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The effects of weather variation on autumn nocturnal migration patterns of *Catharus*
thrushes in Algonquin Park, On.

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Abstract

I studied nocturnal migration of *Catharus* thrushes in relation to seven weather variables and lunar phase using an audio record of each night during fall migration over Algonquin Park. I used AIC to weigh the eight parameters and establish a hierarchy of importance for predicting total birds, peak hour of migration intensity, how spread out birds were through the night, and percentage of birds detected calling more than once. I report for the first time how these parameters affect the nightly spread of birds and peak hour. My results suggest that wind direction is the most important parameter for predicting total birds, while cloud cover and humidity are most important for predicting peak hour and kurtosis. I suggest that more work should be done to evaluate the effects of weather on the structure of nocturnal bird migration and the influence it may have on evaluating sites for their importance to nocturnal migrants.

Introduction:

Significant costs are associated with the annual migration of birds (Richardson 1978). The most direct of these costs is the high risk of mortality associated with making long distance flights (Jehl et al 1999). Migration is also energetically costly, as migrants must fuel their muscles (Nilsson et al 2006). Costs of a trip can change significantly depending on the environmental conditions, so it is necessary that individual birds can make their migrations under the most favourable (least energetically costly) weather conditions (Gauthreaux and Able 1970). For example, a light tailwind for a migrating bird will reduce the energy needed and the time traveling for birds (Butler et al 1997). Cool (fall) or warm (spring) temperatures may favor migration (Pyle et al 1993). In addition, dense cloud cover may impair the navigation ability of some migrants, thus instilling an added cost (Nilsson et al 2006). Precipitation can reduce migration activity, perhaps due to it chilling birds or through increasing their weight (Richardson, 1978). Barometric pressure and lunar phase are also factors that appear to affect bird migration but which are not fully understood (Pyle et al 1993).

Several methods have been used to measure the occurrence and intensity of bird migration. Perhaps the simplest method is direct visual counting using spotlights (Balcomb 1977) or the moon (Carpenter 1906). One study even used downward pointing lights from an airplane to detect migrants (Bellrose 1971)! While this is effective and direct, it is extremely labour-intensive and cannot resolve species composition. Radar has been used for the last fifty years (Hassler et al 1963). While radar allows for remote detection, it is able to detect only large movements of birds and is not capable of resolving species composition precisely. Despite this it is fairly easy to use and is

probably the most common method of quantifying avian migration patterns (Larkin et al 2002, Farnsworth et al 2004). Mist-netting of migrants and daytime observations probably miss many birds due to habitat selectivity, and as a result of not always being able to open nets due to certain factors; thus, the data are hard to standardize (Remsen and Good 1996).

This study uses counting of nocturnal flight calls to estimate the number of birds passing over a location. This method was first documented in Wisconsin in 1896 (Libby 1899). The first recordings were from Toronto in 1957 (Evans 2005) and Harold Mills completed the first working nocturnal flight call detector program at the Cornell Lab of Ornithology's bioacoustics research program in 1994 (Mills 1995). Oldbird Inc. (2006) now publishes free detection and sorting software via the internet.

This paper uses nocturnal flight calls to document the autumnal migration of *Catharus* thrushes (Passeriformes: Turdidae) in Algonquin Park, located in central Ontario. In Ontario four species in the genus *Catharus* are common: Gray-cheeked Thrush (*C. minimus*), Swainson's Thrush (*C. ustulatus*), Veery (*C. fuscescens*), and Hermit Thrush (*C. guttatus*). The Gray-cheeked Thrush is the most northerly, breeding only south to the tree line in North America, but wintering in South America (Lowther et al 2001). The Hermit Thrush breeds throughout Ontario, with the exception of extreme south-western Ontario, and winters in the southern United States and Mexico (Jones and Donovan 1996). The Swainson's Thrush breeds across Ontario with the exception of southern Ontario and winters in Central and South America (Evans Mack and Yong 2000). The Veery breeds throughout southern Ontario north to the edge of the boreal forest and winters in South America (Bevier et al 2004). Thus, all four species have large

breeding ranges north of the central Ontario study site, migrate a long distance south of Algonquin Park, and, due to their close relatedness, are assumed to exhibit similar responses in migration to weather variation. These birds were also chosen based on their flight calls. All four species have relatively loud, long, and easy to identify calls (Evans and O'Brien 2002).

Based on previous work conducted on the relationship between migration and weather two main hypotheses were formed. First, I hypothesized that weather has a direct effect on nightly intensity and peak nightly timing of *Catharus* migration. Secondly, I hypothesized that different weather variables differ in their magnitude of influence on nocturnal migration intensity. As was found in other studies I predicted that light tail winds, low/dropping temperatures, clear skies, and rising barometric pressure will result in increased migration intensity and that wind speed and direction will play the biggest role in predicting nocturnal migration of thrushes on a nightly basis.

With regards to the nightly pattern of nocturnal migration I hypothesized that weather would have an effect. Specifically, I predicted that birds would migrate longer, peak earlier, and call less under ideal conditions.

Methods:

Study site:

The study was conducted at the Visitor Centre of Algonquin Park (N°45.59 W°78.36). Algonquin Park covers 7,725 km² in central Ontario. The park itself is centered largely on a large bedrock dome, which reaches a maximum height of about 550 metres above sea level. The visitor centre is situated on a height of land so that it is approximately 50 – 100 metres higher than the surrounding lands.

Data collection:

I set up a directional microphone (Fig.1) on the Visitor Centre deck of Algonquin Park. The 500 Ω Dynamic brand microphone, model # 33-2001a was housed in a large (40 cm diameter) plastic flowerpot covered with plastic wrap (for water-proofing) and cheesecloth (to prevent piercing of plastic wrap by sticks, hail, etc.). The small flower pot had a diameter of 20 cm and the plastic bowl had a diameter of 23 cm. This design was adapted from Old Bird Inc. (2006). The microphone recorded nightly (2200h – 0600h) from August 14, 2006 until October 14, 2006. Due to technical difficulties data after September 23 was corrupted. Thus, this study used a data set from August 14, 2006 until September 23, 2006 (inclusive).

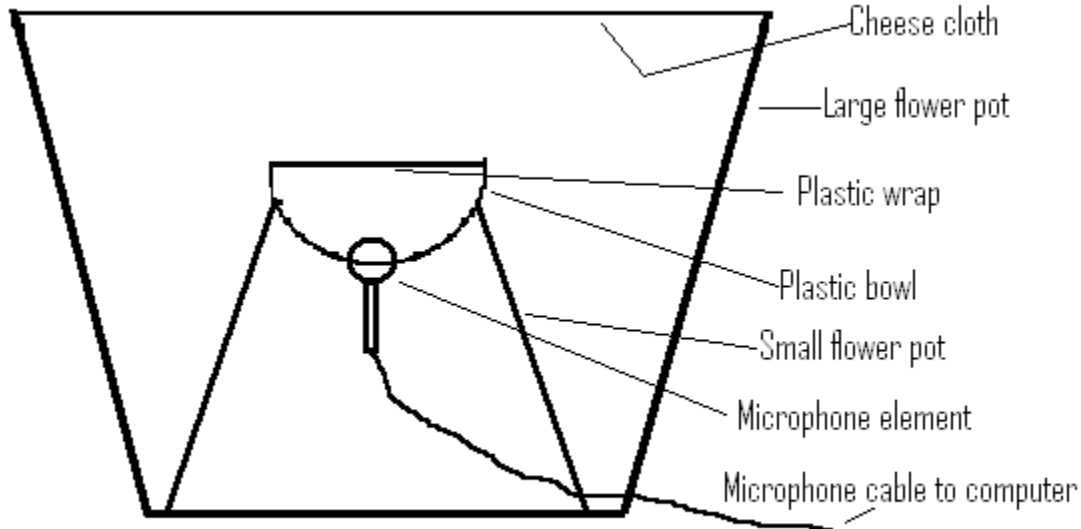


Fig. 1 Microphone design. modified from Oldbird (2005).

Each night’s recording was saved as a single .wav file. Subsequently, automatic call detection software (“Thrush-x”) was run for each night’s sound recording. Thrush-x works by detecting short bursts of sound energy in the frequency range that thrushes most often call at (2.8-5kHz). Whenever a positive sound burst is detected the program saves the clip as an individual file with its name being the time from the start of the eight-hour clip. Thus, after running Thrush-x on a night’s recording all short bursts of energy were individually saved in an output folder, with a name indicating the time they occurred. Files from each night were sorted using Glassofire, a program which displays multiple spectrograms at a time and is designed to sort batches of sounds at a time. Species were identified using recordings of known individuals supplied on the CD-ROM, “flight calls of migratory birds” (Evans and O’Brien, 2002). All analysis software was developed by Oldbird Inc and is available free online at www.oldbird.org (Oldbird 2005).

To avoid counting individuals twice, any calls occurring more than three seconds apart and less than a minute apart were spectrographically analyzed. Any calls in this time frame that appeared and sounded similar were considered to be from the same individual for the purposes of generating the number of thrushes detected (Evans and Mellinger 1999).

For most analyses, all *Catharus* thrushes were lumped into a total number of birds due to small sample sizes of *C. fuscescens* and *C. minimus* and to avoid any error due to misidentification.

From each night several variables related to migration activity were recorded. These included: total number of thrushes, number of thrushes for each hour after sunset, median calling hour (peak), distribution of calls through night by hour (kurtosis), and number of thrushes detected calling more than once.

Weather data were collected from Environment Canada's National Climate Data and Information Archive (online) – North Bay A station. This station was chosen as it is the closest (100km) station north (314°) of the study site (presumably the general direction migrants would be originating from as they migrate south towards their wintering grounds) and because it reports all of the desired weather variables. The pertinent weather variables recorded were: mean temperature, wind direction, wind speed, barometric pressure, relative humidity, visibility, moon phase, and percent cloud cover. Moon illumination was calculated based on a percentage of how full the moon was provided by Stardate online (<http://stardate.org>, accessed February 2007).

Data Analysis

All variables were tested for normality visually and with the Kolmogorov-Smirnov test. All met this assumption except for visibility, total birds, and peak hour; these were subsequently \log_{10} transformed to meet normality. Independent Variables were tested for multicollinearity and were all found to have $R^2 < |0.60|$.

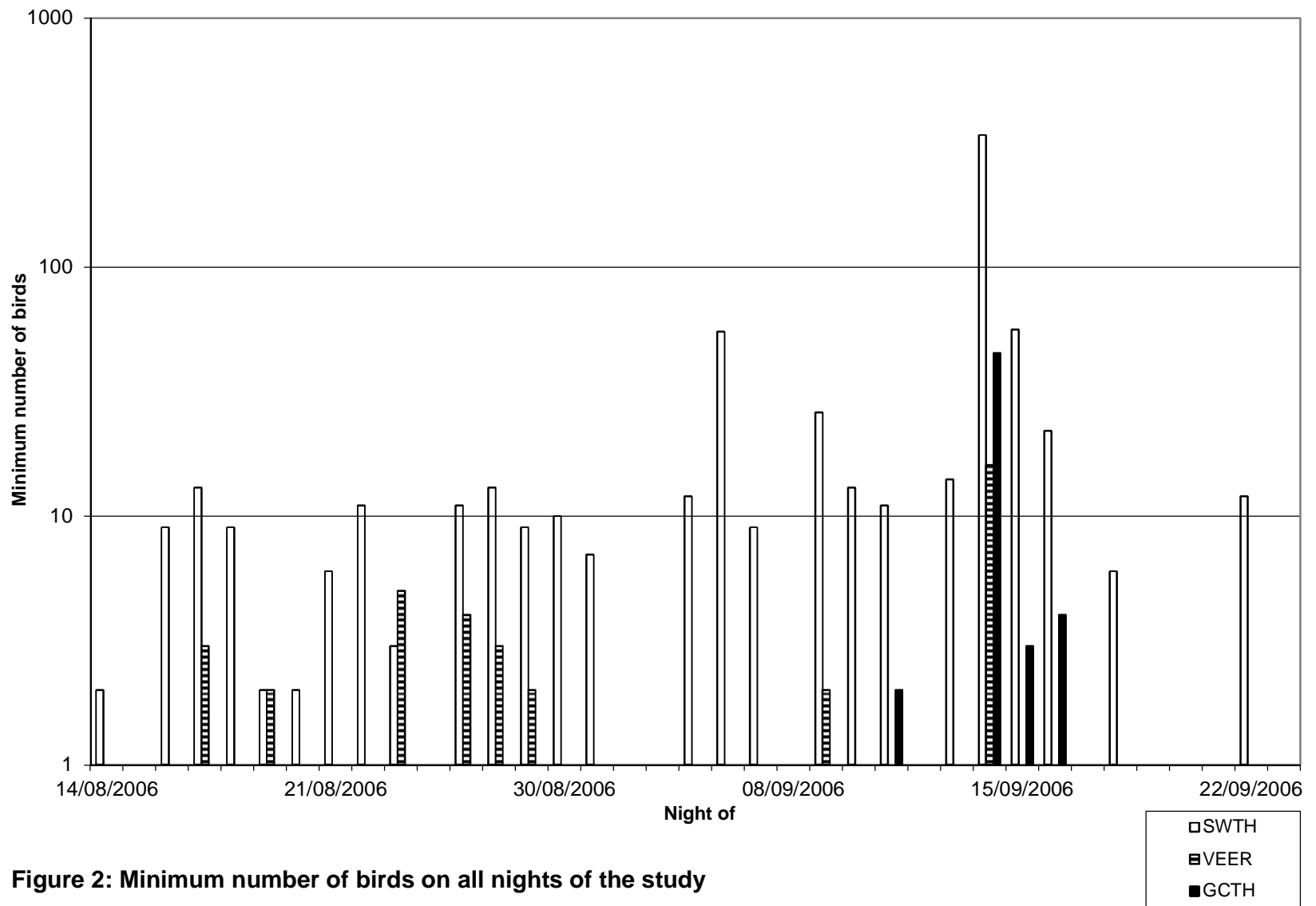
General linear model multiple regressions were performed to determine the magnitude which each weather variable affects migration activity for each species. Akaike's Information Criterion (AIC) was used to quantify the relative importance of each parameter by adding the Akaike weights from all models containing each parameter (Burnam and Anderson 1998).

Results:

At least 784 *Catharus* thrushes were recorded, of which 87% (685) were Swainson's Thrushes, 5% (40) were Veerys, and 7.5% (59) were Gray-cheeked Thrushes. Thrushes were detected on 78% (29) of nights. Of the 37 nights sampled Swainson's Thrushes were detected on 78% (29) of nights from August 14, 2006 to September 23, 2006 (the first and last nights of the study). Veerys were detected on 37% (11) of nights between August 16, 2006 and September 14, 2006, while Gray-cheeked Thrushes were detected on 24% (9) of nights between September 5, 2006 and September 22, 2006;

The night of September 14, 2006 was the largest night of migration, with 51% (400) of the total birds detected during the entire study. This night was characterized by low temperatures, high relative humidity, very light winds from the northwest, moderate visibility (16.6 km), low percentage cloud cover, and a half-full moon. Excluding this night 10.6 ± 13.7 (mean \pm SD, $n = 36$) thrushes were detected nightly. Birds seemed to come in a series of six waves, with peaks occurring on August 17, August 22, August 28, September 6, September 9, and September 14 (Figure 2).

