



NMSR Reports

The Newsletter of the New Mexicans for Science and Reason

NMSR Reports, David E. Thomas, Editor, 801 Fitch Ave., Socorro, NM 87801 © 2019

JANUARY MEETING:
NEW MEXICANS FOR SCIENCE
AND REASON will enjoy
“An Evening of
Science and Magic”
7:00 PM Jan. 9th, 2019

==>**CNM MAIN CAMPUS,**
Student Resource Center<==

==>**Room 204**<==
Bring a friend!

FUTURE MEETINGS ANNOUNCED

**JANUARY 9TH, 2019 NMSR
Meeting: An Evening of Science and
Magic**



Our first meeting of 2019 will feature demonstrations of science, of magic, and perhaps even some scientific magic. Presenters will include Bill Fienning, Steve Brugge, John Geohegan, and Dave Thomas. If you have a nice trick or demo, bring it along to share!

Join us at 7:00 PM January 9th, 2019, CNM MAIN CAMPUS, Student Resource Center, Room 204.

December 12th, 2018 NMSR Meeting:
Bruce Lacey, on
on “A Flat
Earther's Journey
and Perspective”



Our December speaker, Bruce Lacey, had pledged to give an account of the evidence that had brought him around to the view that Earth is a flat planet. The consensus of most audience members, however, was that Lacey failed to deliver convincing evidence.

Bruce Lacey began by saying the Yin/Yang symbol was like a record of the sun's shadow over the year. (Perhaps someone mashed the two sides of an Analemma together?) He then showed some video blogs by rapper O.D.D., a flat earther, who received some rude, vicious, nasty comments. “Do you see the genius of these people?”, the rapper asked.

Lacey then quoted Arthur Schopenhauer: “All truth passes through three stages. First, it is ridiculed. Then it is violently opposed. Finally it is accepted as self-evident.” Brian Mullen, a Flat Earth “Engineer”, was pressured to stop for the sake of his family and job. George Orwell was quoted as saying “In an age of universal deceit, telling the Truth is a revolutionary act.”

CONTINUED ON PAGE 3

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 CNM's Student Resource Center, room 204 (@ Richard Barr Boardroom). NMSR Reports is its official newsletter.

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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**,
Physicist (Impacts, Climate Change,
Global Warming). Sandia National Labs.
- **Kendrick Frazier**
Editor, Skeptical Inquirer
- **John Geissman**
Professor of Paleomagnetism, UNM
- **Alan Hale**
Southwest Institute for Space Research
- **Randy Thornhill**
Professor of Biology, UNM

Cyber-Cypher Clue: U = F, Z = B.

Bonus Puzzle Clue: Use a Digital Watch or Clock.

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 at 7 PM on **WEDS., JANUARY 9th, 2019**, at Student Resource Center, room 204 at CNM!

PUZZLE TIME!

[Please send solutions to Dave Thomas at: nmsrdave@swcp.com, or at 801 Fitch Ave., Socorro NM 87801.]

Cyber-Cypher: JANUARY 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.

```
" Z B Y           C J V H X           E B I H           B
X D J H W C J U J D           I B K Q H .           C E H X H
B O H           P D D B X J P W X           B           N P P Y
K H B O W H O           A P Q K Y           W P C           V J X X . "
-   O B K R E           A B K Y P           H V H O X P W
```

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

DECEMBER CYPHER SOLUTION

"DEMOCRACY IS THE ART AND SCIENCE OF RUNNING THE CIRCUS FROM THE MONKEY CAGE." - SATIRIST HENRY LOUIS MENCKEN

Esteemed December Code Crackers: George Egert*, Mike Arms*, and Henry Jekyll*.

*Secret Word: "FOREST DYNAMIC"

SOCORRO STUMPER

Need more Secret Word Cryptograms?

New puzzles every week at

www.nmsr.org/SocorroStumper.htm

January Bonus: "Clock Palindromes"

Submitted by Dave Thomas

Sometimes the time of day, in hours:minutes:seconds, can be a palindrome. Examples of such palindromes include 5:29:25 and 10:33:01.

