

# **Józef Rotblat (1908-2005)**

# **Józef Rotblat (1908-2005)**

**Ph.D. Physics UW 1938**

# **Józef Rotblat (1908-2005)**

**Ph.D. Physics UW 1938**

**Peace Nobel Price 1995**

# **"Official" Polish Nobel Prize winners**

1. Maria Skłodowska-Curie 1903, 1911  
(also the French laureate)
2. Henryk Sienkiewicz 1905
3. Władysław Reymont 1924
4. Czesław Miłosz 1980 (also laureate of the  
USA and Lithuania)
5. Lech Wałęsa 1983
6. Wisława Szymborska 1996
7. Olga Tokarczuk 2018

**Memory board  
in London on  
the corner of  
Great Russell  
Street and  
Bury Place  
unveiled in  
2017**



# Józef Rotblat Square

From October 31, 2018  
- the green area at the  
intersection of Smocza  
and Nowolipki streets is  
named as **Józef  
Rotblat Square**



**This board was unveiled in the Auditorium Maximum UW in 2016.**



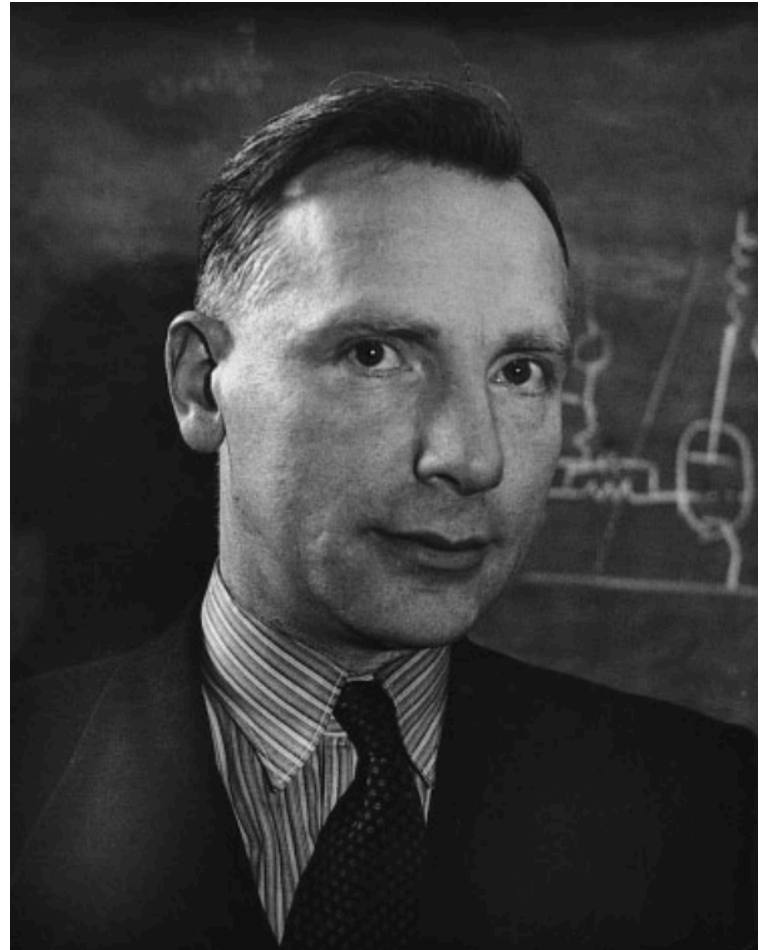
JOZEF ROTBLAT

(4.11.1908 - 31.08.2005)

FIZYK I DZIAŁACZ NA RZECZ POKOJU.  
ABSOLWENT UNIWERSYTETU WARSZAWSKIEGO.  
UCZESTNIK PRAC PRZY PROJEKCIE  
MANHATTAN, PIERWSZY NAUKOWIEC  
W HISTORII, KTÓRY ZREZYGNOWAŁ Z PRAC  
NAD BRONIĄ ATOMOWĄ ZE WZGLEDÓW  
MORALNYCH. LAUREAT POKOJOWEJ  
NAGRODY NOBLA Z 1995 ROKU.

# Józef Rotblat (1908-2005)

Born in Warsaw at Miła Street in Muranów, as a child of Szajndla and Zelman Rotblat. His father had a transport company and a horse breeding business. During World War I, in 1915, the horses were confiscated and the company went bankrupt. He graduated from the Craft School as an electrician. Then he studied physics at Wolna Wszechnica Polska, master's degree in 1932.



**Marriage with  
Hadasa (Tola)  
Gryn in 1934.**

**Born in 1913,  
Matura exam in  
Lublin 1928**

**Graduated in  
Polish studies  
UW in 1933**



16. Zdjęcie legitymacyjne Toli

# Warsaw University

On November 15, 1932, he was admitted to the first year of studies at Wydział Humanistyczny UW. A special, one-year pedagogical course gave him the right to teach physics in secondary schools. Then, until January 1934, he attended lectures on philosophy, psychology and logic at Wydział Humanistyczny UW (among others Władysława Tatarkiewicza i Tadeusza Kotarbińskiego).

