

The COMMUNICATOR

The Tamiami Amateur Radio Club • Venice, Florida

COMMUNICATOR

JUNE 2004

-- PRESIDENT'S MESSAGE --

We have been back in Canada for about a month now, and I want to say how much I enjoy talking with many of you on the Snowbird Net on 14.278 MHz at 10:00 AM Eastern Time. The net is well attended by our TARC members, but there is room for many more to join in.

We have been busy getting settled in. The construction of our new cottage at 40 Mile Park has also been keeping us busy. Our son, Rob-VE6FYK, and I wired the new structure last week and, of course, we put in conduit for coax and a 220-volt outlet for the Alpha amplifier. We are putting up my old 68' Delhi tower and the Cushcraft ATB4 beam that I have now had the pleasure of using for some 30+ years. I picked up new legs and a bolt kit for the tower, so all should go up in fine fashion. Our property is on the edge of the lake, which is 3 miles by 7 miles in size. We should also be able to get a good ground into the lake water.

We will not have any (land line) phone service at the cottage, so we will be relying on our cell phone and ham radio for outside communications. We are negotiating with a wireless Internet provider to use our tower as one of their transmitting sites, and at the same time provide us with high speed Internet service.

We will be using the lake water for all of our needs. We are putting in a proper filtration system, UV sanitizer and a reverse osmosis water treatment system, even though most folks drink the pristine lake water just as it is.

As a point of interest to some of you, the cottage is being erected on a builder's site some 12 miles from our lakefront property. Once the cottage is totally completed, with even the appliances preinstalled, it will be moved on dollies to our lot. This should be something to see, as the cottage structure is 56' x 36' and 26' high. They tell me that the move will take about half a day. Stay tuned to the Snowbird Net for reports on all the "blow by blow" action!

Everybody have a good summer and stay healthy.
73 de John-VE6AIV

"If you'd been tending bar as long as I have, you wouldn't expect so much out of the human race." - Otis (James Westerfield) in "Decision at Sundown"

-- JUNE MEETING --

The June TARC meeting will be at 6:00 PM on Thursday 10 June 2004 in the "Community Room" of The Gulf Coast Community Foundation of Venice (formerly The Venice Foundation), 601 South Tamiami Trail (Business US 41), across from Bon Secours Hospital. Following the business meeting, a video of the 2000 K5K DXpedition to Kingman Reef will be shown. Come on out and witness the exotic, lush vegetation in this tropical paradise!

-- A PLETHORA OF RULE CHANGES --

In mid-April the FCC released a Notice of Proposed Rule Making relative to a wide range of proposed Amateur Service (Part 97) rules changes. This NPRM results from dozens of petitions, some going back to 2001, however it is not related to the three amateur licensing restructuring petitions. Reply comments are due 30 June 2004.

Old Timers will recall the FCC's prohibition on external linear amplifiers operating between 24 and 35 MHz that went into effect in 1978. Supposedly to keep Amateur Radio amplifiers out of the hands of CBers, the FCC has finally recognized that this infamous rule imposed unnecessary restrictions on manufacturers of Amateur Radio equipment and is inconsistent with the experimental nature of ham radio. *(They finally wised up to the fact that CBers were buying export model linears from certain manufacturers or having amps custom built.)*

Another positive proposal would make Kenwood's *Sky Command* system legal for operation within the US. The proposed amendment of the rules would permit auxiliary operation on 2 meters. The *Sky Command* system permits the user to operate certain Kenwood equipment remotely via a VHF/UHF transceiver.

The FCC is proposing expanding the bands available for spread spectrum experimentation to include 6- and 2-meters and 222-225 MHz.

Other proposed amendments of interest include:

- o Prohibit acceptance of more than one application per vanity call sign
- o Allow current amateurs to designate a specific Amateur Radio club to acquire their call sign in memoriam.

see FCC, page 5

TAMIAMI AMATEUR RADIO CLUB

Minutes of the Meeting

13 May 2004

Vice-President Peter Knorr-N2IZD called the meeting to order at 6:00 PM. Bill Rockwood-KE4ZAK led the pledge of allegiance to the US flag. Mel Bullock-W4PSE of Nokomis, Bob Witte-W2FDM of Venice, and Hans Napfel-WB2ZZB of Sarasota were welcomed as visitors.

MINUTES - Eddie Palmer-K4JP moved to forego reading of the minutes of the 08 April meeting which were published in the May issue of *The Communicator*; seconded by Rick Morandi-KI4RMO, and passed.

