

## Fabio Mantovani

Department of Physics and Earth Sciences  
University of Ferrara  
Polo Scientifico Tecnologico  
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## ACADEMIC CAREER

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### January 2014

Associate professor - Italian National Scientific Habilitation - Experimental Physics of fundamental interactions (02/A1).

Associate professor - Italian National Scientific Habilitation - Astronomy, Astrophysics, Physics of the Earth and the Planets (02/C1).

### November 2008

Assistant professor (FIS/04) – Faculty member – University of Ferrara

### November 2006

Post doc position (2 years) – University of Siena – Scientific disciplinary sector of Applied Geology (GEO/05)

### October 2006

PhD dissertation – University of Siena

Title of thesis: *Geo-neutrinos: a new probe of Earth's interior.*

### October 2002

Fellowship for PhD in Earth Science – University of Siena – Center for GeoTechnology.

### November 2001

Master degree in Physics - University of Ferrara

Title of thesis: *La radiazione cosmica a microonde e la determinazione di osservabili cosmologiche.*

## SCIENTIFIC PROJECTS

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### *Principal Investigator (2015 - now)*

Project Umbria\_Rad - National Institute of Nuclear Physics (INFN)

### *Secondary Investigator (2016 - now)*

Project ALADIN - Agroalimentare Idrointelligente - POR-FESR 2014-2020 - Regione Emilia Romagna

### *Principal Investigator (2012 - now)*

Project ITALRAD (ITALian RADioactivity project) - Progetto Premiale MIUR 2011 - National Institute of Nuclear Physics (INFN)

### *Local coordinator - Ferrara INFN Section (2014 - now)*

Experiment JUNO (Jiangmen Underground Neutrino Observatory) - National Institute of Nuclear Physics (INFN)

### *Member (2014 - 2015)*

Experiment BOREXINO - National Institute of Nuclear Physics (INFN)

*Member (2014 - 2017)*

PRIN 2012 - 2012CPPYP7\_003 - University of Ferrara - La fisica del neutrino.

*Secondary Investigator (2009 - 2013)*

Project Rad\_Monitor - The distribution of natural radioelements across the Veneto Region by using airborne gamma-ray spectrometry - Progetto Eccellenza 2009-2010 - Fondazione Cassa di Risparmio di Padova e Rovigo.

*Secondary Investigator (2008 - 2010)*

Project Rad\_Nat - Misure della radioattività naturale e realizzazione di una cartografia tematica del potenziale contenuto di radioattività naturale del territorio della Regione Toscana - Terzo accordo integrativo dell'Accordo di programma quadro "Ricerca e trasferimento tecnologico per il sistema produttivo" - Regione Toscana.

*Member (2008 - 2011)*

PRIN 2008 - 20084ZCK5J\_002 - University of Ferrara - Il neutrino come sonda per lo studio della terra, delle stelle e dell'universo.

## AWARDS

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2006

Best thesis for PhD program in Earth Science of University of Siena - XVIII ciclo

2002

Special mention - Premio Saggio Scientifico "Annibale Di Gasparis" -L'Universo visto coi neutrini - Premio Internazionale Città di Tocco da Casauria.

## PATENT

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No. RM2012A000180 26 April 2012

Property: University of Ferrara, University of Siena and Rossi Alvarez Carlos.

Inventors: Fabio Mantovani, Gerti Xhixha, Tommaso Colonna, Rossi Alvarez Carlos.

Title: "Dispositivo attivo MCA stand-alone per la digitalizzazione di segnali di spettroscopia gamma outdoor"

Ns. Rif.: BREV/ bc/A1722

## ACADEMIC SERVICES

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2016 - now - Member of Research Council (University of Ferrara)

2016 - Member of admission committee - PhD in Physics (University of Ferrara)

2016 - Member of admission committee - PhD in Earth Science (University of Maryland)

2014 - Member of admission committee - PhD in Physics (University of Ferrara)

2013 - Member of final defense committee - PhD in Earth Science (Université Joseph Fourier - Grenoble)

2013 - Member of admission committee - PhD in Physics (University of Ferrara)

## PEER REVIEWED SCIENTIFIC PAPERS

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Xhixha G., J.A. Trinidad, C. Gasco, F. Mantovani. *First intercomparison among laboratories involved in COST Action-TU1301 "NORM4Building": Determination of natural radionuclides in ceramics*. Journal of Environmental Radioactivity, (2016). DOI: 10.1016/j.jenvrad.2016.03.007

