*The Shroud of Turin has at last yielded a precise date. Previous radiocarbon testing (1988) was unable to produce a date because of unknown baseline and contamination. Measurement of Infra-red and strength (2013) partly resolved those problems. Now, independent analysis shows that multiple tests confirm a date for this cherished and sacred remembrance.*

The Shroud of Turin is a central relic of the Catholic (universal) church. Its history is well documented and a small amount of searching will uncover the many references to the ‘Mandylion’ or ‘Sidone’ from the crucifixion to the present. Housed in an unbroken chain of care for millennia, the Shroud is a symbol of the teachings of Jesus, a reminder of his ultimate sacrifice, the profound records, parables and allegory of the bible. It is a token of God’s love and endless mystery.

But what is the actual date of the Shroud?

There are three tests.

In 1988 radiocarbon measurements were performed. [[1]](https://en.wikipedia.org/wiki/Radiocarbon_14_dating_of_the_Shroud_of_Turin) They were known to be contaminated by airborne vapors or (volatile organic compounds) or VOC. These include bees wax, creosote and, frankincense which is not significantly removed by standard cleaning. [[2]](http://www.isco/WebProductFiles/Applications/105/Applocation_Notes/SFE_Preperation_for_Radiocarbon_Dating.pdf) Given the decayed original carbon 71% and 70%(atmospheric C14) flax baseline, the error from carbon contaminants could be 2500 years. Thus the carbon date remained unknown. Reweaving in parts of the control samples is also credibly suggested.

However, on approximately 2013.166, two Infra-Red (cellulose decay) and Physical Strength Tests were performed. These were compared with baseline flax samples which were 14 to 3500yro. [[3]](http://www.matec-conferences.org/articles/matecconf/pdf/2015/17/matecconf_wopsas2015_01002.pdf%20) [[3.0)](http://www.matec-conferences.org/articles/matecconf/pdf/2015/17/matecconf_wopsas2015_01001.pdf%20) The data yielded hidden clues. (Note: IR Dates were actually 280BC and 220BC, but still averaging 250 BC.)

 IR Strength

-----300BC----200BC----------|------------------400AD------ . . .

Taken together they showed an average close to the expected range. But they did not converge on a single date. Initially, they were simply averaged together. (-33) But this is actually incorrect since both tests are separate modalities. The correct way to see the results would be to first average the IR tests.

-----------250BC-----------------|------------------400AD------- . . .

Yet the dates still do not converge. And the average provides an even less hopeful date of +75 with 650 years of error. But what is preventing them from converging?

Parsing the discrepancy:

My initial theory was that the shroud was housed in a temperature lower than desert texts which were used as control samples for calibration. The Shroud was taken to Constantinople (Istanbul) where temperature and humidity were different. This yielded a factor of 1.2 which would alter IR and Strength dates. But this would not bring the dates together. So I examined VOC contamination.

Contamination from Volatile Organic Compounds is known to be approximately that of water which can range as high as 20% for dry wood. But VOC is not cellulose decay and should not fluress in that spectra. The contaminants would only affect the strength and not the IR readings. Added strength would have to be corrected for and would shift back the (400 AD) estimate. And tomb kept control samples would not be exposed to highly polar and acidic pyrolitic candle creosote which differs in strength from viscous airborne oils. Such molecules would adhere more tightly pushing out others.

But how much contamination and what strength?

To find the quantity of contaminant I devised a theory. Contamination fills empty spaces. Thus a unit square minus a unit circle would yield an approximation. Flax fibers are round. But they are also three dimensional. So I considered a cube minus its inner sphere (since distances between molecules are like the spaces between spheres.) The further insight is to average these two. This should approximate a sphere, squashed to half its height, subtracted from the box it fits in. Thus we have a constant that approximates gaps in two and three dimensional spaces. That number is 0.345501530.., it is the Material Absorption Constant. The MAC matches the amount of salt that dissolves in water.

