GRAVITY'S SYNODIC WAVE

Gravity's Mysterious Field Phenomenon



Jim Olsen

Gravity's Synodic Wave

GRAVITATIONAL PHENOMENON OCCURRING AT FORT STEVENS STATE PARK NEAR ASTORIA OREGON
Occurs During Moon's Orbital Cycle. An enormous amount of magnetic iron particles from shipwrecks.
Cause: Doppler Shifted then Heterodyned Gravity Waves from Moon/Earth Orbits.



The Dark Patch Areas are Iron-Oxide Particles Trying to Stand on End Much Like Iron Filings Do When Placed on Paper and a Magnet is Held Below. **The normally clean bluish hue of the surf water has been discolored by pulled-up magnetic particles. A fine slurry of particles forms a sensitive detector similar to a Coherer and a Cat's Wisker Detector. On specific dates, Doppler-shifted gravitational waves from the Moon's elliptical orbit combine with the Earth's resulting in the detected beat frequencies (RF) with longer wavelengths shown above. Proof gravity is an electromagnetic wave. A host of unusual conditions occur as well. Note: 1906 shipwreck Peter Iredale in background.**



Normal Clear Sands with Blue Water



Magnet in Sand

The sedimentology of Sand 2 ft. deep constantly changes. Rust pulled up by intermittent phenomenon events may turn the top surface of the beach dark grey. Then hours later pulled downward leaving a normal smooth sand-colored beach.

See SynodicGravity.com for book and predictions.
Gravity's Synodic Wave, Jim Olsen, ISBN: 979-8-9854401-0-2

Also supporting the theory:
An error is found in the Famous Double Slit Experiment

Gravity's Synodic Wave

Gravity's Mysterious Field Phenomenon

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Thanks to all the men and women in the CompuServe science and Ham.net forums in the late 1980s-1990.
Thanks to Maurice Cotterell who helped by motivating me.
Thanks to my mother and father.
And Christ, by his blood, delivered and guided me. Proverbs 7
And many more that helped me on my way.
Open the Eyes of the Blind.

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ABSTRACT

This study investigates the swash zone of an ocean beach, revealing abnormal behaviors caused by a natural gravitational phenomenon. This phenomenon is hidden within the ripples of the sand and the hydrodynamics of sediment transfer. It occurs during specific dates and times corresponding to the Moon's phases and the Earth's orbits.

The beach environment consists mainly of quartz and iron oxide crystals, which are moved across the surface by the motion of the water. As the crystals lightly contact each other during their movement, they generate a transistor/diode amplifier effect due to the trillions of contacts made. In this scenario, the saltwater acts as a conductor. Interestingly, the beach functions similarly to an early radio signal detector known as a Cat's Whisker, which was used to detect radio signals.

Radio-frequency scans conducted during the occurrence of these events revealed a correlation with an electromagnetic field associated with the phenomenon. The electromagnetic component was isolated from normal occurring conditions. The study also examines the orbital mechanics of the Earth, Sun, and Moon, incorporating principles of Doppler shifting and heterodyning of frequencies. Ultimately, the event is attributed to a rotating torsional electromagnetic helix wave, allowing for the derivation of a gravitational frequency.

Earlier rejections of this theory stemmed from a fundamental error identified in the renowned 'Double Slit Experiment,' particularly concerning the use of ripple tanks to demonstrate how waves can pass through one another without transferring force. This error will be discussed in detail, accompanied by several proofs. The findings presented here challenge the very foundations of physics.

PREFACE

I wrote this book because I was curious about some unusual intermittent patterns showing up in the beach sand. The patterns did not seem to be from normal wave motions. The intermittent unusual patterns and ocean wave motions baffled me, so I set out to find out why.

I always had an interest in science, and armed with a degree in engineering, the notes and observations began adding up. Not totally agreeing with Einsteins general theory of gravity, we looked for an alternative for the cause of this phenomenon. All types of instruments during this study and came to name it the ‘Synodic Gravitational Wave Phenomenon”.

CHAPTER 1. INTRODUCTION

This book is empirical research and presents a field-based hypothesis about an intermittent beach phenomenon observed at Fort Stevens State Park on the Oregon coast, where magnetic iron oxide particles, sand pools, soliton water waves, quartz, and rare mica events appear to correspond with predictable points in the Moon's orbital cycle. This phenomenon becomes so intensely strong that rust particles from the 1906 shipwreck Peter Iredale stand vertically on their ends.

The site is notable for its high concentration of magnetic rust, or iron oxide, in the sand near the wreck of the 1906 Peter Iredale, one of the many shipwrecks associated with the region known as the Graveyard of the Pacific.

The observations described here include darkening of normally sand-colored areas, movement of magnetic particles by wave action, temporary sand pools, soliton-like water waves, and recurring patterns left in the swash zone.

The central proposal is that lunar orbital motion, topocentric Earth-Moon distance, Doppler shift, and natural heterodyning in mineral-rich sand may help explain when these events occur and why they vary in appearance.

Proposed Mechanism
To explain what might create this unusual phenomenon, the book focuses on two physical concepts: Doppler shift and heterodyning.

As the Moon follows an elliptical orbit, its distance from an observer on Earth changes, and this changing topocentric distance can be expressed as a separation velocity.
This manuscript proposes that Doppler-shifted lunar gravity-related wavelengths may interact with Earth's local field and with mineral contacts in the beach sand, producing a weak temporary effect that influences magnetic iron oxide particles under specific surf and sediment conditions. The proposed sand-based detector is compared to early crystal radio devices because quartz, iron oxide, and saltwater can form many small mineral contacts as grains move across one another in the swash zone.

In this interpretation, the beach acts as a natural array of weak contacts, broadly analogous to a Cat's Whisker detector, and may amplify or reveal subtle field interactions through visible movement of magnetic particles and changes in sand patterning.

1.2 Terms

The following terms are used throughout the book and are introduced here so the reader can follow the observations, prediction method, and hypothesis.

Electromagnetic Waves: A form of energy that includes radio waves, light, and other related waves.

Doppler Shift: A change in observed frequency caused by motion between a source and an observer, similar to the change in sound as a vehicle passes.

Earth-Moon-Earth (EME) communications: A radio method that bounces a signal off the Moon and can provide useful Earth-Moon distance and motion data.

Topocentric Earth-Moon distance: The distance from a specific observer on Earth to the Moon, adjusted for Earth's rotation and the observer's location.

Soliton Waves: Self-sustaining water-wave forms that can appear to hold shape or direction longer than ordinary ripples.

Heterodyning: The mixing of two waves to produce additional sum and difference frequencies, commonly used in radio reception. Heterodyne is what all modern radios (even your cell phone) do to receive a signal. Two waves are added together, and that makes two more waves, one wave (the voice) is in the audio range. Musical instruments do something similar, and they are called beat frequencies.

Cat's Whisker Detector: An early crystal radio detector that used a fine contact against a mineral crystal to detect radio signals.

This book explains the observations, the proposed mechanism, and the prediction method so future visitors and researchers can compare event forecasts with field conditions. The prediction method is based on changes in topocentric Earth-Moon distance and the resulting separation velocity, which are treated here as potential timing indicators for event windows.

1.3 Prediction Methods

Doppler data, King Tides, and Super Moon's. The Doppler data agrees with these events and can be more accurate to the hour.

Topocentric Earth-Moon distance, which is more specific than a center-to-center Earth-Moon distance because it accounts for the observer's location and Earth's rotation.

By calculating how that distance changes over time, the method produces a separation velocity that is used as a timing indicator for when the beach events may occur.

The sand's iron oxide and quartz grains are described as a possible natural contact system because they repeatedly touch, separate, and move through conductive saltwater during wave action.

This book describes how Earth-Moon-Earth data and Moon-bounce-style calculations may be used to forecast event windows within several hours, then compare those forecasts with direct beach observations.

The broader implications are presented as a research hypothesis rather than a settled conclusion, and the observations invite further testing, replication, and independent measurement.

1.4 Hypothesis:
The working hypothesis is that Earth and Moon related gravity fields may interact through Doppler-shifted timing relationships and mineral contacts in the beach sand.

In this model, iron oxide, quartz, and saltwater form a natural contact environment that may reveal weak field interactions through changes in magnetic particle movement and sand patterning. The proposed interaction is framed as a testable explanation for the timing and appearance of the observed beach events, not as final proof of a new theory of gravity.

1.5 Television and News Coverage

The gravitational phenomenon described in this book was on the front page of the Daily Astorian newspaper. On July 5, 1995, the author was interviewed by newscaster Eric Schmidt for local television channel 6 News at Fort Stevens State Park.



DAILY ASTORIAN

Tongue Point decision (still) on hold

Task force urges cuts in PERS spending

'He knew where he was going'

Officials look for more clues in Simpson case

Construction on new fairgrounds begins in July

LINES

IN THE SAND

Figure BB123.
Lines in the Sands article
Daily Astorian Newspaper June 21, 1994



Figure BB1321.
Channel 6 newscaster Eric Schmidt and Author

The book is intended for curious general readers, field observers, radio enthusiasts, and researchers interested in evaluating the observations and testing the proposed explanation. Or anyone interested in the mysteries of the universe.

A work in progress, readers reading a printed copy may also want the digital version available through SynodicGravity.com so references, links, and supporting videos can be reviewed alongside the text.

The source for future space travel! Gravity and inertia fields are revealed. Backed up with experimental evidence.

The phenomenon remains under study, and additional observers, measurements, and independent review would strengthen the evaluation of this hypothesis.

CHAPTER 2. HOW IT ALL CAME ABOUT

Scientists don't fully understand gravity or magnetism, but they have developed precise formulas to measure them. Scientists can use existing rules to predict how gravity and magnetism behave under everyday conditions, but a full understanding still eludes physicists. One of their main objections to understanding these forces is that they cannot be tied to quantum mechanics. See addendum #2 of all the YouTube videos by qualified scientists for more on this confusion. Deep mysteries remain unsolved.

Today, several gravitational theories exist. In Einstein's general relativity, there is no gravitational force. Einstein developed general relativity, a theory of gravitation, between 1907 and 1915. The development of general relativity began with the equivalence principle, which states that accelerated motion and being at rest in a gravitational field (for example, standing on the surface of Earth) are physically identical. The upshot is that an object's inertial motion is free-fall, because objects move without a force acting on them, rather than because of gravity, as in classical mechanics. This is incompatible with classical mechanics and general relativity because, in those theories, inertial moving objects cannot accelerate relative to each other, but objects in free fall do. To resolve this difficulty, Einstein assumed light waves were like ripple-tank water waves, and they passed through one another unaffected. Thus, electromagnetic waves were not considered to transfer force directly. This left no alternative, so Einstein developed the curved space-time gravity theory.

Einstein's century-old theory of gravity has theoretical shortcomings. It is also not linked to quantum mechanics, relies on curved spacetime without a true force, and breaks down at black hole singularities.

Today, astronomers try to detect perturbations in existing gravitational waves generated by catastrophic stellar events such as colliding black holes, supernovae, or pulsars. LIGO (Laser Interferometer Gravitational-wave Observatory) is a large-scale, expensive physics experiment operated by Caltech and MIT. LIGO can detect only fluctuations from these catastrophic stellar events in the field, not the ambient field itself. So why does it detect only perturbations from distant stellar events when the field is ***everywhere***?
In physics, gravity is called the weak force, but it is strong enough to hold your car down on the road. It is unusual in modern instrumentation that science can detect only fluctuations in a field, not the ambient gravity field itself. Weighing oneself on a bathroom scale is simply the result of the ambient gravity field, not the field itself.

Nikola Tesla, the father of modern electricity and the inventor of the radio, said.
"Today's scientists have substituted mathematics for experiments, and they wander off through equation after equation and eventually build a structure which has no relation to reality." Today's physics institutes, for fear of ridicule, refuse to publish articles that are too far from current views or from men without a Ph.D.

Directed by what I was told a spirit of God, I visited a particular beach on the ocean near Astoria, Oregon. Unable to communicate fully because of my shortcomings, I proceeded on my own. While walking along the ocean beach, not fully knowing why, the beach suddenly started filling with humps and grooves with black particles in them, and the wet sand got very soft. There seemed to be no apparent reason why they appeared. Then, moments later, they all disappeared. The beach was once flat again, hard, and void of the humps. What the heck caused that? I asked myself. Receiving some clues from the spirit, I wrote this book to explain the phenomenon. Unfortunately, an opposing spirit always twisted and lied, interfering with the work. I kept researching because I felt people were blind and rejected God's truth, and I wondered what could be done. We are like clay, molded by what we see and hear, and it's radically changing the culture and our safety. I was directed to read the word, and I found just reading a paragraph or two my mind shifted. Our eyes and ears are gates to our mind, and we are getting blasted by crap from all sides. While working on this paragraph, this came in: My people are destroyed for lack of knowledge. Hosea 4:6. This work is partial proof that the bible was divinely inspired.

The beach has a high concentration of iron oxide (rust) from natural and naval activities. I became deeply interested as I looked for an explanation for the phenomenon.

This looks like a fictional gravitational phenomenon, but it is not. If you are a researcher, you must check it out thoroughly for yourself. It is difficult to separate the fake from the real parts of this phenomenon, which makes it hard to understand. Video logs are available.

I wondered why the sand didn't show the simple ripples found in almost all moving water, especially river water that flows in one direction only. I found two ways the sand ripples can form at this beach: one from simple wave collisions, and the other from what synodic movements of nearby heavenly bodies revealed to me. I studied for many years before coming to my conclusions. Over time, I uncovered more of the phenomenon and eventually attributed much of it to the beat frequencies of heterodyned gravitational waves.

In this book, we will explore a phenomenon that detects the field itself, not just the fluctuations that LIGO can only detect. It is important to focus mainly on the iron oxide parts of this phenomenon, as they relate gravity to the magnetic field. They are similar but are on different wavelengths. The gravity-wave pulses, as heard on a radio scanner, thus reduce the force. Part two of this book is proof of the gravity helix electromagnetic wave.

The phenomenon centers on Fort Stevens State Park near Astoria, Oregon, USA. Astoria is very near the end of the historic Lewis and Clark Trail, a trek of discovery across early America in the early 1800s. The treacherous Columbia River bar is known as the "Graveyard of the Pacific" because of the number of shipwrecks there. This area has claimed an estimated 2,000 vessels of all types. As a result, fine sands contain a high concentration of rust particles, presumably from naval activities and shipwrecks. If you run a magnet over dry sand, the particle is picked up readily and probably exists as some fraction of the sand, up to 5 percent. Very significant is the rusting skeleton of an English sailing ship that beached in a storm in 1906, the Peter Iredale, permanently stuck in the surf and sand. It appears in the distance in the photos. COLUMBIA RIVER BAR

Because the explanation or mechanism of gravity is not completely understood, and because Einstein's general theory of gravity has no force, nor has it been connected to quantum theory, we will explore within this book another possibility for gravity, associate it with quantum theory, put a force in, and provide a unique way to detect and prove it so that anyone can understand.

Gravity waves cannot be detected in the usual ways, so science had to produce mysterious explanations for it. Scientists who rely solely on mathematics have concluded that warped or curved space and time (general relativity) is correct because the math answers are correct. However, we all know that math can arrive at the same answer in many ways. What makes gravitational waves so mysterious is that they pass through everything; they have a cloak of invisibility, like air until the wind blows.

Richard Feynman (1918-1988), an influential American theoretical physicist, had this to say;
Like gravity, there is no explanation for magnets.
YouTube video: Richard Feynman: Magnets and Why FUN TO IMAGINE:
https://www.youtube.com/watch?v=Q1lL-hXO27Q&t=12s

The phenomenon is intermittent and may not appear completely for several weeks. This book explains what causes the phenomenon and how to predict it, so you can visit the beach with confidence and witness it. Because this book includes several links to various websites, it is advisable to download the PDF from SynodicGravity.com. This will help you read and understand the phenomenon.

This phenomenon in this book correlates with Doppler-shifted and then heterodyned (mixed) gravitational wavelengths/frequencies, providing definitive proof that gravity is an electromagnetic wave. The unique properties of the sands in this area enable heterodyning (adding) gravitational waves on date-and-time relationships centered on the Moon's orbit.

Hypothesis: Gravitational wavelengths can form new wavelengths under special conditions.

A heterodyne is a new signal frequency formed by combining or mixing two different frequencies. A diode can be used to combine two radio signal frequencies. This beach is packed full of natural configurations of diodes. Heterodyne frequencies are related to the "harmonics" found in music. All radios use the heterodyne process. In this case, it is a naturally occurring phenomenon.

The Moon's gravitational pull is greater than the Sun's, and it completes its orbit every 28.4 days. So, we can predict an event twice a month, rather than the 360-day Earth orbit around the Sun. Combining the Moon's and Earth's orbits around the Sun increases the likelihood of events. Also, weeks may go by with only clear sand. The Moon has an apogee and perigee every 27.55455 days.

Postulate: 1. Gravity is a rotating electromagnetic helix wave.
Postulate: 2. There is an error in the rules of superposition

Hypothesis: The components of this beach's sand form an early radio-signal detector called the cat's whisker.

The Moon's gravity-wave wavelength is Doppler-shifted by orbital motion, so it differs slightly from Earth's local wavelength; when they mix, they form a weak third wavelength.
Gravity waves emitted from the Moon, Earth, and Sun heterodyne using the rust crystals and form a longer wavelength (harmonic) that influences the iron oxide particles' movements. Radio operators know that rust causes radio interference by heterodyning two signals. Rust crystals form a crude diode. Early radio detectors used similar crystals that are found in the sand of this beach. The resultant wave must be heterodyned (mixed) to produce this phenomenon.

Neutrons and protons form the basis of atomic weight and stoichiometry (how chemicals combine by whole-number atomic weight). This is how elements are weighed. It should become clear that these particles may be related to the wavelength of gravity. You can find the basic theory and supporting proofs at SynodicGravity.com.

The author believes the gravity EM wave is emitted from protons and neutrons and becomes the aether field, or a new field. The rotating helix wave passes through everything, enabling the properties of inertia, length contraction, time dilation, and the bending of light.

Preliminary Doppler heterodyning calculations have concluded the gravitational wavelength at approximately .00713 Angstroms (7.13 x 10-13 meters). The electron's rotational magnetic wavelength is hypothesized to be in the terahertz range.

Scientists cannot detect gravity waves directly because they pass through everything (including the instruments used to detect them), canceling out the signal. Aside from their resultant pulling force, they remain hidden if one tries to detect the wavelength directly.
Briefly, the gravity phenomenon requires revising the rules of superposition to include an energy interaction between electromagnetic (EM) waves. Two opposing rotating helix waves transfer a minute force back to their source. The paper on 'Duality' explains the revision of superposition.

The Phenomenon's Mechanism
Unlike Einstein's General Relativity theory of curved space-time, the theory covered here postulates that an electromagnetic (EM) torsional helix wave creates the force of gravity and magnetism. I do not believe that the curvature of space is correct.
The following illustrates a radio-wave mechanism creating a force. This has been accomplished on smaller scales.
For illustration only: The huge solar-array satellite once proposed beaming energy down to Earth. Here, energy from the Sun is converted to an electromagnetic wave (microwave) and beamed down to Earth, converted to electricity, and then to mechanical motion (the force) via electric motors (solar panels do the same thing with light waves). The question we should ask is: If man, using the elements of nature, can convert an electromagnetic wave to mechanical motion

(the force), why could not nature? The answer is it most certainly could. A force drawn out of an electromagnetic wave is the foundation of the Synodic theory of gravity and magnetism. An electromagnetic wave can be converted to a torsional form, enabling a direct transmission of a force like physical mechanics, like a propeller on a ship, except through electromagnetic wave mechanics.

Under current rules of physics, this phenomenon cannot happen!
There was no way to associate the known rules of physics with this phenomenon. The key problem is the belief that two waves pass through one another totally unaffected. How we resolved it: During the study of the phenomenon, we found a major error in the foundations of physics. The error involves a transfer of force between EM waves. This error (over 200 years old) has been resolved and is required reading for a complete understanding of the Synodic theory. The paper 'Duality' at SynodicGravity.com addresses this error. We can still describe the synodic phenomenon, and you can read Duality later. It is enough to say that EM waves can transfer a force to one another. Physics previously denied this force transfer because of this major error.

Below are two references that support EM waves transferring a force.
Levitating DIAMONDS with a laser beam!! (demonstration of Nobel Prize in Physics 2018)
https://www.youtube.com/watch?v=Sq7GaO8iqu8 (at 4 minutes)

Physics Paper: Optical Tractor Beam with Chiral Light:
https://www.researchgate.net/publication/270906155_Optical_Tractor_Beam_with_Chiral_Light

2.88 The Doppler Frequency Shift

A Doppler shift is the change in frequency or pitch. For example, a train whistle changes pitch as it approaches an observer and then moves away. Police use Doppler radar guns to determine how fast you are going. The radio signal bounces off your car and reflects back to the officer's radar gun at a different frequency relative to how fast you are traveling. For example, if a police officer's radar gun could reach the Moon, the signal would bounce off the Moon and reveal how fast the Moon is approaching or receding from the officer. However, with the Moon, velocities can range from zero to over a thousand miles an hour. The velocity shift his radar gun measures can predict when the Synodic event will happen—all waves Doppler shift, including gravity and light.
Race car Doppler shift by Bo Manton: https://www.youtube.com/watch?v=dC4Lp7k4zrI
The theory has two basic parts: the Moon's topocentric separation velocity and the combining of two wavelengths.

1. Any electromagnetic wave emitted from a heavenly body is Doppler-shifted from the continuously varying separation velocity due to its elliptical orbit. This, of course, would include gravity.
2. The other half of the theory is a very common process that happens with all waves, including music. They produce beat frequencies when two or more notes are played together. In radio, this is called 'heterodyne'. Combining the two parts, 'Doppler' and 'beat frequencies', along with the helical EM wave, results in the completion of the basics of the theory.

3.44 The Doppler Shift and the Addition of Gravity Waves

For illustration, say both the Moon and Earth emit the musical note middle C (which happens to be 261 cycles). So, when we stand on Earth, we constantly hear the hum of Earth's middle C. The Moon also emits middle C, but because it orbits us in an ellipse, the note constantly Doppler-shifts up and then down (like the race car driver video) as its orbit takes it toward and away from us every 28 days. So now we have two notes we can hear here on Earth: Earth's middle C and the Moon's Doppler-shifted middle C, which constantly shifts to new notes like a very slow wow-wow heard from pressing the vibrato or tremolo bar on an electric guitar. If we listen carefully, we hear a third note: the beat frequency from adding the two musical notes together.

Beat Frequencies Example: YouTube video by PhysicsIsFun
https://www.youtube.com/watch?v=_bV_mEakQ7o

In this illustration, we can hear three notes: Earth's middle C, the Moon's Doppler-shifted middle C, and the beat frequency from hearing the two notes at the same time. This beat frequency can create the beach sand phenomenon, but only on specific dates and times. Why it shows up only on specific dates and hours requires a bit more understanding of orbital mechanics, and, of course, the frequency of gravity is much higher than middle C. Of course, we could never hear musical notes coming from the Moon. In radio language, this addition of waves is very common and is called 'heterodyning'. See the YouTube video: 'Weird Terrestrial Sounds KISS'. Note: In the video, I errantly used the word parabolic instead of elliptical

https://www.youtube.com/watch?v=X2o_Jz_GyZs The signals from the phenomenon are very weak, just above background static levels (Radio Noise).

Now imagine that these are gravity waves and that they pass right through us and everything around us—sort of like an invisible field. Like the air around us, we don't notice it until it moves. Still, we can imagine something is there because something holds everything down to Earth. Like a propeller on a ship, gravity waves form a rotating helix. Our instruments cannot detect the actual waves because they pass through them, leaving only the evidence of their force. However, like playing the musical note middle C in the above example, where it Doppler-shifts and becomes a beat frequency, there may be times when we can detect a wavelength if we open our eyes and look close enough.

When the Moon's Doppler-shifted gravity waves align just right, the third wave formed by heterodyning can influence components on the beach, creating sand patterns and water-wave motions.

Review: What scientific mechanism causes the phenomenon?

All heavenly bodies, including Earth and the Moon, emit gravity waves of the same wavelength. For Earth, the Moon's gravity-wave wavelength Doppler-shifts as it orbits us. The two wavelengths (the Moon's Doppler-shifted and the Earth's stationary field) add together, resulting in a new wavelength. This adding of two waves is known as heterodyning.

The heterodyne equation is as follows:
$W_3 = W_1 +- W_2$
New wavelength = Earth's wavelength +- Moon's Wavelength

The components in the beach sand have the necessary ingredients to heterodyne the two wavelengths, creating the new wavelength that causes the phenomenon. Only the larger wavelength W_3 is large enough to make the phenomenon happen.

The resultant wave W_3 is a rotating helical EM wave and can pull the rust particles and water waves around like a ship's propeller, but only at certain times of the year. This will be discussed later.

It is easy to look at this phenomenon and reject it because flowing water causes ripples. However, when one can discern the difference between sand ripples formed by simple water-flow motions and sand ripples formed by heterodyned gravitational waves, enlightenment takes place. The videos provided give undeniable proof, and Moon bounce Doppler data can predict the events. Here, the mystery of the phenomenon is solved, as is the mystery of what gravity itself is, and the force that relativity lacks is put back into gravity.

CHAPTER 3. THE PHENOMENON AREA



Figure KKK11. Mouth of Columbia River Fort Stevens State Park Warrenton Or. USGS Maps (Public Domain)

Fort Stevens State Park near Warrenton, Oregon, USA (46 deg. 10 min. 28 sec. N. Lat., 123 deg. 59 min. 06 sec. W. Long. GPS), or Latitude 46.199 N, Longitude 123.955 W.

3.22 Road Directions and Beach Access

Access to the beach is at Fort Stevens State Park. Follow directions to the shipwreck.

Sunset Beach has a ramp also but is 5 miles south of Fort Stevens. You can drive 5 miles in the sand to reach the shipwreck. I don't recommend Sunset Beach because it has a much lower concentration of rust, but it's easier to access the beach. The farther south you go from Fort Stevens, the less concentrated the rust becomes, and the less pronounced the phenomenon. Long Beach, Washington, is also okay. Things you will need: an all-wheel-drive car or truck with good ground clearance, tide tables, this book, and the Doppler data on the synodicgravity.com web page.

There are several beach webcams. But unfortunately, they are too far south, and the iron oxide (rust particles) concentration is very low, which reduces the phenomenon greatly. Also, the camera is too far away; you cannot use this method to analyze the beach phenomenon, but you can see the motion of the waves, which can give a minor indication of the event that you can predict with software.

http://spanishhead.com
The Inn at Spanish Head Resort Hotel | Lincoln City, OR

http://www.spanishhead.com/liveskycam.htm 110 miles south of Astoria
http://65.100.41.14/viewer/live/en/live.html

The sand at Fort Stevens State Park consists of black paramagnetic particles along with the natural sand (paramagnetic means that the material is slightly magnetic). The paramagnetic rust particles are assumed to be iron oxide Fe2O3, commonly known as rust. If you run a magnet over dry sand, the particle is picked up readily and exists probably as some fraction of the sand, up to 5 percent. (Interestingly, the black sand beaches of Curry County south of the Fort Stevens area have a high concentration of zirconium; slightly radioactive, the sand is mined to manufacture exotic metals.) Sand particles at the park beach are extremely fine, almost like dust, averaging 0.005 inches in diameter. The iron oxide particles are slightly smaller, allowing very subtle forces to work here!

