

**Discussion on a paper
of Elizabeth Gibney in Nature
“CERN prepares to expel Russian scientists
— but won’t completely cut ties”
published 18 September 2024**

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JINR, Dubna, Russia, also Imperial College, London, UK
Science4Peace meeting, October 2024**

I will talk only on behalf of myself

I use open information and provide links to it everywhere in my talk

I was staying in CERN in 1995-2018 working for CMS and I am strongly against penetration of politics in CERN which unfortunately happen.

There are some not quite correct statements in the paper I want to point out at the beginning of my talk

- «The laboratory (CERN) has ended its agreement with the nation, but will continue working with a Russian nuclear-research institute»
 - *JINR: The Joint Institute for Nuclear Research is an international intergovernmental scientific research organization*
- «But tension over CERN's relationship with Russia remains among researchers, because the organization will continue to work with Russia-based scientists through an agreement with the Joint Institute for Nuclear Research (JINR), an intergovernmental centre in Dubna, near Moscow.»
 - *my comment: I personally do not see any tensions with my CMS colleagues as JINR physicists continue to work for CMS. I see that people do not care at all about it with one exception of Ukrainian CMS physicist Boris Grynov, representing Ukraine in CERN Council*

**Now I come
to the main issue**

Statements of Boris Grynov and Tetiana Hrynova cited in the paper

1. Although JINR's constitution states that its research must be for peaceful purposes, the lab has close ties with the Russian military, say Grynov and Tetiana Hryn'ova, a Ukrainian physicist at the French national research agency, CNRS, who works on the ATLAS experiment. She points to JINR brochures that highlight research with military applications, such as drone fuel cells, and documents on the institute's website that show collaboration with companies in Dubna that manufacture missiles".
 - no references were given for justification of Tetiana's statements
 - thanks to Elizabeth, who provided references on Hannes's request
2. CERN works with institutions in other countries that have separate military ties. But "when missiles made in Dubna are now falling on my colleagues' heads, it becomes more unacceptable", says Hryn'ova.
 - my question is: does JINR have a joined military projects with Dubna's missiles producer, MKB Raduga ?

Some information about Boris and Tetiana

- **Boris Grynov** former Ukrainian representative in JINR, member of JINR Scientific Council (2008-2022). Member of CMS collaboration. Since March 2017 Ukrainian representative in CERN Council
- **Tetiana Hrynova**, Researcher in LAPP, Annecy, France. ATLAS collaboration.
 - published recently an interesting paper "Science vs Propaganda: The case of Russia", Submitted on 12 Aug 2024.

Some information about JINR



- **The Joint Institute for Nuclear Research is an international intergovernmental scientific research organization established through the Convention signed on 26 March 1956**
- **world known scientists: Nikolay Bogolyubov, Vladimir Veksler, Georgy Flyorov**
- **JINR has at present 16 Member States: Armenia, Azerbaijan, Belarus, Bulgaria, Cuba, Arab Republic of Egypt, Georgia, Kazakhstan, D. P. Republic of Korea, Moldova, Mongolia, Romania, Russia, Slovakia, Uzbekistan, and Vietnam.**
- **SEVEN-YEAR PLAN FOR THE DEVELOPMENT OF JINR 2017–2023**
 - no participations in the military projects
- **Seven-Year Plan for the Development of JINR 2024-2030**
 - no participations in the military projects
- **JINR statement at March 2022**

“We reconfirm our full commitment to the Charter of the Institute, reasserting that all our common resources are used solely for peaceful purposes and the benefit of humankind.”

