

RCA AMATEUR RADIO CLUB

JULY, 2014

MONTHLY NEWSLETTER

INDIANAPOLIS, IN

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE

TUESDAY, JULY 8th, 6:30 PM AT [G.T. SOUTH'S](#),

5711 E. 71st STREET, INDIANAPOLIS, IN

We WILL have Indy Hamfest \$6 advance tickets at the July 8th meeting.

Price at the gate on July 12, \$8.

RCA ARC NEWS

SUMMARY OF THE JUNE MEETING – Thanks to all who attended the June meeting, we had a good turnout. AF9A gave the repeater report. Operating normally but still have some local area network problems which has caused Echolink to be off line part of the time. Field Day was discussed. Setup will begin at 11AM Sat morning. There will be an area to camp. AF9A will bring his generator, the problems with the GOTA station will be resolved this year. There will be an area for camping. Dayton Hamvention: Good hamfest, good restaurant, good time. The day before the Indy Hamfest, we'll need a couple of pickups and some help loading stuff starting 3:30 – 4:00 PM at K9RU's QTH. We'll also need help selling the junk on Saturday. If you can spend an hour at the RCA tables it would be great. Members can bring their own stuff to sell, but it must have a price marked on it and we have to know what your bottom dollar price is. If you bring stuff you will to help man the tables. Reminder... the upcoming VHF contest and the IRC auction this coming Friday.

NEXT TEST AMATEUR RADIO LICENSE TEST SESSION – July 12, Saturday

Time: 8:00 AM (Walk-ins allowed)

Contact: Ronda Curtis, 317 363-7457

Email: ws9h@arrl.net

Location: Indianapolis Hamfest, Marion County Fair Grounds, 7300 East Troy Ave., Indianapolis, IN

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

July 12	Indianapolis Hamfest, Marion Co. Fairgrounds, www.indyhamfest.com
Aug 9	TARA Hamfest, Lafayette, IN http://w9reg.org/hamfest/index.htm
Aug 23	Owen - Monroe County Hamfest, Spencer, IN http://www.owencountyara.org/
Sept 6 - 7	Multiple Sclerosis Bike Ride, N9FEB@comcast.net or at (317) 753-8691
Sept 20	Hancock ARC Hamfest, Greenfield, IN http://www.w9atg.org/
Oct 4	Hoosier Hills Hamfest, Mitchell, IN http://www.w9qyq.org/hamfest
Oct 11 - 12	Hilly Hundred, Bloomington ARC, Tom, KC9IRG tmyers@bluemarble.net
Oct 18	Indianapolis Marathon, Lawrence, IN, N9FEB@comcast.net
Oct 25	Hoosier Hikers: Knobstone Run, contact Brian Elliott, n9jpx09@yahoo.com
Nov 15	Ft. Wayne Hamfest & Computer Expo, http://www.fortwaynehamfest.com/

All dates, unless otherwise stated, are UTC.

<http://www.arrl.org/contest-update-issues> Contests updates

<http://www.hornucopia.com/contestcal/> WA7BNM Contest Calendar

<http://www.arrl.org/special-event-stations> ARRL Special Event Stations page

http://www.arrl.org/exam_sessions/search ARRL training page for test sessions

<http://indyhams.org/events/> Indiana events and public service opportunities.

RCA ARC TABLES THE INDY HAMFEST

The RCA ARC will have tables at the Indy Hamfest again this year and we can use your help in loading and moving the "stuff" to the hamfest on Friday afternoon. The plan is to meet at K9RU's home between 3:30 and 4 PM to load the stuff. We think this is only a couple of pickup truck loads. We will move it to the Marion County Fairgrounds and setup the tables.

We need help manning the tables Saturday, so if you can spare a hour to help out that would be great.

Members are welcome to bring their own equipment to sell, but please help man to booth for awhile and have the asking prices clearly marked. Also provide the bottom line price. If not marked it will be sold like the other club stuff, best offer. We will use 144.43 MHz simplex at the hamfest.

