



NMSR Reports

The Newsletter of the
New Mexicans for Science and Reason

NMSR Reports, David E. Thomas, Editor, 1201 N. Avenida de Chamiso Pl., Socorro, NM 87801 © 2022

AUGUST MEETING:
NEW MEXICANS FOR SCIENCE AND REASON will hear
Dave Thomas on “Non-Reversing Mirrors : Update”
=>August 10th, 2022 7:00PM<=
=>Attend online!<=
=>RESUME LIVE MEETINGS?<=
Vote at roundorflat.com/covid19

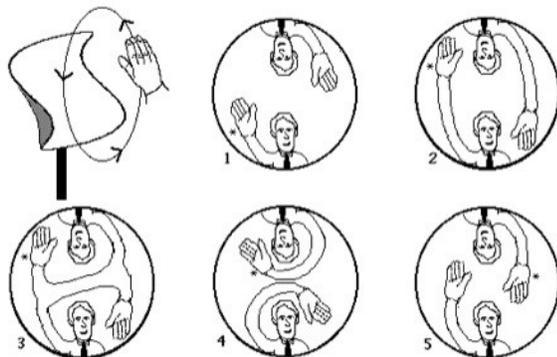
- Let's start meeting live, perhaps at Copper Canyon
 - Cases Still Climbing, Let's Stay on Zoom for now
 - Other (please add suggestion in box provided)
- You can also send snail mail with your preferences, to David E. Thomas, NMSR, 1201 N. Avenida de Chamiso Pl., Socorro, NM 87801.

NCSE Creationism Alert Activated!

Way back in 2003, NMSR developed the “NCSE Creationism Alert System” to help the National Center for Science Education (www.ncse.com) track changes on how SCOTUS rulings might affect the study of evolution in schools. At that time, the *worst* scenario imaginable was the appointment of “Intelligent Design” founder Phillip Johnson to the Supreme Court. Sadly, with recent creationism-friendly rulings on school-sponsored prayers and taxpayer funding of religious schools, it appears the Alert System needs a major update.

FUTURE MEETINGS ANNOUNCED!

August 10th, 2022 NMSR Meeting: Dave Thomas on "Non-Reversing Mirrors : Update"

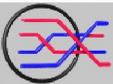


Dave will discuss plans for his non-reversing mirror inventions, plus give an update on a new upcoming YouTube science channel.

VOTE ON LIVE MEETINGS!

Are we ready to resume live meetings? A Live Poll has been developed at roundorflat.com/covid19. Please go to this address, enter your name, and email (optional), and your preference from the following options:



NCSE CREATIONISM ALERT SYSTEM
 DEVELOPED FOR THE NATIONAL CENTER FOR SCIENCE EDUCATION

 BY NEW MEXICANS FOR SCIENCE AND REASON


NCSE CREATIONISM ALERT SYSTEM
 TODAY'S THREAT LEVEL IS
LOW

LESS THAN 2 STATE BOARDS OF EDUCATION UNDER SIEGE

NCSE CREATIONISM ALERT SYSTEM
 TODAY'S THREAT LEVEL IS
SEVERE



SEVERE RISK OF PHILLIP JOHNSON APPOINTMENT TO SUPREME COURT

New Mexicans for Science & Reason (NMSR)

NMSR is a non-profit group with the goals of promoting science, the scientific method, rational thinking, and critical examination of dubious or extraordinary claims. NMSR meets at 7 PM on the second Wednesday of each month, in Albuquerque, New Mexico, at a secure, undisclosed location. NMSR Reports is its official newsletter.

NMSR officers:

Dave Thomas, President

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Marilyn Savitt-Kring, Science Mom

Membership: \$25/year (hardcopy newsletter), or \$15/year (downloadable PDF), make your check **payable to NMSR**, send to treasurer (Debbie Thomas).

NMSR Advisors:

- *Mark Boslough*,
Adjunct Professor, University of New Mexico.
- *Kendrick Frazier*
Editor, Skeptical Inquirer
- *John Geissman*
Professor of Paleomagnetism
- *Alan Hale*
Southwest Institute for Space Research
- *Randy Thornhill*
Professor of Biology, UNM

Cyber-Cypher Clue: U = J, Z = W.

Bonus Puzzle Clue: There's **gold** in them thar **ratios**.

WANTED: READER ARTICLES & COMMENTARY

Got something to share with NMSR members? **Send it in!** ATTN: Dave Thomas, Editor, NMSR Reports.

REMEMBER, our next NMSR meeting is **August 10th at 7PM!** Meetings, Live or Zoom? **Vote!**



PUZZLE TIME!

[Please send solutions to Dave Thomas at: nmsrdave@swcp.com, or at 1201 N Avenida de Chamiso Pl., Socorro NM 87801.]

Cyber-Cypher: AUGUST PUZZLE

(Submitted by Dave Thomas)

The following letters are a simple substitution cypher. If R stands for L, R will stand for L everywhere. Your Cyber-Cypher Clue: Clue? Oh, well - if you must, see p. 2.

" I M A ' Y D T M H E Z L M F D F M H M V
 W D M W F D K G H H G B T M B H L D
 K G R D F G B D K S D N E A K D , V C E B O F I ,
 H L D I ' C D V F A K L V M C H L D
 X M X D B H . " - X G H N L X N N M B B D F F ,
 S F E X G B T U M S G K K A D K M B N M Y G R
 K H G X A F A K X M B D I .

SUPER SECRET WORD!

However you prefer to do the cypher itself (above or below), simply duplicate those actions on the alphabetized row of cypher letters below. You'll build an answer key, and you'll also reveal - the Super Secret Word!