There are two ratios to consider. The beach surface's total concentration of non-magnetic to magnetic particles changes with the combined orbits of the Moon and Earth. See the black sand photograph figure PPP123. The weight ratio of sand to rust by volume is 1 to 1.4 (this changes).

The total concentration of rust has increased considerably since I began studying this in 1995. When the rust grooves form, the rust deposit line is so deep below the surface that it is becoming more difficult for the water to wash the last event away.

Describing the Phenomenon

2.1 SYNODIC DEFINITION:
Relating to conjunction; esp.: Relating to the period between two successive conjunctions of the same celestial bodies.

The timing of these events correlates with the Moon and Earth's orbits.
This is the best beach to witness the phenomenon. The absence or scant presence of iron oxide particles is why the phenomenon is reduced or even nonexistent on many other beaches. Even as little as 5 miles south, both the concentration and the phenomenon are reduced. The beach's gradual slope, combined with the high concentration of paramagnetic iron oxide (Fe2O3) particles (Hematite), creates a very sensitive detector. Several conditions are in effect that form the detector. Since the particles will not hold a magnetic charge, they cannot be magnetite (Fe_2O_4).

This beach has a very low planar slope (gradually sloping) and a low beach-face gradient. In the swash zone at the water line, and only at certain times of the month, a phenomenon occurs. During a receding wave, when the water is only several inches deep, these very fine particles, along with the normal sand, churn into a particle solution and temporarily float weightlessly (suspend) in the water. As the particles are dragged along within the receding wave, the magnetic particles align

themselves on electromagnetic field lines. The distance between lines (the wavelength) usually is from *12-46 inches.

It took some time for the author to become convinced that something other than the usual ripples in the sand was forming here. Identifying when they were just sand ripples, or something else was in effect. Only a close study of video records, and being there at the right date and time, will convince those with doubts. Several videos are very revealing.
These sand patterns can develop along more than ten miles of coastline, including areas such as Long Beach, Washington. This phenomenon is complex and multifaceted.

3.S The Gravity Wave Detection Mechanism

Hypothesis:

How is it possible for this beach to detect heterodyned gravity waves like radio signals? The Cat's Whisker Detector and the Coherer were early methods to detect radio waves. The intermittent contact between the two crystals, quartz and iron oxide, occurs in the slosh zone wave motion. With trillions of particles in solution, the result is a massive detector. See 'Beach Sand Photo'.

The components of this beach sand act like a cat's whisker, an early radio signal detector. Before electricity-powered radio receivers, people used a *non-powered* crystal radio set to detect weak radio signals. A device known as a Cat's Whisker Detector detected the signal, and it could operate without an electrical power supply.
As the crystals in the sand are dragged along the beach surface by the slowly flowing water, they lightly contact one another, creating trillions of cat's whisker-like contact connections. The crystals lightly contact one another as they travel along the surface. Trillions of rust and quartz crystal contacts create a transistor/diode amplifier. The saltwater is the conductor. As mentioned earlier, rust on wires forms a natural detector diode (Ref. 14).

The contact between two dissimilar materials, in the case of the beach sand components, the quartz and iron oxide particles of the sand, forms a crude semiconductor diode that acts as a rectifier, conducting electric current like the 'Cat's Whisker' shown below. The components of this beach sand act similarly. The components in the sand can pick up only a small portion of the heterodyned gravitational-wave signal.

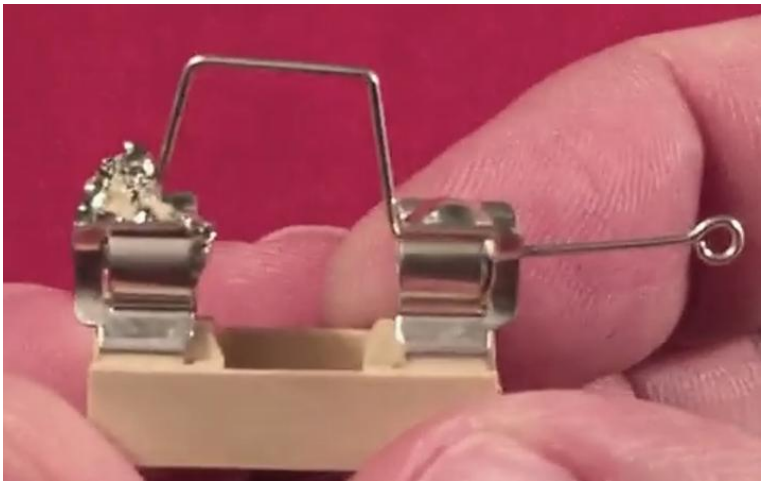


Figure 87xx1. Cat's Whisker Detector

An early radio signal detector from around 1914. The vertical needle gently touches the face of an iron pyrite crystal or any dissimilar crystal. The device was very sensitive to the contact between the needle and the crystal. By gently moving the wire across the crystal, the device could receive a radio station. Other versions incorporate a fine wire resembling a cat's whisker, thus its name. Silicon, carborundum, rust, galena, and many other crystals work similarly.

Rocks that detect radio broadcasts: Cat's whisker demonstration: By Grants Pass TV Repair.
https://www.youtube.com/shorts/2khSiHOy-qg
Wikipedia Commons public domain.

https://en.wikipedia.org/wiki/Crystal_detector
The Auto-coherer: Detectors Before Vacuum Tubes. By: Ottawa Vintage Radio Club.

Here you will see the many ways radio waves can be detected.
https://www.youtube.com/watch?v=_vsqIYSy9sQ
Amazon book: Radios That Work For Free By: K.E. Edwards
Amazon book: The Voice of the Crystal by H. Peter Friedrichs
Alfred Powell Morgan (1914) Wireless Telegraph Construction for Amateurs, 3rd Ed., p. 134, fig. 106 on Google Books.

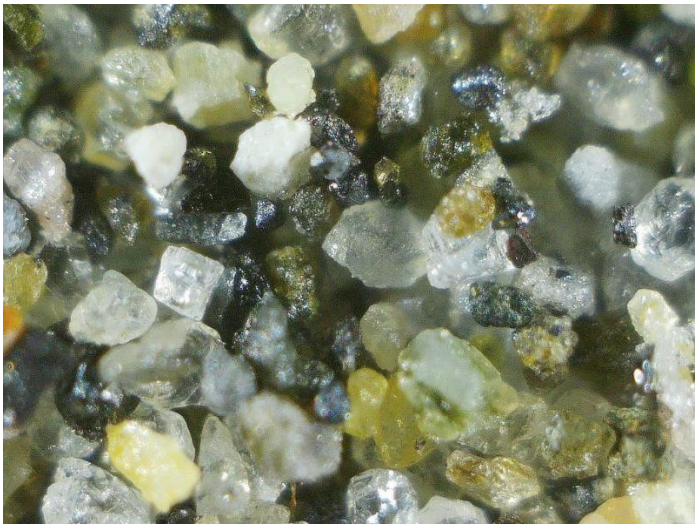


Figure YY991. Closeup of the Beach Sand Crystals in This Area (approx. 500 magnification)

Iron rust particles (Hematite) lightly contacting quartz crystals, creating temporary diodes like the Cats Whisker detector. These crystals simulate weightless conditions when suspended in the conducting saltwater slurry of the ocean wave. As they slowly drop down into the sand and gently slide over one another, they lightly contact one another, creating trillions of Cats Wisker and a Coherer radio detector. See figure NNN11 for how easily the contacting crystals could form this type of detector.

Certain rocks and minerals can facilitate natural heterodyning, but usually only when exposed to specific external energy sources. Because rocks and minerals form nonlinear physical systems, they are physically capable of mixing incoming electromagnetic or acoustic signals to produce new "beat" (sum and difference) frequencies, which is the exact definition of heterodyning. To put it simply, Doppler-shifted gravity waves emitted by the Moon mix with gravity waves from Earth, creating a new wavelength that induces the phenomenon.

Heterodyning in liquid electrolytes (salt water is a electrolyte).
https://www.nature.com/articles/s42005-023-01198-w

Heterodyne: https://en.wikipedia.org/wiki/Heterodyne

Distinction: "Natural" vs. "Engineered":
While the physical capability for heterodyning exists naturally within rocks and minerals, fully tune able heterodyning (like that used in a modern radio receiver) requires an engineered circuit with very specific tuning, localized carrier frequencies, and filters. However, in untouched nature,

heterodyning mostly results in a complex, overlapping jumble of background noise or unrefined harmonics. Cat Wisker radios. Radios that Work for Free. Credit. Grants Pass TV Repair. https://www.youtube.com/watch?v=G4YDsvv1DEk See minute 4:43

As you can see all kinds of materials and configurations can detect radio waves. Even a metalized match book cover can form a diode. A pencil lead can be used in replace the whisker wire. The rust concentrates in the grooves and they may be forming large helix like coils. Books available: http://hopeandallen.com/

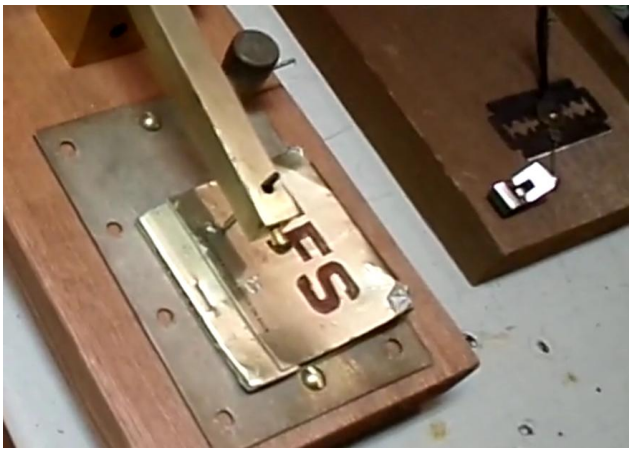


Figure NNN11. Cat's Whisker Detector Variations
Metalized Match Book Cover and on the Right a Razor Blade Detector
A metal needle lightly touches the surface of a match book cover and a razor blade.
Both are defined as Cat's Whisker Detectors and represent how easily a radio station can be detected. Simply light contact on dissimilar surfaces. Grants Pass TV Repair.

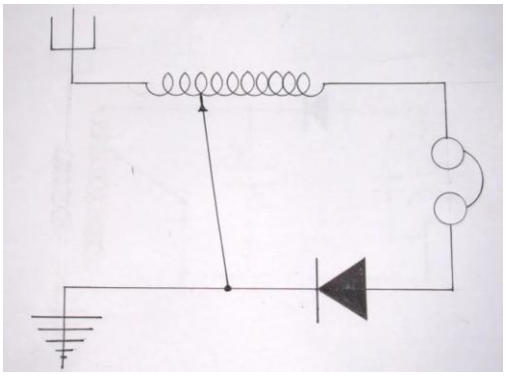


Figure BBB11. The Bare Minimum of Parts is required to receive a low-frequency AM radio signal. Antenna, Coil, Headphones, Diode, and Earth Ground.

Except for the headphones, the beach has similar components. For comparison to the beach components: (the rust crystals replace the diode). The entire beach acts like the antenna. The higher the frequency, the smaller the coil. Gravity waves are extremely small, so only a conductor of electricity would be required to replace the coil.

Shown in figure MMM1, the Coherer, was invented in 1890 by French scientist Édouard Branly, was an early primitive radio signal detector used in the first radio communications systems. The coherer is simply a glass tube filled with iron filings. When a radio-frequency wave passes through the coherer, the iron filings stick together and conduct electricity. Early devices used to detect sound waves (microphones) or radio waves often used small electrically conducting particles of carbon or iron. Iron oxide is used to record on tape, like the early VCR's or tape recorders.

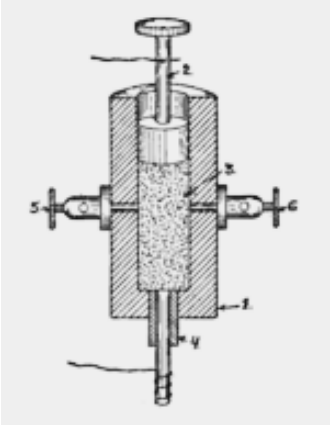


Figure MMM1. Branly's Coherer
Wikipedia Public Domain https://en.wikipedia.org/wiki/Coherer/

Like Branly's Coherer, the iron oxide particles in the beach sand cohere and then align in an electromagnetic field. Combined with the tremendous number of iron oxide particles, this allows for visual effects.

An alternate but related hypothesis: Telluric currents from the phenomenon also might be partially responsible for the particle alignment formations. Telluric currents are naturally occurring electric currents that pass through the ground. (This is not due to telluric currents. The beach water slurry may be more sensitive than this Coherer. Additionally, a sluice-box effect may create false occurrences of the phenomenon.

3.X Detection of the Synodic Field by use of a Compass

What does the compass needle align with at the beach during the phenomenon? A compass will not detect a oscillating field.

I tried to get compass readings of the field but had difficulty getting a clear reading because the beachfront is about 15 degrees from true north.

The Earth's magnetic field may contribute to the phenomenon. The Earth's field is strong enough to move a compass needle. The Earth's magnetic field is not strong enough to orient the rust crystals in the water. A high concentration of rust crystals barely moves the compass needle.

Note that Gravity Sensors 'Gravimeters' cannot measure this phenomenon because this is from heterodyned gravitational waves. Gravity sensors are precise instruments that can detect minute local changes in the Earth's gravity. To my knowledge, the new instrument, 'Quantum gravity' sensors, which are more sensitive, have not been tested at this site. Such an instrument may detect perturbations in this area. I cannot say for certain.

The Addition or heterodyning of gravitational waves from two or more sources:
The Moon's Doppler-shifted gravity wave combines with the Earth's and/or Sun's by the Cat's Whisker detector and the Auto-Coherer formed from the beach components.
Quartz is a semiconductor found in transistors, and the rust on antenna guy wires (known as the rusty bolt effect; Ref. 14) is well known among ham radio operators to cause interference by heterodyning (adding) two or more radio signals. Here we find that this beach has similar attributes that common radios use to receive signals like television and radio. Doppler-shifted gravity waves undergo heterodyning to create an electromagnetic field that attracts and aligns particles, much like the Coherer.

Because the field affects other elements found in the sand and water, it has implications of a heterodyning gravity phenomenon and not just a magnetic phenomenon.

The Earth is making the Moon rust theory: By Firstpost
LIVE: Why is the Moon Rusting? Scientists Say Earth is to Blame | Chandrayaan-1 |N18G

https://www.cnn.com/2020/09/05/world/moon-earth-rust-intl-hnk-scli-scn/index.html
Shuai Li of the University of Hawaii and NASA scientists believe the rust is concentrated on the side of the Moon that faces Earth suggesting it was somehow linked to our planet.

A related phenomenon:
Earth's Magnetic Field Does Strange Things to the Moon. – NASA.
https://science.nasa.gov/science-news/science-at-nasa/2008/17apr_magnetotail

Very slight interruptions of the normal particle flow within the water produce the effect. The ripples referred to here are not the normal ripples formed by water flow alone. The magnetic

particles are deposited at regular intervals. When the water slowly glides back out to sea, it leaves a mound and rift in the wet sand. At maximum conditions, the mound measures about ¼ inch and is 1-1.5 inches wide. One could stumble on them. The black particles form a line attracted to an unusual stationary invisible electromagnetic wave. It is like the mound and rift formed when water flows over a stationary, shallow rod (about 1/8 inch in diameter) resting on the sand. A strange "double" water ripple gouges the grooves. First, one water ripple; then, about one inch later, another water ripple with a deep groove between them. The pattern on the beach sometimes resembles an interference pattern and, at other times, shows fairly uniform wavelengths. These grooves form intermittently, lasting for several hours or longer, wash away, and then reappear repeatedly until the event passes. Appearing then disappearing many times during the window. Sometimes they appear in patches or cover the entire beach. At its peak, the wet sand becomes much softer and harder to walk upon, much like before-and-after changes of rice when you cook it. I have traveled to the beach hundreds of times, but I have not been able to catch all the events.

See photograph xx771. When an event is happening, an abnormally high concentration of iron oxide particles appears in the slosh zone. The wind was not causing this.



Figure xx771. **Slurry of iron Oxide Particles Suspended in the Wave**



Figure xx774. Ring Magnet in Sand

The concentration of rust in the upper layer seems to have an effect. The rust gets pulled up to the surface depending on date and time, changing the phenomenon's appearance. Black granite with mica. The mica is lightweight and sparkles in the sunlight.

Sedimentology of the Sand:



Figure xx7761. 2 ft. Deep Hole in Sand Reveals the Iron Oxide Deposit Layers

In the science of sedimentology, heavy particles are normally pulled downward. Here, something different is happening, as it shows that something is intermittently pulling the rust up and down in date- and time-related intervals. This results from a date-related effect as the beach surface changes colors. The principles of general relativity would fail this test, as a heavier element would never end up on top of a lighter element.

Another hypothesis causing this layering could be the flushing out of rust deposits by fluctuations in the Columbia River flow and storm and changing wind and water flow and wave conditions, however, this does not fully seem to be case. See figure UUU765. I have seen the waves bring rust upward for no apparent reason (no storm or high wind conditions). After some storms the beach is totally void of the black particles. This phenomenon is difficult to prove. The phenomenon is easily mistaken for something else, but that is not the only cause. The confusion arises because the Moon Doppler is associated with the wind and weather. There is not always a detectable electromagnetic wave associated with this event.

A 2-foot-deep pit was dug in the high-tide area on 06-23/2021. The photo shows the layers of rust laid down by the phenomenon. The layers are as follows (increments are in inches) 6 inches sand, 3 inches rust, 1-inch sand only, 2.5 inches rust, 3 inches sand, 2 inches combo rings, 2 inches rust, 1-inch combo, 3 inches rust, very solid 1-inch layers rust/sand, ring of sand, and bottom solid rust.

These layers change daily between the high and low tide where most of the churning occurs. At the time of this photo, the rust particles on the surface had all but disappeared.

The sand records intervals of the phenomenon, like geological sedimentology, and they are continuously altered by daily, weekly, or longer intervals. The rust is pulled down and then up by the intervals. The rust level depicted here is very dense, packed tight, and almost solid even when dry. Sprinkles of rust are brought in from deeper water and lightly deposited on the surface during low tide, initiating part of the phenomenon when the beach lacks rust particles. 10 days earlier, the sediment record was completely different except for the bottom level. A big storm churns all the much deeper levels of the high tide area, resetting the sedimentology layers.

On September 24, 2021, we dug another pit. A storm 1 week earlier had completely erased the previous layers. Only four layers were easily identified. The solid rust bottom layer at 2 feet was not there.



Figure x321. The above photo, taken on 08-16-2022, shows a new sedimentology record. Storms had washed away the last sediment record, allowing a new record to form. These records constantly change throughout the year. This is similar to the forming or growth of tree rings, except this record changes with the Earth's and Moon's orbits, and not how much water the tree receives.



Figure x322. 11-25-2022 Several weeks after storms. The sediment layers start over.



Figure x323. 09-08-2023 Notice the 13-inch section of only white sand. Approximately a month of recording. Also, notice the (barely visible) ring magnet stuck on the lower solid rust area. Notice the top black section with a thin white area represents a transition where strong events may start to occur in the following weeks. On this date, at 6 pm there was an unusual amount of heavy rippling on the surface out at sea and no wind to cause it. A tell-tale sign.



Warning: Beach Access Blocked by Storm and Sneaker Waves.
A storm occurred two hours earlier. I had just driven through this area several hours earlier. A dangerous area where one can get blocked off by logs and trapped on the beach. Also, notice the white sand-colored beach is not dark. This provides proof that a storm is not required to bring in the black-colored rust.

Figure x955. Beach Access Ramp Blocked by Logs

3.74 Black Sand Events

Please see the black sand photograph figure PPP123, GGG123, and UUU765. (All events are intermittent). During these events, gravitational forces and wave motions pull rust particles up from deep within the sand. These events have been correlated with the times of the 'new Moon' when the Moon and Sun are in the same quadrant in the sky. However, this may not always be the case. The events are difficult to predict, as it seems to involve topocentric Moon and Sun angles. One hypothesis is that this may correlate with chemistry, as quartz, mica, or water may occasionally be pulled up to the surface. This may occur between high and low tide. When it occurs at low tide, the water becomes discolored in part of the surf area and does not appear on the beach. However, wave motion will likely wash it up during the transition from low to high tide and deposit it on the beach. Soon after the event, the beach again becomes sand-colored as gravity pulls the heavier iron rust particles down. See sedimentology photos. If the Moon is overhead, it may pull the heavier rust upward. Conversely, if the Moon is on the other side of the Earth, it may pull it downward. However, the Moon's orbital separation velocity could cause the opposite effect.

Hypothesis:
Heterodyning of gravity waves from two or more sources produces variations in the phenomenon.
The heterodyning tunes the gravity waves to specific frequencies of one or more elements found at the beach. When the resultant wavelength matches an element, it moves that element up or down from the depths of the sand. The angles to the beach of the heavenly body's gravity source seem to be required. When the wavelength and associated angles match one of the elements found at the beach, that element moves to the surface. The elements are water, iron oxide, quartz, mica, and salt.

Although there are other elements involved as well. I believe the phenomenon greatly enhanced by a huge iron deposit. There must be a huge iron deposit in this area. There is way more rust here than I previously thought. As mentioned before, two feet down is solid rust, and I have no idea how far down it goes from there.

A related phenomenon:
Earth's Magnetic Field Does Strange Things to the Moon. – NASA.
https://science.nasa.gov/science-news/science-at-nasa/2008/17apr_magnetotail

The Earth is making the Moon rust theory:
https://www.cnn.com/2020/09/05/world/moon-earth-rust-intl-hnk-scli-scn/index.html
Shuai Li of the University of Hawaii and NASA scientists believe the rust is concentrated on the side of the Moon facing Earth, suggesting it was somehow linked to our planet.

The beach's gradual slope, combined with a high concentration of iron oxide (Fe2O3) particles, creates an extremely sensitive detector. Several conditions form the detector. The beach has an extremely low planar slope (gradually sloping beach face gradient). In the swash zone at the water line, and only at certain times of the month, a phenomenon occurs. During a receding wave, when the water is only 1 to 10 inches deep, these particles, along with the standard sand, go into solution. Because of the unique turbulence in this receding wave, the magnetic particles align themselves along electromagnetic field lines. The distance between lines (the wavelength) usually is from *12-46 inches. The slope measured on 5-13-2022 was 7.7 percent, with 14.5-inch groove-to-groove spacing. However, the water velocity seems more important to consider with the sluice box effect. The slope changes from 5.1 to 7.7 percent or greater. Sometimes, it appears almost flat. Note that the sand must be fine-grained.

Another astonishing and convincing but hard-to-catch event occurs when the water flow velocity becomes too great (related to the Moon and Sun's angles and the beach slope). Clearly, the hundreds of ripples forming in the water ***instantly*** disappear, leaving clear sand. The hypothesis is that water flow velocity increases beyond the attraction force on the iron particles, and the phenomenon stops briefly. While I was watching type #3 patterns forming under the shallow water of a receding wave. Then, almost as if by magic, the ripples ***instantly*** disappeared under the fast-flowing water, leaving clear sand instead of the pattern. The EM field is not strong enough to hold the ripples in place due to the increased water flow. The formation releases and disappears when the water flow velocity becomes too great. This only occurs during exceptionally strong events, when combined with an abnormal water flow velocity. To get such strong events, the Moon-Earth and Sun-Earth Doppler must be adding together. The Sun-Earth Doppler may wash out some of the Moon's events, and vice versa. Instead of water-flow velocity, it could be a sudden transition in the Doppler wavelengths.



Figure x3217. Dynamics of Wave Ripples

See figure x3217. Abnormal formation configuration of the water ripples. Notice there are 3 ribs in the ripple pattern, resulting in a single groove in the sand. This is not normal, suggesting something hidden is causing it. This formation can stop immediately while you are watching, resulting in flat sand. The hypothesis is that an unusual intermittent electromagnetic wave is causing this and can be predicted with Moon bounce echo software. The distance between each sand ripple is related to the Doppler shift frequency. A YouTube video shows this forming. There may be a case where this happens anyway.

A strong smell of chlorine was in the air during an exceptionally strong event. Chlorine results from the electrolysis of salty seawater and the separation of NaCl. This indicates an electrical field.

Strong winds have little or no effect on groove formation. The phenomenon occurs on calm days as well as windy days. It is best to look for the phenomenon when the tide is going out (from high to low), but it is not required. Tide tables are available at local fishing or outdoor stores (Ref 51).

This beach near Astoria, Oregon, has a heavy concentration of paramagnetic particles. Traveling 60 miles south, I found the particles had reduced significantly. The grooves and phenomenon were also much less pronounced. The Long Beach area in Washington also has a significant amount. This is where I first identified the visual with the physical feeling of the phenomenon (See hypothesis and microwave files on aging).

An increase in unidentified radio waves, detectable by standard broadband scanners, accompanies this intermittent phenomenon. A massive increase occurs in the weak unidentified radio frequencies when the patterns become very messy and appear to be breaking up. They are most likely absorbed back into the beach elements when the patterns are regular, thus fewer frequencies appear. Also, the frequencies remain for some time after groove formation stops. The radio waves can travel back after the phenomenon leaves the beach sand area. The frequencies shift around, but some patterns remain. Occasionally, a barrage or flurry of unidentified wavelengths will appear. Scans were taken from 33 megahertz to 1 gigahertz.

The resulting radio frequencies from synodic waves seem to quantum-jump to new frequencies, charging earthly elements on one wavelength and then discharging on another, much like a laser or phosphorescent rocks when exposed to black light. This is probably why the beach lines appear at unpredictable intervals. Without the proper equipment, I couldn't determine with certainty whether this quantum jumping was occurring.

Hypothesis: Because the gravity wave pulses on/off, it becomes much weaker than the magnetic force. You can often hear this pulsing on the radio scanner. It can sound like a crackle at times, a pulsing, or, at other times, just heavy static. (See Synodic Radio Waves).

Because the forces involved can be very weak, it is difficult to identify the source. To be confident in your findings, look for grooves that are 12–36 inches apart. These are most likely not formed by simple water flow. Reject grooves formed by wave collisions (figure 4). ***See new findings regarding the intermittent appearance of iron oxide along with the sluice box effect.***

Of course, sand ripples can form from flowing water motions; what I have outlined here is something entirely different. Both water wave motions and gravitational forces can cause sand patterns. Gravitational sand patterns can be further separated into gravitational forces pulling from two separate directions (Moon and Sun), and into Doppler-shifted, then heterodyned, gravitational waves. Normally, scientists attribute sand patterns only to wind and wave motion. If heavy particles are present in the sand, a sluice box effect occurs during water-wave collisions, producing fake or unrelated sand patterns. Black iron particles drop out of the solution when two water waves collide, creating fake or unrelated sand patterns.

Variations and Additional Attributes of the Phenomenon:

This phenomenon has many parts, making it difficult to understand and predict accurately. It may stop for weeks, leaving only clear sand.
To be sure you are looking at an event, do not consider the high-tide area solely as part of the phenomenon. The sand in the high-tide area doesn't get churned or mixed well, so there often isn't a clear slate to start from, and only be a sluice-box effect may occur.
I found it nearly impossible to predict all the events. The rust is becoming more concentrated, and you can add the Moon's Doppler to the Earth's Doppler + and—another dwell.

