1145-1153.
7. **Levizzani, V.**, F. Porcú, and F. Prodi, 1990: Stima di precipitazioni e classificazione delle nubi da satellite meteorologico. *MATREP-Monitoraggio dell'Attivitá Temporalesca nella Regione Padana, Primo Documento Tecnico-Scientifico sui Risultati della Campagna*, ERSA-ENEL, 53-55.
8. **Levizzani V**., F. Porcú, e F. Prodi, 1990: Radar e satelliti meteorologici nello studio dei sistemi precipitanti. *LXXVI Congr. Naz. Soc. Italiana di Fisica*, Trento, 8-13 Oct.
9. Porcú, F., **V. Levizzani,** and F. Prodi, 1990: Sviluppo di tecniche di classificazione delle nubi e stima delle precipitazioni per il nowcasting. *LXXVI Congr. Naz. Soc. Italiana di Fisica*, Trento, 8-13 Oct.
10. **Levizzani, V.**, F. Porcú, and F. Prodi, 1990: Sistema per processamento dati meteorologici e nowcasting. *Workshop P.F. "Sistemi Informatici e Calcolo Parallelo", Sottoprogetto 2, Linea di Ricerca Coordinata "Ambienti Integrati e Distribuiti per il Trattamento di Segnali ed Immagini"*, Pisa, 25 Sep.
11. Prodi, F., and **V. Levizzani,** 1991: Radarmeteorologia e satelliti meteorologici nel Nowcasting. *Atti del Convegno "L'impiego del radar in meteorologia e agrometeorologia*", S. Nanni Ed., RER, ERSA-Servizio Meteor.Reg., Bologna, 17-18 Oct., 1989,183-201.
12. **Levizzani, V.**, F. Porcú, and F. Prodi, 1991: Rappresentazione ed uso dei dati meteorologici multisensore nel Nowcasting. *Atti del Conv.GNFAO sul Progetto Speciale del Comitato Fisica del C.N.R. "Sviluppo di Tecniche Avanzate per l'Utilizzo di Osservazioni e Previsioni Meteorologiche"*, A. Lavagnini Ed., Roma, 31 Oct., 259-280.
13. Prodi, F., **V. Levizzani,** and F. Porcú, 1992: Prospettive di una previsione meteorologica a breve termine (nowcasting). *Atti Conv. "SEP Pollution-Cittá e Ambiente"*, Padova, 29 Mar.-2 Apr., 315-328.
14. **Levizzani, V.**, F. Porcú, and F. Prodi, 1992: METEOPIX: elaborazione e visualizzazione dei dati meteorologici per il nowcasting. *P.F. Sistemi Informatici e Calcolo Parallelo-Sottoprogetto 2/Processori Dedicati, Workshop di Sottoprogetto*, Pisa, 18 Dec.
15. **Levizzani, V.**, F. Prodi, and F. Porcú, 1993: Studio dei sistemi precipitanti con metodi di nowcasting. *X Congr.GNFAO "Ruolo della Fisica dell'Atmosfera e dell'Oceano negli Studi Ambientali"*, S. Terenzo, 3-5 Nov., *Boll. Geofisico*, **16**, 205-209.
16. Prodi, F., E. Smargiassi, F. Porcú, and **V. Levizzani,** 1993: La modellistica numerica dei processi di formazione di ghiaccio atmosferico per accretion. *X Congr. GNFAO "Ruolo della Fisica*

dell'Atmosfera e dell'Oceano negli Studi Ambientali", S. Terenzo, 3-5 Nov., *Boll. Geofisico*, **16**, 225-229.

