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# Utilization of Unmanned System for Environmental Sampling in CTBT OSI

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Areas contaminated with high or lethal radioactivity are deemed as the highest risk for the OSI inspectors if they stay or work there. Besides, other harsh environments, tough conditions, limited personnel also makes the challenge for an OSI system. These circumstances call for an advanced approach to deal with those problems. In this case, an unmanned system equipped with sampling gears could make the most of its advantages. We developed an unmanned OSI environmental sampling system prototype, and the laboratory and field tests have been carried out based on this prototype. The test results indicates that the system has the advantages of robust and functioning properly in harsh conditions with the capability of perception, communication, navigation, reliability, persistence, maintainability, mobility, etc. Using this system, the efficiency of OSI environmental sampling are greatly improved and the personnel security is guaranteed.

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