RCA ARC / IRC FIELD DAY

The weather was challenging with rain showers and high humidity but fortunately no wind or lightning. Band conditions were not great and we had to work for contacts. We were running in the 2A class with one station on phone and the other on CW. We had a station on 6 meters and the GOTA station. We had a good turnout and a lot of guests visiting and operating the GOTA station. NE9T had put together a great GOTA demo station with handouts. The CW station was used to test some of the equipment for the upcoming WRTC. We ended up with over 2000 QSOs, overall a great effort. Thanks to Matt for cooking breakfast.

INDIANAPOLIS RADIO CLUB 100th ANNIVERSARY DISPLAY AT THE INDY HAMFEST

The Indianapolis Radio Club will have a have a display commemorating the 100 years of the Indianapolis Radio Club, of amateur radio, and amateur radio in Indianapolis. This is a museum type of display with radios and ham radio memorabilia. It will be located in the building across the road from the indoor flea market.

CHANGES TO AMATEUR SERVICE PART 97 RULES GO INTO EFFECT ON JULY 21

The FCC's recently announced revisions to the Part 97 Amateur Radio rules governing exam credit to former licensees, test administration, and emission types will go into effect on Monday, July 21. The new rules were published in *The Federal Register* on June 20. Earlier this month, the Commission announced that it would grant examination credit for written elements 3 (General) and 4 (Amateur Extra) to holders of "expired licenses that required passage of those elements." The FCC will require former licensees falling outside the 2-year grace period to pass Element 2 (Technician) in order to be relicensed. The Commission declined to give exam credit to holders of expired *Certificates of Successful Completion of Examination (CSCEs)* or to extend lifetime validity to *CSCEs*.

The FCC also embraced the use of remote testing methods, allowing volunteer examiners and volunteer examiner coordinators "the option of administering examinations at locations remote from the VEs." The National Conference of Volunteer Examiner Coordinators (NCVEC) in 2002 endorsed experimental use of videoconferencing technology to conduct Amateur Radio testing in remote areas of Alaska. The Commission dropped its earlier proposal to permit two VEs to administer exams; the requirement remains at three VEs. The Commission did not spell out the "mechanics" of remote testing, however, which, it said, would "vary from location to location and session to session." VEs administering examinations remotely must grade such examinations "at the earliest practical opportunity," rather than "immediately," as the current rule for conventional exam sessions requires.

In addition, the FCC adopted an ARRL proposal to authorize certain Time Division Multiple Access (TDMA) emissions in the Amateur Service. The Wireless Telecommunications Bureau in 2013 granted an ARRL request for a temporary blanket waiver to permit radio amateurs to transmit emissions with designators FXD, FXE, and F7E, pending resolution of the rulemaking petition. That waiver becomes permanent on July 21.

The Commission also made "certain minor, non-substantive amendments" and corrections to the Amateur Service rules. -ARRL Letter

JUNE 19 LAUNCH PUTS SEVERAL NEW AMATEUR RADIO PAYLOADS INTO ORBIT

A *Dnepr* launch vehicle carried several Amateur Radio payloads aloft from Russia on June 19. The 37 spacecraft for research and commercial applications, about one-third of them carrying Amateur Radio packages, marked a new record for the most spacecraft launched by a single rocket. Among the Amateur Radio payloads now in orbit is FUNcube-3, a transponder-only payload on the [QB50](#) precursor CubeSat, [QB50p1](#). FUNcube-3 carries an inverting 400 mW SSB/CW transponder, with an uplink passband of 435.035-435.065 MHz (LSB) and a downlink passband of 145.935-145.965 MHz (USB).

The otherwise nearly identical QB50p2 package carries an Amateur Radio 435/145 MHz FM voice transponder as well as packet on 145.880 MHz, 1200bps BPSK and 145.840 MHz, 9600 bps FSK. The QB50 satellites will become available to radio amateurs after 6 months of testing. The QB50 program plans to launch a constellation of 50 small science research satellites.

