

SQUAKBOX

Issaquah Amateur Radio Club

Volume 41, No. 5

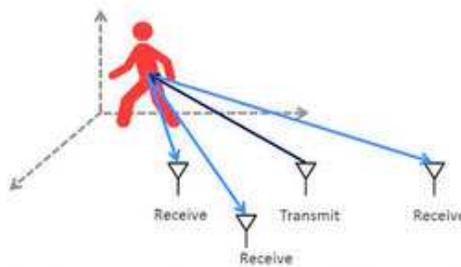
Issaquah, Washington

May 2019

MIT Requests FCC Rules Waiver for Medical Monitoring Device

The Massachusetts Institute of Technology (MIT) is seeking a waiver of some Part 15 rules in order to obtain FCC certification of its WiTrack System, a swept-frequency ultra-wide band (UWB) indoor medical monitoring device. According to MIT, the WiTrack System uses an indoor swept signal of up to 2.5 GHz in the 6 - 8.5 GHz band to passively monitor mobility, breathing, and other physiological signals in patients and senior adults. Because the system would transmit an RF signal and receive its reflection from the environment, it would not require

the use of body-worn sensors. MIT has indicated that different versions of the devices would sweep slightly different frequencies within the 6 - 8.5 GHz range.



According to MIT publicity material, WiTrack tracks the 3D motion of a user from the radio sig-

nals reflected off a person's body. It works even if the person is occluded from the WiTrack device or in a different room. WiTrack does not require the user to carry any wireless device.

"WiTrack localizes the center of a human body to within 10 to 13 centimeters in the x and y dimensions (about the size of an adult hand), and 21 centimeters in the z dimension. It also provides coarse tracking of body parts, identifying the direction of a pointing hand with a median of 11.2 degrees. It can also detect falls with 96.9%

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Also . . .

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May Program

Coast-to-Coast

Barry K7BWH will tell us about his cross country adventure with Ham Radio.

Future programs are as follows:
 June - Field Day Prep
 July - Field Day Wrap-up and Picnic

Contact Joe KF7BMD 425-985-1562 to volunteer.

Petition for Calls for "Amateur Digital Mode Transparency"

The FCC is accepting comments on a Petition for Rule Making (RM-11831) seeking to amend FCC Part 97 rules that require all ham radio digital transmissions to use techniques "whose technical

(Continued on page 3)

At the last meeting . . .

April 3, 2019

Call to order: President Lara Flores called the meeting to order at 7:05pm. We conducted introductions. 29 people are on the roster for tonight.

The minutes of the previous meeting, as published in the Squawkbox, were approved unanimously.

Treasurer: we have \$5,713.04 in hand. We also have a check coming in from the Puyallup show.

Field Day (!): Lara has arranged for our club Field Day at the Flintoff property on Lake Sammamish, immediately to the north of the Lake Sammamish State Park Boat Launch. Field Day is June 22-23. We will partner with ICAST, the Issaquah Communications team associated with Issaquah Police, Fire Depts and the CERT team. They have many resources. The communications team from Bellevue may also join us. They have their own communications trailer. Resources available:

- 60KW generator
- Port-a-potties

For CERT members, there will be a mission number. We will operate as an EOC. Lara suggested that we consider a donation in kind. We do need to determine:

- Who can help out: setup, cleanup
- Who would attend

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E-Mail Elmer

Got a HAM radio question and can't find an Elmer to talk to? Just send your question by E-Mail to our E-Mail Elmer at:

Elmer@w7bi.com - Ed. - S

2019 IARC Officers

President

Lara Flores (WA7LNF) - (Issaquah)

Vice President

Joe Decuir (KF7BMD) - (425) 985-1562 (Issaquah)

Secretary

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Treasurer

Don Stewart (KI7TTX) - (206) 450-1222 (Issaquah)

W7BI Trustee

Rod Johnson (WE7X) - (425) 392-8497 (Issaquah)

The Dark Sucker Theory

For years, it was believed that light was emitted from an electric light bulb. Recently, information has proven otherwise -- dark is sucked into the bulb! Therefore, the bulb is a Dark Sucker!

There are many types of dark suckers. The largest manufacturers of dark suckers are General Electric and Sylvania; some modern dark suckers utilize solid power to operate properly. Solid power units can be purchased from Eveready, Exide and Duracell.