The January Bonus: (A) Of the 86,400 seconds of a day, how many are palindromes? (B) What is the shortest interval between two palindromes? (C) How many palindromes come five minutes after their predecessors?

December Bonus : What’s the Rule?

Submitted by Dave Thomas

The following words can be clearly and unambiguously separated into two distinct groups.

ATOM, BOXED, CHECKBOOK, CHOICE, COCKED, DECKED, DECODE, DOCK, HOOCH, HOOKED, ICEBOX, MAXIMUM, MOUTH, OXIDE, TAXI, TIMOTHY, TOOTHY, TOYOTA, VOMIT, WAXY, WHAT, WITHOUT.

The December Bonus: What are the two groups?

BOXED	CHECKBOOK	CHOICE	
COCKED	DECKED	DECODE	DOCK
HOOCH	HOOKED	ICEBOX	OXIDE
A	M	T	T
T	A	I	O
O	X	M	O
M	I	O	I
M	H	T	H
U		H	Y
M		Y	

ANSWER: Some words are horizontally symmetric, and would appear the same in a mirror held flat. The others are vertically symmetric, and would appear the same in a mirror held upright.

Congrats:

Earl Dombroski (NM), George Egert (NM), Rocky S. Stone (NM), Mike Arms (NM), Harold H. Gaines (KS), Allen Robnett (NM)!

“A Flat Earther's Journey and Perspective” continued from Page 1

by Dave Thomas

Lacey said that Flat Earth (FE) beliefs are becoming a full-blown “truth movement”. He said that NASA gets \$57 million per day, which is a good incentive to lie. He declared that FE is not a religious movement, and that “Scientism” is the new 21st-century religion. Lacey affirmed that “The FE Movement is based on truth and scientific reasoning, not religion or any other dogma.”

Our speaker said that students are taught, not empirical-based scientific evidence, but only “theories.” He said the average flat earther is NOT ignorant, and is much more knowledgeable about earth than the typical layman. “Ask any person about heliocentric details, they can’t answer basic questions,” he said.

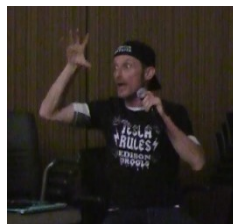
Regarding when he actually made the leap to being a Flat Earther, Lacey said there was no specific time or place, that it “just grows on you.” He allowed that he was into aliens and space, Roswell, Dulce, and so forth.

Lacey opined that the Moon landings were the biggest game changer for him, and that there is so much evidence that NASA lies. He said “There’s no way you can study moon landings and not think they were faked. Same for the International Space Station (ISS).” He pointed to an image of the Apollo Lunar Excursion Module (LEM), with panels having four rivets only. A skateboard has more, he said. He also noted there was no dust, or burn crater, thus proving the fakery.

Lacey played a lengthy segment from a film titled

“A Funny Thing Happened on the Way to the Moon.” The narrator said the footage showed the Apollo astronauts in low earth orbit, faking being half-way to the moon by putting a cut-out of Earth in the spacecraft window. Lacey then claimed that there are cameras all over the US, but zero cameras in space, looking at earth 24/7. He said photographs on the moon don’t show stars in daytime like they are supposed to.

Lacey described how Buzz Aldrin punched Apollo denier Bart Sibrel when asked to swear he’d gone to the moon on a Bible. He said moon rocks are just petrified wood (one alleged moon rock was found to be such). He showed a video clip from a speaker at an Albuquerque City Council meeting who said “Bubbles in space” proved Apollo was a hoax (and also that Climate Change is a hoax). Lacey said NASA lost telemetry, and destroyed technology, and forgot that the Van Allen belts would have been lethal. He quoted Admiral Byrd saying there was land as big as America “beyond” the south pole. He insisted that it is impossible to book trips across Antarctica (presumably, because the government doesn’t want anyone to discover the edge of the Flat Earth).