(at about 4.73 deg C below STP) And studies of flax sorbativity show this number is very accurate.[[7.2](http://www.fibtex.lodz.pl/2013/3/26.pdf)]

When we apply this constant to the shroud we arrive at a very convenient expression to approximate the contamination. 34.55%. There are normally 6 modalities of contamination: Nitrogen, Oxygen, Water, CO2, essential oils and VOC. However, with very old material, the essential oils reduce with time and are replaced by VOC which are polar and non-polar molecules. Thus we typically have 6 things randomly jostling in and out of the material.

The VOC in a church contains different components. Beeswax, creosote, frankincense and CO2 however it is principally molecules that are sublimated solids. These compounds are not liquid or gas except in small quantities. Thus, they are precipitants at full saturation. These compounds are periodically saturated and glommed to the exterior surfaces. So they constantly bathe the shroud in frankincense, beeswax and creosote. These heaver slower moving molecules tend to a Brownian function in which they are either moving in and out, or sideways. Thus 2/3 of the energy is actually static rather than migratory. The result is a constant 2/3 pressure to fill the available space.

We thus have VOC contamination of .3455..\*2/3.

(A similar fractal expression is .3455 - .3455^2, where the space fills up, but there should still be .3455 space inside the contaminant and contaminant in that space.. That fractal can be completed and iterated to produce the same result. Thus the statistical migration ratio of 2/3 (for VOC vs air) appears correct. (see end notes)

Estimating Strength of Contaminant:

Knowing the amount of contaminant, I set out to find its strength. Here I reasoned that cellulose fibers are an ordered structure. But contamination is a scattered network. If we assume a random tetrahedral connectivity (the minimal isotropic spanning geometry), then the (carbon) contaminant strength would be ¼ of the ordered (carbon) cellulose network.

Example

 | ||||

 /|\

Each structure has the same number of elements but the four straight pieces would carry more weight together than a tetrahedral structure which dangled by one thread. The tetrahedron would break at its weak upper length. But the polymer, with 4 straight pieces, would hold 4 times as much load.

Thus we have 2/3 the contamination constant divided by 4 for contaminant strength or 1/6 \*.3455…

When 1+ (.3455../6) is multiplied to the Strength Age we get an extra 92.89 years because the material was helped. And we now remove 5% of the strength, adding 5% to age.

------250BC-------------|---------------------\*<---400AD

Averaging these two dates, -250 and 307… gives 28.554. That’s July 21st, Year 28 (9:18 in the morning) as the ‘canonical’ harvest date of the shroud. –Roughly, the day of the July flax harvest moon of that year. (The Full moon was Friday, 24th ,Year 28) [[5]](http://www.moonpage.com/index.html)

Confirming the Results:

It is known that the Eclipse in the New Testament was on Nov 24, Year 29 AD. And that it was approximately total at the site of the Crucifixion. (NASA Eclipse Tables, accurate to roughly 200 miles) The Nov 24 crucifixion being exactly 200 days after the arrest because Roman law required a 40 day waiting period for capital cases and Jesus was transferred 5 times. Thus the date appears concordant.

Organic contaminant is not expected to fluress significantly in the cellulose rot frequencies (Flurencence should be below 10^-5 [[4]](http://www.acheiropoietos.info/proceedings/LindWeb.pdf), which would only add a few days. Thus all appears correct.

This leaves the concern that we had to average the Strength and IR dates together. Returning to the 1.2 difference in temperature and humidity we know that higher temperature or humidity would increase rot. But the gap between Strength and IR dates is 14%. So what caused the difference?

For Strength and Rot to vary they must come in different proportions. This occurs through variance of the ancient control samples and shroud. Larger fibers produce more rot and more strength. Wider fiber would produce equal amounts of rot area and strength area. (fiber are translucent) So the changes are the same but in opposite directions. And this is what we see. Thus averaging the IR and Strength ages is appropriate. The alternative hypothesis does not appear viable; that there is only added cellulose decay (without strength decay) or that strength alone was augmented by some other means. Thus the Strength and IR (Ages) can be averaged.