Fengpeng A., A. Guangpeng, A. Qi, A. Vito, B. Eric, B. John, B. Leonid, B. Simon, B. Riccardo, A. Margherita Buizza, B. Jose, C. Anatael, C. Hao, C. Xiao, C. Antonio, C. Guofu, C. Jun, C. Yun, C. Shaomin, C. Shenjian, C. Yixue, C. Davide, C. Massimiliano, C. Barbara, C. Janet, D.A. Davide, K. Hervé De, D. Zhi, D. Ziyan, D. Yayun, D. Zelimir, D. Damien, D. Marcos, D. Olivier, D. Stefano, D. Stephen, E. Timo, F. Donghua, F. Jian, F. Laurent, F. Richard, G.-N. Marianne, G. Haonan, G. Alberto, G. Marco, G. Maxim, G. Guanghua, G. Hui, G. Michel, G. Marco, G. Christian, G. Mengyun, G. Vic, G. Gang, G. Wanlei, G. Xin-Heng, H. Caren, H. Ran, H. Miao, H. Yuekun, H. Yee, H. Jun, H. Shouyang, H. Tao, H. Hanxiong, H. Xingtao, H. Lei, I. Ara, J. Manfred, J. Xiangdong, J. Xiaoshan, J. Cécile, K. Li, K. Michael, K. Narine, K. Zinovy, K. Andre, K. Pasi, L. Tobias, L. Rupert, L. Chao, L. Jiaying, L. Weidong, L. Weiguo, L.

Xiaomei, L. Xiaonan, L. Yi, L. Yufeng, L. Zhi-Bing, L. Hao, L. Guey-Lin, L. Tao, L. Yen-Hsun, L. Jiajie, L. Ivano, L. Dawei, L. Hongbang, L. Hu, L. Jianglai, L. Jianli, L. Jinchang, L. Qian, L. Shubin, L. Shulin, L. Paolo, L. Yongbing, L. Haoqi, L. Jiashu, L. Jingbin, L. Junguang, L. Bayarto, L. Livia, L. Shu, Vladimir Lyashuk, M. Randolph, M. Xubo, M. Fabio, M. Yajun, M.M. Stefano, F.M. William, M. Guang, M. Anselmo, M. Emanuela, M. Mauro, M. Lino, Thomas Mueller, N. Dmitry, O. Lothar, O.-R. Juan Pedro, O. Alexander, O. Fausto, P. Alessandro, P. Haiping, Chieh P. Jen, P. Ezio, Q. Ming, Q. Sen, Q. Xin, Q. Yongzhong, Q. Zhonghua, R. Georg, R. Gioacchino, R. Barbara, R. Markus, R. Aldo, R. Xiangdong, R. Xichao, S. Giuseppe, S. Mike, Valery Sinev, S. Chiara, S. Monica, S. Oleg, S. Michael, S. Achim, S. Luca, S. Jochen, S. Xilei, S. Yongjie, T. Dmitriy, T. Jian, T. Igor, T. Wladyslaw, W. Stefan van, V. Cristina, V. Vit, V. Lucia, W. Chung-Hsiang, W. Guoli, W. Hao, W. Meng, W. Ruiguang, W. Siguang, W. Wei, W. Yi, W. Yi, W. Yifang, W. Zhe, W. Zheng, W. Zhigang, W. Zhimin, W. Wei, W. Liangjian, W. Christopher, W. Björn, W. Qun, W. Claudia-Elisabeth, W. Michael, X. Yufei, X. Dongmei, X. Yuguang, zhong X. Zhi, X. Jilei, Y. Baojun, Y. Changgen, Y. Chaowen, Y. Guang, Y. Lei, Y. Yifan, Y. Yu, Y. Ugur, Y. Frédéric, Y. Zhengyun, Y. Boxiang, Y. Chunxu, Y. Zeyuan, Z. Sandra, Z. Liang, Z. Chao, Z. Hong-Hao, Z. Jiawen, Z. Jingbo, Z. Qingmin, Z. Yu-Mei, Z. Zhenyu, Z. Zhenghua, Z. Yangheng, Z. Weili, Z. Guorong, Z. Jing, Z. Li, Z. Rong, Z. Shun, Z. Wenxiong, Z. Xiang, Z. Yeling, Z. Yufeng, Z. Jiaheng. *Neutrino physics with JUNO*. Journal of Physics G: Nuclear and Particle Physics, 43 (2016) 030401. DOI: 10.1088/0954-3899/43/3/030401