PAMIECI

OFIARODAWCY GMACHU TEGO

PROTEKTORA

TOWARZYSTWA NAUKOWEGO WARSZAWSKIEGO

JOZEFA HR. POTOCKIEGO

1922

W TYM GMACHU

DZIAŁAŁA W LATACH 1913 - 1939  
PRACOWNIA RADIOLOGICZNA  
TOWARZYSTWA NAUKOWEGO WARSZAWSKIEGO  
KTÓREJ HONOROWYM DYREKTOREM BYŁA

MARIA SKŁODOWSKA - CURIE

DLA UCZCZENIA STULECIA ODKRYCIA POLONU I RADU  
W HOŁDZIE ODKRYWCOM TYCH PIERWIASTKÓW

MARII SKŁODOWSKIEJ - CURIE

I  
PIOTROWI CURIE

TABLICĘ TĘ WMUROWANO WE WRZESNIU 1997 ROKU  
POLSKA AKADEMIA NAUK  
TOWARZYSTWO NAUKOWE WARSZAWSKIE

# **Pracownia Radiologiczna Warszawskiego Towarzystwa Naukowego, ul. Śniadeckich 8**

**Organized from 1912, honorary director Maria Skłodowska-Curie. Real director dr Jan Kazimierz Danysz (1884-1914). Next prof. Ludwik Wertenstein (1887-1945).**

**Both were her students.**

**Assistants – Józef Rotblat and Marian Danysz (1909-1983).**

**Wertenstein was real supervisor of Rotblat's Ph.D. Thesis.**

# Ph.D. Thesis

**On October 10, 1938, he obtained a doctoral degree at Wydział Matematyczno-Przyrodniczy UW.**

**His official supervisor was prof. Stefan Pieńkowski.**

**Title of the dissertation: *"Research on neutron disintegration processes using an ionization chamber and a Hoffman electrometer."***

**The defense of the doctorate continued around 6 hours !!!**



My

REKTOR UNIWERSYTETU JÓZEFA PIŁSUDSKIEGO W WARSZAWIE

STEFAN PIENKOWSKI  
PROMOTOR

J Ó Z E F R O T B L A T

Nr. 216



WŁODZIMIERZ ANTONIEWICZ      WACŁAW ROSZKOWSKI      STEFAN PIENKOWSKI  
REKTOR      DZIEKAN      PROMOTOR

# **Liverpool since 1939 year**

Since April 1939 - scholarship in England (Liverpool), in the laboratory of Nobel Prize winner James Chadwick.

In August 1939, he came to pick up his wife, and made a tragic mistake. Tola was not feeling well after the appendix surgery and insisted on postponing the trip. She also was not ready to leave her parents. He left alone and never saw her again.

# How to evacuate Tola to England?

- Through Denmark – Niels Bohr was ready to send her an invitation, but in April 9, 1940 Denmark was attacked by Germans.
- Through Italy – Toeplitz family send an invitation, but in 10 June 1940 Italy declared war against England.
- She died in the concentration camp in Bełżec (woj. lubelskie) probably in 1942.

# **Dramatic moment in Physics**

Dec. 22, 1938 - Hahn & Strassmann -  
bombarding uranium with neutrons leads to  
the creation of elements twice lighter than  
uranium, including: barium and lanthanum.

Feb. 18, 1939 - Meitner & Frish – explained  
this as uranium nuclear fission.

# Emission of neutrons

Before depart to England in February and March 1939 year, Rotblat was looking for neutrons emitted during fission of uranium.

Results published in „Nature” 20 V 1939.

***Emission of Neutrons accompanying the Fission of Uranium Nuclei***

Two months earlier [H. VON HALBAN JUN.](#), [F. JOLIOT](#) & [L. KOWARSKI](#) published first results on this subject - ***Liberation of Neutrons in the Nuclear Explosion of Uranium***

# Rotblat and the bomb

He claimed that he was the first in England to propose the construction of a bomb:

*"Unfortunately, I was the first to invent this bomb!"* He presented his calculations to Chadwick in November 1939. Chadwick was to convey this to Churchill.

In March 1940 – Memorandum Frish-Peierls  
– atomic bomb 5 kg of Uranium

# James Chadwick (1891-1974)

Chadwick thought highly of Rotblat. In 1940, in a letter to John Cockroft, he wrote:

*„I don't know if you met Rotblat, a Pole who has been here about nine months. He is extremely able man, one of the best I have come across for some years”.*

# MAUD Committee

Created in April 1940. Program name ***Tube Alloys***. Research at the universities of Birmingham, Liverpool, Oxford and Cambridge.

In summer 1941, report sent to the USA.

*"...an effective uranium bomb could be constructed that would contain about 25 pounds of active material...."*

James Chadwick, Otto Frish, Rudolf Peierls, Klaus Fuchs, Józef Rotblat.

**In USA start on 17 VI 1942**

**Roosevelt approved a detailed program to build an atomic bomb with a budget of \$85 million.**

**The Manhattan Engineer District was established, and on September 23, 1942, Leslie Groves was appointed general and its chief.**

# **Quebec – August 1943**

**Winston Churchill and President Roosevelt agreed in Quebec that the bomb would be made in the USA.**

**Most English physicists left there in December 1943. Rotblat refused to change his citizenship.**

**The Americans blocked his departure.**

**James Chadwick intervened with General Groves himself. Ultimately, Rotblat was the only one who went to Los Alamos with a Polish passport.**

**It is worth adding that two Frenchmen, Von Halban and Kowarski, collaborators of Frederic Joliot-Curie, worked as part of the Manhattan Project in Montreal, but they were not allowed to enter Los Alamos.**

# Documentary from Los Alamos



# FBI File

The FBI was looking for spies in Los Alamos. They missed Klauss Fuchs, but Rotblat turned out to be the perfect candidate. He signed up for a Sunday aviation course in Santa Fe, so it was decided that he definitely wanted to return to Europe, join the RAF, fly to Poland, parachute out and pass on nuclear secrets to the Russians. It was claimed that he had communist views. Moreover, they were attributed to people he met with.