Here are a few things to look for: (you may find one or more of these). It took many visits to the beach to see all of these.
Dark, dirty surf water (iron oxide particles are pulled up from the deep layered sand, making a solution of rusty water).
Clear, sparkling surf water (mica or quartz crystals in solution) reflects light at you like tiny mirrors. The sparkling effect, almost blinding in bright sunlight, peaks when a heterodyned wave pulls mica up, then dries, and the wind blows the lightweight crystals onto the sand bank. At this time, the sand on top of the bank near the parking lot sparkles much more than normal plain sand. Eventually, the wind blows some of it away, reducing the effect. ***Unfortunately, digital cameras cannot photograph the sparkle from the mica. Film or a high-resolution camera may work.*** So far it has been impossible to record this event. Even a computer screen won't display this kind of sparkle from the mica specks. Even a close-up photograph cannot capture the sparkling. The sparkling mica event may be rare but is ***quite spectacular*** to see. You really need to see this event happen. The link below shows how difficult it is to photograph the sparkling effects. Unfortunately, it cannot be photographed. The link below suggests that an iPhone camera got some results.
https://photo.stackexchange.com/questions/52908/how-to-photograph-sparkly-objects

Normal light tan colored sand with quartz on the surface and iron oxide particles buried below.
Surf sound varies from loud to quiet. A feeling of peace at the beach when the wave motion gets quiet (this is quite pronounced, and you must be watchful to catch it).
The normally hard wet sand gets spongy as you walk along the surface.
Rippling, stirring water, and soliton water waves.
Sand pools
Chlorine smell in the air (during very strong events)
A rare weak smell of ionized air.
The evaporation rate (humidity) increases in the local area (can be very small areas, 10 x 10 ft.).
Extremely messy beach patterns with a heavy increase in background radio frequencies.
A weather relationship exists as well.
Tremendous amounts of sand are washed off the beach (approx. 10 ft), revealing the lower parts of the shipwreck. This seems related to gravitational forces.
Background radio frequency slides and jumps (some very strong above background)
Beach sand becomes puffy, swells up, then slowly drops about 1-1/2 to 2 feet as the water drains out of the sand and becomes firmer. It happens so slowly that it is almost unnoticeable. If you stand on the beach, you may feel it slowly drop (about 15 to 30 minutes).
The Sun-Earth Doppler may wash some of the Moon's events away, and vice versa. They may also add together: Sun/Earth and Moon/Earth.
Leftover deep deposits of rust deep within the sand confuse the timing.
NOTE: 04/24/2020 (The Opposite Effect) Quartz crystal EM wave
Black Sand Events. The iron oxide particles were either pulled upward or downward, or the quartz was pulled upward. On certain dates, the black particles (the heavier black iron oxide particles) were pulled up to the surface, and the entire beach turned a dark grey to black color. Geologists and gold panners know that heavier particles are normally pulled down to lower levels by gravity. This is the opposite of the norm.

Sand ripples showed, but the rust was not part of the phenomenon. The water waves were not colliding. And the surf was a very clean, beautiful light turquoise color. The rust particles were buried deep within the sand, not on the surface.
Heterodyned gravitational waves may match frequencies within quartz, separating them.
Doppler velocity dwell of Moon with respect to Earth
Doppler velocity dwells between Earth and the Sun.
The phenomenon can stop for weeks, or the sand ripples may appear almost continuously, especially at the very edge of the wave crash zone. What we are looking for here are the extreme events as pictured here. Concentrate on a single wave on a constant slope flowing on the beach. It takes a close eye to separate normal ripples from weaker events. Dense clouds forming a shield, or partial barrier, may either reduce or increase the phenomenon's effects.
Do not consider the high tide area solely as part of the phenomenon. The sand depth in the high-tide area does not get churned or mixed well, so there is no clear slate, and it may only be sluice-box effects. Also, previously, there were car tracks left in the sand.
The uneven distribution of quartz and rust in the lower levels causes a sluice-box effect, complicating predictions. Also, the Earth/sun Doppler combines with the Earth/Moon Doppler, adding further complications to predicting the events. Also, the Doppler goes from Positive to Negative velocities daily.

CHAPTER 4. THE SYNODIC GRAVITATIONAL THEORY

Given assumption: Gravity is a torsional electromagnetic wave that can transfer a force.

POSTULATE 1:
Gravity is a rotating helix (rotationally polarized) electromagnetic wave of extremely small wavelength emitted from the proton and or neutron.

POSTULATE 2:
Gravity waves are undetectable by most instruments as they pass through all matter, thus, are not detectable by normal means.

POSTULATE 3.
There is an error in present rules of superposition.

A theory unfolded after years of study, based on data from radio scanner, and video logs. Gravity waves emitted from the Sun and Moon, Doppler shift from elliptical orbital motions, then heterodyne in the beach sand slurry along with Earth’s gravity waves.

Hypothesis is the slurry acts like billions of transistors or hot carrier diodes. The liquid slurry combination of rust, quartz in the sand, and salt water as a conductor enables multiple Doppler-shifted electromagnetic waves to combine (heterodyne or mix) producing two more signals and a host of harmonics. In this case, it makes the wavelengths much larger. Ham radio operators have long-known rust on antenna guy wires forms a natural diode and is a common source of interference from the heterodyning of signals Ref 14. Quartz, a semiconductor used in transistors, also has piezoelectric properties.

The sand patterns appear when the field lines dwell, which produces a stationary pattern. In a dramatic video, soliton water waves appear when the electromagnetic field slowly sweeps across the area.

The event can be associated with elliptical orbit Doppler relationships of Earth and Moon orbits, as well as diurnal cycles. Elliptical orbits are the source of Doppler shifts in gravitational frequencies. Near the dates of Moon aphelion and perihelion, Doppler shifted velocities near a dwell position which might be considered as a Doppler Standstill. At this time the topocentric separation velocity to the Moon goes from positive to negative. The Earth/Sun has a bi-yearly cycle as well. I have been unable to predict the events completely. It seems there may be Moon and Sun angles involved. At times, the event stops completely for weeks.

The Moon passes through the 2 extreme points or apsides, the perigee, and apogee about once a month. The time it takes for the Moon to travel from apogee to perigee is called the anomalistic month and takes around 27.55 days. The apogee point has a slower Doppler transition rate. Thus, the events may last a bit longer. See the Moon Perigee Apogee table in this book or visit: https://www.fourmilab.ch/earthview/pacalc.html

Because the Moon and the Sun's gravity fields pass through the Earth allows the phenomenon to occur when the Sun is set, or the Moon is not visible being on the other side of the Earth. Try to find a photograph of an ocean beach with this phenomenon going on. If you find one, it's most likely caused by iron oxide and a synodic event.

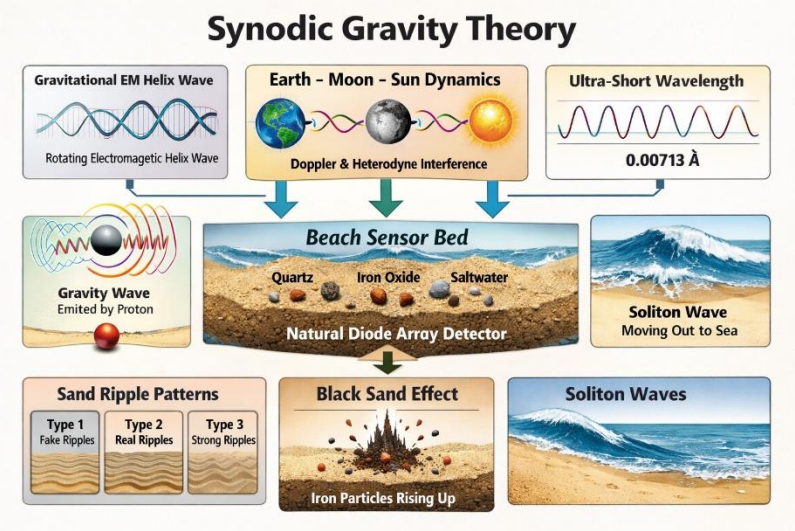


Figure QQ112. Visual Drawing of Entire Theory. CoPilot

Carmarthen Bay: A lot of shipwrecks and rust in sand. Same phenomenon.
51.725376, -4.370785 GPS coordinates Locator: IO71tr.
https://www.youtube.com/shorts/KHmkURoAec
Other beaches that have iron oxide are Miami Beach.

4.X River Water Wave Amplification

Not fully verified; Close study of rivers and lakes reveals that, at certain times, something other than wind causes or enhances minute ripple motions. Under light wind conditions (at specific times), ripple motions on small lakes or ponds and smooth-flowing rivers are amplified by Doppler-shifted and heterodyned gravitational waves. Self-sustaining rippling motions appear to exceed what light wind could produce and seem to enhance or amplify the ripple motions.

There has been some confusion about what is causing these sand patterns. The author wants to make it clear that there are two types, a fake formed by simple water movements, and a real occurrence formed by heterodyned gravitational waves.

Short wavelengths normally form from flowing water. Shown in the below video, two inch ripples form from flowing water. MIT Geomorphology. Dynamics of Wave Ripples
https://www.youtube.com/watch?v=zRGuMddjRGg



Figure 1. Figure X34199. ***The rough dark patch areas (circled in black) are Iron Oxide Particles Trying to Stand on End much like Iron Filings do when Placed on a Paper and a Magnet is Held Below.***

The normally clean bluish hue of the surf (circled in red) has been discolored by black iron-oxide particles. This occurs only during strong iron-oxide wavelength (magnetic) gravitational events. January 3rd, 1995, 17:00 hrs. PST, Solar time. / UTC: Jan 4^{th,} 1:03 a.m. Moon Doppler shift: -209 Hz – -241 Hz. 3+ days after Moon perigee. This strong of an event may be considered rare (I have only seen it once this strong and was able to feel it slightly). Electrolysis of the salt water may occur with a slight odor of chlorine gas.



Figure X98a1. 18-inch spacing

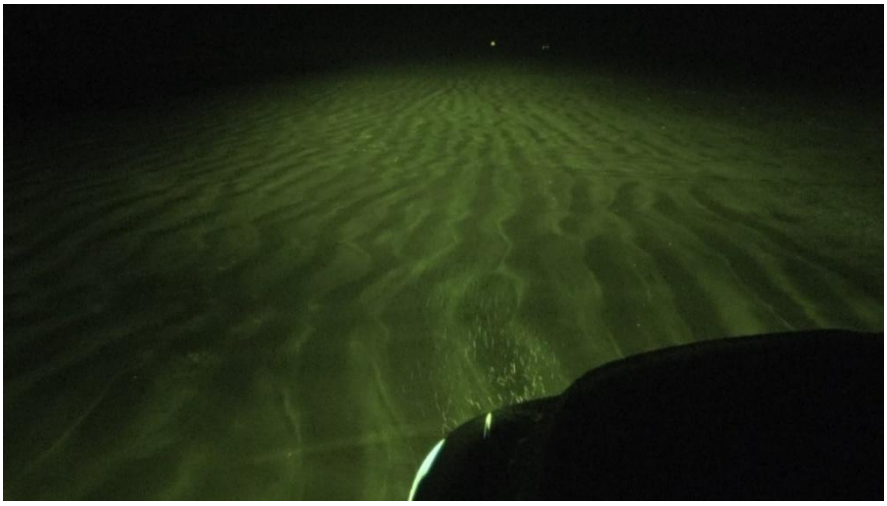


Figure X34191. 05-14-2022 12:05 a.m. Consistent 14.5-15 inch spacing with corresponding RF 814.4 MHz strong background frequency



Figure YYY1.
09-29-2023 Night Photo. 19-20 inch wavelengths.

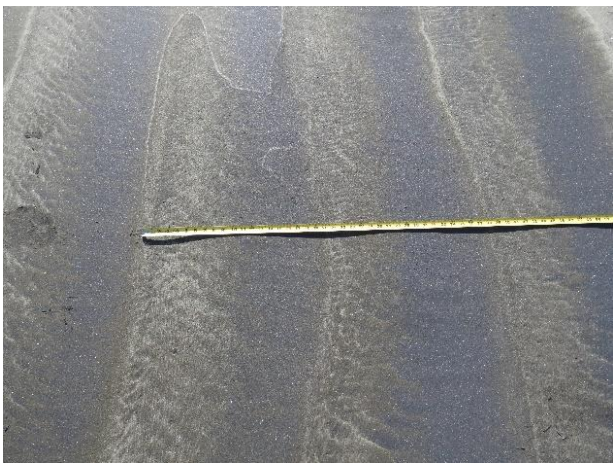


Figure YYY2.
Measure 2 sections then divide in half



Figure 4. Normal clear sand conditions occur outside the phenomenon dates as well as in between its intermittent appearances. Fort Stevens State Park, Astoria, Oregon, USA. The 1906 shipwreck Peter Iredale (in the background) provides an excellent reference point for the phenomenon. Notice the clean blue water void of the darker particles indicates a change in the phenomenon.



Figure XC1243. The Beach Sand is so smooth and flat that clouds can be seen reflecting in wet sand. 01-18-2023



Figure 2. Dry Sand Panoramic Photograph from Type 2 Conditions. Black lines are a concentration of paramagnetic rust particles. This natural detector provides visual proof of gravity waves. An increase in unidentified radio waves often accompanies this phenomenon. Proof gravity is an electromagnetic wave. Reveals a relationship between the gravitational field and the magnetic field. These patterns can occur only on specific dates and times. These are not drainage patterns; water has flowed across the grooves, not down them. Mica or black granite can confuse one studying the event.

→ →



← ←

Figure 2A. The end of the 'Swash Zone' is shown between the arrows. The last part of the wave that washes up upon the beach. An exception is the sand pools event which occurs in 2 to 5 feet of water.

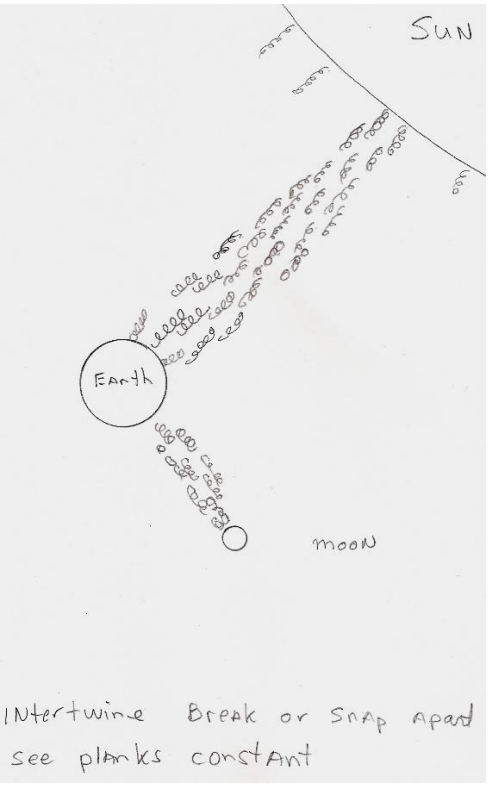


Figure TT123. Helix Spring Gravity Emission Sketch. See details in Planks Constant theory file at synodicgravity.com. Note: Represented incorrectly here moon's field is much stronger than the Sun's.

The above drawing shows an electromagnetic wave connection viva gravity waves emanating from the proton and or neutron. The articles below relate to this connection.
Changes in the decay rates of radioactive elements have an effect that no one understands.
https://www.sciencedirect.com/science/article/abs/pii/S0927650510001234?via%3Dihub
https://phys.org/news/2010-08-radioactive-vary-sun-rotation.html

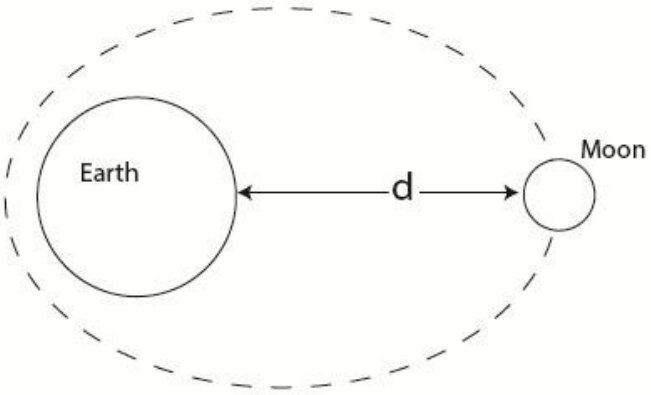


Figure 199. Moon's Elliptical Orbit Around Earth (not to scale). The changing distance creates a Doppler shift in the moon's gravitational frequency. The Earth's orbit around the Sun is similar.

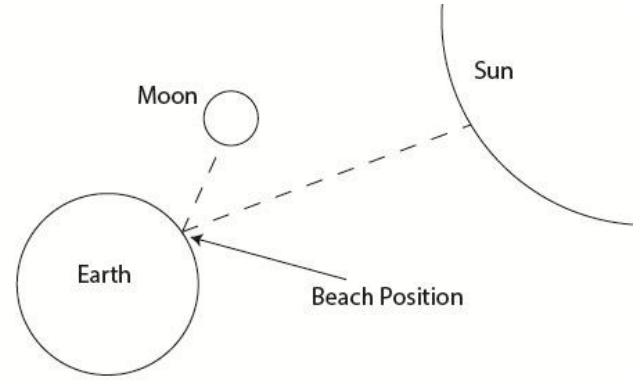


Figure 22221. The Sun and Moon should be in the same quadrant in the sky, otherwise, waves from opposing directions will collide, forming the fake occurrence of the phenomenon. See Figure 4. This applies to night-time conditions also.

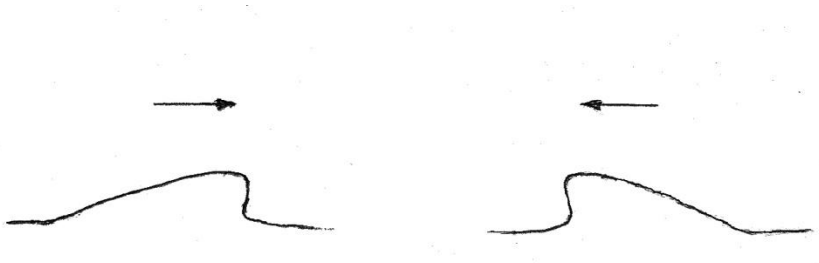


Figure 4456. *Wrong.* The sand patterns left by the collision of two small-sized water waves traveling in opposing directions are NOT part of the phenomenon. The collision temporarily stops the water flow motion allowing the suspended particles to drop in place creating a fake occurrence of the phenomenon.

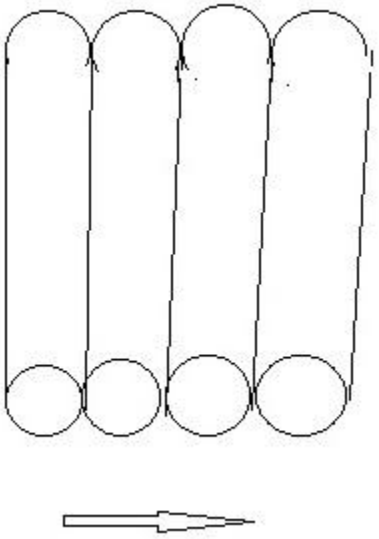


Figure 33312. ***Correct illustration:*** **EM helix field lines. The Helix field is represented by cylinders**

Humps left in the sand by water flow (arrow) passing through temporarily stationary (standing EM wave) electromagnetic field partially (approx. half) buried in the wet sand (the cylinders).
The wavelength can be measured by the grooves left in the sand.
(Note: the field normally moves but can become stationary long enough to leave a series of lines). Multiple field lines form the complete patterns. There must be no wave-to-wave collisions, as shown in Figure 4, occurring in order to identify this event. For no apparent reason, a water ripple

appears. Humps in the sand may also be increased by the temporary slowing of water flow at the ripple and groove.

Why are the beach lines aligned with the water flow direction? Radio waves emitted from a huge flat plate antenna take on a random direction. During the phenomenon, the water flow being a conductor organizes and pulls the electromagnetic waves into parallel rows.

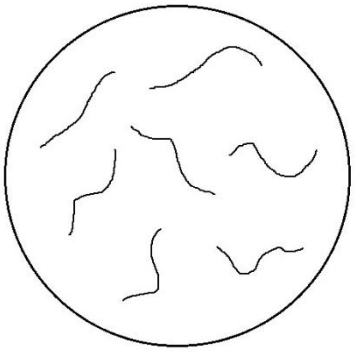


Figure QQQ1234. Radio Waves Emitted from a Huge (the size of beach) Flat Plate Antenna

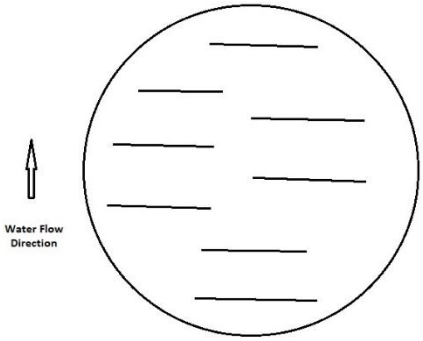


Figure WWW1234. Radio Waves Emitted from a Huge Flat Plate Antenna when Aligned by Flowing Conducting Salt Water as on the Beach Surface.

The electromagnetic field aligns with the direction of water flow, resulting in the parallel rows shown in the beach photographs. Note: The swash zone water wave height is approximately 1- 6 inches. The electrically conducting saltwater pulls the rows into order as it flows across the surface. Eventually, it becomes apparent that radio waves from a transmitter prefer to stay separated from one another. Otherwise, they would overlap and not form neat wavelengths. This will be covered in the 'Duality' file on the double slit. The current rules of superposition would not allow this alignment.

On 6-16-2021 at 3:45 a.m. Illuminated by a powerful light bar, when I drove over the field lines, they were disrupted in a large swath around my car as I drove through the incoming waves, from 1 to 6 inches deep. The field lines broke up, and some disappeared completely. My car made a

clear path or trail in the middle of the forming phenomenon. The steel (magnetic) in my car seemed to shield the area around it, preventing and/or reducing the formation. I kept driving over a 50-foot section. Then I found I had to back off toward land to allow the formation to regain its strength and start appearing in its uniform pattern again. When I drove back several minutes later, it happened again. *A week later, when I tried to disrupt the field with my car, it did nothing, leaving me to believe it may have been a coincidence.* This phenomenon has many unusual attributes.
Notice in figure X34199 or figure 1, the separation line in the sand near the shipwreck. The steel buried in the sand may be creating a similar disruptive effect that my car did.

4.X. Measuring Groove-To-Groove Wavelengths
Often a radio frequency appears with a wavelength that matches the groove-to-groove distance. Imagine large coils of spirals buried in the sand at different angles, with varying amounts exposed, much like a bunch of logs buried at different levels. You can only see the widths (the grooves), so the measurement depends on how much of the coil is buried. Sometimes the grooves extend hundreds of feet, maintaining their position from one wave to the next as though something stationary was forming them. Something impeding the normal flow of water remains in place wave after wave, but slowly migrates until the forces pull it apart, after which it grabs hold in another nearby area. Using the local tide table, the phenomenon is easiest to witness between high and low tides. So, pick events between high and low tide. At low tide, wave motion is uneven and confusing. Reject the fully high-tide area, as it may not have churned up enough to erase the previous patterns.

The groove-to-groove wavelength jumps from long to short dimensions in steps. They do not follow the Doppler-shift heterodyne wavelength, which would change slowly from a low frequency to a higher one. Instead, they appear in steps, as quantum jumps.
Some common groove-to-groove distances are 12.3, 14, 18, 20, 24, 26, 29, 30.5, and 46 inches.
Divide 11803 by the groove-to-groove distance to find the frequency in megahertz.
Note: Not always applicable due to quantum transition-level emissions (hypothesis). The level wavelength is rarely the emission wavelength. It is easiest to look for the increase in RF coinciding with the beach phenomena.

Radio frequency (RF) relationships were found (brief).
397.325 MHz = 29-inch groove
386.025 MHz = 30.5-inch groove
256.725 MHz = 46" 10-30-94 12 pm, the only EM wave found at that time between 350-200 MHz

Regarding: Exact groove measurement-to-frequency correlation. Often, it is difficult to make an exact frequency-to-wavelength correlation. The groove patterns are often formed by heterodyning three different wavelengths. The resulting groove dimensions stretch from one wavelength to another (Visible results of the heterodyning process). This makes exact frequency matching difficult. Another factor is immediate re-absorption of the wavelength, which produces very weak signals. Many other accompanying radio wavelengths from quantum jumps appear in RF but not as sand grooves. Another RF relationship might be found in the snapping apart of the heterodyned waves. This emission should correlate with the difference between the two

heterodyning grooves. Using the energy-level transition-jump method to find frequency relationships should be helpful. i.e., the difference between groove-to-groove dimensions of stretched grooves may reveal the radio frequency (the corresponding photon).
Standard radio-frequency emissions cannot duplicate groove formation. This is because the poles alternate during normal RF propagation. A standing wave may, however. An unusual type of rotation of the polarity of these waves probably forms these grooves.
You should find the groove-to-groove distance maintains specific sets of dimensions. Recognizing certain patterns and sets, for example, the 12-inch often occurs alone. The 18- and 24-inch waves form at the same time. The very wide ones often occur alone. One must determine that they formed at the same interval. Sets found on the entire beach from high to low tide may vary.

4.91 Two Types: The Fake and the Real

Because this phenomenon is easy to dismiss as simple water-flow motion, the author wants to be certain that it is known that two types of conditions form sand patterns. Many patterns form simply from the collision of shore waves coming from opposite directions. Collisions between opposing waves produce a sluice box-like effect. This is not a part of the gravitational phenomenon as described here. Prospectors use sluice boxes to separate gold from river sand. The sluice box-like effects mimic the formation of the sand patterns by depositing the heavier rust particles during the collision. Slowing water during the collision allows heavier rust particles to drop onto the sand surface, forming a dark line of rust. In addition, the water ripple digs a groove in the sand, resulting in patterns that are nearly identical-but not so. The 'wet' sand remains hard and easy to walk on, unlike the 'wet' sand when the phenomenon is formed by heterodyned gravitational waves. Another fake type occurs when a strong event happened 6 –12 hours earlier. The last event leaves an uneven, soft sand layer inches below the current surface. In this case, a fake occurrence forms on sand that had a prior event, resulting in a bumpy surface that collects particles like a sluice box.

A single wave that flows in both directions (in and out) does not normally form sand ripples. Only single-direction flowing water (river water) forms ripples in sand.

Ripple marks - Wikipedia. These are not the same conditions. Ripples can form in a tank by oscillating the water (lifting one end, then the other, in a controlled manner) back and forth.

4.X Conditions Forming Ripples on a Gradual Slope of Sand

The sand-groove-producing part of the phenomenon concerns only low-profile shore water waves from 1 to 8 inches deep. Only the last 30-40 feet of the water wave, as it approaches the shore and flows back out, is important.

Important New Concept Model:

There is a correlation between when the rust is brought up to the surface and the velocity of the water flow. Unseen forces bring the rust to the surface, then it creates a sluice-box effect related to the water-flow velocity. The water flow velocity could be related to the spacing between the black-colored humps and grooves. If so, radio frequencies could appear only temporarily, and the spacing would be due to water-flow velocity and beach slope. However, this would not negate the phenomenon.