Lacey moved on to the Michelson-Morley experiment. Professor of Physics Richard Wolfson said that “It could have detected speeds as low as two miles a second instead of the known 20mps that the earth as in its orbital motion around the sun. It didn’t detect it. What’s the conclusion from the Michelson-Morley experiment? The implication is that *the earth is not moving...*” He mentioned a similar statement by Stephen Hawking on Einstein. Lacey said Einstein *knew* that the Earth was motionless. Lacey noted that these were “**Quotes from highly regarded professionals...**”

Lacey said he moved from Florida two years ago, and what he saw was “Flat Water, Flat Earth.” He described some early photographs of his that he later realized were “Bedford Level Tests”, regarding how far one can see over water (like a river or lake). He said not one repeat of the Bedford Level experiment has been done in 150 years. He said Mick West at Metabunk makes the Earth effectively 1/6 bigger to account for “refraction.” He said that things at a distance don’t go behind the Earth’s curve, they just get smaller (perspective). He said seeing shorelines of Chicago are not mirages, but rather, evidence of a flat earth. Lacey recommended studying Dr. John D’s Bedford Level experiments. He said that because several U.S. states are relatively flat, so is Earth. He cited a \$19 million science project in Louisiana to model the Mississippi with a simulated river plain some hundreds of yards long. Because the model is flat, so is Earth, he said.

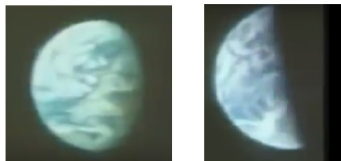
There is no evidence water sticks to a magical ball, Lacey said. The main reason for

heliocentrism/globism, he said, is to deny the ether. This stops us from understanding that everything is electric, and is manipulated by frequencies. He then played a long video showing a musician/engineer making patterns with Chladni plates, Tesla coils, and so forth.

That was the bulk of Bruce's presentation. Dave Thomas asked several specific questions following. The whole lecture and followup has been uploaded on YouTube, and can be seen in seven 16-minute segments, starting here: <https://www.youtube.com/watch?v=mXx3JS0KPV0>.

The consensus was that Lacey failed to make a strong case for a Flat Earth. People screaming at flat-earthers on the internet might be rude, but that doesn't validate FE. On the "Funny Thing Happened..." video, voice-overs claimed a hoax was being performed, but this wasn't at all confirmed by the video. At one point, the narrator says the "same misleading shots" of Earth were used on different days, but inspection of those shots shows they are very different (as would have been expected a day later). But the real kicker for this video is that the original footage is not "secret" at all, it was seen by millions on 17 July 1969, 1 day 9 hours and 59 minutes after Apollo 11 launched (33:59 GET or mission time, 11:31pm GMT).

"And here is the same misleading shot..."



July 19, 1969

July 20, 1969

A Funny Thing Happened on the Way to the Moon BBC documentary

The Apollo crew sent this broadcast from 130,000 miles away - about halfway to the moon. You can compare the "hoax" video on Youtube, (watch? [v=QrUSyJxN3RI](https://www.youtube.com/watch?v=QrUSyJxN3RI)) to the *original* video (at watch?

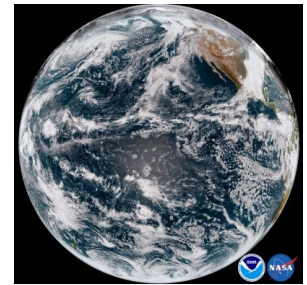
[v=1nVIMg27cik](https://www.youtube.com/watch?v=1nVIMg27cik)). When this is done, the "hoax" claims fall to pieces. There are numerous other errors in the "Funny Thing" video, for example claims that shadows from the sun don't appear parallel as they should. This is an absurd objection; photographs of train tracks show the tracks converging, not parallel. It's due to *Perspective*.