17. **Levizzani, V.**, M. Setvák, R. M. Rabin, C. A. Doswell III, and P. K. Wang, 1996: Osservazioni multispettrali di temporali convettivi mediante GOES-8 e NOAA/AVHRR. *LXXXII Congr. Naz. Soc. Italiana di Fisica*, Verona, 23-28 Sep.
18. **Levizzani, V.**, T. Georgiadis, and C. Tomasi, 1996: Misure e modelli radiativi a Baia Terra Nova (Antartide). *LXXXII Congr. Naz. Soc. Italiana di Fisica*, Verona, 23-28 Sep.
19. Amorati, R., **V. Levizzani**, P. P. Alberoni, S. Nanni, and R. Rizzi, 1997: Analisi radar e satellite di precipitazione convettiva nel Nord Italia. *LXXXIII Congr. Naz. Soc. Italiana di Fisica,* Como, 27-31 Oct.
20. Nardino, M., T. Georgiadis, **V. Levizzani**, A. Orsini, R. Pirazzini, R. Sozzi, S. Argentini, and G. Dargaud, 1998: Parameterizzazione della turbolenza locale a Dome Concordia. *LXXXIV Congr. Naz. Soc. Italiana di Fisica,* Salerno, 28 Sep.-2 Oct.
21. Pirazzini, R., T. Georgiadis, **V. Levizzani**, M. Nardino, A. Orsini, R. Sozzi, S. Argentini, and G. Dargaud, 1998: Studio del bilancio di radiazione a Dome Concordia. *LXXXIV Congr. Naz. Soc. Italiana di Fisica,* Salerno, 28 Sep.-2 Oct.
22. Orsini, A., T. Georgiadis, **V. Levizzani**, M. Nardino, R. Pirazzini, C. Tomasi, and G. Trivellone, 1998: Parametrizzazioni della radiazione solare alla superficie in un sito antartico. *LXXXIV Congr. Naz. Soc. Italiana di Fisica,* Salerno, 28 Sep.-2 Oct.
23. Pirazzini, R., U. Bonafè, P. Calzolari, **V. Levizzani**, M. Nardino, A. Orsini, F. Ravegnani, G. Trivellone, and T. Georgiadis, 1999: Studio del bilancio radiativo superficiale nel sito artico di Ny-Alesund, Svalbard. *LXXXV Congr. Naz. Soc. Italiana di Fisica*, Pavia, 20-24 Sep.
24. Pirazzini, R., S. Argentini, F. Calzolari, **V. Levizzani**, M. Nardino, A. Orsini, G. Trivellone, and T. Georgiadis, 2000: Study of the cloud radiative forcing at two Antarctic sites: Reeves Névé and Dome Concordia. *VIII Workshop on Antarctic Atmosphere*, Bologna, 20-22 Oct., SIF, 151-162.
25. Sozzi, R., M. Nardino, T. Georgiadis, F. Rossi, and **V. Levizzani**, 2001: Parametrizzazione dell'altezza di rimescolamento di una piccola isola con un modello semplificato. *Boll. Geofisico*, Anno **XXIV**, No. 3-4, 55-65.
26. Cervino, M., M. J. Costa, F. Torricella, E. Cattani, and **V. Levizzani**, 2001: Nuovi sensori satellitari per la meteorologia ed il clima: studio dell'aerosol atmosferico. In: *Global Change – Studi delle Variazioni del Clima, degli Ecosistemi e delle Dimensioni Umane*, R. Frassetto, Ed., CNR, Rome, 131.
27. **Levizzani, V**., and all EURAINSAT scientists, 2001: Nuovi sensori satellitari per la meteorologia ed il clima: stima delle precipitazioni. In: *Global Change – Studi delle Variazioni del Clima, degli Ecosistemi e delle Dimensioni Umane*, R. Frassetto, Ed., CNR, Rome, 333-334.
28. Cattani, E., S. Melani, G. L. Mercoli, **V. Levizzani**, and M. Cervino, 2002: Analisi di sensibilità delle misure del sensore SEVIRI alle caratteristiche ottiche e microfisiche delle nubi d'acqua e di ghiaccio. *LXXXVIII Congresso Nazionale Soc. Italiana di Fisica*, Alghero, 26 Sep.-1 Oct.
29. Torricella, F., **V. Levizzani**, E. Cattani, and V. Poli, 2004: Utilizzo di dati multispettrali da sensori polari e geostazionari per la stima delle precipitazioni. Convegno Scientifico "*Conservazione del Suolo, 1974-2004, trent'anni di ricerca scientifica*", GNDCI, Torino, 7-8 Jun.
30. **Levizzani, V.**, 2005: Strumenti per il monitoraggio e la previsione degli eventi convettivi. Workshop "*Fenomeni meteorologici intensi e qualità del servizio elettrico*", CESI, Milano, 9 Jun.
31. **Levizzani, V.**, 2006: Il ciclo dell'acqua e l'atmosfera: stato delle conoscenze e problemi aperti. *Boll. Geofisico*, **Anno XXIX, No. 1-4**, 69-83.
32. **Levizzani, V.**, M. Masotti, R. Ginnetti, S. Laviola, F. Pinelli, M. Pasqui, S, Melani, A. G. Laing, and R. E. Carbone, 2007: Variabilità delle nubi nella stagione calda sull'Europa ed il Mediterraneo. *Conv. Naz. di Fisica della Terra Fluida e Problematiche Affini*, Ischia, 11-15 Jun.

33. Torricella, F., E. Cattani, and **V. Levizzani**, 2007: Delineazione di aree di precipitazione con tecniche multi-spettrali basate su dati da satellite. *Conv. Naz. di Fisica della Terra Fluida e Problematiche Affini*, Ischia, 11-15 Jun.

34. Laviola, S., and **V. Levizzani**, 2008: Misura della precipitazione a 183 GHz: alcuni casi studio. *Telerilevamento a microonde. Sistemi, propagazione, algoritmi: dalle tecnologie alle applicazioni*. Roma, 22-23 Oct.

35. Laviola, S., S. Gabriele, M. M. Miglietta, E. Cattani, and **V. Levizzani**, 2012: Meteo-hydrological analysis of intense flash-flood events over Southern Italy. *86° Cong. Soc. Geologica Italiana*, Arcavacata di Rende, 18-20 Sep., *Rendiconti online Società Geologica Italiana*, **21**, 413-415.