The total number of birds was affected positively by increasing values for humidity, visibility, moon phase, pressure, and wind direction, while total number of birds was affected negatively by increasing values of temperature, cloud cover, and wind speed (Table 1). Wind direction was the most important parameter for predicting total number of birds and was 1.5 times more plausible of an explanation than the next most important parameter (cloud cover) given the data and candidate models (Figure 3). Conversely, wind speed, moon phase, pressure, and visibility were poor explanations given the data and candidate models (Figure 3).



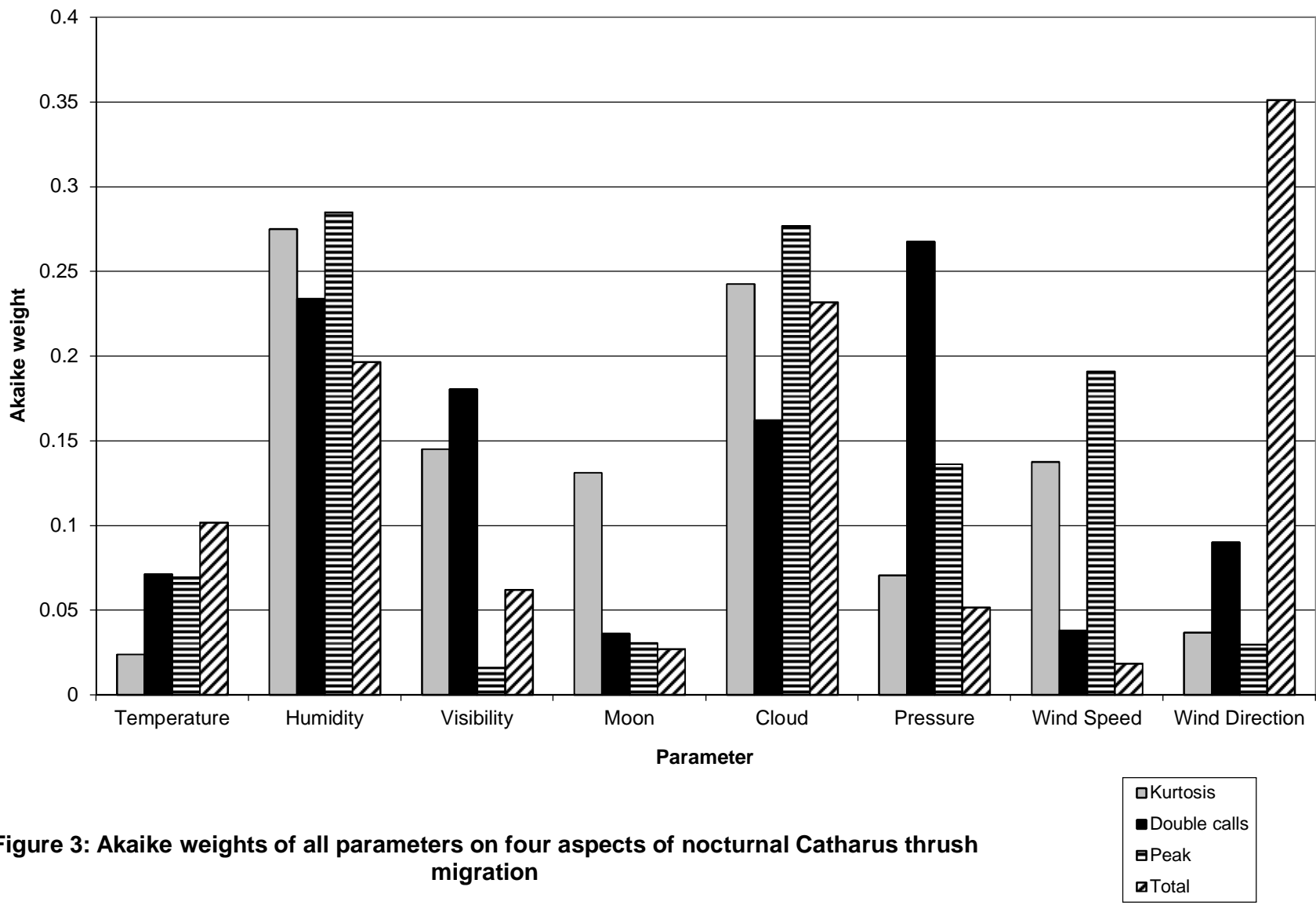


Figure 3: Akaike weights of all parameters on four aspects of nocturnal Catharus thrush migration

Given these data, the best nights for high number of birds would be nights with weak wind from a northwesterly direction, low cloud cover, high humidity, and low temperatures.

Table 1: Direction of affect of weather parameters on four aspects of nocturnal *Catharus* migration.

Weather Parameter	Migration variable			
	Total birds	Kurtosis	Peak Hour	Doubles
Temperature	negative	negative	positive	positive
Humidity	positive	positive	negative	positive
Visibility	positive	negative	positive	positive
Moon	positive	negative	negative	positive
Cloud	negative	positive	negative	negative
Pressure	positive	negative	negative	positive
Wind Speed	negative	positive	negative	negative
Wind Direction	positive	positive	positive	positive

Thrushes tended to be fairly tightly grouped around a particular time of the night with a mean kurtosis value of 2.34 ± 3.82 (mean \pm SD, $n = 29$). Bird clumping was affected positively by increasing values of humidity, cloud cover, wind speed, and wind direction while bird clumping was affected negatively by increasing values of temperature, visibility, moon phase, and pressure (Table 1). Given the data, humidity and cloud cover were the most important parameters for predicting bird clumping through the night (Figure 3). Humidity and cloud cover were 1.9 and 1.1 times (respectively) more plausible of an explanation than the next most likely parameter, visibility (Figure 3). Temperature, wind direction, and pressure provided the poorest explanation for clumping of birds (Figure 3). Based on the data, nights with the most clumped distribution of migratns would be nights with high humidity, high percentage of cloud cover, low visibility, strong winds, and low moon phase.

Thrush migration typically peaked around 3-4 hours after sunset, with a second smaller peak between at 9-10 hours after sunset (Figure 4). 67.9% (532) of all birds were detected between 2 and 5 hours after sunset (Figure 4). The nightly peak of birds was positively affected (pushed further into the night) by increasing values of temperature, visibility, and wind direction, while peak hour was negatively (closer to sunset) affected by increasing values of humidity, cloud cover, pressure, and wind speed (Table 1). Humidity, cloud cover, wind speed, and pressure provided the most plausible explanations (>2 times more plausible than the next most important parameter, temperature) given the data and candidate models (Figure 3). Temperature, visibility, moon phase, and wind direction provided relatively poor explanations for peak hour (Figure 3). Thus, based on these data, nights with migration early in the night would most likely have low humidity, low percentage of cloud cover, light winds, and low pressure.

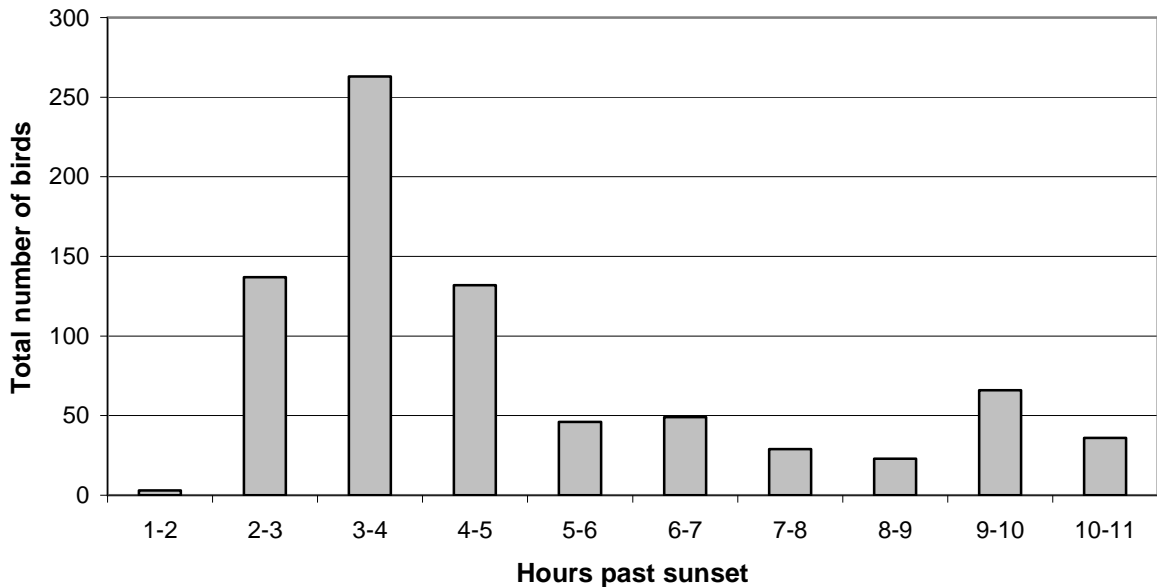


Figure 4: Nightly distribution of migrating thrushes over Algonquin Park, Ont. during the study period

The percentage of birds detected calling more than once varied from 0-71.5% (mean = 20%, n = 29). The percentage of birds detected calling more than once as they passed over the site was positively affected by increasing values of temperature, humidity, visibility, moon phase, pressure, and wind direction, while negatively affected by increasing values of cloud cover and wind speed (Table 1). Pressure, humidity, visibility, and cloud cover were the parameters that provided the most plausible explanations for multiple calling birds, given the data (Figure 3). These four parameters were greater than 1.8 times more likely explanations than the next most probable parameter, wind direction (Figure 3). Given these data, nights most likely to experience high percentages of birds detected calling more than once were those with high pressure, high humidity, high visibility, and low percentage of cloud cover.

Discussion

Throughout the study, the timing of all species reported was similar to what was expected. In a similar study conducted in Quebec in the fall of 1999, Veery, Swainson's Thrush, and Gray-cheeked Thrush were detected over almost the exact same time period as this study (Cormier 2000). The seasonal timing of each of the three species detected was similar to those previously reported in Algonquin Park by visual observations (Tozer, pers. comm.). Hermit Thrush was not detected in this study, likely due to the early end of the study.

All weather variables of this study were found to have some affect on nocturnal bird migration. This supports the hypothesis that weather affects the nightly intensity and peak timing of bird migration. Weather variables were also found to differ in the magnitude with which they affect migration as was also hypothesized. The ideal conditions found in this study for high migration intensity (wind from a northwesterly direction, low cloud cover, high humidity, and low temperatures) were similar to the ideal conditions predicted. Wind direction was the most important parameter tested for predicting migration intensity, similar to what was predicted. However, cloud cover and humidity were also found to be relatively important for predicting migration intensity, which was not predicted. Conversely, wind speed was found to be relatively unimportant for predicting migration intensity, contrary to my prediction.

These results are similar to those of other studies. Wind direction was reported as one of or the major weather factors driving fall migration of shorebirds (Brooks 1965) and of passerines (Hassler et al 1963). Western Sandpipers (*Calidris mauri*) have been

shown to require tailwinds for migration or risk not being able to meet the energy requirements of their migrations (Butler et al 1997). Tailwinds have also been shown to increase the risk of birds being killed in autumnal migration by hitting towers, presumably due to an increased number of birds in the air (Crawford 1981). Low percentage of cloud cover was found to be an important factor for high numbers of migrating thrushes. This is similar to what Cormier (2000) found; clear nights were best for nocturnal thrush migration. Most of the “ideal” conditions found in this study for high numbers of migrating birds correspond to the passage of cold fronts, a feature of autumnal migration identified by many (Brooks 1965, Cormier 2000).

The idea that migrating birds take advantage of tailwinds to save energy is significant. The strong correlation between major migration routes of North American birds and seasonally predictable tailwinds suggests wind direction not only plays an important role in determining nightly migration but also in the evolution of migration routes (Able 1972). It would be interesting to examine the relationship between migration routes and seasonally predictable weather patterns besides wind direction, such as cloud cover and pressure.

While the effects of weather on migration intensity have been well studied, the nightly pattern of migration and how weather influences migration are poorly known. Aside from numbers of birds migrating, the only characteristic of a given night’s migration that is usually reported is time of peak intensity. I found that birds typically passed over within five hours of sunset. This was similar to what others have reported. Peak nocturnal bird migration was found to peak between four and six hours after sunset in South Carolina and New York during fall (Farnsworth et al 2004). The apparent

increase in birds detected just before dawn could be attributed either to increased calling frequency of birds as the night goes on (Farnsworth et al 2004) or birds flying lower as they begin descending from the night's flight, both of which would result in greater chance of detection, even if the number of birds were the same or even lower.

No studies have looked at the effect of weather on predicting the hour of peak migration intensity or how spread out or clumped the migration is through the night (kurtosis). I reasoned that under optimal weather conditions (those identified as correlating with higher intensity migration) the nightly migration would be more spread out as birds would take advantage of ideal weather conditions when they presented themselves. This logic was supported with the data collected. Conditions associated with high kurtosis values (clumped distribution of migrants through the night) were the opposite of the conditions associated with high migration intensity. For instance, high percentage of cloud cover, low visibility and strong winds were associated with high kurtosis and low migration intensity. Similarly, peak migration intensity was later in the night under "poor" migration conditions.

The clumping of birds (measured by kurtosis and peak hour) would probably be affected differently in different geographical areas. Algonquin Park is a continuous forest environment, where, presumably, thrushes could stop to refuel anywhere. At concentration areas before chunks of large unsuitable habitat nocturnal migration may proceed in a much more "bunched up" fashion. This is the case along the Great Lakes, where Diehl et al (2003) report high concentrations of birds along the shores in areas where the crossing is shortest. It would be interesting to know if under moderately ideal weather conditions birds trickle across these barriers throughout the night, but it is only

under very ideal conditions that such clumping occurs. Regardless, this serves to show that factors other than weather may greatly affect certain aspects of nocturnal migration. More work needs to be conducted on the nightly patterns (kurtosis and peak hour) of nocturnal migration and their relation to weather. This is a large gap of knowledge, considering how prevalent migration studies are in the literature.

Conducting this study in a range of locations is just one way that the study could be improved. It would be good to conduct this fieldwork over several seasons, and develop a comparison between spring and fall migration. The possibility exists that some nights localized, undocumented weather may have affected migration at the study site. Weather data were collected from the nearest site, but this was relatively far away; it may be wise to conduct future work similar to this with portable weather stations or locate study sites in close proximity to existing weather stations. The microphone used in this study is also a factor that could have been improved. Other studies recording nocturnal migrants used microphones with greater clarity and pick-up (Evans and Mellinger 1999). For instance, on some nights during the study I was nearby at night and heard many more thrushes in a short period of time than were detected with the microphone.

It is possible that some of the assumptions underlying the statistical analyses of the study were broken. For instance, an important assumption was that nights were independent of each other, when in reality it is likely that after several good nights most birds with suitable fat reserves (those “ready” to migrate) would have already moved through, so the supply of migrants for subsequent nights would be depleted. Future studies could try and correct for this with autocorrelation techniques although it would be difficult. Another assumption that may have been broken is that birds flew and called at

a constant height/ rate. That is, birds were being detected at a constant rate throughout the night. Other studies have shown that a variety of weather factors influence flight height of migrating birds (Blokpoel and Burton 1975). Calling frequency has also been linked to weather variables, such as cloud cover and visibility (Ogden 1960, Graber 1968). While it would seem as though these studies would suggest this assumption was broken the rate of birds detected calling more than once was highest under ideal conditions. This is a perplexing result, possibly due to increased detection range of the microphone under ideal conditions

Another problem of this (and any) study using multiple weather variables is that most of these are correlated. While all of those used in this study passed the test for multicollinearity, all of the weather variables were at least somewhat related, which illustrates the difficulty of working out which variables truly affected migration.