One additional concern remained. The IR dates (200BC and 300BC) were also averaged to give the 250 IR date. This is solved by one additional insight. The team accounted for temperature and humidity. But acidity also affects each IR signature differently. Organic Acids and CO2 buffer the pH, each offsetting the other. So the IR signatures are also moved equally in opposite directions. Thus, averaging them is also correct at 250. [[\*](https://www.google.com/?gws_rd=ssl#q=buffer+effect+of+carbonic+acid+on+ph&*&spf=108)]

There is no mathematical error left in the system.

The old controversy about Radiocarbon dating can now be resolved with the new contamination figure which places roughly .3455\*2/3 modern carbon in the shroud. Studies of outgassing indicate that half the contamination is replaced every couple years. About 7% every 116 days! [4] Thus, it is new carbon. And radiocarbon calculations using the new date yield reasonable baselines for flax and beeswax. Factor analysis yields an expected error on the order of +4 days. (This derives from incrementing a least significant digit among the known values for temperature and humidity.)

The Shroud date is thus solved.

Additional study may consider the nominal strength of resins compared to wood. The contaminant may approach ½ rather than ¼ th the strength of wood. Thus subtracting slightly more strength and adding slightly more age. Also the tetrahedral contaminant geometry may approach a triangular structure when applied to the 2 dimensional surfaces of cells. Hence the 1/4th geometric strength would be closer to 1/3, again adding to the age. Also, IR frequencies may also have been distorted by selective filtering by thicker fibers. In such a scenario the incorrect reading would appear to show less rot. Hence we would favor a slightly older IR date. VOC may have a greater strength when reinforcing a structure.

It is unlikely that any cloth was better cared for than the Shroud. Control samples stored underground would be damper, perhaps marginally reducing shroud age. But, any surviving ancient samples must have been generally well cared for. Bees wax and other resins would reduce mobility of both moisture and CO2 holding in moisture but would not prevent rot. Also fiber thickness could obscure marginal amount of rot signature, ­+10^-5 (stray frequency capture) \* (.06 (fiber variation (half difference between tests)) or about (.43/2) days. (Divided by 2 because this only affects the rot signature and not the strength number.) However, a stray absorbance of rot frequencies by fiber width is roughly the same as stray differential emanation. So these two factors would cancel out. Thus, the result here appears exact.

But a fourth test gives even greater certainty. (see end notes) A raman laser scan reveals a date of 30 AD but careful adjustment of the pH buffering provided by creosote adds 1.444 years and this date is within 1 minute 19 seconds. All 5 tests including radiocarbon now agree.

There is essentially no doubt of any kind that this ancient article is the fabled Mandylion of the ages and the true Shroud of Christ. A loving gift even in death.

To some this conclusion would seem like speculation beyond the facts. Since knowing a date only tells us the time and not the actual circumstances. However, we also have the many complex details of the Shroud which scholars believe could not have been faked to the complexity we see. The body positions, nerve strain of the pierced hands, perhaps DNA, many things which would not have been known to a forger, all reinforce what believers have faithfully shared with each generation.

Theories about trace red pigment (iron from well water), or processes of image formation (carbonized bacterial detris or differential soot absorption in oiled regions), take us no farther. The science supports the faith. Though we cannot discount the possibility of a Transfiguration based image formation.

Finally, the cloth gives us a face which is profound beyond its role as an icon. We see the very face of Christ. It is an image of extraordinary power. An imprint pressed at hand-width against the edges of the eye sockets and down the face. The width and length of the nose are obscured by wrapping as is the placement of the chin. The moustache, simply an anointed upper lip. The lower lip, mostly obscured. And the beard being the cloth wrapped under a shaven chin.

For the ages, Here lies the Christ.

