

# WEST SIDE SIGNAL

Official Bulletin of Toronto's Oldest Amateur Radio Club

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## Meetings

Meetings held at 7:30pm on the third Tuesday of each month, Etobicoke. Municipal Offices (Burnhamthorpe & The West Mall) No meetings in July or August. Visitors always welcome.

## Club Nets

### FM Net

Wednesday 8:00pm  
VE3SKY repeater 146.985 Mhz

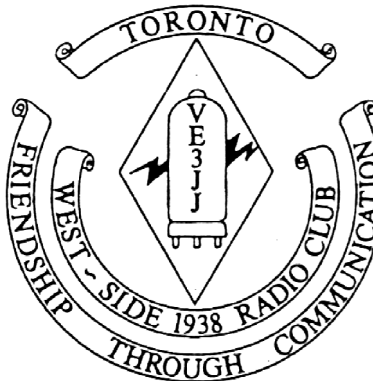
### CW Net

Sunday 10:00am 7.029.5 Mhz

### SSB Net

Sunday 11:00am 7.075 Mhz

Issue No.128 Feb 2010



## Next Meeting

Tuesday Feb 16th 2010

7:30pm

Etobicoke Municipal Building  
Burnhamthorpe Rd & West Mall  
Etobicoke

## CLUB NEWS

We started off the new year in reasonable fashion with 7 members attending the January meeting which is just over half of the present membership, I would think there are few clubs who get a turn-out of 50% Hi. In attendance were VE3EQF Chris, VE3FZL Phil, VE3OBU Bert, VE3PNX Michael, VE3RER Dave, VE3PA Bill and VE3UT Al.. Dave RER gave a very interesting presentation and demonstration of the N1MM contest logging programme and also the Morse code tutor "Morse Runner" Both of these programmes are available for free download

from the internet. A Google search for N1MM and Morse Runner will bring them up. The Morse Runner is a particularly good way to practice picking out callsigns in a pile up, it's also fun. The bands are showing some signs of improvement lately as a result of favourable activity on the sun. Last week for a couple of days there were 34 sunspots visibly active which resulted in a solar flux index of 93, some openings on 10 and 12 meters were observed. However, all good things must come to an end as they say and the sunspots gradually disappeared in number and the solar flux dropped down to the low 80's again. This morning (Jan 21) 16 more sunspots appeared to give us more hope for some better band conditions. I am told there was a major flare yesterday which caused radio black out for several minutes on the HF bands. I wasn't on the air at the time but I've experienced them before, it's a very strange feeling, lots of signals one minute then nothing but noise and you immediately think your rig has given up the ghost and start checking WWV frequencies but hear nothing there, fortunately before you get to the point of opening up the rig signals start reappearing and all is well once more.

## IARU NEWS

### *IARU E-Letter*

The IARU Administrative Council (AC) held its annual meeting in mid-October 2009, in Christchurch, New Zealand. IARU President Tim Ellam, VE6SH/G4HUA, presided over his first AC meeting. Also in attendance was Ole Garpestad, LA2RR, Vice President; Rod Stafford, W6ROD, Secretary; Hans Blondeel Timmerman, PB2T, President and Dennis Green, ZS4BS, Secretary, IARU Region 1; Ramón Santoyo, XE1KK, Secretary, and Daniel Lamoureux, VE2KA, Director, IARU Region 2; and Michael J. Owen, VK3KI, Chairman, and Shizuo Endo, JE1MUI, Director, IARU Region 3. Also present was Region 3 Director Peter Lake ZL2AZ along with David Sumner, K1ZZ, as recording secretary.

One of the major topics of discussion at the AC meeting involved the upcoming WRC-12, the World Radiocommunication Conference in 2012. The AC adopted preliminary IARU positions on the WRC agenda items that relate to amateur radio or may impact the amateur radio service. The most significant agenda items are:

1. Agenda Item (AI) 1.14 - Implementation of the radiolocation service in the range 30-300 MHz;
2. AI 1.15 - Possible allocations in the range 3-50 MHz to the radiolocation service for oceanographic radar applications;
3. AI 1.19 - Software-defined radio and cognitive radio systems;
4. AI 1.22 - Effect of emissions from short-range devices; and
5. AI 1.23 - To consider an allocation of about 15 kHz in parts of the band 415-526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services.