Xhixha G., Alberi M., Baldoncini M., Bode K., Bylyku E., Cfarku F., Callegari I., Hasani F., Landsberger S., Mantovani F., Rodriguez E., Shala F., Strati V., Kaçeli M.X. *Calibration of HPGe detectors using certified reference materials of natural origin*. Journal of Radioanalytical and Nuclear Chemistry (2015). DOI: 10.1007/s10967-015-4360-6

Kaçeli Xhixha, M., Albèri, M., Baldoncini, M., Bezzon, G.P., Buso, G.P., Callegari, I., Casini, L., Cuccuru, S., Fiorentini, G., Guastaldi, E., Mantovani, F., Mou, L., Oggiano, G., Puccini, A., Rossi Alvarez, C., Strati, V., Xhixha, G., Zanon, A.. *Map of the uranium distribution in the Variscan Basement of Northeastern Sardinia*. Journal of Maps (2015). DOI:10.1080/17445647.2015.1115784

Agostini M., Appel S., Bellini G., Benziger J., Bick D., Bonfini G., Bravo D., Caccianiga B., Calaprice F., Caminata A., Cavalcante P., Chepurinov A., Choi K., D'Angelo D., Davini S., Derbin A., Di Noto L., Drachnev I., Empl A., Etenko A., Fiorentini G., Fomenko K., Franco D., Gabriele F., Galbiati C., Ghiano C., Giammarchi M., Goeger-Neff M., Goretti A., Gromov M., Hagner C., Houdy T., Hungerford E., Ianni A., Ianni A., Jedrzejczak K., Kaiser M., Kobychew V., Korablev D., Korga G., Kryn D., Laubenstein M., Lehnert B., Litvinovich E., Lombardi F., Lombardi P., Ludhova L., Lukyanchenko G., Machulin I., Manecki S., Maneschg W., Mantovani F., Marcocci S., Meroni E., Meyer M., Miramonti L., Misiaszek M., Montuschi M., Mosteiro P., Muratova V., Neumair B., Oberauer L., Obolensky M., Ortica F., Otis K., Pagani L., Pallavicini M., Papp L., Perasso L., Pocar A., Ranucci G., Razeto A., Re A., Ricci B., Romani A., Roncin R., Rossi N., Schönert S., Semenov D., Simgen H., Skorokhvatov M., Smirnov O., Sotnikov A., Sukhotin S., Suvorov Y., Tartaglia R., Testera G., Thurn J., Toropova M., Unzhakov E., Vogelaar RB., von Feilitzsch F., Wang H., Weinz S., Winter J., Wojcik M., Wurm M., Yokley Z., Zaimidoroga O., Zavatarelli S., Zuber K., Zuzel G. *Spectroscopy of geoneutrinos from 2056 days of Borexino data*. Physical Review D 92 031101(R) (2015). DOI:10.1103/PhysRevD.92.031101

Ludhova, L., Bellini, G., Benziger, J., Bick, D., Bonfini, G., Bravo, D., Caccianiga, B., Calaprice, F., Caminata, A., Cavalcante, P., Chavarria, A., Chepurinov, A., D'Angelo, D., Davini, S., Derbin, A., Empl, A., Etenko, A., Fomenko, K., Franco, D., Fiorentini, G., Galbiati, C., Gazzana, S., Ghiano, C., Giammarchi, M., Göger-Neff, M., Goretti, A., Hagner, C., Hungerford, E., Ianni, A., Ianni, A., Kobychew, V., Korablev, D., Korga, G., Kryn, D., Laubenstein, M., Lehnert, B., Lewke, T., Litvinovich, E., Lombardi, F., Lombardi, P., Lukyanchenko, G., Machulin, I., Manecki, S., Maneschg, W., Mantovani, F., Marcocci, S., Meindl, Q., Meroni, E., Meyer, M., Miramonti, L., Misiaszek, M., Mosteiro, P., Muratova, V., Oberauer, L., Obolensky, M., Ortica, F., Otis, K., Pallavicini, M., Papp, L., Perasso, L., Pocar, A., Ranucci, G., Razeto, A., Re, A., Ricci, B., Romani, A., Rossi, N., Saldanha, R., Salvo, C., Schönert, S., Simgen, H., Skorokhvatov, M., Smirnov, O., Sotnikov, A., Sukhotin, S., Suvorov, Y., Tartaglia, R., Testera, G., Vignaud, D., Vogelaar, R. B., von Feilitzsch, F., Wang, H., Winter, J., Wojcik, M., Wright, A., Wurm, M., Zaimidoroga, O., Zavatarelli, S., Zuber, K., and Zuzel, G. (2015). *Geo-neutrinos and Borexino*. Physics of Particles and Nuclei 46, 174-181, doi: 10.1134/S1063779615020148