Unlike river sand ripples, which form under constant-velocity water flow in one direction only. Beach wave motion is different. The water flows back and forth, and the velocity goes from a maximum to zero and then reverses direction. The back-and-forth, washing-like motion working alone on a gradual slope results in clear sand conditions (Figure 4). Unrestricted (no collisions) back-and-forth washing motions of small shoreline waves on a gradual slope flatten the sand. However, when two waves from opposite directions collide, they form a hump in the sand and drop the heavier iron oxide particles.

As a single water wave comes in, the water flow stops and lies flat on the *gradual slope* of this beach, then the water begins to flow back out to sea. Note that the water surface lies flat. At this point, if there are no other factors present, such as the collision of two water waves and stationary electromagnetic fields, then the particles of sand and iron oxide are distributed evenly and result in clear sands (figure 4).

There are several ways to determine when patterns form from gravitational waves. We can be certain the sand patterns are caused by heterodyned gravity waves when the rust particles stand on end (see Figure 1), and when the timing of the water waves is such that the incoming waves do not collide with the outgoing waves. The sand pools are part of this phenomenon, and the surf's normal blue hue becomes deeply discolored by black iron oxide particles.

The water waves here are shore water waves ranging from 1–8 inches high and are not part of the crashing surf. The final waves that reach the shore then proceed back out to sea.

Culmination of the work, YouTube: All 3 of these links work but the =2s seem to be correct
Gravitational Phenomenon Verified Complete Video 3. 05-05-2026
https://www.youtube.com/watch?v=WBvhrvFOtOg&t=56s
https://www.youtube.com/watch?v=WBvhrvFOtOg&t=2s Use this one
Search the title if the YouTube video has been revised. All the links above are the same video.

(Synodic Gravity Wave of the Future): https://www.youtube.com/watch?v=kP6i5us9vac&t=8s

4.X. Guidelines to Identify and Separate Out the Phenomenon

To avoid confusing the actual phenomenon with the appearance of lines in sand from flowing water, like in a river, or with simple wave-to-wave collisions, the guidelines below are provided.

The normal sand patterns we associate with flowing river water require a continuous flow of water in one direction only. Here, the continuous undulation in the water slowly builds up the sand from below resulting in a sand hump to hump distance of about 5 inches. With river water flow, it takes time for the sand patterns to develop, depending on water velocity and depth. The wave-to-wave distance depends on the water velocity and depth.

It may take about 5 -10 seconds for the water to come to a complete stop before it begins to flow back out. The in-and-out water flow continuously erases any previous patterns left in the sand.

The patterns produced by the phenomenon are both humps and grooves, not just a series of waves in the sand and crest direction. The wet sand can become very soft and can be compressed or impressed, collapsing the particle alignments within the sand. See the photo of rust particles standing on their ends.

An unusual ‘blink on and off’ makes the water ripples suddenly appear and then disappear within seconds. There may or may not be a groove pattern left in the sand depending on when the event occurred within the in or outgoing wave. This occurrence may require many hours of watching, and the best I can determine is that it comes from a momentary gravitational bulge on Earth or a mountain on the Moon’s surface temporarily altering the Doppler shift.

As in type one patterns, two opposing-direction water waves often occur, causing a collision that drops the particles, creating a stationary water ripple at the point of collision and leaving a dark line in the sand. The type one patterns may be Doppler-related but are not considered part of the phenomenon as described. This type may have no associated radio frequency match. Locate dates and times when incoming waves are not colliding with outgoing waves. When the Sun and Moon are in opposing positions in the sky, opposing water wave collisions may occur. Conversely, when both the Sun and Moon are in relatively similar positions in the sky, the water waves are pulled from a single direction, reducing wave-to-wave collisions.

Figure 2 shows the alignment results after the sand has dried. Type #2 conditions formed these. Drying causes the domains to tip over. The patterns in the sand are immediate and visual because a liquid slurry of fine piezoelectric quartz and rust particles is suspended in salt water. A slight agitation allows the particles to float in the slurry and self-align, leaving the visual pattern.

The particles are free to orient and align completely unrestricted because the slurry suspends them temporarily until they drop into position. This is like a compass needle floating in the water, only free to rotate in three dimensions. Floating in this lightly agitated solution, the particles are in pseudo-weightless suspension.

Figure 1 shows the alignment immediately after it occurs when the sand is still wet. As proof that a strong electromagnetic field is present, the black patch areas show paramagnetic particles trying to stand vertically on end, much like iron filings do when placed on paper and a magnet is held below.

Timing of the Events:

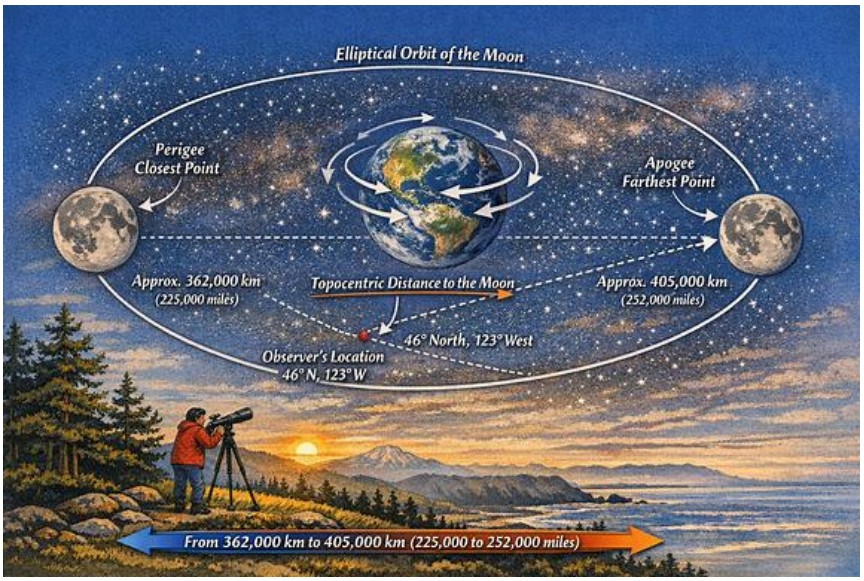


Figure 7799A. Topocentric distance to the Moon from latitude 46° N, 123° W, the Moon's elliptical orbit, and Earth's rotation. Credit: ChatGPT. Note the drawing is not quite right.

More accurate than the simple distance to the Moon that is calculated from the center of the Earth. The topocentric distance is a very precise distance to the Moon. This absolute distance includes the Earth's rotation and the observer's rotation angle facing the Moon. Simply put, at times the Earth rotates you toward the Moon and at other times you rotate away. This distance is added to the orbit distance, resulting in a very precise value called the 'topocentric distance'. Only this value can be used to predict the event. (Note the separation velocity is calculated from this distance value)

The phenomenon is not related to the tide. The opposite is true: The tide is partially related to the Doppler velocity.

How the topocentric velocity to the Moon changes over time. A sinusoidal distance-velocity curve reflects how the Moon's elliptical orbit causes its distance to vary smoothly over time.

The Moon’s orbit is elliptical, so its distance from Earth varies continuously.
Topocentric distance also changes due to: The Earth’s rotation: Your position relative to the Moon shifts throughout the day.

Moon’s orbital motion: It completes one orbit every ~27.3 days.
Observer’s latitude and longitude: Affects the Moon's angle and elevation.
Earth's rotation and the observer’s geographic position affect the exact topocentric distance and velocity at any given moment. When Earth’s rotation relative to your latitude and longitude is added to the Moon’s changing distance, the distance and velocity can pause for up to one hour. This is called a dwell and is when the phenomenon becomes apparent.
(Use the Doppler data to predict the events)
The proper date/time to witness this is when the Sun and Moon are in the same relative position in the sky (see Doppler Calculation Example), i.e., they are both pulling from the same direction. At this time,, a single, very small shore water wave occurs without collisions. The phenomenon has an orbital Doppler and a diurnal cycle.
Picking a negative Doppler value may be required to reduce the frequency (this did not prove helpful).

Reason: A higher frequency than the proton may not heterodyne correctly or will result in a frequency that cannot show up at the beach. This is required to reduce the frequency to a magnetic frequency (sub-millimeter).

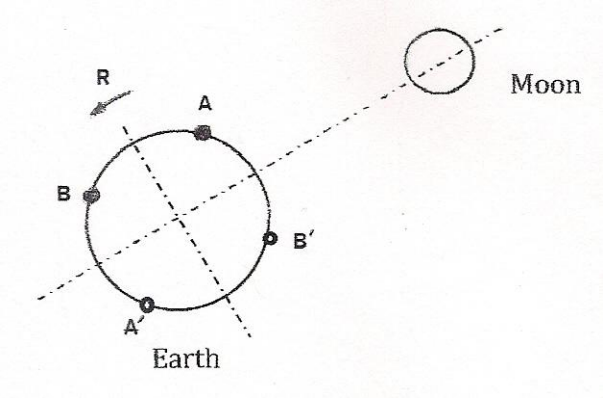


Figure RRR312. Topocentric Timing of the Phenomenon by Earth’s 24-Hour Rotation

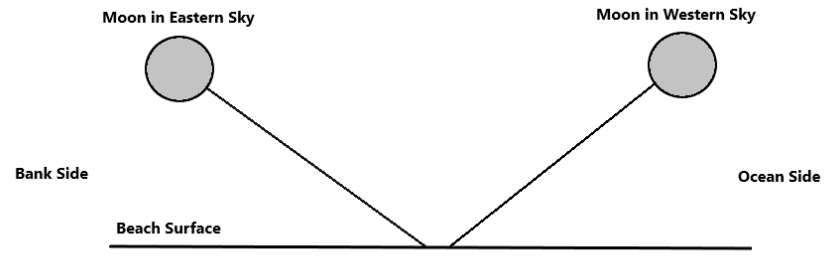


Figure RR1239. The Angle of the Moon Relative to the Beach

The phenomenon has quite a few variations. Some come from Figure RR1239, showing the beach angles to the Moon—the Doppler data syncs with these angles, creating variations. The rust isn't always pulled up to the shoreline, even when the Doppler data predicts an event. At this point, the beach may create sand pools.

Negative Doppler indicates movement away, and positive indicates movement toward. Negative Doppler seems to pull, and positive seems to push.
The Doppler wavelength shift appears associated with the type of event that will occur.
The Earth rotates faster than the Moon orbits the Earth. It appears as though the Moon is traveling from east to west, but it actually orbits the Earth from west to east. The Earth rotates from west to east. Because the Earth rotates 1 revolution every 24 hours, it appears differently. Your position on Earth rotates eastward toward the Moon at moonrise, making it seem as if the Moon is setting in the west.

High tide does not occur when the Moon is in the eastern sky.
It would seem that when the Moon is in the eastern sky, and the Doppler is dwelling at the same time, the frequency is for iron oxide so that the rust particles would be pulled toward the bank. The reverse would then be true. Negative Doppler velocity may push the rust toward the ocean. I have seen rust churn quite far out toward the ocean, and little rust was on the beach.
The slanted lines are gravity waves from the moon.



Figure RW123. Earth Moon and Sun Orrery

The Orrery simulator may be helpful to visualize how the Moon orbits and when the Sun and Moon are in the same quadrant in the sky. See YouTube video: "Phases of the Moon explained using an Orrery." https://www.youtube.com/watch?v=1sj2otIjZfM

Sun, Earth, and Moon Position – 3d Simulator
https://en.tutiempo.net/astronomy/sun-earth-moon-3d.html#UTC20220224T2300

Moon rise and set calendar for Hammond Oregon.
https://sunsetsunrisetime.com/moon/warrenton_(oregon)
https://www.timeanddate.com/moon/usa/portland-or

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CHAPTER 5. HOW TO PREDICT EVENT DATES

Earth-Moon-Earth (EME) Communications, also known as Moon bounce, is a radio communications technique that bounces a radio signal off the Moon. As the Moon orbits and the Earth turns, the signal is Doppler-shifted to another wavelength.

The EME software Moon-bounce makes the phenomenon predictable. More accurate than simple distance measurements, the software is set to calculate the *topocentric distance* and separation velocity just from Fort Stevens State Park to the Moon and back, like an echo. Without this software, the events cannot be predicted accurately.

The software calculates the Doppler shift from Fort Stevens to the Moon and back, but in this case, the signal is theorized to be gravitational-wave emissions from the Moon. The software is set at 10.4 giga Hz. Although the actual calculated gravitational wavelength (revealed later) is much smaller, the curve pattern of the Doppler shift is the same.

What is EME (Earth-Moon-Earth) or Moonbounce in Amateur Radio?

5.13 Methods To Help Predict Events

1. Moon Doppler data. (This method has proven valid)
2. King Tides (Nov. 20- Feb. 20), when the Moon is closest to Earth approx. 12 days apart. King Tides and the Moon Doppler dwell appear to occur at the same time. ***(Be wary of Sneaker Waves during the King Tides.)***
3. Super New Moons? Events seem to occur near the dates of Super Moons.

There are other factors causing the phenomenon and those events have not been predicted.

Below is link to find dates for the King Tides at Astoria Oregon, Zip 97103.
https://thetidewindow.com/

5.81 How to Use Doppler Programs for Predictions:

There are two Moon bounce software programs to choose from:
VK3UM Libration Calculator LibCalc (easiest to use), and MoonSked.
VK3UM Libration Calculator version 1.15 is easier to use. Do not use MoonSked.

https://vk3um-emrcalc.software.informer.com/8.0/
EMECalc 11.11
https://emecalc.software.informer.com/
VK3UM Libration Calculator version 1.15.

Note: The libration rate shown in libCalc EME is the moon rocking back and forth. This affects the gravity wave field and appears to be showing up in the sand patterns.

MoonSked has a unique map that is fun to look at. MoonSked is free now and you can download it at: http://www.gm4jjj.co.uk/MoonSked/moonsked.htm

Credits for MoonSked: Developer David Anderson GM4JJJ
Credits for LibCalc: Doug VK3UM

It is difficult to predict events. Here, we will be incorporating software to make predictions. The method is as follows:

1. It is best to pick a day that has a low tide or a good elevation separation between the high and low tides. That way, you can see more occurring.

2. Set both stations to CN86ad (Hammond, Oregon)
Latitude 46.199 N., Longitude 123.955 W. (**do not use GPS coordinates**).

FIX 3.
3. (IMPORTANT) Set the min EL at zero and the max elevation (EL) at 90. The program will not work correctly without this setting. This setting is for MoonSked only.
When using LibCalc, set elevations to zero

Use the below settings for: VK3UM Libration Calculator LibCalc else you will not get good results.

Set Libration frequency at 10.4 giga Hz.
Pick Doppler
Pick Planner Calculator
On Bottom: Double click Calculate Moon even when below horizon.
Set Home elevation = 0
Min Spacial 90
Pick station A only (clear DX station). BE SURE TO CLEAR THE DX STATION.
The column HM-HM is the Doppler Data
The day highlighted in yellow is a UTC day

5.35 How to predict events in other global positions

I am only familiar with the Fort Stevens area. The Doppler programs should be able to pick up slight changes, such as rippling water motion in your area, by entering your latitude and longitude quadrants in LibCalc. Because saltwater conducts better than fresh water, and iron oxide and quartz create phenomenon dates. If these elements are not there the phenomenon will be greatly reduced, or less events will occur.

Since "LibCalc" software was designed for EME (Earth-Moon Communication). The Moon-bounce Doppler data from "LibCalc" output stops when the Moon sets, then picks up again when the Moon rises. However, the Moon's gravitational field passes around and directly through the Earth. This allows the phenomenon to occur even when the Moon is not overhead. So, to extrapolate events when the data stops the below suggestion is helpful. However, the hour is off.

THE BELOW OPPOSITE SIDE OF THE EARTH DATA HAS NOT BEEN VERIFIED:
The opposite side of the Earth from Fort Stevens is in Kazakhstan. The data can be interpolated to fill in the missing hours when the Moon is not in the sky at Hammond, Oregon. One method is to set both locations to 46.1875 N Latitude, -123.955 Longitude, Locator PN16xe. This is the direct opposite side of the Earth from Fort Stevens near Kazakhstan. See the **"Missing Data from** LibCalc **Table".**

A Ham Radio Grid Locator is required to use the Doppler programs to locate your latitude and longitude. The link below will find the locator number for any area.
Amateur Radio Maidenhead Grid Square Locator Map - KarhuKoti
GridMapper by QRZ Ham Radio

Use the table figure RR123 to convert UTC to Pacific Standard Time (PST) and to correct the calendar day. The calendar day changes at the International Date Line from UTC to PST and is shown on the table. Print out the converter below and align it up against the LibCalc output for a quick conversion. Or use it as is to keep the day of the week correct.

Subtract -8 from UTC to get PST / or -7 hours for PDT
PDT starts on the second Sunday in March and ends on first Sunday in November.

When UTC is before 8 it is the previous day in PST
00:00 is midnight in UTC and when the UTC Day changes. NOTE: 24:00 and 00:00 are the same time.
08:00 UTC is midnight in PST time. SAME DAY

UTC	PST	Subtract 1 hour from PST for PDT
00:00	04:00 pm	PREVIOUS DAY in PST BELOW ----------
00:30	04:30	
01:00	05:00 pm	17:00 Hr.
01:30	05:30	
02:00	06:00 pm	18:00
02:30	06:30	
03:00	07:00 pm	19:00
03:30	07:30	
04:00	08:00 pm	20:00
04:30	08:30	
05:00	09:00 pm	21:00
05:30	09:30	
06:00	10:00 pm	22:00
06:30	10:30	
07:00	11:00 pm	23:00
07:30	11:30 pm	PREVIOUS DAY ^ ABOVE
08:00	00:00	Midnight 08:00 UTC is midnight in PST time. SAME DAY BELOW----------
08:30	00:30 am	
09:00	01:00 am	
09:30	01:30	
10:00	02:00	
10:30	02:30	
11:00	03:00 am	03:00 hrs.
11:30	03:30	
12:00	04:00	
12:30	04:30	
13:00	05:00	
13:30	05:30	
14:00	06:00 am	06:00 hrs.
14:30	06:30	
15:00	07:00	
15:30	07:30	
16:00	08:00	
16:30	08:30	
17:00	09:00 am	09:00 hrs.
17:30	09:30	
18:00	10:00	
18:30	10:30	
19:00	11:00 am	11:00 hrs.
19:30	11:30	
20:00	12:00	PST NOON
20:30	12:30	
21:00	13:00	1 pm 13:00 hrs.
21:30	13:30	
22:00	14:00	2 pm
22:30	14:30	
23:00	15:00	3 pm
23:30	15:30	SAME DAY ABOVE ^
24:00	16:00	4 pm ----------

Figure RR123. UTC Hour Converter converts UTC to PST for VK3UM Libration Calculator or MoonSked. For Astoria only. THIS WILL NOT CONVERT Kazakhstan time to PST

The Moon Doppler data has been very reliable in predicting the event. The February 28th video explains how to match the data to the event for a prediction.

Doppler dwell data verification matches the occurrence of the phenomenon January 28-29th 2026. https://www.youtube.com/watch?v=wjkzKGC_A7A

February 28 and March 2-3rd, 2026, Verification video:
Gravity Phenomenon Predictions Verified

March 28th, 2026 @ 3 pm. This hour was spot on. THIS IS THE BEST ONE TO WATCH
Gravitational Phenomenon Verified Complete Video
https://www.youtube.com/watch?v=WBvhrvFOtOg&t=19s

The best way to prove the event is real is when the rust particles stand on their ends. However, this event is rare.

Identifying chemicals with radio frequencies relates to which materials will be on the beach surface. Watch for changes in the materials on the beach surface, such as rust or quartz on the surface, when the Doppler frequency data changes. The 12-hour cycle is evident in the visual phenomenon formed in the sands.

Since gravity waves can pass directly through the Earth, they create a 12-hour cycle. Another approx. 6-hour cycle appears in the computer-generated Doppler data. You will need a UTC and a PST or PDT (Pacific Time) 12/24-hour clock, as the tide tables are Pacific Time and MoonSked is UTC. Time must be in the 24-hour military format. After finding a Moon Doppler date, it may be helpful to use this online converter (UTC to Pacific Time): www.worldtimebuddy.com. Be sure to change it to 24-hour format (upper right-hand corner)

The Sun and Moon conjunctions amplify the effects. When the Moon and Sun are near the same position in the sky, their gravitational pull adds together, which may increase the effects. Extremely high or low tides occur during these events. These also occur on the opposite side of the Earth near the Caspian Sea. Need the Moon's solar elevation and azimuth for Portland, Oregon. During a solar eclipse, the Moon is directly in front of the Sun.

The beach grooves form on a 1-2-hour basis twice each day, assuming the Doppler shifts and bodies' alignments are correct, which is date- and time-related.

The Moon’s gravity field is stronger here on Earth than Sun’s and occurs much more frequently. The phenomenon should not be confused with 'type one' patterns.

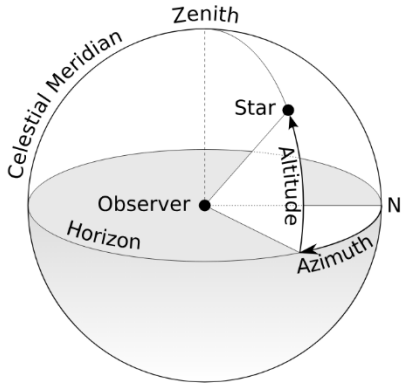


Figure GG129. The Prime Meridian Starts at Greenwich England.
Anything west of the prime meridian is a negative (-) longitude.
By TWCarlson - Azimut altitude.svg, CC BY-SA 3.0,
https://commons.wikimedia.org/w/index.php?curid=17727911

The below increases the gravity fields emitted from a single direction.
A New Moon occurs when the Moon is close to the Sun in the sky. It may be nearly invisible at this time. When the Moon aligns with the Sun, the Sun's and Moon's gravity fields add together, increasing tidal effects and possibly the phenomenon. A Super New Moon occurs when the Moon's orbit brings it closest to Earth (perigee). A Tellurium model that shows the Earth and Moon moving around the Sun can help. Good Tellurium Simulation:
Http://TimeandDate.com/astronomy/moon/location.html/

Moon chart for Portland Or:
https://www.timeanddate.com/moon/usa/portland-or/

New Moon Phases (When the Moon lines up with the Sun)
https://www.timeanddate.com/moon/phases
It is hypothesized these times are near black sand events.

Super New Moon (apogee closest to Earth)
Yr.: 2021 Dec 3rd 11:43 pm Portland Oregon

Year 2022 Time adjusted for Portland Oregon
Jan 2 10:33 am
Jan 31 9:46 pm
Other new Moon's (not super)
Mar 2 9:34 a.m. (This was a black sand event)
Mar 31 11:24 pm
Apr 30 1:28 pm
May 30 4:30 am

Jun 28 7:52 pm
Jul 28 10:54 am
Aug 27 1:17 pm
Sep 25 2:54 pm
Oct 25 3:48 pm
Nov 23 2:57 pm
Dec 23 2:16 am

Note the Doppler data below can reveal times when sand pools might form, special wave motions, and stirring water. The tables are from Moonsked (LibCalc is recommended).

Astoria
Oregon

Lat: 46.1879
Long: 123.8313

MoonSked by MoonBounce Software © GM4JJJ
Moon Data for [redacted] in Locator CN86ce on 144 MHz with [redacted] in Locator CN86ce