IARU has a document on the IARU web site that identifies the present and anticipated future requirements for radio spectrum allocations to the Amateur and Amateur-Satellite Services. These requirements are identified so that they may be taken into account in the formulation of national policies with respect to proposed and possible future international allocations conferences. At each AC meeting, those requirements are reviewed and when circumstances change so do the requirements. If you're interested in seeing what the IARU sees as spectrum requirements for the amateur service then log onto the IARU web site at <http://www.iau.org> and look for the "Spectrum requirements" document.

The IARU 2025 Committee was established a few years ago to explore restructuring IARU to make it more effective to meet the challenges faced by amateur radio. The committee came up with a proposed new structure. However, even though the proposed new structure had a number of beneficial aspects it became obvious early on that funding of the new structure could be problematic.

At its recent meeting, the committee was restructured and given a slightly different mandate. If the committee can't develop a funding method for the proposed new structure then the committee may propose a different structure.

Additionally, the committee should identify changes which can be implemented in the present structure to address concerns raised by the regional organizations and some member-societies.

There has been a movement in the last several years to try to identify "centers of activity" frequencies across all three IARU regions that can be used in disaster relief operations. It has at times been difficult to arrive at a consensus on what frequencies should be used.

The AC noted that all three regions have now reached consensus on three global Center of Activity (CoA) frequencies for use in the event of emergencies: **14.300, 18.160 and 21.360 MHz.**

When no emergency operations are being conducted, these frequencies are open for normal amateur usage. However, GAREC-09 calls upon IARU member-societies, among others, "whenever emergency communications are being conducted on frequencies that propagate internationally, to use any available real-time communications channels, including but not limited to e-mail bulletins, web sites, social networking

and DX-clusters to draw the attention of the largest possible number of Amateur Radio operators to on-going emergency communications, in order to avoid interference with emergency traffic.”

It would be helpful for each member-society to develop an effective method of notifying amateurs within their own country of any such emergency traffic being handled on the CoA frequencies, or elsewhere in the amateur bands.

In 2008, the AC called for a study of the QSL Bureau System. Since the study was initiated over 51 member-societies responded to the study questionnaire. It became clear that in some societies, QSL cards are not handled the same way for members as non-members. There are a small number of societies that dispose of the cards sent through their bureaus for non-members. The AC adopted a resolution stating “that member-societies are strongly encouraged, whenever possible, to provide incoming QSL bureau service to non-members within their operating territory, if such non-members agree to pay the full cost of this service; and if they are not already doing so, to explore appropriate means and methods for delivering QSL cards to non-members.”

The AC adopted a protocol to deal with member-societies that no longer exist. If for a period of not less than 5 years: (a) there is no address or other means known to either the International Secretariat or the relevant regional organization by which communication may be made with a member-society; (b) there has been no communication from any person claiming to represent that member-society; and (c) there is no other evidence of the continued existence of that member-society. If those circumstances exist, then the relevant regional organization may request that the AC thereafter publish in the *Calendar* a notice setting out its belief that the particular Member-Society has ceased to exist, and calling for the submission of any evidence to the contrary within 180 days of the publication of the *Calendar*. If no such evidence is submitted within 180 days of the publication of the *Calendar*, then the member-society shall be deemed to no longer exist from that date. Thereafter, any association of radio amateurs claiming to represent that country or separate territory shall be required to apply for membership in the IARU in accordance with the IARU Constitution and Bylaws.

Promoting and preserving amateur radio is the mainstay of the IARU. The AC has at its disposal a number of expert consultants and technical representatives and relies heavily on such volunteer experts and technical representatives.

