Can Explosives Explain It?

How could the towers disintegrate so easily?

For 30 years the steel framework of the towers survived winds that put a lot of stress on the structure. According to the engineering sites that describe these towers, the shaking and stress from a severe winter storm was more intense and of a much longer duration than the stress produced by the airplane crashes. If those engineers are correct, the towers were not flimsy, and the design limits of the towers were not exceeded by the airplane crashes. That would explain why both towers survived the airplane crashes; the airplanes did nothing more than shake the towers for a brief moment.

As Chapter 4 explained, the fires did not seem severe enough to explain the disintegration of the buildings. So if not the fires or the airplane crashes, what would cause the towers to shatter?

FEMA and other "experts" promote the theory that the floors fell down like pancakes, but none of the floors simply "fell down." Hundreds of corrugated steel pans were shredded during the collapse of the towers, and thousands of steel beams were broken at their joints. What can cause such total destruction of hundreds of thousands of tons of steel assemblies and concrete?

The concrete turned to powder in the air

When the upper portion of the North Tower fell down onto the base (Figure 5-21) it fell a distance of only one or two floors. It would not be traveling very fast when it hit the base. I can understand that it might crack the floors, bend some steel beams, and even bust a few holes in the flooring, but how could it shatter into dust after falling such a short distance? And how could it start a reaction in which the entire tower shatters? And how could the powder be ejected with such a high velocity that the clouds reached perhaps 200 to 400 feet wide? Throwing dust any significant distance requires a lot of energy. (Figure 5-29 shows the tower throwing streams of dust an enormous distance.)

How could the towers disintegrate in 8 seconds?

There were thousands of massive steel beams in the towers, and they hit the ground at a high velocity. This created shocks that seismic stations picked up. According to the Columbia University Seismology Group, the North Tower created a shock of magnitude 2.3 (Figure 7-1), while the South Tower created a shock of 2.1. Their report also shows that the South Tower collapsed in 10 seconds and the North Tower collapsed in 8 seconds. Video images also show the towers collapsing within 8 to 10 seconds, verifying the seismic data.

Figure 7-1 shows the shocks increased during the first 5 seconds (red) then dropped abruptly to a lower level for about 3 seconds (blue), and then slowly tapered off (green). The seismic data of the South Tower showed the same pattern, although the red section peaked a bit higher in the North Tower. The significance of this seismic data will be explained later.

Figures 5-13 and 5-14 illustrate a flaw in all official theories of the collapse of the South Tower. Specifically, the steel beams in the overhanging section fell through the air, so they should hit the ground before the beams that had to crash through the base section. There is no possible way that a steel beam that hits dozens of steel and concrete floors will reach the ground as quickly as a beam that falls through the air. Hundreds of exterior columns from *both* towers should also have fallen on all four sides, but only a few are visible.

The beams that fell through the air would fall at 32 feet per second, per second; the rate at which all objects fall in the earth's gravity. The towers were about 1300 feet tall. If a object is dropped from 1300 feet, it will hit the ground about 8 seconds later. Notice that the North Tower collapsed in 8 seconds. That means pieces of the North Tower fell down as fast as objects fall through air. How could the debris crush 100 steel and concrete floors while falling as fast as objects that fall through air?

The video shows that the collapse occurred at the same rate as if somebody had dropped the steel beams in air from the top of the building. It *aint possible* for steel beams to bust through all of those floors without slowing down!

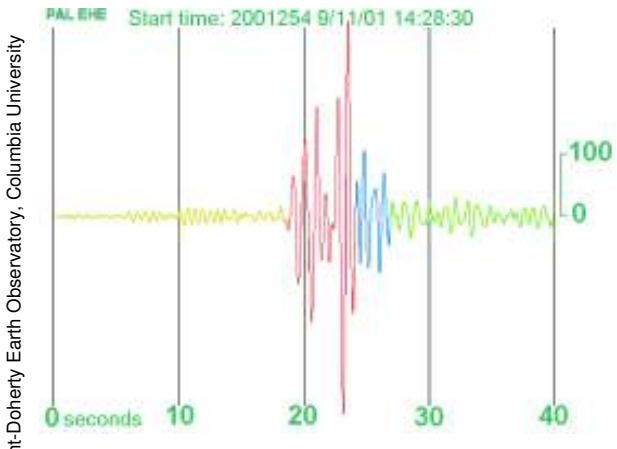


Figure 7-1 *Seismic data for the North Tower.*

Were explosives detonated by a computer via radio links?