# **November 1944**

**"One day in November 1944, [Chadwick] came to Los Alamos and told me that he had just received an intelligence report showing that the Germans had given up on building the bomb...**

**When he told me this... I replied unequivocally that I gave up further work on building a bomb."**

# He was not the first

**Edward Condon** left in 1943 after six weeks. *"I only want to say that in my case I found that the extreme concern with security was morbidly depressing."* He was later working outside on Manhattan Project.

**Felix Bloch** left in 1943, and joint radar group at Harvard.

**Lisa Meitner, Max Born** and several others refused strongly to work with the bomb.



Tom Herzberg, United States

## Leaving the bomb project

*A nuclear physicist responsible for helping design the atomic bomb tells for the first time why he decided to leave Los Alamos in 1944.*

***Bulletin of the Atomic Scientists. 41 (7): 16–19, 1985.***<sup>29</sup>

# The documents

Rotblat recounted how a box containing **"all my documents"** went missing on a train ride from Washington D.C. to New York as he was leaving the country. However the presence of large numbers of his personal papers from Los Alamos archived at the Churchill Archives Centre is totally at odds with his account of events.

# **Return to England**

**He returned to England, and became Director of Research in Nuclear Physics at Liverpool University. He took up British citizenship and brought the surviving part of his family from Poland - including mother, brother and sister with their families. The family escaped from the Warsaw ghetto and hid in Otwock.**

**He co-found the Atomic Scientists' Association in 1946, and instigating the Atom Train, an exhibition that toured Britain, 1947-8, and later Europe and the Middle East.**

# **New work place**

**In 1949 he became Professor of Physics at St Bartholomew's Hospital, a teaching hospital attached to the University of London, where he worked until 1976.**

**In 1950-76 he was Chief Physicist at St. Bartholomew's Hospital.**

**In 1960-72 he was Editor-in-Chief of *Physics in Medicine and Biology***

**He dealt with the impact of radiation on living organisms.**



# Test Castle Bravo

March 1, 1954 Ulam-Teller bomb with lithium deuteride (400 kg).

Called **Shrimp** built in Los Alamos. Size 4.56 m x 1.37 m weight 10.6 tons.

Calculated efficiency – approx. 4-6 MT

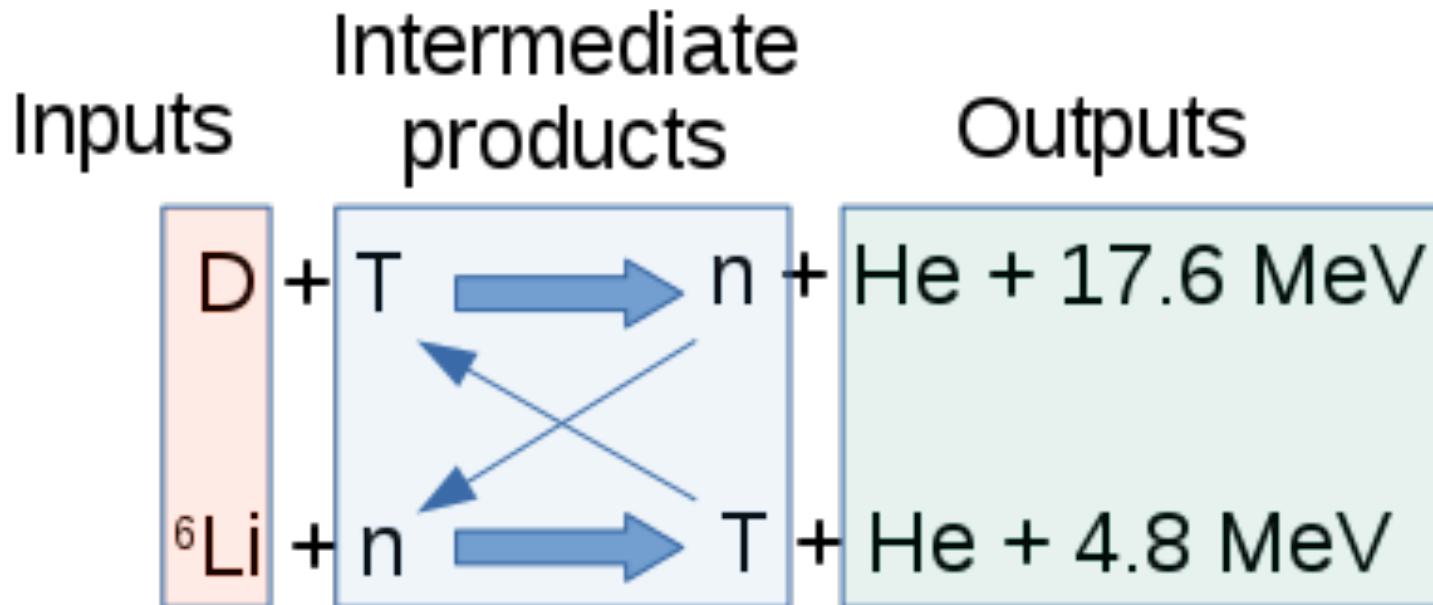
Explosion on an artificial island on a reef in Bikini Atoll.

A fireball with a diameter of 7 km. Crater diameter 2 km, mushroom 14 km.

# SHRIMP



# Anticipated reactions of the so-called Jetter Cycle



# Final result 15 MT

It turned out that the reaction with Li-6 actually took place, but the surprise came from Li-7 (60%).

After absorbing a neutron, Li-8 was created, which was to decay into Be-8 and then into 2 alpha particles.