CORRESPONDENCE - Secretary Jack Sproat-W4JS summarized a request from the North Port ARC which requested photos of TARC activities which NPARC could use for "fund raising." After discussion, it was determined that we have no photos that would be of such general interest.

TREASURER'S REPORT - Treasurer Bob Officer-WA6WAY reported the 30 April 2004 bank balance was \$4,182.68. Expenditures during April totalled \$588.56 for costs associated with the repeater relocation, newsletter printing and postage. Subsequent to 30 April, \$171.00 was deposited and there is a check outstanding in the amount of \$68.98 for newsletter printing and postage, such that the 13 May account balance is \$4,284.70. Marty Horowitz-W4MHH moved acceptance of the report, seconded by Peter Pesa-N4RD, and passed.

COMMITTEE REPORTS

SUNSHINE - Bill Rockwood-KE4ZAK reported sending a card to Marge Frey, XYL of Jim Frey-W8ISZ. Bill also reported that Ken Truran-KC8BI is now under hospice care, and urged members to give Ken a call to say "hi."

VE TESTING - Jack Sproat-W4JS stated that there were no candidates at the 08 May VE session.

REPEATER/TECHNICAL - Eddie Palmer-K4JP reported that the new installation is essentially complete, however, some realignment of the antennas will be done upon return of the tower crew to improve coverage to the north.

FIELD DAY - Following an e-mail recommendation by President John Fyke-VE6AIV, Marty-W4MHH moved that the TARC members who wish to participate in Field Day do so with the Englewood ARS; seconded by Pete-N4RD, and passed. Five TARC members indicated they would help with set up on 25 June at the EARS Filed Day site.

CLUB GRANTS & DONATIONS - Bob-WA6WAY stated that he had been promised the paperwork that would transfer the decommissioned Red Cross communications trailer to the TARC. Donations of coax and antennas have also been received.

LIAISON TO SERC/ARES/RACES/RED CROSS - Bob-WA6WAY reported that he and Eddie-K4JP had been working with the Red Cross to establish a local communications network. Eddie-K4JP reported that the SERC would be involved in a RACES effort as part of the 11 June hurricane exercise. Eddie also gave an update on the SERC Field Day effort which will take place at the usual site off Clark Road.

LIAISON TO QCWA - Jack-W4JS reported there were 21 Suncoast Chapter members and friends at the 05 May luncheon meeting, which was the last meeting of the season. Bob Avrutik-N1RA gave a slide presentation of his recent South Pacific cruise.

OLD BUSINESS - Pete-N4RD showed off a variety of call sign badges for consideration by the club. An ad hoc committee of Bob-WA6WAY, Marty-W4MHH and Pete-N4RD was formed to determine the best price and potential design for TARC badges.

NEW BUSINESS - Jack-W4JS summarized an e-mail from WCF Section Public Information Coordinator, and TARC member, Jack Doyle-WX1JAD, regarding TARC participation in ham radio program time being offered by AM Station WENG in Englewood. This would be a once a month effort, generally consisting of on-the-air interviews and public call in to discuss the activities of the club and various members. Pete-N2IZD, Eddie-K4JP, Pete-N4RD and Jack-W4JS expressed willingness to participate.

Eddie-K4JP stated that he has a spare repeater available, however, it lacks a proper controller, which would cost about \$250. Bill-KE4ZAK moved, seconded by Bob Retter-KD4SOJ, that the club authorize up to \$250 for said expense. Motion passed.

Marty-W4MHH announced that the EARS offered a \$500 scholarship to a member of the Lemon Bay High School graduating class, which was won by a Mike Hennessy, who will study engineering in college. Marty suggested that the TARC consider such a scholarship for Venice High School. John Miller-WA9YHW recommended formation of a criteria committee.

Pete-N2IZD reported there is a 6-meter repeater now in operation in the Sarasota area. Output frequency is 51.360, input is 51.860 with a PL of 103.5. He has not had any luck raising the machine to date, however.

ADJOURNMENT - Motion to adjourn at 6:45 PM was made, seconded, and passed. There were 20 members and three visitors present.

