SUNSET SKIP IN DEPTH

by ROBERT KRAMER

One of the more productive periods for DX is sunset skip (SSS). At this time of day, especially during the fall and winter months, daytime only stations (& fulltime stations will operate with day facilities) will be broadcasting in night time conditions for a brief time. In some of the months the darkness path can be almost an hour. As a result, many of the states that are difficult during the night, in some areas, are much easier at sunset(examples are New Mexico & Arizona). Unfortunately, it is difficult to write an article of this sort for a national readership. The characteristics of sunset will vary from area to area (the East Coast will have the most SSS chances, with the West Coast having the least). So keep in mind that this is written with the experiences & biases of a Midwesterner. I will try to incorporate other areas into the article whenever possible.

Sunset skip takes place, in a large part, due to the way the FCC licenses daytime only stations & daytime facility changes. Although, technically, daytime facilities are used from local sunrise (or 6AM if a PSA is granted) to local sunset, stations do not sign-off (or change to night power & antenna power) exactly at local sunset. This would make sign-off time extremely confusing for the station staff, since it would change every day. To lessen the confusion, the FCC lets the station sign-off at the same time each day of the month (with the time varying from month to month). How the sign-off time is determined is simple. The station will sign-off at the closest 15 minute period to local sunset on the 15th of the month. Thus, if local sunset on the 15th is 8:18, the station would sign-off at 8:15 for that entire month. During the fall months, when the days are getting rapidly shorter, the sunset time at the end of the month is as much as 45 minutes earlier then the sign-off time. This means 45 minutes of night conditions & a good chance to log the station. In the winter (especially January & February), the early part of the month is best, because the days are getting longer.

Another characteristic of sunset that may be noticed is reception occurring before local sunset. This can be either the local sunset of the station or DXer (sometimes both). The period that this takes place in is called critical hours (2 hours before local sunset & 2 hours after local sunrise), and some stations use lower power or a different directional antenna pattern to lessen interference during these hours. It is caused by the low angle of the sun & reduced solar radiation, due to shorter daylight hours. (This critical hour reception is, for the most part, confined to the DX season, i.e. late August to early February). Since there is less daylight, and that which occurs comes from a low angle, the sun's radiowave absorbtion capibility is greatly reduced. As the sun goes down, the absorbtion becomes less & less, causing skywave DX to return. This explains why you can hear a station west of you before its local sunset & sometimes yours.

Sunset skip & sunrise skip are similar in that you are logging daytime facilities under night, or near night, conditions. Actually, the periods are total opposites. With sunrise, you are waiting for a station to sign-on. With sunset, the station is already on & you have until its sign-off to log it. This makes sunset somewhat easier to DX than sunrise, because sunrise is more of a gamble. You don't know if you will be getting a sign-on on a particular frequency but can tell if a station is in before sign-off (even if it may not be what you thought it was). Another advantage SSS has is that if you ID something, you can still try for something else in the same area during the 15 minute period. With sunrise this is not always possible, since the stations will begin to fade as their local sunrise approaches. The biggest advantage SSS has over SRS is that you don't have to get up in the wee hours of the morning to DX it. SSS takes place in the late afternoon, sometimes just about the time you arriving home from school or work.

As you DX sunset some, you will discover certain patterns in your area. You will find that one direction will be the most common for DX. Here in Chicago it is Southwest. We log more SSS stations to that direction than anywhere else, particularily Arkansas, Missouri, Oklahoma & Texas. The next direction in frequency is straight South (almost equal to Southwest, with Alabama, Mississippi, Kentucky & Tennessee appearing. When the openings go due West or Northwest, a dandy SSS session often results, many times getting into Colorado, Wyoming, Montana, & the Western portions of the Dakotas. Also good are the openings that go deep into the Southwest, producing New Mexico & Arizona. As you might see, SSS is a progressing type of DX. Strong signals from an unusual station (unusual in the terms of DX, not the station format, hi) in Arkansas could indicate a good Texas opening. Also, strong signals from Northwest Texas often indicate a New Mexico-Arizona type opening. The same type of indicators would be present for openings to other directions. Sometimes an opening one way could indicate a gradual move in that direction as sunset moves westward (such as South progressing to Southwest). These types of indicators you will learn over time as you work SSS. Eventually you will learn what to DX for just from what is in during the first 15 minute period after your locals sign-off. You will know which stations are regulars & which mean unusual conditions to a particular direction.

