# Effects of the Time Change

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What everybody wants to know, of course, is what was the effect of changing start time to one hour earlier? First, before we read too much into this data, remember that the solar flux was 74 and the K index jumped from 2 at 2300 UTC to 5 at 0000 UTC so conditions were changing rapidly as the contest was beginning. This had a big effect on 20 meters, in particular, with numerous comments about deep QSB on 20 meter signals. (For the February 2020 CW Sprint, K was 2.)
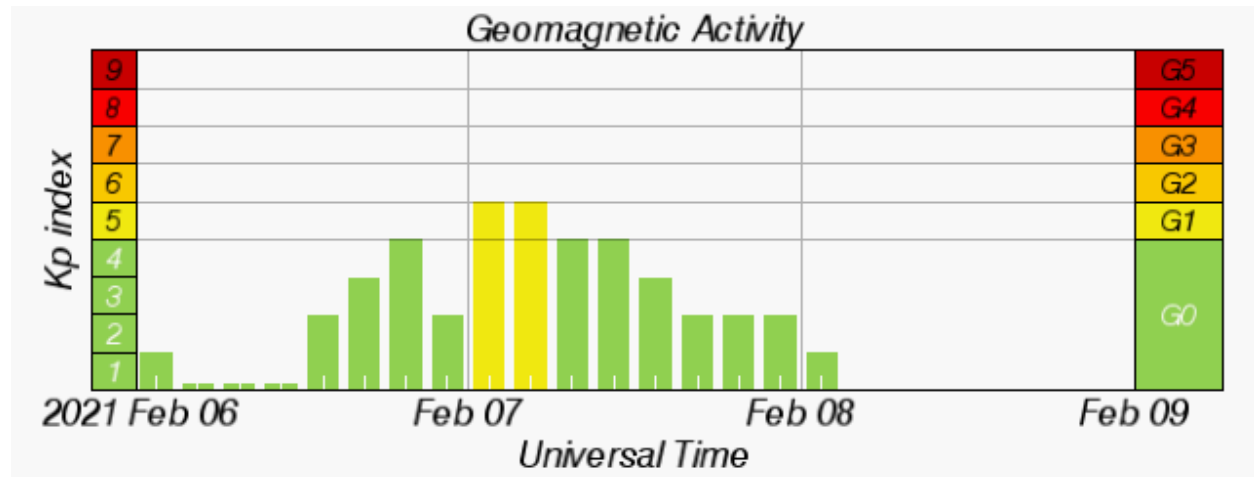
(Graph from NOAA Space Weather Prediction Center)
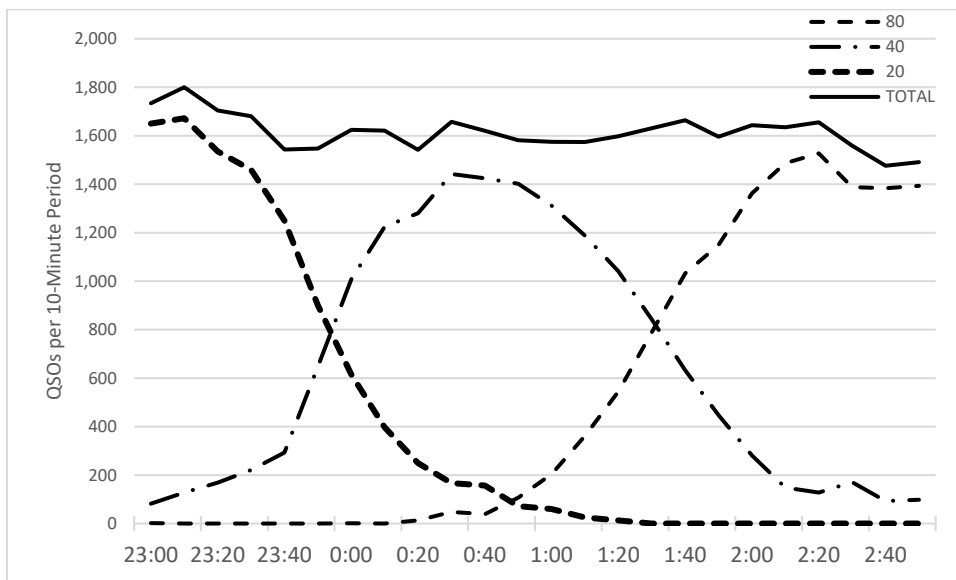
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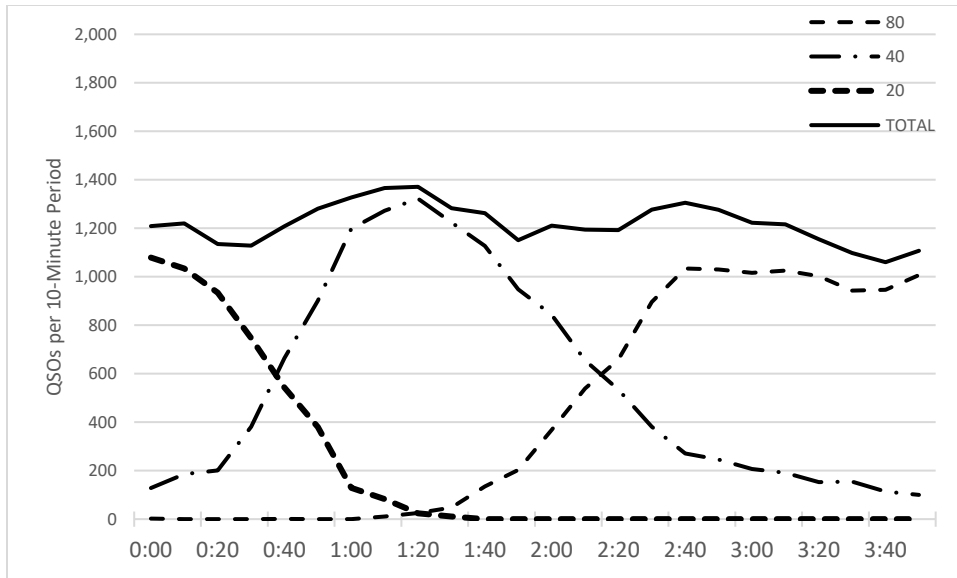
Feb 2020