PROGRAM - Assisted by Hans Napfel-WB2ZZB, Bob Avrutik-N1RA gave a very colorful and interesting slide presentation of his February/March South Seas cruise. Jack Sproat-W4JS - Secretary

"We are asked to remember much; the white man remembers nothing." - Little Wolf (Ricardo Montalban) in John Ford's "Cheyenne Autumn"

CURRENT/PENDING DX ACTIVITY and HF PROPAGATION FORECASTS

CURRENT and/or SCHEDULED DX ACTIVITY									
COUNTRY - CALL SIGN	ACTIVITY PERIOD	BEARING	HF BANDS and OPENING TIMES (GMT)						
			80	40	30	20	17	15	12
Liberia - EL/EI5IF	Now to December	92	00-07	22-08	21-09	00-24	23-03	23-03	NO
Thailand - HS0ZCW	Now to 15 August	355	NO	NO	NO	12-13	12-13	NO	NO
The Sudan - ST2DX	Now to 30 June	66	00-04	23-04	22-05	18-23	21-00	0100	NO
Marquesas - FO/ON4AXU/M	03 - 13 June	245	03-11	02-13	00-13	00-24	17-04	23-04	23-04
Svalbard - JW/CT1BWW	07 - 14 June	13	NO	00-09	23-10	14-01	14-01	NO	NO
French Polynesia - FO/ON4AXU	14 - 15 June	243	03-11	02-12	01-12	17-08	17-04	00-03	00-03
Liechtenstein - HB0/DL7NS **	14 - 25 June	46	00-04	23-06	22-07	13-00	19-00	NO	NO
St. Pierre & Miquelon - FP/K9OT	02 - 11 July	39	00-10	00-24	00-24	00-24	NO	NO	NO

Updated 29 May 2004, based on 26 May 2004 *QRZ DX*, and 24 May 2004 *The Weekly DX*

Notes: ??? = Call sign not yet known, ++ = Phone Only, ** = CW Only, NO = No opening forecast, **Time in bold** = Best Band(s) for opening
Long path bearings and opening times (if any) are underlined. All forecasts calculated via *W6ELProp V.1.03* propagation software.
<http://www/qsrl.net/w6elprop/> by Sheldon C. Shallon-W6EL. Solar Flux and K-index vary in accordance with NOAA 27-day forecast.

-- SOLAR ACTIVITY DURING MAY --

Solar activity ranged from low to moderate and the geomagnetic field was at quiet to active levels during May. For the first 30 days of May, the Solar Flux ranged from 85 up to 118, with a mean value of 99.9 (vs. 116.2 for May 2003 and 178.4 for May 2002). The A-index was ≤ 10 on 18 days, through 30 May.

-- JUNE PROPAGATION FORECAST --

During June, solar activity is expected to be at low levels. The greater than 2MeV electron flux in geosynchronous orbit is expected to reach high levels through 04 June and 16 and 18 June due to coronal hole high speed streams.

The geomagnetic field is expected to range from quiet to active. Unsettled to active conditions are possible 04, and 16-18 June as coronal high speed streams rotate into a geoeffective position.

(From *NOAA Weekly Highlights and Forecasts*, 25 May 2004)

June marks the changeover from equinoctial to summertime propagation conditions. Solar absorption is expected to be at seasonally high levels, resulting in generally weaker signals during the daylight hours, when compared with winter and spring conditions.

Ten-meter openings, if any, will be limited to sporadic E, which peaks during June, and short north-south path openings. Fifteen and 17 meters will be marginally better than 10 meters, however, these will be a challenge with the decreased solar activity.

Twenty meters will be fair during daylight hours but poor to fair during the hours of darkness. The best 20-meter openings will be the hours around sunrise.

The 30-, 40-, and 80-meter bands will be the best DX bands during June, however, high static levels will decrease their usefulness.

(From "Propagation," Tomas Hood-NW7US, June 2004 *CQ*)

-- WHAT'S AHEAD FOR CYCLE 23? --

The Space Environment Center of the National Oceanic and Atmospheric Administration (NOAA) released two charts on 08 May 2004 which plot historic data and predictions for the smoothed sunspot numbers (SSN) and smoothed 10.7 cm radio flux (SSF) relative to the current Sunspot Cycle 23.

The SSN in the current cycle was minimum in mid-1996, rose to 121 in April 2000, dropped to 104 in February 2001, peaked at 116 in November 2001, and has been declining ever since. The predicted SSN values indicate that Cycle 23 will end in December 2006, with a low SSN of 5.

The SSF during Cycle 23 also had two peaks: 181 in April 2000, dropping to 166 in February 2001, with a second peak of 197 in February 2002. The SSF values are predicted to bottom out at 70 in September 2006.

From these predictions, it appears that HF propagation will continue to decline for another 30 months, at which time Cycle 24 will commence. During those months, most DXing will be on 20 meters and lower frequencies.

-- PROPAGATION PRIMER --

With declining sunspots, HF operators would be well advised to utilize the propagation data broadcast at 18 minutes after the hour by WWV on 15.000 MHz. (Data for the current day is first broadcast at 2118 GMT.) To best utilize these data, however, one must have some understanding of the information being transmitted. This "primer" is intended to provide that understanding.