One way to explain the rapid collapse of the towers (and other odd aspects of the collapse) is that explosives were placed in these buildings before the airplanes hit them. Explosives easily explain the dust that flew out of the towers (Figure 7-2). However, for those of you who are unfamiliar with computers, let me begin by explaining how the explosives could be controlled.

Packages of explosives could be installed on nearly every floor, in the areas used by maintenance personnel. A few packages may have been connected together with wires so that they detonate simultaneously, thereby acting as one package. Each package would have a battery powered radio link that connected it to the main computer. This master computer would be able to detonate specific packages of explosives at specific times simply by sending signals to the packages.

Think of cellphones to understand this. Imagine 100 cell phones spread out on a table. You could trigger the ringer on any one of them simply by dialing the number to that particular phone. Now replace the ringer with the detonator of an explosive; you would then be able to detonate any explosive simply by dialing that phone. Now replace your manual dialing of the phone with a computer that calls the phones in a certain sequence and according to a certain time table.

After determining that the airplane hit the 77th floor of the South Tower, the master computer would be set to detonate the explosives on the 77th floor, and then 250 milliseconds later the explosives on the 76th floor, and then 180 milliseconds later the explosives on the 75th floor, etc.

Figure 7-2 *This view shows the puffs of white dust coming out of the base section. These puffs always come out in a horizontal line, and they appear before that section of the tower breaks away from the building. Explosives easily explain this; i.e.; the high pressure gas forced dust out of the windows.*

The puffs and ribbons of dust

Since the airplane hit the South Tower on one side, the collapse was initiated by detonating explosives near the crash zone (Figure 7-3). This caused the tower to tilt toward the crash zone, creating the illusion that the columns in the crash zone had become weak from the fire and the airplane crash.

Within milliseconds other explosives along the crash zone were detonated to break all the columns along the crash zone (Figure 7-4). This instantly disconnected the top section without altering its position or orientation. (You can see this effect if you place a block of wood on top of another block, and then knock the lower block out from under it very quickly. This will cause the top block to fall down without changing its orientation. Or, if you rapidly pull a tablecloth out from underneath objects, those objects will drop vertically to the table without changing their orientation or position.)

Once the top section was severed, it began to fall downward at the rate at which all objects fall due to the force of gravity. It also continued to tilt towards the crash zone as it fell (Figures 7-5 to 7-10).

Photographs show ribbons of dust coming out of both towers as they collapse. Two suspicious aspects of these ribbons are:

1) The dust comes from a floor while that area of the tower still appears structurally intact, rather than forming at the location where the tower is in the process of crumbling. (One of these ribbons has just formed along the left side of Figure 7-2. The floors immediately above the ribbon seem intact. The area that is collapsing seems to be many floors higher up.)

2) The dust comes out very precisely. Specifically, almost the same quantity of dust comes out of each window, and only along one floor at a time, as opposed to appearing haphazardly in different windows along different floors. (Look back at the red arrow in Figure 5-16.)