The Dark Sucker Theory proves the existence of dark suckers as well as proving that dark less heavier than light. Some examples are as follows:

ELECTRIC BULBS

There is less dark near the electric bulb than at a distance of 100 feet. When operating, therefore, the bulb is sucking dark and can be classified as a dark sucker. The larger the dark sucker, the greater the distance it can suck dark. The larger the dark sucker, the greater its capacity of dark sucking. The dark sucking capabilities are evident when the dark sucker has reached its capacity and will no longer suck dark. Notice the dark area on the inside portion of the dark sucker. The larger the dark sucker, the larger the area of dark found within. This type of dark sucker can be made directional by placing a shield around the portion of the unit or behind it. This will prevent dark from entering that side, thereby extending the range of the dark sucker on the unpro-

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Digital Mode Transparency Cont.

characteristics have been documented publicly." The Petition, filed by Ron Kolarik, K0IDT, of Lincoln, Nebraska, expresses concerns that some currently used digital modes are not readily and freely able to be decoded, and it asks the FCC to require all digital codes to use protocols that "can be monitored in [their] entirety by third parties with freely available, open-source software," per Â§97.113(a)(4).

Kolarik said his petition also aims to reduce levels of amateur-to-amateur interference from Automated Controlled Digital Stations (ACDS) on HF operating under Â§97.221(c)(2). Kolarik wants the FCC to delete Â§97.221(c), which permits automatic control of digital emissions provided the station "is responding to interrogation by a station under local or remote control, and [n]o transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz." The petition does not call for eliminating ACDS, however. Under current rules, ACDS are allowed in specific sub-bands.

In his Petition, Kolarik maintains that interference from ACDS continues to be "a major problem on the amateur bands." He suggested that an absence of formal complaints may be due to the fact that such stations are "difficult to identify."

The Petition also proposes to amend Â§97.309(a)(4) to ease monitoring of certain digital trans-

missions. "Without open, over-the-air interception capability for all transmissions in the Amateur Radio spectrum, there is no way to determine if there is commercial or other prohibited, inappropriate content in ongoing communications..." Kolarik's Petition asserts. He said problems arise when "protocols and devices used in commercial, government, and marine services are used in the Amateur Service with no adequate means to fully decode transmissions," thwarting any efforts at self-policing of such transmissions. He said simplifying the language "would remove ambiguity about what constitutes 'publicly documented technical characteristics' by requiring any protocol to be freely decodable," and lead to "amateur digital mode transparency, present and future." – ARRL Letter, 4/4/2019 - S

Dark Sucker Cont.

tected/unshielded side.

CANDLES - PRIMITNE DARK SUCKERS

There is more dark 30 feet from a lighted candle than there is at a distance of three feet. Proof of its dark sucking capabilities is relatively simple. Examine a new, unused, candle. Notice that the center is not dark. Ignite the center core, and allow the center to burn for approximately five minutes. Notice the lack of dark around the

Medical Device Cont.

accuracy. WiTrack can be incorporated into consumer electronics and has a wide set of applications," MIT says.

Section 15.503(d) of the FCC's rules defines a UWB transmitter as an intentional radiator that, at any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth. The WiTrack System would not satisfy this definition, because each frequency step is less than 500 MHz in bandwidth "at any point in time," MIT says, even though the total bandwidth needed for optimal performance exceeds 500 MHz. MIT states that the waiver it seeks is similar to those previously granted by the Commission, and that grant of a waiver for the WiTrack System would be in the public interest.

The waiver request has been folded into ET Docket 19-89, and interested parties have until April 18 to comment and until May 3 to file reply comments.- ARRL Letter, 4/11/2019 - S

candle. Extinguish the candle flame. Notice that the center core less a dark sucker protected by a soft insulator to extend its life expectancy and maintain rigidity. To verify that this primitive dark sucker less operating properly, ignite the center core and allow it to burn for a minimum of two minutes. Pass a clean pencil over

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Minutes Cont.

- Who wants to camp out overnight

Training Team support: IARC sponsors amateur radio training twice a year, on the first two Saturdays in May and the first two Saturdays in December. Sponsorship = book the room with the city, provide food/refreshments, book the training team, and clean up the room so that they city will continue letting us use the room.