36. Laviola, S., **V. Levizzani**, E. Cattani, and M. M. Miglietta, 2012: Studio di eventi estremi sul Mediterraneo con sensori satellitari e col modello numerico WRF. *Giornata di Studio "Previsione e Prevenzione di Eventi Idrologici Estremi"*, Salerno, 6 Jul.

37. Miglietta, M. M., S. Laviola, and **V. Levizzani**, 2013: Tropical-like cyclones in the Mediterranean Sea: From the case study over Salento to a combined satellite-modelling approach. *1st Conf. Italian Soc. for Climate Sci*., Lecce, 23-24 Sept, ISBN: 978-88-97666-08-0.

38. Laviola, S., E. Cattani, **V. Levizzani**, and G. P. Marra, 2016: Classificazione di nubi grandinigene col metodo Microwave Cloud Classification (MWCC). VIII Conv. AIT, Palermo, 22-23 Jun.

39. **Levizzani, V**., 2016: Meteorologia e clima: Il ciclo dell'acqua. *Conv. L'Italia Sostenibile – Idee e Azioni per il Futuro*, Bologna, 20-21 May.

40. Cattani, E., A. Merino, and **V. Levizzani**, 2018: Rainfall variability and trends over East Africa. *1° Cong. Naz. AISAM*, Bologna, 10-13 Sep.

41. Laviola, S., J. Beauchamp, R. Ferraro, and **V. Levizzani**, 2018: Cloud type classification and solid precipitation retrieval from satellite microwave sensors. *1° Cong. Naz. AISAM*, Bologna, 10-13 Sep.

42. Fratianni, S., F. Acquaotta, P. Allamano, V. Andreoli, S. Barbero, R. Bonanno, M. Cadauro, D. Canone, C. Cassardo, E. Cattani, P. Claps, E. Cremonese, S. Ferrarese, S. Ferraris, S. Gabellani, D. Garzena, F. Laio, S. Laviola, U. Morra Di Cella, E. Palazzi, R. Pelosini, G. Piazzi, P. Pogliotti, D. Pognant, M. Previati, A. Provenzale, S. Ratto, R. Rudari, A. Salandini, S. Terzago5, J. von Hardenberg, S. Zecchetto, and **V. Levizzani**, 2018: The NextSnow Project: A new dataset to study the climate change in the Alps. *SISC 6th Annual Conf*., 17-19 Oct.