[TabletSat-Aurora](#), built in Russia, carries a experimental D-STAR parrot (store-and-forward) repeater running 0.8 W (GMSK) on 437.050 MHz (± 10 kHz). It can store a voice message of up to 8 seconds. Two other transceivers on the satellite operate on 435.550 MHz and 436.100 MHz. Their power can be varied by ground-station command from between 0.8 and 2.0 W. They will be used for command and control and transmit GMSK telemetry data. Unofficial reports indicate that the D-STAR repeater could become operational in early July and that when the D-STAR repeater is active telemetry will be turned off.

In the hours immediately following the launch, signals were reported from FUNcube-3, POPSAT, QB50p1, QB50p2, UniSat-6, BugSat-1 -- the first satellite to be deployed after launch -- NanosatC-BR1, Duchifat-1, TabletSat-Aurora, and DTUsat-2. BugSat-1 contains an Amateur Radio digipeater, which will be activated after the satellite's primary mission has been completed.

[UniSat-6](#), which transmits on 437.425 MHz (9600 bps GFSK at 2 W) with the call sign I10US, carried Tigrisat, Lemur 1, [ANTELSat](#), and AeroCube 6. ANTELSat is the first Uruguayan satellite. It carries a telemetry downlink and a command uplink (437.575 MHz 1200 bps AFSK) with a 2403.000 MHz (1 Mbit GFSK/MSK) downlink for payload data, and a 437.280 MHz CW beacon. --ARRL Letter

HOUSE BILL WOULD REQUIRE FCC TO EXTEND PRB-1 COVERAGE TO RESTRICTIVE COVENANTS

A bill with bipartisan support has been introduced in the US House of Representatives that calls on the FCC to apply the "reasonable accommodation" three-part test of the [PRB-1](#) federal pre-emption policy to private land-use restrictions. HR.4969, the "Amateur Radio Parity Act of 2014" was introduced on June 25 at the request of the ARRL, which worked with House staffers to draft the proposed legislation. The bill's sponsor is Rep [Adam Kinzinger](#) (R-IL). It has initial co-sponsorship from Rep [Joe Courtney](#) (D-CT). If the measure passes the 113th Congress, it would require the FCC, within 120 days of the Bill's passage, to amend the Part 97 Amateur Service rules to apply PRB-1 coverage to include homeowners' association regulations and deed restrictions, often referred to as "covenants, conditions, and restrictions" (CC&Rs). Presently, PRB-1 only applies to state and local zoning laws and ordinances.

"There is a strong federal interest in the effective performance of Amateur Radio stations established at the residences of licensees," the bill states. "Such stations have been shown to be frequently and increasingly precluded by unreasonable private land-use restrictions, including restrictive covenants."

The 11-page PRB-1 FCC *Memorandum Opinion and Order* is codified at § [97.15\(b\)](#) in the FCC Amateur Service rules, giving the regulation the same effect as a federal statute. In short, PRB-1 states that local governments cannot preclude Amateur Radio communications; they must "reasonably accommodate" amateur operations, and the state and local regulations must be the minimum practicable regulation to accomplish a legitimate governmental interest. Subject to those guidelines,

municipalities may still establish regulations with respect to height, safety, and aesthetic concerns.

For 28 years, FCC regulations have "prohibited the application to Amateur Radio stations of state and local regulations that preclude or fail to reasonably accommodate Amateur Service communications," the bill points out, "or that do not constitute the minimum practicable regulation to accomplish a legitimate state or local purpose." Since PRB-1 was enacted, the FCC has said several times that it would prefer to have some guidance from Congress before extending the policy to private land-use regulations.

HR.4969 has been referred to the House Energy and Commerce Committee. Rep Greg Walden, W7EQI (R-OR), chairs that panel's Communications and Technology Subcommittee, which will consider the measure.

