

Seasonal Spring/Summer Es Probabilities

From KA5DWI – Art Jackson EM12ju Fort Worth, Texas

For four years (2005-2008), I have actively participated on 10-Meter PropNET (www.propnet.org) fulltime during the Spring/Summer *Es* season. Since *Es* were identified and studied they have been called “Sporadic”. After capturing over 50,000 PSK31 data packets from 119 amateur stations also participating in PropNET, I have determined that “Periodic” is a much better description for *Es* propagation.

Last year I released the first charts showing the probabilities of working another amateur on *Es* based upon 3 years of PropNET data at my QTH. I have now updated the charts with a 4th year. My intent is to add a 5th year, but I have experienced enough consistency with these 4 four years to believe that this data is quite reliable.

Please enjoy and use this data for amateur radio use and interests. You may copy, print and link these charts. All I ask is that you mention the PropNET.org and its website Library as its source <http://propnet.org/docs.shtml>.

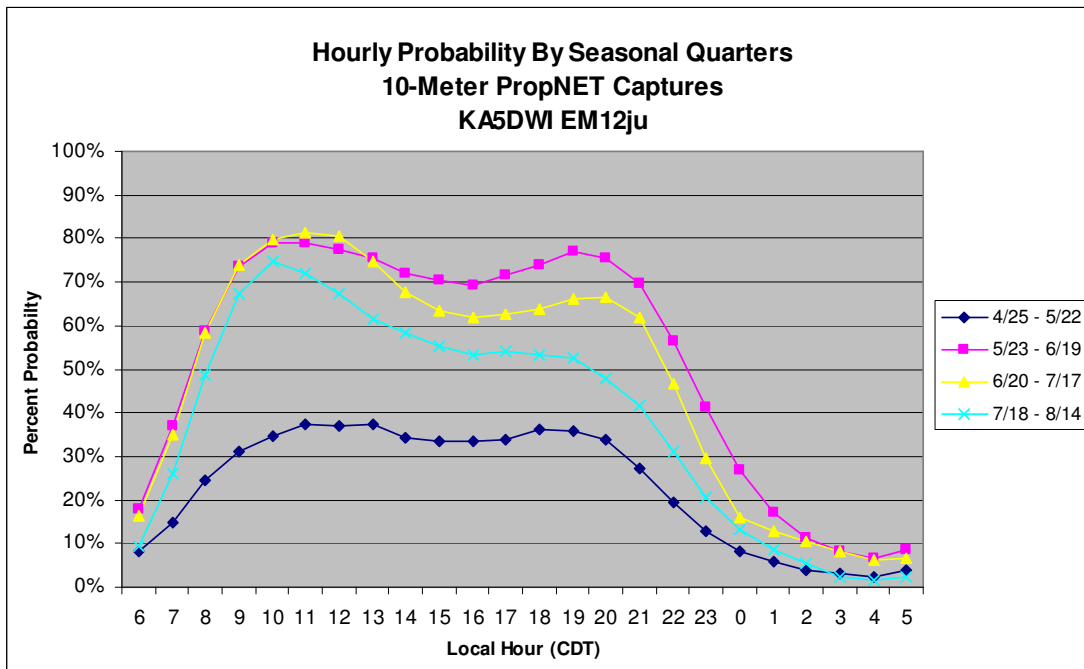
The data compiled is from the home QTH of KA5DWI, Art Jackson located in grid square EM12ju near Fort Worth, Texas. It is based on reception (capture) of 119 PropNET participants from April 25 to August 14, 2003 to 2008. It does not contain captures of KA5DWI, nor other participant’s captures. These charts are a small part of an extensive 4-year study on *Es* propagation that will be published in the future.

It is believed that other areas of the Northern Hemisphere experience different *Es* propagation conditions and you may experience different results. I do believe that it will be similar to what I have observed.

