



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 © 2023

MARCH MEETING:

NEW MEXICANS FOR SCIENCE AND REASON will discuss

Impending Solar Eclipse of 2024

=>MARCH 20th, 2024 7:00PM<=

=>Attend online on Zoom!<=

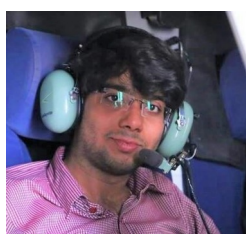
FUTURE MEETINGS ANNOUNCED!

March 20th, 2024 NMSR Meeting: The Total Solar Eclipse of April 8, 2024: Plans, Preparations, Past Eclipses

Everyone is invited to attend and describe their plans for the April 8th Total Eclipse. Are you going to Texas or other totality locations? Bring your photographs of previous eclipses!

7:00 PM March 20th, 2024, on Zoom

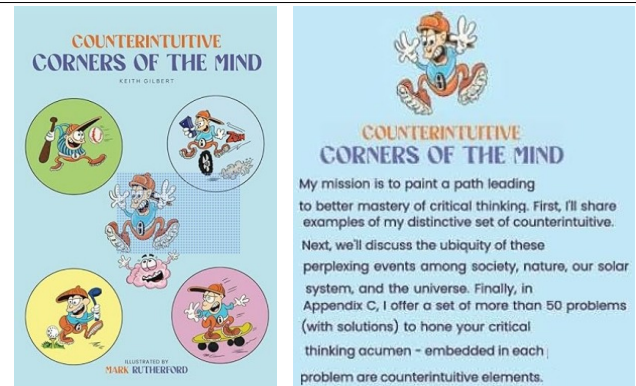
Coming April 17th, 2024 Arjak Bhattacharjee



A staff member at New Mexico Tech, Arjak will talk about the “Indian Knowledge System (IKS). The Indian Knowledge Systems comprising Jnan, Vignan, and Jeevan Darshan have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce.”

Coming May 15th, 2024, Keith Gilbert, “Counterintuitive Corners of The Mind”

Our own Keith Gilbert has penned a non-fiction book titled “Counterintuitive Corners of The Mind.” It is a guide on “how to hone critical thinking skills in our wobbly world.” It is available on Amazon and Kindle, https://www.amazon.com/Counterintuitive-Corners-Mind-Keith-Gilbert/dp/B0CTHWL8RS/ref=sr_1_1



February 21st, 2023 NMSR Meeting: Dr. Anay Luketa on “Thermal Hazards Associated with Transporting Liquefied Natural Gas by Rail”

Dr. Anay Luketa is a Principal Member of the Technical Staff at Sandia National Laboratories in the Engineering Sciences Center where she is a nationally recognized expert in fire research, fire safety, and fire hazard and risk analysis and testing.

She spoke about problems with transportation of Liquefied Natural Gas (LNG), which has to be cryogenically cooled for transport. Her group was tasked by the department of energy to look at the vulnerabilities of these large LG vessels, and found several causes for concern. One problem is that train crashes can involve hundreds of cars, with risks rising accordingly. If cryogenic coolant spills, that can cause steel structures to fail. The DOE has considered the group’s report carefully, and LNG transport by rail has not been approved. See the lecture on video, www.nmsr.org/nmst-hot.htm.



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.
- *John Geissman*
 Professor of Paleomagnetism
- *Alan Hale*
 Southwest Institute for Space Research

Cyber-Cypher Clue: U = J.

Bonus Puzzle Clue: Start with easiest solution, and build up.

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 **March 20th at 7PM!**

Meetings, Live or Zoom? Vote!

www.roundorflat.com/covid19



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: MARCH 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.

T T G G P P A V T " Y N P Q R E F N R C
 N O X P A J N N T C A T Q C A R C Z N Q M
 T A B G T G C Z A O N Q R T C N G Y A B
 G H C F G P P J L N C C Q R L C A V A M I
 G R Y Y A Q R L C Z N Q M U A W T .
 G W T A P F C N P J F R G H H N X C G W P N . " -
 M N X . P G F M N R W A N W N M C

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

NOVEMBER 2023 CYPHER SOLUTION

"WHAT DOES MIKE JOHNSON THINK ABOUT ANY ISSUE UNDER THE SUN? WELL, GO PICK UP A BIBLE OFF YOUR SHELF AND READ IT. THAT'S MY WORLDVIEW." - SPEAKER OF THE HOUSE MIKE JOHNSON

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

*Secret Word: "SMUGLY CREATION"

SOCORRO STUMPER

Need more Secret Word Cryptograms?

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

March Bonus: "It's Diophantine"

Submitted by Dave Thomas

$$28x + 30y + 31z = 330$$

$$x + y + z = ???$$

The March Bonus: Solve for x+y+z.

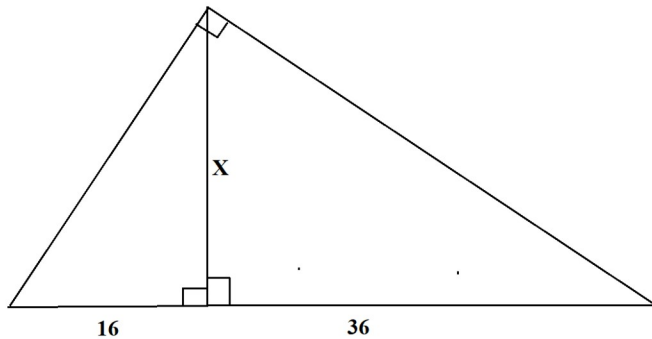
Bonus Bonus: List all positive integer solutions for (x.y.z).