There is always a need for more assistance by knowledgeable amateurs to attend ITU meetings and other telecommunications meetings to represent IARU. The IARU regional organizations and member-societies can be of assistance by recommending individuals who are capable of attending meetings and effectively promoting the IARU objectives at such meetings. Individuals who are amateurs and who have backgrounds in various technical fields such as broadband or wireless technologies, propagation, radar, satellite communications and spectrum management, just to name a few, can be of assistance. Individuals who may be retired from government work in the field of communications or telecommunication regulation are good candidates for working within the IARU to achieve IARU goals.

Member-society leaders are requested to investigate whether such individuals are members of their society and to determine if those amateurs would be willing to assist the IARU. If they are willing to do so, please contact the International Secretariat with the names and contact information so inquiries can be made to determine if they are willing to join the IARU team of experts.

These are some of the important matters discussed at the recent Administrative Council meeting. The complete Summary Record of the meeting can be found at

**<http://www.iaru.org/admin-council-summaries.html>**

## IRISH JOKE

An Irishman goes into the confessional box after years of being away from the Church. There's a fully equipped bar with Guinness on tap. On the other wall is a dazzling array of the finest cigars and chocolates. Then the priest comes in. "Father, forgive me, for it's been a very long time since I've been to confession, but I must first admit that the confessional box is much more inviting than it used to be."

The priest replies: "**Get out.. You're on my side..**"

## KON-TIKI

*ARRL Letter*

Knut Magne Haugland of Norway, passed away on December 25. He was 92. Haugland was one of six men, who with Thor Heyerdahl in 1947, successfully crossed the Pacific Ocean in a 45 foot raft made of balsa wood and bamboo -- named Kon-Tiki -- to prove that people from South America could have settled Polynesia in pre-Columbian times.

Called the "most unusual expedition ever to place reliance on Amateur Radio for communication" in the , *December 1947 QST* Kon-Tiki departed Peru for Polynesia on April 28, 1947. "It was the theory of Thor Heyerdahl, Norwegian ethnologist and leader of the venture, that the settlement of the Pacific Islands resulted from a migration of American peoples who had sailed there many of years ago, rather than a trek from Asia as claimed by other scientists," the article explained. "To prove that such a migration was possible, Mr Heyerdahl decided to attempt the trip in a raft of the type preserved in Incan legends and early Spanish historical accounts. He named the expedition on honor of the pre-Incan Sun god. The Kon-Tiki raft was fashioned out of logs of the lightest wood in existence and lashed together with native-made hemp rope. Its only sources of locomotion would be the Pacific trade winds and the Humboldt Current which sweeps northward along the west coast of South America and thence in the direction of the Tuamotu Archipelago."

### Haugland and World War II

During World War II, Haugland was a member of the Norwegian Resistance where he was instrumental in the destruction of the Vemork Hydroelectric Plant. When the Nazis took over Norway, they wanted to use the plant -- which produced "heavy water" -- in their quest to produce nuclear weapons. Between 1940 and 1944, a sequence of sabotage actions by the Norwegian resistance movement, as well as Allied bombing, ensured the destruction of the plant and the loss of the heavy water produced. These operations -- codenamed Grouse, Freshman and Gunnerside -- finally managed to knock the plant out of production in early 1943. The Norwegian Resistance Operation Grouse successfully placed four Norwegian nationals -- Haugland, Arne Kjelstrup, Jens-Anton Poulsson and Claus Helberg -- who became Operation Grouse. The four men were parachuted over Hardangervidda on October 18, 1942, to rendezvous with the British Operation Freshman and proceed to Vemork. Once on the ground, the Norwegians began to send back intelligence about the plant, including the composition of its defenses. Operation Freshman failed when the British military gliders crashed short of their destination. All 41 participants were killed in the crash or captured, interrogated and executed by the Nazis. Members of Operation Grouse were then ordered to wait for another team, Operation Gunnerside. In 1943, this team of British-trained Norwegian commandos succeeded at destroying the production facility. In 1965, this feat was made into a movie, *The Heroes of Telemark*, starring Kirk Douglas;