Most people think of SSS as a period to wait until the locals sign-off and then begin DXing. This is wrong. Believe it or not, SSS is not only possible, but is even good to the East many afternoons during the prime season. This means that unless you live on Cape Cod, or DX from a little dighy anchored in the midst of the Atlantic, you can receive Eastern SSS. My SSS DX always begins at 3PM CST during November & December (when Chicago Area station sign-offs occur at 4:30 & 4:15 respectively). During these months, plus late October, I get regular reception into Central PA, Eastern VA, Quebec & Eastern

Ontario. Many times, stations, such as WGSA-1310 Ephrata, PA, will be in strong for a half hour before they sign-off. I also get reception further East on rare ocassions, even to the Northeast (I had either Worcester, MA or Norwich, CT on 1310 last year, but the antenna pattern was changed before I could get an ID). Under the right conditions, SSS to Maine is possible from the Midwest. So try some Eastern SSS this season. Pick a frequency that is fairly open in your area (for Chicago area people, try: 910, 1260, 1290, 1310, 1380 & 1420). Then just sit on it & see what pops in. After you have checked this frequency, look for other fairly clear ones & DX for stations in the same area as you were getting on the other frequency. Remember, SSS is not good every night. So if you are unsuccessful on the first few tries, keep DXing. Eventually you will find some good Eastern DX. You will probably need a loop, or receiver with nulling capability, to DX Eastern SSS, since you often will need to receive a nearby groundwave station. Luckily, groundwave is much easier to null than skywave, so you should be able to DX on channels with moderate strength signals (maybe even locals if you can null them). Just hope the station nulls favors the east or southeast.

In addition to Eastern SSS, be also on the lookout for stations west of your location before local sunset. Many times, you will find Eastern & Western pre-sunset SSS occurring simultaneously. I remember a time that WGSA-1310 was being covered by KNOX-1310 Grand Forks, ND an hour before the KNOX pattern change time, & while the sun was still up in Chicago. Generally,when this type of reception takes place, be on the lookout for other stations in the same area. But not around the scheduled S/Off time, rather, earlier (about as much early as the early indicator was). Thus KNOX being in an hour early would make me look for other stations in the Grand Forks area for as long as KNOX was in. After KNOX fades, I would look for stations west of them an hour or so before their scheduled S/Off time. Generally, the pattern for this type of DX is for the station to fade out long before its sign-off or pattern change time, and then for something further west to be in. We often get KOA-850 & KLDR-1090,on this type of reception, right after our locals go off. When this happens, both are usually gone by Denver sunset(DX further west than Denver is extremely rare, so we don't get anything else). Another pattern noted with this type of reception is that it only effects stations with 5000 watts or more. Most low powered reception takes place during openings that peak right around the station's sign-off time. Thus, afternoons when the stations are in well before sunset will not be great DX days unless you are new to SSS.

For the most part, SSS reception will be best in the lat part of the month during June to December and in the early part of the month January to May. Why, you ask ? Well during the summer & fall months, the days are getting shorter, while in the winter & spring are getting longer. With the fall months, the days will be getting rapidly shorter so that the sunset time on the 15th of the month(the time when the stations sign-off) will be much earlier than it is on the last day of the month. At the end of the year, the last 2 weeks of December, & the beginning of the new year, the first 2 weeks of January, the best 4 weeks of SSS will be found. Since the sign-off times for December are determined by local SS on the 15th, the DX for the late part of the month will be good. This despite the fact that after December 21 or 22, the days are getting longer again. The reason is that the amount of daylight gained between the 21st & 31st is not enough to create daylight paths at SSS. The stations will still be signing off long after local sunset. When January comes, the days begin to get longer rather rapidly. As a result, the sunset time on the 15th, which determines station sign-off time, will be later than on the 1st, when sunset is still early. The darkness path for this 4 week period is about 30 minutes each day, allowing for fine SSS DX.

Even though the later parts of the fall months are best for SSS, don't ignore the rest of these months. During many of these months, the sunset time is earlier than the quarter hour period on the 15th. Example, the sunset time could be 5:10 PM on the 15th, but the station would still sign-off at 5:15. This means that the daylight period at the beginning of the month is not a 15 minute period, but 10 or less minutes. With critical hour reception being in its peak, many good loggings are possible during a brief daylight period. And since the sunset time is getting earlier each day, there should be a gradual day to day improvement. This is not to say that each day will be better than the previous. Many factors besides sunset time influence SSS DX, just as any other mode. So if DX conditions are lousy, and they often are, even in December, the earlier sunset time will not overcome this. Eventually the day to day improvement will lead to the days when local sunset is before the sign-off times. When this happens you will notice increased life on the band during the SSS period (except when cx are bad, when the band will be dead).

When DXing the nonpeak parts of the month, especially in the fall, when S/Off time will be near the local sunset for the station, you may find that no stations will be in until just around local sunset for each 15 minute period. Stations will then fade up, usually weaker than later in the month. Thus, stations that may be in for half an hour later in the month may only be in for 2 or 3 minutes, just before sign-off, on the first couple of days. Many times, the extremely low powered stations will pop in just at S/Off, or right in the middle. Some even wait to appear during the SSB, hi. What is a good idea is to keep a record of the UnIDed stations that you suspect may be needed by you. Write down the time & frequencies of all UnIDed SSBs or S/Offs that you tuned into & check for them throughout the month. As the month progresses, you can even check these frequencies well before the S/Off times were noted.