With thanks,

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(Drafted: Oct, 18 2015; completed: Oct, 21 2015 with minor edits)

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IR and Strength data:

3 [http://www.matec-conferences.org/articles/matecconf/pdf/2015/17/matecconf\_wopsas2015\_01002.pdf](http://www.matec-conferences.org/articles/matecconf/pdf/2015/17/matecconf_wopsas2015_01002.pdf%20)

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4 Production of Radiocarbon by Neutron Emission on Linen (includes outgassing data)

<http://www.acheiropoietos.info/proceedings/LindWeb.pdf>

5 Moon Phase calculator <http://www.moonpage.com/index.html>

6 flax absorption and radio carbon error <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.964.882&rep=rep1&type=pdf>

7 moisture in flax <http://ageconsearch.umn.edu/bitstream/157411/2/tb1200.pdf>

7.1 Caster oils retention in carbon testing. <https://www.cambridge.org/core/services/aop-cambridge-core/content/view/050623D9BA5BEEE6D1501CCCF4E83AD6/S0033822200064808a.pdf/are-the-14c-dates-of-the-dead-sea-scrolls-affected-by-castor-oil-contamination.pdf>

7.2 Absorbency of clean (bleached) flax fibers http://www.fibtex.lodz.pl/2013/3/26.pdf (graph below)

Flax 1+ .345, Hemp 1+e\*.345



The absorbency of fibers and the degree of pyrolitic replacement of voc are key issues in understanding the results. Also the known strength improvement of saturated fibers. The above link provides many good data elements. . The density of water (62.4 lbs/cu ft) vs flax, estimated here via the mac at 57.54 lbs/cu ft (vs 59 for red oak) must be factored to determine free space. The data suggest close agreement and initial 8.4% water weight. Other absorption tests show a first-phase equal to 2/3 mac. And inundation phases which exceed that.

8. The Year Calculation: 365 days 6 hours 9 minutes 9.504 Length of earth orbit around the sun (includes leap years centuries etc.) 365.25636.., (this minutes Changes with ice thawing and ocean rise)

 **End notes:**

The Material Absorption Constant closely matches salt dissolved in water. Here the water plays the role of the cellulose which surrounds the contiguous contaminant regions. But because the water is overly flexible in surrounding salt the water pathway is slightly more efficient than the structured flax fiber at containing material. It’s a small amount of difference, about 2/10th of a percent. ([\*](https://srdata.nist.gov/solubility/IUPAC/SDS-47/SDS-47.pdf) p 140) so there is slightly more salt in water (at saturation) than space (at saturation) in flax. The difference would represent about 4.8 months age in the current framework, placing the date incorrectly at the start of the growing season. But other salts vary.

The alternate ‘fractal’ equation of .3455-.3455^2 requires additional terms. Completing the series one way produces a saturation of about 24.55%. (adding about 15.09 years of age) or one can match the 2/3\*mac with third terms like 1/(6+1/2.4)\* 3455^2\*.3455 or +(.3455-.3455^2)^2\*.3455. But the fractal can also be competed and then iterated by replacing the result in the beginning of the series and this converges a nearly identical number. The fractal apparently closely represents the capillary absorption potential and the mac. So 2/3\*.3455 VOC is clearly favorable.

Studies of saturated flax paper show absorptions higher than 2/3\*mac. These appear to be beyond capillary migration, causing agglomeration outside the fibers absorptions of 0.2356, higher than .2303, (2/3\*mac).[[6]](http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.964.882&rep=rep1&type=pdf). (0.2356 voc content would move the date to June 28, in year 27. However subtracting for outgassing periods could move the date forward slightly.) Hyper saturation appears to add approximately 2\*.3455^4. Super saturation (dripping wet) can reach 1/Pi or higher for viscous fluids.

Moisture is also a quasi-precipitant and would compete for space in the fiber. However water does not appear to dominate until humidity rises above 70% and so it remains well below available free space. [[7]](http://ageconsearch.umn.edu/bitstream/157411/2/tb1200.pdf)

Of course carbon can also accrete or fuse with the structure making absorption difficult to measure.

The DNA of Christ has not been reported as sequenced yet but remains possible and perhaps recommended.

**UPDATE: Raman spectral absorption confirms date. (update)**

The ‘Raman’ scan gave a Date of 30AD, extremely close to the above results. But Raman IR absorption is proportional rather than FT-IR scattering, which is affected by the amount of surface area. Thus TF-IR is highly accurate but imprecise and Raman precise but inaccurate. Raman uses only two frequencies. FT appears to use many, which compensates for buffering of contaminant. Thus Only Raman would be affected by a slowing of the aging process from pH buffering. (Creosote replacing normal voc content) The buffering error in Rot Signature is estimated here as:

[pH Shroud-H20]/[pH Carbonic acid] /[pH Contaminant difference] \* .23033( contamination) => 1.44454 years slower aging.