REPORTS

1. Tomasi, C., F. Prodi, and **V. Levizzani,** 1986: *Atti del Workshop "Intercalibrazione di fotometri solari multispettrali"*, Passo Pordoi, 16-21 Sep. 1985, Rep. Ist. FISBAT-C.N.R., Bologna, 149 pp.
2. Prodi, F., **V. Levizzani,** and F. Porcú, 1990: A system for meteorological data processing and nowcasting*. P.F. "Sistemi Informatici e Calcolo Parallelo", Sottoprogetto 2 "Processori Dedicati", Rep. No. R/2/1*, 78 pp.
3. **Levizzani, V.**, F. Porcú, and F. Prodi, 1994: Rapporto di Evento. Savona-22 settembre 1992. Genova-27 settembre 1992. Parte I. Caratterizzazione meteorologica: Analisi alla mesoscala e stima delle precipitazioni da satellite geostazionario. *Gruppo Nazionale per la Difesa dalle Catastrofi Idrogeologiche-CNR*. *Dipartimento della Protezione Civile*. 3-37.
4. Mugnai, A., F. S. Marzano, **V. Levizzani**, F. Porcú, and F. Prodi, 1994: Rapporto di Evento. Savona-22.settembre.1992. Genova-27.settembre.1992. Parte II. Stima comparata delle precipitazioni da satellite geostazionario e polare. *Gruppo Nazionale per la Difesa dalle Catastrofi Idrogeologiche-CNR*. *Dipartimento della Protezione Civile*. 39-61.
5. **Levizzani, V.**, 1998: METEOSAT rapid scan during MAP-SOP. *MAP Newsletter*, **8**, 17-19.
6. Cervino, M., and **V. Levizzani**, 1998: METEOSAT VIS-IR image classification: Cloud detection for GOME declouding. *GASP Project Report*, IMGA/TPZ Contract, 19 pp.
7. Bougeault, P., P. Binder, D. Anfossi, S. Anquetin, L. Armi, B. Bacchi, R. Banta, R. Benoit, A. Buzzi, A. Broad, J. L. Caccia, C. Cacciamani, M. Colacino, H. C. Davies, C. Davies, J. Doyle, A. Dornbrack, M. Dorninger, D. Durran, S. Emeis, R. Fehlman, C. Frei, D. Fritts, M. Georgelin, V. Grubisic, D. Heimann, P. Hereil, K. P. Hoinka, R. Houze, C. James, A. Jansa, M. Juckes, J. Kuettner, H. Lang, M. Leutbecher, **V. Levizzani**, A. Massacand, G. Mayr, F. Mesinger, O. Morgenstern, T. Paccagnella, E. Piervitali, G. Poulos, C. Quadri, R. Ranzi, E. Richard, M. Rotach, F. Roux, S. Rutledge, B. Schaedler, C. Schaer, H. J. Schiesser, G. Shutts, R. K. Smith, R. B. Smith, R. Steinacker, M. Steiner, J. van Belen, H. Volkert, H. Wanner, J. Wilson, and V. Wirth, 1998: *MAP - Mesoscale Alpine Programme - The Science Plan*. MAP Program Office, 64 pp.
8. Nardino, M., R. Pirazzini, T. Georgiadis, **V. Levizzani,** T. Vihma, B. Cheng, J. Launiainen, F. Calzolari, F. Ravegnani, G. Trivellone, and U. Bonafè, 2000: *Ground-based radiation and turbulence measurements at Ny-Ålesund (Svalbard): First data analysis and modelling*. Polar Atmospheres, PAS-1, Polarnet Sci. Tech. Report Series, 92 pp.
9. Gallino, S., M. Cervino, and **V. Levizzani**, 2001: Verification of Lokal-Modell cloudiness at CMIRL (Genova). *COSMO Newsletter*, **1**, 64-68.
10. Golding. B. W., S. Senesi, K. A. Browning, B. Bizzarri, W. Benesch, D. Rosenfeld, **V. Levizzani**, H. P. Rösli, U. Platt, T. E. Nordeng, J. T. Carmona, P. Ambrosetti, P. Pagano, and M. Kurz, 2001: EUMETSAT position paper on observation requirements for nowcasting and very short range forecasting in 2015-2025. EUMETSAT, Darmstadt, 62 pp.
11. **Levizzani, V.**, R. Amorati, and F. Meneguzzo, 2002: A review of satellite-based rainfall estimation methods. *European Commission Project MUSIC Report* (EVK1-CT-2000-00058), 66 pp.
12. European Earth Observation Research and Applications on Environment. EO-Workshops Series, Ed. By P. Bauer, S. Boxall, D. Briggs, T. Businaro, R. Casale, S. Condé, M. Cornaert, J. Hyyppa, R. Päivinen, M. Schouppe, C. Simmer, N. Soulakellis, and L. Wald, Brussels, 11-13 Sep., 192 pp.
13. **Levizzani, V.,** 2003: Precipitation dynamics. In: *Mission objectives and user requirements for the Mediterranean region implying the use of a geostationary satellite. Interim Report*. B. Bizzarri Ed., Contract ASI-MeditRain, 52-56.
14. **Levizzani, V.**, and A. Gruber, 2003: The International Precipitation Working Group: opportunities and perspectives. In: *Rep. of the GEWEX Global Precipitation Climatology Project (GPCP) Workshop on Precipitation Analysis*. WCRP Informal Report No. 11/2003, 100-103.

