

# POLISH AIR FORCE ONE

WITH THE PRESIDENT OF POLAND AND FIRST LADY ON BOARD

DESTROYED ON LANDING

IN SMOLENSK, RUSSIA, ON APRIL 10, 2010

BY A TERRORIST ATTACK CARRIED OUT BY THE RUSSIAN FEDERATION



## **Today Georgia, Tomorrow Ukraine...**

President of Poland Lech Kaczynski became a symbol of a politician with great vision, courage, and determination. In August 2008, when Russia invaded Georgia, President Lech Kaczynski led a delegation of several European leaders to Georgia to protest Russian aggression. At the rally in Tbilisi on August 5, 2008, President Lech Kaczynski gave the prophetic speech:

*We stand here as representatives of five European Nations – Poland, Ukraine, Estonia, Latvia, and Lithuania. We came here to stand up to Russian aggression... Our neighbor from the North and from the East showed their true face – the face known to us for hundreds of years. We say NO! This country is Russia. These neighbors believe that the nations around them should be their subjects. This country believes that the old Soviet Empire that had crumbled some twenty years ago, will rise once again, wishing that this domination would once again take over this region. It will not be so! We all experienced this domination. These times are over once and for all... This calamity that befell this part of Europe was characterized by the breaking of the human character, an imposition of a foreign system, an imposition of a foreign language on others...*

*We know very well that today is Georgia, tomorrow Ukraine, the day after the Baltic states, and later maybe the time will come for my country – Poland!*

### **1940 Katyn – 2010 Smolensk**

Katyn is the key to understanding Smolensk. Upon invading Poland on September 17, 1939, the USSR took hundreds of thousands of Polish prisoners of war. In April 1940, the Soviets secretly murdered about 22,000 Polish officers in various locations throughout the Soviet Union. In 1943, the German Army advancing east discovered mass graves of over four thousand Polish officers in the Katyn Forest near Smolensk in Russia. It was not until 1991 that Russia admitted its responsibility for the Katyn Massacre. For the 70<sup>th</sup> anniversary of this monstrous crime, the official Polish delegation was on its way to pay respect to the Polish victims murdered by the Soviets in the Katyn forest near Smolensk. This delegation led by the President of Poland and the First Lady consisted of government officials, members of the Polish Parliament, families of Katyn victims, activists, clergy, and the Central Command of the Polish Armed Forces. They all perished when the Polish Air Force One exploded on landing in Smolensk on April 10, 2010. No one survived. That day Russia decapitated Poland once again.

### **2010 Smolensk Assassination**

The Smolensk disaster was investigated by Russia under Annex 13 to the ICAO Convention. Russia fully controlled the crash site and all the evidence. In its investigation, Russia tampered with all evidence, altered the crash site, destroyed or disregarded evidence of the explosion, desecrated the bodies of the victims, and implemented a massive international disinformation operation. Poland never received the original black boxes. Instead, Poland obtained numerous inconsistent copies of manipulated recordings from black boxes. The wreckage of the plane has been systematically altered and destroyed.

On January 12, 2011, Russia announced its final report (MAC Report) that blamed the Polish pilot-in-Command, Commander-in-Chief of the Polish Air Force, and the President of Poland for causing the crash. The wreckage of the Polish Air Force One with all black boxes remains in the possession of the Russian Federation to this day. The Polish report issued in July 2011 repeated Russian conclusions.