**This changes ‘Year 30’ to 28.554, Virtually IDENTICAL to the Canonical Result! (‘8:56am’ vs 8:57am)**

**(Assumptions: pH-Water 7.5, pH-co3=2.5 and pH-Contaminant=2.5)**

*(Correction: A slight error was resolved by use of 365.35636 instead of 365 for the decimal part of the year.).*

*The 9:18am time was the first result with some decimal truncation and without the astronomical adjustments.)*

Current calculations are 8:56 am harvest. But adding an 1hr:6min from Italy gives about 10:02

And Sunrise in in 28AD was about 1:50 hours later from earth’s elliptical procession around the sun.

Thus the time would be 11:52.

But in July the noon sun is off by 7 minutes. Thus the harvest calculations both indicate Noon exactly.

Published by <http://AmericanSmokeless.Com>

**About the Author:**

Timothy Sheridan is best known for creating “the world wide web” or “inter-net” which he invented in 1987, named and launched April 20 1988 in a lecture to The United States Congress through its Congressional Information Technology Advisor Staff, including key terms “hypertext”, browser”, “search engines” and “web page”, “web server”, “multi author web page” and “hyper mail” most of which were used in later documents at locations specified by Sheridan for their significance. Geneva for its ‘convention on prisoner’s rights’ and a university in the US for its notable film lore.

In 2000 Sheridan patented the modern tube shape vaporizer, tube “with at least one vent hole”, which is 90% less toxic than smoking, hence, a (preventative) cure for 27% of all cancer. (U.S. Pat 7415982, AmericaSmokeless.Com)

In 2013 Sheridan drafted “[The Internet Bill of Rights](http://theubie.com/ibrc.htm)” (published in 2014) and continues to promote fair-trade and internet-freedom.

2015 He drafted the “European Debt Armistice” to prevent “currency-death” from systemic trade imbalances between common-currency members.

A lifelong lover of Science and Education, designed and constructed numerous exhibits for the Austin Science Museum, Austin Children’s Museum and the Franklin Institute in Philadelphia.

He is also the author of numerous screen plays. (Including a first draft which later earned over a billion dollars.)

His other works include a 2010 proof of the Balance of Carbon emissions between Land and Sea. (<http://TheUbie.Com/k.htm>). Conception of a “digital music player” (2003), Conception of the network “screen”, a 4” by 2.5” or 6.5” by 9” touch device with all essential communications(2004). In 2008 Sheridan was among the first scientists to espouse that modern humans are descended from the 14% larger brained, indigenous European “Neanderthals” -- a fact which was then proved in 2011 by DNA testing. In 2011, he was first “to observe a Gravity wave” (they cause earth tides), In 2012 he formulated empirical proof that gravity waves travel at the speed of light –based on planetary motion data. Sheridan continues to work toward enforcement of fair trade laws. He has proposed to resolve Multi-Author-Web oppression with a system of “concordance” to filter inappropriate deletion attacks. He favors secure biometric access systems for democracy and banking and the poor. The development of secure, open and verifiable operating systems and forums remains a vital priority. Mr. Sheridan is a life-long advocate of improved justice and fair trade. He hopes for improved systems of population moderation – something better than war and poverty.

Mr. Sheridan is a proponent of teaching “History of Theology” (not religion) in public schools because public schools secularism creates a massively disproportionate silencing of the predominate Christian faith. (see: <http://theubie.com/HistoryofTheology.docx>)

As early as 2008 Sheridan was prevented from doing business online by extremists of “The Internet Axis”, a racist cartel which continues to alter Search engines, Email delivery and Advertising. Every online-ad he ever purchased was hacked and cheated 80% to 100%. Every search engine is hacked to hide his business. Americansmokeless.Com (Search: VAPORIZER). Wikipedia refuses to allow his name or business or inventions.

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