NeverMine Technologies

Remote Elemental Intelligence

A PLATFORM FOR SHALLOW SUBSURFACE CHEMICAL MAPPING

Mines, Explosives and Beyond

May 2026

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Core Technology:

Detect and map chemical/explosives signatures by analysing Neutron/ Gamma response from shallow subsurface targets (Patent Pending)

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FNAA (Fast Neutron Activation Analysis)

- Mature technology
- Used in labs and drills

FAST NEUTRON ACTIVATION ANALYSIS (FNAA) – SCHEMATIC DIAGRAM
WITH D–T NEUTRON GENERATOR

1 NEUTRON SOURCE
D–T NEUTRON GENERATOR

Reaction:

$D + T \rightarrow \alpha + n\ (14.1\ MeV)$

Fast neutrons are produced via the fusion of deuterium and tritium.

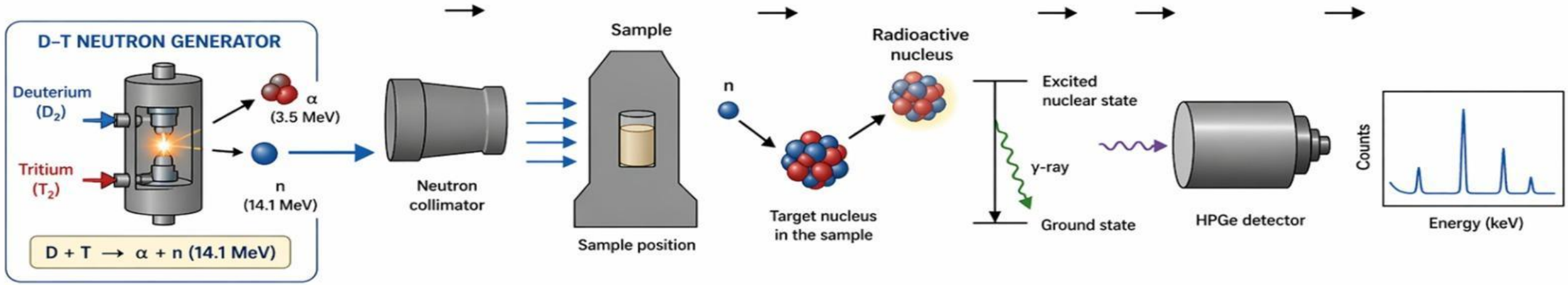
2 NEUTRON IRRADIATION
Fast neutrons are directed onto the sample.

3 NUCLEAR REACTIONS
Fast neutrons interact with nuclei, producing radioactive (activated) isotopes.

4 DECAY OF RADIONUCLIDES
The activated nuclei decay, emitting characteristic gamma rays.

5 GAMMA-RAY MEASUREMENT
Gamma rays are measured using a high-purity germanium (HPGe) detector.

6 DATA ANALYSIS
Gamma-ray energies and intensities are used to identify and quantify elements in the sample.



SUMMARY OF THE METHOD

High Penetration

Fast neutrons penetrate deeply, allowing bulk sample analysis.

Multi-element Capability

^{11}Na ^{17}Cl ^{26}Fe ^{27}Co ^{30}Zn ^{35}Br

Many elements can be determined simultaneously.

Non-destructive

The sample remains intact after analysis.

Sensitive and Accurate

High sensitivity and good accuracy for a wide range of elements.

Typical Applications

Geology, environmental studies, archaeology, materials science, forensics, and more.

D–T FUSION REACTION (NEUTRON SOURCE): $D + T \rightarrow \alpha\ (3.5\ MeV) + n\ (14.1\ MeV)$

GENERAL NUCLEAR REACTION (IN SAMPLE):

$$^{A}_{Z}X + ^{1}_{0}n \rightarrow ^{A+1}_{Z}X^{*} \rightarrow ^{A+1}_{Z}X + \gamma$$