# **MINISTRY OF NATIONAL DEFENSE OF THE REPUBLIC OF POLAND**

## **SUBCOMMITTEE FOR REINVESTIGATION OF THE AVIATION INCIDENT**

### **FINAL REPORT ON THE CRASH OF THE TU-154M AIRPLANE ON APRIL 10, 2010**

#### **OVER THE SMOLENSK-SEVERNEY AIRDROME IN THE RUSSIAN FEDERATION**

## **CONCLUSIONS OF THE FINAL REPORT DATED APRIL 11, 2022**

1. The analysis of the circumstances leading to the catastrophe of Tu154M on April 10, 2010, shows that of key significance was the selection of the Aviakor plant in Samara, Russia, owned at the time by Oleg Deripaska, a Russian oligarch and a friend of the then Prime Minister of the Russian Federation V. V. Putin, for the 2009 overhaul of two Tu-154M planes owned by the Republic of Poland. This decision was made under pressure exerted by special services of the Russian Federation, which controlled the entire overhaul process from the beginning to the end. The fact that the Polish intelligence services and the Ministry of National Defense gave a positive opinion regarding this company, despite official warnings from a part of the government apparatus, played a significant role in this process. This decision was influenced by the military officials and Ministry of Defense officials connected with the communist special services in the past and trained in the USSR. But such a decision would not have been possible without the decision or at least the approval of Prime Minister Donald Tusk who supervised the special services and was constitutionally responsible for their oversight. As a result, Russian special services took total control not only over the renovation of Tu-154M No. 101 and No. 102 but also over the preparations for the visit of President of Poland Lech Kaczynski to Katyn, near Smolensk, the flight of Tu-154M No. 101 to Smolensk on April 10, 2010, as well as the investigation of this catastrophe, and the way it was presented by the media in Poland and by important political and media centers all over the world.

2. The consequence of their decision was, inter alia, the overhaul of Tu-154M in Samara. Upon its return to service, Tu-154M planes experienced numerous failures. Repair works consisted of replacing faulty parts from Tu-154M No. 102 with good parts from Tu-154M No. 101 and vice versa. An example of such actions was the replacement of the left-wing slots in Tu-154M No. 102, in which traces of explosives were found after the crash.

3. The supervision of the overhaul process by the Russian special services gave them the opportunity to take actions in an uncontrolled manner that could pose a threat to the safety of passengers using the overhauled aircraft in the future.

4. The reason for this state of affairs was the political direction of the Polish administration at the time, which focused on rapprochement with Russia and conflict with the President of Poland and his pro-independence political line. It resulted in cooperation with Russia in order to make the visit of President Lech Kaczynski to Smolensk on 10.04.2010 difficult.

5. In practice this meant:

- a) agreeing to Prime Minister Putin's demand that visits of the Polish Prime Minister and President to Katyn in April 2010 be conducted separately;
- b) delaying the decision of the Ministry of Foreign Affairs to inform the Russian Federation about the visit of the President;
- c) consent not to examine the readiness of Smolensk airport to receive the President of Poland on April 10, 2010, and the safety conditions at the airport by proper services;
- d) approval for non-compliance with the basic requirements of the HAED Instruction by Minister T. Arabski, Head of the Chancellery of the Prime Minister of Poland, including failure to prepare a reserve

- airplane, failure to check the malfunction rate of the Tu-154M plane, and failure to equip the plane with the necessary devices to signal the crash;
- e) changing of the alternative airports for the Tu-154M plane on the evening of April 9, 2010, in agreement with Moscow (GCORL) but without informing the Polish pilots and the President of Poland about it;
  - f) permission to direct Tu-154M flight No. 101 to the Smolensk landing corridor, which had been closed for 6 months;
  - g) failure to inform the Smolensk Airport about the departure from Warsaw of Tu-154M flight No. 101 on April 10, 2010;
  - h) failure to inform the President of Poland about Russian preparations to prevent the President's participation in the Katyn ceremony on April 10, 2010;
  - i) undertaking by Minister T. Arabski of secret talks with Russian Minister J. Ushakov, who supervised the special services on behalf of Prime Minister Putin, including secret arrangements concerning the organization of the visit of the President of Poland;
  - j) disregarding Interpol's information about the terrorist threat to planes departing from EU capitals towards Russia on April 10, 2010;
  - k) entrusting the preparations of the Katyn visit of the President of the Republic of Poland to the former functionary of the communist intelligence service T. Turowski.

6. Without these decisions, the Smoleńsk drama would not have happened. The consequence of such an attitude of the leadership of the administration subordinated to Prime Minister Tusk was a total disregard of all rules and regulations, including those defined by the HEAD instruction of June 2009 that assures the safety of the President, by the members of state administration, officers of special services, the army, and those responsible for the HEAD status flights. As a result of such actions, the fate of the Tu-154M flight No. 101 was fully controlled by the Russian services.

7. The Polish pilots had been planning to go around and fly to the alternative airport in Vitebsk or Minsk once they found out about the weather threatening the landing in Smolensk at around 06:00 UTC. Meanwhile, the services (GCORL and the Center "Logika") until the last minutes before the approach to the Smolensk airport did not agree to it, indicating Sheremetyevo, Domodedovo, or Vnukovo near Moscow as alternative airports.