Some information about MKB Raduga

- Raduga Design Bureau, where *raduga* literally means "rainbow") is a Russian aerospace company, concerned with the production of various missile-systems and related technologies. It is headquartered in Dubna, Moscow Oblast.
- founded in October 1946 - OKB-2



Now I came to the event which created a lot of speculations about JINR involvement into military programs initiated by our Ukrainian colleagues

- Meeting of the Council for Science and Education of the Russian Federation held on June 13, 2024 in JINR under the chairmanship of Vladimir Putin.
 - pay attention to what Georgy Trubnikov, JINR director said. There was nothing about military projects in JINR or involvement of JINR in the projects with Russian Defence Ministry



Now I came to the references provided by Elizabeth

**I was trying to figure out from these links
does JINR participate in the military projects in collaboration with
MKB Raduga or any other military projects**

Reference 1

“This 2023 brochure

https://www.jinr.ru/wp-content/uploads/Brochures/JINR_A4_brochure_business_rus.pdf

includes joint projects between JINR and businesses. It includes a fuel cell for a drone (UAV, page 4), which is a dual use technology.”

Google translator:

Fuel cell UAVs have clear advantages (multiple increased flight time, accelerated refueling time) in front of the UAV on the battery for long-distance transportation of goods in the harsh Russian climate. It is expected that the installation with an electrochemical generator based on fuel cell with a capacity of up to 200 kW can be lifted into the air cargo unmanned helicopter take-off weight 750 kg

Does it say anything about military implication of a such technology ?

Can it be used for a military applications ? I do not think so, but you might know better than me.

Reference 2

“This (from 2009) discusses a joint technical training programme with MKB Raduga (also known as Engineering Design Raduga or Raduga Design Bureau https://www.jinr.ru/posts/post_4341/ .

The programme was not a one-off (this was its 10th anniversary)”

The MIREA Chair “Electronics of physics facilities” celebrates the 10th anniversary of its foundation in Dubna. It trains specialists for the JINR and EDB (Engineering Design Bureau) “Raduga”. The meeting “10 years of the basic MIREA Chair “Electronics of physics facilities” will be held on 23-24 November in the International Conference Hall in Dubna. Leading JINR scientists, specialists of EDB “Raduga” and graduates of the department will participate in the meeting. The student conference will be held in the frames of the meeting.

MIREA — Russian Technological University (RTU MIREA) is The Federal State Budget Educational Institution of Higher Education «MIREA — Russian Technological University». Founded in 1947

The university got the name of the Moscow Institute of Radio Engineering, Electronics and Automation (MIREA) on June 30, 1967

Does it mean that JINR and Raduga have a common military projects ?

I do not think so.

Reference 3

“This https://www.jinr.ru/posts/post_927/ (from 2015) discusses joint work on an in-space physics experiment. It says “several versions of the developed and manufactured trigger system modules were tested both on the SPS beams at CERN [LG: I think via JINR affiliated colleagues] and on the I. P. Chupin stands at the Raduga Design Bureau under the supervision of a military representative.”

Google translator:

- The NUCLEON detector was launched in Baykonur into the orbit of the Earth's satellite
- NUCLEON Collaboration was lead by SiNP MSU.
- Detector was designed to study the spectrum and composition of cosmic rays with an energy of 10^{11} – 5×10^{14} eV in the region of the so-called elbow (a fracture in the slope of the spectrum), discovered by Soviet physicists more than 50 years ago.
- For many years, an indispensable designer of the mechanics of the trigger system was N. S. Tolstoy from the JINR Design Bureau.
- Several versions of the developed and manufactured modules of the trigger system were tested both on SPS beams at CERN and on I.P. Chupin's stands at the Raduga Design Bureau under the supervision of a military representative

Is NUCLEON detector is a common military project with Raduga ? I do not think so.

My conclusions

- **JINR is not involved into any Russian military projects**
- **two Ukrainian colleagues from CMS and ATLAS started a good “provocation” war against Russian colleagues with the goal to exclude JINR from CERN**
- **I regret very much about it**
- **I do not think it is good idea for Nature to cite Ukranian colleagues without a proper references**

**Many thanks to Hannes and Elizabeth
for a good discussions and clarifications
via email exchange**

Finale

- Paper style reminded me a lines were written by Russian poet Michel Lermontov (1814-1841) in the poem "Journalist, Writer and Reader" (1840). Thanks to Olga Kodolova (MSU and JINR, CMS Collaboration) who pointed me out on these lines:

“Намеки толстые на то
про что не ведеат никто”

Google translator:

“thick hints of this
what no one knows about”

