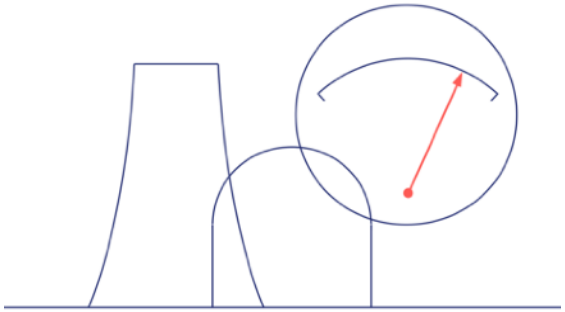
TDRM

TIHANGE DOEL RADIATION MONITORING



A network for independent monitoring of radioactivity in the Tihange–Doel region and beyond

www.tdrm.eu

A project of

FIfF e.V.

Radioactivity—the invisible threat

Within reach of several major cities in Belgium, the Netherlands and Germany, two nuclear power plants, Tihange and Doel, are kept in operation despite of severe safety issues. Every day with those power plants in operation increases the danger of an accident exposing the environment to excessive radioactivity.

Radioactive radiation is invisible. It can neither be felt or smelled. Considering the danger of radioactive substances, this is at the very least unsettling. Even low dose rates can pose a significant risk. This makes it essential to have access to accurate information about the extent of radioactivity in the region.

Particularly people living in regions with increased risk of dangerous radioactive exposure need to be aware of the level of radiation. This holds generally for regions around nuclear power plants —even more so, if their reactors have been shown to be prone to failures caused by age or design weakness. The eldest reactors at Tihange (1975) and Doel (1974) are, unfortunately, in this category. A major accident of one of those would affect Belgium entirely as well as large areas of the Netherlands, France and Germany!

Knowledge requires measured data!

Radioactive radiation can be measured with special sensors. Their output can be plotted to make radiation ‘visible’. Measured data is often displayed relative to environmental radiation level or compared to dangerous thresholds. The analysis of radiation over time and geographic location reveals trends and enables us to recognise alarming events. This is vital for the planing of appropriate measures for prevention and protection.

Yet another network?

Several governmental organisations and voluntary initiatives operate measurement stations already. Why did scientists, engineers and IT experts develop, build and operate yet another network?!

First, we want to stay independent of political, commercial and administrative factors. Second, we want to have free and unrestricted access to the entirety of measured data—for analysis and assessment of past radioactivity levels as well as for enabling immediate access to the public. Concerned citizens should be able to stay informed without delay and restrictions, about the current situation as well as about the past.

Our mission

The network pursues three essential and in part interconnected objectives:

- To satisfy the need for information of concerned citizens living in the area by enabling public access to raw radiation data, particularly gathered at relevant locations. To contribute thereby to the awareness of the risks and threats of the exploitation of nuclear power.
- To underline the demand for transparency of political bodies and authorities by demonstrating the awareness of the citizens by their desire for an independent information source. To support, this way, the political activities of the *Aachen* Alliance against Atomic Power (AAA), and to contribute to the ultimate goal to close down all reactors at Tihange and Doel.
- To provide specially tailored data for a team of members of the International Physicians for the Prevention of Nuclear War (IPPNW) with particular expertise in the effects of radioactive radiation on health. To support the team, in cases of unusual events, to evaluate the radiation data in order to propose as early as possible appropriate preventive and protective measures to the authorities.

Technology in motion

So far, 20 sensor stations have been manufactured. Their simple design allows production at low cost. Each station captures the dose rate of atmospheric Gamma radiation. While most of them have been installed in proximity to the power plants Tihange and Doel as well as in Liege, further stations are situated more to the east, e.g. in Aachen and in the Eifel, preferably placed in clusters to enhance, by means of mutual approval, the reliability of the data.

The focus in the current project phase was not set on the highest precision possible but on a fast response to changing environmental conditions. With updates every few minutes (rather than within hours) we are able to estimate trends and recognise unusual events. With newer versions we attempt to identify specific isotopes.

Our website, **www.tdrm.eu,** offers a geographic map with the sensor station locations, a compilation of actual measurements, as well as trends and statistics with detailed curves. Furthermore, we offer information about technology, about medical background, and about other measuring networks, initiatives, and action groups.

TDRM—under the patronage of FIfF

The NGO Forum of Computer Scientists for Peace and Social Responsibility (Forum InformatikerInnen für Frieden und gesellschaftliche Verantwortung, FIfF) is patrons of the TDRM project. FIfF is an collaboration of individuals who critically address the impact of computer science and information technology on society. They operate in various technical and non-technical sectors, raise the public awareness of risks and stand up for digital rights.

The project is realised by voluntary work alone. Only the purchase of the components for the manufacturing and installation of sensor stations (about 250 € per station) is financed by donations. All donations will exclusively and in full extent benefit the project. Donations are eligible for tax relief.

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