8. The issue of an alternate airport was the cause of dispute between Smolensk controllers and Moscow centers, which caused tension and chaos among representatives of the Russian services.

9. Of major importance were the failures of the navigation systems in Smolensk, the incorrect bringing down of the Tu-154M plane on the descent path in such a way that there was a danger of hitting the ground a kilometer before the airport strip, and the lack of experience and competence of some airport servicemen.

10. Contrary to the Russian arguments, the Polish pilots acted consistently and in accordance with the established plan, which assumed a controlled approach to the altitude of 100 m, the go-around to the second circle, and directed the plane to the alternative airport in Vitebsk.

11. This plan was carried out until the start of the go-around procedure when explosions occurred in the left wing and subsequently in the left centerwing that destroyed the aircraft and killed all the passengers and the crew.

12. So, two explosions in the final phase of the flight constitute the real cause of the Smolensk crash. The first one took place during the departure to the second circle, over 100 meters before the place where the birch tree grew on N. Bodin's plot. Consistently from the first hour of the flight, the pilots had been talking about the autopilot-controlled departure in case of impossibility of landing due to bad weather. Having agreed on this plan in advance with the Russian flight controllers, they started to implement their plan, as stated. The misleading

bringing down of the Tu-154M airplane by the Russian controllers, who in the last phase of the flight systematically gave the Polish pilots false data concerning the distance from the runway and from the course, surely made the pilots' work difficult. However, the pilots did not make any mistakes and at the right time made a decision to go around.

13. The first explosion severed the nearly 6-foot-long tip of the left wing, destroying slot no. 2/2, the upper skin of the detachable wing section, and severed the left-wing flap attachment. The ABSU put the plane into a glide, allowing it to maintain the correct flight position for about 1 second. Later, due to the extent of damage to the slot, wing flap, and covering of the removable part of the wing, the plane started to roll to the left. At the same time, there were other failures: the left engine and the landing gear, the flap at the left landing gear shank broke off and the radio altimeter failed. The plane lost its vertical stabilizer, and a part of the left horizontal stabilizer was also torn off.

14. The second explosion occurred several meters above the ground, about 6 seconds after the first explosion in the left wing, near the two furrows marking the first contact with the ground of large parts of the aircraft. It took place in the left center plane, which was broken into two parts, with the front girder of the left part of the center plane being shot nearly 80 m to the northeast. As a result of the explosion, the tail of the aircraft was also blown off together with the pressure bulkhead and the rear part of the fuselage after the roof was torn open and fell in an inverted position with the sides turned outwards. The left side near the passenger door was also torn and destroyed, and the passenger door was shot to the ground to a depth of over 1 m. The cockpit of the aircraft was also almost completely destroyed.

15. The charge that led to the explosion contained hexogen (RDX) as well as pentrite and TNT. The result of the explosion was the death of everybody on board and the total destruction of the aircraft.

16. The Smolensk catastrophe showed the full preparation of the Russian side, which was ready to react to a catastrophe that would have happened a few hundred meters before the airport. This readiness was evidenced, among other things, by the deployment of rescue services to this area.

17. Donald Tusk also acted consistently by agreeing, immediately after the catastrophe, to hand over the entire process of investigating this incident into the hands of Prime Minister Putin and his subordinate services. This decision was made by Prime Minister Tusk during a telephone conversation with Prime Minister Putin on the morning of April 10, 2010, soon after the catastrophe. Shortly thereafter, Prime Minister Tusk ignored the proposal by President Medvedev for a joint investigation of the crash, as stipulated by the 1993 Polish-Russian agreement.

18. As a result, at 11:00 am the Minister of Transport of the Russian Federation I. Levitin, who supervised the commission to investigate the crash on behalf of Prime Minister Putin, called the Polish Infrastructure Minister Cezary Grabarczyk and they agreed that the crash would be investigated under the direction of these two ministers who supervise commissions investigating crashes of civilian aircraft. (The Tu-154M plane was a military aircraft). A communiqué published after this conversation announced the departure of the representatives of the Polish commission for investigation of civilian airplane accidents PKBWL to Smolensk.