15. Torricella, F., **V. Levizzani**, A. Ortolani, S. Melani, and A. Antonini, 2004: The Rapid Update satellite rainfall estimation method: operational setup documentation. *European Commission Project MUSIC Report* (EVK1-CT-2000-00058), 49 pp.
16. Cattani, E., S. Melani, **V. Levizzani**, and M. J. Costa, 2004: Sensitivity analysis of the EURAINSAT multispectral retrieval algorithm of cloud properties. *EURAINSAT Tech. Rep.*, **3**, 17 pp.
17. Alberoni, P. P., and **V. Levizzani**, 2004: The Local Analysis and Prediction System (LAPS) implementation in Bologna: advanced mesoscale analysis techniques. *EURAINSAT Tech. Rep.*, 4, 19 pp.
18. International Ground Validation Research Programme of Global Precipitation Measurement (GPM) Mission. *Rep. of the 1st GPM GV Requirements Workshop*, 4-7 Nov. Abingdon, UK, 102 pp.
19. Kakar, R., J. M. Shepherd, E. A. Smith, R. Adler, R. Austin, A. Barros, P. Bauer, R. Bennartz, S. Bidwell, R. Bras, J. Durning,, J. Entin, B. Fekete, R. Ferraro, M. Flaming, E. Foufoula-Georgiou, A. Hou, G. Huffman, G. Skofronick Jackson, P. Joe, C. Kidd, M.-J. Kim, C. Kummerow, K.-S. Kuo, W. Lau, D. Lettenmaier, **V. Levizzani**, G. Liu, A. Mugnai, W. Olson, C. Peters-Lidard, W. Peterson, J. Shuie, S. Sorooshian, D. Staelin, G. Stephens, G. Tripoli, F. J. Turk, C. Vörösmarty, J. Weinman, T. Wiheit, E. Wood, S. Yang, and E. Zipser, 2005: Global Precipitation Measurement (GPM) or Global Rainfall Measurement (GRM): Case for Including High Frequency Channels on GMI. *NASA-GSFC White Paper on GPM*, 7 pp.
20. Dietrich S., C. Adamo, **V. Levizzani**, A. Mugnai, F. Porcù, and F. Prodi, 2005: Utilization of remotely sensed data for rainfall estimation. Use and availability of meteorological information from different sources as input in agrometeorological models. *COST Action 718 Meteorological Applications for Agricolture,* 227-259.
21. Gruber, A., and **V. Levizzani**, 2006: Assessment shows no trend in global precipitation. *GEWEX Bull.*, **16(4)**, 6-8.
22. Gruber, A., and **V. Levizzani**, Eds., 2008: Assessment of global precipitation products. *WCRP Series Report No. 128 and WMO TD-No. 1430*, 55 pp.
23. De Bellis, A., V. Pavan, and **V. Levizzani**, 2010: Climatologia e variabilità interannuale della neve sull'Appennino Emiliano-Romagnolo. *Quaderno Tecnico ARPA-SIMC*, **19/2010**, 117 pp.
24. Pappenberger, F., G. Miguez-Macho, W. Dorigo, T. Melzer, D. Chung, R. de Lange, M. Crone, E. Cattani, S. Laviola, **V. Levizzani**, H. Winsemius, R. van Beek, A. Weerts, 2011: Report on improved hydrological parameters version 1. *Rep. GLOWASIS D30.3*, European Commission, FP7-SPACE-2010.1.1-04, GA No. 262255, 98 pp.
25. Pappenberger, F., E. Dutra, G. Miguez-Macho, W. Dorigo, T. Melzer, D. Chung, R. de Lange, M. Crone, E. Cattani, S. Laviola, **V. Levizzani**, H. Winsemius, R. van Beek, and A. Weerts, 2012: Report on improved hydrological parameters version 2. *Rep. GLOWASIS D30.5*, European Commission, FP7-SPACE-2010.1.1-04, GA No. 262255, 102 pp.
26. **Levizzani, V.**, W. Dorigo, F. Aires, E. Cattani, C. Claud, R. de Jeu, S. Groom, M. Jindrova, S. Laviola, F. S. Marzano, I. Melotte, G. Miguez Macho, G. Panegrossi, R. Westerhoff, and H. Winsemius, 2014: Earth observations dataset inventory. *Rep. eartH2Observe D3.1*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 23 pp.
27. **Levizzani, V.**, W. Dorigo, F. Aires, E. N. Anagnostou, N. Bartsotas, L. Brodsky, E. Cattani, D. Chung, C. Claud, R. de Jeu, J. Detry, M. Grant, S. Groom, M. Jindrova, L. Kucera, M. Lambotte, S. Laviola, A. C. Marra, G. P. Marra, F. S. Marzano, I. Melotte, T. Melzer, G. Miguez Macho, M. Montopoli, S. Mori, E. Nikolopoulos, G. Panegrossi, C. Prigent, J.-F. Rysman, J. Schellekens, S. Simis, P. J. Ward, C. Wenhaji Ndomeni, R. Westerhoff, and H. Winsemius, 2015: Report on EO datasets. *Rep. eartH2Observe D3.2*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 40 pp.
28. **Levizzani, V.**, W. Dorigo, B. Calton, E. Cattani, C. Claud, R. de Jeu, J. Detry, S. Groom, M. Jindrova, M. Lambotte, S. Laviola, A. C. Marra, G. P. Marra, I. Melotte, M. Montopoli, G. Panegrossi, J.-F. Rysman, J. Schellekens, P. J. Ward, C. Wenhaji Ndomeni, R. Westerhoff, and

H. Winsemius, 2015: Release 1 of EO datasets. *Rep. eartH2Observe D3.3*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 13 pp.

29. **Levizzani, V.**, E. N. Anagnostou, G. Balsamo, E. Blyth, J.-C. Calvet, E. Cattani, W. Dorigo, E. Dutra, J. Schellekens, and G. Steerk, 2016: Report on the Joint WORKSHOP OF WP3, 4, 5 and 6. *Rep. eartH2Observe D3.4*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 21 pp.

30. **Levizzani, V.**, W. Dorigo, F. Aires, E. N. Anagnostou, N. Bartsotas, L. Brodsky, E. Cattani, D. Chung, C. Claud, R. de Jeu, J. Detry, M. Grant, S. Groom, M. Jindrova, L. Kucera, M. Lambotte, S. Laviola, A. C. Marra, G. P. Marra, F. S. Marzano, I. Melotte, T. Melzer, G. Miguez Macho, M. Montopoli, S. Mori, E. Nikolopoulos, G. Panegrossi, C. Prigent, J.-F. Rysman, J. Schellekens, S. Simis, P. J. Ward, C. Wenhaji Ndomeni, R. Westerhoff, and H. Winsemius, 2016: Final report on EO datasets. *Rep. eartH2Observe D3.5*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 43 pp.