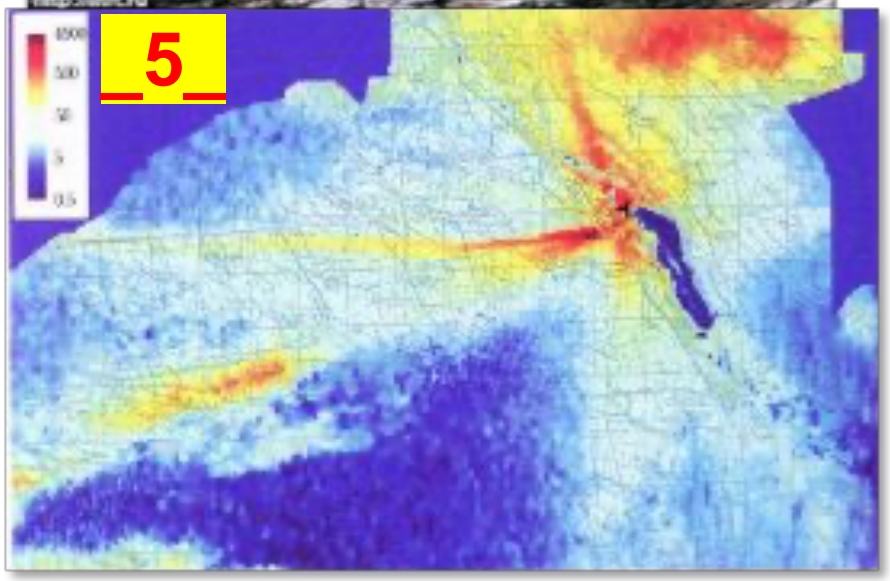
n – fast neutron; $^{A}_{Z}X$ – target nucleus; $^{A+1}_{Z}X^{*}$ – excited nucleus; $^{A+1}_{Z}X$ – radioactive nucleus; γ – gamma ray; α – alpha particle

Chernobyl - Proprietary Algorithms and Sensors

Developed over 40 years following the Chernobyl Incident

Radiation devices and systems (1986-2025)