ARRL Hudson Division Director Mike Lisenco, N2YBB, is a principal advocate for the current legislative initiative to gain PRB-1 recognition for CC&Rs. Lisenco said the most urgent task now is to get additional co-sponsors to sign onto HR.4969. --ARRL Letter

FRIEDRICHSHAFEN HOSTS 39TH ANNUAL INTERNATIONAL "HAM RADIO" EXHIBITION

What some consider Europe's answer to Dayton Hamvention®, the 39th International "Ham Radio" exhibition, gets underway June 27 in Friedrichshafen, on the shores of Lake Constance in southern Germany. Thousands of radio amateurs and electronics enthusiasts will converge on the Messe Friedrichshafen convention center and surrounding fairgrounds for the event. Some 200 exhibitors and organizations from more than 2 dozen countries, including the ARRL, will be represented in the exhibit hall. The Deutscher Amateur Radio Club (DARC) has chosen "Creative Amateur Radio -- Build It Yourself" as the theme for this year's show.

"Building things yourself has played an important role in Amateur Radio for a long time," said DARC spokesman Axel Voigt, DO1ELL. "Building your own equipment has been part of Amateur Radio since the beginning. [T]he pioneers of Amateur Radio experimented, built their own equipment, optimized it, and laid the foundations upon which Amateur Radio operates today."

The ARRL team will be on hand to greet international visitors and to network with representatives of other national ham radio societies.

"We're looking forward to bringing the ARRL Centennial celebration to our members in Europe," said ARRL Marketing Manager Bob Inderbitzen, NQ1R.

The League will offer DXCC card checking at its booth -- a service very popular within the international ham radio community. Others on the seven-person ARRL team include ARRL International Affairs Vice President Jay Bellows, K0QB, ARRL CEO David Sumner, K1ZZ, ARRL Regulatory Information Manager Dan Henderson, N1ND, and Assistant Member and Volunteer Programs Department Manager Norm Fusaro, W3IZ.

In its role as International Secretariat for the International Amateur Radio Union ([IARU](#)), the ARRL will host a meeting area for IARU officials and friends at the convention. IARU President Tim Ellam, VE6SH/G4HUA, will head the IARU delegation, which will include Vice President Ole Garpestad, LA2RR, IARU Secretary Rod Stafford, W6ROD, and IARU International Representative Hans Zimmermann, F5VKP/HB9AQS

"Sister Event"

In line with the show's theme, Ham Radio for the first time will share space June 28-29 with [Maker World](#), as a "sister event." The pairing could boost overall attendance, which typically runs between 15,000 and 20,000 visitors.

"The event will show off a wide range of individually designed products and ideas for hobbyists and tinkerers," a Ham Radio news release said. "These range from things like 3D printing to case

'modding,' when the appearance of a computer case is [visually] improved or changed, on up to 'upcycling,' in which everyday items which have outlived their useful lives are transformed for a new purpose."

Among other activities at Ham Radio, an Amateur Radio transmitter hunt will be held near the fairgrounds, and a balloon mission and a drift buoy project will be launched, both carrying payloads to collect data from the air and water. A ham radio youth camp will offer 100 young people an opportunity to experience the Ham Radio show up close.

The DARC will hold its 65th Lake Constance Conference during the weekend of Ham Radio. The Continent's biggest ham radio show will wrap up on June 29. --ARRL Letter

SWISS 60 METER BEACON NOW ON THE AIR

Although radio amateurs in Switzerland do not yet have access to the 60 meter band, the Sursee Amateur Radio Club has received authorization to operate an [experimental beacon](#) in grid square JN47be under the call sign HB9AW. The 5291 kHz beacon, which went live on June 1, is primarily to study 60 meter propagation within Switzerland.

The new beacon will transmit HB9AW in CW at 10 W, followed by five dashes, with the power lowered with each dash. The first dash will be at 10 W, the second at 5 W, the third at 1 W, the fourth at 100 mW, and the fifth at 10 mW (all power levels in ERP). The beacon will transmit every 5 minutes, starting at the top of the hour.