Coming in Late Spring of 2024:

SKEPTICAMP! 🔥🔥🔥

November Bonus Solution: “Solve for X”

Submitted by Dave Thomas



The November Bonus: Solve for X

ANSWER: $x = 24$. Many ways to skin this cat!

Congrats to: Paul Braterman (UK), Earl Dombroski (NM), Rocky S. Stone (NM), K. Sengupta (INDIA), Mike Arms (NM), Eiichi Fukushima (NM), Keith Gilbert (NM), Gene Aronson (NM), Swami Lad (ND).

November 15th, 2023 NMSR Meeting: Karl Reineke on “Astro-photography: Equipment, Methods & Results”

Our November meeting featured retired scientist and amateur astro-photographer Karl Reineke. Karl discuss photographic and telescopic equipment, processing strategies, tips and tricks, and more. Karl talked about what telescopes and auxiliary equipment are needed. A good system can run from \$10,000 to \$15,000. Karl has seven telescopes; one of his favorites is an 11 inch Celestron, with an equatorial mount for tracking the sky. He explained the “500 Rule” : this rule says that if you divide 500 by the focal length of your lens, that’s how many seconds you can take a picture without tracking. With a 10mm lens, you can take a 50-second photo (perhaps of the Milky Way). With a 500mm lens, your exposure would be limited to a second, and that won’t work. As you zoom in on the stars or planets, you’ll definitely need tracking.



Karl discussed the process of acquiring stellar images like that above. He likes the PixInsight application, which costs less than \$200, but is worth it for the object-oriented workflows possible with the platform, which allows methods and procedures to be developed independently of the actual images being processed. To obtain his stunning images, hours of work stacking and processing multiple exposures of the same region of sky are required. Karl’s work is publicly available on his Facebook “Rastrophotography” album page, <https://www.facebook.com/media/set/?set=a.551374273325272&type=3>.

NMSR thanks Karl Reineke for a comprehensive and illuminating discussion. **Videos of this and past meetings are available at** <http://www.nmsr.org/meetings.htm>.

December 13th, 2023 NMSR Meeting: Dave Thomas on “What’s New in Flat Land?”

At our December meeting , Dave Thomas discussed his new research into Internet-enabled pseudoscience, including answers to common “Flat Earth” arguments. There was a presentation of how to calculate length of day and night anywhere on Earth, any day of the year, using the simplest spherical-globe model possible. This works reasonably well (accurate to within 15-30 minutes), and shows why equivalent results using Flat Earth assumptions are intrinsically impossible.

$$\text{Declination of Sun } \delta \approx 23.5^\circ \sin\left(\frac{360^\circ}{365.25 \text{ days}} (\text{Day} - 80)\right)$$

$$\text{Length of Day} \approx \frac{2 \arccos(-\tan \theta \tan \delta)}{\frac{15 \text{ degrees}}{\text{hour}}}$$

where θ = Latitude , δ = Declination of Sun

Dave showed how self-styled experts reject the reality of photographs of earth and moon from space, even on non-fringe sites like the David Attenborough fan page on Facebook.



Noah Fense Beers
This is the most fake looking photo I've ever seen
1d Like Reply 287 🍌🍌🍌

Luke Morgan Jones
Looks Fake.
16h Like Reply

proposed. A quick online search showed that both concave and convex versions of Flat Earth have been put forward.



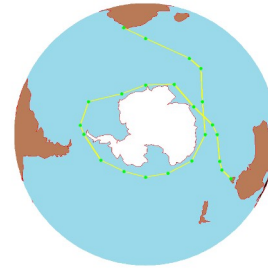
“Convex” Flat Earth

A new animation for how sunrise would differ on a globe versus a flat earth was shown, along with videos of sunrises worldwide. Star trails and more were also discussed.



Sunrise on Socorro's M Mountain: The shadow of the Earth can be seen coming down the mountain.

During the Q&A, the question came up as to other shapes besides flat and spherical have been



The journey of Katharsis II, some 15,000 miles around all of Antarctica, would have take five times longer on a Flat Earth.

The actual journey lasted about 100 days, and set a Guinness World Record.

Videos of this and past meetings are available at <http://www.nmsr.org/meetings.htm>.

DUES check the date on your mailing label. If it's time for you to renew, or to make a contribution, please make your check **payable to NMSR**, and send it to Debbie Thomas, NMSR Treasurer, 3205 Alcazar NE, Albuquerque., NM 87110
Name _____
Address _____
Membership \$25 per annum (hard copy newsletter), or \$15 per annum (online newsletter).

The NMSR e-mail list is fun! It's an e-mail list with news announcements of interest to NMSR members, discussions about news of the times, and more. To join, send a request to nmsrdave@swcp.com.
Thanks to: John Covan, Debbie Thomas, Keith Thomas and all of our Puzzlers!

Spring Haiku by Keith Thomas

Those big Texas boars Look tuffa' and meana' than The javalina.	Interviews suggest Flat Earthers have problems with Global perception.	Insects all across Our nation/Communicate By stridulation.
At Whole Foods Markets, Shoppers are likely to see Some half-baked products.	Who knows how many MAGA voters are members Of megachurches?	Though weasels can't speak, We have surely heard/Lots and Lots of weasel words!

	<p>NMSR Reports Vol 30, No. 1-3 March 2024 David E. Thomas, Editor (505) 410-0753 1201 Avenida de Chamisso Pl. Socorro NM 87801 <i>IN THIS ISSUE:</i> Future Meetings Announced New Puzzles! Karl Reincke on Astrophotography Dave Thomas on Flat Earth Any Luketa on LNG Transport</p>
	<p>March 20th Meeting: 2024 Total Eclipse! 7PM on Zoom</p>