a) ARTICOLE PUBLICATE

Etapa 1 (02.07.2012-31.12.2012)

-Nu au fost publicate articole în etapa 1.

Etapa 2 (01.01.2013-31.12.2013):

1) M. Sahagia, A. Luca, A. Antohe, C. Ivan, R. Ioan, B.L. Neacşu, "Realization of the metrological traceability chain of Rn-222", Romanian Journal of Physics, vol. 58, Supplement, P. S230-S242, Bucharest, 2013
2) R. Şuvăilă, I. Osvath, O. Sima, "Improving the assessment of activity in samples with non-uniform distribution using the sum peak count rate", Applied Radiation and Isotopes, vol. 81, 77-80, 2013

Etapa 3 (01.01.2014-31.12.2014):

1) O. Ott, O. Sima, Q. Zhao, „Distribution of the ^{222}Rn decay products from a ^{226}Ra solution in a PTB ampoule – Implications for calibration", Applied Radiation and Isotopes vol. 87, 365-371, 2014.
2) Denis Glavic-Cindro, Carmen Varlam, Denisa Faurescu, Irina Vagner, Jasmina Kozar-Logar, „Slovenian-Romanian bilateral intercomparison on tritium samples", Applied Radiation and Isotopes, vol. 87, 418-424, 2014.

Etapa 4 (01.01.2015-31.12.2015):

M.-C. Lépy, A. Pearce, O. Sima, „Uncertainties in gamma-ray spectrometry", Metrologia 52, S123–S145 (2015).

Etapa 5 (01.01.2016-31.12.2016):

1) A. Antohe, M. Sahagia, A. Luca, M.-R. Ioan, C. Ivan, "Measurement of liquid scintillation sources of ^{210}Pb obtained from ^{222}Rn decay", Applied Radiation and Isotopes, vol. 109, 286-289, 2016.
2) O. Sima, M.-C. Lépy, „Application of GUM Supplement 1 to uncertainty of Monte Carlo computed efficiency in gamma-ray spectrometry", Applied Radiation and Isotopes, vol. 109, 493-499, 2016.
3) M. Sahagia, A. Luca, A. Antohe, M.-R. Ioan, C. Ivan, Recent work and results of the Radionuclide Metrology Laboratory from IFIN-HH, *Rom. Rep. Phys.* 68 (1), p. 177-190 (2016).
4) A. Luca, M. Sahagia, A. Antohe, M.-R. Ioan, L. Serbina, C. Ivan, "Radon gas activity measurements in the frame of an international comparison", *Journal of Radioanalytical and Nuclear Chemistry*, vol. 311, iss. 2, 1075-1079, 2017.

b) PARTICIPĂRI LA CONFERINŢE

Etapa 1 (02.07.2012-31.12.2012)

-La conferinţa "6th International Conference on Radionuclide Metrology – Low Level Radiation Measurement Techniques" (ICRM-LLRMT'12), Jeju, Republica Coreea, 17-21 septembrie 2012, Prof. Dr. Octavian Sima (Univ. Bucureşti, partener 2 la proiect) a fost membru în Comitetul Ştiinţific al Conferinţei, referent oficial şi moderator pentru două sesiuni; de asemenea, a fost coautor la trei lucrări prezentate la conferinţă, în legatură directă cu proiectul fiind lucrarea "Improving the assessment of activity in samples with non-uniform distribution using the sum peak count rate", autori: Rareş Şuvăilă, Iolanda Osvath, Octavian Sima (lucrare publicată ulterior în revista Applied Radiation Isotopes, în 2013, menţionată mai sus, la nr. 2).

-La Simpozionul international "FIRST EAST EUROPEAN RADON SYMPOSIUM" FERAS 2012 September 2nd – 5th, 2012, Cluj-Napoca, România, a fost prezentată Lecţia Invitată: REALIZATION OF THE METROLOGICAL TRACEABILITY CHAIN OF RADON-222, autori: Maria Sahagia, Aurelian Luca, Andrei Antohe, Constantin Ivan, Răzvan Ioan, Beatris Neacşu (lucrare publicată ulterior în revista Romanian Journal of Physics, în 2013, menţionată mai sus, la nr. 1). D-na Dr. Maria Sahagia (IFIN-HH) a fost membră a Comitetului Ştiinţific Internaţional al Simpozionului şi a condus prima sesiune ştiinţifică.