The antenna is a half-wave NVIS-type dipole with its feed point 0.12λ above ground and its ends slightly lower. A reflector is set beneath the dipole. "We deliberately chose this high-angle radiating antenna to study propagation conditions in Switzerland," the club said on its website, adding, "Conditions for DX contacts are for now only of secondary interest." --ARRL Letter

FCC DECIDES NOT TO ADOPT NEW RULES AFFECTING 902-928 MHZ BAND

The FCC has [terminated](#) a longstanding proceeding involving the 902-928 MHz (33 centimeter) band. In 2006, the FCC, in WT Docket 06-49, proposed rule changes to encourage development of the Multilateration Location Monitoring Service (M-LMS) -- a terrestrial service for location of objects and tracking. Amateur Radio is secondary in the band to federal radiolocation systems, industrial, scientific and medical devices, federal fixed and mobile systems, and the M-LMS. This week, the FCC, with little fanfare, concluded that proceeding.

"Based on the record before us, and on recent developments pertaining to M-LMS operations in the 902-928 MHz band, we conclude that the various proposals for wholesale revisions of the applicable rules do not merit further consideration at this time," the FCC said.

Commenting on the 2006 proposal, the ARRL expressed concern about increasing noise levels in the band. "This 'kitchen sink' of allocations is acceptable from ARRL's perspective, provided that the noise floor is regulated, in terms of aggregate noise levels from unlicensed devices," the League said. "The high power levels permitted in this band in particular bear careful watching, lest the allocated radio services, including federal systems, suffer decreased utility of the band."

After the FCC last June gave consent to Progeny LMS to begin commercial operation of its M-LMS in the upper portion of the 902-928 MHz band, the ARRL worried that a portion of the band could become less useful to radio amateurs in urban areas. Progeny's location service is designed to operate on approximately 4 megahertz -- about one-half of the M-LMS portions of the band between 919.750 and 927.750 MHz -- where Progeny holds licenses.

While M-LMS operations, at least on paper, have a higher priority than unlicensed Part 15 devices on the band, Progeny had to demonstrate through field testing that its network would not cause "unacceptable levels of interference" to such Part 15 devices as cordless telephones and baby

monitors. This was a result of an FCC policy to promote "co-existence" in the band, while not elevating Part 15 devices to co-equal status with M-LMS systems.

The latest FCC action will not affect Progeny's M-LMS deployment. In terminating the 2006 proceeding, the Commission said it had concluded that Progeny could commence commercial M-LMS operations "within the framework that the Commission initially had established to promote the co-existence of M-LMS operations and unlicensed operations in the band." Read [more](#). --ARRL Letter

SPROUT DIGITALKER AND SSTV ACTIVE

Slow Scan TV (SSTV) images in Scottie 1 format have been successfully received from the [SPROUT](#) (Space Research On Unique Technology) Amateur Radio satellite on 437.600 MHz FM (± 9 kHz Doppler shift). The Digtalker has also been active.

SPROUT, a 20 × 20 × 22 cm Amateur Radio nanosatellite, which launched successfully on May 24. SPROUT (call sign JQ1ZJQ) is now in a 654 km, 97.9° inclination Sun-synchronous orbit. SPROUT was built by students at [Nihon University](#) in Japan.

The Voice Message Box will record and play back transmissions from radio amateurs. Pre-loaded images from the Message Gallery can be transmitted on Slow Scan TV (SSTV). Pictures of Earth can be transmitted by SSTV, and radio amateurs can receive them using free software such as [MMSSTV](#).

As part of the Earth-mapping project the team asks radio amateurs to contribute pictures they have received from the satellite for display on the SPROUT website. The satellite also has a packet radio digipeater and text message box function.

The CW and FM packet downlink is 437.525 MHz; digipeater uplink is 437.600 MHz; digtalker and SSTV downlink is 437.600 MHz. -- AMSAT-UK

FCC TURNS AWAY PETITION REQUESTING HAM GEAR ON GMRS

The FCC has turned down a rule making petition from a Florida ham who asked that the rules be amended to permit ham radio operators to use their gear in the General Mobile Radio Service frequency spectrum. Amateur Radio Newslines' Bruce Tennant, K6PZW has the details:

In his May 29th petition, Mark Friedlander, KV4I of New Smyrna Beach, Florida had requested that the Part 95 rules be amended so that a person who holds both a General Mobile Radio Service or GMRS license as well as a Part 97 amateur radio operator license above Novice Class be allowed to operate on GMRS channels. This, using a transmitter that has not been certificated for GMRS use as long as the it complies with the General Mobile Radio Service technical rules.