Future studies should also incorporate nocturnal flight call monitoring along with other migration monitoring techniques, such as radar to improve the power of both methods. Some authors, with great success, have done this (e.g. Diehl et al 2003).

While the results of this study are interesting, one downfall is that strong correlations between weather and migration intensities are likely hard to demonstrate. As is evidenced by this study and others (Courmier 2000), migration takes place under virtually all weather conditions, but when several of the most important factors are favourable, large numbers of birds migrate. This appears to be what happened on September 14, 2006. Almost every weather variable measured was ideal, and as a result a massive movement took place. If the study was conducted over several years, it is likely that more nights like this would occur. The fact that such a large migration of birds

may occur only infrequently when all factors are right is very important to keep in mind when planning the construction of large objects such as microwave towers or wind turbines. Many authors have demonstrated the danger of electrical towers (Avery et al 1976) and more recently wind turbines (Desholm et al 2006) to migrating birds. While using nocturnal flight call monitoring to assess the impact one of these structures may have on migrating birds would be cost effective and efficient, it is obvious that a large number of nights under a range of all environmental conditions should be used before assessing the expected impact on migrants.

Conclusion:

Weather plays an important role in the nocturnal migration of *Catharus* thrushes. While it is likely that many factors are important in overall migration, it appears that certain factors, such as wind direction are more important than others. More work should be done to assess the impact of certain weather phenomena on the distribution of birds throughout the night and the implications of this for our understanding of the evolutionary history of bird migration.

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Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Hum	3	232.1911	67.2877	0.0000	0.269252563
Cloud	3	234.2762	67.5469	0.2593	0.236516631
Vis	3	243.1181	68.6213	1.3336	0.138219145
WSpd	3	244.0184	68.7285	1.4408	0.131006306
Moon	3	244.7961	68.8208	1.5331	0.125099015
Press	3	262.2446	70.8175	3.5298	0.046097139
WDir	3	274.2626	72.1169	4.8292	0.024071568
Temp + Press	4	285.8945	76.0282	8.7405	0.003405576
Temp + Press + WDir	5	259.6685	76.1799	8.8922	0.003156765
Temp	3	323.6306	76.9169	9.6292	0.002183737
Temp + Vis + Press	5	277.3592	78.0912	10.8035	0.001213961
Temp + Vis + Press + WDir	6	249.5397	78.2355	10.9478	0.001129446
Temp + Hum + Press	5	283.6580	78.7424	11.4547	0.000876585
Temp + Cloud + Press	5	284.3429	78.8124	11.5247	0.000846461
Temp + Hum + Press + WDir	6	254.6318	78.8213	11.5337	0.000842667
Temp + Moon + Press	5	285.1060	78.8901	11.6024	0.000814196
Temp + Press + WSpd + WDir	6	255.2913	78.8964	11.6087	0.000811648
Temp + Press + WSpd	5	285.3836	78.9183	11.6306	0.000802788
Temp + Moon + Press + WDir	6	257.1632	79.1082	11.8205	0.000730065
Temp + Cloud + Press + WDir	6	259.4497	79.3649	12.0772	0.000642124
Press + WSpd	4	329.5280	80.1473	12.8596	0.000434246
Press + WDir	4	330.2321	80.2092	12.9215	0.000421014
Vis + Press	4	331.2323	80.2969	13.0092	0.00040295
Moon + Press	4	331.7474	80.3419	13.0542	0.000393973
Cloud + Press	4	331.9680	80.3612	13.0735	0.000390193
Hum + Press	4	331.9687	80.3613	13.0736	0.000390181
Temp + Vis + Moon + Press	6	276.0172	81.1600	13.8724	0.000261707
Temp + Vis + Press + WSpd	6	276.9708	81.2601	13.9724	0.000248941
Temp + Vis + Press + WSpd + WDir	7	245.4144	81.2673	13.9796	0.000248047
Temp + Vis + Cloud + Press	6	277.1863	81.2826	13.9949	0.000246149
Temp + Hum + Vis + Press	6	277.3529	81.3000	14.0124	0.000244014
Temp + Vis + Moon + Press + WDir	7	245.9073	81.3254	14.0378	0.000240935
Temp + Moon + Press + WSpd + WDir	7	246.3423	81.3767	14.0890	0.000234838
Temp + Hum + Vis + Press + WDir	7	248.9062	81.6770	14.3893	0.0002021
Temp + Vis + Cloud + Press + WDir	7	249.2726	81.7196	14.4319	0.000197836

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Temp + Hum + Moon + Press	6	282.8475	81.8689	14.5812	0.000183604
Temp + Hum + Cloud + Press	6	283.0488	81.8896	14.6019	0.00018172
Temp + Hum + Press + WSpd	6	283.5244	81.9383	14.6506	0.000177349
Temp + Moon + Press + WSpd	6	283.6086	81.9469	14.6592	0.000176587
Temp + Moon + Cloud + Press	6	283.8079	81.9672	14.6796	0.000174798
Temp + Cloud + Press + WSpd	6	283.8372	81.9702	14.6826	0.000174536
Temp + Hum + Press + WSpd + WDir	7	251.9074	82.0245	14.7369	0.00016986
Temp + Hum + Moon + Press + WDir	7	251.9247	82.0265	14.7389	0.000169691
Temp + Hum + Cloud + Press + WDir	7	254.4746	82.3186	15.0309	0.000146636
Temp + Moon + WSpd + WDir	6	287.7104	82.3633	15.0756	0.000143395
Temp + Cloud + WDir	5	321.3892	82.3641	15.0764	0.00014334
Temp + Cloud + Press + WSpd + WDir	7	255.1499	82.3954	15.1078	0.000141108
Temp + Moon + Cloud + Press + WDir	7	257.1120	82.6176	15.3299	0.000126273
Cloud + WDir	4	359.7198	82.6895	15.4018	0.000121812
Press + WSpd + WDir	5	326.0043	82.7775	15.4898	0.000116569
Temp + WDir	4	361.3327	82.8193	15.5316	0.000114161
Vis + Press + WSpd	5	328.6928	83.0157	15.7280	0.000103482
Temp + WSpd + WDir	5	329.4337	83.0810	15.7933	0.000100158
Cloud + Press + WSpd	5	329.4682	83.0840	15.7964	0.000100006
Moon + Press + WSpd	5	329.4944	83.0863	15.7987	9.98908E-05
Hum + Press + WSpd	5	329.5251	83.0890	15.8014	9.97559E-05
Vis + Press + WDir	5	329.6111	83.0966	15.8089	9.9379E-05
Cloud + Press + WDir	5	329.8480	83.1174	15.8298	9.83493E-05
Moon + Press + WDir	5	329.9549	83.1268	15.8392	9.78879E-05
Temp + Cloud	4	365.2947	83.1355	15.8478	9.74644E-05
Hum + Press + WDir	5	330.1161	83.1410	15.8533	9.71972E-05
Cloud + WSpd	4	365.7335	83.1703	15.8826	9.57826E-05
Vis + Cloud + Press	5	330.8448	83.2050	15.9173	9.41387E-05
Vis + Moon + Press	5	330.9562	83.2147	15.9270	9.36803E-05
Hum + Vis + Press	5	331.1898	83.2352	15.9475	9.27269E-05
Hum + Moon + Press	5	331.6574	83.2761	15.9884	9.08493E-05
Moon + Cloud + Press	5	331.7096	83.2807	15.9930	9.06421E-05
Hum + Cloud + Press	5	331.7930	83.2879	16.0003	9.03123E-05
WSpd + WDir	4	367.3071	83.2948	16.0072	9.00013E-05
Moon + Cloud	4	371.2134	83.6016	16.3139	7.72027E-05

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Temp + Cloud + WSpd + WDir	6	301.9664	83.7658	16.4781	7.11197E-05
Temp + Vis + Moon + Press + WSpd + WDir	8	234.3231	83.7927	16.5051	7.01667E-05
Vis + Cloud	4	373.8877	83.8098	16.5221	6.95709E-05
Hum + Cloud	4	374.6653	83.8700	16.5824	6.75064E-05
Moon + WSpd	4	375.3281	83.9213	16.6336	6.57983E-05
Hum + WSpd	4	376.4098	84.0048	16.7171	6.31089E-05
Vis + WDir	4	377.6778	84.1023	16.8146	6.01054E-05
Vis + WSpd	4	378.5905	84.1723	16.8846	5.80382E-05
Temp + Moon + Cloud + WDir	6	307.3674	84.2799	16.9922	5.49986E-05
Temp + Moon + WDir	5	344.5612	84.3830	17.0953	5.22347E-05
Cloud + WSpd + WDir	5	345.6837	84.4773	17.1896	4.98285E-05
Temp + Vis + Moon + Press + WSpd	7	274.4520	84.5103	17.2226	4.90143E-05
Hum + WDir	4	383.1868	84.5222	17.2346	4.87217E-05
Temp + WSpd	4	384.2042	84.5991	17.3115	4.68839E-05
Temp + Vis	4	384.5964	84.6287	17.3410	4.61954E-05
Temp + Vis + Moon + Cloud + Press	7	275.9653	84.6697	17.3821	4.5258E-05
Temp + Hum + Vis + Moon + Press	7	276.0163	84.6751	17.3874	4.51369E-05
Temp + Vis + WDir	5	349.0013	84.7543	17.4666	4.33839E-05
Temp + Vis + Cloud + Press + WSpd	7	276.7947	84.7568	17.4691	4.33309E-05
Temp + Hum + Vis + Press + WSpd	7	276.9636	84.7745	17.4868	4.29492E-05
Temp + Hum + Vis + Cloud + Press	7	277.1859	84.7977	17.5100	4.24526E-05
Moon + WDir	4	387.0542	84.8135	17.5258	4.21195E-05
Vis + Moon	4	388.4013	84.9142	17.6265	4.00503E-05
Temp + Hum + Moon + Press + WSpd + WDir	8	243.8616	84.9498	17.6622	3.93431E-05
Temp + Hum	4	389.0094	84.9596	17.6719	3.91519E-05
Hum + Vis	4	389.5437	84.9994	17.7117	3.83804E-05
Temp + Moon	4	390.5530	85.0744	17.7868	3.6967E-05
Temp + Vis + Cloud + Press + WSpd + WDir	8	245.0560	85.0915	17.8039	3.66524E-05
Temp + Vis + Moon + Cloud + Press + WDir	8	245.0908	85.0957	17.8080	3.6577E-05
Temp + Hum + Vis + Press + WSpd + WDir	8	245.3056	85.1211	17.8334	3.61152E-05
Temp + Hum + Vis + Moon + Press + WDir	8	245.3427	85.1254	17.8378	3.60362E-05
Hum + Moon	4	391.4482	85.1408	17.8532	3.57599E-05
Moon + WSpd + WDir	5	354.0227	85.1686	17.8809	3.52671E-05
Temp + Moon + Cloud + Press + WSpd + WDir	8	246.2882	85.2370	17.9493	3.40813E-05
Temp + Hum + WDir	5	354.8885	85.2394	17.9517	3.40399E-05

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Temp + Hum + Moon + Press + WSpd	7	282.1114	85.3085	18.0208	3.28841E-05
Temp + Moon + Cloud	5	355.7770	85.3119	18.0243	3.28278E-05
Temp + Hum + Moon + Cloud + Press	7	282.4129	85.3395	18.0518	3.23788E-05
Temp + Cloud + WSpd	5	356.1242	85.3402	18.0525	3.23669E-05
Moon + Cloud + WSpd	5	356.1423	85.3417	18.0540	3.2343E-05
Temp + Moon + Cloud + Press + WSpd	7	282.4859	85.3470	18.0593	3.22576E-05
Temp + Hum + Cloud + Press + WSpd	7	282.8594	85.3853	18.0976	3.16454E-05
Moon + Cloud + WDir	5	357.2028	85.4279	18.1402	3.09782E-05
Temp + Hum + Cloud + WDir	6	320.1790	85.4641	18.1764	3.04225E-05
Temp + Hum + Vis + Cloud + Press + WDir	8	248.3274	85.4761	18.1884	3.02407E-05
Hum + WSpd + WDir	5	358.4875	85.5320	18.2444	2.94068E-05
Temp + Moon + WSpd	5	358.5009	85.5331	18.2454	2.93909E-05
Temp + Vis + Cloud + WDir	6	321.3583	85.5707	18.2831	2.88431E-05
Temp + Hum + Moon + WSpd + WDir	7	284.8193	85.5855	18.2979	2.86305E-05
Vis + Cloud + WDir	5	359.3481	85.6016	18.3139	2.84019E-05
Vis + WSpd + WDir	5	359.5571	85.6184	18.3308	2.81636E-05
Hum + Cloud + WDir	5	359.6914	85.6293	18.3416	2.80114E-05
Temp + Hum + WSpd + WDir	6	322.6362	85.6858	18.3982	2.72302E-05
Temp + Vis + WSpd + WDir	6	323.6796	85.7795	18.4918	2.59847E-05
Temp + Hum + Moon + Cloud + Press + WDir	8	251.4357	85.8369	18.5492	2.52498E-05
Temp + Vis + Moon + WSpd + WDir	7	287.6210	85.8694	18.5817	2.4842E-05
Temp + Hum + Cloud + Press + WSpd + WDir	8	251.7972	85.8785	18.5908	2.47293E-05
Vis + Press + WSpd + WDir	6	325.4455	85.9373	18.6496	2.40135E-05
Cloud + Press + WSpd + WDir	6	325.4983	85.9420	18.6543	2.39571E-05
Moon + Press + WSpd + WDir	6	325.7454	85.9640	18.6763	2.36949E-05
Hum + Press + WSpd + WDir	6	325.9958	85.9863	18.6986	2.34324E-05
Hum + Moon + WSpd	5	364.3107	85.9993	18.7116	2.32797E-05
Hum + Cloud + WSpd	5	364.3318	86.0010	18.7133	2.32603E-05
Temp + Vis + Cloud	5	364.4690	86.0119	18.7242	2.31335E-05
Vis + Cloud + WSpd	5	365.0301	86.0565	18.7688	2.26233E-05
Temp + Hum + Cloud	5	365.0467	86.0579	18.7702	2.26083E-05
Hum + Vis + Press + WSpd	6	328.3012	86.1906	18.9029	2.11563E-05
Vis + Cloud + Press + WSpd	6	328.3532	86.1952	18.9075	2.11077E-05
Vis + Moon + Press + WSpd	6	328.6470	86.2211	18.9335	2.08358E-05
Vis + Cloud + Press + WDir	6	328.7576	86.2309	18.9432	2.07344E-05