19. On April 10, 2010, at about 12:00 AM, a conversation took place between the representative of the Interstate Aviation Committee of the Commission for Investigation of Aviation Accidents (IAC) Alexey Morozov, and the chairman of the Polish Commission for Investigation of Aviation Accidents Edmund Klich, during which it was accepted that the catastrophe would be investigated on the basis of the Chicago Convention and its Annex 13, giving all the control over the investigation and evidence to the Russian experts.



20. As a result of these actions, Edmund Klich, after his arrival in Smolensk, was recognized by the Russian side as a representative of the Polish commission investigating the crash on behalf of the Republic of Poland and, despite the lack of such authority, he agreed to Russians taking over the black boxes and transporting them to Moscow in order to conduct the investigation.

21. That is why the Commission on State Aircraft Accident Investigation (KBWL LP), the only Polish institution authorized to investigate military plane crashes, was established only on April 15, 2010, when its management was taken over by Edmund Klich, and then by Jerzy Miller who served as the minister of internal affairs and administration. Both heads of the KBWL LP were guided in their actions by the directives of Donald Tusk, who chaired the Interdepartmental Team of the Council of Ministers supervising the investigation of the crash. Tusk's directives focused on actions aimed at preventing the spread of Polish suspicions that the catastrophe had been caused by actions of the Russian side, as the Prime Minister himself stated on April 23.

22. In turn, the chairman of the KBWL LP Jerzy Miller, taking the leadership of the Commission, openly announced that its report must be consistent with the report of the Russian side because otherwise "we're going to crack the whip on our own backs."

23. The result of these actions was the seizure of all the evidence by the Russian side and taking comprehensive measures to falsify records of the recorders, fragments of the plane bearing traces of an explosion, the pattern of scattering of parts of the plane, the location and identification of the bodies of the victims.

24. In these activities, the Russian side received the full support of special services, commissions, government media, and the political leadership of Donald Tusk's government.

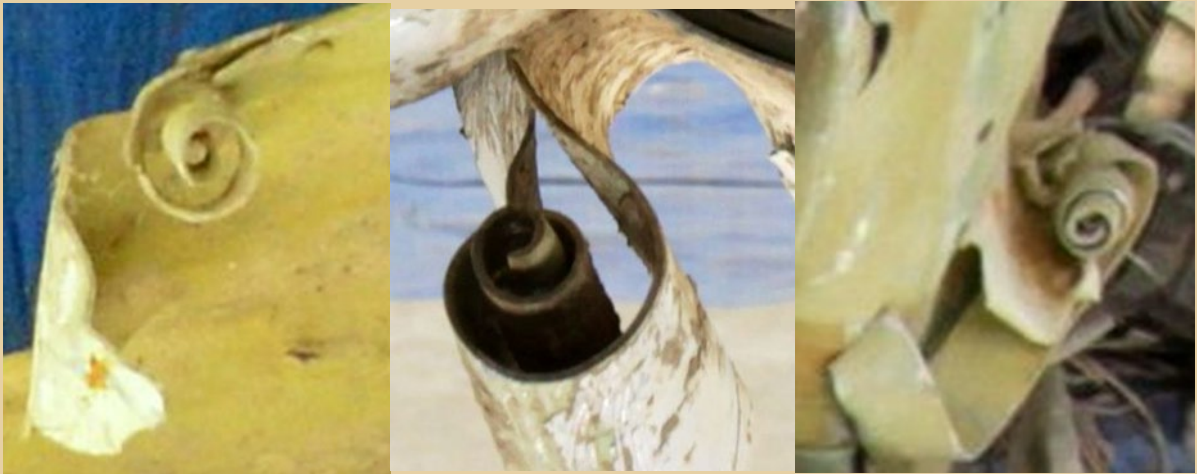
25. Such attitude resulted in two reports of MAK and KBWL LP falsely presenting the causes of the Smolensk catastrophe, accusing the Polish pilots, Polish Air Force Commander-in-Chief General A. Blasik, and above all Polish President Lech Kaczynski of causing the crash, in which the Polish national elite was killed. At that same time, the Russian side destroyed or seized a large part of the evidence, while Donald Tusk's administration made it impossible to investigate the real causes of the crash.