Sample 2118 GMT WWV Transmission: Solar-terrestrial indices for 06 February follow. Solar flux 203 and estimated mid-latitude A-Index 16. The mid-latitude K-index at 2100 UTC on 06 February was 3. Space weather for the past 24 hours has been moderate. Geomagnetic storms reaching the G2 level occurred.

see Propagation, page 4

CONTESTS & ACTIVITIES

Contest/Special Event	Times/Dates	Bands/Modes	QSO With	Exchange
IARU Region 1 Filed Day	1500 GMT 05 June 1459 GMT 06 June	160 - 10 Meters CW Only	European Countries Only	R/S/T + Serial Number
ANARTS WW RTTY/Digital Contest	0000 GMT 12 June 2400 GMT 13 June	80 - 10 Meters Digital Modes	Anyone, Anywhere	R/S/T, CQ Zone and Time (GMT)
Portugal Day Contest	0000 GMT 12 June 2400 GMT 12 June	80 - 10 Meters Phone Only	Portuguese Stations + DXCC entities	R/S + Serial Number
Asia-Pacific Sprint	1100 GMT 12 June 1300 GMT 12 June	15 & 20 Meters Phone Only	Asian & Pacific Stations Only	R/S + Serial Number
All-Asian DX Contest	0000 GMT 19 June 2400 GMT 20 June	160 - 10 Meters CW Only	Asian Stations Only	R/S/T and opera- tor's age
His Majesty King of Spain Contest	1800 GMT 26 June 1800 GMT 27 June	160 - 10 Meters Phone Only	Spanish Stations Only	R/S + Serial Number
Marconi Memorial HF Contest	1400 GMT 26 June 1400 GMT 27 June	160 - 10 Meters CW Only	Anyone, Anywhere	R/S/T + Serial Number
ARRL Field Day	1800 GMT 26 June 2100 GMT 27 June	All Bands All Modes	Other FD Stations in USofA	Entry Category + ARRL Section
RAC Canada Day Contest	0000 GMT 01 July 2359 GMT 01 July	160 - 2 Meters Phone & CW	Canadian Stations Only	R/S(T) + Serial Number

From June 2004 *Worldradio* and June 2004 *QST*.

-- TARC FIELD DAY PARTICIPATION --

Following the recommendation of President John Fyke-VE6AIV, those present at our 13 May meeting voted to cooperate with the Englewood ARS in the latter's 2004 ARRL Field Day efforts. Five TARC members indicated that they would be willing to help with antenna erection, etc. on 25 June, and several members are being urged to help operate.

The Englewood ARS will set up and operate from the semi-wooded overflow parking area on the north side of the Englewood United Methodist Church, located on the north side of East Dearborn Street just west of the Pine Street traffic light. At noontime on Sunday, 27 June, Field Day operations will cease and a picnic lunch will be offered to all who assisted the EARS.

Note that there will be two other contests going on at the same time as Filed Day, so it should be a "busy weekend" on the HF (and possibly six meters) bands.

-- USA AMATEUR RADIO LICENSEE STATUS --

Class	2001	2002	2003	2004
Extra	95,974	101,155	104,089	105,298
Advanced	87,663	85,483	83,509	79,975
General	136,950	138,971	141,096	139,914
Tech/Tech+	320,505	320,381	323,987	323,430
Novice	42,698	38,245	34,374	31,549
TOTAL	683,790	684,235	687,055	680,166

Totals for month of May in the years shown.

(From Joe Speroni-AH0A, <<http://www.ah0a.org>>)

Propagation, from page 3

Solar radiation storms reaching the S2 level occurred. Radio blackouts reaching the R1 level occurred. Space weather for the next 24 hours is expected to be minor. Geomagnetic storms reaching the G1 level are expected.

Definitions of the foregoing terms must be understood.

Solar Flux is a measurement of the intensity of solar radio emissions on a 10.7 cm wavelength. The daily SF measurement is recorded at 2000 GMT by the Dominion Radio Astrophysical Observatory of the Canadian National Research Council at Penticton, BC. The SF units relate to sunspot activity approximately s per:

SF	Sunspots
68	None
77	10
83	20
90	30
104	50
135	100
158	130
180	160

K-Index uses a scale from 0 to 9 to measure the change in the horizontal component of the earth's geomagnetic field. A new K-Index is determined and added to the WWV broadcast every 3 hours, based on magnetometer measurements at the Table Mountain Observatory north of Boulder, CO or an alternate mid-latitude observatory.