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Vis + Moon + Press + WDir	6	329.3546	86.2835	18.9958	2.0196E-05
Moon + Cloud + Press + WSpd	6	329.4149	86.2888	19.0011	2.01425E-05
Hum + Cloud + Press + WDir	6	329.4499	86.2919	19.0042	2.01115E-05
Hum + Cloud + Press + WSpd	6	329.4664	86.2934	19.0057	2.00969E-05
Hum + Moon + Press + WSpd	6	329.4878	86.2952	19.0076	2.0078E-05
Hum + Vis + Press + WDir	6	329.6051	86.3056	19.0179	1.99747E-05
Moon + Cloud + Press + WDir	6	329.6700	86.3113	19.0236	1.99176E-05
Hum + Moon + Press + WDir	6	329.8287	86.3252	19.0376	1.97792E-05
Temp + Hum + WSpd	5	369.2457	86.3895	19.1018	1.91535E-05
Vis + Moon + WSpd	5	369.3389	86.3968	19.1092	1.90835E-05
Vis + Moon + Cloud + Press	6	330.6732	86.3994	19.1117	1.90592E-05
Hum + Vis + Cloud + Press	6	330.8417	86.4142	19.1265	1.8919E-05
Hum + Vis + Moon + Press	6	330.9236	86.4213	19.1337	1.88511E-05
Hum + Moon + Cloud + Press	6	331.5498	86.4762	19.1885	1.83414E-05
Vis + Moon + Cloud	5	370.7480	86.5073	19.2196	1.80584E-05
Hum + Moon + Cloud	5	371.0577	86.5315	19.2438	1.7841E-05
Temp + Vis + WSpd	5	371.8404	86.5926	19.3049	1.73042E-05
Hum + Vis + Cloud	5	373.8792	86.7512	19.4635	1.59852E-05
Hum + Vis + WSpd	5	374.5908	86.8063	19.5186	1.55505E-05
Vis + Moon + WDir	5	375.8202	86.9013	19.6136	1.4829E-05
Temp + Moon + Cloud + WSpd	6	336.9552	86.9452	19.6575	1.45075E-05
Moon + Cloud + WSpd + WDir	6	337.1934	86.9656	19.6780	1.43596E-05
Temp + Vis + Moon + WDir	6	337.5705	86.9981	19.7104	1.41288E-05
Hum + Vis + WDir	5	377.1376	87.0028	19.7151	1.40953E-05
Temp + Vis + Moon	5	377.8599	87.0583	19.7706	1.37096E-05
Temp + Vis + Moon + Cloud + WSpd + WDir	8	262.3631	87.0706	19.7829	1.36257E-05
Temp + Hum + Moon	5	379.8071	87.2074	19.9197	1.2725E-05
Hum + Moon + WDir	5	379.9956	87.2217	19.9341	1.26337E-05
Temp + Hum + Moon + WDir	6	340.5974	87.2569	19.9693	1.24134E-05
Temp + Hum + Vis	5	382.8751	87.4407	20.1530	1.13238E-05
Temp + Hum + Moon + Cloud + WDir	7	304.8230	87.5540	20.2663	1.07002E-05
Temp + Hum + Moon + Cloud + WSpd + WDir	8	267.8891	87.6750	20.3874	1.00716E-05
Temp + Vis + Moon + Cloud + WDir	7	306.1323	87.6783	20.3906	1.00555E-05
Vis + Cloud + WSpd + WDir	6	345.6093	87.6806	20.3929	1.00439E-05
Hum + Vis + Moon	5	386.8479	87.7400	20.4524	9.74963E-06

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Temp + Vis + Moon + Cloud + Press + WSpd + WDir	9	232.1911	87.8014	20.5137	9.45518E-06
Hum + Moon + WSpd + WDir	6	347.3354	87.8250	20.5374	9.3439E-06
Temp + Hum + Moon + WSpd	6	347.3499	87.8262	20.5386	9.33828E-06
Temp + Hum + Vis + WDir	6	348.7817	87.9455	20.6579	8.79754E-06
Temp + Hum + Vis + Moon + Press + WSpd + WDir	9	234.2762	88.0606	20.7729	8.30561E-06
Vis + Moon + WSpd + WDir	6	350.6315	88.0989	20.8113	8.14801E-06
Temp + Hum + Vis + Moon + Press + WSpd	8	274.3138	88.3623	21.0747	7.14262E-06
Temp + Vis + Moon + WSpd	6	353.9641	88.3733	21.0856	7.10366E-06
Temp + Vis + Moon + Cloud + Press + WSpd	8	274.4334	88.3750	21.0873	7.09763E-06
Temp + Hum + Cloud + WSpd	6	354.8878	88.4489	21.1612	6.84021E-06
Hum + Moon + Cloud + WSpd	6	354.9367	88.4529	21.1652	6.82655E-06
Temp + Vis + Cloud + WSpd	6	355.6338	88.5097	21.2221	6.63509E-06
Temp + Vis + Moon + Cloud	6	355.7228	88.5170	21.2293	6.61105E-06
Temp + Hum + Moon + Cloud	6	355.7425	88.5186	21.2309	6.60574E-06
Temp + Hum + Vis + Moon + Cloud + Press	8	275.9647	88.5363	21.2487	6.54745E-06
Vis + Moon + Cloud + WSpd	6	356.1260	88.5499	21.2622	6.50336E-06
Temp + Hum + Vis + Cloud + Press + WSpd	8	276.7561	88.6194	21.3317	6.28116E-06
Vis + Moon + Cloud + WDir	6	357.1009	88.6291	21.3415	6.25059E-06
Hum + Moon + Cloud + WDir	6	357.1210	88.6308	21.3431	6.24549E-06
Hum + Vis + WSpd + WDir	6	357.1392	88.6322	21.3446	6.24088E-06
Hum + Vis + Cloud + WDir	6	359.1003	88.7911	21.5034	5.76449E-06
Temp + Hum + Vis + Cloud + WDir	7	320.0597	88.9685	21.6808	5.27517E-06
Temp + Hum + Vis + WSpd + WDir	7	321.7068	89.1173	21.8297	4.89679E-06
Temp + Hum + Moon + Cloud + Press + WSpd	8	281.6456	89.1273	21.8396	4.87255E-06
Temp + Hum + Moon + Cloud + Press + WSpd + WDir	9	243.1181	89.1350	21.8473	4.85376E-06
Hum + Vis + Moon + WSpd	6	364.1394	89.1952	21.9075	4.70987E-06
Hum + Vis + Cloud + WSpd	6	364.2413	89.2033	21.9156	4.69081E-06
Temp + Hum + Vis + Cloud	6	364.4612	89.2208	21.9331	4.64992E-06
Temp + Hum + Vis + Moon + Cloud + Press + WDir	9	244.0184	89.2422	21.9545	4.60047E-06
Temp + Hum + Vis + Cloud + Press + WSpd + WDir	9	244.7961	89.3345	22.0468	4.39303E-06
Temp + Hum + Vis + Moon + WSpd + WDir	8	283.8432	89.3527	22.0650	4.35322E-06
Vis + Cloud + Press + WSpd + WDir	7	324.4330	89.3620	22.0744	4.33283E-06
Moon + Cloud + Press + WSpd + WDir	7	325.0230	89.4147	22.1271	4.22017E-06
Hum + Vis + Press + WSpd + WDir	7	325.1223	89.4236	22.1359	4.20152E-06
Hum + Cloud + Press + WSpd + WDir	7	325.4584	89.4536	22.1659	4.13904E-06

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC _c	Δ_i	w_i
Temp + Hum + Vis + WSpd	6	367.4486	89.4575	22.1698	4.13085E-06
Hum + Moon + Press + WSpd + WDir	7	325.7168	89.4766	22.1889	4.09169E-06
Hum + Vis + Cloud + Press + WSpd	7	328.1111	89.6890	22.4013	3.67944E-06
Hum + Vis + Moon + Press + WSpd	7	328.1873	89.6957	22.4080	3.66707E-06
Vis + Moon + Cloud + Press + WSpd	7	328.2389	89.7003	22.4126	3.65872E-06
Hum + Vis + Moon + Cloud	6	370.7391	89.7161	22.4284	3.62993E-06
Vis + Moon + Cloud + Press + WDir	7	328.6492	89.7365	22.4488	3.59304E-06
Hum + Vis + Cloud + Press + WDir	7	328.7245	89.7431	22.4555	3.58112E-06
Hum + Moon + Cloud + Press + WDir	7	329.2954	89.7935	22.5058	3.49214E-06
Hum + Vis + Moon + Press + WDir	7	329.3518	89.7984	22.5107	3.48349E-06
Hum + Moon + Cloud + Press + WSpd	7	329.4144	89.8039	22.5163	3.47391E-06
Hum + Vis + Moon + Cloud + Press	7	330.6702	89.9143	22.6266	3.28744E-06
Hum + Vis + Moon + WDir	6	375.2373	90.0658	22.7781	3.04756E-06
Temp + Hum + Vis + Moon	6	375.9840	90.1235	22.8358	2.96097E-06
Temp + Hum + Moon + Cloud + WSpd	7	336.0585	90.3830	23.0953	2.60057E-06
Temp + Vis + Moon + Cloud + WSpd	7	336.7463	90.4423	23.1546	2.5246E-06
Hum + Moon + Cloud + WSpd + WDir	7	337.0247	90.4663	23.1786	2.49454E-06
Vis + Moon + Cloud + WSpd + WDir	7	337.0331	90.4670	23.1793	2.49364E-06
Temp + Hum + Vis + Moon + WDir	7	337.3377	90.4932	23.2055	2.46119E-06
Temp + Hum + Vis + Cloud + WSpd + WDir	8	301.5391	91.1065	23.8188	1.8112E-06
Hum + Vis + Cloud + WSpd + WDir	7	345.4565	91.1829	23.8952	1.74333E-06
Temp + Hum + Vis + Moon + Cloud + WSpd + WDir	9	262.2446	91.3312	24.0435	1.61877E-06
Hum + Vis + Moon + WSpd + WDir	7	347.2668	91.3345	24.0468	1.6161E-06
Temp + Hum + Vis + Moon + WSpd	7	347.3491	91.3413	24.0537	1.61055E-06
Temp + Hum + Vis + Moon + Cloud + WDir	8	304.5959	91.3990	24.1113	1.56477E-06
Hum + Vis + Moon + Cloud + WSpd	7	354.7101	91.9495	24.6618	1.18828E-06
Temp + Hum + Vis + Cloud + WSpd	7	354.8543	91.9613	24.6736	1.18129E-06
Temp + Hum + Vis + Moon + Cloud	7	355.7147	92.0315	24.7438	1.14054E-06
Hum + Vis + Moon + Cloud + WDir	7	356.8711	92.1256	24.8379	1.0881E-06
Temp + Hum + Vis + Moon + Cloud + Press + WSpd + WDir	10	232.1723	92.5476	25.2599	8.81147E-07
Temp + Hum + Vis + Moon + Cloud + Press + WSpd	9	274.2626	92.6306	25.3429	8.45307E-07
Vis + Moon + Cloud + Press + WSpd + WDir	8	323.7987	93.1720	25.8843	6.44852E-07
Hum + Vis + Cloud + Press + WSpd + WDir	8	324.3392	93.2203	25.9326	6.29444E-07
Hum + Vis + Moon + Press + WSpd + WDir	8	324.7144	93.2539	25.9662	6.1898E-07
Hum + Moon + Cloud + Press + WSpd + WDir	8	324.9991	93.2793	25.9916	6.11163E-07

Appendix 1: AIC table for dependent variable Kurtosis

Model	K	SSE	AIC_c	Δ_i	w_i
Hum + Vis + Moon + Cloud + Press + WSpd	8	327.9406	93.5406	26.2529	5.36314E-07
Hum + Vis + Moon + Cloud + Press + WDir	8	328.6169	93.6003	26.3126	5.2053E-07
Temp + Hum + Vis + Moon + Cloud + WSpd	8	334.9290	94.1521	26.8644	3.95034E-07
Hum + Vis + Moon + Cloud + WSpd + WDir	8	336.5557	94.2926	27.0049	3.68233E-07
Hum + Vis + Moon + Cloud + Press + WSpd + WDir	9	323.6306	97.4306	30.1429	7.6685E-08

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Press	3	0.6038	-105.3246	0.0000	0.258628454
Hum	3	0.6097	-105.0406	0.2840	0.224386231
Vis	3	0.6211	-104.5019	0.8228	0.171402066
Cloud	3	0.6257	-104.2888	1.0358	0.154082176
WDir	3	0.6539	-103.0104	2.3143	0.081308129
Temp	3	0.6672	-102.4259	2.8987	0.060704883
Moon	3	0.7601	-98.6465	6.6781	0.009173489
Moon + WSpd	4	0.7118	-97.8450	7.4796	0.006144563
Temp + Moon + WSpd	5	0.6889	-95.8514	9.4733	0.002267668
Vis + Moon + WSpd	5	0.6966	-95.5281	9.7966	0.001929209
Hum + Moon + WSpd	5	0.6992	-95.4177	9.9069	0.001825643
WSpd	3	0.8572	-95.1596	10.1651	0.001604556
Moon + Press + WSpd	5	0.7071	-95.0917	10.2329	0.001551067
Moon + WSpd + WDir	5	0.7089	-95.0209	10.3038	0.001497062
Moon + Cloud + WSpd	5	0.7117	-94.9049	10.4197	0.001412725
Press + WSpd	4	0.8073	-94.1926	11.1320	0.000989428
Hum + WSpd	4	0.8109	-94.0632	11.2614	0.000927442
WSpd + WDir	4	0.8113	-94.0492	11.2754	0.000920984
Cloud + WSpd	4	0.8125	-94.0056	11.3191	0.000901097
Temp + WSpd	4	0.8154	-93.9041	11.4205	0.000856528
Vis + WSpd	4	0.8156	-93.8967	11.4279	0.000853361
Temp + Moon + WSpd + WDir	6	0.6603	-93.8705	11.4542	0.00084224
Temp + Vis + Moon + WSpd	6	0.6705	-93.4262	11.8985	0.000674458
Temp + Hum + Moon + WSpd	6	0.6765	-93.1669	12.1578	0.00059244
Temp + Moon + Press + WSpd	6	0.6885	-92.6557	12.6690	0.000458826
Temp + Moon + Cloud + WSpd	6	0.6886	-92.6530	12.6717	0.000458207
Vis + Moon + Cloud + WSpd	6	0.6892	-92.6280	12.6967	0.00045251
Vis + Moon + WSpd + WDir	6	0.6915	-92.5293	12.7954	0.000430717
Hum + Moon + Cloud + WSpd	6	0.6926	-92.4855	12.8391	0.000421407
Hum + Moon + WSpd + WDir	6	0.6939	-92.4327	12.8920	0.000410412
Hum + Vis + Moon + WSpd	6	0.6948	-92.3951	12.9296	0.000402768
Vis + Moon + Press + WSpd	6	0.6965	-92.3227	13.0019	0.000388459
Moon + Press + WSpd + WDir	6	0.6989	-92.2237	13.1009	0.000369697
Hum + Moon + Press + WSpd	6	0.6990	-92.2192	13.1054	0.000368866
Moon + Cloud + Press + WSpd	6	0.7034	-92.0384	13.2863	0.000336974