26. Establishing the causes of the Smolensk catastrophe was possible only thanks to the change of government in Poland and the appointment of the Subcommittee for Investigating the Smolensk Catastrophe by the Minister of National Defense. Thanks to an extensive and long-term investigation conducted by the Subcommittee, it was possible to take into account first the methodological conditions resulting from the falsification and deprivation of Poland of the majority of evidence. The separation of reliable sources from the existing materials required a special effort, caution, and factual knowledge significantly exceeding the aviation issues. This was possible, also thanks to the cooperation of Polish and foreign scientific institutions whose research and experiments finally invalidated the MAK and Miller's reports and confirmed the destruction of the airplane by an explosion. Also of great importance were the Report and Resolution of the Council of Europe from September 2018 responding to the Subcommittee's Technical Report and demanding that Russia immediately return the wreckage of the Tu-154M airplane and the rest of the appropriated evidence.

27. The main body of evidence was gathered through:

- a) analysis of extracted reliable records of copies of flight parameter recorders and CVR based on records of American TAWS and FMS systems. Thanks to this process, the time and location of the explosion in the left wing nearly 100 m before the birch tree in Bodin's plot were determined, as well as the location of the explosion in the centroid, at about 15-10 m above the ground;

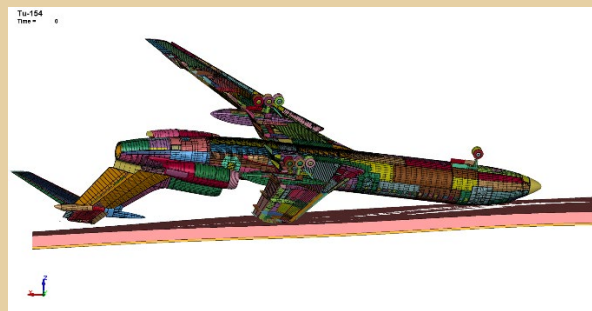
- b) reconstruction of the damage to the left wing and other parts of the plane scattered on the site, and identification of the location of the explosion and numerous post-explosion curls of the left wing tip, fuselage, and cockpit covering, which constitute indisputable evidence of the explosion;



- c) crash examination of the passenger door no. 823 driven 1 m deep into the ground as a result of the explosion, along with fragments of the body of one of the victims;
- d) analysis of forces in excess of 1430 T required to detach the tail of the aircraft from the rear of the fuselage;
- e) analysis of the scattering and destruction of the bodies of the victims of the catastrophe, which preserved numerous traces of post-explosion injuries, inter alia numerous and severe burns of 1/3 of the bodies, scattering of the remains of the bodies of the passengers of the 3rd compartment over the entire crash site, i.e., over 100 m, while small fragments of internal parts of the bodies lay at the very beginning of the crash site;
- f) determining the presence of numerous fragments of bodies lying in places of the crash site before the first ground traces of the impact of a part of the airplane fuselage (i.e., the passenger part);
- g) the presence of explosives found by Polish, British, and American laboratories, which identified traces of hexogen, pentrite, and TNT on parts of the aircraft's skin, including on some parts identified by the Subcommittee as parts of the skin from the central location of explosion;
- h) simulations performed by the Subcommittee, Military Technical Academy, and NIAR Wichita State University on the model of the Tu-154M airplane reconstructed with the Finite Elements Method. This model has over 30 million elements and is the largest such model used so far for aircraft crashworthiness simulation analysis;
- i) simulation of the impact of the Tu-154M airplane with the ground according to the parameters accepted by MAK and Miller's commissions showing the crucial difference between the destruction of the airplane on the crash site with the simulation results and the incompatibility of the scattering of the fragments of the bodies of victims with the disintegration of the airplane according to the assumptions accepted by MAK/Miller reports. This conclusively disqualifies MAK and Miller reports. Simulations show not only fundamental differences in the plane's destruction but also the fact that the airplane hitting the birch tree on Bodin's plot with its wing at the height of 5 m, as claimed by MAK and Miller's reports, hits the ground afterward in a

completely different place of the crash site and in a different position than it happened in reality.