Meanwhile, Li-7 also decayed into tritium and an alpha particle. In total, more tritium and more neutrons were created.

# **Massive pollution**

**Bravo caused an ecological disaster - white dust fell on a Japanese cutter, an American aircraft carrier and the Marshall Islands.**

**In total, approximately 15,000 square kilometers were polluted. The US paid millions in compensation to locals, Japanese fishermen and its sailors.**

# **The beginning of public Rotblat's activity**

He appeared on British TV and declared that the US information was false. He explained what a hydrogen bomb is, that it is many times more powerful than an atomic bomb and that its "purity" is untrue. He received information about pollution from the Japanese and published it in the scientific press.

# Rotblat explanation

The bomb was to be a **two-stage bomb**.

A plutonium bomb igniting a hydrogen bomb. However, it was coated with U-238 to reflect X-rays. The large number of neutrons created a **three-stage bomb**, and the fission of uranium caused massive pollution. His paper contributed to the public debate that resulted the **Partial Nuclear Test Ban Treaty** (Moscow 1963).

# Security Services

- FBI files in England 1952-1968 suspicions of cooperation with Klauss Fuchs and communist sympathies
- File "Physicist 1" in the IPN 1956-1959 the desire to recruit and obtain secret information with negative result.

## **A visit of an officer Henryk Babel of the Security Office to prof. Pniewski**

Professor Pniewski, talking about the Rotblat family, spent a long time talking about the professor Rotblat Józef himself, calling him a "man of crystal character" due to the help he received in England.

I heard similar opinions from two physicist colleagues - Zbigniew Gortel and Wiktor Niedzicki, who met Rotblat at scientific conferences.

# Russell-Einstein Manifesto

Appeal for disarmament written by **Bertrand Russel and Józef Rotblat**, signed just before his death by Albert Einstein.

Announced July 9, 1955. A total of 11 signatures, including: **Józef Rotblat, Leopold Infeld, Max Born, Fryderyk Joliot-Curie, Linus Pauling, Hideki Yukawa**. It started the Pugwash movement.

# PUGWASH Conference

Pugwash Conference on Science and World Problems was founded in 1957 by J. Rotblat and Bertrand Russell in Pugwash, Nova Scotia, Canada, following the release of the Russell–Einstein Manifesto in 1955. At the first conference there were 22 scientists from USA, USSR, Japan, UK, Canada, Australia, Austria, France, China and Poland (Marian Danysz). Since then, over 60 conferences have been held. The proceedings are secret and speeches are not published. Only final documents are published.

In the years 1957-1973 Rotblat was the Secretary General of Pugwash, and in the years 1988-1997 he was its President.

# **Pugwash's main objective**

**„is the elimination of all weapons of mass destruction (nuclear, chemical and biological) and of war as a social institution to settle international disputes.“**

# **Pugwash successes**

**It provided background work to the Partial Test Ban Treaty (1963), the Non-Proliferation Treaty (1968), the Anti-Ballistic Missile Treaty (1972), the Biological Weapons Convention (1972), and the Chemical Weapons Convention (1993).**

**Former US Secretary of Defense Robert McNamara has credited a backchannel Pugwash initiative with laying the groundwork for the negotiations that ended the Vietnam War.**

# Poles active in Pugwash

- physicist – Józef Rotblat
- physicist – Leopold Infeld
- physicist – Marian Danysz
- philosopher – Tadeusz Kotarbiński
- political scientist – Adam Daniel Rotfeld
- biologist - Maciej Nałęcz
- acoustician – Ignacy Malecki
- biologist – Leszek Kuźnicki

# Negative opinions

Many people believed that Pugwash was a forum for Soviet propaganda. The conference in Poland in 1982 during martial law was particularly unfortunate. It was planned in advance and such complications were not expected. They tried not to notice the surrounding reality. Pugwash management visited General Jaruzelski, which TVP eagerly took advantage of.

Sakharov (imprisoned in Gorki) sent a letter to the participants, which did not become an official document of the conference. Apparently it was discussed in closed sessions. In general, Pugwash did not deal with human rights in either the USSR, Poland or China.

# Opinion about Rotblat

Tom Milne, Józef Rotblat's assistant in the 1990s, called his boss a moral, idealistic visionary in one of his interviews. He also recalled that every time the creator of Pugwash was accused of naivety, he calmly replied that conversation was the only way for humanity to survive. That everything possible must be done in the pursuit of eliminating all nuclear weapons in the world.

# **Nobel nominations for Pugwash**

**2 x 1963**

**1964**

**1968**

**1969**

**1971**

**Further years are not yet available**

# **Nobel Peace Prize 1995**

**The Nobel Peace Prize 1995 was awarded jointly to Joseph Rotblat and Pugwash Conferences on Science and World Affairs *"for their efforts to diminish the part played by nuclear arms in international politics and, in the longer run, to eliminate such arms"***

# **From Presentation Speech by Francis Sejersted, Chairman of the Norwegian Nobel Committee**

**The Pugwash movement probably played a not insignificant part in the processes which led to such important arms-limitation agreements as the nuclear test ban treaty in 1963, the non-proliferation treaty in 1968, and SALT I and the convention on biological weapons in 1972. Through its unwearying long-term efforts, it has also been a major contributor to the change of mentality so essential to the nuclear disarmament that has taken place since the end of the Cold War. START I and START II and the agreement to make the non-proliferation treaty permanent have meant a significant reduction in the nuclear threat.**

# Rotblat Nobel lecture

*I participated at the most senior level in the World War II Manhattan Project that produced the first atomic weapons.*