31. Dorigo, W., **Levizzani, V.**, B. Calton, E. Cattani, C. Claud, R. de Jeu, J. Detry, S. Groom, M. Jindrova, M. Lambotte, S. Laviola, A. C. Marra, G. P. Marra, I. Melotte, M. Montopoli, G. Panegrossi, J.-F. Rysman, J. Schellekens, P. J. Ward, C. Wenhaji Ndomeni, R. Westerhoff, and H. Winsemius, 2016: Release 1 of EO datasets. *Rep. eartH2Observe D3.6*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 13 pp.

32. **Levizzani, V.**, W. Dorigo, F. Aires, E. N. Anagnostou, N. Bartsotas, L. Brodsky, B. E. Cattani, D. Chung, C. Claud, R. de Jeu, J. Detry, A. Gevaerts, M. Grant, S. Groom, M. Jindrova, L. Kucera, M. Lambotte, S. Laviola, A. C. Marra, G. P. Marra, F. S. Marzano, T. Melzer, G. Miguez-Macho, M. Montopoli, S. Mori, E. Nikolopoulos, G. Panegrossi, C. Prigent, J.-F. Rysman, J. Schellekens, S. Simis, T. Veldkamp, P. J. Ward, C. Wenhaji Ndomeni, R. Westerhoff, and H. Winsemius, 2017: Release 3 of Finalized and Improved EO datasets. *Rep. eartH2Observe D3.7*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 50 pp.

33. **Levizzani, V.**, W. Dorigo, F. Aires, E. N. Anagnostou, N. Bartsotas, L. Brodsky, B. E. Cattani, D. Chung, C. Claud, R. de Jeu, J. Detry, A. Gevaerts, M. Grant, S. Groom, M. Jindrova, L. Kucera, M. Lambotte, S. Laviola, A. C. Marra, G. P. Marra, F. S. Marzano, T. Melzer, G. Miguez-Macho, M. Montopoli, S. Mori, E. Nikolopoulos, G. Panegrossi, C. Prigent, J.-F. Rysman, J. Schellekens, S. Simis, T. Veldkamp, P. J. Ward, C. Wenhaji Ndomeni, R. Westerhoff, and H. Winsemius, 2017: Publications. *Rep. eartH2Observe D3.8*, European Commission, FP7-ENV-2013, Grant Agreement No. 603608, 279 pp.