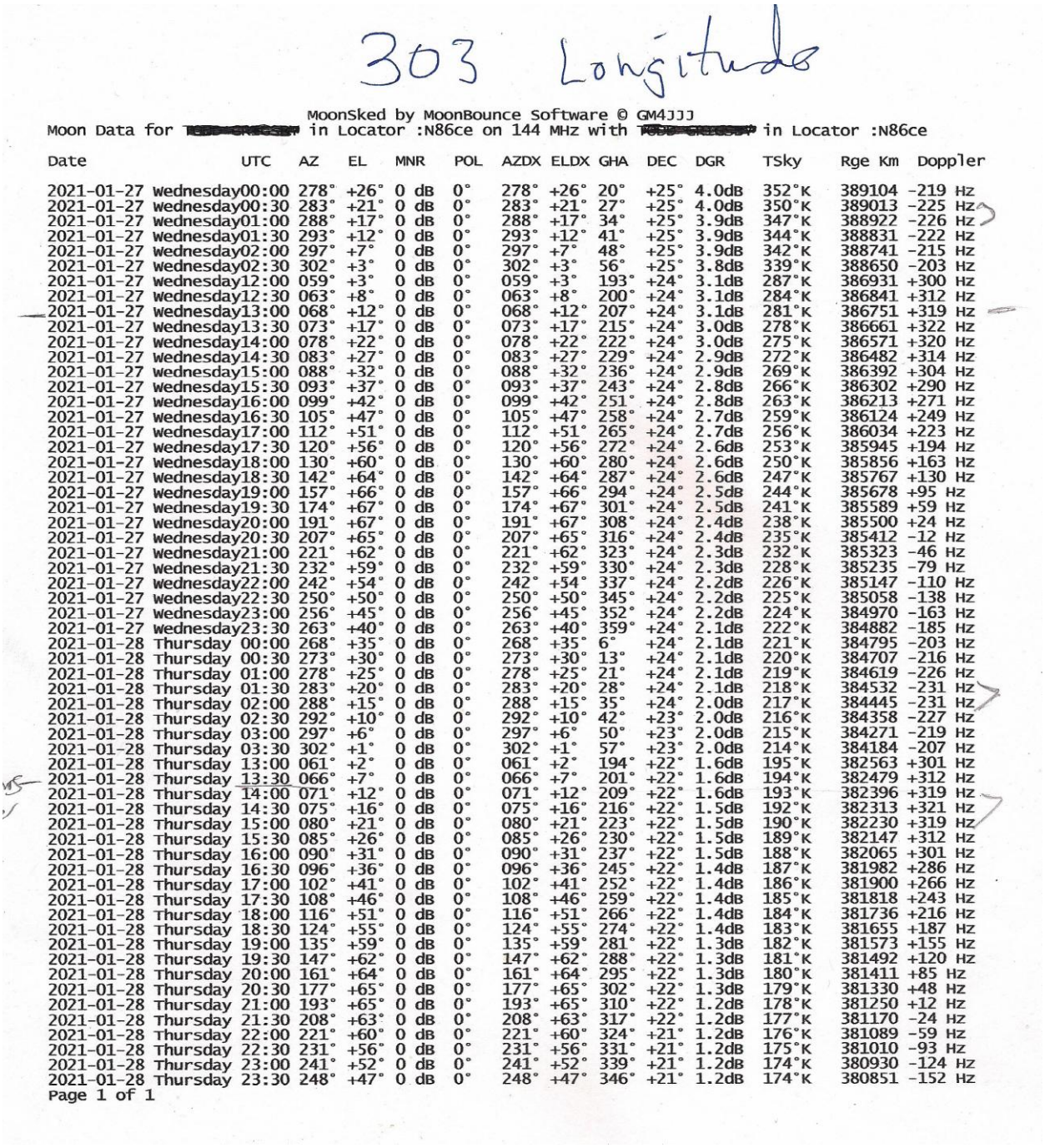
Date	UTC	AZ	EL	MNR	POL	AZDX	ELDX	GHA	DEC	DGR	TSky	Rge Km	Doppler
2021-01-27	Wednesday00:00	063°	+8°	0 dB	0°	063°	+8°	20°	+25°	4.0dB	352°K	389104	+311 Hz
2021-01-27	Wednesday00:30	068°	+12°	0 dB	0°	068°	+12°	27°	+25°	4.0dB	350°K	389013	+319 Hz
2021-01-27	Wednesday01:00	072°	+17°	0 dB	0°	072°	+17°	34°	+25°	3.9dB	347°K	388922	+322 Hz
2021-01-27	Wednesday01:30	077°	+22°	0 dB	0°	077°	+22°	41°	+25°	3.9dB	344°K	388831	+321 Hz
2021-01-27	Wednesday02:00	082°	+27°	0 dB	0°	082°	+27°	48°	+25°	3.9dB	342°K	388741	+315 Hz
2021-01-27	Wednesday02:30	087°	+32°	0 dB	0°	087°	+32°	56°	+25°	3.8dB	339°K	388650	+305 Hz
2021-01-27	Wednesday03:00	092°	+37°	0 dB	0°	092°	+37°	63°	+25°	3.8dB	337°K	388559	+291 Hz
2021-01-27	Wednesday03:30	098°	+42°	0 dB	0°	098°	+42°	70°	+25°	3.8dB	334°K	388468	+273 Hz
2021-01-27	Wednesday04:00	104°	+47°	0 dB	0°	104°	+47°	77°	+25°	3.7dB	332°K	388378	+251 Hz
2021-01-27	Wednesday04:30	111°	+51°	0 dB	0°	111°	+51°	85°	+25°	3.7dB	329°K	388287	+226 Hz
2021-01-27	Wednesday05:00	119°	+56°	0 dB	0°	119°	+56°	92°	+25°	3.7dB	326°K	388196	+197 Hz
2021-01-27	Wednesday05:30	129°	+60°	0 dB	0°	129°	+60°	99°	+25°	3.6dB	324°K	388106	+166 Hz
2021-01-27	Wednesday06:00	141°	+64°	0 dB	0°	141°	+64°	106°	+25°	3.6dB	321°K	388015	+133 Hz
2021-01-27	Wednesday06:30	155°	+67°	0 dB	0°	155°	+67°	113°	+25°	3.6dB	319°K	387925	+99 Hz
2021-01-27	Wednesday07:00	172°	+68°	0 dB	0°	172°	+68°	121°	+25°	3.5dB	316°K	387834	+64 Hz
2021-01-27	Wednesday07:30	190°	+68°	0 dB	0°	190°	+68°	128°	+25°	3.5dB	313°K	387744	+28 Hz
2021-01-27	Wednesday08:00	207°	+66°	0 dB	0°	207°	+66°	135°	+25°	3.5dB	311°K	387653	-7 Hz
2021-01-27	Wednesday08:30	221°	+63°	0 dB	0°	221°	+63°	142°	+25°	3.4dB	308°K	387563	-42 Hz
2021-01-27	Wednesday09:00	232°	+60°	0 dB	0°	232°	+60°	150°	+25°	3.4dB	306°K	387472	-75 Hz
2021-01-27	Wednesday09:30	242°	+55°	0 dB	0°	242°	+55°	157°	+25°	3.4dB	303°K	387382	-105 Hz
2021-01-27	Wednesday10:00	250°	+51°	0 dB	0°	250°	+51°	164°	+25°	3.3dB	300°K	387292	-134 Hz
2021-01-27	Wednesday10:30	257°	+46°	0 dB	0°	257°	+46°	171°	+24°	3.3dB	297°K	387201	-159 Hz
2021-01-27	Wednesday11:00	263°	+41°	0 dB	0°	263°	+41°	178°	+24°	3.2dB	294°K	387111	-180 Hz
2021-01-27	Wednesday11:30	268°	+36°	0 dB	0°	268°	+36°	186°	+24°	3.2dB	291°K	387021	-198 Hz
2021-01-27	Wednesday12:00	273°	+31°	0 dB	0°	273°	+31°	193°	+24°	3.1dB	287°K	386931	-212 Hz
2021-01-27	Wednesday12:30	278°	+26°	0 dB	0°	278°	+26°	200°	+24°	3.1dB	284°K	386841	-222 Hz
2021-01-27	Wednesday13:00	283°	+21°	0 dB	0°	283°	+21°	207°	+24°	3.1dB	281°K	386751	-227 Hz
2021-01-27	Wednesday13:30	288°	+16°	0 dB	0°	288°	+16°	215°	+24°	3.0dB	278°K	386661	-228 Hz
2021-01-27	Wednesday14:00	293°	+11°	0 dB	0°	293°	+11°	222°	+24°	3.0dB	275°K	386571	-224 Hz
2021-01-27	Wednesday14:30	297°	+7°	0 dB	0°	297°	+7°	229°	+24°	2.9dB	272°K	386482	-216 Hz
2021-01-27	Wednesday15:00	302°	+2°	0 dB	0°	302°	+2°	236°	+24°	2.9dB	269°K	386392	-204 Hz
2021-01-28	Thursday 00:30	059°	+3°	0 dB	0°	059°	+3°	13°	+24°	2.1dB	220°K	384707	+301 Hz
2021-01-28	Thursday 01:00	064°	+7°	0 dB	0°	064°	+7°	21°	+24°	2.1dB	219°K	384619	+312 Hz
2021-01-28	Thursday 01:30	069°	+12°	0 dB	0°	069°	+12°	28°	+24°	2.1dB	218°K	384532	+319 Hz
2021-01-28	Thursday 02:00	074°	+17°	0 dB	0°	074°	+17°	35°	+24°	2.0dB	217°K	384445	+321 Hz
2021-01-28	Thursday 02:30	079°	+22°	0 dB	0°	079°	+22°	42°	+23°	2.0dB	216°K	384358	+320 Hz
2021-01-28	Thursday 03:00	084°	+27°	0 dB	0°	084°	+27°	50°	+23°	2.0dB	215°K	384271	+313 Hz
2021-01-28	Thursday 03:30	089°	+32°	0 dB	0°	089°	+32°	57°	+23°	2.0dB	214°K	384184	+303 Hz
2021-01-28	Thursday 04:00	094°	+37°	0 dB	0°	094°	+37°	64°	+23°	2.0dB	213°K	384097	+288 Hz
2021-01-28	Thursday 04:30	100°	+42°	0 dB	0°	100°	+42°	71°	+23°	1.9dB	212°K	384010	+269 Hz
2021-01-28	Thursday 05:00	106°	+46°	0 dB	0°	106°	+46°	78°	+23°	1.9dB	211°K	383924	+246 Hz
2021-01-28	Thursday 05:30	114°	+51°	0 dB	0°	114°	+51°	86°	+23°	1.9dB	210°K	383838	+220 Hz
2021-01-28	Thursday 06:00	122°	+56°	0 dB	0°	122°	+56°	93°	+23°	1.9dB	209°K	383751	+191 Hz
2021-01-28	Thursday 06:30	132°	+60°	0 dB	0°	132°	+60°	100°	+23°	1.9dB	208°K	383666	+159 Hz
2021-01-28	Thursday 07:00	145°	+63°	0 dB	0°	145°	+63°	107°	+23°	1.8dB	207°K	383580	+126 Hz
2021-01-28	Thursday 07:30	159°	+65°	0 dB	0°	159°	+65°	115°	+23°	1.8dB	206°K	383494	+90 Hz
2021-01-28	Thursday 08:00	175°	+66°	0 dB	0°	175°	+66°	122°	+23°	1.8dB	205°K	383409	+54 Hz
2021-01-28	Thursday 08:30	192°	+66°	0 dB	0°	192°	+66°	129°	+23°	1.8dB	204°K	383323	+18 Hz
2021-01-28	Thursday 09:00	208°	+64°	0 dB	0°	208°	+64°	136°	+23°	1.8dB	203°K	383238	-18 Hz
2021-01-28	Thursday 09:30	221°	+61°	0 dB	0°	221°	+61°	144°	+23°	1.7dB	202°K	383153	-52 Hz
2021-01-28	Thursday 10:00	232°	+58°	0 dB	0°	232°	+58°	151°	+23°	1.7dB	201°K	383068	-85 Hz
2021-01-28	Thursday 10:30	241°	+53°	0 dB	0°	241°	+53°	158°	+23°	1.7dB	200°K	382984	-116 Hz
2021-01-28	Thursday 11:00	249°	+49°	0 dB	0°	249°	+49°	165°	+23°	1.7dB	199°K	382899	-145 Hz
2021-01-28	Thursday 11:30	256°	+44°	0 dB	0°	256°	+44°	172°	+23°	1.7dB	198°K	382815	-170 Hz
2021-01-28	Thursday 12:00	262°	+39°	0 dB	0°	262°	+39°	180°	+23°	1.6dB	197°K	382731	-191 Hz
2021-01-28	Thursday 12:30	267°	+34°	0 dB	0°	267°	+34°	187°	+23°	1.6dB	196°K	382647	-209 Hz
2021-01-28	Thursday 13:00	273°	+29°	0 dB	0°	273°	+29°	194°	+22°	1.6dB	195°K	382563	-222 Hz
2021-01-28	Thursday 13:30	278°	+24°	0 dB	0°	278°	+24°	201°	+22°	1.6dB	194°K	382479	-231 Hz
2021-01-28	Thursday 14:00	282°	+19°	0 dB	0°	282°	+19°	209°	+22°	1.6dB	193°K	382396	-236 Hz
2021-01-28	Thursday 14:30	287°	+14°	0 dB	0°	287°	+14°	216°	+22°	1.5dB	192°K	382313	-236 Hz
2021-01-28	Thursday 15:00	292°	+9°	0 dB	0°	292°	+9°	223°	+22°	1.5dB	190°K	382230	-232 Hz
2021-01-28	Thursday 15:30	297°	+4°	0 dB	0°	297°	+4°	230°	+22°	1.5dB	189°K	382147	-223 Hz
2021-01-28	Thursday 16:00	302°	-0°	0 dB	0°	302°	-0°	237°	+22°	1.5dB	188°K	382065	-211 Hz

Page 1 of 1

JAN 27 17:30 PST — Dwell

JAN 28 6AM PST — Dwell

MoonSked Data: UTC. West longitude Locator: CN86ce. Set maximum EL at 90 degrees. Note: In 'MoonSked' west is positive longitude. Note the slow rate of change at this date. This was the black sand event. Data for several years is available at synodicgravity.com.



303 Longitude

MoonSked by MoonBounce Software © GM4JJJ
Moon Data for [redacted] in Locator :N86ce on 144 MHz with [redacted] in Locator :N86ce

Date	UTC	AZ	EL	MNR	POL	AZDX	ELDX	GHA	DEC	DGR	TSky	Rge Km	Doppler
2021-01-27	Wednesday00:00	278°	+26°	0 dB	0°	278°	+26°	20°	+25°	4.0dB	352°K	389104	-219 Hz
2021-01-27	Wednesday00:30	283°	+21°	0 dB	0°	283°	+21°	27°	+25°	4.0dB	350°K	389013	-225 Hz
2021-01-27	Wednesday01:00	288°	+17°	0 dB	0°	288°	+17°	34°	+25°	3.9dB	347°K	388922	-226 Hz
2021-01-27	Wednesday01:30	293°	+12°	0 dB	0°	293°	+12°	41°	+25°	3.9dB	344°K	388831	-222 Hz
2021-01-27	Wednesday02:00	297°	+7°	0 dB	0°	297°	+7°	48°	+25°	3.9dB	342°K	388741	-215 Hz
2021-01-27	Wednesday02:30	302°	+3°	0 dB	0°	302°	+3°	56°	+25°	3.8dB	339°K	388650	-203 Hz
2021-01-27	Wednesday12:00	059°	+3°	0 dB	0°	059°	+3°	193°	+24°	3.1dB	287°K	386931	+300 Hz
2021-01-27	Wednesday12:30	063°	+8°	0 dB	0°	063°	+8°	200°	+24°	3.1dB	284°K	386841	+312 Hz
2021-01-27	Wednesday13:00	068°	+12°	0 dB	0°	068°	+12°	207°	+24°	3.1dB	281°K	386751	+319 Hz
2021-01-27	Wednesday13:30	073°	+17°	0 dB	0°	073°	+17°	215°	+24°	3.0dB	278°K	386661	+322 Hz
2021-01-27	Wednesday14:00	078°	+22°	0 dB	0°	078°	+22°	222°	+24°	3.0dB	275°K	386571	+320 Hz
2021-01-27	Wednesday14:30	083°	+27°	0 dB	0°	083°	+27°	229°	+24°	2.9dB	272°K	386482	+314 Hz
2021-01-27	Wednesday15:00	088°	+32°	0 dB	0°	088°	+32°	236°	+24°	2.9dB	269°K	386392	+304 Hz
2021-01-27	Wednesday15:30	093°	+37°	0 dB	0°	093°	+37°	243°	+24°	2.8dB	266°K	386302	+290 Hz
2021-01-27	Wednesday16:00	099°	+42°	0 dB	0°	099°	+42°	251°	+24°	2.8dB	263°K	386213	+271 Hz
2021-01-27	Wednesday16:30	105°	+47°	0 dB	0°	105°	+47°	258°	+24°	2.7dB	259°K	386124	+249 Hz
2021-01-27	Wednesday17:00	112°	+51°	0 dB	0°	112°	+51°	265°	+24°	2.7dB	256°K	386034	+223 Hz
2021-01-27	Wednesday17:30	120°	+56°	0 dB	0°	120°	+56°	272°	+24°	2.6dB	253°K	385945	+194 Hz
2021-01-27	Wednesday18:00	130°	+60°	0 dB	0°	130°	+60°	280°	+24°	2.6dB	250°K	385856	+163 Hz
2021-01-27	Wednesday18:30	142°	+64°	0 dB	0°	142°	+64°	287°	+24°	2.6dB	247°K	385767	+130 Hz
2021-01-27	Wednesday19:00	157°	+66°	0 dB	0°	157°	+66°	294°	+24°	2.5dB	244°K	385678	+95 Hz
2021-01-27	Wednesday19:30	174°	+67°	0 dB	0°	174°	+67°	301°	+24°	2.5dB	241°K	385589	+59 Hz
2021-01-27	Wednesday20:00	191°	+67°	0 dB	0°	191°	+67°	308°	+24°	2.4dB	238°K	385500	+24 Hz
2021-01-27	Wednesday20:30	207°	+65°	0 dB	0°	207°	+65°	316°	+24°	2.4dB	235°K	385412	-12 Hz
2021-01-27	Wednesday21:00	221°	+62°	0 dB	0°	221°	+62°	323°	+24°	2.3dB	232°K	385323	-46 Hz
2021-01-27	Wednesday21:30	232°	+59°	0 dB	0°	232°	+59°	330°	+24°	2.3dB	228°K	385235	-79 Hz
2021-01-27	Wednesday22:00	242°	+54°	0 dB	0°	242°	+54°	337°	+24°	2.2dB	226°K	385147	-110 Hz
2021-01-27	Wednesday22:30	250°	+50°	0 dB	0°	250°	+50°	345°	+24°	2.2dB	225°K	385058	-138 Hz
2021-01-27	Wednesday23:00	256°	+45°	0 dB	0°	256°	+45°	352°	+24°	2.2dB	224°K	384970	-163 Hz
2021-01-27	Wednesday23:30	263°	+40°	0 dB	0°	263°	+40°	359°	+24°	2.1dB	222°K	384882	-185 Hz
2021-01-28	Thursday 00:00	268°	+35°	0 dB	0°	268°	+35°	6°	+24°	2.1dB	221°K	384795	-203 Hz
2021-01-28	Thursday 00:30	273°	+30°	0 dB	0°	273°	+30°	13°	+24°	2.1dB	220°K	384707	-216 Hz
2021-01-28	Thursday 01:00	278°	+25°	0 dB	0°	278°	+25°	21°	+24°	2.1dB	219°K	384619	-226 Hz
2021-01-28	Thursday 01:30	283°	+20°	0 dB	0°	283°	+20°	28°	+24°	2.1dB	218°K	384532	-231 Hz
2021-01-28	Thursday 02:00	288°	+15°	0 dB	0°	288°	+15°	35°	+24°	2.0dB	217°K	384445	-231 Hz
2021-01-28	Thursday 02:30	292°	+10°	0 dB	0°	292°	+10°	42°	+23°	2.0dB	216°K	384358	-227 Hz
2021-01-28	Thursday 03:00	297°	+6°	0 dB	0°	297°	+6°	50°	+23°	2.0dB	215°K	384271	-219 Hz
2021-01-28	Thursday 03:30	302°	+1°	0 dB	0°	302°	+1°	57°	+23°	2.0dB	214°K	384184	-207 Hz
2021-01-28	Thursday 13:00	061°	+2°	0 dB	0°	061°	+2°	194°	+22°	1.6dB	195°K	382563	+301 Hz
2021-01-28	Thursday 13:30	066°	+7°	0 dB	0°	066°	+7°	201°	+22°	1.6dB	194°K	382479	+312 Hz
2021-01-28	Thursday 14:00	071°	+12°	0 dB	0°	071°	+12°	209°	+22°	1.6dB	193°K	382396	+319 Hz
2021-01-28	Thursday 14:30	075°	+16°	0 dB	0°	075°	+16°	216°	+22°	1.5dB	192°K	382313	+321 Hz
2021-01-28	Thursday 15:00	080°	+21°	0 dB	0°	080°	+21°	223°	+22°	1.5dB	190°K	382230	+319 Hz
2021-01-28	Thursday 15:30	085°	+26°	0 dB	0°	085°	+26°	230°	+22°	1.5dB	189°K	382147	+312 Hz
2021-01-28	Thursday 16:00	090°	+31°	0 dB	0°	090°	+31°	237°	+22°	1.5dB	188°K	382065	+301 Hz
2021-01-28	Thursday 16:30	096°	+36°	0 dB	0°	096°	+36°	245°	+22°	1.4dB	187°K	381982	+286 Hz
2021-01-28	Thursday 17:00	102°	+41°	0 dB	0°	102°	+41°	252°	+22°	1.4dB	186°K	381900	+266 Hz
2021-01-28	Thursday 17:30	108°	+46°	0 dB	0°	108°	+46°	259°	+22°	1.4dB	185°K	381818	+243 Hz
2021-01-28	Thursday 18:00	116°	+51°	0 dB	0°	116°	+51°	266°	+22°	1.4dB	184°K	381736	+216 Hz
2021-01-28	Thursday 18:30	124°	+55°	0 dB	0°	124°	+55°	274°	+22°	1.4dB	183°K	381655	+187 Hz
2021-01-28	Thursday 19:00	135°	+59°	0 dB	0°	135°	+59°	281°	+22°	1.3dB	182°K	381573	+155 Hz
2021-01-28	Thursday 19:30	147°	+62°	0 dB	0°	147°	+62°	288°	+22°	1.3dB	181°K	381492	+120 Hz
2021-01-28	Thursday 20:00	161°	+64°	0 dB	0°	161°	+64°	295°	+22°	1.3dB	180°K	381411	+85 Hz
2021-01-28	Thursday 20:30	177°	+65°	0 dB	0°	177°	+65°	302°	+22°	1.3dB	179°K	381330	+48 Hz
2021-01-28	Thursday 21:00	193°	+65°	0 dB	0°	193°	+65°	310°	+22°	1.2dB	178°K	381250	+12 Hz
2021-01-28	Thursday 21:30	208°	+63°	0 dB	0°	208°	+63°	317°	+22°	1.2dB	177°K	381170	-24 Hz
2021-01-28	Thursday 22:00	221°	+60°	0 dB	0°	221°	+60°	324°	+21°	1.2dB	176°K	381089	-59 Hz
2021-01-28	Thursday 22:30	231°	+56°	0 dB	0°	231°	+56°	331°	+21°	1.2dB	175°K	381010	-93 Hz
2021-01-28	Thursday 23:00	241°	+52°	0 dB	0°	241°	+52°	339°	+21°	1.2dB	174°K	380930	-124 Hz
2021-01-28	Thursday 23:30	248°	+47°	0 dB	0°	248°	+47°	346°	+21°	1.2dB	174°K	380851	-152 Hz

Page 1 of 1

Figure HHH12. The Missing Data After Moon Set

By inputting 46.18 Longitude, 303.8313 latitude in MoonSked, the missing data when the Moon is set in Astoria may be obtained. This is 180 degrees from Astoria or, exactly halfway around the Earth, near the Caspian Sea? when the Moon is in the sky. Set maximum EL at 90 degrees. Reverse the frequency Doppler sign from + to – or from – to + for Astoria Oregon. Use Locator: PN16xe

EARDOP90.BAS Computes Earth/Sun Doppler Velocity for Synodic Wave Analysis
Program Run Date: 03-05-2021 By [redacted]
FOR LOCATION: LAT: 46 LONG: 124 ELEVATION: 0 EARTH RADII AT LAT: 4438

DATE / SOLAR TIME			DISTANCE TO SUN (AU)	DEC.	GEOCENTRIC VELOCITY	DOPPLER VEL.(Km\Hr)
JAN 27	2021	00:00	.984769	-18.2	-36723	-35127
JAN 27.041	2021	01:00	.984774	-18.2	753	294
JAN 27.083	2021	02:00	.984779	-18.2	755	47
JAN 27.125	2021	03:00	.984784	-18.2	756	-155
JAN 27.166	2021	04:00	.984789	-18.1	757	-298
JAN 27.208	2021	05:00	.984794	-18.1	758	-371
JAN 27.25	2021	06:00	.984799	-18.1	759	-370
JAN 27.291	2021	07:00	.984804	-18.1	761	-294
JAN 27.333	2021	08:00	.984809	-18.1	762	-150
JAN 27.375	2021	09:00	.984815	-18.1	763	55
JAN 27.416	2021	10:00	.98482	-18.1	764	305
JAN 27.458	2021	11:00	.984825	-18.1	765	584
JAN 27.5	2021	12:00	.98483	-18.1	767	872
JAN 27.541	2021	13:00	.984835	-18.0	768	1151
JAN 27.583	2021	14:00	.98484	-18.0	769	1401
JAN 27.625	2021	15:00	.984845	-18.0	770	1606
JAN 27.666	2021	16:00	.98485	-18.0	771	1751
JAN 27.708	2021	17:00	.984856	-18.0	773	1827
JAN 27.75	2021	18:00	.984861	-18.0	774	1828
JAN 27.791	2021	19:00	.984866	-18.0	775	1755
JAN 27.833	2021	20:00	.984871	-18.0	776	1612
JAN 27.875	2021	21:00	.984876	-18	777	1410
JAN 27.916	2021	22:00	.984882	-17.9	778	1162
JAN 27.958	2021	23:00	.984887	-17.9	780	885
JAN 28	2021	00:00	.984892	-17.9	781	599
JAN 28.041	2021	01:00	.984897	-17.9	782	322
JAN 28.083	2021	02:00	.984903	-17.9	783	74
JAN 28.125	2021	03:00	.984908	-17.9	784	-128
JAN 28.166	2021	04:00	.984913	-17.9	786	-271
JAN 28.208	2021	05:00	.984918	-17.9	787	-344
JAN 28.25	2021	06:00	.984924	-17.9	788	-343
JAN 28.291	2021	07:00	.984929	-17.8	789	-268
JAN 28.333	2021	08:00	.984934	-17.8	790	-123
JAN 28.375	2021	09:00	.984939	-17.8	792	82
JAN 28.416	2021	10:00	.984945	-17.8	793	333
JAN 28.458	2021	11:00	.98495	-17.8	794	612
JAN 28.5	2021	12:00	.984955	-17.8	795	901
JAN 28.541	2021	13:00	.984961	-17.8	796	1180
JAN 28.583	2021	14:00	.984966	-17.8	798	1431
JAN 28.625	2021	15:00	.984971	-17.8	799	1636
JAN 28.666	2021	16:00	.984977	-17.7	800	1781
JAN 28.708	2021	17:00	.984982	-17.7	801	1857
JAN 28.75	2021	18:00	.984987	-17.7	802	1858
JAN 28.791	2021	19:00	.984993	-17.7	803	1784
JAN 28.833	2021	20:00	.984998	-17.7	805	1642
JAN 28.875	2021	21:00	.985004	-17.7	806	1439
JAN 28.916	2021	22:00	.985009	-17.7	807	1191
JAN 28.958	2021	23:00	.985014	-17.7	808	914

Figure EE51. Earth/Sun Doppler (Pacific Standard Time)
Topocentric Doppler data may be late by 5 hours. So, plan ahead. Note the first line is wrong.
Geocentric velocity decimal is dropped for printout but was included in the Doppler.
Increasing distances = (+) Thus a receding or (-) value is required when used in the relativistic Doppler equation resulting in a frequency reduction,
Moon Perigee Apogee Table: See Ref 50.

Moon Perigee/Apogee Year 2022 UTC Time. Subtract -8 hrs. for PST or -7 hrs. for PDT. Apogee is a slower Doppler rate of change. https://www.fourmilab.ch/earthview/pacalc.html By John Walker

The Perigee and Apogee Moon dates maybe when the phenomenon is not occurring, however, the Earth's orbit may form patterns on the dates instead. It is exceedingly difficult to predict. Concentrate on times that have a maximum number of Doppler data days. The Moon's gravitational pull at apogee is roughly 34% stronger than at perigee. The supermoon occurs when the Moon is near its closest point to Earths perigee.

Perigee	**Apogee**
Apogee Perigee Year 2024	
	Jan 1 15:29 404910 km F+5d14h
Jan 13 10:36 362263 km N+1d22h	Jan 29 8:15 405780 km F+3d14h
Feb 10 18:51 358087 km N+ 19h	Feb 25 15:01 406314 km + F+1d 2h
Mar 10 7:07 356893 km -- N- 1h	Mar 23 15:45 406291 km + F-1d15h
Apr 7 17:54 358848 km N-1d 0h	Apr 20 2:10 405624 km F-3d21h
May 5 22:12 363165 km N-2d 5h	May 17 19:01 404639 km F-5d18h
Jun 2 7:24 368107 km N-4d 5h	Jun 14 13:37 404077 km F-7d11h
Jun 27 11:46 369291 km F+5d10h	Jul 12 8:13 404362 km N+6d 9h
Jul 24 5:45 364913 km F+2d19h	Aug 9 1:33 405297 km N+4d14h
Aug 21 5:06 360198 km F+1d10h	Sep 5 14:56 406214 km - N+2d12h
Sep 18 13:28 357283 km + F+ 10h	Oct 2 19:41 406516 km -- N+ 0h
Oct 17 0:47 357172 km + F- 10h	Oct 29 22:51 406163 km - N-2d13h
Nov 14 11:19 360109 km F-1d10h	Nov 26 11:57 405314 km N-4d18h
Dec 12 13:20 365358 km F-2d19h	Dec 24 7:26 404484 km N-6d15h

New	Full
2024 Jan 11 11:58	2024 Jan 25 17:55
2024 Feb 9 23:01	2024 Feb 24 12:31
2024 Mar 10 9:03	2024 Mar 25 7:02
2024 Apr 8 18:23	2024 Apr 23 23:51
2024 May 8 3:24	2024 May 23 13:56
2024 Jun 6 12:40	2024 Jun 22 1:11
2024 Jul 5 22:59	2024 Jul 21 10:20
2024 Aug 4 11:14	2024 Aug 19 18:29
2024 Sep 3 1:57	2024 Sep 18 2:37
2024 Oct 2 18:51	2024 Oct 17 11:28
2024 Nov 1 12:48	2024 Nov 15 21:30

2024 Dec 1 6:22 2024 Dec 15 9:03
2024 Dec 30 22:28 2025 Jan 13 22:28

New and Full Moons UTC time

========== BELOW PHOTO PLACEMENT ?

