2018 Huntsville Hamfest Forum Listing

8-7-2018

ARRL / IARU

- **"Publicity/Information Sharing: I Heard it in the Grapevine/Web"**
  Ed Tyler, N4EDT, Public information Coordinator, Alabama Section

- **Alabama ARES Forum**
  David Gillespie, W4LHQ

- **ARRL Southeastern Division and Alabama Section Meeting**
  JVann Martin, W4JVM, Alabama Section Manager and Greg Sarratt, W4OZK, Southeastern Division Director

  The ARRL forum will include information about Alabama Section new appointments, upcoming drills and events in Alabama, and Southeastern current events, news, and updates.

- **ARRL Education**
  Moderated by Greg Sarratt, W4OZK, Southeastern Division Director

  The Education forum explores Amateur Radio in schools. Learn about school clubs, stations and activities. This is a discussion from successful school teachers on how they started, organize and manage Amateur Radio activities in their school. Speakers are

  Rod Hall – Plainview High School
  Karl Henry – Drake State Community & Technical College
  Jennifer and Ken Moore - Pinson Valley High School
  Ed Tyler – Pell City High School and Saint Clair County High School

Education

- **Radio Club of America Youth Forum**
  Carole Perry, WB2MGP

  The Huntsville Youth Forum will feature talented young hams who will share their fun adventures and accomplishments in ham radio. In addition, this forum is for teachers, scout leaders, and youth group leaders to learn how to start or to enrich a ham radio program for youngsters. They will learn how the RCA Youth Activities program can provide materials, equipment, and assistance FOR FREE to help get programs started. Come show support for our young hams.

- **"EDUCOM: Education through Communication"**
  Joe Fairclough, WB2JKJ

  Our *EDUCOM* forum will detail how you can take ham radio back to your school and introduce it as the most effective teaching tool ever.

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Public Service/EmComm

- **"It Really CAN All Fail!"**
  Bill Feist, WB8BZH, Salvation Army National SATERN Liaison

  As technology progresses, the domestic and global communications infrastructure has become increasingly robust and resilient. This has led many to believe that there is little or no possibility that this infrastructure can completely fail. The 2017 Atlantic Hurricane Season proved that it really CAN all fail - even catastrophically fail - given the right circumstances.

  This talk will be about HOW it failed - particularly in Puerto Rico, the U.S. Virgin Islands and other places in the Caribbean, how the Salvation Army Team Emergency Radio Network (SATERN) and the general amateur radio community responded to that failure, and the lessons learned from that response.

- **Joint Services MARS Meeting (2 hours)**
  Bob Glasscock, AAA4AL, Alabama/Mississippi State MARS Director
  Jim Hamilton, AAA4RD, Army MARS Region 4 Director
  Bruce Nebergall, AFR4C, Director, USAF MARS SE Division
  John Briscoe, Jr. AAA4AL7, Army MARS Region 4 Training Officer

  The current status of the MARS program and future areas of service will be discussed.

- **SKYWARN Forum and NWS Operations**
  Robert Boyd, KC5ZJO, Senior Forecaster, NWS-Huntsville

Technical

- **"Lightning Research at NASA's Marshall Spaceflight Center"**
  Dr. Monte Bateman, WB5ZRX, Thunderstorm Physicist

  NASA's Marshall Spaceflight Center is home to one of the top lightning research groups in the world. We study basic physics of the lightning process, its relationship to storm severity, and help with lightning protection for our nation's space program. In addition to basic and applied science, we also design and build cutting-edge instrumentation that allows us to make unique measurements to study thunderstorms. This has been another big year in the lightning community, with the launch of GOES-S (now GOES-17), which carries another Geostationary Lightning Mapper (GLM). The GLMs were developed right here in Huntsville; they add lightning information to the GOES satellite photo loop images and are becoming important in weather forecasting and warning. We also have the Lightning Imaging Sensor (LIS) aboard the ISS, and it has been working well now for 18 months. Come see the state-of-the-art in lightning measurements and how most of it comes from Huntsville!

- **"Lightning Protection for the Radio Amateur"**
  Dr. Monte Bateman, WB5RZX, Thunderstorm Physicist, NASA/Marshall Space Flight Center

  Protect your shack and your tower! With a lot of anecdotal grounding discussions generating more heat than light, here's a solid approach to the best protection practices and the theory behind how and why they work. Learn how a lightning flash occurs and how to convince it to go elsewhere!

- **"Advances in SDR and Remote Radio"**
  Michael Walker, VA3MW, Technical Marketing/Sales, FlexRadio Systems

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- **Yaesu Forum (Saturday and Sunday)**
  John Kruk, N9UPC

- **"Balloon Launch"**
  Bill Brown, WB8ELK

- **Parametric Receive Audio System**
  Bob Heil, K9EID

  Bob demos the new Parametric Receive Audio System.