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Hum + Press + WSpd	5	0.7892	-91.9072	13.4174	0.000315591
Moon + Cloud + WSpd + WDir	6	0.7089	-91.8119	13.5127	0.0003009
Temp + Vis + Moon + WSpd + WDir	7	0.6290	-91.7613	13.5633	0.000293389
Hum + Cloud + WSpd	5	0.7958	-91.6674	13.6572	0.000279926
Vis + Press + WSpd	5	0.7987	-91.5605	13.7642	0.000265355
Temp + Press + WSpd	5	0.8008	-91.4851	13.8395	0.000255542
Hum + WSpd + WDir	5	0.8038	-91.3776	13.9470	0.000242166
Temp + WSpd + WDir	5	0.8045	-91.3526	13.9721	0.000239154
Temp + Hum + Moon + WSpd + WDir	7	0.6385	-91.3300	13.9946	0.000236471
Press + WSpd + WDir	5	0.8060	-91.2973	14.0273	0.000232641
Vis + Cloud + WSpd	5	0.8072	-91.2533	14.0714	0.000227571
Cloud + Press + WSpd	5	0.8073	-91.2512	14.0734	0.000227336
Cloud + WSpd + WDir	5	0.8081	-91.2220	14.1027	0.000224038
Vis + WSpd + WDir	5	0.8099	-91.1570	14.1677	0.000216872
Temp + Hum + WSpd	5	0.8102	-91.1475	14.1772	0.000215845
Hum + Vis + WSpd	5	0.8102	-91.1470	14.1776	0.000215794
Temp + Cloud + WSpd	5	0.8111	-91.1143	14.2103	0.000212299
Temp + Vis + WSpd	5	0.8147	-90.9860	14.3386	0.000199105
Temp + Moon + Press + WSpd + WDir	7	0.6551	-90.5837	14.7409	0.000162827
Hum + Press	4	0.9195	-90.4185	14.9061	0.000149916
Temp + Vis + Moon + Cloud + WSpd	7	0.6591	-90.4075	14.9171	0.000149095
Temp + Vis + Moon + Press + WSpd	7	0.6662	-90.0974	15.2273	0.000127678
Temp + Hum + Moon + Cloud + WSpd	7	0.6680	-90.0203	15.3044	0.000122849
Temp + Hum + Vis + Moon + WSpd	7	0.6695	-89.9531	15.3716	0.000118791
Temp + Hum + Moon + Press + WSpd	7	0.6745	-89.7366	15.5880	0.000106607
Temp + Press	4	0.9489	-89.5064	15.8182	9.50156E-05
Hum + Cloud	4	0.9501	-89.4708	15.8539	9.33372E-05
Hum + Vis + Moon + Cloud + WSpd	7	0.6837	-89.3434	15.9813	8.7577E-05
Vis + Moon + Cloud + WSpd + WDir	7	0.6840	-89.3321	15.9926	8.70837E-05
Moon + Press	4	0.9555	-89.3063	16.0184	8.59661E-05
Vis + Moon + Cloud + Press + WSpd	7	0.6858	-89.2581	16.0666	8.39191E-05
Vis + Press	4	0.9581	-89.2273	16.0974	8.26378E-05
Hum + Moon + Cloud + WSpd + WDir	7	0.6868	-89.2157	16.1089	8.21623E-05
Temp + Moon + Cloud + Press + WSpd	7	0.6873	-89.1943	16.1304	8.12841E-05
Press + WDir	4	0.9600	-89.1692	16.1554	8.02732E-05

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Press + WSpd	6	0.7769	-89.1555	16.1691	7.97254E-05
Hum + Moon + Cloud + Press + WSpd	7	0.6886	-89.1370	16.1877	7.89891E-05
Hum + Vis + Moon + WSpd + WDir	7	0.6890	-89.1217	16.2030	7.83876E-05
Moon + Cloud + Press + WSpd + WDir	7	0.6907	-89.0487	16.2760	7.5577E-05
Hum + Moon + Press + WSpd + WDir	7	0.6914	-89.0196	16.3050	7.44876E-05
Cloud + Press	4	0.9660	-88.9886	16.3360	7.33422E-05
Moon + Cloud	4	0.9680	-88.9277	16.3970	7.11409E-05
Hum + Vis + Moon + Press + WSpd	7	0.6948	-88.8800	16.4447	6.94637E-05
Hum + Cloud + Press + WSpd	6	0.7856	-88.8308	16.4938	6.77776E-05
Temp + Vis + Press + WSpd	6	0.7864	-88.8035	16.5212	6.68568E-05
Hum + Moon	4	0.9742	-88.7433	16.5814	6.48748E-05
Hum + Press + WSpd + WDir	6	0.7881	-88.7387	16.5859	6.47267E-05
Hum + Vis + Press + WSpd	6	0.7885	-88.7228	16.6019	6.42129E-05
Temp + Vis + Moon + Cloud + WSpd + WDir	8	0.6125	-88.6673	16.6573	6.24579E-05
Temp + Moon	4	0.9812	-88.5362	16.7885	5.84935E-05
Temp + Hum + Cloud + WSpd	6	0.7941	-88.5185	16.8062	5.79776E-05
Temp + Press + WSpd + WDir	6	0.7942	-88.5171	16.8076	5.79377E-05
Hum + Vis + Cloud + WSpd	6	0.7957	-88.4626	16.8621	5.63792E-05
Temp + Hum + WSpd + WDir	6	0.7960	-88.4489	16.8757	5.59967E-05
Temp + Hum + Press	5	0.8899	-88.4247	16.9000	5.53217E-05
Vis + Cloud + Press + WSpd	6	0.7973	-88.4014	16.9233	5.46803E-05
Vis + Press + WSpd + WDir	6	0.7979	-88.3791	16.9455	5.40756E-05
Moon + WDir	4	0.9876	-88.3453	16.9793	5.31697E-05
Vis + Moon	4	0.9877	-88.3452	16.9795	5.31658E-05
Hum + Vis	4	0.9891	-88.3038	17.0209	5.20764E-05
Temp + Cloud + WSpd + WDir	6	0.8003	-88.2935	17.0311	5.18106E-05
Temp + Cloud + Press + WSpd	6	0.8006	-88.2826	17.0421	5.1527E-05
Vis + Cloud + WSpd + WDir	6	0.8014	-88.2542	17.0705	5.08007E-05
Temp + Vis + WSpd + WDir	6	0.8027	-88.2086	17.1160	4.96572E-05
Vis + Cloud	4	0.9924	-88.2060	17.1187	4.95912E-05
Temp + Cloud	4	0.9927	-88.1977	17.1269	4.93869E-05
Hum + Vis + WSpd + WDir	6	0.8032	-88.1874	17.1372	4.91329E-05
Cloud + WDir	4	0.9942	-88.1529	17.1717	4.8293E-05
Temp + Vis + Cloud + WSpd	6	0.8055	-88.1043	17.2204	4.71328E-05
Cloud + Press + WSpd + WDir	6	0.8058	-88.0941	17.2306	4.6893E-05

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Moon + Cloud + WSpd + WDir	8	0.6261	-88.0292	17.2954	4.53971E-05
Temp + Hum + Vis + Moon + WSpd + WDir	8	0.6268	-87.9974	17.3272	4.46807E-05
Temp + Hum + Vis + WSpd	6	0.8095	-87.9637	17.3610	4.39328E-05
Temp + Vis + Moon + Press + WSpd + WDir	8	0.6286	-87.9153	17.4093	4.28838E-05
Hum + Cloud + Press	5	0.9093	-87.7996	17.5250	4.04728E-05
Hum + Moon + Press	5	0.9100	-87.7776	17.5471	4.00289E-05
Temp + Hum	4	1.0098	-87.7035	17.6212	3.85734E-05
Hum + WDir	4	1.0098	-87.7034	17.6213	3.85712E-05
Hum + Press + WDir	5	0.9146	-87.6308	17.6939	3.71968E-05
Hum + Moon + Cloud	5	0.9171	-87.5521	17.7726	3.57609E-05
Temp + Vis	4	1.0155	-87.5391	17.7855	3.55307E-05
Vis + WDir	4	1.0160	-87.5258	17.7988	3.52947E-05
Hum + Vis + Press	5	0.9190	-87.4938	17.8308	3.47343E-05
Temp + Hum + Moon + Press + WSpd + WDir	8	0.6385	-87.4634	17.8612	3.42105E-05
Temp + WDir	4	1.0183	-87.4585	17.8662	3.41259E-05
Temp + Moon + Press	5	0.9309	-87.1184	18.2062	2.87903E-05
Temp + Vis + Press	5	0.9314	-87.1038	18.2209	2.85799E-05
Temp + Moon + Cloud + Press + WSpd + WDir	8	0.6493	-86.9735	18.3512	2.67777E-05
Temp + Hum + Vis + Moon + Cloud + WSpd	8	0.6545	-86.7433	18.5813	2.38669E-05
Hum + Vis + Cloud	5	0.9463	-86.6430	18.6816	2.26992E-05
Vis + Moon + Press	5	0.9468	-86.6278	18.6969	2.25269E-05
Temp + Hum + Cloud	5	0.9481	-86.5885	18.7362	2.20886E-05
Temp + Press + WDir	5	0.9485	-86.5760	18.7486	2.19516E-05
Temp + Cloud + Press	5	0.9487	-86.5713	18.7534	2.18993E-05
Hum + Cloud + WDir	5	0.9489	-86.5650	18.7596	2.18309E-05
Temp + Vis + Moon + Cloud + Press + WSpd	8	0.6588	-86.5528	18.7719	2.16979E-05
Moon + Press + WDir	5	0.9495	-86.5447	18.7799	2.16108E-05
Vis + Press + WDir	5	0.9505	-86.5157	18.8090	2.12991E-05
Moon + Cloud + Press	5	0.9544	-86.3965	18.9281	2.00673E-05
Vis + Cloud + Press	5	0.9558	-86.3528	18.9718	1.96333E-05
Temp + Hum + Vis + Moon + Press + WSpd	8	0.6638	-86.3353	18.9894	1.94618E-05
Temp + Moon + Cloud	5	0.9589	-86.2613	19.0633	1.87555E-05
Cloud + Press + WDir	5	0.9600	-86.2277	19.0969	1.84431E-05
Hum + Vis + Moon	5	0.9613	-86.1878	19.1369	1.80784E-05
Vis + Moon + Cloud	5	0.9622	-86.1595	19.1652	1.78242E-05

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Moon + Cloud + Press + WSpd	8	0.6680	-86.1536	19.1710	1.77723E-05
Temp + Hum + Moon	5	0.9675	-86.0015	19.3231	1.64707E-05
Moon + Cloud + WDir	5	0.9676	-85.9985	19.3262	1.64455E-05
Temp + Hum + Press + WSpd + WDir	7	0.7678	-85.9797	19.3449	1.62922E-05
Vis + Moon + Cloud + Press + WSpd + WDir	8	0.6728	-85.9441	19.3806	1.60044E-05
Hum + Moon + Cloud + Press + WSpd + WDir	8	0.6742	-85.8851	19.4395	1.55396E-05
Temp + Hum + Moon + Press	6	0.8714	-85.8243	19.5004	1.50737E-05
Hum + Moon + WDir	5	0.9742	-85.8014	19.5232	1.49026E-05
Hum + Vis + Moon + Cloud + WSpd + WDir	8	0.6772	-85.7571	19.5676	1.45758E-05
Temp + Hum + Vis + Press + WSpd	7	0.7744	-85.7342	19.5904	1.44104E-05
Temp + Hum + Cloud + Press + WSpd	7	0.7750	-85.7109	19.6137	1.42434E-05
Temp + Moon + WDir	5	0.9801	-85.6250	19.6997	1.36443E-05
Temp + Vis + Moon	5	0.9810	-85.5996	19.7251	1.34719E-05
Hum + Vis + Moon + Cloud + Press + WSpd	8	0.6812	-85.5829	19.7417	1.33602E-05
Temp + Vis + Press + WSpd + WDir	7	0.7788	-85.5676	19.7571	1.3258E-05
Vis + Moon + WDir	5	0.9873	-85.4136	19.9111	1.22755E-05
Hum + Cloud + Press + WSpd + WDir	7	0.7831	-85.4077	19.9169	1.22398E-05
Temp + Hum + Cloud + Press	6	0.8847	-85.3875	19.9371	1.21166E-05
Temp + Hum + Vis	5	0.9888	-85.3705	19.9542	1.20138E-05
Hum + Vis + WDir	5	0.9888	-85.3695	19.9551	1.20082E-05
Hum + Vis + Cloud + Press + WSpd	7	0.7843	-85.3657	19.9590	1.19852E-05
Temp + Vis + Cloud	5	0.9907	-85.3144	20.0102	1.16819E-05
Temp + Vis + Cloud + Press + WSpd	7	0.7859	-85.3062	20.0185	1.16337E-05
Hum + Vis + Moon + Press + WSpd + WDir	8	0.6880	-85.2984	20.0262	1.15887E-05
Temp + Cloud + WDir	5	0.9923	-85.2659	20.0587	1.14019E-05
Vis + Cloud + WDir	5	0.9924	-85.2640	20.0607	1.13908E-05
Hum + Vis + Press + WSpd + WDir	7	0.7876	-85.2431	20.0815	1.12727E-05
Hum + Vis + Cloud + WSpd + WDir	7	0.7877	-85.2386	20.0860	1.12474E-05
Temp + Hum + Vis + Press	6	0.8897	-85.2232	20.1015	1.11609E-05
Temp + Hum + Press + WDir	6	0.8897	-85.2226	20.1020	1.11576E-05
Hum + Moon + Cloud + Press	6	0.8957	-85.0270	20.2977	1.0118E-05
Temp + Hum + Vis + Cloud + WSpd	7	0.7940	-85.0093	20.3153	1.00292E-05
Temp + Cloud + Press + WSpd + WDir	7	0.7942	-85.0020	20.3227	9.99222E-06
Temp + Hum + Vis + WSpd + WDir	7	0.7956	-84.9487	20.3760	9.72959E-06
Vis + Cloud + Press + WSpd + WDir	7	0.7960	-84.9360	20.3887	9.66783E-06