One facet of SSS DX that is rarely discussed is post sunset Eastern DX. Some evenings SSS is not all that it should be. For some reason, even in the later part of the fall months, the band is totally dead. This does not mean that there is no DX. It just means that the band is slow in recovering from the effects of solar radiation. When this takes place, be looking for stations out east. When the band does recover, it usually does so in an east-west direction, just as SSS. The difference will be that the trek westward may be faster. Somedays the band will suddenly liven up as though a switch was thrown turning on the ionosphere. Other times only limited stations in the east will appear. In Chicago we often get Quebec, Ontario & Upstate New York when this occurs, My best catches through this type of opening are WOTT-1410 Watertown, New York & CHOV-1350 Pembroke, ON. Be sure to check the graveyard channels when an Eastern opening is apparent. They often produce several suprises.

Speaking of the GY channels, don't totally ignore them at SSS. While, most evenings, they are hopelessly cluttered with very weak signals, at times they will be quite remarkable. Last season, here in Chicago, we had several good openings in late October & early November to Arkansas & Oklahoma. It was sort of wierd to have KADA-1230 Ada, Oklahoma be in interference free (after power change) on a frequency as cluttered as 1230. While openings on GY channels are not very frequent at SSS, when they do occur they are dandies.

Hopefully this article will have given you some tips on fully exploiting SSS. I tried to address various factors as they popped into my head, which explains why the article, at times, lacks continunity, hi. I will close with my usual list on concluding pointers:

1. The SSS season usually lasts from late September to mid February, so be DXing then.
2. The late part of Sept. Oct. Nov. & Dec. and the early parts of Jan. & Feb. are the peak SSS periods.
3. Be sure to DX the early parts of Oct. Nov. & Dec. Even if you don't hear any new stations, you can get some UnIDeds to look for later.
4. Obtain a road atlas or the GWDXA frequency maps discussed in the pointers of my SRS During Aurora article, & a set of the Sunrise/Sunset maps so you'll know what signs-off when.
5. Don't ignore SSS before your local stations sign-off. Many times SSS will begin over an hour before your local sunset.
6. When stations to the west are in well ahead of when they should be, look for stations even further west, also before they should be in, as the day gets later.
7. Look for SSS patterns in your area to determine what directions are best.
8. Look for stations that are regular,so that when stations that are not usually in appear, you will know that unusual DX conditions are present.
9. On days when SSS seems dead, be looking for stations to the east of you. Often an eastern opening, of brief duration, will occur (usually 1-2 hours after local sunset).
10. Check the GY channels periodically to determine if anything unusual is happening there.
11. In the early parts of the fall months the stations often will not fade up until the last few minutes before sign-off. Thus, don't give up just because the band sounds dead after the previous sign-off period.

Statewide Radio Networks

OVER at Halloran House at noon today the National Association of State Radio Networks will be repeating the pitch it has been making to advertisers and agencies across the country. Part of it will be that its 18 member networks can offer greater penetration in their states than any of the national radio networks.

That's because statewide networks exist in highly agricultural states, having come into being as news services for the farmer and an advertising medium for agribusiness. And in these states half or more of the population lives in rural areas — what ad people call the C and D counties — while national radio networks are reaching the more densely populated A and B counties.

But the state networks work much like the 28 or so national ones, serving their affiliated stations with schedules of programming that the stations add to their own. The first one started in Texas in the 1930's. The National Association of State Radio Networks was founded in 1974, and two years ago its members were generating enough cash flow to attract the interest of the John Blair Company, which has a number of divisions that represent various media to national advertisers. Blair represents 13 of the 18 networks.

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Yesterday, association members met at Blair Radio offices to discuss the Halloran House extravaganza with Edwin J. Howard, a Blair vice president and head of Blair Wired State Networks. Among them was Clyde G. Lear, a 38-year-old fireball from Jefferson City, Mo., who is their current president and is also founder-chairman of the Missouri Network. It was only the fourth state network when he started it in 1972, but now it supplies 138 stations that overflow into Kentucky, Iowa and Kansas. And who knows where he's going from there?

The sky's the limit, so to speak, because like the cable TV network operators, Mr. Lear is abandoning leased telephone lines for transmitting and switching to satellite (Western Union's Westar 3), and saving money in the process. That means his programming could be available nationally.

He was bitten by the radio bug while doing the disk jockey bit for a local station as an undergraduate at Central Methodist College. Then he did his master's thesis at the University of Missouri's School of Journalism on starting a state radio network, so all he had to do was follow his own advice. Once he lined up the financing from four friendly businessmen, at any rate.

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As most of these networks have, his Missouri Network started with farm news, which now runs 18 times a day in 5- to 10-minute segments. State news, 5 minutes each hour, was added in 1975, and a twice-daily state sports program joined the roster in 1977. Stations take the programs they want, so the network may be serving competing stations in the same market.

The arrangement with all the stations is the same — 50/50 barter, with the station running the programming in exchange for being able to sell off half of the commercial time, which comes to about one minute for each five-minute segment.

During this year, national advertisers using state networks included such big spenders as Lever Brothers, Anheuser-Busch, Borden, S. C. Johnson, United Airlines, Century 21, American Cynamid, Texaco and Gulf Oil.

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