- **"60 Years of HF Amplifiers"**
  Bob DePierre, K8KI

  If you've been a ham for a while, you'll remember those old amps where high power was 400 watts out and you wouldn't dare turn it on during the summer. Then big glass tubes came out, then metal-ceramics, then smart amps that weren't merely arc welders, then auto-tune amps, and finally transistors. Amps had always been heavy metal, but now you can find 1500 watt amps you could literally throw. What has happened during our lifetime! Let's look at a few and take a walk down memory lane.

- **"How Electromagnetics Works"**
  Hans Schantz, Ph. D., KC5VLD

  This talk explains how electromagnetics works by explaining near or reactive fields in a (mostly) non-mathematical fashion. Ideal radiation or "far-field" electromagnetic waves have a balance of electric and magnetic energy. As waves interact with material objects or even other waves, the energy they convey slows down and even changes direction. Understanding the nature of this balance along with a few basic concepts like field impedance and energy velocity makes the mysteries of antennas and other electromagnetic behavior more comprehensible. This novel perspective will be useful for professional engineers and scientists, and informative for novices interested in understanding how the world works.

- **"Impedance Matching"**
  Ben Lowe, K4QF

  Ben's emphasis will be on matching at VHF/UHF.

- **"Frequency Synthesis for the Radio Amateur"**
  John Stensby, Ph. D., N5DF

  Modern frequency synthesis techniques have had a revolutionary influence on amateur radio communication gear. On communication transceiver design, phase-lock loop (PLL) and direct-digital synthesis (DSS) techniques have had an impact surpassed only by the introduction and use of solid state technology. In non-mathematical, intuitive terms, basic ideas will be presented that explain this amazing frequency-control technology. First, PLL synthesizer techniques will be discussed along with their advantages and limitations. Next, commonly used DDS techniques will be presented. Finally, it will be argued that the "marriage" of PLL and DDS techniques overcomes some key limitations of both technologies.

- **"HF Propagation and the Great American Eclipse"**
  Rob Suggs, Ph. D., KB5EZ

  All hams know that we owe the ups and downs of HF propagation to the sun so what happens if you turn it off mid-day? That is what happened almost exactly 1 year ago

during the total solar eclipse and the effects on propagation were very interesting. Come get a refresher on how "the sun giveth and the sun taketh away" when it comes to propagation, where we are in the solar cycle and how WSPR (weak signal propagation reporting) data showed some rather dramatic changes in the bands as the shadow of the moon crossed the U.S. last year.

- **"Kit Building Techniques for Success" (Saturday and Sunday)**
  Joe Eisenberg, K0NEB

  We will cover how to identify and test and sort parts and how to best assemble kits as well as go over techniques for dealing with things like toroids and suggestions of some great beginner's kits that are available as well as kits for more advanced builders. I am the Kit Building Editor for CQ Magazine as well as the current author of the Construction Techniques chapter of the ARRL Handbook.

- **"Building a Modern Solid State Amp, or How We Shrunk the Linear"**
  David Shoaf, KG6IRW

  The newest RF amplifier modules are enabling manufacturers to build high power amplifiers into smaller spaces. We'll step through some of the manufacturing techniques used to make it a reality today.

Operating

- **Alabama Repeater Council**
  Dennis Littleton, K4DL

- **"Network 105 – the HF Packet Radio Network"**
  Sholto Fisher, K7TMG, West Mountain Radio

  Sholto has been interested in digital modes since the 1980's. First licensed in 1995 as G7TMG he holds FCC amateur extra class license K7TMG and the GMDSS full license. For the last 7 years he has been working for West Mountain Radio in a technical support role.

- **AMSAT Forum**
  John Kludt, K4SQC, AMSAT Area Coordinator

  The year's AMSAT forum will focus on the skills, techniques and equipment needed to successfully use the current crop of amateur radio-carrying satellites. In addition we will be discussing upcoming launches and future opportunities.

- **"WRTC 2018 through the Eyes of a Youth Operator"**
  Bryant Rascoll, KG5HVO

- **"Life and Contesting in the South Pacific"**
  Bruce Smith, AC4G

  Service on Kwajalein is not about laying around under palm trees! Bruce will tell of his time there, where that part you forgot to bring is not just a phone call away.

- **"Multi-Op VHF Contesting in the South East"**
  Kim Hensley, WG8S

  Experiences with the Fourlander VHF Contest Group, a multi-op group out of Atlanta who operate from a great vantage point in north Georgia/Northwest North Carolina with lots of gear and operators.