Smirnov, O., Bellini, G., Benziger, J., Bick, D., Bonfini, G., Bravo, D., Caccianiga, B., Calaprice, F., Caminata, A., Cavalcante, P., Chavarria, A., Chepurinov, A., D'Angelo, D., Davini, S., Derbin, A., Empl, A., Etenko, A., Fomenko, K., Franco, D., Fiorentini, G., Galbiati, C., Gazzana, S., Ghiano, C., Giammarchi, M., Göger-Neff, M., Goretti, A., Hagner, C., Hungerford, E., Ianni, A., Ianni, A., Kobychew, V., Korablev, D., Korga, G., Kryn, D., Laubenstein, M., Lehnert, B., Lewke, T., Litvinovich, E., Lombardi, F., Lombardi, P., Ludhova, L., Lukyanchenko, G., Machulin, I., Manecki, S., Maneschg, W., Mantovani, F., Marcocci, S., Meindl, Q., Meroni, E., Meyer, M., Miramonti, L., Misiaszek, M., Mosteiro,

P., Muratova, V., Oberauer, L., Obolensky, M., Ortica, F., Otis, K., Pallavicini, M., Papp, L., Perasso, L., Pocar, A., Ranucci, G., Razeto, A., Re, A., Ricci, B., Romani, A., Rossi, N., Saldanha, R., Salvo, C., Schönert, S., Simgen, H., Skorokhvatov, M., Sotnikov, A., Sukhotin, S., Suvorov, Y., Tartaglia, R., Testera, G., Vignaud, D., Vogelaar, R. B., von Feilitzsch, F., Wang, H., Winter, J., Wojcik, M., Wright, A., Wurm, M., Zaimidoroga, O., Zavatarelli, S., Zuber, K., and Zuzel, G. *Solar neutrino with Borexino: Results and perspectives*. *Physics of Particles and Nuclei* 46, 166-173, (2015). DOI:10.1134/S1063779615020185

Xhixha, G., Baldoncini, M., Callegari, I., Colonna, T., Hasani, F., Mantovani, F., Shala, F., Strati, V., and Xhixha Kaceli, M. *A century of oil and gas exploration in Albania: Assessment of Naturally Occurring Radioactive Materials (NORMs)*. *Chemosphere* 139, 30-39, (2015). doi: 10.1016/j.chemosphere.2015.05.018

Strati, V., Baldoncini, M., Callegari, I., Mantovani, F., McDonough, W., Ricci, B., and Xhixha, G. *Expected geoneutrino signal at JUNO*. *Progress in Earth and Planetary Science* 2, 1-7, (2015). DOI: 10.1186/s40645-015-0037-6

Baldoncini M., Callegari I., Fiorentini G., Mantovani F., Ricci B., Strati V. and Xhixha G. *Reference worldwide model for antineutrinos from reactors*. *Phys. Rev. D* 91, 065002 (2015). DOI: 10.1103/PhysRevD.91.065002

Huang Y., Strati V., Mantovani F., Shirey S. B. and McDonough W. F. *Regional study of the Archean to Proterozoic crust at the Sudbury Neutrino Observatory (SNO+), Ontario: Predicting the geoneutrino flux*. *Geochemistry, Geophysics, Geosystems*, 15 (2014) 3925–3944. ISSN: 1525-2027. DOI: 10.1002/2014GC005397