After the destruction of the plant, Haugland stayed in Hardangervidda for two months and then went to Oslo

to train marine telegraphers. After a trip to the United Kingdom for radio supplies, he returned to Norway in November, being parachuted at Skrimfjella. The Nazis arrested him in Kongsberg, but he escaped and commenced his training duties. On April 1, 1944, he narrowly escaped another capture by the Gestapo when one of his transmitters -- hidden in the Oslo Maternity Hospital -- was located by the Nazis using direction finding. Haugland fled to the United Kingdom and did not return to Norway until after the war. For his bravery, Haugland was twice awarded Norway's highest decoration for military gallantry, the War Cross with sword, in 1943 and 1944. In addition, Haugland was awarded the Distinguished Service Order and the Military Medal by the British. He also received the French Croix de guerre and legion d'honneur and the Royal Norwegian Order of St Olav

### **Haugland and the Kon-Tiki**

Haugland first met Thor Heyerdahl in 1944 at a paramilitary training camp in England. It was here that Haugland first heard of Heyerdahl's theories about Polynesian migration patterns and his plans to cross the Pacific on a balsa wood raft. In 1947, Heyerdahl invited Haugland and Torstein Raaby, another former resistance member, to join the Kon-Tiki expedition as radio operators.

Heyerdahl and his five companions sailed the raft for 101 days more than 4300 miles across the Pacific Ocean before smashing into a reef in the Tuamotu Islands on August 7, 1947. The Kon-Tiki carried 250 liters of water in bamboo tubes. For food, they took 200 coconuts, sweet potatoes, bottle gourds and other assorted fruit and roots. The US Army Quartermaster Corps provided field rations, tinned food and survival equipment. In return, the Kon-Tiki explorers reported on the quality and utility of the provisions. They also caught plentiful numbers of fish, particularly flying fish, mahi-mahi, yellow fin tuna, bonito and shark.

The expedition used call sign LI2B and carried three watertight radio transmitters. The first operated on the 40 and 20 meters, the second on 10 meters and the third on 6 meters. Each unit was made up entirely of 2E30 vacuum tubes providing 10 W of RF input. As an emergency backup, they also carried a German Mark V transceiver originally re-created by Britain's Special Operations Executive in 1942. Other equipment included a hand-cranked emergency set of the Gibson Girl type for use on the maritime bands, a special VHF set for contacting aircraft and two British Mark II transmitters. The Kon-Tiki also carried a National Radio Company NC-173 receiver. Dry batteries and a hand-cranked generator supplied the power.

The December 1947 QST article stated that "the conditions under which the radio equipment aboard the raft was to operate presented many unusual problems. Proximity of the craft's deck to the sea and the relatively small protection afforded by the thatched bamboo cabin meant that the gear would have to withstand the effects of moisture. It was desired to have transmitter units light and tight enough so that if they should fall overboard they could be fished out and put to work again immediately. Operation was required on maritime and amateur frequencies. Both 'phone and c.w. were specified. The transmitters were to be tuned, closed up and remain watertight unless something went wrong. It must be possible to load them up on antennas of whatever length could be erected on available supports. With these requirements in mind, [C. F. Haddock] W1CTW and [H. A. Gardner] W1EHT of the National [Radio] Company's engineering staff designed and constructed the needed rigs. One transmitter was built to operate on 7 and 14Mc., another for 28 Mc. and a third for 50 Mc."

For the first 22 days following their departure from Peru, the only radio contact Kon-Tiki had was with OBE, the station of the Peruvian Naval School. LI2B kept to its schedule, trying to contact key amateur stations on specified frequencies without success. Finally, on May 20 at 9:44 PST, Harold Kempel, W6EVM, heard and worked LI2B on 14.142 kHz, providing the raft with its first North American contact. By mid-June, LI2B had worked numerous amateur stations.

As the trip progressed, a long-haul network of amateur stations developed. Stations in North America, the Canal Zone and Norway cooperated in handling the Kon-Tiki's traffic. [Gene Melton] W3FNG, in

Kon-Tiki's mission ended on August 7, 1947 -- just 101 days after departure from Peru -- when waves deposited the raft on a reef off Raiora Island. "But the safety of the courageous crew which had made the venture a success was still at stake," the QST article said. "Half an hour after being stranded, LI2B was fortunate in making contact with [G. W. Hitch] ZK1AB on Rarotonga, who was asked to stand a listening watch and communicate with the Norwegian Embassy in Washington if LI2B was not heard at the end of a 36 hour period. Just before the specified period ended, contact was established with [P. Fuller], WOMNU, and word of the landing passed along, thus avoiding the necessity of sending out any rescue parties."