28. Finally, it is worth recalling the evidence of experts of the Prosecutor's Office of the Russian Federation stating unequivocally that both, the fuselage of the plane and the wings, were destroyed by the explosion. The expertise prepared in 2012 is based on the inspection carried out by these experts in September 2010. The photographic evidence attached to the examination, including that showing the left part of the destroyed center wing and the left wingtip, fully confirms the thesis that the damage was the result of internal pressure. Russian experts, aware of the consequences of their diagnosis, tried to attribute the explosion to a "hydraulic impact", which is obviously illogical taking into account the small amounts of fuel that could have been in the tank caissons at that moment, as well as the shape of these caissons preventing the formation of a "hydraulic hammer". The heads of the MAK and Miller commissions, aware of this situation, ignored this expertise completely, also overlooking the attached analysis from the examination of the wreckage and photos of the parts of the airplane showing the damages caused by the internal pressure.



EXCERPT FROM APRIL 11, 2022 REPORT ON THE 2010 CRASH OF THE POLISH AIR FORCE ONE  
OVER SMOLENSK AERODROME IN RUSSIA

### **Comparing results of computer simulations with the factual state of debris on the wreckage field**

The American National Institute of Aviation Research (NIAR) and the Polish Military University of Technology (WAT) conducted computer studies aiming to simulate the impact of the Tu154M airplane into the ground according to the initial conditions in the configuration assumed in the Russian MAC and Polish Miller's final reports released in 2011. These studies were designed to produce simulated debris fields that would be compared to the factual debris field for verification purposes.

The development of a numerical model of the aircraft required a reverse engineering approach. This approach included many geometric measurements of individual structural components of the twin Tu154M airplane, experimental characterization of materials used for those components, building a CAD model of the entire airplane, and converting this model into the Finite Element Model for LsDyna analysis.

The entire FE model consisted of 33 million elements, including a large number of 1D elements used for connections such as rivets and screws. A close-up of the center wing shows the structural accuracy of this model. The simulation can be considered an accurate computer representation of the crash event. Results can be used to examine the validity of the assumed initial conditions by comparing the simulation results with the real state of destruction.

The initial conditions of the simulation are as follows:

- the aircraft is rotated around its axis about approximately -150 degrees.



- impacts into the soft and wet soil with a horizontal speed of about 76 m/s and a vertical speed towards the ground of about 18 m/s.

Overlaying the results over the satellite image of the main debris field with a 5-meter grid, the visual representation of the destruction of the 80-ton airplane can be observed in the simulation for the duration of 1 second from the moment of contact with the ground. NIAR ended the computer simulation at 1075ms. At this time, all parts of the aircraft are still in the process of moving over the surface of the ground with a speed from 20-50m/s decelerating due to friction.

In the next part of the presentation, we focus on large fragments of the aircraft and compare simulation debris to factual debris. In each case, fundamental discrepancies prove that the actual destruction of the airplane was not caused by the impact into the ground of the entire airplane in the configuration and with the initial conditions assumed by MAC and Miller's reports.

First, we will examine the passenger section of the fuselage. The computer simulation shows the roof collapsing into the interior of the fuselage. However, the factual damage of this section of the airplane shows the roof opened outward. Analysis shows that the roof of the fuselage fractured along the row of rivets that connects the stringer with the skin of the aircraft. This was caused by circumferential principal stress generated by large internal pressure. Furthermore, the fracture of the fuselage roof had to take place in the air prior to impact with the ground so that the ground would not impede the opening of the roof.

Next, we will examine the pressure bulkhead of the airplane. In the computer simulation, the tail part of the plane broke off from the passenger part of the fuselage, but the pressure bulkhead remained connected to the passenger part. We can see that the bulkhead is damaged only near the ground and it moves forward together with the passenger part of the fuselage sliding on the ground.

In reality, the pressure bulkhead remained connected to the tail part. This demonstrates that the internal pressure in the fuselage not only tore apart the roof but also sheared off all rivets with the bulkhead and exerted an aft pointing force on the tail with the engines. In this way, the progressive kinetic energy of the heavy engine mass was reduced by this force.

The tail part and the engines are the heaviest fragments of the Tu154M plane. According to the laws of physics, such a massive part should travel the farthest on the ground in the main field of debris due to the law of momentum. The reality that this large mass stopped at the beginning of the main field of debris is the outcome of a rapid impulse in the aft direction.

Let's see what happened to the engines in the NIAR simulation. Both engines – right and left – broke away from their pylons, and the middle engine freed itself from the mounts inside the tail and partially slid outwards. In reality, only the right engine was detached completely from the pylon, and the other two engines stayed together with the tail section in the main field of debris. The mounts of the middle engine were not broken so that this engine remained inside the tail part in its normal position.