A-Index is a daily value ranging from 0 to 400 to see Propagation, page 5

Propagation, from page 4

express the range of disturbance of the geomagnetic field. It is derived from eight 3-hour K-Index values. The mathematical relationships between the K-Indices and the resultant A-Index are:

<u>K-Index</u>	<u>A-Index</u>
0	0
1	4
2	7
3	15
4	27
5	48
6	80
7	140
8	240
9	400

Space Weather describes the conditions in space that affect Earth and its technological systems, e.g., radio propagation. Space Weather storms are characterized using the NOAA Space Weather scales, as per:

<u>Geomagnetic Storms</u>	<u>Solar Radiation Storms</u>	<u>Radio Blackouts</u>	<u>Descriptor</u>
G5	S5	R5	Extreme
G4	S4	R4	Severe
G3	S3	R3	Strong
G2	S2	R2	Moderate
G1	S1	R1	Minor

Geomagnetic Storm levels are determined by the estimated 3-hour Planetary K-Indices which are derived from a network of western hemisphere ground-based magnetometers, as per:

<u>Geomagnetic Storm Level</u>	<u>Planetary K-Indices</u>
G5	K=9
G4	K=8
G3	K=7
G2	K=6
G1	K=5

Solar Radiation Storm levels are determined by the proton flux measurements made by the primary GEOS satellite.

Radio Blackouts are determined by the x-ray levels which typically accompany solar flares, and are measured by the primary GEOS satellite.

How can these data be put to use by the Radio Amateur? The Solar Flux is related to the number of sunspots, and the number of sunspots is related to the Maximum Usable Frequency, with higher MUF being available with higher sunspots. The MUF will also vary with the position of the Earth with respect to the Sun. For example, during the low point in the sunspot cycle, with the Solar Flux of 68, in late May the MUF between SW Florida and VE6 will range from 8 to 11 MHz; during late December, the MUF will range from 3.7 to 11.2 MHz. However, with the Solar Flux at 180, in late May the MUF to VE6 will range from 14 to 16.5 MHz;

during late December, the MUF will range from 8.1 to 30.5 MHz. Therefore, choice of operating frequency is critical, dependent on path, season and sunspots.

The A-Index is the next most important value to be aware of when looking for band openings. These values may be interpreted as per:

<u>A-Index Range</u>	<u>Comments</u>
0 - 7	Quiet, Excellent polar paths
8 - 15	Unsettled, Good Conditions
16 - 29	Heralding a Storm
30 - 49	Minor Storm, No polar path
> 50	Major Storm, No paths open

These data are put to use when utilized with propagation forecasting software. One of the best and easiest to use is W6ELProp which was developed by Sheldon Shallon-W6EL. Originally available for \$60, it is now free at <<http://www/qs1.net/w6elprop/>>.

Understanding of the foregoing, and use of the WWV broadcasts will help any serious HF operator maximize their success during the coming years.

(From *The SEC Geophysical Alert Message "WWV Broadcast"*, and "Understanding the Numbers from WWV-WVH", Lee R. Wical-KH6BZF, *The DX Magazine*, May/June 2001)

FCC, from page 1

- o Clarify that amateur stations may, at all times and on all frequencies authorized to the control operator, make transmissions necessary to meet essential communications needs and to facilitate relief actions during an emergency.
- o Eliminate the requirement for a public announcement of volunteer examiner test locations and times.
- o Provide Element 1 (5 WPM Morse) credit to any applicant holding a Technician license granted after 14 February 1991, and who can document having passed a telegraphy exam element.

The FCC also implemented certain amendments to the Part 97 rules which became effective 01 June 2004. These include:

Revised the definition of an Amateur Radio Operator to reflect that it is "not the possession of a license document but rather an entry in our Universal Licensing System (ULS) that determines whether a person is an Amateur radio operator." (*Emphasis added.*)

In keeping with recent international radio regulations, the FCC now specifies that the mean power of any spurious emission from a new amateur station transmitter or amplifier operating below 30 MHz must be at least 43 dB (formerly 40 dB) below the mean power of the fundamental emission.

Technician and Tech with Element 1 (5-wpm Morse) credit licensees are prohibited from preparing Element 1 and Element 2 (Tech written) examinations.

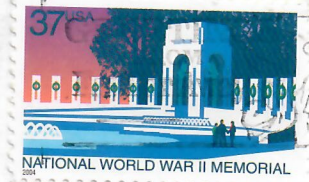
(From ARRL Web Site, 09 May 2004)

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