**Òåñòèðîâàíèå ìîäåëåé èíòåðïðåòàöèè äàííûõ èçìåðåíèé äëÿ îïðåäåëåíèÿ ïàðàìåòðîâ ðàäèîàêòèâíûõ çàãðÿçíåíèé ïî÷âû íà ïðèìåðå çàãðÿçíåíèÿ òåððèòîðèè Áðÿíñêîé îáëàñòè öåçèåì-137**

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Аннотация. Ðàçðàáîòêè ÈÁÐÀÝ ÐÀÍ, íàïðàâëåííûå íà ðåøåíèå çàäà÷ ðàäèàöèîííîé ðàçâåäêè è ðàäèàöèîííîãî ìîíèòîðèíãà, ïðåäïîëàãàþò ïðèìåíåíèå ìåòîäîâ àýðîãàììà ñúåìêè è ïîëåâîé ãàììà-ñïåêòðîìåòðèè äëÿ îïðåäåëåíèÿ ïëîòíîñòè çàãðÿçíåíèÿ ïî÷âû ðàäèîíóêëèäàìè. Ïðè èíòåðïðåòàöèè èçìåðåíèé, âûïîëíÿåìûõ äàííûìè ìåòîäàìè, âîçíèêàåò íåîáõîäèìîñòü èñïîëüçîâàíèÿ ðàñ÷åòíûõ è ïîëóýìïèðè÷åñêèõ ìîäåëåé ñ öåëüþ îïðåäåëåíèÿ õàðàêòåðèñòèê ðàäèîàêòèâíûõ çàãðÿçíåíèé. Ïðè ýòîì äëÿ äîñòîâåðíîãî ïðèìåíåíèÿ òàêèõ ìîäåëåé òðåáóåòñÿ ïðîâåäåíèå òåñòèðîâàíèÿ íà ýêñïåðèìåíòàëüíîì ìàòåðèàëå. Â äàííîé ðàáîòå íà ïðèìåðå îáðàáîòêè èçìåðåíèé, ïðîâåäåííûõ íà òåððèòîðèè Áðÿíñêîé îáëàñòè, çàãðÿçíåííîé ðàäèîíóêëèäîì Cs-137 â ðåçóëüòàòå àâàðèè íà ×åðíîáûëüñêîé ÀÝÑ, ïîêàçàíî ïðèìåíåíèå ðàçëè÷íûõ ìîäåëåé èíòåðïðåòàöèè ýêñïåðèìåíòàëüíûõ äàííûõ, îñíîâàííûõ êàê íà îáùåèçâåñòíûõ ïîäõîäàõ, òàê è íà ðàçðàáîòêàõ ÈÁÐÀÝ ÐÀÍ, ñ öåëüþ îïðåäåëåíèÿ àêòèâíîñòè Cs-137 â ïî÷âå. Ïðîâåäåíî ñðàâíåíèå çíà÷åíèé àêòèâíîñòåé, ïîëó÷åííûõ ìåòîäàìè ïîëåâîé ñïåêòðîìåòðèè, àýðîãàììà ñúåìêè, à òàêæå â ðåçóëüòàòå ïîâåðõíîñòíîãî îòáîðà ïðîá ïî÷âû, âûïîëíåí àíàëèç ïîëó÷åííûõ ðàñõîæäåíèé ðåçóëüòàòîâ.

Êëþ÷åâûå ñëîâà: ðàäèîàêòèâíîå çàãðÿçíåíèå ïî÷âû Cs-137, àýðîãàììà ñúåìêà, ïîëåâàÿ ãàììà-ñïåêòðîìåòðèÿ, ãèáðèäíûé ìîíèòîðèíã, èíòåðïðåòàöèÿ äàííûõ ãàììà-ñïåêòðîìåòðèè, ïðîôèëü çàãëóáëåíèÿ àêòèâíîñòè.

**Testing of Measurements Data Interpretation Models for Determination of Radiation Contaminations Parameters by Example of Bryansk Region Cs-137 Contamination**

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Abstract. There are IBRAE RAN developments intended for radiation exploration and monitoring tasks that assume application of aero-gamma survey and in-situ gamma-ray spectrometry for the determination of radionuclides density in soil. Measurements data interpretation requires application of calculation and semiempirical models to determine parameters of radioactive contaminations. To confirm reliability of these models it in necessary to carry out testing on experimental data. In this paper application of different models based on well-known and developed by IBRAE approaches is shown by example of processing of measurements data obtained at Bryansk region territory, contaminated by Cs-137 due to Chernobyl Nuclear Power Plant accident. As a result, Cs-137 activities in soil have been calculated using experimental data of aero-gamma survey, in-situ gamma-ray spectrometry and soil sample collection, analysis of calculated values has been conducted.

Key words: Cs-137 soil radiation contamination, aero-gamma survey, in-situ gamma-ray spectrometry, hybrid radiation monitoring, gamma-ray spectrometry data interpretation, activity depth profile.