CONTRIBUTIONS TO BOOKS

1. Prodi, F., and **V. Levizzani,** 1984: Measurements of atmospheric turbidity by two sun-photometers at two elevations to evaluate the optical characteristics of the interposed layer. In: *IRS'84: Current Problems in Atmospheric Radiation*, G. Fiocco Ed., A. Deepak Publ., Hampton, VA, 58-61.
2. **Levizzani, V.,** and F. Prodi, 1984: Atmospheric effects of the 1982 El Chichón volcanic eruption observed by multiwavelength sun-photometer at a mountain station in Italy. In: *IRS'84: Current Problems in Atmospheric Radiation*, G. Fiocco Ed., A. Deepak Publ., Hampton, VA, 136-139.
3. **Levizzani, V.**, A. Mugnai, F. Porcú, F. Prodi, E. A. Smith, and X.-W. Xiang, 1992: Comparison of rainfall estimation using SSM/I and METEOSAT measurements. In: *IRS'92: Current Problems in Atmospheric Radiation*, S. Keevallik and O. Kärner Eds., A. Deepak Publ., Hampton, VA, 65-68.
4. Porcú, F., **V. Levizzani,** and F. Prodi, 1992: Cloud classification based on METEOSAT visible, infrared and water vapor imagery. In*: IRS'92: Current Problems in Atmospheric Radiation*, S. Keevallik and O. Kärner Eds., A. Deepak Publ., Hampton, VA, 319-322.
5. Prodi, F., **V. Levizzani,** and F. Porcú, 1994: Nowcasting: Una previsione meteorologica a breve termine con rete di radar e satelliti meteorologici. In: *Le Scienze della Terra*, a cura di R. Cassinis, Rizzoli Corriere della Sera-Libri & Grandi Opere, in pubblicazione.
6. **Levizzani, V.**, T. Georgiadis, and C. Tomasi, 1997: Radiation and surface fluxes measurements at Terra Nova Bay (Antarctica). In: *IRS'96: Current Problems in Atmospheric Radiation*, W. L. Smith and K. Stamnes Eds., A. Deepak Publ., Hampton, VA, 62-65.
7. **Levizzani, V.,** M. Setvák, R. M. Rabin, C. A. Doswell III, and P. K. Wang, 1997: Ice crystal plumes on top of convective storms. In: *IRS'96: Current Problems in Atmospheric Radiation*, W. L. Smith and K. Stamnes Eds., A. Deepak Publ., Hampton, VA, 175-178.
8. **Levizzani, V.**, 1998: I temporali: la natura mostra la sua forza nei cieli. In: *Dall'Antartide al Cosmo, Porte Aperte sulla Ricerca*, Bologna 23-29 Marzo 1998, B. Gualandi, L. Casoni e S. Parisini (Eds.), Consiglio Nazionale delle Ricerche, Area della Ricerca di Bologna, Bologna.
9. **Levizzani, V.**, 1998: Microphysics of atmospheric transport. In: *Methods in Aerobiology*, P. Mandrioli, P. Comtois and V. Levizzani (Eds.), Pitagora Ed., 13-46.
10. **Levizzani, V.**, T. Georgiadis, and S. Isard, 1998: Meteorological aspects of the aerobiological pathway. In: *Methods in Aerobiology*, P. Mandrioli, P. Comtois and V. Levizzani (Eds.), Pitagora Ed., 113-184.
11. **Levizzani, V.**, 2000: Clouds and rainfall by visible-infrared radiometry. In: *Remote Sensing of Atmosphere and Ocean from Space: Models, Instruments and Techniques*, F. S. Marzano and G. Visconti, Eds., Kluwer Acad. Publ., Dordrecht (The Netherlands), 127-143.
12. Turk, J. F., G. Rohaly, J. Hawkins, E. A. Smith, F. S. Marzano, A. Mugnai, and **V. Levizzani**, 2000: Meteorological applications of precipitation estimation from combined SSM/I, TRMM and geostationary satellite data. In: *Microwave Radiometry and Remote Sensing of the Earth's Surface and Atmosphere*, P. Pampaloni and S. Paloscia Eds., VSP Int. Sci. Publisher, Utrecht (The Netherlands), 353-363.
13. Pirazzini, R., M. Nardino, A. Orsini, F. Calzolari, T. Georgiadis, and **V. Levizzani**, 2001: Parameterisation of the downward longwave radiation from clear and cloudy skies at Ny-Ålesund (Svalbard). In: *IRS' 2000: Current Problems in Atmospheric Radiation*, W. L. Smith and Y. M. Timofeyev Eds., A. Deepak Publ., Hampton, VA, 559-562.
14. **Levizzani, V.**, 2002: Clouds and rainfall by visible-infrared radiometry. In: *Remote Sensing of Atmosphere and Ocean from Space: Models, Instruments and Techniques*, F. S. Marzano and G. Visconti, Eds., Kluwer Acad. Publ., Dordrecht (The Netherlands), 127-143.
15. **Levizzani, V.**, 2004: Satellite observation of clouds. *McGraw-Hill Yearbook of Science & Technology*, McGraw-Hill Book Co., New York, 303-306.
16. **Levizzani, V.**, 2004: Satellite sensing of water in the atmosphere. In: *Encyclopedia of Water Sciences*. Marcel Dekker, Inc., DOI: 10.1081/E-EWS 120020401.