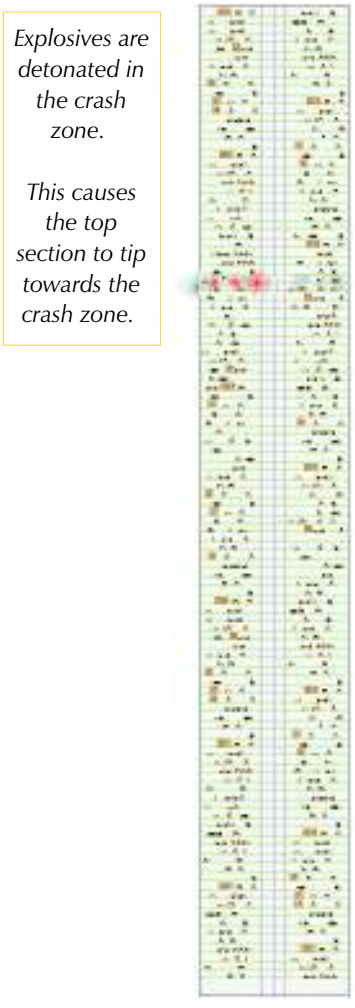


Figure 7-3 *Start*

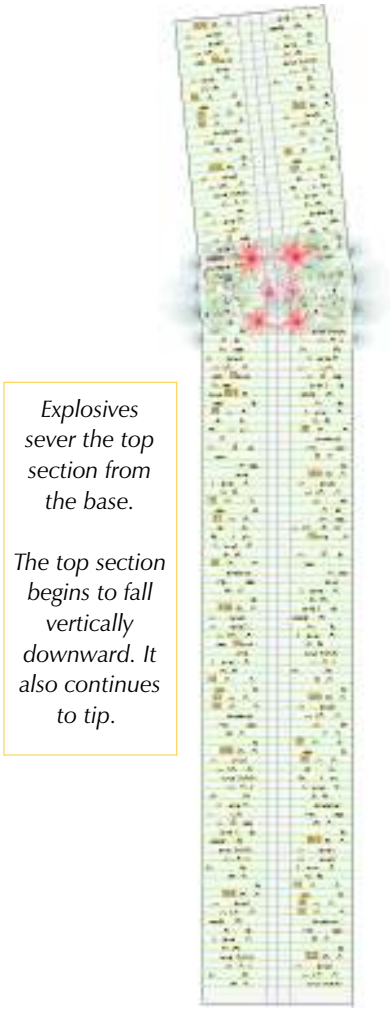


Figure 7-4 *½ second*

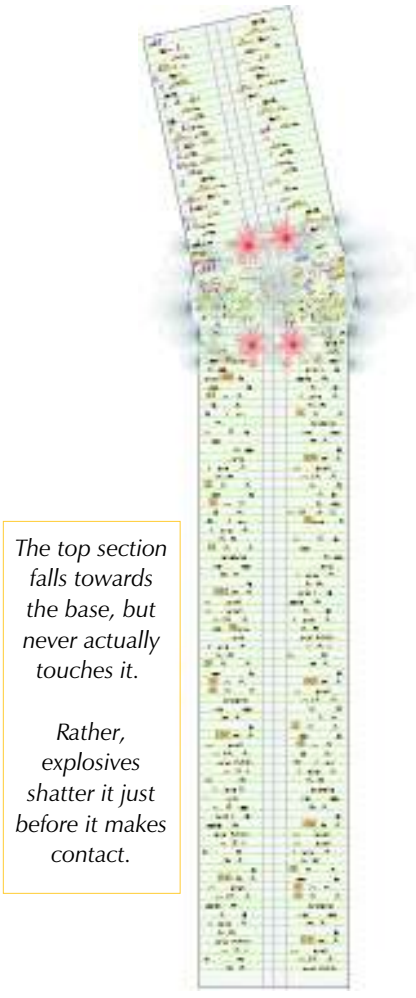


Figure 7-5 *1.0 seconds*

The precision of these ribbons is most obvious in a video taken by an amateur photographer who was standing under the South Tower (Figure 7-11). I doubt such a perfectly balanced increase in pressure could be due to the random falling of debris from the floors above. Rather, explosives were being set off inside the building. The ribbons are horizontal and precise because the explosives were detonated one floor at a time.

After a ribbon blows out of the building it grows into large clouds. Meanwhile a new ribbon forms underneath it.

The rate of disintegration increased over time

A few floors shattered during the first second, but that rate of disintegration did not hold steady. Rather, the number of floors shattering each second increased each and every second. The reason is that objects falling in gravity continually increase in speed, so the explosives were detonated at an increasingly faster rate in order to stay ahead of the falling objects.