How about satellites looking at the whole Earth 24/7? The United States has five geosynchronous full-scan 24/7 satellites in operation; GOES-12, GOES-13, GOES-15, GOES-16 and GOES-17. Japan operates Himawari 8 and 9. And then there is DSCOVR, which is outside geosynchronous orbits, and shows the Earth turning daily from a million miles out. (The image at left was taken just before the December Meeting!)

While humans on the moon can see stars, *cameras*, with their very limited exposure range, are not able to capture very bright lights like the sun, or sun-lit

surfaces, along with fainter stars. Re the bubbles, there would have been a LOT of bubbles had this really been "underwater." Where were turbulence, cavitation and nucleation? Why weren't the "bubbles" digitally removed to avoid suspicion?

Regarding the Van Allen belts, the Apollo trajectories were designed to pass through the thinnest known parts, and the astronauts received minimal radiation. Admiral Byrd was describing the side of Antarctica facing India, on the other side of the South Pole from the more commonly visited side. This area is a land mass about the size of the CONUS. Two explorers, Colin O'Brady and Louis Rudd, used the services of Union Glacier Camp (the company that outfits private tours of Antarctica, which Lacey said aren't permitted at all) to walk alone, from the Atlantic side of Antarctica, to the South Pole, to the Pacific side. Interestingly, this trek of 930 miles would, on the "Flat Earth" map in which the South Pole is an Ice Wall running the entire circumference of the flat earth, amount to over 17,000 miles.



GOES-17, November 13th 2018

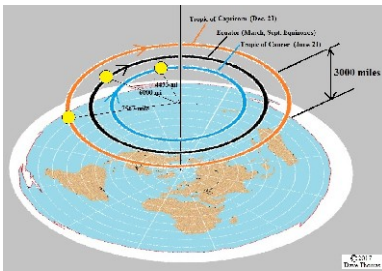
Einstein didn't think the earth was "motionless." His hypothesis that the laws of physics are the same in all inertial reference frames led him to realize that these laws, which predict electromagnetic waves in a vacuum, require the Speed of Light to be constant in all reference frames. There is no *optical* (lightwave) experiment that can show motion through an "ether", and that is how Einstein explained the null result of Michelson-Morley. One of the "**highly regarded professionals**" quoted, Professor Richard Wolfson, has written that "*...the 19th century closed with no satisfactory answer to this question (of earth's motion) that is consistent with observations like aberration of starlight and experiments like Michelson-Morley. But Einstein's 1905 answer is consistent and simple: the laws of physics are the same in all uniformly moving reference frames. Period. ... If you still don't like what relativity has to say, then you answer the question, Speed C relative to what? In a way that's consistent with experiments like Michelson-Morley and that doesn't put Earth, alone among all the cosmos, in a favored position.*" (Simply Einstein: Relativity Demystified By Richard Wolfson, November 2003, ISBN 978-0-393-32507-2) In other words, Prof. Wolfson says that Einstein was first to explain that no "motion" can be measured in optical experiments like Michelson-Morley, and *also* that the **Earth IS in motion**, as is proved by phenomena like aberration of starlight. The Earth does not have the favored position of being "stationary."

About the only actual Flat Earth argument

presented by Lacey was the Bedford Level experiment. In 1838, Samuel Rowbotham claimed to see a boat while 6 miles downriver, thus “proving” the earth is flat. Critics said the result could also be explained by atmospheric refraction. In 1870, a supporter named John Hampden offered a wager to use the method to show Earth is flat. None other than Alfred Russell Wallace accepted the wager. Wallace know about both surveying and physics, and wisely made the sight line 13 feet (about 4 m) above water, thus *greatly reducing the effects of atmospheric refraction*. Wallace also added a pole in the middle, so as to see the “bump” of curvature between the two end points. Wallace was awarded the bet, but had to return it later when a court ruled that Hampden had retracted the bet before the actual test. Along the way, Hampden was jailed for threatening to kill Wallace. In 1901, Henry Yule Oldham at Cambridge added a theodolite to the mix, and came up with a definitive experiment that was taught in schools until photographs from space became available.