*Now, at age 88, I am one of the few remaining such senior persons alive. Looking back at the half century since that time, I feel the most intense relief that these weapons have not been used since World War II...*

*... in some countries nuclear weapons development still continues.*

*Accordingly, I call on all scientists in all countries to cease and desist from work creating, developing, improving and manufacturing further nuclear weapons – and, for that matter, other weapons of potential mass destruction such as chemical and biological weapons.*<sup>53</sup>

# **„Gazeta Wyborcza”, 14/15. X 1995**

*... global stability "is threatened today not by nuclear warheads, but by tanks: Iraqi tanks in Kuwait, Serbian tanks in Sarajevo, Russian tanks in Grozny."*

... the award should go to the Russian biophysicist and dissident, Sergei Kovalev, who fought against the Kremlin's imperial aspirations, and ... *"the peace and security of our part of the world depend largely on whether he succeeds."*

# Tygodnik Powszechny

## Nr 46(2418) 12 XI 1995

nie spotkam, nie mogę  
ikami nie wspólnego  
historię lektura serii  
torze". poświęca-  
mują się one niemal  
go mordował i jak  
linie napisał, że  
tylko trzydziestu  
o tysiący. Słowo  
nie; arytmety-  
nie stosuje, nie  
ordował trzy  
y od tego, co  
wiadomość  
ropietnistw,  
ityw, by  
zać. Nie

Przebudowa i odnowa gospodarki  
ukraińskiej wymagałaby dwóch mili-  
ardów dolarów. Na taką akcję nasz kraj  
pozwolić sobie nie może, ale wedle stawu  
grobla, i coś jednak trzeba zrobić, cho-  
by w skromnej skali. Co jakiś czas w pi-  
smach takich jak „Herald” pojawiają się  
wkładki, poświęcone a to szefkanatowi  
Dubaj, a to Arabii Saudyjskiej, a to  
Panamie. Informują one, co dany kraj  
może sprzedać lub zaoferować, co od  
niego możemy mieć, pisze się też o jego

...wielki, przynajmniej dla nas, o norma-  
wności, jeszcze słabsze niż my  
...Istniejącemu szkodzie... Tru-  
wici, co zatrzała krew pobratymczą. Tru-  
dno mi wymazać wspomnienia krwawo-  
dno wojennego czasu; pamiętam, jak pod-  
ziemnie nasze zastrzeliło profesora mo-  
go, fizyka Lastowieckiego, a znów Ukra-  
ińcy zastrzelili histologa, prof. Bolesława  
Jałowego. Okropne rzeczy się działy, ale  
mimo nich dążyć należy do poprawy  
i utrwalenia stosunków, które na razie są  
niemal żadne — i to bardzo niedobrze.  
Wchłonięcie Ukrainy, czy choćby tylko  
Charkowszczyzny przez Rosję byłoby  
dla nas strasliwym ciosem, nieporów-  
nanie gorszym od utraty niezależności  
przez Białoruś. Niewiele możemy zrobić,

materialnej, a przede wszystkim  
budować. Przykładem  
i nie wrócić w tym punkcie  
udziału, nie stawiam sobie  
przykład. Nie możemy sobie  
lewiąć brakiem środków  
Jerzy Jarzłowski, że odnowienie  
skich pism literackich, uwaga  
sytuację za bliską dekadencją  
za raj w porównaniu z in-  
borykają się na co dzień. W  
mie powstającej wstanie  
szych dzikich kapitalistach  
użyć słowa, którym ka-  
wał swoją powieść, że  
nych inicjatyw leży w  
rze rozumianym im

*Spory — polemiki*

## Niezasłużona nagroda

ŁUKASZ A. TURSKI

...zeczy-  
tyku-  
dom  
sób  
cz-  
ę-  
d

...wykorzystania nowych źródeł energii,  
warzyszyły grzmoty protestów prze-  
ko kontynuowaniu przez Francję  
jądrowych na Pacyfiku i, znamien-  
la mnie, cisza nad podobnymi eks-

...wszechnianie ja-  
ni, służących  
nych raczej ni-  
grożeniem sz-  
ludność wi-  
Czeczeniu.  
jak przep-  
atomowy  
można  
zasym-  
nagra-  
groze-  
się  
neg-  
su-  
P

liwiający postępowym kręgom świata,  
do których niewątpliwie należała spora  
część naiwnych i nieco mniej naiwnych  
uczonych z kręgu „Pugwash”, marsz ku  
zaszczytnym celom międzynarodowego

## Prof. Łukasz Turski opinion

The article was from 1995, I thought that after a quarter of a century the opinion of prof. Turski will soften. In 2021, however, he had a discussion on Facebook with prof. Stanisław Mrówczyński, in which he was as sure as in 1995. However, I realized that he did not know about one important matter:

***"While Pugwash petting the dragon could be explained in the 1950s (ca. the Cuban Missile Crisis), in 1982 the threat of nuclear war was just a PR move by the Kremlin."***

# Operation RYAN

- Yuri Andropov's idea announced after the election of Ronald Reagan in 1981  
**Operation RYAN - Nuclear Missile Attack (Rakietnoye Yadiernoeye Napadenie).**
- Death of Leonid Brezhnev – November 10, 1982, Andropov takes power
- Andropov in hospital - since August 1983

# Operation RYAN

All Soviet agents in the West were to look for evidence of NATO preparations to attack the USSR. They were given a list of twenty tasks that had to be performed regularly.

Some were quite absurd - such as checking the stock of blood banks or observing the whereabouts of nuclear decision-makers, which included, among others, the most important bankers and heads of churches.