I invite you to become a 10-Meter PropNET participant and help me refine this work in progress.
73’s Art – KA5DWI

4-Week Period *Es* Season Probability Chart

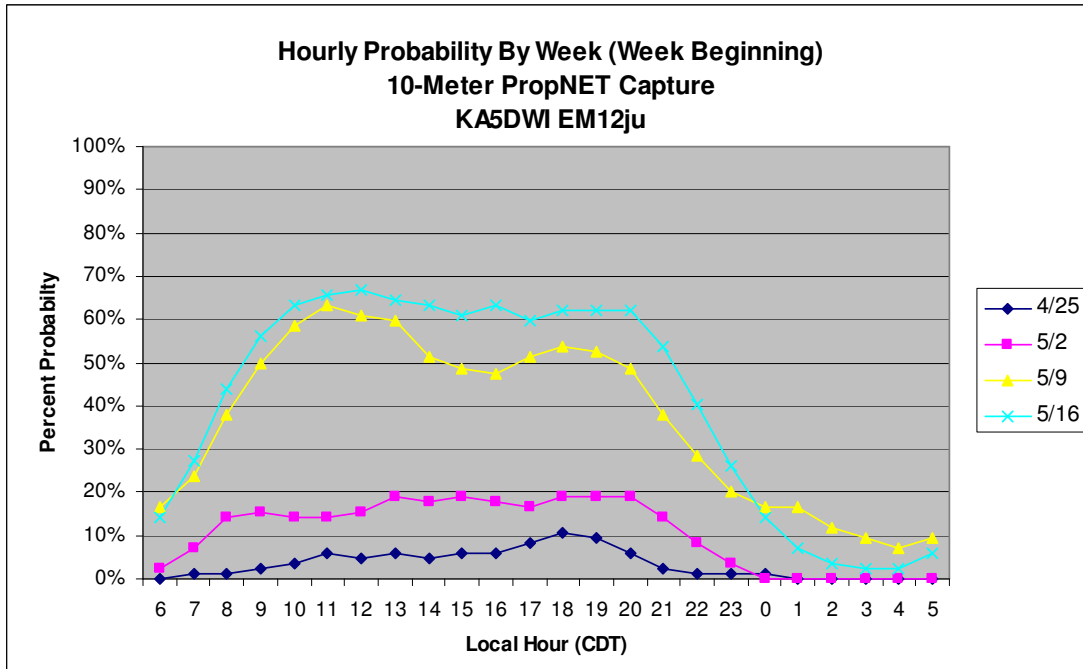
Es propagation does show up in early April and becomes much more consistent on or near April 25. *Es* remain active until August 14. After the latter date, they do become truly sporadic. The periodic season lasts 16 weeks centered on the Summer Solstice. *Es* fire up in late April and become very consistent through mid-August. The best period to work *Es* exists from May 23 to June 19.



The chart above displays the exact results at my QTH in percentages for capturing another PropNET participant’s 10-Meter data packet by local hour and broken down into four-week periods. For example, during the four-week period from July 18 to August 14, during my local *daylight savings time* 10:00AM hour, I captured at least one 10-Meter PropNET station 75% of the time (42 out of 56 measured hours in 4 years).