Etapa 2 (01.01.2013-31.12.2013)

-La conferinţa internaţională "19th International Conference on Radionuclide Metrology and its Applications" (ICRM 2013), 17-21 iunie 2013, Antwerpen, Belgia, au fost prezentate două lucrări referitoare la proiect, care au fost acceptate pentru publicare în revista Applied Radiation and Isotopes (2014):

a) "Distribution of the ^{222}Rn decay products from a ^{226}Ra solution in a PTB ampoule – implications for calibration", autori: Oliver Ott, Octavian Sima, Qi Zhao (lucrarea poster P-044, DOI: http://dx.doi.org/10.1016/j.apradiso.2013.11.059);
b) "Slovenian – Romanian bilateral intercomparison on tritium samples", autori: Denis Glavič-Cindro, Jasmina Kožar Logar, Carmen Varlam, Denisa Faurescu, Irina Vagner (lucrarea poster P-135, DOI: http://dx.doi.org/10.1016/j.apradiso.2013.11.058);

Trebuie menţionat că, la această conferinţă, Prof. Dr. O. Sima (Universitatea din Bucureşti, Partener 2 la proiect) a fost membru în comitetul ştiinţific, referent principal pentru lucrări de spectrometrie gama, moderator al unei sesiuni şi organizator al întâlnirii grupului de lucru de spectrometrie gama.

Etapa 3 (01.01.2014-31.12.2014)

La workshopul internaţional, 5th Workshop of the Decay Data Evaluation Project (DDEP-2014), 6-8 octombrie 2014, organizat la IFIN-HH, Măgurele, România, http://ddep14.nipne.ro, a fost prezentată o lucrare orală referitoare la proiect: "Recent work and results of the Radionuclide Metrology Laboratory from IFIN-HH", autori Maria Sahagia, Aurelian Luca, Andrei Antohe, Mihail-Răzvan Ioan şi Constantin Ivan.

Etapa 4 (01.01.2015-31.12.2015)

La conferinţa internaţională "20th International Conference on Radionuclide Metrology and its Applications" (ICRM 2015), 8-11 iunie 2015, Viena, Austria, au fost prezentate două lucrări referitoare la proiect, care au fost acceptate pentru publicare în revista Applied
Radiation and Isotopes (2016):

a) "Application of the GUM Supplement 1 to uncertainty estimation of Monte Carlo computed efficiency in gamma-ray spectrometry", autori: O. Sima, M.-C. Lépy (prezentare orală, GS-O-104, doi:10.1016/j.apradiso.2015.11.097);

b) "Standard sources for the measurement of ^{210}Pb – ^{210}Po chain activity", autori: A. Antohe, M. Sahagia, A. Luca, M.-R. Ioan, C. Ivan (lucrare poster LSC-P-36, doi:10.1016/j.apradiso.2015.12.020).

La această conferinţă, Prof. Dr. Octavian Sima (Universitatea din Bucureşti, Partener 2 la proiect) a fost membru în Comitetul Ştiinţific, referent coordonator pentru lucrări de spectrometrie gama, organizator şi moderator al secţiunii de spectrometrie gama şi al întâlnirii grupului de lucru de spectrometrie gama al ICRM, fiind desemnat şi coordonator al grupului de lucru de spectrometrie gama al ICRM pentru perioada 2015-2017.

Etapa 5 (01.01.2016-31.12.2016):

La conferinţa internaţională „1st International Conference on Radioanalytical and Nuclear Chemistry" (RANC-2016), 10-15 aprilie 2016, Budapesta, Ungaria, dr. A. Luca a prezentat lucrarea orală "Radon gas activity measurements in the frame of an international comparison", autori: A. Luca, M. Sahagia, A. Antohe, M.-R. Ioan, L. Serbina, C. Ivan (lucrare publicată ulterior în revista J. Radioanal. Nucl. Chem.);

Prof. Dr. Octavian Sima, responsabil al proiectului din partea Universităţii din Bucureşti, a participat la conferinţa "International Conference on Radionuclide Metrology –Low Level Radioactivity Measurement Techniques" (ICRM-LLRMT 2016), Seattle, SUA (26-30 septembrie 2016), unde a prezentat două lucrări orale referitoare la proiect:

a) O. Sima, A. Luca, M. Sahagia, "Monte Carlo simulation of air sampling methods for the measurement of radon decay products";

b) O. Sima, "Efficiency computation for gamma-ray spectrometry assessment of samples with intrinsic inhomogeneity".

Ambele lucrări vor fi publicate în revista Appl. Radiat. Isot. în cursul anului 2017.