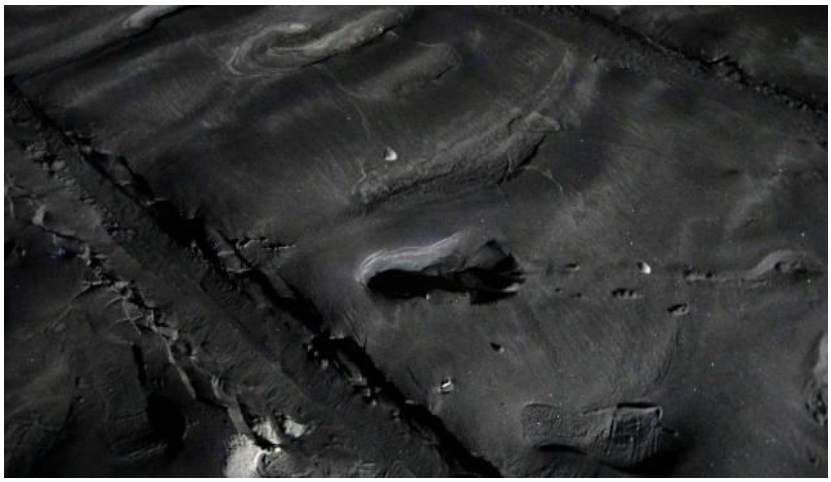


Figure ZZ126. Unusual Soft Puffy Wet Sand

See figure ZZ126—06/22/2021 11 pm. Footprint shown in the wet sand along a car track. Almost like quicksand, the longer I stood, the deeper my foot sank, about 3 inches. My AWD car almost got stuck when I paused for a moment. Normally, wet sand is very hard and easy to walk, jog, and drive on. In this case, it wasn't—afterward, the wet part of the beach had sunk several feet. While parked for several minutes, I felt my car slowly slant to the side, startling me; I quickly drove toward the bank. You know something is happening when the wet sand feels spongy underfoot. What would cause this other than gravitational forces? 'Soft Sand' Reference: Air in sand hypothesis: https://coastalcare.org/educate/exploring-the-sand/

I do not believe this beach sand contains air. A good way to find out is to lay down a large plastic sheet and see if it inflates a bit as the beach slowly drops, as described earlier. I believe the heterodyned gravity waves locked onto the water or sand and formed this soft, puffy sand. It is not normal at all and may be difficult to duplicate in the lab.

CHAPTER VV132. DESCRIPTION OF THE FORMATION

This phenomenon has been overlooked because sand ripples can be formed by other means. Unlike normal ripples that form in sand, the mechanisms that form these patterns fall into three distinct categories. All the events shown here are driven by gravity. It is important to focus on the iron oxide events, as they relate to the heterodyned gravity waves that produce the magnetic field events.

Type #1: Nothing unusual about type #1 patterns; they are simply the result of two water waves colliding. The intersection of the two opposing flows forms a water ripple, leaving sand patterns and grooves. Sluice box-like effects separate out the black rust particles. The collision slows the water flow, allowing heavier iron oxide particles to fall out of suspension and leave a dark line. The wet sand remains hard and is easy to walk upon. This is not part of the gravitational phenomenon as described in this document.

Type #2: Produced when a single unobstructed water wave flows back out to sea. Something invisible impeding the water flow produces a ripple and gouges a groove in the sand.

Type #3: Similar to type #2 but produced when water flows in both directions. Increased field strength allows the formation to appear in both incoming and outgoing waves. The forces that form them appear much stronger, and the grooves are more pronounced. This event is strong enough to cause rust particles to stand on end. Wet beach sand becomes very soft and harder to walk on. Both #2 and #3 have been measured and correlate with unidentified radio frequencies (when you know how to measure the groove-to-groove wavelength).

Formation of type #2 and #3.
During a receding wave, when the water is only one or so inches deep, these particles, along with the standard sand, go into solution. Because of the unique turbulence in this receding wave, the magnetic particles align themselves along electromagnetic field lines. They follow lines that are uniform and spaced between 16 and 30 inches (0.41- 0.76 m) apart. These are the ones most easily identified as coming from something other than flowing water alone. The electromagnetic field lines described here cannot come from the Earth’s magnetic field, since the event is intermittent.

The black-colored paramagnetic iron oxide particles are deposited at regular intervals. As the water slowly glides back out to sea, it leaves a mound and rift in the wet sand. At its maximum, the distance from the bottom of the rift to the top of the mound measures about 1/4 inch, and it is 1-1.5 inches wide, with a large hump between the grooves. One could stumble on them. The black rust particles form a line, attracted to an unusual, stationary, invisible electromagnetic wave. It is similar to the type of mound and rift that is formed when water flows over a stationary shallow rod (1/8 diameter or so) resting on the sand. An unusual "double" water ripple gouges the grooves. A ripple appears, then about one inch later another ripple forms, with a deep groove between them.

The pattern on the beach resembles an interference pattern at times and, at other times, fairly uniform wavelengths. These grooves form intermittently, lasting several hours or longer; they

wash away, then reappear repeatedly until the event passes. They appear and disappear many times during the window. Sometimes the patterns appear in patches or cover the entire beach. At its peak, the wet sand becomes much softer (puffy) and harder to walk on, much like the before-and-after changes of rice when you cook it.

Associated radio frequencies have been correlated with and accompany the beach patterns. Unusual sounds such as pulsing, snaps, crackling, pops, or static appear at varying strengths, with some frequencies matching groove-to-groove length measurements from the beach. The strongest signals show clear pulsing (30-40 Hz) audio detected through a broadband scanner. The signal can be heard on both AM and FM.

There is an art to scanning for these. You must identify human-caused frequencies, as well as the scanner's inherent peculiarities (birdies). A barrage of weak (just above background) unidentified radio frequencies was recorded when the groove patterns broke up into erratic, multi-fold patterns. They are most likely absorbed back into the beach elements when the patterns are regular. Thus, fewer frequencies appear. Assuming the radio waves travel back after the phenomenon leaves the beach area explains why the radio frequencies remain sometime after groove formation stops. The frequencies shift, but they seem to follow some patterns. The most common groove-to-groove distances were between 18 and 33 inches (.46 - .84 meters). On the date (1995) the scans were taken, there were only a few television stations and AM and FM radio stations in this semi-remote area. The entire Pacific Ocean on one side was a radio dead zone, and yet many unidentified signals were present, some quite strong. Birdies (signals inherent to the scanner) were excluded. The resulting radio frequencies from gravitational synodic waves that have heterodyned here seem to quantum-jump to new frequencies.

VV132 46 Sand Pools

Figure 3 shows another related event. A tremendous upwelling of either rust from the sand or water pulls upward, forming large pits or sand pools. The surf water filled with black iron oxide particles becomes deeply discolored. A narrow band of these sand pools forms simultaneously for about forty miles because of the huge amount of rust in this region. The tide pools may be formed simply from the Moon’s pull on the water. When the frequency is magnetic, rust particles can discolor the surf.

The sand pools event recurred at predictable intervals for about three weeks, then disappeared. Swirling water lifts the sand and forms thousands of these pools. Soliton water waves accompany the unusual swirling, along with perpetual, self-sustaining ripple motions. Solitons are waves that appear to be self-sustaining and last much longer than normal waves. The pools can be several feet deep and four to ten feet across. The phenomena occurred in shallow water from three inches to several feet deep. Date: 07-15-95 through 07-30-95, approximately two hours after both daily high tides. A striking change in the texture of the ocean surface precedes this phenomenon, like a calming of the normal wave-like motions. This is observed while looking out toward the horizon. The normal crashing white noise of the surf diminishes noticeably.
Video of soliton waves: https://www.youtube.com/watch?v=kP6i5us9vac&t=92s Minute 1:40

The Action Lab. Strange Wave Changed Physics Forever:
https://www.youtube.com/watch?v=y3P77vz0QyU

The beach soliton wave is similar to the soliton that physics has identified. There are some differences. The soliton waves produced during the sand pool event are small, one to 12+ inches high, and 10 to 50 feet long. A normal wave would break and come up onto the beach, and then, as it began to return out to sea, it would pick up an abnormal velocity for this beach slope. After the soliton moved outward toward the sea, it would pawl to the right, bucking the 15-20 mph winds, passing through incoming waves, and traveling up slight inclines while gaining momentum. The soliton waves would literally fight their way past obstacles normal waves couldn't. Something was pulling them along. Jetting out pencil-sized squirts of water from their crests, they had a quite unusual appearance. Traveling 100-200 feet, they quickly dissipate once outside the formation area. An important observation of the solitons is that, as they move toward the ocean, the breaking part of the wave crest reverses. For example, a normal wave always breaks toward the shore.
In contrast, some waves were large or fast enough to break toward the sea as they traveled out. The Moon's position in the sky was not considered. More can be studied about solitons. About 5-7% of the total waves during the hour the phenomenon occurred were solitons.



Figure BBB11. Synodic Pools Photograph

How Tide Pools are Formed. Earth Science Classroom
https://www.youtube.com/watch?v=cX-yD1zLRs4

Coastal Geomorphology: Berm and Berm Crest. Earth Science Classroom
https://www.youtube.com/watch?v=Zp-p1RViu4Q

See figure BB11. This wide band of tide pools centered between high and low tide, formed at a re-occurring predictable timing for more than a week. Photo date: 07/15/95 Swirling water lifts the sand and forms thousands of these pools of water. Occurring simultaneously for more than 35+ miles of coastline, accompanying this unusual swirling water are Soliton-like water waves that aid the pool formation. Unusual perpetual-like or self-sustaining ripple motion of the surface water randomly occurs as well. The rippling water leaves the ripples in the sand as shown. Video during formation is available. The Earth/Sun wavelength can heterodyne with the Earth/Moon increasing the strength and complexity of the field, which is probably what is happening here. Because the water is only several feet deep, you can walk out into the swash zone during its formation. Something other than currents becomes obvious is causing it. Moon's Perigee was Jul 11th Apogee July 23 in the year 1995. This event was a long duration, so may have been a combination of both Earth/Sun and Moon orbits.



Figure AZQ12. Rippling Water Motion. (7-27-2024 7:28 a.m. PST.)

See figure AZQ12. There was no wind on this day, so a historically unidentified force caused the rippling. The circle shows a brief soliton wave traveling from left to right. There are two types of this event. There are two types: clear water and dirty, rusty water; the one shown here is clear, clean water with no rust. The other type, which may be stronger, involves pulling rust out of the sand, discoloring the water. These variations give insight into chemistry and how elements attract and combine by wavelengths to form compounds. Also on this day, the increased evaporation rate created a fog layer about fifteen feet high over the wet sand.

There may be healing in the stirring water. In John 5:1-9. The Pool of Bethesda (the House of Mercy): when an Angel stirred the water, the first person who entered afterward would be healed. Other references regarding healing include known water cleansing and healing. Hot springs pools. Electromagnetic wave healing example: Royal Rife (Rife Machine). Note: some electromagnetic waves are destructive.

VV132. 30 Sand Pools and Soliton Theory

I prefer to focus on the rust part of the phenomenon, as it seems related to the magnetic wavelength of iron oxide. However, I may consider this part later as a separate attribute. Often, sand pools are simply tide pools without rust involved, but something is evidently happening, possibly with the molecular wavelengths of sand or water.

Because the soliton waves can be pulled in the opposite direction from the Moon's position, this suggests that tidal forces are not responsible for the soliton wave. Could a positive or negative Doppler effect create a repulsive force, similar to magnets? The field may change direction, much like a radio wave when it encounters an obstacle or during interference.
The author formed this hypothesis based on what pulls the soliton waves along, like the magneto-hydrodynamic drive of silent propulsion submarines. They are pulled along by very strong, slowly moving electromagnetic fields produced by heterodyned gravitational waves. These are the same gravitational electromagnetic field lines that lay down the sand patterns (grooves), except they move slowly. Because they are moving, the sand can no longer record them, but water can latch on and get a free ride, much like surfing. As the gravitational bodies' phases continue to change, the field moves too fast for the water to latch on, and the Solitons disappear. The grooves are formed when the field lines become stationary. An important item to recognize during the sand pool event is the dirty color of the incoming shore waves. On video, it clearly appears something is gripping, latching onto the rust particles and violently pulling them up from the depths of the sand, leaving the large pits. The rust concentration gradually diminishes the further south one travels. So, the sand pools may shrink as the concentration decreases. However, there may be several types of this event. Some heterodyned gravity waves may affect all components of the sand and water.

Adding both velocities together (Kilometers/Hr.) of Earth/Sun and Moon/Earth (include negative and positive values) results in more events that cannot be predicted by using each velocity alone. Note: Positive and negative Doppler can differ in the events. I recommend using Negative Doppler velocities; they may add and subtract better in heterodyning.

Evidence that a slow-moving electromagnetic field pulls water Soliton waves along. Sand grooves record stationary electromagnetic waves from a dwell of synodic movements occurring on either side of the pool formation times. See the lower photo in Figure 3.



Figure PPP123. Black Sand Photo

See figure PPP123. On January 27th, 2021, at 11:52 PST, after high tide, and six days after the moon's apogee. Iron oxide particles darkened the entire beach a deep grey, pulled up to the surface, and left the quartz sand buried some distance below. The reverse effect (white quartz particles on top with black below) happened several hours later near low tide. It is stunning to see the beach change from light to dark. Tire tracks marred the beach in this photo.



Figure GGG123. Black Rust Event 11-29-2022. Even the bank was very dark as high winds blew rust up onto it. This is a color photograph. Spectacular Mica events occur as well.



Figure UUU765. The beach is changing back to Sand Color Again. 09-29-2023. The Ocean is on the left, and the Bank is on the Right Side of the Photo. It may take several tidal cycles to

complete the full change. Moisture content was similar on both sides of the line. 19-inch wavelengths were forming. This event repeated for several tidal cycles, then stopped.
There are several basic event types. Magnetic iron oxide (rust), water events, mica, and quartz. Unfortunately, digital cameras cannot record the sunlight sparkling off the mica crystals during the mica events. The change in Doppler frequency and the angle to heavenly bodies is hypothesized to be the progenitor.

Figure III876. Because the phenomenon seems to pull rust up and then down on date-related events, we constructed a simple balance to detect any weight change. The balance is slightly different than a normal balance. Dissimilar materials are placed on either side. Rust is placed on the right side, and glass shards on the left. The beam is aluminum. As the calendar days passed, if there was any weight difference between the glass and the rust, the balance would be affected. After a year, no movement was recorded. The balance was not sensitive enough to detect any change. However, the internet has reported experiments using more sensitive equipment. The experiment used salt water in the solution, and no imbalance resulted. Gravity pulls on both sides of a balance, so it remains balanced unless something changes on either side. However, if Earth's magnetic field fluctuates, the balance would tip; the rust side would be pulled down. A new experiment that vibrated a cup of sand every 10 minutes seemed to have better results as the Cats Whisker diodes could be formed in this way.



Figure III876. This Simple Balance Did Not Detect any Change in Weight
Glass on one side, and rust with salt water on the other side. Apparently, the Cats Wisker detector was not working here.

A standard compass can only detect a static magnetic field; it will not respond to the high frequency field that is hypothesized here. The synodic theory is a high frequency EM field. The field must be steady enough for a compass needle to respond mechanically.

VV132.19 Relating the Phenomenon to Gravity Doppler Frequency Shifts

A brief outline of the Doppler shift sources that must be accounted for:
NOTE: TOPOCENTRIC VELOCITIES ARE REQUIRED. Topocentric coordinates use a celestial coordinate system with its origin at a specific point on Earth's surface. The geocentric velocities below are for reference only. See Doppler calculations for topocentric velocities.
Both the Earth and Moon wobble during rotation, which alters the topocentric Doppler velocities and, to some extent, event attributes. The wobble is not considered in calculations. My findings indicate that the Doppler values computed by LibCalc software related to this phenomenon can be off by 1 to 2 hours.
Doppler (will both approaching and increasing frequencies heterodyne?)

Some other facts:
The Moon has an apogee and perigee every 27.55455 days.
Earth's geocentric orbital separation velocity with respect to the Sun varies from +1790 kilometers per hour,, then reverses direction,, becoming negative. This velocity becomes zero at aphelion and perihelion. This is a separation velocity, not orbital velocity. Earth's tangential velocity component with respect to both the Sun and Moon. Earth's tangential rotational velocity at the 46th parallel: 1165 km/hr. This rotational velocity with respect to the Sun cycles from zero at noon and midnight to its maximum at 6:00 A.M. and 6:00 P.M. solar time. This is a positive value between midnight and noon and negative between noon and midnight.
Thus, each body has a continuously varying gravitational Doppler shift due to its orbital motion—the gravitational Doppler-shifted frequencies heterodyne (add and subtract), producing much larger wavelengths. The paramagnetic rust particles can leave patterns in the sand only when the topocentric Doppler shift dwells long enough for the particles to drop into a single position, leaving patterns on the beach. The particles are attracted to the momentarily stationary electromagnetic field lines.
The appearance dates involve determining when the topocentric Doppler velocity is dwelling. When the resulting field is momentarily stationary, patterns are recorded in the beach sands. When the fluxion field slowly sweeps across the area, soliton water waves occur. Establishing when the electromagnetic flux becomes momentarily stationary requires precise astronomy topocentric computer programs.

Only some EM waves combine. One cannot solve every equation by combining the heterodyning of all the wavelengths involved, including the quartz, rust particles, salt water, and the chlorine smell that may show up at times. Molecular interactions seem to play a role, adding variation to the phenomenon.

By studying the sand patterns in depth, the author discovered they form from helix (rotationally polarized) electromagnetic waves. Imagine a bunch of tree logs buried in the sand to various depths and angles. This illustrates the many helices and the patterns they leave on the beach. These waves have a special property. They rotate or spin. The waves cinch up, like the threads on nuts and bolts. They also have elastic-like properties; they auger and slip. Like a ship's propeller in the water, they transmit force. The pulsing on-and-off gravity waves make it much weaker than the magnetic force.

The magnetic component of these electromagnetic waves may be appearing in the dark areas of the wet sand photograph (figure 1). The magnetic and gravity fields have different wavelengths, so they do not react. Heterodyning of the Doppler-shifted waves produces, on certain dates, a wavelength that matches that found in common magnets, and this phenomenon becomes visible. This is why a multitude of radio frequencies with different wavelengths can be picked up that do not match the groove-to-groove measurements taken off the beach.

Meters	Freq MHz	Inches	Meters	Freq MHz	Inches
.25	1199.16	9.84	.54	555.17	
.305	982.93	12	.55	545.00	
.33	908.46	13	.56	535.3	22
.34	881.74		.57	525.95	
.35	856.54	14	.58	516.88	
.36	832.7		.59	508.12	
.37	810.2		.60	499.65	
.38	789	15	.61	491.46	24
.39	768.7		.62	483.54	
.40	749.5	16	.63	475.86	
.41	731.2		.64	468.42	
.42	713.8		.65	461.22	
.43	697.2	17	.66	454.23	26
.44	681.35		.67	447.45	
.45	666.2		.68	440.87	
.46	651.72	18	.69	434.48	
.47	637.86		.70	428.27	
.48	624.57		.71	422.24	28
.49	611.82		.72	416.37	
.50	600		.73	410.67	
.51	587.82	20	.74	405.12	
.52	576.5		.75	399.72	
.53	565.6		1Meter	299.79	39.37

Figure VV123. Wavelength to Radio Frequency Chart

To improve accuracy for the groove-to-groove wavelength, measure 3 groove-to-groove distances then divide by 3. Use the chart to find the frequency.
https://www.everythingrf.com/rf-calculators/wavelength-to-frequency
https://wiki.radioreference.com/index.php/Television_Frequencies

Conversion Factors:
Multiply inches by .0254 to get meters.

.0254 meters per inch. 39.37 inches per meter.
Scan from 500 MHz to 850 MHz (or more) with a spectrum analyzer. Spectrogram: The spectrum monitors waterfall setting should help.
https://www.hamradiosecrets.com/antenna-calculator.html

The energy from the Moon's gravity field hitting the Earth's surface is approximately: 6.8 mW / m^2 (6.8 milliwatts per square meter). This value looks high, so one answer is that not all the gravity waves are heterodyning; otherwise, the background noise would be much higher. Most likely, we need the volume of the Earth to find the distribution of gravitational energy from the Moon. Earth's volume is approximately 1.08321 x 10^12 cubic kilometers. Dividing the energy by Earth's volume would give a very small number. So, something must be happening at Earth's surface, or Earth acts like a shield, and mostly only the Earth's surface area is pulled by the Moon. Magnets are like this! When identical magnets are stacked directly on top of each other,, the force increases, but not linearly. The increase diminishes as you add more magnets. Eventually, adding additional magnets does very little. Inversely proportional to the square of the distance to the source. Compare to a 200 mW LED at x distance and use the inverse square to distance. This much energy would overload a radio receiver.
Gravitation of the Moon - Wikipedia

Complications making predictions:
As mentioned before, the resulting radio frequencies from synodic waves seem to quantum-jump to new frequencies, charging earthly elements on one wavelength and then discharging on another, much like a laser or phosphorescent rocks when exposed to black light. This may be why the beach lines appear at unpredictable intervals. Without the proper equipment, I couldn't determine with certainty whether this quantum jumping was occurring.

CHAPTER XXXXX. USING A SPECTRUM ANALYZER

This part using the spectrum analyzer is not for amateurs. I do not recommend attempting this because of the difficulty in associating the phenomenon to RF wavelengths. This requires many hours of work and dedication, and more expensive equipment than the analyzer shown.

Possible Molecular Quantum Radio Frequency Transitions.
These may not always be associated with the visual beach grooves part of the phenomenon. Since we are studying RF with the new spectrum analyzer instruments (see below) as a source of beach-frequency emissions, we can look more closely and expand the solution to the phenomenon.

Can quantum jumps emit radio wave frequencies in the range we are studying here?
Yes, they can. In the reference below, we find that molecular quantum jumps are a strong possibility in the formation of the phenomenon.

https://www.britannica.com/science/spectroscopy/Radio-frequency-spectroscopy
Transitions can occur in atoms and molecules. From one state to another. The resulting spectra are known as radio-frequency (RF) spectra or microwave spectra. They range from 10^6 to 10^11 Hertz. (1 megahertz to 100 gigahertz). This is within the range we are studying here. These transitions can have delays, so they may not occur immediately. The emission can be delayed.

Due to the complexity and size of the (RF) spectrum, I am going to reduce my scans to match the beach sand wavelengths. However, much lower and higher RF should also appear. As a side note: Planetary motions may play a part in quantum noise,, which is inherent in all radio and electronic equipment.

The links below show a relationship between beach Doppler-shift wavelengths and the various elements found at the beach (rust, quartz, mica, water, granite).
Detecting elements with RF Prospecting.
https://www.youtube.com/results?search_query=detecting+elements+with+radio+waves
Identify Chemicals With Radio Frequencies.
https://www.youtube.com/watch?v=JO_EHceV9sk
Quantum jump emissions.
The Theory of Complex Spectra
https://link.springer.com/chapter/10.1007/978-1-4613-9083-1_16

Shot Noise:
Different Types of Noise in Radio Frequency #4
https://www.youtube.com/watch?v=9QPVcUiGrjI
The background shot noise at the isolated beach area is approximately -100 Deci-Bells.
In Portland, the background shot noise is much higher.

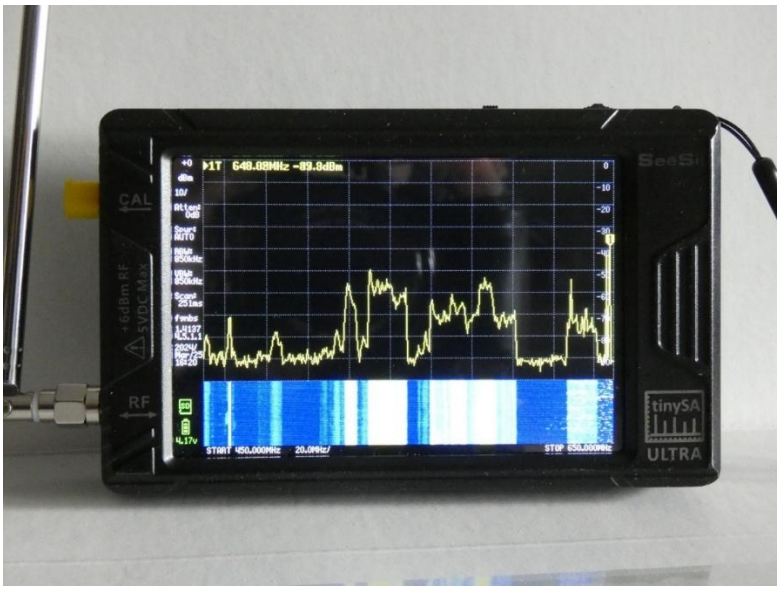


Figure GG11A. TinySA Ultra Spectrum Analyzer

The scan shown here on the screen was run at Portland Oregon. There is too much going on in town, so the phenomenon is lost in the background.
The TinySA Ultra Spectrum analyzer is low-cost and available on AliExpress or Amazon.
I recommend the Zeenko model ZS-407. There are fakes, so be sure to get the original. Note that the lower part of the screen is the 'waterfall ', a record of the spectrum. Remember, the signal may be very weak and hidden in the lower background RF. Look for an intermittent spike moving through the blue areas. You can also hear the signal with a pair of headphones with a 3.5mm jack. A real-time spectrum analyzer is recommended, but I use the TinySA.

YouTube videos can be found at:
https://www.youtube.com/watch?v=6C24RnYNOWQ

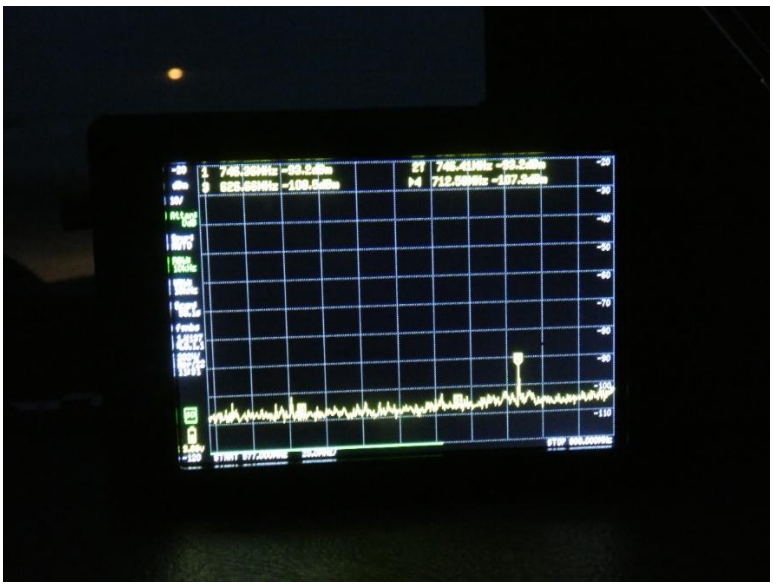


Figure 11XXQ. Beach Scan April 23rd, 2024. 4:43 AM. Normal low activity scan from 577-800 MHz. Notice the full Moon in the background getting ready to set in the horizon.