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Vis + Moon + Cloud + WSpd + WDir	9	0.6038	-84.8110	20.5137	9.0821E-06
Temp + Hum + WDir	5	1.0088	-84.7882	20.5364	8.97954E-06
Hum + Moon + Press + WDir	6	0.9053	-84.7171	20.6075	8.66572E-06
Temp + Hum + Moon + Cloud	6	0.9055	-84.7128	20.6119	8.64698E-06
Hum + Cloud + Press + WDir	6	0.9074	-84.6528	20.6719	8.39135E-06
Temp + Vis + WDir	5	1.0154	-84.5985	20.7262	8.16662E-06
Hum + Vis + Cloud + Press	6	0.9093	-84.5910	20.7337	8.13605E-06
Hum + Vis + Moon + Press	6	0.9097	-84.5793	20.7454	8.08863E-06
Temp + Vis + Moon + Press	6	0.9099	-84.5716	20.7531	8.05752E-06
Temp + Vis + Moon + Cloud + Press + WSpd + WDir	9	0.6097	-84.5269	20.7977	7.87964E-06
Hum + Vis + Press + WDir	6	0.9144	-84.4281	20.8965	7.49986E-06
Hum + Vis + Moon + Cloud	6	0.9162	-84.3710	20.9537	7.28863E-06
Hum + Moon + Cloud + WDir	6	0.9167	-84.3557	20.9689	7.23326E-06
Temp + Hum + Moon + Cloud + Press + WSpd + WDir	9	0.6211	-83.9882	21.3364	6.01902E-06
Temp + Vis + Cloud + Press	6	0.9308	-83.9129	21.4118	5.79661E-06
Temp + Moon + Cloud + Press	6	0.9309	-83.9091	21.4155	5.78576E-06
Temp + Moon + Press + WDir	6	0.9309	-83.9090	21.4156	5.78543E-06
Temp + Vis + Press + WDir	6	0.9312	-83.8994	21.4252	5.75775E-06
Temp + Hum + Vis + Moon + Press + WSpd + WDir	9	0.6257	-83.7751	21.5495	5.41081E-06
Vis + Moon + Press + WDir	6	0.9395	-83.6431	21.6816	5.06502E-06
Vis + Moon + Cloud + Press	6	0.9421	-83.5632	21.7614	4.86681E-06
Temp + Hum + Cloud + WDir	6	0.9431	-83.5320	21.7926	4.79142E-06
Temp + Hum + Vis + Cloud	6	0.9446	-83.4872	21.8374	4.68529E-06
Hum + Vis + Cloud + WDir	6	0.9453	-83.4661	21.8585	4.63612E-06
Temp + Cloud + Press + WDir	6	0.9482	-83.3766	21.9480	4.43331E-06
Moon + Cloud + Press + WDir	6	0.9493	-83.3416	21.9830	4.35634E-06
Vis + Cloud + Press + WDir	6	0.9497	-83.3316	21.9931	4.33452E-06
Temp + Vis + Moon + Cloud	6	0.9512	-83.2849	22.0397	4.23463E-06
Temp + Hum + Vis + Moon	6	0.9556	-83.1512	22.1735	3.96066E-06
Temp + Moon + Cloud + WDir	6	0.9575	-83.0926	22.2321	3.8463E-06
Hum + Vis + Moon + WDir	6	0.9613	-82.9787	22.3459	3.63342E-06
Vis + Moon + Cloud + WDir	6	0.9621	-82.9553	22.3693	3.59122E-06
Temp + Hum + Moon + WDir	6	0.9643	-82.8870	22.4376	3.4706E-06
Temp + Hum + Moon + Cloud + Press	7	0.8628	-82.5976	22.7270	3.00309E-06
Temp + Hum + Vis + Moon + Cloud + Press + WSpd	9	0.6539	-82.4967	22.8280	2.85525E-06

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Vis + Moon + WDir	6	0.9800	-82.4180	22.9067	2.74507E-06
Temp + Hum + Moon + Press + WDir	7	0.8703	-82.3472	22.9775	2.6496E-06
Temp + Hum + Vis + Moon + Press	7	0.8706	-82.3378	22.9868	2.63722E-06
Temp + Hum + Cloud + Press + WSpd + WDir	8	0.7637	-82.2685	23.0561	2.5474E-06
Temp + Hum + Vis + Press + WSpd + WDir	8	0.7653	-82.2086	23.1161	2.47218E-06
Temp + Hum + Vis + WDir	6	0.9878	-82.1881	23.1365	2.44703E-06
Temp + Vis + Cloud + WDir	6	0.9900	-82.1253	23.1993	2.37139E-06
Temp + Hum + Vis + Cloud + Press + WSpd	8	0.7717	-81.9655	23.3591	2.18933E-06
Hum + Vis + Moon + Cloud + Press + WSpd + WDir	9	0.6672	-81.9122	23.4124	2.13174E-06
Temp + Hum + Cloud + Press + WDir	7	0.8837	-81.9050	23.4196	2.12407E-06
Temp + Hum + Vis + Cloud + Press	7	0.8839	-81.8960	23.4287	2.11451E-06
Temp + Hum + Vis + Cloud + WSpd + WDir	8	0.7756	-81.8208	23.5038	2.03649E-06
Temp + Vis + Cloud + Press + WSpd + WDir	8	0.7774	-81.7553	23.5693	1.97088E-06
Temp + Hum + Vis + Press + WDir	7	0.8895	-81.7151	23.6095	1.93166E-06
Hum + Vis + Cloud + Press + WSpd + WDir	8	0.7820	-81.5843	23.7403	1.80938E-06
Hum + Moon + Cloud + Press + WDir	7	0.8944	-81.5554	23.7692	1.78343E-06
Hum + Vis + Moon + Cloud + Press	7	0.8957	-81.5125	23.8122	1.74555E-06
Temp + Hum + Moon + Cloud + WDir	7	0.8960	-81.5019	23.8228	1.73632E-06
Temp + Hum + Vis + Moon + Cloud	7	0.9051	-81.2093	24.1154	1.5E-06
Hum + Vis + Moon + Press + WDir	7	0.9052	-81.2053	24.1194	1.49699E-06
Hum + Vis + Cloud + Press + WDir	7	0.9074	-81.1377	24.1870	1.44724E-06
Temp + Vis + Moon + Cloud + Press	7	0.9075	-81.1340	24.1907	1.44457E-06
Temp + Vis + Moon + Press + WDir	7	0.9098	-81.0582	24.2665	1.39085E-06
Hum + Vis + Moon + Cloud + WDir	7	0.9158	-80.8683	24.4563	1.2649E-06
Temp + Vis + Cloud + Press + WDir	7	0.9307	-80.4001	24.9245	1.00089E-06
Temp + Moon + Cloud + Press + WDir	7	0.9309	-80.3940	24.9306	9.97851E-07
Vis + Moon + Cloud + Press + WDir	7	0.9369	-80.2073	25.1173	9.08905E-07
Temp + Hum + Vis + Moon + Cloud + Press + WSpd + WDir	10	0.6017	-80.1598	25.1649	8.87541E-07
Temp + Hum + Vis + Cloud + WDir	7	0.9401	-80.1104	25.2143	8.65892E-07
Temp + Vis + Moon + Cloud + WDir	7	0.9482	-79.8600	25.4646	7.64012E-07
Temp + Hum + Vis + Moon + WDir	7	0.9527	-79.7235	25.6012	7.13594E-07
Temp + Hum + Moon + Cloud + Press + WDir	8	0.8595	-78.8437	26.4810	4.59632E-07
Temp + Hum + Vis + Moon + Cloud + Press	8	0.8607	-78.8005	26.5241	4.49815E-07
Temp + Hum + Vis + Moon + Press + WDir	8	0.8694	-78.5087	26.8160	3.8874E-07
Temp + Hum + Vis + Cloud + Press + WSpd + WDir	9	0.7601	-78.1328	27.1918	3.2214E-07

Appendix 2: AIC table for dependent variable multiple calls

Model	K	SSE	AIC_C	Δ_i	w_i
Temp + Hum + Vis + Cloud + Press + WDir	8	0.8829	-78.0626	27.2620	3.11032E-07
Hum + Vis + Moon + Cloud + Press + WDir	8	0.8943	-77.6905	27.6341	2.58228E-07
Temp + Hum + Vis + Moon + Cloud + WDir	8	0.8959	-77.6387	27.6859	2.51624E-07
Temp + Vis + Moon + Cloud + Press + WDir	8	0.9072	-77.2775	28.0472	2.10042E-07
Temp + Hum + Vis + Moon + Cloud + Press + WDir	9	0.8572	-74.6459	30.6788	5.63462E-08

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Hum	3	0.6269	-104.2333	0.0000	0.2818073
Cloud	3	0.6282	-104.1724	0.0609	0.273349088
WSpd	3	0.6447	-103.4197	0.8136	0.187622284
Press	3	0.6615	-102.6769	1.5564	0.129412632
Temp	3	0.6930	-101.3282	2.9051	0.065936796
Moon	3	0.7473	-99.1372	5.0961	0.022047362
WDir	3	0.7487	-99.0863	5.1470	0.021492943
Vis	3	0.8364	-95.8715	8.3618	0.004307293
Vis + Moon + WDir	5	0.7576	-93.0944	11.1389	0.001074413
Vis + Press	4	0.8662	-92.1517	12.0816	0.000670614
Vis + Moon + Press	5	0.7844	-92.0837	12.1496	0.000648175
Vis + Moon	4	0.8808	-91.6664	12.5669	0.000526116
Vis + Moon + Press + WDir	6	0.7125	-91.6630	12.5703	0.00052522
Vis + Press + WDir	5	0.7965	-91.6402	12.5931	0.000519261
Vis + WDir	4	0.8869	-91.4669	12.7664	0.000476165
Vis + Moon + WSpd + WDir	6	0.7197	-91.3709	12.8624	0.000453848
Temp + Vis + Moon + WDir	6	0.7322	-90.8727	13.3606	0.000353782
Temp + Vis + Moon + Press + WDir	7	0.6506	-90.7861	13.4472	0.000338785
Vis + Cloud + Press	5	0.8312	-90.4042	13.8291	0.0002799
Vis + Moon + Cloud + WDir	6	0.7553	-89.9729	14.2604	0.000225605
Temp + Vis + Moon + WSpd + WDir	7	0.6697	-89.9470	14.2863	0.000222705
Hum + Vis + Moon + WDir	6	0.7560	-89.9439	14.2894	0.00022236
Vis + Press + WSpd	5	0.8526	-89.6670	14.5663	0.000193607
Moon + WDir	4	0.9450	-89.6252	14.6081	0.000189599
Vis + Moon + Cloud + Press	6	0.7662	-89.5549	14.6784	0.000183052
Temp + Vis + Press + WDir	6	0.7696	-89.4297	14.8036	0.000171944
Vis + Moon + WSpd	5	0.8628	-89.3221	14.9112	0.000162943
Hum + Vis + Press	5	0.8653	-89.2398	14.9935	0.000156368
Temp + Vis + Press	5	0.8656	-89.2278	15.0055	0.000155438
Temp + Vis + Moon + Press	6	0.7763	-89.1752	15.0581	0.000151404
Vis + Cloud + Press + WDir	6	0.7790	-89.0756	15.1577	0.000144049
Hum + Vis + Moon	5	0.8731	-88.9769	15.2564	0.000137108
Hum + Vis + Moon + Press	6	0.7825	-88.9462	15.2871	0.000135019
Vis + Moon + Press + WSpd	6	0.7843	-88.8810	15.3523	0.000130691
Temp + Vis + Moon	5	0.8774	-88.8357	15.3976	0.000127762

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Vis + Moon + Cloud	5	0.8795	-88.7665	15.4668	0.000123419
Vis + WSpd + WDir	5	0.8832	-88.6457	15.5876	0.000116186
Vis + Cloud + WDir	5	0.8855	-88.5685	15.6648	0.000111784
Hum + Vis + WDir	5	0.8859	-88.5579	15.6754	0.000111193
Temp + Vis + WDir	5	0.8861	-88.5501	15.6832	0.000110763
Hum + WDir	4	0.9808	-88.5479	15.6854	0.000110638
Vis + Press + WSpd + WDir	6	0.7947	-88.4981	15.7352	0.000107917
Hum + Vis + Press + WDir	6	0.7965	-88.4311	15.8022	0.000104361
Hum + Moon + WDir	5	0.8901	-88.4175	15.8158	0.000103656
Vis + Moon + Cloud + Press + WDir	7	0.7067	-88.3854	15.8479	0.000102004
Cloud + WDir	4	0.9896	-88.2893	15.9440	9.72221E-05
Hum + Vis + Moon + Press + WDir	7	0.7122	-88.1599	16.0734	9.11295E-05
Hum + Vis + Moon + WSpd + WDir	7	0.7132	-88.1211	16.1122	8.93763E-05
Cloud + Press	4	0.9967	-88.0820	16.1513	8.76475E-05
Temp + Vis	4	0.9976	-88.0549	16.1784	8.64681E-05
Moon + Cloud + WDir	5	0.9029	-88.0050	16.2283	8.43397E-05
Moon + Cloud	4	1.0031	-87.8951	16.3382	7.98275E-05
Vis + Moon + Cloud + WSpd + WDir	7	0.7192	-87.8753	16.3580	7.90429E-05
Temp + Vis + Moon + Press + WSpd + WDir	8	0.6296	-87.8671	16.3662	7.87167E-05
Hum + Moon	4	1.0100	-87.6968	16.5365	7.22915E-05
Vis + Cloud + Press + WSpd	6	0.8187	-87.6338	16.5995	7.00524E-05
Temp + Vis + Moon + Cloud + WDir	7	0.7258	-87.6102	16.6231	6.9231E-05
Press + WDir	4	1.0196	-87.4208	16.8125	6.29745E-05
Hum + Vis + Cloud + Press	6	0.8252	-87.4068	16.8265	6.25338E-05
Temp + Hum + Vis + Moon + WDir	7	0.7312	-87.3982	16.8351	6.22674E-05
Temp + WDir	4	1.0214	-87.3699	16.8634	6.13916E-05
WSpd + WDir	4	1.0215	-87.3694	16.8639	6.13776E-05
Hum + Vis	4	1.0232	-87.3191	16.9142	5.98525E-05
Temp + Vis + Cloud + Press	6	0.8287	-87.2825	16.9508	5.87658E-05
Temp + Vis + Moon + Cloud + Press + WDir	8	0.6450	-87.1679	17.0654	5.54951E-05
Vis + Cloud	4	1.0297	-87.1371	17.0962	5.46457E-05
Vis + WSpd	4	1.0301	-87.1247	17.1086	5.43093E-05
Temp + Moon + WDir	5	0.9329	-87.0582	17.1751	5.25333E-05
Temp + Moon	4	1.0364	-86.9474	17.2859	4.97016E-05
Temp + Hum + Vis + Moon + Press + WDir	8	0.6505	-86.9204	17.3129	4.9034E-05

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Moon + Press	4	1.0396	-86.8589	17.3744	4.75506E-05
Moon + WSpd + WDir	5	0.9404	-86.8250	17.4083	4.675E-05
Moon + WSpd	4	1.0414	-86.8086	17.4247	4.63686E-05
Cloud + Press + WDir	5	0.9424	-86.7620	17.4713	4.53014E-05
Moon + Press + WDir	5	0.9425	-86.7592	17.4741	4.52365E-05
Temp + Vis + Cloud + Press + WDir	7	0.7500	-86.6626	17.5707	4.31037E-05
Hum + Vis + Moon + WSpd	6	0.8483	-86.6041	17.6292	4.18615E-05
Moon + Cloud + Press	5	0.9495	-86.5448	17.6885	4.06391E-05
Temp + Vis + Press + WSpd	6	0.8511	-86.5096	17.7237	3.99293E-05
Hum + Vis + Moon + Cloud + WDir	7	0.7546	-86.4853	17.7480	3.94486E-05
Hum + Vis + Press + WSpd	6	0.8526	-86.4575	17.7758	3.89041E-05
Temp + Vis + Moon + Cloud + Press	7	0.7553	-86.4549	17.7784	3.88534E-05
Temp + Hum + Vis + Moon + WSpd + WDir	8	0.6626	-86.3879	17.8454	3.75731E-05
Hum + Vis + Moon + Cloud + Press	7	0.7601	-86.2744	17.9589	3.54994E-05
Hum + Press	4	1.0617	-86.2498	17.9835	3.50651E-05
Temp + Vis + Moon + Cloud + WSpd + WDir	8	0.6662	-86.2300	18.0033	3.47203E-05
Hum + Press + WDir	5	0.9615	-86.1828	18.0505	3.39098E-05
Temp + Vis + Moon + WSpd	6	0.8613	-86.1640	18.0693	3.35936E-05
Vis + Moon + Cloud + WSpd	6	0.8625	-86.1229	18.1104	3.29104E-05
Temp + Hum + Vis + Press	6	0.8648	-86.0467	18.1866	3.16796E-05
Vis + Moon + Cloud + Press + WSpd	7	0.7662	-86.0404	18.1929	3.15805E-05
Temp + Vis + Press + WSpd + WDir	7	0.7677	-85.9849	18.2484	3.07157E-05
Temp + Cloud	4	1.0721	-85.9653	18.2680	3.04164E-05
Temp + Hum + Vis + Press + WDir	7	0.7694	-85.9206	18.3127	2.97447E-05
Temp + Hum + Vis + Moon	6	0.8701	-85.8675	18.3659	2.8964E-05
Hum + Cloud + WDir	5	0.9737	-85.8150	18.4183	2.82142E-05
Temp + Hum + Moon + WDir	6	0.8719	-85.8101	18.4232	2.81455E-05
Hum + Vis + Moon + Cloud	6	0.8730	-85.7723	18.4610	2.76189E-05
Temp + Hum + Vis + Moon + Press	7	0.7746	-85.7247	18.5086	2.69683E-05
Temp + Vis + Moon + Press + WSpd	7	0.7762	-85.6641	18.5692	2.61637E-05
Temp + Vis + Moon + Cloud	6	0.8766	-85.6519	18.5814	2.60045E-05
Vis + Cloud + Press + WSpd + WDir	7	0.7767	-85.6476	18.5857	2.59487E-05
Temp + Hum + WDir	5	0.9801	-85.6273	18.6060	2.56866E-05
Hum + Vis + Cloud + Press + WDir	7	0.7773	-85.6234	18.6099	2.56363E-05
Hum + WSpd + WDir	5	0.9805	-85.6152	18.6181	2.55325E-05