La această conferinţă, prof. O. Sima a fost membru al Comitetului Ştiinţific (de program) al conferinţei, a organizat şi moderat două secţiuni: Radiometrics, şi respectiv Metrology of NORM, a fost referent coordonator (Associate Guest Editor) pentru lucrările prezentate la secţiunea Radiometrics şi referent pentru lucrări prezentate la sesiunea de tehnici de masură pentru probe cu radioactivitate de nivel redus.

a) PUBLISHED ARTICLES

Stage 1 (02.07.2012-31.12.2012)

-There were no articles published during stage 1.

Stage 2 (01.01.2013-31.12.2013):

1) M. Sahagia, A. Luca, A. Antohe, C. Ivan, R. Ioan, B.L. Neacşu, "Realization of the metrological traceability chain of Rn-222", Romanian Journal of Physics, vol. 58, Supplement, P. S230-S242, Bucharest, 2013
2) R. Şuvăilă, I. Osvath, O. Sima, "Improving the assessment of activity in samples with non-uniform distribution using the sum peak count rate", Applied Radiation and Isotopes, vol. 81, 77-80, 2013

Stage 3 (01.01.2014-31.12.2014):

1) O. Ott, O. Sima, Q. Zhao, „Distribution of the ^{222}Rn decay products from a ^{226}Ra solution in a PTB ampoule – Implications for calibration", Applied Radiation and Isotopes vol. 87, 365-371, 2014.
2) Denis Glavic-Cindro, Carmen Varlam, Denisa Faurescu, Irina Vagner, Jasmina Kozar-Logar, „Slovenian-Romanian bilateral intercomparison on tritium samples", Applied Radiation and Isotopes, vol. 87, 418-424, 2014.

Stage 4 (01.01.2015-31.12.2015):

M.-C. Lépy, A. Pearce, O. Sima, Uncertainties in gamma-ray spectrometry, Metrologia 52, S123–S145 (2015).

Stage 5 (01.01.2016-31.12.2016):

1) A. Antohe, M. Sahagia, A. Luca, M.-R. Ioan, C. Ivan, "Measurement of liquid scintillation sources of ^{210}Pb obtained from ^{222}Rn decay", Applied Radiation and Isotopes, vol. 109, 286-289, 2016.
2) O. Sima, M.-C. Lépy, „Application of GUM Supplement 1 to uncertainty of Monte Carlo computed efficiency in gamma-ray spectrometry", Applied Radiation and Isotopes, vol. 109, 493-499, 2016.
3) M. Sahagia, A. Luca, A. Antohe, M.-R. Ioan, C. Ivan, Recent work and results of the Radionuclide Metrology Laboratory from IFIN-HH, Rom. Rep. Phys. 68 (1), p. 177-190 (2016).
4) A. Luca, M. Sahagia, A. Antohe, M.-R. Ioan, L. Serbina, C. Ivan, "Radon gas activity measurements in the frame of an international comparison", Journal of Radioanalytical and Nuclear Chemistry, vol. 311, iss. 2, 1075-1079, 2017.

b) CONFERENCES PARTICIPATION

Stage 1 (02.07.2012-31.12.2012)

-At the conference "6th International Conference on Radionuclide Metrology – Low Level Radiation Measurement Techniques" (ICRM-LLRMT'12), Jeju, Republic of Korea, 17-21 September 2012, Prof. Dr. Octavian Sima (University of Bucharest, partener 2 in the project) was a member of the Scientific Committee of the Conference, official referee and moderator for two sessions; he was also coauthor to three papers presented at the conference, one paper directly related to the project being "Improving the assessment of activity in samples with non-uniform distribution using the sum peak count rate", authors: Rareş Şuvăilă, Iolanda Osvath, Octavian Sima (paper published afterwards in the journal Applied Radiation Isotopes, in 2013, as mentioned above, at no. 2).

-At the international symposium "FIRST EAST EUROPEAN RADON SYMPOSIUM" FERAS 2012 September 2nd – 5th, 2012, Cluj-Napoca, Romania, the invited lesson was presented: REALIZATION OF THE METROLOGICAL TRACEABILITY CHAIN OF RADON-222, authors: Maria Sahagia, Aurelian Luca, Andrei Antohe, Constantin Ivan, Răzvan Ioan, Beatris Neacşu (paper published afterwards in the journal Romanian Journal of Physics, in 2013, as mentioned above, at no. 1). Mrs. Dr. Maria Sahagia (IFIN-HH) was a member of the International Scientific Committee of the Symposium and she conducted the first scientific session.