In his petition Friedlander noted that the amateur radio service and General Mobile Radio Service operate on similar frequencies. Also, that amateur radio operators are authorized to design, build, and operate transmitters without equipment certification in the 420 to 450 MHz amateur band. As such he believed that they should also be permitted to do the same on the 462 to 467 MHz GMRS channels as well.

But the FCC wasted little time in turning down this request. In its June 20th decision to deny the rules change request the FCC stated that GMRS transmitters with frequency capability for amateur frequencies will not be certificated. That the General Mobile Radio Service and the Amateur Radio service are separate and with different purposes and as such the Amateur Service is unsuitable for GMRS communications. It also stated that making an exception to the current rule would allow for the proliferation of home-built, non-standardized transmitters in the GMRS spectrum with no practical way for the Commission to monitor and enforce regulatory compliance for these devices.

Based on this and several other factors the FCC concluded that Mark Friedlander's petition does not present grounds for it to amend the device certification requirement in Section 95 of the General Mobile Radio Service rules and as such it dismisses his petition.

SHORTS

DAYTON HAMVENTION ATTENDANCE UP SLIGHTLY -- Dayton Hamvention® has announced on its website that 24,873 people turned out for Hamvention 2014. That was up slightly from 2013, when 24,542 attended the annual, 3-day international gathering. Hamvention 2014 was a Regional ARRL National Centennial Event. Charles Kaiser, KD8JZR, was the 2014 general chairman. The Dayton Amateur Radio Association ([DARA](#)) has sponsored Hamvention since 1952. Originally called the Southwestern Ohio Ham-vention, the inaugural event, held in March in downtown Dayton, attracted 600 attendees -- twice as many as had been predicted. Hamvention attendance peaked at 33,669 in 1993. --ARRL Letter

NO YOUNG HAM OF THE YEAR IN 2014 -- [Amateur Radio Newslines](#) has announced that it will not name a 2014 Young Ham of the Year ([YHOTY](#)). *Newslines* Editor Bill Pasternak, WA6ITF, told ARRL that not enough nominations were received by the May 30 deadline.

"We initiated the award in 1986, so this would have been the 28th year it would have been presented," Pasternak said.

Young Ham of the Year Award Judging Committee Chair Mark Abramowicz, NT3V, said the committee's decision to defer this award this year due to the low number of nominees "does not in any way reflect on the quality of the nominees we did receive or on their nominators. It's simply the decision of the judges that more nominations and documentation would be needed to make a fair determination of the Young Ham of the Year." *Newslines* said it plans to open nominations for the 2015 YHOTY in February. --ARRL Letter

BAOFENG REBRANDS TO POFUNG -- Chinese radio manufacturer BAOFENG is rebranding its products under the "Pofung" label in international markets. The company said BAOFENG -- a literal Pinyin translation of the company's Chinese character name -- "may be difficult for a hobbyist across the ocean to pronounce." The company said the new name, Pofung, is easier to pronounce and more customer-friendly, while maintaining the brand's phonetic symbolism. Products for the domestic market in China will retain their current brand name and identity, and the company's web domain, www.baofengradio.com, will remain unchanged. -- *Thanks to Amateur Radio Newslines, Baofeng*

FIRST NORTH AMERICA-TO-SOUTH AMERICA CONTACT ON 902 MHZ MOONBOUNCE REPORTED -- Some hams may not even realize that there *is* a ham band at 902 MHz, but [Bruce Halasz](#), PY2BS, in Embu, Brazil, reported on the [Moon-Net reflector](#) that after months of preparation and testing, he and Al Ward, W5LUA, in Allen, Texas, completed a two-way EME (Earth-Moon-Earth) -- or moonbounce -- contact on the band on June 8 *Thanks to Bart Jahnke, W9JJ.*