Strati, V., Baldoncini, M., Bezzon, G. P., Brogгинi, C., Buso, G. P., Caciolli, A., Callegari, I., Carmignani, L., Colonna, T., Fiorentini, G., Guastaldi, E., Kaçeli Xhixha, M., Mantovani, F., Menegazzo, R., Mou, L., Rossi Alvarez, C., Xhixha, G., and Zanon, A. *Total natural radioactivity, Veneto (Italy)*. *Journal of Maps*, 1-7 (2014). DOI: <http://dx.doi.org/10.1080/17445647.2014.923348>

Cfarku, F., Xhixha, G., Bylyku, E., Zdruli, P., Mantovani, F., Përpunja, F., Callegari, I., Guastaldi, E., Xhixha Kaçeli, M., and Thoma, H. *A preliminary study of gross alpha/beta activity concentrations in drinking waters from Albania*. *Journal of Radioanalytical and Nuclear Chemistry* 301, 435-442 (2014). DOI: <http://dx.doi.org/10.1007/s10967-014-3142-x>

Miramonti L., Bellini G., Benziger J., Bick D., Bonfini G., Bravo D., Buizza Avanzini M., Caccianiga B., Cadonati L., Calaprice F., Carraro C., Cavalcante P., Chavarria A., Chepurnov A., Chubakov V., D'Angelo D., Davini S., Derbin A., Etenko A., Fomenko K., Franco D., Galbiati C., Gazzana S., Ghiano C., Giammarchi M., Göger-Neff M., Goretti A., Grandi L., Guardincerri E., Hardy S., Ianni A., Ianni A., Kobychiev V., Korablev D., Korga G., Koshio Y., Kryn D., Laubenstein M., Lewke T., Lissia M., Litvinovich E., Loer B., Lombardi F., Lombardi P., Ludhova L., Machulin I., Manecki S., Maneschg W., Manuzio G., Meindl Q., Meroni E., Miramonti L., Misiaszek M., Montanari D., Mosteiro P., Mantovani F., Muratova V., Nisi S., Oberauer L., Obolensky M., Ortica F., Otis K., Pallavicini M., Papp L., Perasso L., Perasso S., Pocar A., Ranucci G., Razeto A., Re A., Romani A., Rossi N., Sabelnikov A., Saldanha R., Salvo C., Schönert S., Simgen H., Skorokhvatov M., Smirnov O., Sotnikov A., Sukhotin S., Suvorov Y., Tartaglia R., Testera G., Vogelaar RB., Feilitzsch F., Winter J., Wojcik M., Wright A., Wurm M., Xhixha G., Xu J., Zaimidoroga O., Zavatarelli S., Zuzel G. *Lifetime measurements of  $^{214}\text{Po}$  and  $^{212}\text{Po}$  with the CTF liquid scintillator detector at LNGS*. *Journal of Environmental Radioactivity (Special Issue) - 2nd International Conference on Po and Radioactive Pb Isotopes (INCO-PoPb 2013) Mangalore, India*. DOI 10.1016/j.jenvrad.2014.02.025 (2014)

Puccini, A., Xhixha, G., Cuccuru, S., Oggiano, G., Xhixha, M. K., Mantovani, F., Alvarez, C. R., and Casini, L. (2013). *Radiological characterization of granitoid outcrops and dimension stones of the Variscan Corsica-Sardinia Batholith*. *Environmental Earth Sciences* 71, 393-405 (2014). DOI: <http://dx.doi.org/10.1007/s12665-013-2442-8>

Bellini, G., Ianni, A., Ludhova, L., Mantovani, F., and McDonough, W. F. *Geo-neutrinos*. *Progress in Particle and Nuclear Physics* 73, 1-34 (2013). ISSN: 0146-6410. DOI: 10.1016/j.ppnp.2013.07.001