# **Staff exercises Able Archer XI 1983**

The exercise plan included the response of NATO forces (Blue) to the attack of Warsaw Pact forces (Orange) on Yugoslavia, and then Finland, Norway and Greece.

The Blues put 40,000 soldiers on alert. As the simulated conflict developed, a state of alert was announced for units equipped with nuclear weapons. The aim of the exercise was to examine the procedure for switching from conventional to nuclear weapons under the influence of Orange aggression.

**These were only staff exercises, i.e. no soldier left his base.**

# Panic in USSR

The start of the exercises brought Andropov and his entourage to the brink of panic. It was concluded that the Able Archer was a ruse leading to the start of World War III. In addition, the date of the exercises was coincidentally correlated with the largest Soviet holiday - the anniversary of the October Revolution, which fell on November 7. An attack on a holiday always adds the element of surprise.

- **A state of alarm was introduced in the armies of the Warsaw Pact.**
- **The planes were armed with nuclear weapons.**
- **Missile silos were ready to launch missiles.**

# The end of the crisis

Fortunately, the head of the KGB in London was Col. Oleg Gordievsky (MI6 agent), who notified MI6 on an emergency basis. MI6 notified Prime Minister Margaret Thatcher. Thatcher called Reagan. A decision was made to end the exercises quickly.

Operation RYAN continued even after the death of Yuri Andropov on February 9, 1984.

Mikhail Gorbachev wrote in his memoirs: *"Perhaps never in the post-war period has the situation in the world been so explosive, and therefore more difficult and more unfavorable, than in the first half of the 1980s."*

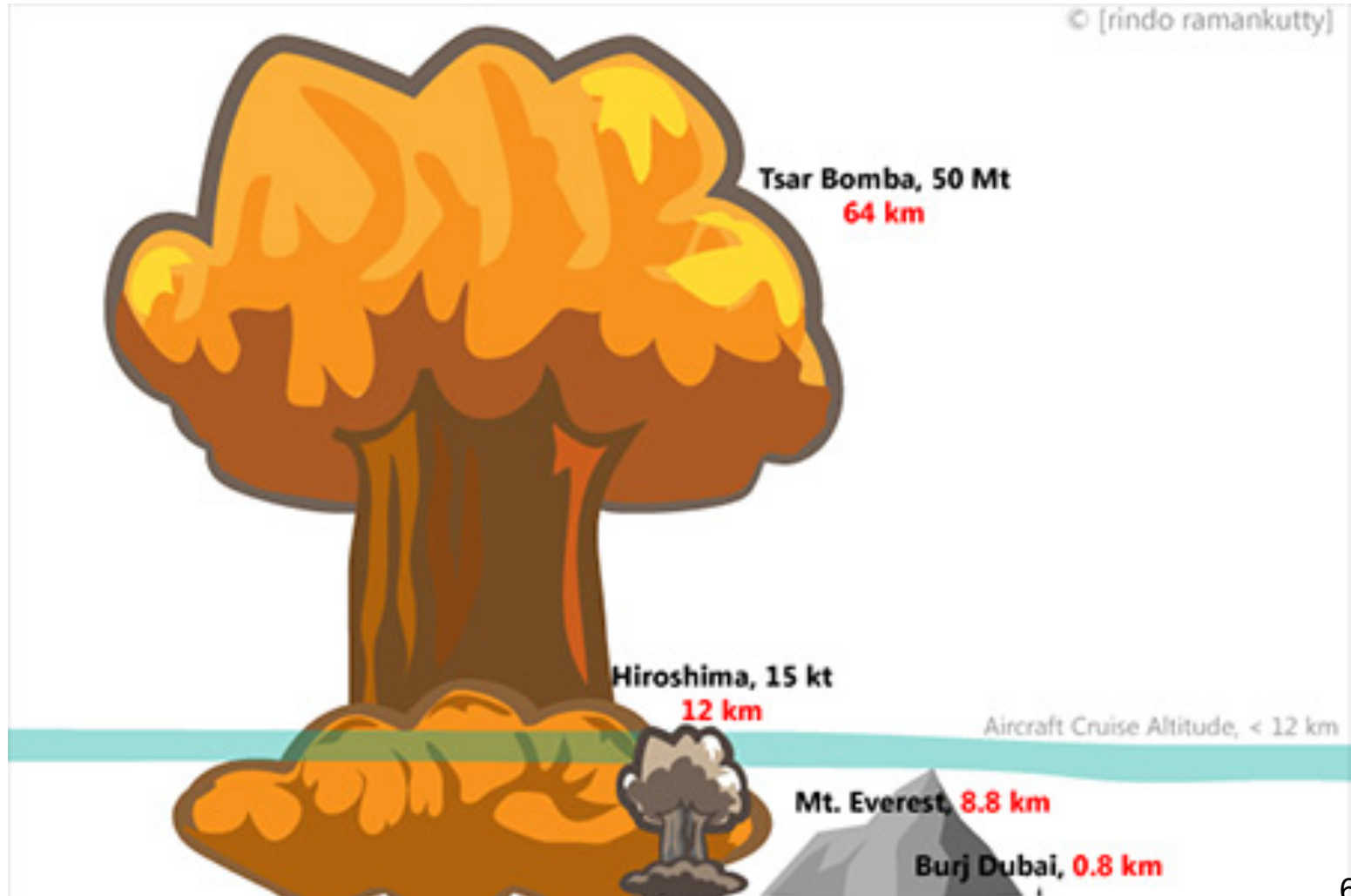
# Comparison with Sakharov

- Sakharov built bombs for Stalin, Khrushchev and Brezhnev from 1948 to 1968.
- In the "pre-missile" times, he proposed to Soviet generals to make a 100-megaton underwater explosion near the shores of the USA and completely destroy Washington, New York, Boston, etc. with a gigantic tsunami wave.
- Currently, Russia is testing a 100-ton unmanned submarine - the Poseidon torpedo. It is to have a nuclear engine, size 24x2 m, speed > 100 km/h, be armed with a 2 MT bomb and operate at a depth of less than 1000 m.