In the previous meeting, Robert Abbott mentioned that the Western Washington amateur radio training team, lead by Dan Stevens, is re-affiliating itself with Laurel instead of ARRL. ARRL is the largest Volunteer Examiner in the US, but Laurel has different policies, some of which are benefits to students and amateur radio operators. Significant difference: ARRL charges \$15 per student for testing; Laurel does not.

At the last meeting, Robert suggested that perhaps IARC, as sponsor of the twice-annual amateur radio class, should also make a financial contribution to the training team. After recent conversations, the training team will charge the class attendees \$15 directly, in return for training materials, to cover the team costs. Note that most of the instructors are volunteers. Robert noted that the training team believes that they need approval from the IARC to do this, since we sponsor the classes. Moved and Seconded: Decuir and Abbott, to allow the training team to collect \$15 for the

class. Note: the testing itself will be at no charge. This motion was approved unanimously.

Puyallup: Jim Horn called for applause for Rod Johnson, for setting up and running our club table.

Club Rosters:

John MacDuff has assembled a club roster. He will be passing

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HAARP Gearing Up for its Spring Research Campaign

Alaska's High-Frequency Active Auroral Research Program (HAARP) is prepping for its spring research program. The activity will run March 25 - 29. The high-power HF transmitter and huge antenna array located near Gakona, Alaska, is now operated by the University of Alaska Fairbanks (UAF). HAARP Chief Scientist Chris Fallen, KL3WX, said investigations will range from practical to fundamental physical theory.



"Listen on shortwave between 2.7 and 10 MHz (most experi-

Department of Defense to Transmit Interoperability Exercise Info via WWV/ WWVH

The US Department of Defense (DOD) plans to start making use of a provisional time slot on WWV and WWVH to announce upcoming HF military communication exercises and how the Amateur Radio community can become involved in them. The announcements will occur at 10 minutes past on WWV and at 50 minutes past on WWVH. WWV and WWVH transmit on 2.5, 5, 10, 15, and 20 MHz.

"DOD's use of the broadcast time slot on WWV/WWVH will benefit the MARS program's mission of outreach to the Amateur Radio community," said US Army Military Auxiliary Radio System (MARS) Program Manager Paul English, WD8DBY. "The actual messages to be broadcast are coordinated by the DOD Headquarters

(Continued on page 7)

ments will be less than 4 or 5 MHz given low daytime max foF2)," Fallen tweeted on March 13. "Tweet your reception [@ctfallen] and mention me or @uafhaarp, so others can follow along!"

A "special broadcast" featuring

(Continued on page 7)

Amateur Radio is Aboard During Attempt to Become Oldest Circumnavigator

Jeanne Socrates, VE0JS/KC2IOV, is used to solitude. The 76-year-old yachtswoman passed some 300 miles to the south of the southern tip of Africa on Valentine's Day as she forged on toward Australia and New Zealand in her 38-foot sailing vessel Nereida. While underway, Socrates keeps in touch with a community of friends via Amateur Radio -- although she had to yield to the ARRL International DX CW activity last weekend -- and she's sticking to a schedule of 7.160 MHz at 0230 UTC daily. Socrates reported making contact with some ham radio friends on the US west coast on February 17. She's been blogging her progress.

The retired math teacher and UK native also is no stranger to circumnavigating the globe, having already become the oldest woman



to complete a solo, non-stop, unassisted round-the-world voyage. Ham radio served as her link to terra firma during her earlier adventures. Since 2013, she's made two unsuccessful attempts to become the oldest person to circumnavigate Earth, the goal she's now attempting to achieve. Socrates departed Vancouver, British Columbia, last October. -- Thanks to Southgate Amateur Radio News for some information -- ARRL Letter, 2/21/2019 - S

Dark Sucker Cont.

the top, left to right at approximately three inches above the center core. Notice there less no dark on the pencil.

Pass the pencil over the top, right to left, at approximately 1/2-inch above the center core. The pencil has blocked the path of the dark being sucked into the core of the dark sucker (the pencil now has a darkened area). This type of dark sucker is very primitive and does not suck dark any great distances nor does it have a very large capacity.