Bellini G, Benziger J, Bick D, Bonfini G, Bravo D, Buizza Avanzini M, Caccianiga B, Cadonati L, Calaprice F, Carraro C, Cavalcante P, Chavarria A, Chepurnov A, Chubakov V, D'Angelo D, Davini S, Derbin A, Etenko A, Fomenko K, Franco D, Galbiati C, Gazzana S, Ghiano C, Giammarchi M, Göger-Neff M, Goretti A, Grandi L, Guardincerri E, Hardy S, Ianni A, Ianni A, Kobychiev V, Korablev D, Korga G, Koshio Y, Kryn D, Laubenstein M, Lewke T, Lissia M, Litvinovich E, Loer B, Lombardi F, Lombardi P, Ludhova L, Machulin I, Manecki S, Maneschg W, Manuzio G, Meindl Q, Meroni E, Miramonti L, Misiaszek M, Montanari D, Mosteiro P, Mantovani F, Muratova V, Nisi S, Oberauer L, Obolensky M, Ortica F, Otis K, Pallavicini M, Papp L, Perasso L, Perasso S, Pocar A, Ranucci G, Razeto A, Re A, Romani A, Rossi N, Sabelnikov A, Saldanha R, Salvo C, Schönert S, Simgen H, Skorokhvatov M, Smirnov O, Sotnikov

A, Sukhotin S, Suvorov Y, Tartaglia R, Testera G, Vogelaar RB, Feilitzsch F, Winter J, Wojcik M, Wright A, Wurm M, Xhixha G, Xu J, Zaimidoroga O, Zavatarelli S, Zuzel G. *Lifetime measurements of  $^{214}\text{Po}$  and  $^{212}\text{Po}$  with the CTF liquid scintillator detector at LNGS*. The European Physical Journal A 49, 92 (2013). ISSN: 1434-6001. DOI:10.1140/epja/i2013-13092-9

Guastaldi E., M. Baldoncini, G. Bezzon, C. Broggin, G. Buso, A. Caciolli, L. Carmignani, I. Callegari, T. Colonna, K. Dule, G. Fiorentini, M. Kaçeli Xhixha, F. Mantovani, G. Massa, R. Menegazzo, L. Mou, C. Rossi Alvarez, V. Strati, G. Xhixha, A. Zanon, *A multivariate spatial interpolation of airborne  $\gamma$ -ray data using the geological constraints*. Remote Sensing of Environment, 137 (2013) 1-11. ISSN: 0034-4257. DOI: 10.1016/j.rse.2013.05.027

Callegari I., G.P. Bezzon, C. Broggin, G.P. Buso, A. Caciolli, L. Carmignani, T. Colonna, G. Fiorentini, E. Guastaldi, M.K. Xhixha, F. Mantovani, G. Massa, R. Menegazzo, L. Mou, A. Pirro, C.R. Alvarez, V. Strati, G. Xhixha, A. Zanon. *Total natural radioactivity, Tuscany, Italy*. Journal of Maps, (2013) 1-6. DOI: 10.1080/17445647.2013.802999

Fiorentini G., G.L. Fogli, E. Lisi, F. Mantovani, A. M. Rotunno, G. Xhixha. *Exploring the Earth's mantle with geoneutrinos*. Il Nuovo Cimento C, 36 (2013) 239-242. DOI: 10.1393/ncc/i2013-11446-1

Xhixha G., A. Ahmeti, G.P. Bezzon, M. Bitri, C. Broggin, G.P. Buso, A. Caciolli, I. Callegari, F. Cfarku, T. Colonna, G. Fiorentini, E. Guastaldi, F. Mantovani, G. Massa, R. Menegazzo, L. Mou, D. Prifti, C.R. Alvarez, D.S. Kuqi, M. Shyti, L. Tushe, M. Xhixha Kaçeli, A. Zyfi, *First characterisation of natural radioactivity in building materials manufactured in Albania*. Radiation Protection Dosimetry, 155 (2013) 217-223. ISSN 0144-8420. DOI: 10.1093/rpd/ncs334

Xhixha G., G.P. Bezzon, C. Broggin, G.P. Buso, A. Caciolli, I. Callegari, S. Bianchi, G. Fiorentini, E. Guastaldi, M. Kaçeli Xhixha, F. Mantovani, G. Massa, R. Menegazzo, L. Mou, A. Pasquini, C.R. Alvarez, M. Shyti. *The worldwide NORM production and a fully automated gamma-ray spectrometer for their characterization*. J Radioanal Nucl Chem, 295 (2013) 445-457. ISSN: 0236-5731 DOI: 10.1007/s10967-012-1791-1

Fiorentini G., G.L. Fogli, E. Lisi, F. Mantovani, A.M. Rotunno, G. Xhixha. *The Earth's mantle and geoneutrinos*. Nuclear Physics B - Proceedings Supplements, 237-238 (2013) 82-84. ISSN 0920-5632. DOI: 10.1016/j.nuclphysbps.2013.04.062