In his book Kon-Tiki, Heyerdahl described the rush to make contact after landing on the reef, including the crew's despair as the NC-173 slowly dried after getting soaked in a shipwreck, gradually receiving at higher and higher frequencies until eventually settling on the 13.990 MHz frequency needed to make contact:

"Coils and radio parts lay drying in the tropical sun on slabs of coral. The whole day passed, and the atmosphere grew more and more hectic. The rest of us abandoned all other jobs and crowded round the radio in the hope of being able to give assistance. We must be on the air before 10 PM. Then the thirty-six hours' time limit would be up, and the radio amateur on Rarotonga would send out appeals for airplane and relief expeditions.

"Noon came, afternoon came, and the sun set. If only the man on Rarotonga would contain himself! Seven o'clock, eight, nine. The tension was at breaking point. Not a sign of life in the transmitter, but the receiver, an NC-173, began to liven up somewhere at the bottom of the scale and we heard faint music. But not on the amateur wavelength. It was eating its way up, however; perhaps it was a wet coil which was drying inward from one end. The transmitter was still stone-dead short circuits and sparks everywhere.

"There was less than an hour left. This would never do. The regular transmitter was given up, and a little sabotage transmitter from wartime was tried again. We had tested it several times before in the course of the day, but without result. Now perhaps it had become a little drier. All the batteries were completely ruined, and we got power by cranking a tiny hand generator. It was heavy, and we four who were laymen in radio matters took turns all day long sitting and turning the infernal thing.

"The thirty-six hours would soon be up. I remember someone whispering 'Seven minutes more,' 'Five minutes more,' and then no one would look at his watch again. The transmitter was as dumb as ever, but the receiver was sputtering upward toward the right wavelength. Suddenly it crackled on the Rarotonga man's frequency, and we gathered that he was in full contact with the telegraph station in Tahiti. Soon afterward we picked up the following fragment of a message sent out from Rarotonga: '...no plane this side of Samoa. I am quite sure...'"

"Then it died away again. The tension was unbearable. What was brewing out there? Had they already begun to send out plane and rescue expeditions? Now, no doubt, messages concerning us were going over the air in every direction. The two operators worked feverishly. The sweat trickled from their faces as freely as it did from ours who sat turning the handle. Power began slowly to come into the transmitter's aerial, and Torstein pointed ecstatically to an arrow which swung slowly up over a scale when he held the Morse key down. Now it was coming!

"We turned the handle madly while Torstein called Rarotonga. No one heard us. Once more. Now the receiver was working again, but Rarotonga did not hear us. We called Hal and Frank at Los Angeles and the Naval School at Lima, but no one heard us. Then Torstein sent out a CQ message, that is to say, he called all the stations in the world which could hear us on our special amateur wavelength. That was of some use. Now a faint voice out in the ether began to call us slowly. We called again and said that we heard him. Then the slow voice out in the ether said 'My name is Paul. I live in Colorado. What is your name and where do you live?'"

Washington, DC, relayed messages to and from the Norwegian Embassy. "On at least two occasions, urgent traffic was exchanged between the Embassy and the raft via this circuit," the QST article explained. "In one instance, a message was relayed from the raft to W3FNG, delivered by telephone to the Embassy, an answer procured and relayed in the reverse direction to Kon-Tiki -- all in a matter of 35 minutes elapsed time!"

"This was a radio amateur. Torstein seized the key, while we turned the handle, and replied, 'This is the Kon-Tiki. We are stranded on a desert island in the Pacific.' Paul did not believe the message. He thought it was a radio amateur in the next street pulling his leg, and he did not come on the air again. We tore our hair in desperation. Here were we, sitting under the palm tops on a starry night on a desert island, and no one even believed what we said.