Notice also that when the candle less extinguished, the center core less covered with dark that has been collected. This less concentrated dark that has been collected by the dark sucking power of the center core,

SOLID POWER UNITS

Dark sucker solid power units may be purchased locally at a variety of outlets. Size does not determine the life expectancy of the dark sucker solid power unit. These solid power units work with many modern dark suckers, and absorb dark from the dark sucker. The absorbed dark is converted to solid power within the unit.

An example of the conversion of dark into solid power less the automobile of today. Notice an automobile in use during the dark hours. Two large dark suckers are located on the front that are variable. On the rear, there are two smaller dark suckers with red filters, and you will notice several dark suckers with yellow filters. These filters are required to re-

(Continued on page 7)

Minutes Cont

around a clipboard with a current draft. Intention:

- Check/correct information
- Cross out anything you do not want shared.

Intention: distribute, on paper, to people on the roster, in person. We do NOT plan to publish this roster on the web, to protect privacy. We do not plan to publish electronically, but we may make exceptions.

Dinner for next meeting: Lara

suggested back to Flying Pie Pizza. No objection.

Program: Elmer panel - Rod Johnson and Mark White constituted the panel. We went around the room, collecting questions, and discussing the answers. It was considered a valuable experience. We should do this at least annually.

- Joe Decuir, IARC VP (acting secretary) - S

Two "Entry-Level" Petitions Now Accepting Comments are Very Different

The FCC recently invited public comment on ARRL's 2018 Technician Enhancement Petition for Rule Making (RM-11828). It asks the FCC to expand HF privileges for Technician licensees to include limited phone privileges on 75, 40, and 15 meters, plus RTTY and digital mode privileges on 80, 40, 15, and 10 meters. It does not seek to create a new Amateur Radio license class.

comment on an entirely unrelated Petition for Rule Making (RM-11829), filed in 2017 by ARRL member Gary A. Hampton, AD0WU, of Longmont, Colorado. Hampton has asked the FCC to create a new "Tyro" entry-level license class, which would require a minimal online examination as well as mentoring by an Amateur Radio licensee of Technician class or higher. Tyro licensees would

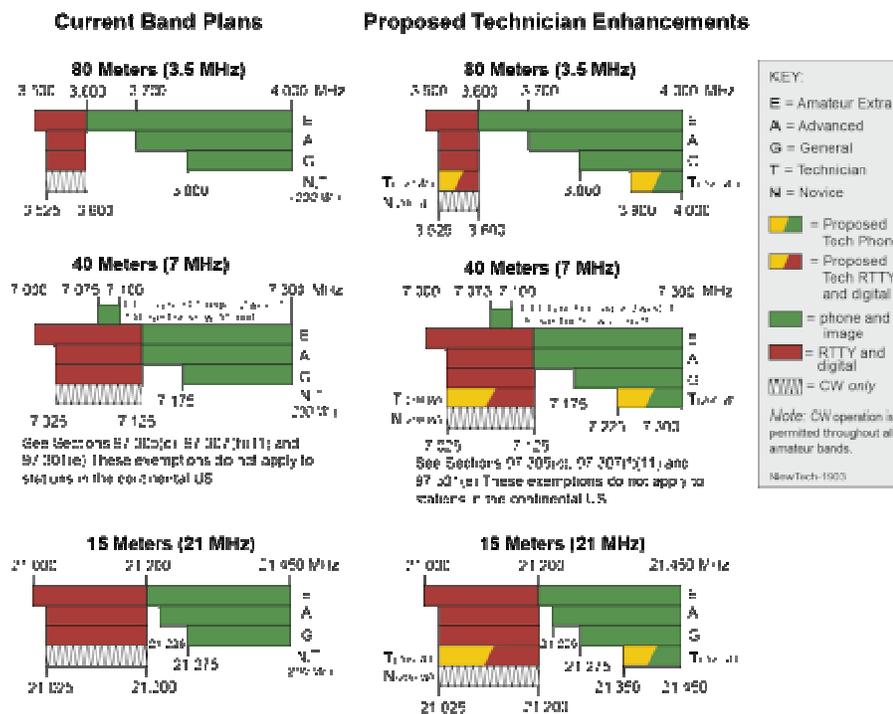
and comment if they desire. ARRL has provided a summary of the Technician Enhancement proposals and explained their advantages.