HOW DID THEY DO IT? CAPTURE A SPACECRAFT, THAT IS -- An IEEE article describes how volunteers, including many radio amateurs were planning to command a 35-year-old NASA spacecraft, the International Sun-Earth Explorer 3 (ISEE-3). As [announced](#) a few days ago, they were successful and are now planning a comprehensive assessment of the spacecraft's general health. If all goes well, they will attempt to fire the satellite's engines to place it one of several gravitationally stable locations known as the Lagrangian points. You can keep current on the program's status at [Space College](#).

PAUL NA5N RELAYS INFORMATION ON LIGHTNING DETECTION --"In our stormy season, employees are supposed to carry a lightning detector before climbing into the New Mexico VLA (Very Large Array) antennas. Lightning storms can sneak up on you pretty fast at times. The two models we use are the "Strike Alert" (about \$65) and one from Acu-Rite Weather (about \$35). They seem to perform about the same in spite of the price difference. They are small, about the size of a pocket pager. The units basically gives one, two or three beeps to alert of approaching lightning and how close (3 beeps

usually when within 8 miles or so). For a build-it-yourself, I recommend this [Techlib circuit](#) which allows you to adjust the sensitivity, which is useful if you're cloaked by nearby mountains or your shack is down in the basement or something. You can also add an external antenna (a few feet of hookup wire)." If you don't want to carry a standalone unit, Doug KØDXV notes that "Android and iPhone app WeatherBug has a sub-app called Spark, which is an excellent lightning strike tracker. It uses a detailed, zoomable map and reports to tenths of a mile.

HERE COMES THE SUN – THERE GOES THE SUN, Solar researchers are now dubbing the sun's recent activity as a mini-max. This is because the maximum period of activity so far has been shorter than usual.

Researchers note that sunspots are now showing up and lower-density areas are appearing in the sun's corona. As such this current situation demonstrates how hard it is to accurately forecast a solar cycle.

They note that this cycle's strange peak appears to have its roots in 2008 and 2009 when sunspot numbers were far lower than scientists expected. Solar flares, which are associated with sunspot numbers and the sun's magnetic activity, were also relatively quiet in that same time frame.

The average for a solar cycle from minimum to maximum and back to minimum is in theory 11 years, however it can actually take between 9 and 14 years. The current solar cycle is expected to start fading in 2015 but it will likely go out with some increased activity.

The researchers note that historically speaking, there are usually strong flares leading to numerous auroras on Earth at the end of the solar peak. This is because particles from the sun strike our planet's magnetic lines and excite gases in the upper atmosphere.

Ron Turner of Analytic Services Inc. is a senior science advisor for NASA's Innovative Advanced Concepts program. He summed it up by saying that the current Cycle 24 is one of the weakest in the 24 cycles since 1755. (NASA, other published news reports)

FLYING UNMANNED AIRCRAFT TO BE PROHIBITED IN NATIONAL PARKS, If you are into flying radio remote controlled aircraft then listen up. National Park Service Director Jonathan B. Jarvis has signed a policy memorandum that directs his superintendents nationwide to prohibit launching, landing, or operating unmanned aircraft including drones on lands and waters administered by the National Park Service.

Unmanned aircraft have already been prohibited at several national parks. These bans were put in place after noise and nuisance complaints from park visitors and a least one incident in which park wildlife was harassed.

The memorandum does not affect the primary jurisdiction of the Federal Aviation Administration over the National Airspace System. Also, the National Park Service itself can continue to use unmanned aircraft for administrative purposes such as search and rescue, fire operations and scientific study but some of these uses must first be approved by the Associate Director for Visitor and Resource Protection.

You can find links to several stories regarding the new radio controlled model aircraft ban at the following URL's:

<http://www.forbes.com/sites/gregorym...otential-uses/>, <http://www.usatoday.com/story/news/n...arks/11099497/>, <http://www.inquisitr.com/1310455/use...l-parks-banned> (Various news sources)

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