Huang Y., V. Chubakov, F. Mantovani, R.L. Rudnick, W.F. McDonough, *A reference Earth model for the heat-producing elements and associated geoneutrino flux*. Geochemistry, Geophysics, Geosystems, 14 (2013) 2003-2029 (2013). ISSN: 1525-2027. DOI: 10.1002/ggge.20129

Bellini G., J. Benziger, D. Bick, G. Bonfini, D. Bravo, M. Buizza Avanzini, B. Caccianiga, L. Cadonati, F. Calaprice, P. Cavalcante, A. Chavarria, A. Chepurinov, D. D'Angelo, S. Davini, A. Derbin, A. Empl, A. Etenko, G. Fiorentini, K. Fomenko, D. Franco, C. Galbiati, S. Gazzana, C. Ghiano, M. Giammarchi, M. Goeger-Neff, A. Goretti, L. Grandi, C. Hagner, E. Hungerford, Aldo Ianni, Andrea Ianni, V.V. Kobychiev, D. Korablev, G. Korga, Y. Koshio, D. Kryn, M. Laubenstein, T. Lewke, E. Litvinovich, B. Loer, P. Lombardi, F. Lombardi, L. Ludhova, G. Lukyanchenko, I. Machulin, S. Manecki, W. Maneschg, F. Mantovani, G. Manuzio, Q. Meindl, E. Meroni, L. Miramonti, M. Misiaszek, P. Mosteiro, V. Muratova, L. Oberauer, M. Obolensky, F. Ortica, K. Otis, M. Pallavicini, L. Papp, L. Perasso, S. Perasso, A. Pocar, G. Ranucci, A. Razeto, A. Re, B. Ricci, A. Romani, N. Rossi, A. Sabelnikov, R. Saldanha, C. Salvo, S. Schönert, H. Simgen, M. Skorokhvatov, O. Smirnov, A. Sotnikov, S. Sukhotin, Y. Suvorov, R. Tartaglia, G. Testera, D. Vignaud, R.B. Vogelaar, F. von Feilitzsch, J. Winter, M. Wojcik, A. Wright, M. Wurm, J. Xu, O. Zaimidoroga, S. Zavatarelli, G. Zuzel. *Measurement of geo-neutrinos from 1353 days of Borexino*. Physics Letters B, 722 (2013) 295-300. DOI 10.1016/j.physletb.2013.04.030

Caciolli A., M. Baldoncini, G.P. Bezzon, C. Broggin, G.P. Buso, I. Callegari, T. Colonna, G. Fiorentini, E. Guastaldi, F. Mantovani, G. Massa, R. Menegazzo, L. Mou, C.R. Alvarez, M. Shyti, A. Zanon, G. Xhixha, *A new FSA approach for in situ  $\gamma$  ray spectroscopy*. Science of The Total Environment, 414 (2012) 639-645. ISSN: 0048-9697. DOI: 10.1016/j.scitotenv.2011.10.071

Fiorentini G., G.L. Fogli, E. Lisi, F. Mantovani, A.M. Rotunno, *Mantle geoneutrinos in KamLAND and Borexino*. Physical Review D, 86 033004 (2012). ISSN 1550-7998. DOI: 10.1103/PhysRevD.86.033004

Wurm M., J. F. Beacom, L. B. Bezrukov, D. Bick, J. Blümer, S. Choubey, C. Ciemniak, D. D'Angelo, B. Dasgupta, A. Dighe, G. Domogatsky, S. Dye, S. Eliseev, T. Enqvist, A. Erykalov, F. von Feilitzsch, G. Fiorentini, T. Fischer, M. Göger-Neff, P. Grabmayr, C. Hagner, D. Hellgartner, J.Hissa, S. Horiuchi, H. T. Janka, C. Jaupart, J. Jochum, T. Kalliokoski, P. Kuusiniemi, T. Lachenmaier, I. Lazanu, J. G. Learned, T. Lewke, P. Lombardi, S. Lorenz, B.