Unique Gamma Analysis based on Customized Sensors and Proprietary Algorithms



Proprietary

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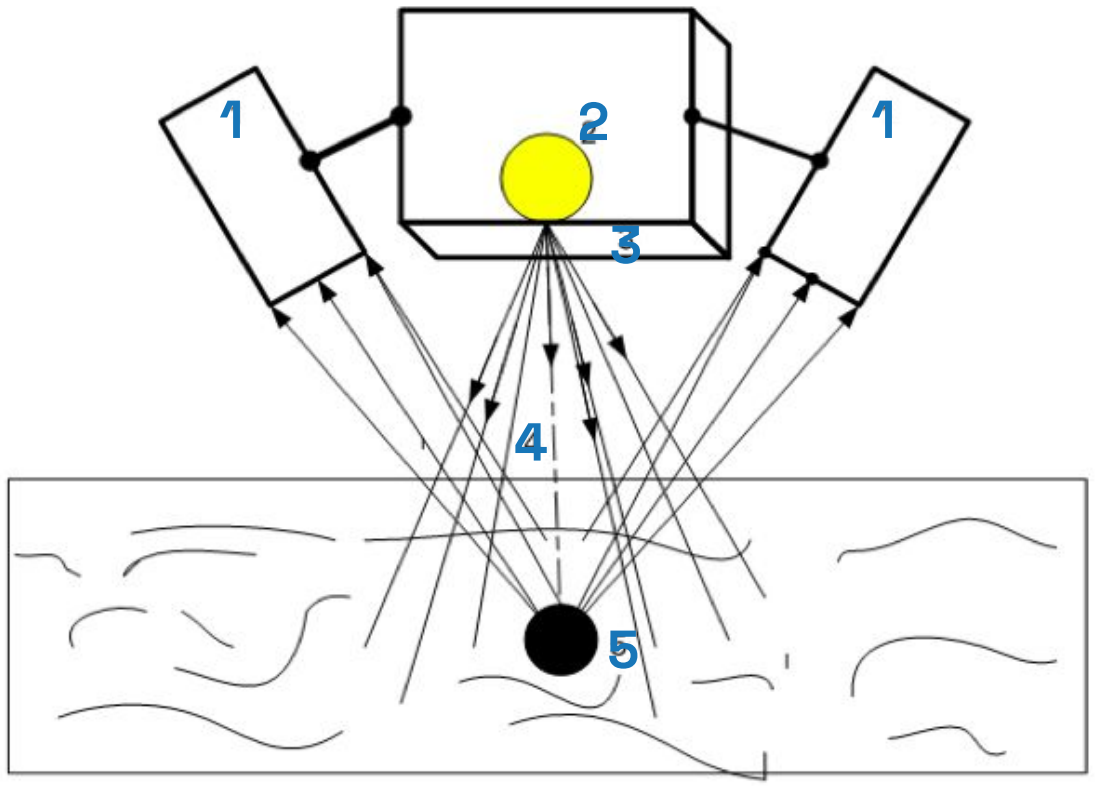
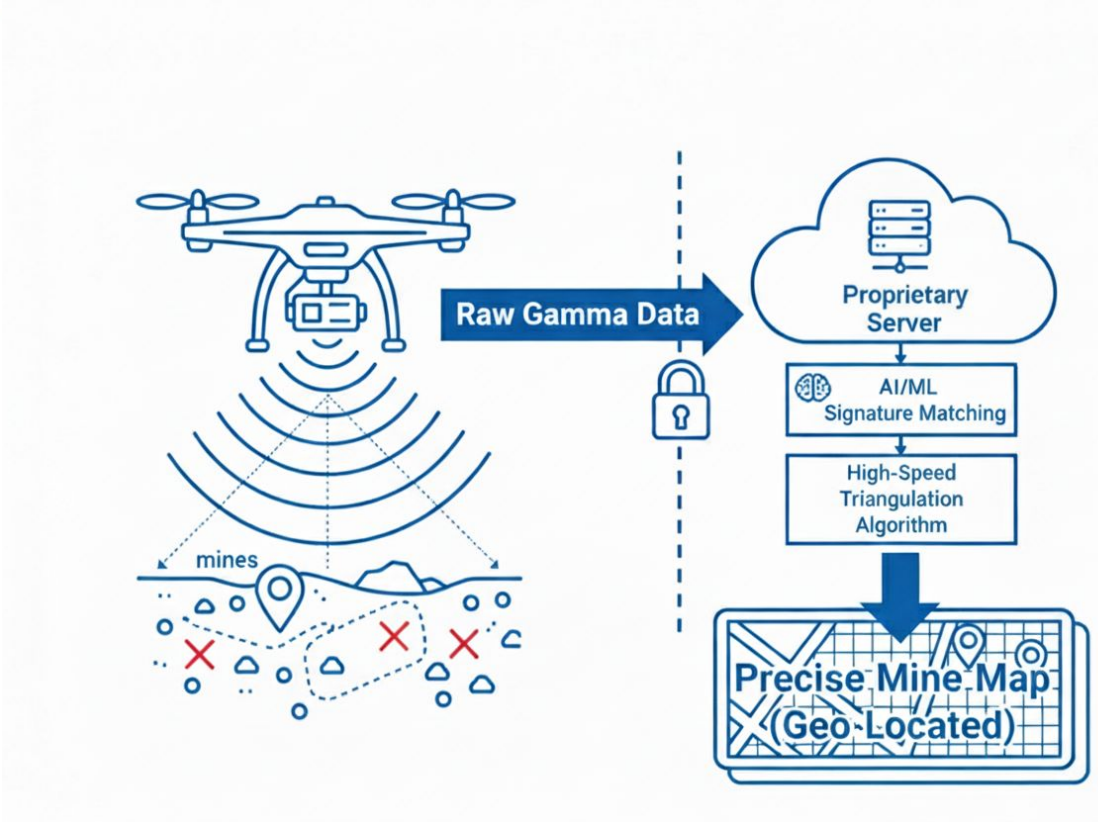
NeverMine Combines FNAA with Unique Gamma Analysis based on Customized Sensors and Proprietary Algorithms