As you can see from the activity graphs, even with the disturbed conditions, 20 hung in there quite a bit longer with the earlier start time. In Feb 2020, it took the 20 meter activity about 30 minutes to drop by 25% while in 2021 the same drop took 50 minutes, another 20 minutes longer. If conditions had been a bit better, we probably would have seen 20 meter activity somewhat longer still. So starting earlier definitely made for more 20 meter activity.

Did this have a big effect on the geography of the top scorers? i.e. Did the East Coast win? No, the East Coast did not win. But there were clear changes and the biggest change was not from west to east but from High Power (HP) to Low Power (LP).

The table below shows the effect of the time change in two ways for the Top 30 High Power and Top 30 Low Power scores. The left side of the table shows the average percentage of QSOs made on each band in both Feb 2020 and Feb 2021. The right side of the table shows the percentages of Top 30 stations in each time zone. (Hawaii and Alaska were arbitrarily assigned to the Pacific Time group and Caribbean and Maritime to the Eastern Time group.)

From Feb 2020 to Feb 2021 we see that:

• In HP, 20 meter activity increased 8% while in LP, 20 meter activity increased a whopping 24%. Both increases came at the expense of the low bands. 40 meter activity didn't change a great deal in either case — just a few percent. HP stations made a bit fewer 80 meter QSOs but the effect was greatest for the LP stations where 80 meter activity fell 22 percent.

• In HP, the number of Top 30 stations in the Pacific Time Zone fell 10% with modest increases in the Mountain and Central Time Zone stations. There was no change in the number of Eastern Time Zone stations in the Top 30. Stations in mid-continent did somewhat better from having 20 meters open a bit longer.

• In LP, the effect was dramatic. Top 30 stations in the Eastern Time Zone increased by 17%, mostly at the expense of Central Time Zone stations. LP stations in the east really benefited from more 20 meter activity.

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Top 30 HP							
Average percent of QSOs	Feb-20	Feb-21	Change		Percent of stations in the Top 30	Feb-20	Feb-21	Change
20 meters	21	29	8		Pacific	37	27	-10
40 meters	43	40	-3		Mountain	7	13	6
80 meters	36	31	-5		Central	23	27	4
					Eastern	33	33	0
Top 30 LP							
20 meters	11	35	24		Pacific	20	20	0
40 meters	55	53	-2		Mountain	7	3	-4
80 meters	34	12	-22		Central	50	37	-13
					Eastern	23	40	17

In summary, moving the start time earlier did benefit stations in the middle and east of the continent. Yet two familiar West Coast stations (N6TR and N5KO operating at W6NL) were atop the overall Top Ten. They obviously benefited from the increased activity but their fraction of QSOs on each band wasn't greatly different from the Top 30 averages. The primary beneficiary of the time change, as we had hoped, was the smaller, LP stations who had more opportunities to make QSOs. i.e. it was probably more fun for them and they are more likely to participate next time.

This experiment of an earlier start time seems worth running again with, hopefully, a less active ionosphere and maybe a bit more solar flux. The upcoming RTTY Sprint will also have an earlier start time so we'll see how that contest is affected as well. Thanks to all for giving it their best, regardless of expectations!