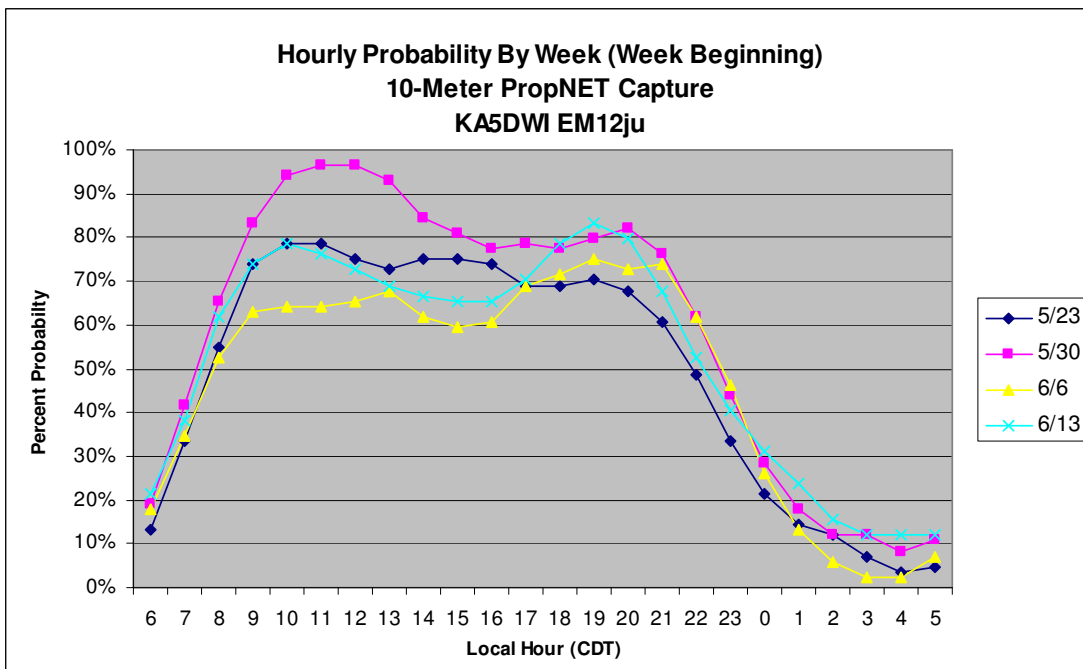
Four Week Period: April 25 to May 22

Es usually appeared in most years by April 27. By May 6, the first signs of consistent propagation will appear. Also early seasonal openings will favor the afternoon, but once well into May it eventually favors morning periods.



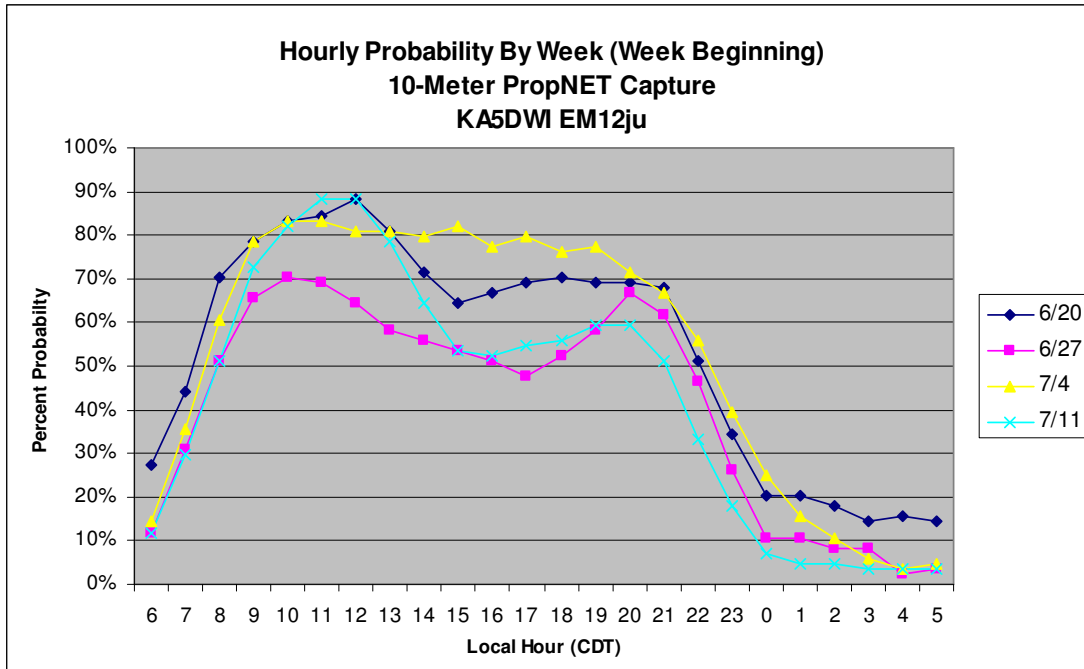
Four Week Period: May 22 to June 19

Clearly the best week of the season is from May 30 to June 5. 100% hourly capture rates occurred during this week in the 4 years for specific dates. Amazingly the following week (beginning June 6) was not as active, but still good nonetheless.