- The top section of the tower did not collide with the base; rather, the explosives shattered it just before it would have made contact.
- The debris did not contact the base portion; rather, the explosives were always staying a few microseconds ahead of it.
- The overhanging section cannot be seen falling down in photographs in one large chunk because it was shattered by explosives. Its debris fell down at the rate objects fall in gravity, but none of the debris can be seen in photographs because the base was destroyed at the same rate; therefore, the base was always a few microseconds ahead of that debris.

The steel beams fell much faster than the dust, so the steel beams were actually passing through the clouds of dust. However, new clouds were created at the same rate at which the debris was falling. Therefore, as soon as a steel beam fell below one particular cloud, it entered a new cloud that had just been created a few microseconds earlier. By the time it fell below *that* cloud, another cloud had been created below it. The end result was that all of the falling objects were always hidden by clouds of dust.

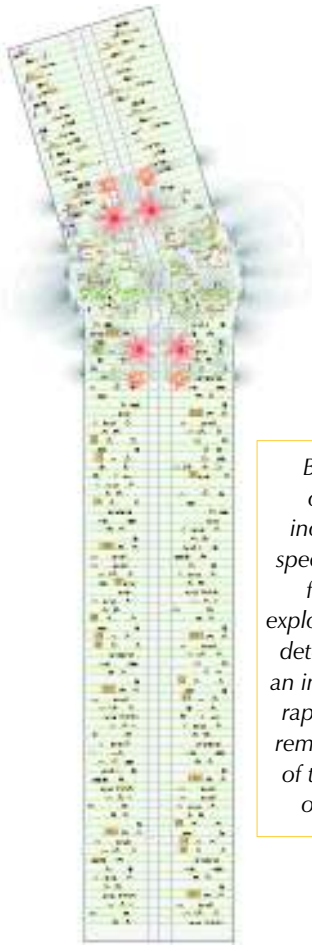
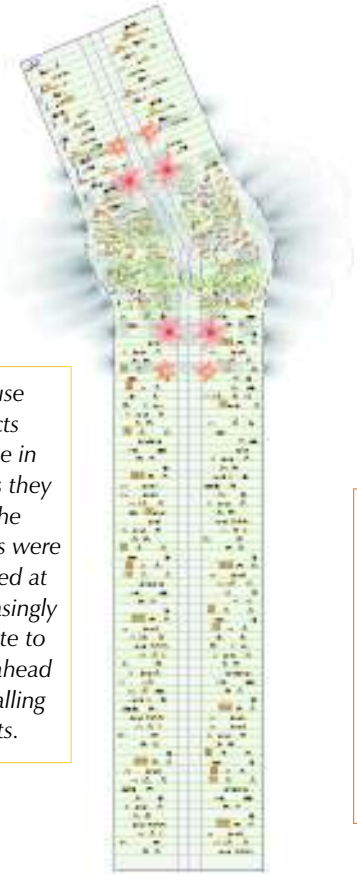
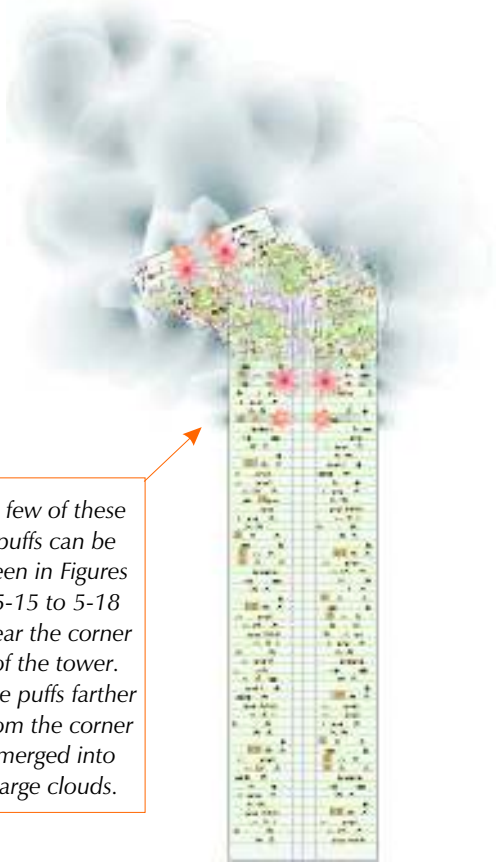


Figure 7-6 *1½ seconds*



Because objects increase in speed as they fall, the explosives were detonated at an increasingly rapid rate to remain ahead of the falling objects.