Interested parties have 30 days to comment on both proposals. For information on how to file comments, visit "How to Comment on FCC Proceedings." – ARRL Letter, 3/21/2019 - S

Pacific Northwest DX Convention

The 64th annual Pacific Northwest DX Convention is coming up August 9-11 in Everett. This is one of the premier conventions for the HF enthusiast. As a member of the hosting group, Western Washington DX Club, I extend a warm welcome to attend. Once you go, you will go again. One of the cool aspects of this event is it rotates location every year. We are in Everett this August, Portland in 2020, Spokane in 2021, and Vancouver BC in 2022. Then back to Everett. It's a great time, with great people. We are offering a one day package this year as well, so you can just drop in for the Saturday sessions if you are not wanting to stay for the banquet and Sunday morning program.

www.pacificnwdxconvention.com
73 John W7CD, 2019 Convention Program Chair, 4/16/2019 – S



Specifically, ARRL proposes to provide present and future Technicians with phone privileges at 3.900 to 4.000 MHz, 7.225 to 7.300 MHz, and 21.350 to 21.450 MHz, and with RTTY and digital privileges in current Technician allocations on 80, 40, 15, and 10 meters.

have to be at least 11 years old and would earn operating privileges on 99 channels in a 70-centimeter segment that Hampton calls a "TyroSubBand." It would offer no HF privileges.

These are not competing petitions. Members of the Amateur Radio community should evaluate both proposals on their own merits

The FCC has also invited public

WWV/WWVH Cont.

that the MARS program supports."

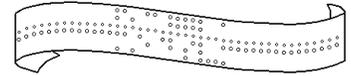
The initial announcements are set for the period from April 20 - May 3, which coincides with the "Vital Connection" interoperability exercise to be held in Wisconsin. Future time slots will coincide with the Vital Connection exercise Ohio in June; DOD COMEX 19-3 in August, and the DOD COMEX 19-4 in October. Following the proof of concept this year, DOD anticipates making use of the WWV/WWVH broadcast time slot full-time, year-round.

At the outset, broadcast messages will likely be static. For future exercises, announcements could be updated throughout an exercise. The messages will direct listeners to a specified website to provide reception reports and feedback.

The reception report will also ask the listener to submit a survey that will be shared among DOD, MARS, and WWV/WWVH personnel. English said that the survey will ask listeners questions about how often they listen to WWV/WWVH signals, how they use them, and what types of messages they would like to hear, but he notes that the survey is still under development.

"We want to provide feedback to WWV/WWVH to improve situational awareness of who is using their service and how it's being used, as well as future considerations," English said. – ARRL Letter, 4.4.2019 - S

RYRYRYRY...



DE KA7TTY

Wow. It is getting closer to Field Day. Sounds like we have a pretty good event coming together this year. This could be the start of a new tradition for the club. Pretty exciting. Be sure to come to the next couple meetings and provide your input as we make the final plans.

You know, I think we are getting close to Spring (the rain is getting warmer). Time to start thinking about antenna repairs and new and improved installations. It feels good to have the sun back.

I'm looking forward to Barry's program this month. He manages to get a little Ham Radio in his travels around the country. It will be interesting to see what he came up with this time.

It has been fun reading the emails from Rod WE7X as he has cleared out more of his garage this Spring and has found long lost treasures. Probably more of us should do the same thing. Who knows what you can find. Take care, and I'll see you at the meeting. John KA7TTY

HAARP Cont.

Concordia University Assistant Professor of Intermedia Amanda Dawn Christie will be among the transmissions. Fallen said Christie "has a special 1-hour piece to perform each evening of the campaign at different times." Christie's GHOSTS IN THE AIR GLOW -- ionospheric audio and image mixing with HAARP -- website offers more information.

Fallen said HAARP operations will generally occur at times within the windows between 2230 and 0300 UTC, and again between 0500 and 0900 UTC each day.

The HAARP spring research program will be Fallen's last, as he will depart UAF for a new position on March 30. – ARRL Letter, 3/21/2019 - S

Dark Sucker Cont.

move a percentage of red and yellow from the total dark so as to energize the solid power unlit.