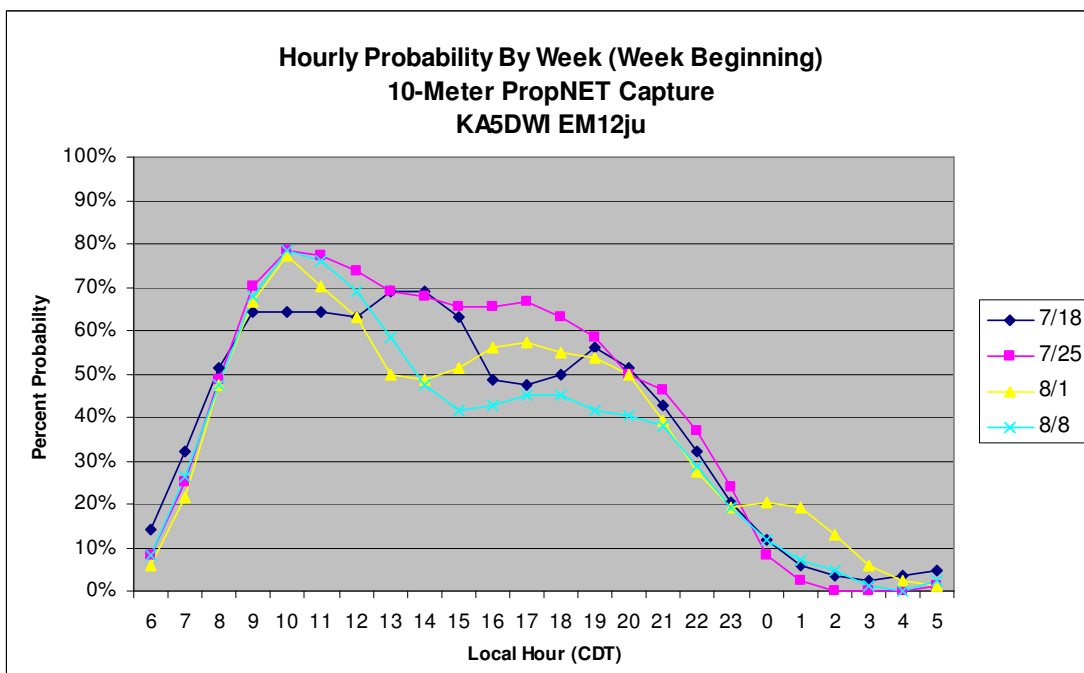
Four Week Period: June 20 to July 17

These four weeks follow the Summer Solstice. As in the prior period, some weeks are outstanding (July 4th week) and one (June 27th) is not. Overall, the quarter and the prior one are the best time of the season to work *Es* on a consistent basis.



Four Week Period: July 18 to August 14

The final quarter of the season is the most fascinating. It was surprising how active it remains. Probabilities do not drop off in this period as dramatically as it rises in April. Also there are a few secondary peaks of activity which get your attention, such as the midnight peak in the week beginning August 1st. The end result was that had I recognized the high level of probabilities during this period, I would have extended the study at least 3 weeks.



In the Future

I had hoped to release the overall 4-year study this year, but other obligations kept me from doing so. With some luck it will be released this summer. I will continue to add annual data from the 2009 season to refine and perfect the product. We also invite new participants to PropNET. Please join me on 28.131 MHz this season and be part of the study.

Visit www.propnet.org, become a member of our Yahoo Groups and join in the fun.

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