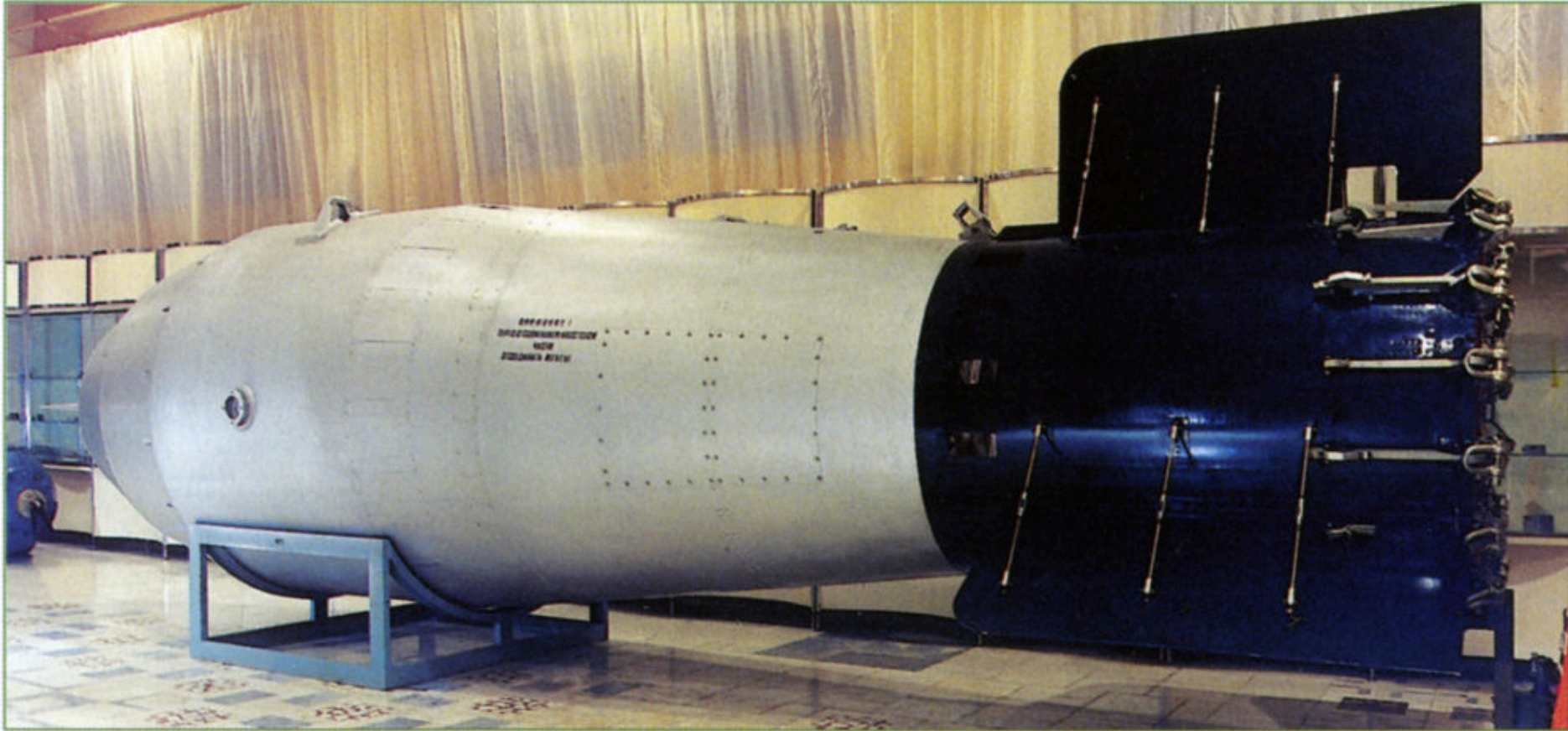
# Tsar-bomb 30 X 1961

- Sakharov's idea in 1960-61.
- Three-stage Teller-Ulam bomb, weight 27 tons, result 58 MT, plan 100 MT, but the uranium armor in the 3rd stage was omitted. There was lead and/or tungsten.
- Dropped from 10 km at Novaya Zemlya, explosion at 4 km. Mushroom cloud 64 km, diameter 40 km. Fireball – diameter 8 km.