Stage 2 (01.01.2013-31.12.2013)

-At the international conference "19th International Conference on Radionuclide Metrology and its Applications" (ICRM 2013), 17-21 June 2013, Antwerp, Belgium, two papers related to the project were presented and accepted for publishing in the journal Applied Radiation and Isotopes (2014):

a. "Distribution of the ^{222}Rn decay products from a ^{226}Ra solution in a PTB ampoule – implications for calibration", authors: Oliver Ott, Octavian Sima, Qi Zhao (poster paper no. P-044, DOI: http://dx.doi.org/10.1016/j.apradiso.2013.11.059);
b. "Slovenian – Romanian bilateral intercomparison on tritium samples", authors: Denis Glavič-Cindro, Jasmina Kožar Logar, Carmen Varlam, Denisa Faurescu, Irina Vagner (poster paper no. P-135, DOI: http://dx.doi.org/10.1016/j.apradiso.2013.11.058);

It must be stressed out that, at this conference, Prof. Dr. O. Sima (University of Bucharest, partner 2 in the project) was a member of the Scientific Committee, main referee for the gamma-ray spectrometry papers, moderator of one session and organizer of the Gamma-ray Spectrometry Working Group meeting.

Stage 3 (01.01.2014-31.12.2014)

-At the international workshop, 5th Workshop of the Decay Data Evaluation Project (DDEP-2014), 6-8 October 2014, organized at IFIN-HH, Magurele, Romania, http://ddep14.nipne.ro, an oral paper about the project was presented: "Recent work and results of the Radionuclide Metrology Laboratory from IFIN-HH", authors Maria Sahagia, Aurelian Luca, Andrei Antohe, Mihail-Razvan Ioan and Constantin Ivan.

Stage 4 (01.01.2015-31.12.2015):

-At the international conference "20th International Conference on Radionuclide Metrology and its Applications" (ICRM 2015), 8-11 June 2015, Vienna, Austria, two papers related to the project were presented and accepted for publishing in the journal Applied Radiation and Isotopes (2016):

a) "Application of the GUM Supplement 1 to uncertainty estimation of Monte Carlo computed efficiency in gamma-ray spectrometry", authors: O. Sima, M.-C. Lépy (oral presentation, GS-O-104, doi:10.1016/j.apradiso.2015.11.097);

b) "Standard sources for the measurement of ^{210}Pb – ^{210}Po chain activity", authors: A. Antohe, M. Sahagia, A. Luca, M.-R. Ioan, C. Ivan (poster presentation, LSC-P-36, doi:10.1016/j.apradiso.2015.12.020).

At this conference, Prof. Dr. Octavian Sima (University of Bucharest, Partner 2 in the project) was a member of the Scientific Committee, coordinating referee for gamma-ray spectrometry papers, organizer and moderator of the gamma-ray spectrometry section and of the meeting of the ICRM Gamma-ray Spectrometry Working Group; he was designated as Coordinator of the ICRM Gamma-ray Spectrometry Working Group during the period 2015-2017.

Stage 5 (01.01.2016-31.12.2016):

At the international conference „1st International Conference on Radioanalytical and Nuclear Chemistry" (RANC-2016), 10-15 April 2016, Budapest, Hungary, dr. A. Luca presented the oral paper "Radon gas activity measurements in the frame of an international comparison", authors: A. Luca, M. Sahagia, A. Antohe, M.-R. Ioan, L. Serbina, C. Ivan (paper published afterwards in the journal J. Radioanal. Nucl. Chem.);

Prof. Dr. Octavian Sima, project responsible on behalf of the University of Bucharest, participated to the conference "International Conference on Radionuclide Metrology – Low Level Radioactivity Measurement Techniques" (ICRM-LLRMT 2016), Seattle, USA (26-30 September 2016), where he presented two oral papers about the project:

a) O. Sima, A. Luca, M. Sahagia, "Monte Carlo simulation of air sampling methods for the measurement of radon decay products";

b) O. Sima, "Efficiency computation for gamma-ray spectrometry assessment of samples with intrinsic inhomogeneity".

Both papers will be published in the journal Appl. Radiat. Isot. during 2017.

At this conference, prof. O. Sima was a member of the Scientific Committee (Program Committee) of the conference, organized and moderated two sections: Radiometrics, and respectively Metrology of NORM, was the coordinating reviewer (Associate Guest Editor) for the papers presented in the section Radiometrics and reviewer for papers presented in the session of measurement techniques for low level radioactive samples.