I posed a few questions to Bruce Lacey after his main presentation. I mentioned that private citizens *can* book tours to the heart of Antarctica through Union Glacier Camp. Lacey replied “How far can you go without telling somebody? Am I controlled?” I guess he wants a *secret* trip for some reason.

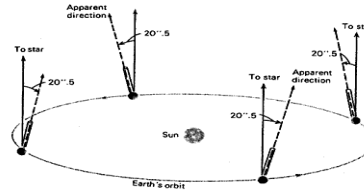
I showed Lacey this FE explanation of day/night/seasons. The sun is 3000 miles above the plane, and in Summer, the sun circles above the Tropic of Cancer; in Winter, the Tropic of Capricorn; and in spring and fall, over the Equator. Bruce Lacey agreed that “*That’s the basic theory, yes.*” I then showed why the sun rises due East on the equinox, and displayed a picture of the Sun rising in the East in Socorro on Sept. 22nd, 2018. I then showed that, according to the model Lacey had just agreed with, the FE sun would not rise in the East, but some 30 degrees to the North instead. “Why keep a model that has been Falsified?” I asked. Lacey answered “Do you know what the sun is? You don’t even know what it is. Fusion? Can’t be proven.” Bruce also mentioned that “I actually never heard any flat earthers positively say they know what the sun is, for one. And what it’s doing, for number 2.”



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I showed how anyone can measure their local latitude with the use of the height of a pole, and the length of its shadow at noon of the equinox. On the solstice, the earth’s axial tilt can be measured with the same pole and shadow. Lacey countered that I was *assuming* an axial tilt; I pointed out that I was *measuring* the axial tilt.

I went on to show how those same measurements could be interpreted with the Flat Earth model, which



provides the height of the sun above the plane of the earth. But, different latitudes give wildly different heights, anywhere from 0 to 4000 miles.

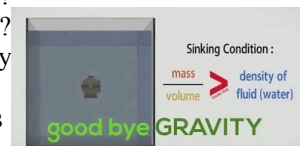
I tried to discuss stellar parallax and aberration, but Lacey kept yelling that this was only *apparent* motion, and thus an *assumption*. Mark Fraser said that yes, we actually measure this phenomenon. The stars *appear* to move because it’s Earth that is actually moving, Fraser said. Then, Lacey said “So, you disagree with Einstein, who said that there is no experiment that could prove Earth is moving?” Gerry Alldredge noted the many ellipses in Lacey’s quotes of scientists, and that parts were *missing* (such as what Einstein actually thought about the motion of the Earth). Lacey vehemently countered “Don’t say I cherry picked. I gave you page numbers. Go look it up and point it out to me and then tell me!” (But, when you do look it up, like I did with Prof. Wolfson, you’ll find that the scientists quoted *do* agree with Einstein; *the earth moves!*)

On Stellar Aberration, I said “We have to correct the angle of the telescope to see the starlight, and that’s a *measurement*.” Lacey yelled that “I can’t argue with you if you’re going to deny that this is an *assumption*...” I showed an article from website www.thetruthaboutguns.com where long-range shooters discuss the Coriolis effect, which can produce deviations of up to 3 inches at 1000 yards, and 9 inches at 1500 yards. Lacey declared that I was *lying*, and cited a marine sniper manual that didn’t even mention Coriolis. Gerry Alldredge mentioned that it wasn’t important for snipers, but consideration of Coriolis effects is *not negligible* for artillery. Lacey then asked why the Earth didn’t spin underneath a helicopter in the air. I said if that happened, then Hurricane Harvey should have circumnavigated the Earth every day for a week.

I showed an amazing star trails panorama, with stars circling counter-clockwise around Polaris, and clockwise toward the south (the southern axis was below the horizon, of course). I noted that this could never happen upon a flat earth. Lacey said I was making assumptions, and that we don’t know about the electrical ball of energy in the sky.