- Lubsandorzhev, L. Ludhova, K. Loo, J. Maalampi, F. Mantovani, M. Marafini, J. Maricic, T. M. Undagoitia, W. F. McDonough, L. Miramonti, A. Mirizzi, Q. Meindl, O. Mena, R. Möllenberg, R. Nahnauer, D. Nesterenko, Y. N. Novikov, G. Nuijten, L. Oberauer, S. Pakvasa, S. Palomares-Ruiz, M. Pallavicini, S. Pascoli, T. Patzak, J. Peltoniemi, W. Potzel, T. Rähä, G. G. Raffelt, G. Ranucci, S. Razzaque, K. Rummukainen, J. Sarkamo, V. Sinev, C. Spiering, A. Stahl, F. Thorne, M. Tippmann, A. Tonazzo, W. H. Trzaska, J. D. Vergados, C. Wiebusch, J. Winter, *The next-generation liquid-scintillator neutrino observatory LENA*, *Astroparticle Physics*, vol. 35, Issue 1, pp. 685-732, (2012). ISSN 0927-6505. DOI: 10.1016/j.astropartphys.2012.02.011
- Coltorti M., R. Boraso, F. Mantovani, M. Morsilli, G. Fiorentini, A. Riva, G. Rusciadelli, R. Tassinari, C. Tomei, G. Di Carlo, V. Chubakov. *U and Th content in the Central Apennines continental crust: a contribution to the determination of the geo-neutrinos flux at LNGS*. *Geochimica et Cosmochimica Acta*, vol. 75, n. 9, 2271-2294 (2011). ISSN: 0016-7037. DOI 10.1016/j.gca.2011.01.024
- Fiorentini G., A. Ianni, G. Korga, M. Lissia, F. Mantovani, L. Miramonti, L. Oberauer, M. Obolensky, O. Smirnov, Y. Suvorov. *Nuclear physics for geo-neutrino studies*. *Phys. Rev. C*81, ISSN 1089-490X (2010). DOI 10.1103/PhysRevC.81.034602
- Fiorentini G., M. Lissia, F. Mantovani. *Geo-neutrinos and earth's interior*. *Phys. Rep.* 453, 117-172, ISSN 0370-1573, (2007). DOI 10.1016/j.physrep.2007.09.001
- Fiorentini G., M. Lissia, F. Mantovani, B. Ricci. *Geo-Neutrinos: from theory to the KamLAND results*. *Earth, Moon and Planets* 99, 91-110, ISSN 1573-0794, (2006). DOI 10.1007/s11038-006-9115-5
- De Meijer R. J., F.D. Smit, F.D. Brooks, R.W. Fearick, H.J. Woertche, F. Mantovani. *Towards Earth Antineutrino Tomography (EARTH)*. *Earth, Moon and Planets* 99, 193-206, ISSN 1573-0794, (2006). DOI 10.1007/s11038-006-9104-8
- Fiorentini G., M. Lissia, F. Mantovani, B. Ricci. *KamLAND results and the radiogenic terrestrial heat*. *Phys. Lett. B* 629, 77, ISSN 0370-2693, (2005). DOI 10.1016/j.physletb.2005.09.067
- Fiorentini G., M. Lissia, F. Mantovani, R. Vannucci. *How much Uranium is in the Earth? Predictions for geo-neutrinos at KamLAND*. *Phys. Rev. D* 72, 033017, ISSN 1550-2368, (2005). DOI 10.1103/PhysRevD.72.033017
- Fiorentini G., M. Lissia, F. Mantovani, R. Vannucci. *Geo-neutrinos: a new probe of Earth's interior*. *Earth Planet. Sci. Lett.* 238, 235, ISSN 0012-821X, (2005). DOI 10.1016/j.epsl.2005.06.061
- Fiorentini G., M. Lissia, F. Mantovani, R. Vannucci. *A brief review on geo-neutrinos*. *Nucl. Phys. Proc. Suppl.* 145, 170, ISSN 0920-5632, (2005). DOI 10.1016/j.nuclphysbps.2005.03.019
- Mantovani F., L. Carmignani, G. Fiorentini, M. Lissia. *Antineutrinos from the earth: the reference model and its uncertainties*. *Phys. Rev. D* 69, 013001, ISSN 1550-2368, (2004). DOI 10.1103/PhysRevD.69.013001
- Fiorentini, G., F. Mantovani, and B. Ricci. *Neutrinos and Energetics of the Earth*. *Phys. Lett. B* 557, 139, ISSN 0370-2693, (2003). DOI 10.1016/S0370-2693(03)00193-X