# Mushroom cloud



# Tsar-bomba (RDS-220) 8 m.



# **REPORT ON SAKHAROV**

**Walentyn Falin 2011, advisor to Gromyko,  
ambassador to the Federal Republic of  
Germany, secretary of the Central Committee**

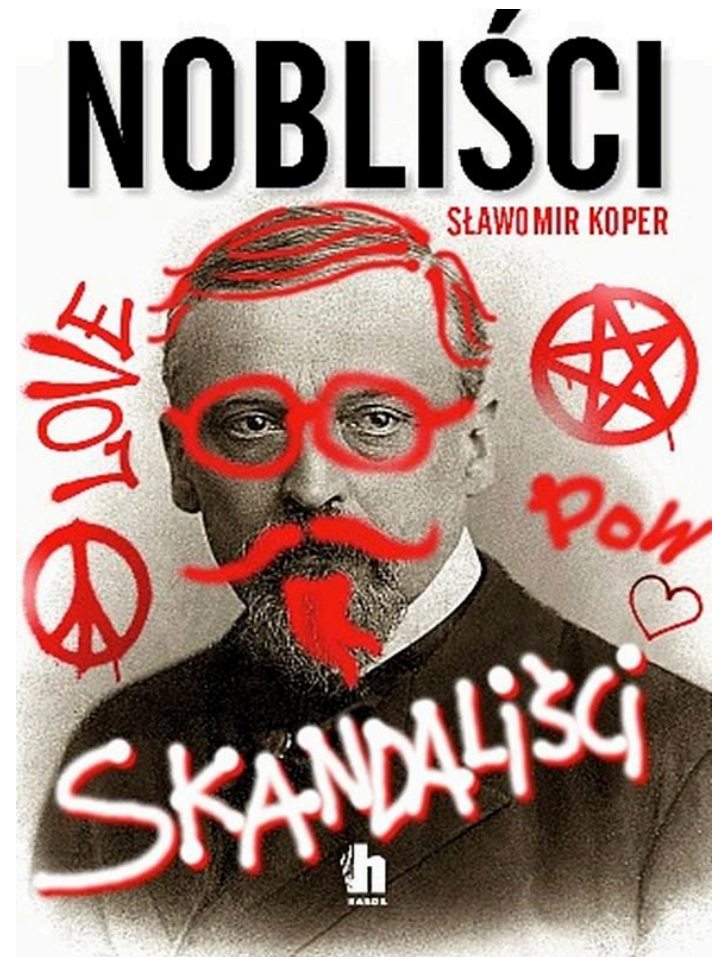
***A.D. Sakharov generally suggested not to serve  
Washington's strategy of ruining the Soviet Union with  
an arms race. He advocated the placement of nuclear  
weapons of 100 megatons each along the Atlantic and  
Pacific coasts of the United States. And in case of  
aggression against us or our friends, press the  
buttons.***

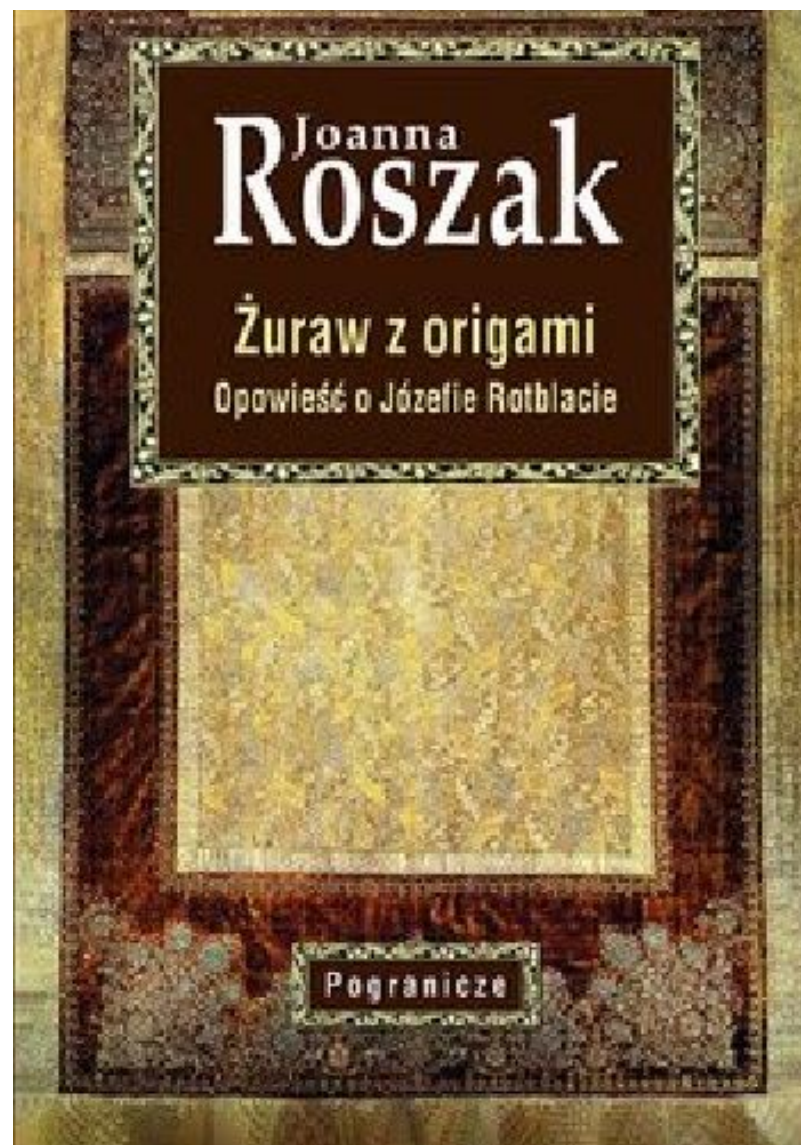
- **Sakharov built hydrogen bombs for 20 years and fought for peace for 20 years.**
- **Rorblat built the atomic bomb for 6 years and fought for peace for 60 years.**

# Józef Rotblat

- Interview from 2003
- <https://www.youtube.com/watch?v=Qqw3nXdDuLE>
- Died in London 2005 r.

# Polish books about Rotblat





**I would like to see at the  
Faculty of Physics of the  
University of Warsaw in  
2025, on the 20th  
anniversary of Józef  
Rotblat's death, a board in  
his memory.**