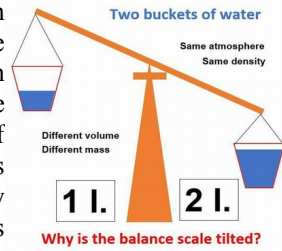
I asked “Gravity – do you think it’s real?” Lacey answered “No, it’s made up.” I showed a picture of someone struggling to climb uphill, and asked “Why is it harder to go uphill than downhill?” Lacey replied “Force of motion? Buoyancy and Density? Is a Helium balloon anti-gravity? Does anyone here think gravity exists? That it’s real?”

I followed by showing this FE meme, which claims that if the



mass divided by the volume of something is greater than that of the surrounding fluid, it sinks.

When I showed this counter-meme, however, things got interesting. Both buckets of water have the same density, and are suspended in lighter-density air. Why does the 2-liter bucket tip the scale, if only relative densities matter (as the FE meme declared)? Lacey answered "Because it's twice as much water. More of one than the other. You don't need gravity to explain why things drop. You only need gravity to explain why you can be upside down on a spinning ball of water."



I asked "What covers the sun during an eclipse?" Lacey answered "Rahu and Ketu" (Vedic mythologies). "Can you prove it's the moon?" To do just that, I showed a long-exposure eclipse picture by the ministry of creationist David Rives, with the moon clearly visible inside the over-exposed corona. Lacey dismissed it as CGI. (Even though these creationists are not at NASA!)

I asked why I can't see the Southern Cross, and Lacey said it was simply too far away. But, I replied, you can see the top star of the cross from Albuquerque at times. What's blocking the other three, if not the limb of the earth? Perspective? I showed how anyone, anywhere in the northern hemisphere, can measure their local latitude by marking the elevation of Polaris, and Lacey responded "Can you prove the earth is curving?"

I showed how, viewed from a mountain top, the horizon dips below true level. Lacey dismissed it as mere



perspective, the same excuse he employed to deny obvious evidence of the curving earth at Lake Ponchartrain, where a

series of same-sized towers cross the lake. I showed pictures (taken by a friend) of ships at sea, and how the ship clearly goes *behind* the water, and does not simply get

small from perspective. Lacey said the photograph showing the curve (on right) was "totally faked."

I showed how, at sunset, high clouds far to the West can be bathed in bright sun, while it's already nightfall on the ground. I asked Lacey to explain what, in FE theory, was blocking the sunlight from the photographer and the local terrain, when the distant, high clouds are lit up so well. In globe terms, the earth itself blocks the light from the sun, which still reaches the high clouds easily. Lacey was not able to answer this simple question. He pointed out parallel sun rays in my diagram, and then demanded to know how the shadow of the moon in an eclipse can be so small. For that, I said, you need more detail – you need to consider the different sizes of sun and moon, and all rays of light (not all of which are parallel). Lacey ranted about how scientists use parallel rays here, non-parallel rays there, they just use whatever they can to sell their lies.

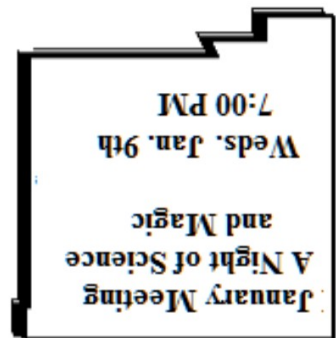
It never got any better. Experiments are just assumptions, NASA tells only lies, no one knows what the sun is, or what covers the moon in an eclipse. Lacey gave lip service to "observable and repeatable science," but dismissed numerous experiments that ARE "observable and repeatable" as mere "assumptions." Bruce Lacey provided an alarming example of the True Believer, who is shouting rebuttals so fiercely that they cannot begin to comprehend the simplest of arguments. It was interesting, like watching a train wreck, but it's obvious Mr. Lacey will never allow himself to be reasoned out of his delusions.

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, Eddy Jacobs, Debbie Thomas, and all our Puzzlers!

IN THIS ISSUE:
 Future Meetings
 Announced
 New Puzzles!
 December Meeting:
 Bruce Lacey
 Flat Earth



NMSR Reports Vol. 25, No. 1 January 2019
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