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum	4	1.0863	-85.5852	18.6481	2.51524E-05
Hum + Moon + Cloud + WDir	6	0.8810	-85.5065	18.7268	2.4181E-05
Hum + Vis + WSpd + WDir	6	0.8812	-85.4995	18.7338	2.40963E-05
Cloud + Press + WSpd	5	0.9844	-85.4991	18.7342	2.40925E-05
Hum + Cloud + Press	5	0.9845	-85.4953	18.7380	2.40465E-05
Temp + Vis + WSpd + WDir	6	0.8818	-85.4798	18.7535	2.38604E-05
Vis + Cloud + WSpd + WDir	6	0.8824	-85.4629	18.7704	2.36598E-05
Hum + Vis + Moon + Press + WSpd	7	0.7817	-85.4611	18.7722	2.36381E-05
Temp + Vis + Cloud + WDir	6	0.8843	-85.3979	18.8354	2.29027E-05
Hum + Vis + Cloud + WDir	6	0.8850	-85.3754	18.8579	2.26465E-05
Hum + Moon + WSpd + WDir	6	0.8851	-85.3718	18.8615	2.26061E-05
Temp + Hum + Vis + WDir	6	0.8852	-85.3710	18.8623	2.25967E-05
Cloud + WSpd + WDir	5	0.9888	-85.3686	18.8647	2.25701E-05
Temp + Cloud + WDir	5	0.9895	-85.3486	18.8847	2.23458E-05
Moon + Cloud + WSpd + WDir	6	0.8870	-85.3101	18.9232	2.1919E-05
Hum + Moon + Press	5	0.9909	-85.3067	18.9266	2.18826E-05
Temp + Hum + Vis	5	0.9916	-85.2884	18.9449	2.16828E-05
Hum + Moon + Press + WDir	6	0.8880	-85.2786	18.9547	2.15768E-05
Moon + Cloud + Press + WDir	6	0.8889	-85.2500	18.9833	2.12702E-05
Press + WSpd	4	1.0995	-85.2347	18.9986	2.11086E-05
Temp + Press	4	1.1001	-85.2183	19.0150	2.09359E-05
Temp + Moon + Cloud	5	0.9943	-85.2073	19.0260	2.08218E-05
Temp + Cloud + Press	5	0.9949	-85.1922	19.0411	2.06649E-05
Hum + Moon + Cloud	5	0.9953	-85.1793	19.0540	2.05314E-05
Temp + WSpd	4	1.1029	-85.1453	19.0880	2.01855E-05
Moon + Cloud + WSpd	5	0.9969	-85.1326	19.1007	2.00585E-05
Temp + Vis + WSpd	5	0.9975	-85.1165	19.1168	1.98969E-05
Temp + Vis + Cloud	5	0.9976	-85.1129	19.1204	1.98611E-05
Hum + Cloud	4	1.1054	-85.0798	19.1535	1.9535E-05
Temp + Moon + Cloud + WDir	6	0.8945	-85.0654	19.1679	1.93954E-05
Cloud + WSpd	4	1.1079	-85.0142	19.2191	1.8905E-05
Hum + Vis + Press + WSpd + WDir	7	0.7946	-84.9847	19.2486	1.86279E-05
Temp + Hum + Moon	5	1.0043	-84.9195	19.3138	1.80307E-05
Vis + Moon + Cloud + Press + WSpd + WDir	8	0.6974	-84.9024	19.3309	1.78772E-05
Hum + WSpd	4	1.1122	-84.9002	19.3331	1.78579E-05

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Hum + Vis + Moon + Press + WSpd + WDir	8	0.6985	-84.8571	19.3762	1.74769E-05
Hum + Moon + WSpd	5	1.0094	-84.7709	19.4624	1.67396E-05
Hum + Vis + Moon + Cloud + Press + WDir	8	0.7052	-84.5820	19.6513	1.52309E-05
Press + WSpd + WDir	5	1.0185	-84.5110	19.7223	1.46999E-05
Temp + Press + WDir	5	1.0187	-84.5046	19.7287	1.46528E-05
Temp + WSpd + WDir	5	1.0213	-84.4320	19.8013	1.41306E-05
Hum + Vis + WSpd	5	1.0231	-84.3794	19.8539	1.37639E-05
Hum + Vis + Cloud	5	1.0232	-84.3771	19.8562	1.37477E-05
Temp + Vis + Cloud + Press + WSpd	7	0.8145	-84.2701	19.9632	1.30313E-05
Hum + Vis + Moon + Cloud + WSpd + WDir	8	0.7132	-84.2551	19.9782	1.2934E-05
Hum + Vis + Cloud + Press + WSpd	7	0.8162	-84.2073	20.0260	1.2629E-05
Hum + Cloud + Press + WDir	6	0.9215	-84.2032	20.0301	1.26032E-05
Vis + Cloud + WSpd	5	1.0295	-84.1988	20.0345	1.25753E-05
Temp + Moon + WSpd + WDir	6	0.9234	-84.1447	20.0886	1.22395E-05
Hum + Press + WSpd	5	1.0321	-84.1267	20.1066	1.21301E-05
Temp + Moon + Press	5	1.0358	-84.0222	20.2111	1.15126E-05
Temp + Moon + WSpd	5	1.0362	-84.0126	20.2207	1.14572E-05
Temp + Hum + Vis + Cloud + Press	7	0.8227	-83.9787	20.2546	1.12647E-05
Moon + Press + WSpd + WDir	6	0.9302	-83.9327	20.3006	1.10089E-05
Moon + Press + WSpd	5	1.0396	-83.9172	20.3161	1.09236E-05
Temp + Moon + Press + WDir	6	0.9323	-83.8675	20.3658	1.06554E-05
Hum + Moon + Cloud + Press	6	0.9355	-83.7663	20.4670	1.01299E-05
Temp + Hum + Vis + Moon + Cloud + WDir	8	0.7258	-83.7466	20.4867	1.00306E-05
Temp + Vis + Moon + Cloud + Press + WSpd + WDir	9	0.6269	-83.7196	20.5137	9.89606E-06
Temp + Cloud + Press + WDir	6	0.9380	-83.6891	20.5442	9.74601E-06
Temp + Hum + Vis + Moon + Press + WSpd + WDir	9	0.6282	-83.6587	20.5746	9.59904E-06
Cloud + Press + WSpd + WDir	6	0.9403	-83.6177	20.6156	9.40434E-06
Temp + Hum + Press	5	1.0555	-83.4751	20.7582	8.75721E-06
Moon + Cloud + Press + WSpd	6	0.9493	-83.3415	20.8918	8.19131E-06
Temp + Moon + Cloud + Press	6	0.9495	-83.3358	20.8975	8.16785E-06
Hum + Press + WSpd + WDir	6	0.9540	-83.1977	21.0356	7.62319E-06
Temp + Hum + Press + WDir	6	0.9542	-83.1936	21.0397	7.60757E-06
Temp + Hum + Vis + Moon + WSpd	7	0.8474	-83.1205	21.1128	7.33456E-06
Hum + Vis + Moon + Cloud + WSpd	7	0.8478	-83.1052	21.1281	7.27842E-06
Temp + Hum + Cloud	5	1.0691	-83.1043	21.1290	7.27511E-06

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Cloud + WSpd	5	1.0712	-83.0480	21.1853	7.07339E-06
Temp + Hum + Vis + Press + WSpd	7	0.8511	-82.9946	21.2387	6.88685E-06
Temp + Hum + Vis + Moon + Cloud + Press + WDir	9	0.6447	-82.9060	21.3273	6.58862E-06
Temp + Vis + Cloud + Press + WSpd + WDir	8	0.7476	-82.8882	21.3451	6.53029E-06
Hum + Cloud + Press + WSpd	6	0.9646	-82.8786	21.3547	6.49894E-06
Temp + Hum + Vis + Moon + Cloud + Press	8	0.7492	-82.8236	21.4097	6.32273E-06
Temp + Hum + Vis + Cloud + Press + WDir	8	0.7493	-82.8223	21.4110	6.31856E-06
Temp + Hum + WSpd	5	1.0803	-82.8027	21.4306	6.25679E-06
Temp + Hum + Moon + WSpd + WDir	7	0.8604	-82.6780	21.5553	5.87871E-06
Temp + Vis + Moon + Cloud + WSpd	7	0.8611	-82.6543	21.5790	5.80953E-06
Temp + Hum + Cloud + WDir	6	0.9736	-82.6099	21.6234	5.68183E-06
Temp + Vis + Moon + Cloud + Press + WSpd	8	0.7553	-82.5883	21.6450	5.62075E-06
Temp + Hum + Moon + Press + WDir	7	0.8635	-82.5754	21.6579	5.58482E-06
Temp + Press + WSpd	5	1.0890	-82.5699	21.6634	5.56936E-06
Hum + Moon + Cloud + Press + WDir	7	0.8647	-82.5347	21.6986	5.47207E-06
Temp + Hum + Moon + Cloud + WDir	7	0.8666	-82.4718	21.7615	5.30268E-06
Hum + Vis + Moon + Cloud + Press + WSpd	8	0.7592	-82.4400	21.7933	5.21905E-06
Temp + Hum + WSpd + WDir	6	0.9798	-82.4241	21.8092	5.17776E-06
Temp + Hum + Vis + Moon + Cloud	7	0.8701	-82.3531	21.8802	4.99713E-06
Hum + Moon + Cloud + WSpd + WDir	7	0.8701	-82.3522	21.8811	4.99507E-06
Temp + Hum + Cloud + Press	6	0.9835	-82.3144	21.9189	4.90149E-06
Temp + Cloud + Press + WSpd	6	0.9836	-82.3137	21.9196	4.89961E-06
Temp + Moon + Cloud + Press + WDir	7	0.8739	-82.2282	22.0051	4.69476E-06
Temp + Hum + Moon + Cloud	6	0.9874	-82.2015	22.0318	4.63249E-06
Hum + Cloud + WSpd	5	1.1035	-82.1872	22.0461	4.59952E-06
Hum + Moon + Press + WSpd	6	0.9880	-82.1833	22.0500	4.59052E-06
Temp + Hum + Vis + Moon + Cloud + WSpd + WDir	9	0.6615	-82.1632	22.0701	4.54451E-06
Temp + Cloud + WSpd + WDir	6	0.9888	-82.1596	22.0737	4.5363E-06
Temp + Hum + Vis + Press + WSpd + WDir	8	0.7671	-82.1391	22.0942	4.49009E-06
Temp + Moon + Cloud + WSpd	6	0.9896	-82.1365	22.0968	4.48427E-06
Temp + Hum + Moon + Press	6	0.9904	-82.1136	22.1197	4.43321E-06
Temp + Hum + Vis + Cloud	6	0.9911	-82.0924	22.1409	4.38655E-06
Hum + Moon + Cloud + WSpd	6	0.9912	-82.0897	22.1436	4.38065E-06
Temp + Hum + Vis + WSpd	6	0.9915	-82.0796	22.1537	4.35856E-06
Temp + Hum + Vis + WSpd + WDir	7	0.8800	-82.0254	22.2079	4.24188E-06

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC _C	Δ_i	w_i
Hum + Vis + Cloud + WSpd + WDir	7	0.8810	-81.9921	22.2412	4.1719E-06
Moon + Cloud + Press + WSpd + WDir	7	0.8829	-81.9312	22.3021	4.04689E-06
Temp + Vis + Cloud + WSpd	6	0.9975	-81.9071	22.3262	3.99837E-06
Temp + Hum + Vis + Cloud + WDir	7	0.8840	-81.8944	22.3389	3.97306E-06
Temp + Hum + Vis + Moon + Press + WSpd	8	0.7740	-81.8801	22.3532	3.9447E-06
Hum + Moon + Press + WSpd + WDir	7	0.8851	-81.8584	22.3749	3.90214E-06
Hum + Vis + Cloud + Press + WSpd + WDir	8	0.7757	-81.8162	22.4171	3.82075E-06
Temp + Hum + Moon + WSpd	6	1.0041	-81.7157	22.5176	3.63351E-06
Temp + Press + WSpd + WDir	6	1.0176	-81.3272	22.9061	2.99189E-06
Hum + Vis + Cloud + WSpd	6	1.0231	-81.1701	23.0632	2.76596E-06
Temp + Hum + Press + WSpd	6	1.0297	-80.9852	23.2481	2.52163E-06
Temp + Hum + Cloud + Press + WDir	7	0.9125	-80.9740	23.2593	2.50765E-06
Hum + Cloud + Press + WSpd + WDir	7	0.9155	-80.8798	23.3535	2.39219E-06
Temp + Moon + Press + WSpd + WDir	7	0.9162	-80.8568	23.3765	2.36492E-06
Hum + Vis + Moon + Cloud + Press + WSpd + WDir	9	0.6930	-80.8146	23.4187	2.31546E-06
Temp + Moon + Press + WSpd	6	1.0358	-80.8137	23.4196	2.31441E-06
Temp + Hum + Vis + Cloud + Press + WSpd	8	0.8122	-80.4833	23.7500	1.96203E-06
Hum + Moon + Cloud + Press + WSpd	7	0.9335	-80.3143	23.9190	1.80301E-06
Temp + Hum + Moon + Cloud + Press	7	0.9354	-80.2540	23.9793	1.74948E-06
Temp + Cloud + Press + WSpd + WDir	7	0.9359	-80.2396	23.9937	1.73698E-06
Temp + Hum + Cloud + WSpd	6	1.0674	-79.9421	24.2912	1.49686E-06
Temp + Hum + Press + WSpd + WDir	7	0.9461	-79.9253	24.3080	1.48436E-06
Temp + Moon + Cloud + Press + WSpd	7	0.9493	-79.8266	24.4067	1.41289E-06
Temp + Hum + Moon + Cloud + Press + WDir	8	0.8400	-79.5080	24.7253	1.20483E-06
Temp + Hum + Cloud + Press + WSpd	7	0.9645	-79.3660	24.8673	1.12222E-06
Temp + Hum + Vis + Moon + Cloud + WSpd	8	0.8468	-79.2755	24.9578	1.07261E-06
Temp + Hum + Moon + Cloud + WSpd + WDir	8	0.8493	-79.1901	25.0432	1.02776E-06
Temp + Hum + Vis + Moon + Cloud + Press + WSpd + WDir	10	0.6242	-79.0948	25.1385	9.79929E-07
Temp + Hum + Moon + Press + WSpd + WDir	8	0.8588	-78.8661	25.3672	8.74063E-07
Temp + Hum + Moon + Cloud + WSpd	7	0.9843	-78.7764	25.4569	8.3572E-07
Hum + Moon + Cloud + Press + WSpd + WDir	8	0.8626	-78.7368	25.4965	8.19312E-07
Temp + Hum + Moon + Press + WSpd	7	0.9876	-78.6787	25.5546	7.95857E-07
Temp + Moon + Cloud + Press + WSpd + WDir	8	0.8650	-78.6573	25.5760	7.87413E-07
Temp + Hum + Vis + Cloud + Press + WSpd + WDir	9	0.7473	-78.6236	25.6097	7.74224E-07
Temp + Hum + Vis + Cloud + WSpd	7	0.9910	-78.5800	25.6533	7.57561E-07