Scan down the beach against the 15-foot sand bank. The sand bank blocks RF from the east, and only Pacific Ocean RF wavelengths come in. These are easier to identify. This way it is easier to associate the phenomenon with the beach sand. Note: The TinySA spectrum analyzer baseline occasionally jumps up 10 Decibels, then drops back down. This is the analyzer resetting or adjusting the zero line, so it is not important.

Spikes show up in the 700+ MHz range. Cell phones and televisions use this band so it could be coming from them. Turn your cell phone and automobile off when you are scanning.

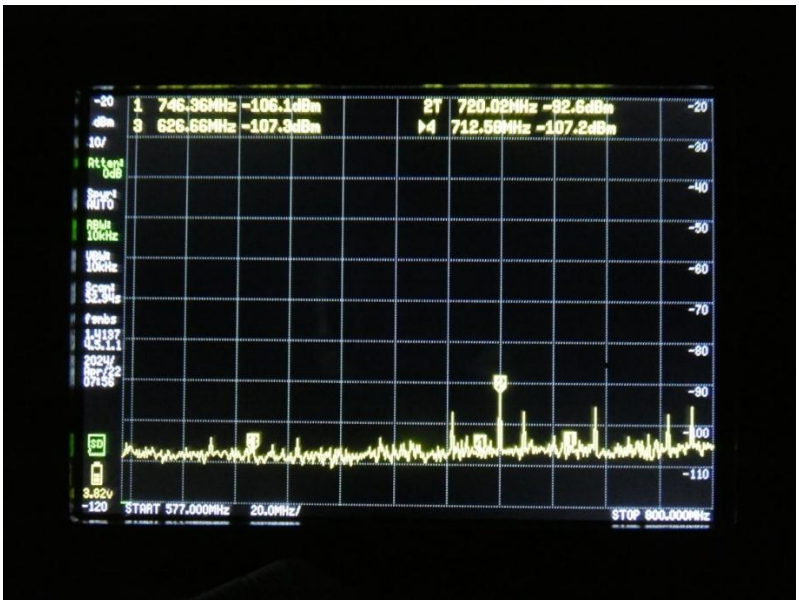


Figure QQSS1. Beach Scan: 3:12 am. April 23, 2024

Scanning between 577 and 800 MHz. Notice the difference between the upper and lower photos. When the beach sand patterns appeared, the decibels of the background wavelengths increased. The wavelengths appear only for a moment, then they are gone. At times, they get very strong and fill almost the entire bandwidth, down to almost -80 dB. They are only there for a moment, then they are gone.

To get the TinySA spectrum analyzer to scan above 800 MHz. Enter config, more, enable ultra, then enter the password (4321). However, I didn't detect much in this region over four days.
It helps to run two or more of these low-cost analyzers at the same time. This way, you can tune one in a shorter span, speed up the scan rate, and use one to attach to a headset to hear the signal. A small antenna in the parking lot emits around 774 MHz; stay well away from it. It takes many hours of scanning to catch events as they occur briefly, then disappear.

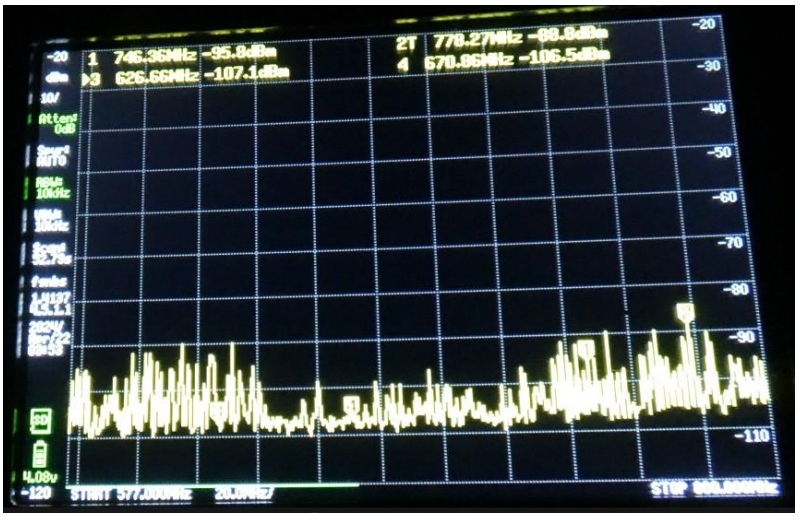


Figure FFF11. Beach Scan: 04-22-2024 4:45 PM 577-800 MHz

A huge amount of brief activity with a lot of beach sand patterns. This blitz of activity only lasted 30 seconds and nearly filled the entire scan width then suddenly disappeared. Several minutes earlier it was nearly a flat line. Blurry from snip from video. I was not fast enough to get a photograph, so I had to snip it from a video.

XXXXX.16 Heterodyning in Beach Sand Experiment

NEED PHOTOS OF RADIOS AND THE BOX

An experiment was conducted to determine if the iron oxide crystals could heterodyne two radio waves. The radios used for the experiment had outputs of only 5 watts and was assumed to be too low. The TinySA Ultra Spectrum analyzer was incorporated to detect the heterodyned signal. Several frequencies were transmitted from 200-600 MHz. The results were inclusive.

The Rusty Bold Effect:
The rusty bolt effect occurs when radio waves interact with corroded, oxidized, or otherwise imperfect metal parts, such as bolts, connectors, or antenna mounts, even if these parts are not in the direct signal path. These materials can act like nonlinear elements or diodes, producing harmonics and intermodulation products that radiate unwanted signals into the system. This phenomenon is technically classified as passive intermodulation (PIM), a type of intermodulation distortion generated by passive, unpowered components.
Wikipedia

The rusty bolt effect has proved that rust on guy wires causes heterodyning.
Passive intermodulation measurements (PIM) require a high output and specific frequencies. I only tested 4 – 5 frequencies with little or no results.

Heterodyning is a technique where two signals of different frequencies are mixed together so that their sum and difference are produced. This is commonly used in radio and communications systems to shift a signal to a different frequency.

I conducted the heterodyning experiment with two transceivers and a spectrum analyzer. Two Quansheng portable multi-band transceivers were used.

Heterodyning formula: Fn = frequency new, f1 = frequency 1, f2 = frequency 2
Fn = f1 +- f2

Fn = 575 – 600 = 25 MHz
And
Fn = 575 + 600 = 1.175 giga Hz.

Equation results: 25 MHz and 1.175 giga Hz.

The 'Single Radio Harmonic' shows on the Tiny SA analyzer with just 1 radio transmitting.
The '2 Radio Harmonic' is with 2 radios transmitting.

These frequencies were checked at the beach as a small wave moved the crystals along.
MHz. The below were checked for abnormal readouts at analyzer. All OK!

#1 Radio Setting	#2 Radio Setting	Add	Sub	Single Radio-Harm, 2 radios-Harm
360.000	435.000	795.000	75	
575	**600**	**1.175 giga**	**25 MHz**	**Both giga checked ok**
560	**600**	**1.160 giga**	**40 MHz**	**set analyzer at 500 to 1.5 gig**

At Home: Re-check the 25 MHz subtract and the 40 MHz subtract – they showed up at the beach.

One of these two resultant frequencies should show up if the sand crystals are capable of combining the signals.

The results were inconclusive due to the difficulties.

Sunspot activity as of the year 2024 is near a solar high. Sunspot activity normally affects only the lower frequencies
https://www.spaceweatherlive.com/en/solar-activity.html

Note: The Hydrogen spectra line is 1.42 GHz, 21 centimeters.
https://www.youtube.com/watch?v=YkE8d2vrWI0
The Big Bang sound: Cosmic Microwave Background Radiation. Seagull of astronomy.

Detecting the extremely faint 21-centimeter background radiation
https://www.youtube.com/watch?v=89B_C0x3-xI

CHAPTER XX9. GRAVITATIONAL WAVELENGTH CALCULATION

Using the known data from the phenomenon we make a good calculation on the wavelength of gravity.

What is the wavelength of gravity? Calculate the wavelength of gravity using the beach groove-to-groove spacing and the Doppler separation velocity shift.

NOTE: Only one heavenly body source of Doppler-shifted gravity waves is required for heterodyning; the Earth's gravity field provides the second source. Considering multiple Doppler-shifted sources from the Sun, Moon, and Earth makes the predictions much more complex. THE BELOW CALCULATION IS FOR SUN/EARTH ONLY. However, the Earth/Moon and Earth/Sun orbit frequencies may combine, forming stronger events centered around the Earth's apogee and perigee, along with the Moon's apogee and perigee.

THERE ARE 3 WAYS THE DOPPLER SHIFTED SOURCES CAN HETERODYNE
1. Earth w/Sun 2. Earth w/Moon 3. Combination of the two sources.

'The following calculations were made to establish a point of reference.' By working backward and using the trial-and-error method, the author arrived at the gravitational wavelength used in the calculations. 'Gravit.bas' computer program was incorporated in the trial-and-error calculations. The author inserted trial-and-error gravity wavelengths into the program until it matched the results found at the beach at a given time/date. The separation velocities used in the equations are approximate values. More accurate values will be required. See the example below. January 3rd, 1995, 17:00 hrs. solar time (see figure 1) was used to calculate the example below. On the date chosen for the example, the Earth/Sun Doppler value held (dwell) at a constant value (1083 km/hr.) for approximately one hour. On this date/time, the Moon's location was: Horizontal azimuth: 38 degrees, Altitude: 23 degrees (as astronomers measure not navigators). This places the Moon in a similar direction in the sky as the Sun. The author believes this results in the single water wave required to satisfy 'type 2' and 'type 3' conditions. The bodies are not in

perfect alignment, but the pull from the two sources is in a similar direction, reducing the possibility of water-wave collisions. As shown, all factors add up to provide definitive mathematical proof. The main factors are the associated dwell of the topocentric separation velocities and the relative sky position of both the Sun and Moon. The topocentric separation velocity is calculated using your latitude and longitude position and requires a precise astronomy computer program.[4]

The goal was to determine whether the correct Doppler-shifted wavelengths were present at this date/time that match the patterns found on the beach and the frequencies found in the radio scan taken at the time, and to determine whether a gravitational wavelength could be calculated from the results. As you will see, all the data correlated correctly with the findings, resulting in a good result.

RELATIVISTIC DOPPLER EFFECT EQUATIONS:

$f = Doppler\ Frequency \qquad fo = Source\ Frequency$

Receding velocities (source and observer are moving away):

$$f = \sqrt{\frac{c - v}{c + v}}\ fo$$

Approaching velocities (source and observer are moving toward each other):

$$f = \sqrt{\frac{c + v}{c - v}}\ fo$$

NOTE: THE BELOW REQUIRES DOUBLE PRECISION - THE CORRECT ANSWER CANNOT BE ARRIVED AT WITHOUT DOUBLE PRECISION. A standard calculator does not have enough digits.

For simplicity, this calculation ignores the Moon's gravitational frequency, as only the Earth/Sun separation velocity was used.
be used.

The 'D' represents the digits held within the computer memory but not shown.
The double-precision limit used in the calculations: max +308, min -324 digits.

Calculating by working backward is a problem-solving technique that starts with the final result and reverses the steps to find the original starting point.

Calculating by working backward with trial-and-error iterations:

If we assume that heterodyning Earth's surrounding frequency with the Sun's Doppler-shifted frequency produced the 28-inch (.71 m) beach grooves shown in Figure 1, then the frequency = c / .71 = 422.5 MHz. Thus, this frequency is assumed to be the resultant of subtracting the two heavenly bodies' frequencies. We detected this signal frequency on a radio scanner, one of several present at this time and date. The signal was much stronger than the normal background level.

Assuming a gravity wavelength of .00713 Angstroms (determined by trial and error using the below). .00713 Angstroms converts to 4.204662777451454D+20 Hertz.
The final calculation is as follows:
At 17:00 hours solar time on January 3rd, 1995, the Earth/Sun topocentric velocity dwelled at 1083 km/hr. The Earth/Moon topocentric Doppler velocity moved from 238 km/hr to 237 km/hr. at this hour, so it will not be considered. (This needs to be double-checked.)
(Note: the topocentric separation velocity dwell results from adding the rotation of a point on Earth to the Moon's orbital separation velocity).
At this date and time, the velocities were added in such a way that the Doppler shift remained the constant value 1083 km/hr. for approximately one hour).

Inserting the trial gravity frequency and velocity into the receding Doppler equation:

f = ((c - 1083m/s) / (c + 1083m/s)) ^ .5 * 4.204662777451454D+20 Hertz.
f = 4.204662777447235D+20 Hertz.

Subtracting the Sun's Doppler-shifted frequency from Earth's local stationary gravitational frequency.

f = 4.204662777451454D+20 - 4.204662777447235D+20 (Requires the missing digits; the correct answer is given below)

f = 421,920,768 Hz, or 421.9 megahertz (Comparable to the groove-to-groove distance and a radio frequency found at the time).

The fact that two groove-to-groove wavelengths appeared simultaneously on the beach at the time indicates either two gravity wavelengths, or beach elements absorbing and re-emitting through quantum jumps, as described previously. The Earth/Sun Doppler shift, combined with the Earth's rotation velocity at the 46th parallel, passes through zero approximately every 12 hours. The Doppler frequency from the Sun passes through zero (reversing direction) twice daily when Earth is near apogee or perigee. At this time, the Earth's topocentric tangential rotation velocity relative to the heavenly bodies becomes the dominant velocity factor. This information was taken from Doppler computer programs the author incorporated in his studies [4]. Obviously, this calculation will require further work.

Surprisingly, a different gravitational wavelength may be calculated (not shown here). Normal heterodyning is the addition of 'frequencies', not wavelengths. Zetta wavelengths may heterodyne by wavelengths, not frequencies. More evidence for adding atomic spectra by wavelength can be found at https://synodicgravity.com. (See the file: Rainbow). Ref.

Once gravity-wavelength accuracy improves, RF events should be traceable to quantum levels of the atomic iron spectrum.

Other wavelengths that may be considered for calculations:
Proton rotation rate: 5 x 10+22 cycles per second. Rotation wavelength = 5.99 x 10-15m
Neutron Compton wavelength = 1.319590898 x 10-15 m.
De Broglie wavelength

CHAPTER BB90. ATMOSPHERIC WEATHER CYCLE PREDICTIONS METEOROLOGY

Years ago, when I brought up this topic, people ridiculed and scoffed at me. Now there is evidence for this. That's how the scientific community works. My work was rejected, then plagiarized later.

We included this section as a potentially useful tool for predicting local weather conditions. West Coast weather storm-front predictions are often off by six hours. Cold fronts often linger out at sea 6-12 hours before coming in. Six hours is the difference between high and low tide, and it also shows up in the Doppler data. The Doppler data can make these predictions more accurate and eliminate the six-hour error.

The Moon's gravitational pull affects the atmosphere. Variations in air pressure, weather patterns, rainfall, and local wind systems are affected during full or new moons.
https://maweb.org/how-does-the-moon-affect-the-weather-and-climate/

The Moon pulls on water, causing the tides. Less apparent, however, and not well recognized, it also pulls on all mass, including the atmosphere and water in clouds. A dwelling of topocentric Doppler velocities (Doppler Standstill) of gravitational waves at specific times slows down the gravitational waves sweeping across the Earth's surface. It enables effects not seen in simple tidal six-hour intervals. Over time, it becomes clear that something more than a light wind is causing the water to move during these events.

Hypothesis: The topocentric Doppler data incorporated here should help meteorologists predict future adverse weather events.
The video links on the synodic gravity phenomenon provide strong evidence that a force pulls the soliton water waves around and that the Doppler data does predict it.

Using the EME LibCalc Doppler program should improve weather prediction accuracy.
We have undeniable video proof and have correctly predicted soliton waves forming in this area. These waves often start from a dead stop, indicating a force at work. An increase in the evaporation rate and the jet stream may be influenced. Atmospheric rivers would also be affected, like the tides.

Predictions would have some lag. The topocentric elevation would need to be adjusted to cloud level (the elevation in EME programs is limited).
It appears that separate elements are affected by the Moon angle and the Doppler dwell frequency at the moment. When it is atmospheric (water) frequency, it pulls on the air and influences the weather.
Further study is needed in this area.

BB90.1 Moon's Saros Cycle Relationship Predictions

Weather events have been associated with the Moon's Saros Cycle: 6585.32 days.
The word "Saros" means repetition or to be repeated. The Sun, Earth, and Moon return to approximately the same relative geometry (a near-straight line), and an identical eclipse will occur; this is called an eclipse cycle. A "sar" is one half of a Saros. Hypothesis: Combining EME Doppler velocities and the Saros cycle can increase the accuracy of predictions for future beach and weather phenomenon events. The Saros Cycle can also be used to make weather predictions.

Saros Cycle weather predictions:
https://arxiv.org/ftp/arxiv/papers/1306/1306.0451.pdf -Saros Cycle Manuscript Ref 122
(I have not compared the Saros cycle to known beach events.) The cycle shown here is for the Sun, Earth, and Moon. I suggest that only Moon Doppler is required. I do not expect the Saros cycle to predict the phenomenon accurately. It has previously been used to predict, within 10 days, when a repeat storm may occur.
The Saros Cycle is 223 synodic months (6585.32 days, or 18.04 years)
Saros Cycle is related to weather events. See Ref 122
It appears that with the Saros cycle, only approximations can be made for the beach phenomenon.
The Earth's topocentric position and the Moon's Saros cycle do not match. The Earth's topocentric position repeats every 3 Saros cycles. This means that an accurate beach phenomenon prediction may require 3 Saros cycles.
To simplify calculations, astronomers use the Julian date to calculate astronomical events. The counting system started on January 1, 4316 BC. The Julian date is a single number that represents a specific date. You can convert any calendar date to the Julian date. For example, Oct 25th, 1906 = 2417509 days.
Ref 1. Julian date calculator: https://www.aavso.org/jd-calculator
Method to predict future storms, or beach phenomenon events, especially extreme events: It is based on historical weather or beach phenomenon data and the Saros cycle. it's based on the Moon' Triple Saros Cycle' which occurs every (6585.32 * 3) = 19756 days
Past weather data:

Below are some major events to investigate to check the viability of using both the EME Doppler data and the Saros cycle.

Find the Julian date of the shipwreck: Oct 25th, 1906 = 2417509. Use the Julian date calculator. Then add multiples of the Saros cycle to that (7 cycles = approx. year 2021)

Then find the corresponding calendar date. Also compare the Moon Doppler data for this date.

Columbus Day storm Oct 10th, 1964, = 2428679 + 19756 (3 Saros cycles) = 2458435 = Dec 11th, 2018. = This is very close to the last storm on Dec 18th, Yr. 2018 (within 10 days or so).
Big Blow storm: Dec. 12th, 1995, 2pm 100+ mph winds
JD = 2450064 + (2021 yr. or so). This did not get verified.

To predict a future date for a high-wind or beach phenomenon event.

1. Find the date of a previous weather event that occurred approx. 18 years ago.
2. Go to Ref. 1 and calculate the Julian Date of that event.
3. Add any whole-number multiple of the Saros cycle (6585.32). A multiple of 3 may be a more accurate prediction.
4. Go back to Ref 1 and enter the resultant Julian Date and find the corresponding calendar date.
5. That date is good for a high wind prediction within approx. 10 days. Doppler data may increase accuracy.

Ref 2. Astoria weather records:
https://www.wunderground.com/history/daily/us/or/astoria/KAST/date/2018-12-18

CHAPTER 13SS. SUMMARY of PHENOMENON

DIFFERENCE BETWEEN SUMMARY AND CONCLUSION

A summary is a concise overview of the main points of a text, while a conclusion synthesizes those points to provide closure, insights, or recommendations.
Key Differences

Purpose: A summary condenses the content to highlight the main ideas without adding interpretation or opinion, allowing readers to quickly grasp the essential points of a text. In contrast, a conclusion provides closure, interprets the significance of the information, and may offer recommendations, solutions, or reflections based on the discussion Key Differences+2.
Content: Summaries restate facts, key points, or findings objectively, typically without introducing new ideas. Conclusions, however, integrate the main points, draw inferences, and may include the writer's judgment or suggestions for further action Key Differences+1.
Length and Placement: Summaries are usually shorter, often 5–15% of the original text, and can appear at the beginning (as in abstracts) or throughout a document. Conclusions are positioned at the end of a text and may be slightly longer, providing a final synthesis of the discussion Key Differences+2.

Critical Engagement: Summaries are neutral and non-evaluative, focusing on what the text says. Conclusions are analytical and reflective, addressing what the analysis shows and why it matters epic-essay.com.

Practical Example
Summary: "The article discussed the causes and effects of climate change, highlighting key environmental and social impacts."

Conclusion: "Based on the evidence presented, urgent action is needed to mitigate climate change, including policy reforms and community engagement strategies."
In essence, while both serve to wrap up information, a summary provides a condensed account, whereas a conclusion interprets, evaluates, and offers closure to the discussion thisvsthat.io+2. Understanding this distinction is crucial for effective writing and clear communication.

Examining Complex Atomic Spectra for Fundamental Wavelengths.

Supporting the theory for the phenomenon. Proof that atomic spectra wavelengths add. We may assume that two gravitational wavelengths (one Doppler-shifted) may add, producing smaller and larger wavelengths (beat frequencies) with their associated frequencies.
The Addition of Atomic Spectra (to my knowledge never been revealed before)
Data for several elements from Rainbow is available at SynodicGravity.com.
Ref (97) “Rainbow” Examining Complex Atomic Spectra for Fundamental Wavelengths.

Regarding the rainbow; The Bible describes well the rolling back of the atmosphere as in an atomic-bomb blast and the Sun and Moon going dark in the middle of the day. In Genesis 9:12, God tells Noah that He has placed the rainbow in the clouds as a sign of His covenant that He will never again destroy the Earth by water. The rainbow is the atomic spectra of elements burning on the Sun. The waters shall never again become a flood to destroy all flesh. Is the spectrum of the rainbow signature a warning that that of the atomic bomb destruction of the Earth, or is it a coincidence?

Creation is mentioned in the bible about 9 times. The book has a lot of other parts that are much more important. There is a good explanation of what creation means today. The electromagnetic field is one. Things are molded by fields including man, which is a part of creation. You have look beyond "In the Beginning"

CHAPTER 93. THE NEW PHYSICS BORN FROM THE PHENOMENON

93.1 THE ELECTRONIC STRUCTURE is this in the conclusion

HOW A FREE ELECTROMAGNETIC WAVE CAN PRODUCE A FORCE.
This is covered in the file: “Duality” at synodicgravity.com

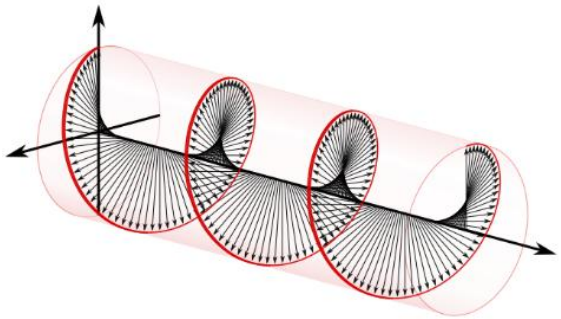


Figure MMM3. Circularly Polarized (Helix) Electromagnetic Wave (right-handed)
Public domain: Dave3457: https://en.wikipedia.org/wiki/Circular_polarization

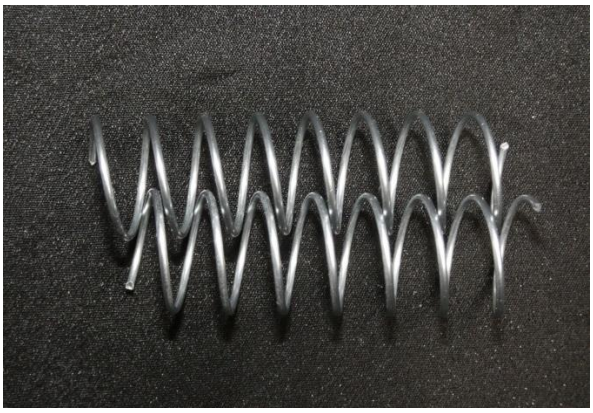


Figure MMM2. Example of Two Helix's Electromagnetic Waves Mating

To fully understand the Synodic Theory, the paper 'Duality' found at synodicgravity.com must be read. The paper solves an early, fundamental error that appears in the famous double slit experiment. Light has both magnetic field and electric field components. The magnetic field components of two separate beams of light repel one another. See Duality file.

CHAPTER CCAB1. MICROWAVE AGING HYPOTHESIS

The simple experiment presented here provides insight that natural electromagnetic waves from planetary motion contribute to aging. (There are other factors also) The frequencies center around 600- 800 megahertz, and are related to the phenomenon.

Electromagnetic waves can oscillate within our bodies much like a wave on a string. There are nodes, areas that do not absorb them. Our fingertips are an obvious nodal area where the waves are not absorbed. Visual evidence in the fingertips is easy to see in older people (their fingertips appear much younger and pinker than the hand or body).

YouTube video: https://www.youtube.com/watch?v=NzfmczEciKs
Subject: Microwave oven absorption. The ends of human fingers age more slowly.

Another attribute of the Synodic wave is present. At periodic intervals, the Synodic waves enter the human body and can be felt physically. These waves seem to be present most of the time but

can only be felt at certain intervals. Enclosing oneself in a Faraday cage disconnects the wave from the flesh. I made this serendipitous discovery while studying the beach phenomena. I associated the visual phenomenon with a physical feeling. The strange disappearance of seagulls after a very strong event also aroused my curiosity. They may have flown away to avoid exposure. These waves emanate from all mass; they Doppler shift from planetary motions, then heterodyne on non-linear or ionic surfaces, forming new wavelengths. A small percentage of these waves have healing properties. Most seem to cause tissue damage. See photos below of noodles and fingertips.

Occasionally, you can feel these natural Doppler-shifted waves very slightly. A very slight buzzing feeling, an uncomfortable or annoying feeling, and very slight momentary joint pain. Irritability, or possibly even low audio at times, depending on the strength and time of year. I first made this connection while studying the visual beach phenomenon on an exceptionally strong and unusual formation day. Some people can feel cellular phone wave emissions. In some cases, it causes ringing in their ears. Ham radio operators claim they can feel effects in their heart.

Depending on your latitude, elevation, and elemental deposits. Intermittently, they fade in and out, disappearing for weeks, then reappearing. May not be perceptible to everyone. The characteristics change slightly, phasing in and out of your perceptible range. Doppler may calculate the timing of the event precisely.
Slow accumulating tissue damage. Inspect the fingertips of older people (85-100 years old). You will find the fingertips look like those of a 30-year-old. See the microwave experiment results. I compared uncooked noodle tips to the fingertips of older adults.

"End of Fingers" Note: microwaves are radio waves at a frequency of 2.4 Giga Hz.
Check the older adults for young-looking fingertips! An age difference at the ends of their fingers relates to the microwave absorption characteristics of noodles when placed in the microwave oven below. The noodles do not absorb readily at the ends. Hypothesis: Synodic gravity heterodyning may cause aging. Slow cooking, so to speak. Most people show this; however, several factors may reduce this effect. Factors include one's environment, how often their fingertips touch another, and finger moisture content. Google 'Fingertips of the elderly'.