1 Detectors **2** Neutron source **3** Collimator **4** Neutrons + Gammas **5** Mine

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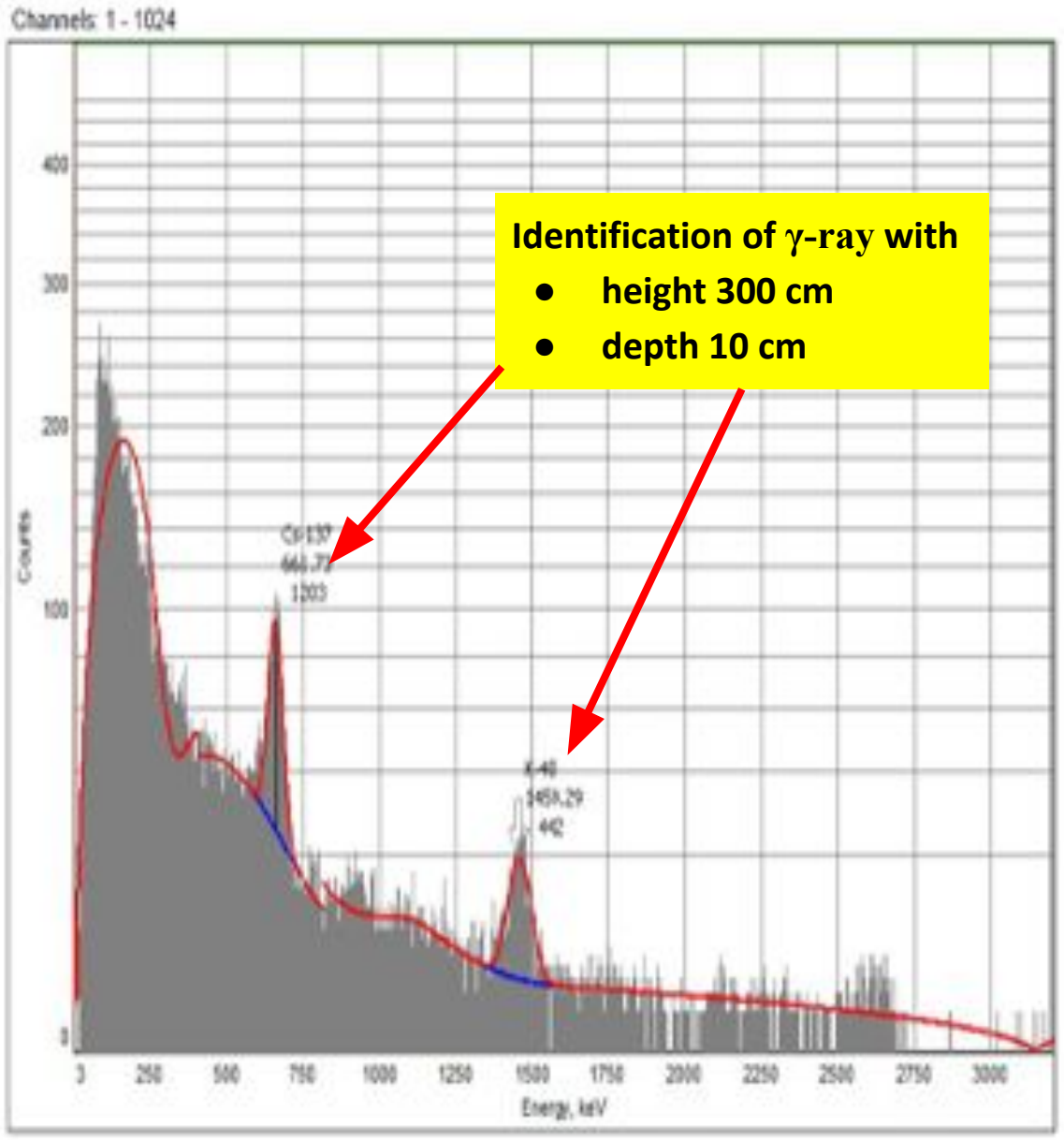
First Phase: Mine and Explosives Detection

Traction with key entities

POC Report

Channel	Energy, keV	FWHM, keV	Area	Area uncert.	Nuclides	Activity, Bq
465,921	1459,292	78,659	442	53	K-40	41
211,373	661,731	51,310	1203	107	Cs-137	14



CONCLUSIONS

1. A detection system was developed and tested in the laboratory, demonstrating high efficiency in identifying gamma radiation sources, including concealed ones

2. Software for real-time detection of gamma radiation sources was tested

3. The results obtained indicate a 99.5% probability of detecting BB even in conditions of a interfering man-made background.

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How can the ITG Community help

- Partners (Demining Projects & Companies)
- Financing (We are in a financing round)

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Thank You!

For additional information, collaboration opportunities, or follow-up discussions, please contact:

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