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

JUNE CYPHER SOLUTION

"IF POLICE OFFICERS LIKE THOSE AT MY HIGH SCHOOL AND IN TEXAS ARE TOO AFRAID TO TAKE ON MEN WITH A-R FIFTEENS, STOP ASKING OUR TEACHERS AND STUDENTS TO DO IT." - DAVID HOGG

Esteemed June Code Crackers: Mike Arms* and Austin Moede*!

*Secret Word: "IMPROVED GUN LAWS"

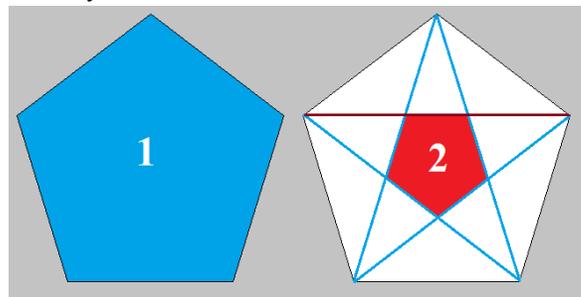
SOCORRO STUMPER

Need more Secret Word Cryptograms?

New puzzles every week at
www.nmsr.org/SocorroStumper.htm

July Bonus: "Pentagonal Ratios"

Submitted by Dave Thomas



Two large pentagons are shown, having the same area, labeled 1 at left. The pentagon at right has an

inscribed pentagram (star), revealing a smaller, inverted pentagon, labeled 2.

The August Bonus: (A) What is the ratio of the perimeters of pentagons 1 and 2?

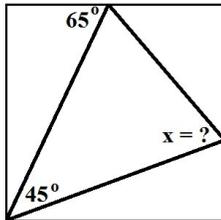
(B) What is the ratio of the areas of pentagons 1 and 2?

June Bonus Solution: “A Cute Angle”

Submitted by Dave Thomas

A triangle is inscribed in a square as shown. What is angle x ?

Answer: 70 degrees.



Congrats to: Rocky S. Stone (NM), Earl Dombroski (NM), Keith Gilbert (NM), Gene Aronson (NM), and Swami Lad (ND)!

June 8th, 2022 NMSR Meeting:

Revisiting Earthquake Lights!

This mysterious phenomena is back in the news! A background article by NMSR speaker Alberto Enriquez is available at www.nmsr.org/eqlights.htm. The June 8th NMSR meeting featured a panel discussion with Dr. Friedemann Freund (senior research scientist with the SETI institute, and also at NASA Ames), Alberto Enriquez (a journalist who has a longstanding interest in earthquake lights), John Derr (now



Friedemann Freund

retired from USGS), and Dave Thomas. Dr. Freund is an expert on abiogenesis and the synthesis of organic compounds in space, and the founder of Positive Hole Theory, a novel explanation for why earthquake precursors exist.

Alberto Enriquez began by saying he was pleased to join Friedemann Freund and John Derr, “two of the most seminal figures in earthquake forecasting

and anything to do with pre-earthquake.” He described Derr as “the bravest USGS employee who ever lived,” for sticking to his guns on the subject despite vigorous opposition from USGS. Alberto explained that USGS is notorious for ignoring key areas; for example, USGS should have been the natural agency to develop InSar and GPS, but they let DoD handle it. And, they ignored Alfred Wegener’s seven



Alberto Enriquez

independent lines of evidence for moving continents for decades, he said.

Alberto added that Dr. Freund is “the innovator genius behind positive hole theory, which explains all of the earthquake precursors.” Freund’s work was supported in part by his wife, a successful novelist. Friedemann Freund and John Derr also provided some introductory remarks.

Dave then showed a recent video (“*Unexplained Earthquake Light Phenomenon Finally Captured on Camera*”, [youtube.com/watch?v=05NmTEeXvhs](https://www.youtube.com/watch?v=05NmTEeXvhs)) by popular YouTuber Anton Petrov, regarding new observations of earthquake lights. Petrov described several observations of earthquake lights for several events. With the advent of smartphones, he said, we are getting actual video footage of such events, such as a quake in Acapulco in 2021. Is the phenomenon real? While there are many skeptics, Petrov said, the new evidence is thought-provoking. These events, which sound like ball lightning reports, do not involve aliens, Anton said. Possible mechanisms could involve expulsion of ions from rock, creating flashes of light, or the more exotic processes of piezoelectricity or triboluminescence. Do earthquake lights occur for specific types of quakes, such as vertical faults? Can they be used to warn the public of imminent shaking? The phenomenon’s explanation is still unknown, Petrov concluded.

Alberto mentioned some novel research by Jorge Heraud of Peru. The theory is that harder rocks (igneous or highly metamorphosed sedimentary rocks) accumulate



Anton Petrov

defects, and often are the location of earthquake lights when reported. What happens when a seismic wave hits a granitic intrusion? Friedemann explained that common rocks normally have oxides with a -2 valence states. In dense igneous rock like granite, however, there can be peroxy defects, in which the oxygen changes its valence to -1, and two such oxygens combine to form a peroxy bond. Freund argues that positively charged holes can be produced in crystalline rocks containing peroxide bonds, in which oxygen atoms are connected to each other, and not to another atom such as silicon. Upon a pressure and temperature increase during seismic activity, these bonds break, and the oxygen atoms can draw an electron from a neighboring atom, leaving behind a positively charged “hole” or “defect electron”. He hypothesizes that seismic activity produces a continuous stream of such positive holes, which produce visible breakdown phenomena when they reach the earth’s surface – Earthquake Lights. The speed of the pulses can be 100 to 300 meters/second.

Alberto related how a father in L’Aquila, Italy observed these lights in 2009, and had heard of their