Figure 7-7 *2.0 seconds*



A few of these puffs can be seen in Figures 5-15 to 5-18 near the corner of the tower. The puffs farther from the corner merged into large clouds.

Figure 7-8 *2½ seconds*

The clouds of dust expanded to perhaps two or three times the diameter of the building because the explosives created a high pressure inside the tower. The 20 million kg of debris from the overhanging section eventually hit Building 4, but we cannot see that debris as it fell because the clouds of dust were so phenomenal. The only objects that can be seen falling are some of the outer pieces of the tower that were blown off as the explosives were detonated.

Figure 6-4 shows shiny objects scattered on the rooftops in the area. These objects are pieces of the aluminum coverings along the exterior columns (Figure 3-5, page 24). The explosives shredded the covers, and the gas pressure was so high that some of them were blown all over the neighboring buildings.

The final explosions at the base of the tower and in the basement had to break joints on columns made from 100mm thick steel, so they were **powerful** explosives. The seismic data peaked when the explosives in the basement were detonated. Then the explosions stopped and the rubble continued to fall for another couple of seconds, resulting in smaller seismic tremors (the blue section of Figure 7-1)

Figure 7-11 *Four frames of video show the collapse progressed floor by floor in a nearly perfectly balanced manner.*

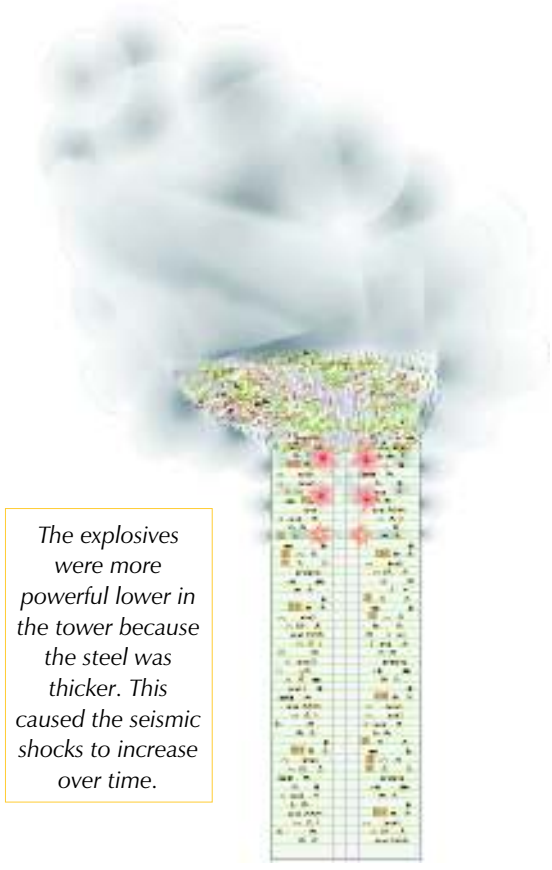


Figure 7-9 *4.0 seconds*

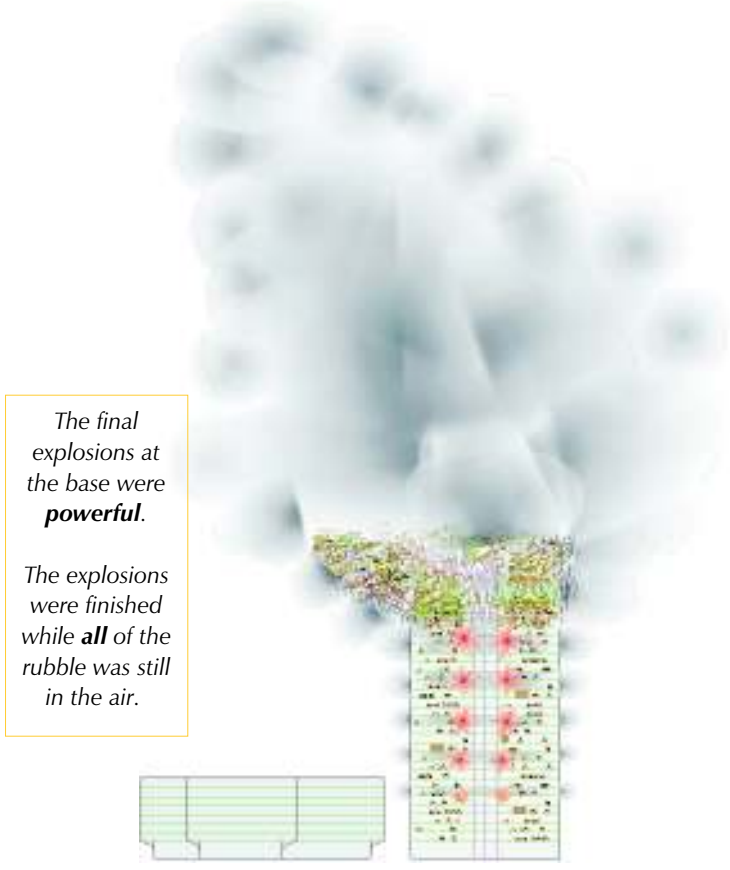


Figure 7-10 *4½ seconds*

No "potential energy" needed

Objects above the ground have "potential energy" due to the force of the gravity. The experts claim that the potential energy of the towers was the source of the energy that shattered the towers into dust. However, the only sensible explanation for the collapse is that explosives were detonated at a rate that matched the acceleration due to gravity. Each floor was shattered *before* the debris above it was about to make contact. The end result is that the debris *never collided with the floors*. Rather, all debris was in free-fall..

By the time the debris hit the ground, the fastest moving debris (the debris from the top of the tower) was traveling up to 190 mph. Since none of its potential energy was used to shatter the towers, all of its energy was available to become heat. There was more than 200,000 tons of steel in these towers, and it was at an average height of 200 meters, so a lot of energy was available for heat production. The explosives added even more heat to the beams. This would explain why the rubble ended up with such a high temperature.