17. Cattani, E., S. Melani, **V. Levizzani**, and M. J. Costa, 2007: The retrieval of cloud top properties using VIS-IR channels. In: *Measuring precipitation from space – EURAINSAT and the future*. V. Levizzani, P. Bauer, and F. J. Turk, Eds., Springer, 79-96.
18. Costa, M. J., E. Cattani, **V. Levizzani**, and A. M. Silva, 2007: Cloud microphysical properties retrieval during intense biomass burning events over Africa and Portugal. In: *Measuring precipitation from space – EURAINSAT and the future*. V. Levizzani, P. Bauer, and F. J. Turk, Eds., Springer, 97-111.
19. Tapiador, F. J., C. Kidd, **V. Levizzani**, and F. S. Marzano, 2007: Neural network tools for satellite rainfall estimation. In: *Measuring precipitation from space – EURAINSAT and the future*. V. Levizzani, P. Bauer, and F. J. Turk, Eds., Springer, 149-161.
20. Torricella, F., **V. Levizzani**, and F. J. Turk, 2007: Application of a blended MW-IR rainfall algorithm to the Mediterranean. In: *Measuring precipitation from space – EURAINSAT and the future*. V. Levizzani, P. Bauer, and F. J. Turk, Eds., Springer, 497-507.
21. Smith, A., G. Asrar, Y. Furuhama, A. Ginati, C. Kummerow, **V. Levizzani**, A. Mugnai, K. Nakamura, R. Adler, V. Casse, M. Cleave, M. Debois, J. Durning, J. Entin, P. Houser, T. Iguchi, R. Kakar, J. Kaye, M. Kojima, D. Lettenmaier, M. Luther, A. Mehta, P. Morel, T. Nakazawa, S. Neeck, K. Okamoto, R. Oki, G. Raju, M. Shepherd, E. Stocker, J. Testud, and E. Wood, 2007: International Global Precipitation Measurement (GPM) program and mission: An overview. In: *Measuring precipitation from space – EURAINSAT and the future*. V. Levizzani, P. Bauer, and F. J. Turk, Eds., Springer, 611-653.
22. **Levizzani, V.**, and A. Gruber, 2007: The International Precipitation Working Group: a bridge towards operational applications. In: *Measuring precipitation from space – EURAINSAT and the future*. V. Levizzani, P. Bauer, and F. J. Turk, Eds., Springer, 705-712.
23. **Levizzani, V.**, R. E. Carbone, R. Ginnetti, A. G. Laing, M. Masotti, S. Melani, and M. Pasqui, 2007: Climatologia di nubi precipitanti nella stagione calda: Primi risultati sull'Europa e il Mediterraneo. In: *Clima e Cambiamenti Climatici – Le attività di ricerca del CNR*. B. Carli, G. Cavarretta, M. Colacino, and S. Fuzzi, Eds., CNR, ISBN 978-88-8080-075-0, 113-116.
24. Lensky, I. M., and **V. Levizzani**, 2008: Estimation of precipitation from space-based platforms. In: *Precipitation: Advances in measurement, estimation and prediction*. S. Michaelides, Ed., Springer, 195-217.
25. **Levizzani, V**., 2009: Satellite clouds and precipitation observations for meteorology and climate. In: *Hydrological modelling and water cycle. Coupling of the atmospheric and hydrological models*. S. Sorooshian, K.-L. Hsu, E. Coppola, B. Tomassetti, M. Verdecchia, and G, Visconti, Eds., Springer, 49-68.
26. Laviola, S., and **V. Levizzani**, 2010: Passive microwave remote sensing of rain from satellite sensors. In: *Advanced microwave and millimeter wave technologies semiconductor devices circuits and systems*, M. Mukherjee, Ed., Intech, 549-572.
27. Kidd, C., **V. Levizzani**, and S. Laviola, 2010: Quantitative precipitation estimation from Earth observation satellites. In: *Precipitation: from physics to measurement to estimation to statistical analysis*, F. Y. Testik, and M. Gebremichael, Eds., AGU, *Geophysical Monograph Series,* **191**, ISBN 978-0-87590-481-8, 127-158.
28. Su, Z., R. A. Roebeling, J. Schulz, I. Holleman, **V. Levizzani**, W. J. Timmermans, H. Rott, N. Mognard-Campbell, R. de Jeu, W. Wagner, M. Rodell, M. S. Salama, G. N. Parodi, and L. Wang, 2011: Observation of hydrological processes using remote sensing. In: *Treatise on Water Science*, P. Wilderer, Ed., Academic Press, Oxford, ISBN: 978-0-444-53193-3, **2**, 351–399.
29. **Levizzani, V.**, 2013: I satelliti e il clima. In: *Il mutamento climatico – Processi naturali e intervento umano*. A. Provenzale, Ed., il Mulino, 205-222.

BOOK EDITOR

1. Mandrioli, P., P. Comtois, and **V. Levizzani**, 1998: *Methods in Aerobiology*. Pitagora Ed., Bologna, 262 pp.
2. **Levizzani, V.**, P. Bauer, and J. F. Turk, 2007: *Measuring precipitation from space – EURAINSAT and the future*. Springer, Dordrecht, *Advances in Global Change Research*, **28**, ISBN: 978-1-4020-5834-9, 722 pp.

LECTURE NOTES

1. **Levizzani, V.,** 1992: Meteorologia da satellite. *Corso di Formazione sui Processi Fisici e Chimici dell'Atmosfera*, Istituto FISBAT-CNR., 44 pp.
2. **Levizzani, V.,** 1992: Uso del radar in meteorologia. *Corso di Formazione sui Processi Fisici e Chimici dell'Atmosfera*, Istituto FISBAT-CNR., 23 pp.
3. **Levizzani, V.,** 1992: Metodologie per le previsioni meteorologiche alla mesoscala. *Corso di Formazione sui Processi Fisici e Chimici dell'Atmosfera*, Istituto FISBAT-CNR., 34 pp.
4. **Levizzani, V.,** 1992: Esercitazioni di Fisica delle Nubi. *Università degli Studi di Bologna, Scuola Diretta a Fini Speciali*, Insegnamento di Meteorologia, Titolare Prof. Franco Prodi, 13 pp.
5. **Levizzani, V.,** 1992: Esercitazioni di Analisi Meteorologica. *Università degli Studi di Bologna, Scuola Diretta a Fini Speciali*, Insegnamento di Meteorologia, Titolare Prof. Franco Prodi, 21 pp.
6. **Levizzani, V.,** 1995: *Le nubi: Tipologia e fenomenologia*. Dispense Corso Contratto Nuova Telespazio-C.N.R., 48 pp.
7. **Levizzani, V.**, 2005: Fisica delle nubi. Lecture notes of the Cloud Physics class, *Università degli Studi di Bologna*, 226 pp.