Experiments with the standard household microwave oven have revealed some interesting microwave absorption characteristics. Using the noodle called Fettuccini. When cooked in boiling water as directed, it is perfect for this experiment. After cooking, it is about 1/4 inch wide and 12 inches long. From there, you can trim it to any length you like.

Here are the results from a recent experiment using Fettuccine: I microwaved them in a standard oven for about 2 minutes. At least 1 total length (12 inches) was placed in the oven at any one time. The oven may have been interrupted several times during heating for inspection. Be careful; shorter lengths do not absorb and the oven could be damaged. 750-watt oven is used. Stop heating before any dry areas form. Lengths are reduced with drying. Do not use wax paper; it melts and alters the results. Place the noodles on microwave wrap with several layers of paper

towels underneath for insulation. Make sure none of the noodles touch each other. This allows the EM wave to continue into the next noodle.

Results of experiment: Length.
2-inch-long noodles. Got hot but would not bubble
3 inches: all bubbled at the same location.
4 inches: all bubbled at the same location
5 inches: similar patterns
12 inches: nodal patterns appeared, unless overheated
All the tips of the noodles did not heat and remained flexible.

Basically, I looked for bubbling on the noodle, which indicated areas of intense absorption. Results may differ slightly.

I want TO EMPHASIZE ONE PARTICULAR PECULIAR THING THAT OCCURRED ON ALL BUT THE SHORTEST SAMPLES: All had NO BUBBLING on the very ends. I repeat, NO BUBBLING for approximately 1/2 inch (1 cm) of the ends regardless of their placement within the oven. I feel this indicates the wave nature of a taut string. The two stationary mounting end points of the string are the ends of the noodle, so to speak. As the microwave vibrates from one end to the other, when the wave reaches the noodle's end, its amplitude becomes zero, so no heating occurs there. The wave snaps back and forth within the noodles. This is like a radio wave emitted from an antenna. The end of the antenna is a zero point. This suggests: The noodle length probably should be a whole number of the length of the oven’s wavelength. Adjusting the noodle length should reveal a clearer pattern of high and low amplitudes, as well as a better indication of the unheated ends of the noodle. Wavelengths were measured at one time using a grid dip meter. This meter shows the high and low phases of an RF wave along a straight wire. These high and low points appear in the noodle. Please use fettuccine noodles; they are ideal for this experiment.



Figure FF333. Fettuccini Noodle Photograph
White and Green (spinach) fettuccini noodles. (Line spacing in centimeters). The tips are still flexible, and the center burnt areas break off like potato chips.



Figure XX111. Fingers Photograph

See Figure XX111. 'The fingers of an eighty-two-year-old woman's hand, five feet three inches tall. The entire hand is damaged and swollen except for the fingertips. The fingertips look like those of a 30-year-old. This is common for almost all older people. Evidence of electromagnetic wave damage from naturally occurring radio waves in the universe. Compare this photo to the undamaged tips of the noodle.

Standard microwave oven wavelength: 122 mm or 2450 MHz. Relating the oven's 1 cm at 122 mm wavelength to the undamaged length of the elderly fingertips should reveal the average damaging frequencies responsible for the human aging hypothesis: Proportion:
1 cm / 2450 MHz = (Length of undamaged fingertips 3-4 cm) / (Damaging Frequency)
Solving for Frequency. Answer: 816 to 612 megahertz. Conducting a radio scan for unidentified frequencies in this range may have some interesting results (Date and time relationships).
Some elderly say that their fingertips feel funny, buzzing, etc. Possibly the rest of their body's nerves have been damaged, leaving their fingertips more sensitive. Also: See notes on the galvanized steel Faraday shield. (Not available). Important Fact: An instrument string tuned for a particular note will also readily absorb it. Then re-emit it.

Does this have something to do with aging? I know now that it does. Wearing metal-woven clothing would shield us from this aging radiation. Brief testing shows that leaving your head or feet unshielded creates concentrated radiation areas.

Note: The hypothesized heterodyned gravity waves are rotating helix waves, not the standard electromagnetic waves found in radio waves, which are simpler sine waves. Thus, radio waves should have a minimal effect on body tissues (unless heating occurs). However, older people's toes show similar or worse damage, much like the rest of the body. Why? I might hypothesize that shoes force the toes into contact with one another, increasing the overall distance and allowing the waves to do damage. Also, toes are much shorter.
"Salt Waterbed Experiment". Add several cups of rock salt to a bag-type waterbed (not the waveless type). Then sleep on the bed for a week. One will wake up at night every couple of hours to a water wave passing through the salt water. Slow-moving synodic gravitational EM waves latch onto the conducting salt water and pull it, producing a small, wave-like motion. The danger is that the bed could leak and cause an electrical shock. Salt water will also damage the plastic bag and produce a dangerous gas after about a week. I tried this and had to replace the water bag because the smell got worse. I also could not get a good night's sleep. The wave motion I experienced occurs only during the correct Moon synodic events.



Figure HHH222. Waterbed with Faraday Cage EM shield

Shown in figure HHH22. Both the water in the bed and the metallic covers provide some protection from natural electromagnetic waves. I found that several layers of graphite cloth improve sleep because carbon is more compatible with the body. The fan on the right provides ventilation. I couldn't sleep well with the silver and copper; only the graphite cloth gave me a good night's rest. Graphite fibers can be painful if they break off. I had to coat the graphite to stabilize it and sandwich it between two sheets to prevent fibers from breaking off and getting into the bed. The cover should be grounded. I used my house ground in the electrical plug. The water should probably be grounded, but mine is not.

CHAPTER 77XX. CONCLUSION

As mentioned previously, scientists have no clear idea of how magnets or gravity works, although they claim they do. Their reasoning has a gap they cannot fill or connect objectively to a solid conclusion. Richard Feynman (1918-1988), an influential American theoretical physicist, had this to say; YouTube video: Richard Feynman: Magnets and Why FUN TO IMAGINE: https://www.youtube.com/watch?v=Q1lL-hXO27Q&t=12s

The key term in the above paragraph is the word 'solid'. Waves can have the attributes of a solid. During the research of this phenomenon a long study was undertaken find out how a free EM wave could cause the motions found at this beach. The author discovered that an early experiment that a great deal of physics was built upon was at fault. The experiment is called the 'double slit'. The double slit could not determine if a photon was a wave or a particle. Because of the confusion the experiment was given the word 'duality' to explain it. The word 'Duality' in this case means that scientists really did not know whether there is a wave or a particle caused an unusual interference pattern of light. The experiment has been a great argument for over 200 years, and no one completely solved it until now.

The below video is the current viewpoint on wave particle duality. (IT IS WRONG AND BECAUSE OF THIS THERE IS NO FORCE IN EINSTEINS GRAVITY THEORY) https://www.youtube.com/watch?v=yamh2OWgzo8 Kahn Academy.
There are tens of thousands of videos and books on this subject and they are all wrong! All the university's teach the errant concept of duality. That is a very bold statement.

The author undertook a full study of the experiment and discovered why it ends up with two dual completely different attributes which causes great confusion. To fully understand what went wrong the paper 'Duality' at synodicgravity.com must be read. Using mathematics Einstein found a way to bypass it and developed the general theory of gravity which has no force. Because of the error called duality gravity has no force. The synodic phenomenon reveals that gravity has a force. Without the help from the Holy Spirit, I could never have figured this out!

Using knowledge acquired from the phenomenon the author with some help was able to develop a concrete theory for gravity and magnetism.

Provides a relationship between gravity, magnetism, and chemistry (the combining of the elements). When the quartz in the sand pulls up, it is a quartz or water wavelength. When it's an iron oxide frequency, the rust pulls up or down. When it is a mica-matching frequency, it pulls mica up (you can see it sparkling in the water). When the mica dries, it can blow up to the upper bank. It is lightweight and can deposit many mica particles on the upper dunes, giving them an excessive sparkling effect in the sunlight. When it is an atmospheric (water) frequency, it pulls on the air and influences the weather. When it is a human body frequency, it can be felt.

If one looks closely at this phenomenon, along with the guidelines written here, it is difficult to deny. The author concluded that some hidden interaction (a unique collision or transfer of force in the case of the rotating helix) exists between electromagnetic waves of similar wavelength. Briefly, this requires extending the rules of superposition to include an energy interaction, while still allowing them to pass through one another unaffected. See the paper on 'Duality'.

The Doppler heterodyning calculations concluded the gravitational wavelength at approximately .00713 Angstroms (7.13 x 10-13 meters). The neutron and proton are the basis for atomic weight and stoichiometry (how chemicals combine by their whole-number atomic weight). This is how elements are weighed. It should become clear that these particles may be related to the wavelength of gravity. This wave cannot be detected directly because it passes through everything (including the instruments used to detect it), nulling the results and altering the experiment's outcome. If the rotational wavelengths of the proton and neutron are slightly different, two gravitational wavelengths are possible.

Beyond its pulling force, it is hidden if one tries to detect the wavelength directly. The author believes the gravity wave is emitted from the proton and/or neutron and becomes the ether field or a new field. The rotating helix wave passes through everything, enabling inertia, length contraction, time dilation, and the bending of light. The rotating helix wave concept is easily understood but requires enhancing the rules of superposition, which then allows complete comprehension of the double slit and wave-particle duality.

Hypothesis: Gravity helix waves distort or warp the aether field, and this warp curves the light path. Mathematical terms can be added to Newton's theory of gravity to account for the bending of light.

The author sincerely believes that once this is understood as a gravitational phenomenon, some difficult physics mysteries become easier to understand. Since this wave passes through everything, and the particles of matter (related to mass) are the source, it is not unreasonable to assume the wavelength of gravity is related to the neutron and/or proton.

Please see the theory files on these subjects at synodicgravity.com
Accepting that an electromagnetic wave can transmit a minute force gives us insights into:

1. How the aether field, composed of gravitational waves, can be undetectable by the Michelson-Morley experiment
2. Looking at superposition and interference in a new light
3. Understanding inertia and magnetism

4. Gravitational lensing.
5. Duality
6. Time dilation and length contraction are easy to understand.
7. Results found in EPR experiments.
8. Chirality: Since it is emitting a helix from one direction and is in a magnetic helix field. gives it one direction of alignment or its handedness. i.e., the helices align up.

In figure RRR12, a focused beam of light from a laser suspends and holds a particle in midair. The video below on optical tweezers supports the hypothesis that a free electromagnetic wave can produce a force. The optical tweezer also works in a vacuum. Radiation pressure is often used to explain it, although other explanations exist. The author believes the force lies in the electromagnetic field, as it would support the synodic field theory of gravity and electromagnetism. It also seems to negate the long-held belief that the photoelectric effect requires a particle. An electromagnetic wave can do the same.



Figure RRR12. Optical Tweezers Particle Suspended in Mid Air

Optical Tweezers- If light was composed of particles, a traveling particle beam of light could not hold a particle in its beam. It would be knocked away.
This one by Styropyro is best;
Levitating DIAMONDS with a laser beam!! (demonstration of Nobel Prize in Physics 2018)
https://www.youtube.com/watch?v=Sq7GaO8iqu8 (at 4 minutes)

Physics Paper: Optical Tractor Beam with Chiral Light:

https://www.researchgate.net/publication/270906155_Optical_Tractor_Beam_with_Chiral_Light

(This is contrary to Einstein's curved space-time general theory).
After studying the phenomenon, I came up with this conclusion. Somehow an electromagnetic wave must transfer a force. This led me to the wave or particle study of duality.

https://www.youtube.com/watch?v=y-Tp5oswnNA
The photo-electric effect does not require a particle.

Traveling ocean Waves crashing into another
Video: 'Giant waves at Point Lonsdale (interference effects)' by Ben Ryder
https://www.youtube.com/watch?v=6EKZKaWhufI

There are two basic types of water waves. One has an up-and-down motion as it travels across a lake when a pebble is thrown in. Here, the water in the wave moves only up and down, forming ripples that spread outward across the lake surface. It has the appearance of propagation. It cannot have a breaking crest like traveling ocean water waves have. The other type of wave is generated by pushing a large section of water, like at an ocean beach. Both types appear to propagate, but the waves found in lab ripple tanks are simple, static (non-propagating) standing waves and are errantly related to light waves. The ripple tank experiment should be modified to the collision of moving water waves, not the stationary standing waves found in ripple tanks. Only then can correct assumptions be made about light waves in which the photons travel. Because they can bounce off each other, it indicates they may transmit a force.

Further evidence that EM waves can transmit a force: Here we find an example of radio waves bouncing off one another. A photon is similar to a radio wave, only of a different wavelength.
Below link: ScienceX.com 'Do radio waves bounce of each other':
sciencex.com/wire-news/166501095/do-radio-waves-bounce-off-each-other.html
-or- Do Radio Waves Bounce Off Each Other?.

Hans G. Schantz states while describing radio waves emitted from a special antenna.
"In the case of mirror-image waves with identical waveforms, all the energy associated with the two waves comes to a rest and then changes direction. If the interaction is purely destructive interference, the electric field goes to zero, the impedance goes to zero, and the energy associated with each wave bounces off the virtual short created by the superposition. If the reaction is purely constructive interference, the magnetic field goes to zero, the impedance becomes infinite, and the energy associated with each wave bounces off the virtual open created by the superposition. " See also Ref:
FERMAT, Vol. 4, No. 2, July-August 2014 [ART-2014-Vol4-Jul_Aug-002]. See also http://arxiv.org/abs/1407.1800/

The author built an artificial gravity generator based on the rotating helix EM wave. It appeared to form ripples on a calm lake. It was not coherent enough to pull waves along. I have a new design,

not built yet, but it requires a klystron tube. I hope to get some help building it. If you are interested and know this type of electronics, let me know.

The theory and further work will be posted at: https://synodicgravity.com/

Before God there was a small amount of primordial soup, 'the aether'. And the aether became God, and God created the universe of himself. The aether is still part of God.
Explanation: (Before God created himself, the aether was a small volume of random, oscillating electromagnetic fields.) A self-building structure acquired intelligence from a minute random oscillating electromagnetic field. No longer random, he (I am that I am) built the majestic universe, with angelic beings to maintain it. Therefore, evolution makes such a strong manifestation, yet these spiritual beings exist to correct and build. This supports the existence of God, not the reverse. For the brokenhearted: God has a spirit that comes to comfort us in times of trouble.

REFERENCES

1. Musha, T. 2008. "Possibility for the Detection of Gravitational Waves by the Electrogravitic Property of a Dielectric Material" Infinite Energy, 14, 82 November/December
2. Dadd, R. 1997. "T.T. Brown's Rock Electricity," Electric Spacecraft Journal, 20, 21-25.
4. Meeus J. 1991. "Astronomical Algorithms" ISBN 0-943396-35-2
Computer program: Moon.bas (see companion disk).
6. Diurnal Extremely Low Frequency at sunrise. DTIC Defense Technical Information Center Document#: ADA060095
8. http://encycl.opentopia.com/term/Ring_laser_gyroscope
9. http://en.wikipedia.org/wiki/Cat%27s-whisker_detector
10. MoonSked by GM4JJJ
Moon Sked download (Moon Doppler Data): http://gm4jjj.co.uk/MoonSked/moonSked.htm
11. https://www.youtube.com/watch?v=RRi4dv9KgCg 'MIT video of total wave cancellation or destructive interference
12. http://www.saltwatertides.com/dynamic.dir/oregonsites.html Phone app: saltwatertides.com
14. The rusty bolt effect. - Guy wires heterodyning. Rust as a natural diode. Pick up high frequency radio signals. https://en.wikipedia.org/wiki/Rusty_bolt_effect
https://everything.explained.today/Rusty_bolt_effect/

45. Crisis in Cosmology: https://www.scientificamerican.com/article/how-a-dispute-over-a-single-number-became-a-cosmological-crisis/

97. Grigsby, T 1995. "Examining Complex Atomic Spectra for Fundamental Wavelengths"

DOI: 10.6084/m9.figshare.29318405

99. Moon Parabolic Orbit Heterodyne YouTube video.
https://www.youtube.com/watch?v=X2o_Jz_GyZs

50.. Moon apogee perigee dates calculator https://www.fourmilab.ch/earthview/pacalc.html

51. NOAA: Tide Table PDF (Click Download) LST= Local Standard Time
Choose 9439040 Astoria (click - annual published tide tables)
https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9439040
https://tidesandcurrents.noaa.gov/

https://tidesandcurrents.noaa.gov/map/index.html?region=Oregon
Below includes the Moon phase.
https://www.usharbors.com/harbor/Oregon/Astoria-or/tides

52. Modern radios use the heterodyning principle.
https://en.wikipedia.org/wiki/Heterodyne122

122. Saros Cycle Manuscript: https://arxiv.org/ftp/arxiv/papers/1306/1306.0451.pdf
Climate variability according to the triple Saros cycle gravity cycles.
By: William R. Livingston Olympia Washington

The Principle of Relativity By: H. A. Lorentz, A. Einstein, H.Minkowski and H. Weyl

Videos of phenomenon:
https://www.youtube.com/watch?v=WBvhrvFOtOg
http://youtu.be/kP6i5us9vac

Gravity Wavelength Calculator in synodic3 directory

Julian Date Converter. http://www.onlineconversion.com/julian_date.htm . Universal Time.

Einstein admits the existence of the ether: http://www.mu6.com/einstein.html
http://www.infinite-energy.com/iemagazine/issue38/einstein.html

http://redshift.vif.com/JournalFiles/V08NO3PDF/V08N3GRF.PDF

Rare Atmospheric Gravity Wave Phenomenon Captured on Satellite:
https://www.youtube.com/watch?v=B0bnOKw9K

The Weight of Nothing: https://www.youtube.com/watch?v=szI-HpOScFQ
The expansion of space beyond the cosmos is hypothesized.

Beyond the cosmos there is nothing (the vacuum of space) and it somehow causes the outward acceleration of the mass of the cosmos. This force opposes the force of gravity. What could be causing it?

Carmarthen Bay: A lot of shipwrecks and rust in sand. Same phenomenon.
51.725376, -4.370785 GPS coordinates. Locator: IO71tr. One ham operator.
https://www.youtube.com/shorts/KHmkURoAedc

NOTE: Complete theory and further proofs will be posted at: https://synodicgravity.com

James Maxwell (1831-1879) developed a comprehensive, theoretical and mathematical framework of electromagnetic field theory, embracing all types of energy systems (accepting gravity and nuclear forces) within the famous "electromagnetic wave spectrum." Albert Einstein called Maxwell's achievement "the most profound and most fruitful that physics has experienced since the time of Newton."

I keep a copy of James Maxwell's prayer on the wall of my laboratory. I know/believe that the Holy Spirit guided many of these famous scientists, albeit somewhat unknown to them. Here is his prayer:

"Almighty God, who hast created man in thine own image, and made him a living soul that he might seek after thee, and have dominion over thy creatures, teach us to study the work of thy hands, that we may subdue the Earth for our use, and strengthen the reason for thy service; so to receive thy blessed word, that we may believe on him whom thou hast sent, to give us the knowledge of salvation and the remission of our sins. All of which we ask in the name of the same Jesus Christ, our Lord."

James Clerk Maxwell.

ADDENDUM

The rotating gravity helix wave concept is easy to understand, but grasping wave-particle duality fully requires enhancing the rules of superposition.
Double Slit Debunked 6: https://www.youtube.com/watch?v=_OHLqM8P0Mo&t=1362s
See the paper on 'Duality' at SynodicGravity.com.

At the distance we orbit the Sun, the Sun's gravitational pull is 0.0006 times the strength of Earth's gravity on the surface. The Sun's tidal force here on Earth is less than half the moon. At perigee (the closest to Earth), the Moon's tidal gravitational force is nearly twice as strong as at apogee.

Gravitational wave canceling. Dr. Eugene Podkletnov
https://www.youtube.com/watch?v=AgyAFElQZcU

High voltage multi-frequency antigravity YouTube video: "The Hutchinson Effect"
https://www.youtube.com/watch?v=elSWT_goNTM
Somehow, John Hutchinson has used several high-voltage sources to cancel the effects of gravity. His video shows various objects, including a cannonball levitating.
https://www.youtube.com/watch?v=ufcsOjy9D1c

Conjunctions of Moon with Planets
I am not certain of these events. However, I witnessed a Uranus and Moon alignment on 9-24-2021 an unusual spectacular event with many puffy clouds and a messy beach, and an exceptionally low tide.

Guides to the Night Sky: https://in-the-sky.org/
Planetary alignments may cause an increase in the events.
https://eclipse.gsfc.nasa.gov/SKYCAL/SKYCAL.html (this one is the better)

Gravitational forces felt here on Earth from all planets in terms of the Moon's force:
Moon: 1
Sun: 0.4
Venus: 6 x 10-5
Jupiter: 3 x 10-6
Mercury: 4 x 10-7
Saturn: 2 x 10-7
Mars: 5 x 10-8
Uranus: 3 x 10-9
Neptune: 8 x 10-10

The author built a crude but working prototype artificial gravity-wave generator. The output is a rotating, rotationally polarized microwave. The device can form small surface ripples about 50 feet out on a normally clear lake. The device was not stable/coherent enough to make propagating water waves, only ripples.

CRITICISMS OF THE CURRENT THEORY OF GENERAL RELATIVITY

See the YouTube video: "How we know that Einstein's General Relativity can't be Quite Right"! https://www.youtube.com/watch?v=Ov98y_DCvRY By: Sabine Hossenfelder. There are many others that reject Einstein's General Theory of Gravity.

Why the Theory of Relativity Doesn't Add Up (In Einstein's Own Words)
Dialect. https://www.youtube.com/watch?v=HduM03ZyyKI

RELATIVITY DEBUNKED By MindShock:
https://www.youtube.com/watch?v=WABe9pbA-Hc

Criticism of the theory of relativity
Wikipedia: https://en.wikipedia.org/wiki/Criticism_of_the_theory_of_relativity

The Institute of Art and Ideas
Gravity and the Universe |Sabine Hossenfelder, Erik Verlinde, Priyamvada Natarajan (FULL DEBATE)
https://www.youtube.com/watch?v=1j0Xh9XM34M

The Most Fundamental Problem with Gravity is Solved (Very Important Document)
(Newton's Bucket and Mach's Principle.
https://www.youtube.com/watch?v=BpQ0T7rDWm0

The Axis of Evil:
Our solar system seems to be aligned with the cosmic microwave background radiation. Presently, cosmologists have no explanation for this. However, the Synodic Theory has an obvious answer. The "Axis of Evil" in the cosmic microwave background {Unsolved Mystery (dubbed the axis of evil). By: Dr. Beck
https://www.youtube.com/watch?v=SDRNvhbrz3k

Does the Axis of Evil Scare You? By: The Action Lab.
https://www.youtube.com/watch?v=yJ5wQF093Rc

This Axis can be explained by gravity wave heterodyning. All the planets of our solar system have a common axis. The plane of the planets in our solar system would then produce a radiation axis. Synodic electromagnetic (radio) waves similar to the background radiation would naturally align with the plane of our solar system. This would provide good proof for the synodic theory. Also: The background cosmic radiation isn't just 2mm wavelength; it covers a much broader spectrum.

By: Anton Petrov.
The below can also explained by the Synodic Theory of Gravity.
76 Minute Long Pulses Coming From the Central Black Hole...Why Though?
https://youtu.be/MuBdajXtEZw
Visible in Many Different Frequencies. (No current explanation):
Wow, Something Is Orbiting the Central Black Hole At 100,000 km/s #space #astronomy #blackhole (youtube.com)

Many different frequencies are emitted. This is how the Synodic Gravity phenomenon occurs, except that it involves the Moon's orbit around Earth and Earth's orbit around the Sun. Watch these videos and find out that cosmology has no explanation. It is simply due to gravitational waves, as explained in this document.

Mystery Cosmic Static May Cast Light on Formation of First Stars:
https://www.scientificamerican.com/article/cosmic-radio-background/

Curt Jaimungal See minute 6.xx "Where the reality and the proof matches."
She Solved a 30-Year Physics Mystery by Accident

Gravity affects the elements. Contrary to special relativity, this indicates a type of connection force. Gravity alters the Dynamics of a phase change:
https://physics.aps.org/articles/v17/104?utm_campaign=weekly&utm_medium=email&utm_source=emailalert

WHAT IS MATTER? http://www.scientificamerican.com/article/what-is-matter/ By Erwin Schrodinger Scientific American September 1953 Schrodinger concludes in the final paragraph: The wave-particle dualism afflicting modern physics is best resolved in favor of waves, in summary 'particles are constructed from waves'. Here we may conclude that waves under some circumstances may take on particle like attributes such as collision and transfer of momentum or forces. And such we might at the very least, consider such attributes in wave interference experiments when the waves take on particle like attributes.

GLOSSARY HAVE TO ALPHABETIZE

The following terms are used throughout the book and are introduced here so the reader can follow the observations, prediction method, and hypothesis.

Electromagnetic waves: A form of energy that includes radio waves, light, and other related waves.

Doppler shift: A change in observed frequency caused by motion between a source and an observer, similar to the change in sound as a vehicle passes.

Earth-Moon-Earth (EME) communications: A radio method that bounces a signal off the Moon and can provide useful Earth-Moon distance and motion data.

Topocentric Earth-Moon distance: The distance from a specific observer on Earth to the Moon, adjusted for Earth's rotation and the observer's location.

Soliton waves: Self-sustaining water-wave forms that can appear to hold shape or direction longer than ordinary ripples.

Heterodyning: The mixing of two waves to produce additional sum and difference frequencies, commonly used in radio reception. Heterodyne is what all modern radios (even your cell phone) do to receive a signal. Two waves are added together, and that makes two more waves, one wave (the voice) is in the audio range. Musical instruments do something similar, and they are called beat frequencies.

Cat's Whisker detector: An early crystal radio detector that used a fine contact against a mineral crystal to detect radio signals.

Superposition

GRAVITY'S SYNODIC WAVE

This unusual gravitational phenomenon occurs frequently in the sand on the Oregon near Astoria Oregon. As revealed on the front cover, the dark patch areas are magnetic particles trying to stand on their ends, much like iron filings do when sprinkled on a magnet. The phenomenon has been correlated to the orbital motions of the moon and earth's orbits. The phenomenon has many unusual attributes depending on the date and time. Defying the rules of sedimentology where the heavy elements go downward, astonishingly the heavier magnetic particles can be pulled upward from the depths of the sands turning the entire beach almost black in color. Then several hours later the particles are pulled downward resulting in a normal sand colored beach. Mica particles also at times are pulled up to the surface, then wind can blow them upon the bank making the bank sparkle more than normal. The wet sand may puff up making the beach difficult to walk upon. Self-sustaining Soliton water waves occur pulled around by mysterious gravitational forces. Unusual water undulations and unidentified radio frequencie may appear. A wide band of deep sand pools occurs on predictable intervals.

Occurring during night or day. Known as the "Grave yard of the Pacific" the source of the magnetic particles is from thousands of shipwrecks in the Columbia river bar. The orbital dates of the moon's apogee and perigee center the phenomenon and aid predicting the events. Years of research leads to some amazing conclusions about gravity. Calculations were made from radio frequencies correlated to the groove to groove distance and a gravitational frequency is derived. The resulting wavelength supports the rules of stoichiometry. A unique rotating helix electromagnetic wave type is associated to the phenomenon. Puts the force back into gravity.

By, Jim Olsen

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