The explosives would also explain why photos of the rubble show only dust and pieces of steel; namely, the concrete, carpeting, and office furniture were pulverized by the explosives. Only steel can survive such abuse.

The seismic data of the towers shows that the South Tower required about two more seconds to collapse than the North Tower. The extra two seconds was because the South Tower started to collapse by forming a crack, and then the tower was severed into two pieces. Each of those two pieces were separate, independent demolitions, but both of them occurred at the rate an object falls in gravity. By comparison, the North Tower disintegrated in almost one, continuous motion.

Have you ever tried to break concrete?

I suspect that many of the people who refuse to believe explosives were used have never tried to bust a concrete slab. Most people seem to believe that concrete has about the same strength as chalk, but if concrete was as fragile as the typical person believes, it would not be safe to use it in bridges.

Breaking concrete into pieces is a common procedure around the world. Pneumatic jack hammers are designed specifically for this purpose. The jack hammers do not pulverize the concrete into powder; rather, all they do is crack it into pieces. Only a small amount of powder is created in the process. In order to pulverize concrete into powder, explosives must be used. Concrete will not turn into powder simply by falling down onto another piece of concrete.

Some people have made the remark that the buildings were very tall, and therefore a piece of concrete falling from such a height could easily shatter into powder. However, the concrete shattered in the air, not when it hit the ground. If a piece of concrete is 1,000 feet in the air and shatters into powder after falling to 990 feet, that means it shattered into powder after falling only 10 feet. This is exactly the same as dropping a concrete block from a height of 10 feet above the ground.

Building 7 was a conventional demolition

Videos show Building 7 collapsing in perhaps eight seconds. Building 7 was about half the height of the towers, but it collapsed in about the same amount of time.