"Torstein did not give up; he was at the key again sending 'All well, all well, all well' unceasingly. We must at all costs stop all this rescue machinery from starting out across the Pacific. Then we heard, rather faintly, in the receiver, 'If all's well, why worry?' Then all was quiet in the ether. That was all. We could have leaped into the air and shaken down all the coconuts for sheer desperation, and heaven knows what we should have done if both Rarotonga and good old Hal had not suddenly heard us. Hal wept for delight, he said, at hearing LI2B again. All the tension stopped immediately; we were once more alone and undisturbed on our South Sea island and turned in, worn out, on our beds of palm leaves."

### **After *Kon-Tiki***

In 1951, Haugland married librarian Ingeborg Prestholdt. He participated in the Independent Norwegian Brigade Group in Germany from 1948-1949, continued in the Forsvarsstaben until 1952, when he was transferred to the Royal Norwegian Air Force. He headed the electronic intelligence service in Northern Norway during the Cold War. He held the ranks of Major from 1954 and Lieutenant Colonel from 1977. In 1963, Haugland left the Air Force to become acting director of the Norway's Resistance Museum; he was later made its permanent director and retired from this position in 1983. He was also the director of the *Kon-Tiki* Museum from its start in 1947, continuing until 1990.

## **A NEW LOOK AT CYCLE 24**

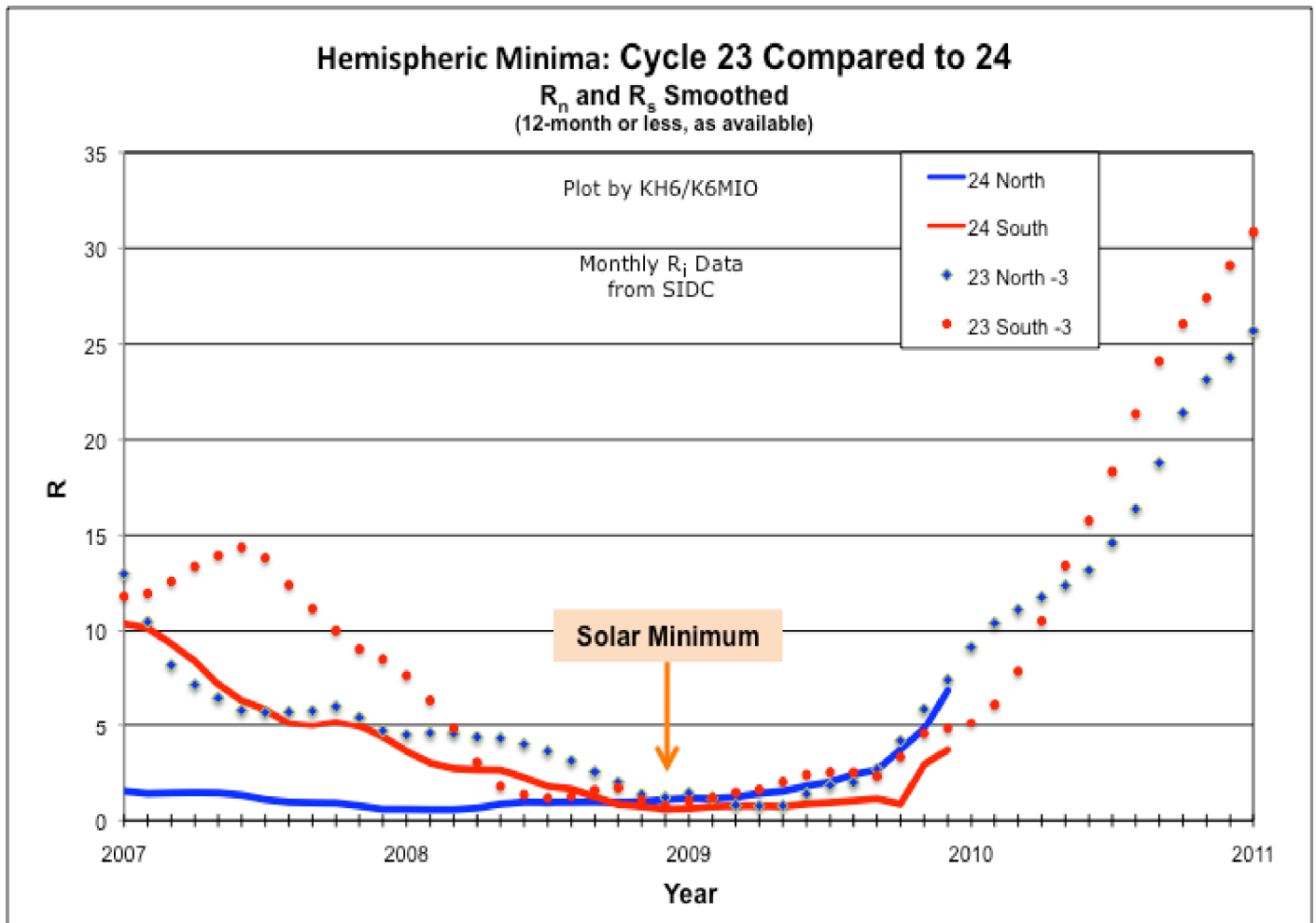
*K6MIO/KH6*

*K6MIO/KH6, Jim Kennedy, has been a student of propagation since Cycle 19 and is a physicist and active HF/VHF DXer who over the years has written extensively about six-meter propagation. He has a PhD in physics and, until retiring recently, was an Associate Director of the Gemini Observatory in Hawaii and Chile. Prior to Gemini, Kennedy was the Project Manager for the Global Oscillation Network Group (GONG) at the National Solar Observatory in Tucson. "One of the key goals of the (ongoing) GONG program has been to provide observational data on the solar interior to help explain the origins of the solar cycle", Jim says. Below is a recent post he made to one of the VHF reflectors that might help us all. Thanks Jim!*