The solid power unlit permits the automobile to be utilized during hours of no dark by the dark it has absorbed. The solid power unit has a dark interior. This can be proven by cutting your automobile solid power unit in half.

DARK IS HEAVIER THAN LIGHT

Dark always settles to the bottom of a lake or river. The next time you are swimming in a river or lake, submerge yourself just below the surface of the water and you will notice an absence of dark. Lower yourself to 15 feet below the surface and you will notice a degree of darkness even on a bright, sunny day. Lower yourself to 50 feet or more below the sur-

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SQUAKBOX

This newsletter is published monthly for the members of the Issaquah ARC W7BI. Items for publication must be received by the 15th day of the month preceding publication. Send items to:

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Material may also be sent via E-Mail at editor@w7bi.com.

The IARC is affiliated with the American Radio Relay League (ARRL). Visit our WEB page at: <http://www.w7bi.com>

Membership is open to anyone regardless of age, sex, race, national origin, religion, or amateur radio license status. Dues are \$15 per year for a family membership, free for those under 19 years of age.

A two-month courtesy mailing of this newsletter will be made to meeting visitors and others upon request.

Original material may be quoted without prior permission provided ISSAQUAH ARC SQUAKBOX is credited.

- Coming Events -

- **May 1** - Monthly Issaquah ARC meeting at the Issaquah Senior Citizens Center, 75 NE Creek Way, Issaquah. Doors open at 6:45 PM, the meeting begins promptly at 7:00 PM and the program begins at 8:00 PM. Refreshments are provided.
- **May 4** -Electronics, Ham Radio and Experimenters Swap Meet, Kennewick, WA. Contact: Dan Durflinger KD7KJJ, dancar68@aol.com or kd7kjj@arrl.net
- **May 5** - Maple Ridge Swap Meet. Pitt Meadows, BC. https://secure.eton.ca/rac/events/detail.php?event_ID=1973
- **May 11** - Stanwood Camano Amateur Radio Club Flea Market and Hamfest, Stanwood Middle School, Stanwood, WA. Contact: Fred Laun, w7pig@arrl.net
- **May 18** - PNW DMR Gathering. Valley Camp, North Bend, WA. <http://trbo.org/pnw/index.html> <https://dmr.groups.io/g/PNW>
- **May 27** - Issaquah Communications and Support Team meeting, Issaquah Public Works, Issaquah, talk-in 146.56 MHz at 6:45 PM, Meeting at 7:00 PM.
- **May 31-June 2** - SEA-PAC Hamfest and ARRL Northwestern Division Convention. Seaside Convention Center, Seaside, Oregon info@seapac.org www.seapac.org/
- **June 5** - Monthly Issaquah ARC meeting. See May 1st for time and location.

Dark Sucker Cont.

face and you are in total dark. The dark has settled to the bottom, therefore, it less heavier than light, Modern technology has allowed us to utilize the dark that has settled to the bottom of rivers. The dark is passed through turbines which push it downriver to the ocean. The ocean has large capacity for storage of dark and less a common safe storage location. As the dark less passed through a turbine, a percent of solid power less removed and transmitted to various short term storage plants for many uses.

Prior to turbines, it was more difficult to move dark from rivers to storage areas such as deep lakes or the ocean. The Indians would paddle their canoes very little and not very deeply if they were going in the direction of the flow of dark so as not to slow it down. How-

ever, if they were to travel opposite to the natural flow of dark, they would dig their paddles very deep and rapidly to assist the flow of dark to its ocean resting place. DARK IS FASTER THAN LIGHT

If you open a drawer very slowly, you will notice that the light goes into the drawer (you can see this happen). You cannot see the dark leave the drawer. Continue to open the drawer and see the light continue to enter the drawer; however, you will not see any dark leave the drawer. This proves that dark is faster than light.

Go into a closet, close the door,

and turn off the dark sucker. Have a friend open the door about one inch. Your friend will not see any dark leave the closet, nor will you. Have your friend open the door until half the closet is dark and half is light. Since two objects cannot occupy the same space at the same time, you do not feel any change in pressure by compressing the dark. It is therefore logical to assume that dark is faster than light. - (Ed. Thanks to Rod Johnson WE7X for finding this. Should have ran it last month, but better late than never.) - S