Figure 7-12 shows the seismic data of its collapse. The first thing to notice is that the vibrations are one tenth the magnitude of the North Tower. Therefore, the background noise is much more noticeable. The background noise is so significant that it is difficult to figure out exactly when the collapse began and when it finished.

The next thing to notice is that there appears to be three phases to the collapse of Building 7. The first may be the building falling down (red); next is a few seconds where perhaps the rubble settled (blue), and finally the vibrations increase significantly (green).

It is possible that the second and third phases (blue and green) are not even part of the collapse of Building 7. Maybe an earthquake coincidentally occurred at that moment in time. The seismic sensors pick up vibrations, but they do not identify the source of those vibrations. Only a serious scientific analysis from a variety of seismic centers could pinpoint the source, but our government has not bothered with such an analysis.

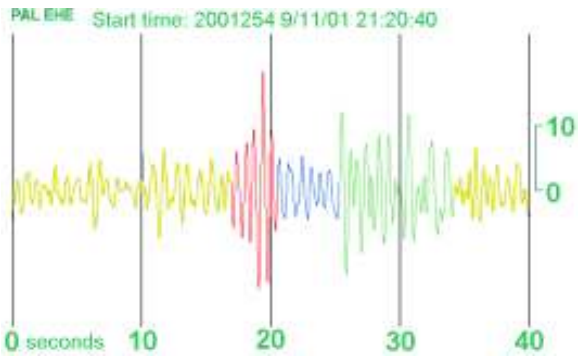


Figure 7-12 *The seismic data of the collapse of Building 7*

Lamont-Doherty Earth Observatory, Columbia University

The third phase (green) is the confusing part of the graph. If those vibrations belong to Building 7 it could mean that explosives were set off *after* the building had collapsed.

It should be noted that the "experts" claim that Building 7 collapsed in 18 seconds, which would mean all three phases of that seismic data are of the "collapse." However, the low quality video I found on the Internet shows the building collapsing in about eight seconds. Do the experts have a more accurate video? Or are they making the mistake of measuring from the start of the red phase to the end of the green phase and then assuming that entire span of time is the collapse?

How could the steel corrode?

Only a tiny fraction of all steel beams in the World Trade Center were inspected. A few of them were very peculiar. A *New York Times* article in February, 2002 described them as:

> *Pieces of steel have also been found that were apparently melted and vaporized not solely because of the heat of fires, but also because of a corrosive contaminant that was somehow released in the conflagrations.*
>
> ...
>
> *Perhaps the deepest mystery uncovered in the investigation involves extremely thin bits of steel collected from the trade towers and from 7 World Trade Center, a 47-story high rise that also collapsed for unknown reasons. The steel apparently melted away, but no fire in any of the buildings was believed to be hot enough to melt steel outright.*

A brief article in *The Minerals, Metals & Materials Society* gives a technical analysis of a steel beam from Building 7. The most interesting paragraph:

> *Rapid deterioration of the steel was a result of heating with oxidation in combination with intergranular melting due to the presence of sulfur. The formation of the eutectic mixture of iron oxide and iron sulfide lowers the temperature at which liquid can form in this steel. This strongly suggests that the temperatures in this region of the steel beam approached ~1,000ºC,*

The scientists who inspected the steel did not bother with any speculations on what could have caused the high temperatures.

The FEMA report describes these odd steel beams without technical details (Figure 7-13), and in such a vague manner that you have to carefully think about what this corrosion might mean. I say the *"hot corrosive environment approaching 1,000°C"* that FEMA refers to is evidence of explosives. The burning of office furniture, diesel fuel, or jet fuel will not create such high temperatures or such corrosive conditions. FEMA described the corrosion as *"an unusual event,"* but perhaps it is unusual only for fires; perhaps it is a common event with explosives.

Nothing happens without a reason; there is a reason the steel showed signs of high temperature corrosion. Why not look for the reason rather than terminate the issue? Or does FEMA know the reason, and are they simply avoiding it?

