

World Trade Center 7 – Why did it free fall?

NIST, in the year 2001 held the firm position that WTC7 fell due to fire alone. At about 5:20PM on the afternoon of 9/11/01 WTC7 spontaneously collapsed, bottom up demolition style. WTC7 was never hit by a plane and was 5 blocks from WTC1 and WTC2 which also collapsed before noon that day.

The position of NIST is that the fire expanded joints inside the building which created a chain reaction of failure, which from the outside, looked remarkably like a well done bottom-up demolition.

I offer a third opinion here from the University of Alaska Fairbanks which stated:

The principal conclusion of our study is that fire did not cause the collapse of WTC 7 on 9/11, contrary to the conclusions of NIST and private engineering firms that studied the collapse. The secondary conclusion of our study is that the collapse of WTC 7 was a global failure involving the near-simultaneous failure of every column in the building.

<https://ine.uaf.edu/projects/wtc7/>

NIST created a computer simulation which shows the interior of the building collapsing that kept the exterior shell intact and then the exterior shell collapsed. By comparing the NIST computer simulation to the actual film (see it in the link above) you should see that the simulation doesn't compare to what happened.

If you look at the actual film, it looks just like a bottom-up demolition.

Successive failure of steel joints which create a smooth, symmetric collapse of free fall for 2.5s across its 300 feet of building width would require a **highly improbable** set of circumstances which would have self-sequenced at just the right time.

Occam's Razor says simplicity is the key to truth.

Occam is not on the side of a the NIST theory.

If fire did this, then why pay millions of dollars to have a demolition done?

Just burn the building.

NIST agreed that they had never seen such a failure before – as the one they say happened. Such a failure has never occurred since. But it happened 3 times that day.

The collapse of WTC7 as a demolition is characterized by the following:

1. The roof line exhibited a dip or kink near the middle which brought the left and right sides of the building inward to create an implosion.

- a. This is standard for demolitions – to keep the rubble inward to minimize collateral damage.
2. Across 300 feet of width of the building the collapse was symmetric – virtually all the way down. Fire is chaotic. Successive failure would not be perfect and would also be chaotic. Deliberate, timed explosives as is done in demolition has the highest chance of symmetry of the fall. It was eerily symmetric. That in itself is a give-away to demolition.
3. A Physics instructor, David Chandler used the CBS film of building 7 which was not hit by a plane and overlaid physics lab software onto the film.

See Mr Chandler's analysis.

<https://youtu.be/iGMvnwjUizY>

- a. Using known information about the building height and width, Chandler scaled the software to units of meters.
- b. Using the frame rate of the film he could superimpose a time base Δt
- c. With x = distance; t = time; v = velocity; a = acceleration
 - i. $\Delta x/\Delta t$ = velocity
 - ii. $\Delta v/\Delta t$ = acceleration
 - iii. $\Delta x/\Delta t/\Delta t = \Delta x/\Delta t^2$ also acceleration
4. For 2.5s the slope of $\Delta v/\Delta t$ = acceleration = 9.8 m/s^2
 - a. Downward acceleration
 - b. 9.8 m/s^2 is the acceleration due to gravity at the Earth surface = g
 - c. This is known as FREE FALL
5. The building came down SYMMETRICALLY across a 300 foot width.
 - a. The Symmetry of the fall across 300 feet
 - b. Combined with the kink and the implosion to avoid collateral damage
 - c. Is a dead give away that it was not due to fire creating successive failure but rather controlled demolition.
6. After the 2.5s FREE FALL the slope of $\Delta v/\Delta t$ starts to bend to $< 9.8 \text{ m/s}^2$ and this was due to fall building catching up to its own rubble it had created toward the ground.

FREE FALL

Free fall means that nothing is in the way when an object is falling,

[Air friction is negligible when it comes to heavy objects at low velocities – so air is not a factor at all.]

Experiments for you to do:

- Take an object and lift it above your head (call this height h)
- Drop that object and watch it.

The object will accelerate at g towards the ground. Its in free fall.
- Now take another object which is known to be heavier than the first object into your

Other hand.

- Now drop both the heavy and the lighter objects at the same time and watch both of them carefully as they strike the ground. Try it a few times.

You will see the both the heavy object and the light object will strike the ground at the same time. This is remarkable !

The heavy object is being pulled by the Earth harder than the lighter object.

So how can they both hit the ground at the same time?

So how can they both be accelerating downward at the same rate g ?

FREE FALL - conversion of energy

When you lift an object a height h above the ground you give that object gravitational potential energy GPE.

GPE = mgh where m = mass of the object; g = acceleration due to gravity; h = height above ground level. [mg = weight of the mass in a gravitational field g]

When you let the object drop in FREE FALL then gravity converts the potential energy to KINETIC ENERGY KE

$$KE = (1/2)mv^2$$

So the total energy during the drop is the sum of the two.

GPE + KE = Total Energy

So as its dropping the GPE is decreasing and the KE is increasing in FREE FALL.

$$mgh = (1/2)mv^2$$

The m (mass) is the same as aon both sides of the equation so they cancel out.

$$gh = (1/2)v^2$$

Solving for v (final velocity)

$v = \text{SQRT}(2gh)$; SQRT = square root

The math for the energy says that the final velocity is independent of the mass !

That means that two objects of different mass's (weights) will drop at the same rate (g). Again in FREE FALL – if nothing is in the way.

One object could be a ball bearing and the other object could be a 47 story building. As long as that timed explosive demolition well approximates nothing in the way – we will have a FREE FALL situation and g will pop out of the physics lab software overlaid on that CBS film.

The reason why objects fall at g independent of their mass in a gravitational field is because an objects gravitation mass is identical to an objects inertial mass. One pulls down with m and the other resists the pull with m. The two cancel.

NEWTON's 2nd law of motion

$F = ma$; where F is in this case the force of gravity

NEWTON's law of gravity

$F = G \frac{mM}{r^2}$; r is the distance between the two mass's; m is the object, M is the planet; G what is the universal gravitational constant

Equating the two

$G \frac{mM}{r^2} = ma$

Once again the object mass m cancels out on both sides

$G \frac{M}{r^2} = a = g$ in this equation you can compute g for a planet M is the mass of the Earth and r is the radius of the Earth; G is universal gravitational constant,

$g = 9.8 \text{ m/s}^2$ at the Earth's surface

If you see 9.8 m/s^2 as the downward g then either

1. Its FREE FALL or
2. It's a demolition that approximates FREE FALL

The physics says WTC7 was demolished.

All other conclusions and questions after this point is hypothetical.

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