In October I made a presentation on Cycle 24 noting that the Cycle 23 minimum occurred around early December 2008. This "officially" signaled the start of Cycle 24. (Of course we have been seeing occasional Cycle 24 spots and magnetic regions in both solar hemispheres since December 2007.) I also presented a plot that showed the R-sunspot-index values separately for the northern and southern solar hemispheres, since differences in the northern and southern solar hemispheres' behavior have played a key role in the unusual character of Cycle 23. The sluggish southern solar hemisphere seems to be responsible for dragging out Cycle 23 for so long (12.6 years). (The total Ri is the sum of Rn and Rs.) That plot compared the behavior of the solar minimum that began Cycle 23 to the 2008 solar minimum that began Cycle 24. I reported that the then most recent data (through September 2009) were consistent with the northern solar hemisphere beginning to track the upward climb in Rn, signaling the long awaited "upswing" of Cycle 24 activity. I also

suggested that we should be seeing a clear indication of the upswing by the beginning of 2010, IF the cycle was really starting up in a way consistent with Cycle 23. I am happy to report that the most recent data are consistent with a real beginning of Cycle 24 activity.

The attached (below) update of the October plot shows the northern and southern R indices through December 2009. The northern hemisphere shows a clear jump in activity that continued to increase through October, November, and December (and appears to be continuing into January); and it is tracking quite close to the Cycle 23 northern-hemisphere trajectory. Even more encouraging is that in November and December, there is a similar jump in the southern hemisphere R, which appears to be approaching the Cycle 23 track. I must point out that, while the Cycle 23 data are the traditional 12-month running average values, the last six months of Cycle 24 data (July-December 2009) are averages of only the available data to date (e.g. July is an 10-month average, and December is a one-month average). Consequently, the "real" values for this last period may change over the coming months as additional months are averaged in to complete the 12-month average. (IF a normal pattern is followed, they should actually increase slightly.) The current, very preliminary, indications continue to suggest that solar maximum may occur around the Northern Hemisphere winter of 2012-13, if normal rules apply (they may not). I do not make any inferences about the impact on the solar maximum peak  $R_i$  value at this time.



**“We make a living by what we get.....We make a life by what we give”**  
 ....Winston Churchill