8. 2. 8 Appendix C: Limited Metallurgical Examination

Two structural steel samples from the WTC site were observed to have unusual erosion patterns. One sample is believed to be from WTC 7 and the other from either WTC 1 or WTC 2.

8. 2. 8. 1 Observations and Findings

a. The thinning of the steel occurred by high temperature corrosion due to a combination of oxidation and sulfidation.

b. Heating of the steel into a hot corrosive environment approaching 1,000 °C (1,800 °F) results in the formation of a eutectic mixture of iron, oxygen, and sulfur that liquefied the steel.

c. The sulfidation attack of steel grain boundaries accelerated the corrosion and erosion of the steel.

d. The high concentration of sulfides in the grain boundaries of the corroded regions of the steel occurred due to copper diffusing from the high-strength low-alloy (HSLA) steel combining with iron and sulfur, making both discrete and continuous sulfides in the steel grain boundaries.

8. 2. 8. 2 Recommendations

The severe corrosion and subsequent erosion of Samples 1 and 2 constitute an unusual event. No clear explanation for the source of the sulfur has been identified.

Figure 7-13 *A section of Appendix C of the FEMA WTC report*

Was the collapse beyond perpetual motion?

Perpetual motion requires using energy without wasting any of it so that the same energy can be used over and over. Even more absurd than perpetual motion is a process which uses more energy than is available to it, which requires it to create energy.

Cracking a concrete block into two pieces requires energy, and converting a concrete block into *powder* requires even more energy. The smaller the particles, the more energy needed.

Perhaps 100,000 tons of concrete in each tower was pulverized to a powder. This required a lot of energy. The powder was ejected with a velocity so high that clouds of dust expanded to two or three times the diameter of the building. This also required energy. Thousands of steel beams in the building broke at their joints, and breaking those joints required energy. Energy was also needed to shred the corrugated steel sheets that were part of every floor. The high temperature of the rubble required energy as well. Where did all this energy come from?

I can think of only two ways to explain the powdering of the concrete without violating the laws of physics:

1) The buildings were incredibly defective.
   If the concrete was defective, not much energy would be needed to turn it into powder. Also, if the rivets, bolts, and welds that held the steel beams together were corroded and/or defective, not much energy would be needed to break the joints. Of course, if the towers were defective, it is amazing that they survived 30 years of storms.

2) Small packages of explosives were used.
   If small packages of explosives were placed at several locations on virtually every floor, they could provide the energy necessary to break the joints and shatter the concrete.

Both of these theories would explain why our government wanted the rubble destroyed so quickly. Are either of these theories correct? Before we try to answer that question, consider what the rubble would be like with each of those theories:

1) If the buildings were incredibly defective.
   No additional heat would be added to the rubble. The final temperature of the rubble would be due to whatever heat was remaining from the fire, and whatever heat was created as the pieces hit the ground (which converts the remaining potential energy into heat).

2) If small packages of explosives were used.
   The steel directly next to explosives would be exposed to a high temperature gas, although only briefly. This could melt small, thin portions of the steel, and it would add a bit of heat to the thicker pieces of steel.

   The explosives would shatter the concrete and the small particles would pick up a significant amount of heat. Those hot particles would raise the temperature of the rubble significantly.

   The steel in the basement was very thick, so the explosives had to be powerful, which would create a lot of heat. The combination of the basement walls and the falling rubble would trap a lot of the heat inside the basement.

My point is that if explosives were used, the rubble would end up with a significantly higher temperature than if the buildings had merely fallen down, and the temperature in the basement would be extremely high. Judging by the high temperature of the rubble five days after the collapse (Figure 6-5), it appears that explosives were used.

A Challenge for Physics Students

Can you estimate the amount of energy needed to pulverize the concrete in the towers? If you designed a building that shattered into dust, would you be able to figure out if your structure truly "fell down" or if it was blown up?

With the endless fighting between nations and religions, the world needs a way to determine when a building has been secretly destroyed with explosives. So, rather than practice physics with irrelevant problems, how about looking for a way to deal with *this* problem?