Now let's examine the destruction of the vertical and horizontal stabilizers. In a computer simulation, the vertical stabilizer was not separated from the tail section, while the horizontal stabilizer completely broke off from the vertical stabilizer. In reality, a significant part of the vertical stabilizer together with the horizontal stabilizer was separated from the aircraft before the Kutuzov road. This detached T-shaped fragment flew towards the southern border of the main field of debris and hit the ground with the tip of the right section of the horizontal stabilizer at the rotated configuration of about – 210 degrees. This fact can be found in the documentation of the MAK report. Thus, in the simulation, the forces on the stabilizers acted differently than they did in reality.

Let us now discuss the process of destruction of the passenger door from the starboard side. In the simulation, the fuselage together with this door impacted into the ground. As a result of this impact, a large crater in the soft wet soil has been excavated. The door was crushed and twisted due to the interaction with the heavy fuselage sliding on the ground above the door. Due to the rapid sliding movement of the fuselage on the ground, the door has no chance to be driven perpendicularly into the ground. Instead, the fuselage moved faster from the door which eventually was dropped behind, became airborne to land back several dozen meters further away, flat on the ground.

In reality, the door was driven like a razor blade perpendicularly to the surface, one-meter deep into the ground, at the very beginning of the main field of debris. Inside the door structure, the remains of human tissue were found, which had to be squeezed into the door structure cavity before the door was ejected from the airplane. The polymer material from the cabin side door cover had visible signs of high-temperature exposure. The actual deformations of the door structure are also completely different than the deformations obtained in this computer simulation.

Another NIAR study was dedicated to the analysis of driving the passenger door into the ground in such a way that the door is buried the same way as in reality, and the resulting deformation and damage is similar to that observed in reality. The results concluded that the necessary condition to reach this goal is a minimum vertical speed before impact with the ground of about 125m/s while the horizontal speed needs to be smaller than 30m/s.



The only way to obtain the necessary conditions for the door to be injected perpendicularly into the ground is for the door to be violently ejected by high internal pressure within the fuselage while the fuselage is still in the air. The position of the fuselage must be oriented with the left wing pointing into the ground and the cockpit pointing slightly down. In this configuration, the door launch speed vector was directed to the ground and backward, which resulted in an increase of the vertical speed from 18m/s to over 125m/s and a decrease of the horizontal speed from 76m/s to below 30m/s.

To assess the importance of the vertical speed of the crashing airplane into the ground, WAT performed impact simulations for the entire aircraft similar to the NIAR simulation but assuming the initial vertical speed to be 12m/s, according to the vertical speed recorded in the black box just before the loss of power. The vertical initial speed in NIAR simulation was assumed to be almost 18m/s. The comparison of WAT and NIAR simulations has shown that a lower vertical speed increases the survivability rate of passengers, especially those seating in the rear part of the fuselage.

The results of the NIAR simulation of the airplane impacting the ground, even at a very high vertical speed, do not agree with the actual state of the wreckage of the airplane and the scattering of the remains of the victims on the main field of debris. In fact, tens of thousands of fragments of the fuselage debris and human remains were scattered over a width of up to five times the fuselage diameter. In addition, heavy parts of the aircraft, such as the engines and tail part marked with the numbers "62" "55", stopped at the beginning of the wreckage field, while the lighter parts of the fuselage landed about 100 meters away, as can be seen on the situation map from the MAK report.

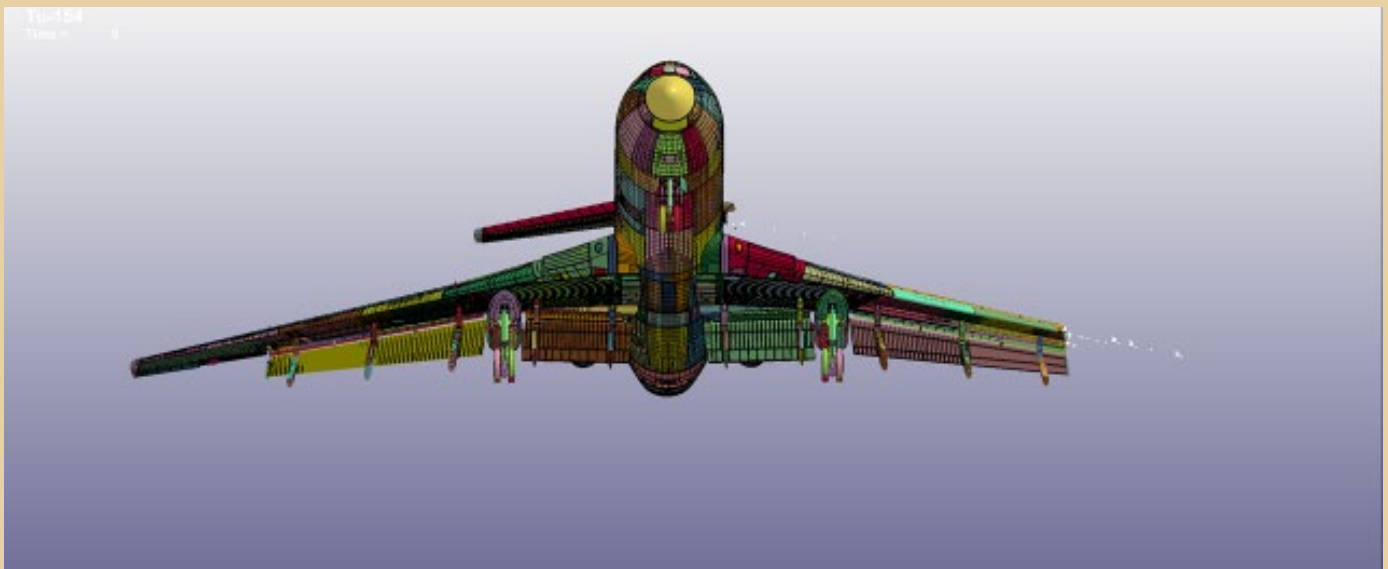
If we include visualizations of fragments found underground by Polish archaeologists, we see the actual degree of fragmentation of the airplane. The airplane system must contain enough energy to break off and deform into

so many fragments. The impact of the airplane into the ground would not achieve the degree of fragmentation of the aircraft that is observed in Smolensk. Explosions provide the additional source of energy needed to obtain such a degree of fragmentation as we observe on the wreckage site in Smolensk.

The dispersion of all fragments on the ground is presented on a map of the actual state of damage for this airplane in the form of debris, victim fragmentations, and damage to the trees and traces on the ground, which allowed us to discover the true nature of the disintegration of this aircraft.

## Summary

1. The assumptions adopted in the Russian MAC and Polish Miller's report used in the NIAR and WAT simulations gave results that do not correspond with the actual state of the evidence found on the field of debris in Smolensk.
2. The left wing was torn apart as a result of an explosion about 100 meters before the so-called Bodin's birch;
3. A significant part of the vertical stabilizer together with the horizontal stabilizer was torn off before Kutuzov road;
4. The pressure bulkhead rivets were sheared off from the passenger part when the roof of the fuselage was fractured by high-pressure stresses while still in the air;
5. The left passenger door was ejected from the fuselage while the plane was still above the ground by a high internal pressure which was required to generate the necessary velocity vector components to embed this door along with fragments of human tissue one-meter-deep into the ground;
6. The ballast fuel tank under the third compartment of the center wing was destroyed by a significant explosion;
7. The fuselage along the starboard side was destroyed by a series of small explosions;
8. The passengers and crew of Tupolev 154M were killed as a result of the explosions.
9. Scientific analyses and results of experiments on several aspects related to the Smolensk crash were published in the peer reviewed international journals.



See the video of this presentation here: <https://www.youtube.com/watch?v=wycYXnJDTKY>

# WE REMEMBER!

ME BEWENBEKI



FOR THE FULL SPEECH OF PRESIDENT LECH KACZYNSKI IN TBILISI, GEORGIA, IN 2008 SEE WYKLECI CHANNEL ON YOUTUBE: <https://www.youtube.com/watch?v=LsOfTk9HZ-c>

FOR MORE INFORMATION ABOUT THE SMOLENSK DISASTER VISIT: <https://www.smolenskrashnews.com/>  
FOR MORE INFORMATION ABOUT KATYN AND SMOLENSK VISIT: <https://www.librainstitute.org/>