Appendix 3: AIC table for dependent variable nightly peak

Model	K	SSE	AIC_C	Δ_i	w_i
Temp + Hum + Vis + Moon + Cloud + Press + WSpd	9	0.7487	-78.5726	25.6607	7.54755E-07
Temp + Hum + Vis + Cloud + WSpd + WDir	8	0.8795	-78.1742	26.0591	6.18417E-07
Temp + Hum + Cloud + Press + WSpd + WDir	8	0.9058	-77.3217	26.9116	4.03809E-07
Temp + Hum + Moon + Cloud + Press + WSpd	8	0.9333	-76.4531	27.7802	2.61555E-07
Temp + Hum + Moon + Cloud + Press + WSpd + WDir	9	0.8364	-75.3578	28.8755	1.51257E-07

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
WDir	3	3.0975	-81.5549	0.0000	0.347564617
Cloud	3	3.1710	-80.7113	0.8435	0.22796358
Hum	3	3.2007	-80.3755	1.1793	0.192727507
Temp	3	3.3262	-78.9911	2.5638	0.096453303
Vis	3	3.4259	-77.9279	3.6269	0.056683893
Press	3	3.4746	-77.4197	4.1352	0.043963742
Moon	3	3.6939	-75.2163	6.3386	0.014609445
WSpd	3	3.9446	-72.8526	8.7023	0.004480769
Moon + WSpd	4	3.8520	-71.1667	10.3881	0.001928777
Moon + Press + WSpd	5	3.7612	-69.3163	12.2385	0.000764662
Temp + Moon + WSpd	5	3.7633	-69.2964	12.2585	0.00075707
Vis + Moon + WSpd	5	3.7937	-69.0068	12.5480	0.000655032
Hum + Moon + WSpd	5	3.8244	-68.7162	12.8387	0.000566435
Temp + Vis + Moon + Press + WSpd	7	3.2416	-68.6678	12.8871	0.000552896
Moon + WSpd + WDir	5	3.8495	-68.4804	13.0745	0.000503438
Moon + Cloud + WSpd	5	3.8503	-68.4734	13.0815	0.000501674
Vis + Moon + Press + WSpd	6	3.5665	-68.3331	13.2217	0.000467705
Temp + Moon + Press + WSpd	6	3.5784	-68.2134	13.3414	0.000440536
Hum + Vis + Moon + WSpd	6	3.6336	-67.6624	13.8924	0.000334452
Press + WSpd	4	4.2725	-67.4371	14.1178	0.000298816
Moon + Cloud + Press + WSpd	6	3.6789	-67.2163	14.3386	0.000267577
Temp + Vis + Moon + WSpd	6	3.6957	-67.0516	14.5032	0.000246433
Moon + Press + WSpd + WDir	6	3.7222	-66.7951	14.7598	0.000216766
Temp + Moon + WSpd + WDir	6	3.7307	-66.7123	14.8426	0.000207973
Temp + Hum + Moon + WSpd	6	3.7330	-66.6908	14.8640	0.000205754
Temp + Moon + Cloud + Press + WSpd	7	3.4354	-66.5777	14.9772	0.000194436
Hum + Moon + Press + WSpd	6	3.7606	-66.4256	15.1292	0.000180203
Temp + Moon + Cloud + WSpd	6	3.7628	-66.4046	15.1503	0.000178319
Vis + Moon + Cloud + WSpd	6	3.7823	-66.2181	15.3367	0.000162446
Cloud + Press + WSpd	5	4.1056	-66.1617	15.3931	0.000157928
Vis + Moon + WSpd + WDir	6	3.7922	-66.1243	15.4305	0.000155002
Temp + Hum + Vis + Moon + Press + WSpd	8	3.1725	-66.1106	15.4442	0.000153944
Hum + Moon + Cloud + WSpd	6	3.7984	-66.0656	15.4892	0.00015052
Hum + Vis + Moon + Press + WSpd	7	3.4858	-66.0536	15.5012	0.000149618
Vis + Press + WSpd	5	4.1227	-66.0121	15.5427	0.000146546

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
Hum + Moon + WSpd + WDir	6	3.8202	-65.8593	15.6956	0.000135763
Temp + Vis + Moon + Cloud + Press + WSpd	8	3.2010	-65.7889	15.7660	0.00013107
Temp + Hum + Vis + Moon + WSpd	7	3.5138	-65.7654	15.7895	0.000129538
Moon + Cloud + WSpd + WDir	6	3.8480	-65.5982	15.9566	0.000119152
Temp + Press + WSpd	5	4.1749	-65.5596	15.9953	0.000116872
Press + WSpd + WDir	5	4.1905	-65.4249	16.1300	0.000109259
Vis + Moon + Cloud + Press + WSpd	7	3.5474	-65.4227	16.1322	0.000109139
Temp + Vis + Moon + Press + WSpd + WDir	8	3.2408	-65.3433	16.2115	0.000104893
Press + WDir	4	4.5373	-65.2726	16.2823	0.000101248
Temp + Press	4	4.5419	-65.2362	16.3187	9.94201E-05
Temp + Moon + Press + WSpd + WDir	7	3.5749	-65.1452	16.4096	9.50012E-05
Temp + Hum + Moon + Press + WSpd	7	3.5761	-65.1330	16.4218	9.44234E-05
Cloud + Press	4	4.5626	-65.0725	16.4823	9.16105E-05
Moon + Cloud + Press + WSpd + WDir	7	3.5916	-64.9772	16.5776	8.73468E-05
Vis + Press	4	4.5979	-64.7950	16.7599	7.97391E-05
Temp + Cloud + Press + WSpd	6	3.9364	-64.7804	16.7745	7.91593E-05
Cloud + Press + WSpd + WDir	6	3.9377	-64.7688	16.7861	7.87028E-05
Cloud + Press + WDir	5	4.2690	-64.7571	16.7977	7.82448E-05
Hum + Press + WSpd	5	4.2697	-64.7514	16.8035	7.80191E-05
Temp + Vis + Press + WSpd	6	3.9406	-64.7424	16.8124	7.76713E-05
Moon + Press	4	4.6089	-64.7084	16.8464	7.63625E-05
Hum + Vis + Moon + WSpd + WDir	7	3.6288	-64.6058	16.9490	7.25438E-05
Hum + Vis + Moon + Cloud + WSpd	7	3.6327	-64.5673	16.9875	7.11603E-05
Temp + Cloud + Press	5	4.3013	-64.4856	17.0693	6.831E-05
Temp + Vis + Moon + WSpd + WDir	7	3.6515	-64.3821	17.1727	6.48674E-05
Vis + Press + WSpd + WDir	6	3.9826	-64.3603	17.1946	6.41617E-05
Hum + Moon + Cloud + Press + WSpd	7	3.6582	-64.3157	17.2392	6.27478E-05
Temp + Vis + Press	5	4.3254	-64.2848	17.2701	6.17848E-05
Temp + Vis + Moon + Cloud + WSpd	7	3.6750	-64.1507	17.4042	5.77781E-05
Vis + Press + WDir	5	4.3438	-64.1320	17.4228	5.72421E-05
Hum + Press	4	4.6894	-64.0853	17.4696	5.59198E-05
Temp + Moon + Press	5	4.3677	-63.9340	17.6208	5.18467E-05
Vis + Cloud + Press + WSpd	6	4.0357	-63.8835	17.6714	5.05525E-05
Hum + WSpd	4	4.7171	-63.8735	17.6814	5.02999E-05
Temp + Hum + Moon + WSpd + WDir	7	3.7058	-63.8505	17.7044	4.97248E-05

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Moon + Cloud + WSpd	7	3.7125	-63.7857	17.7692	4.81398E-05
Hum + Moon + Press + WSpd + WDir	7	3.7222	-63.6918	17.8630	4.59329E-05
Hum + Vis + Moon + Press + WSpd + WDir	8	3.4096	-63.5162	18.0387	4.20709E-05
Temp + Hum + Vis + Moon + Cloud + Press + WSpd	9	3.0975	-63.3818	18.1731	3.93371E-05
Hum + Cloud + Press + WSpd	6	4.0925	-63.3805	18.1743	3.93125E-05
Moon + Press + WDir	5	4.4366	-63.3711	18.1838	3.91275E-05
Temp + Hum + Moon + Cloud + Press + WSpd	8	3.4267	-63.3354	18.2195	3.84351E-05
Hum + Vis + Press + WSpd	6	4.0985	-63.3279	18.2270	3.82916E-05
Cloud + WSpd	4	4.7988	-63.2553	18.2996	3.69264E-05
Temp + Moon + Cloud + Press + WSpd + WDir	8	3.4347	-63.2523	18.3025	3.68713E-05
Vis + Moon + Cloud + Press + WSpd + WDir	8	3.4350	-63.2488	18.3061	3.68059E-05
Temp + Vis + Moon + Press	6	4.1115	-63.2135	18.3413	3.61632E-05
Hum + Vis + Moon + Cloud + Press + WSpd	8	3.4398	-63.1983	18.3565	3.58894E-05
Vis + WSpd	4	4.8079	-63.1872	18.3677	3.56902E-05
WSpd + WDir	4	4.8127	-63.1511	18.4037	3.50519E-05
Temp + WSpd	4	4.8130	-63.1491	18.4058	3.50159E-05
Vis + Moon + Cloud + WSpd + WDir	7	3.7806	-63.1312	18.4236	3.47052E-05
Hum + Moon + Cloud + WSpd + WDir	7	3.7942	-63.0017	18.5531	3.25292E-05
Vis + Moon + Press	5	4.4868	-62.9654	18.5895	3.19432E-05
Temp + Press + WDir	5	4.4905	-62.9358	18.6190	3.14751E-05
Temp + Hum + Press	5	4.4940	-62.9081	18.6467	3.10418E-05
Moon + Cloud + Press	5	4.4950	-62.8998	18.6551	3.09126E-05
Hum + Press + WDir	5	4.4999	-62.8604	18.6944	3.03104E-05
Temp + Vis + Cloud + Press + WSpd	7	3.8110	-62.8430	18.7119	3.00466E-05
Temp + Hum + Vis + Moon + WSpd + WDir	8	3.4749	-62.8328	18.7221	2.98945E-05
Temp + Press + WSpd + WDir	6	4.1557	-62.8290	18.7258	2.9838E-05
Temp + Hum + Press + WSpd	6	4.1623	-62.7714	18.7835	2.89904E-05
Vis + Cloud + Press	5	4.5140	-62.7483	18.8066	2.86576E-05
Temp + Moon + Cloud + Press	6	4.1744	-62.6673	18.8875	2.75205E-05
Vis + Cloud + Press + WDir	6	4.1799	-62.6198	18.9351	2.68744E-05
Vis + Cloud + Press + WSpd + WDir	7	3.8355	-62.6120	18.9429	2.67696E-05
Hum + Press + WSpd + WDir	6	4.1822	-62.6003	18.9546	2.66137E-05
Temp + Hum + Vis + Moon + Press + WSpd + WDir	9	3.1710	-62.5383	19.0166	2.58007E-05
Temp + Vis + Cloud + Press	6	4.1898	-62.5348	19.0200	2.57564E-05
Temp + Cloud + Press + WDir	6	4.1997	-62.4501	19.1048	2.46878E-05

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Vis + Moon + Cloud + WSpd	8	3.5138	-62.4322	19.1226	2.44686E-05
Hum + Cloud + Press	5	4.5625	-62.3632	19.1917	2.36379E-05
Moon + Cloud + Press + WDir	6	4.2171	-62.3009	19.2539	2.29138E-05
Temp + Vis + Moon + Cloud + Press + WSpd + WDir	9	3.2007	-62.2024	19.3524	2.18127E-05
Temp + Cloud + Press + WSpd + WDir	7	3.8834	-62.1654	19.3894	2.14129E-05
Hum + Moon + Press	5	4.5880	-62.1628	19.3921	2.13846E-05
Vis + Moon + Press + WDir	6	4.2343	-62.1546	19.4003	2.12969E-05
Hum + Vis + Press	5	4.5978	-62.0858	19.4691	2.05769E-05
Temp + Vis + Press + WDir	6	4.2540	-61.9872	19.5676	1.95874E-05
Temp + Vis + Press + WSpd + WDir	7	3.9087	-61.9316	19.6233	1.90499E-05
Hum + Cloud + Press + WDir	6	4.2690	-61.8606	19.6942	1.83859E-05
Temp + Hum + Moon + Press + WSpd + WDir	8	3.5729	-61.8317	19.7232	1.81215E-05
Hum + Moon + Cloud + Press + WSpd + WDir	8	3.5741	-61.8196	19.7353	1.80126E-05
Temp + Hum + Vis + Press + WSpd	7	3.9243	-61.7883	19.7665	1.77332E-05
Hum + Cloud + Press + WSpd + WDir	7	3.9273	-61.7608	19.7941	1.74909E-05
Temp + Hum + Cloud + Press + WSpd	7	3.9314	-61.7225	19.8324	1.71589E-05
Temp + Hum + Cloud + Press	6	4.2992	-61.6067	19.9481	1.61939E-05
Temp + Hum + Moon + Press	6	4.3184	-61.4460	20.1089	1.49433E-05
Hum + Vis + Press + WSpd + WDir	7	3.9622	-61.4415	20.1134	1.49096E-05
Temp + Hum + Vis + Press	6	4.3253	-61.3890	20.1659	1.45236E-05
Hum + Vis + Cloud + Press + WSpd	7	3.9755	-61.3208	20.2340	1.40369E-05
Hum + Vis + WSpd	5	4.6972	-61.3157	20.2392	1.4001E-05
Temp + Vis + Moon + Cloud + WSpd + WDir	8	3.6269	-61.2914	20.2635	1.38317E-05
Hum + Vis + Moon + Cloud + WSpd + WDir	8	3.6280	-61.2807	20.2742	1.37577E-05
Temp + Moon + Press + WDir	6	4.3412	-61.2570	20.2979	1.35959E-05
Hum + Vis + Press + WDir	6	4.3436	-61.2367	20.3182	1.34586E-05
Hum + Cloud + WSpd	5	4.7135	-61.1912	20.3636	1.31561E-05
Temp + Hum + WSpd	5	4.7165	-61.1684	20.3865	1.30068E-05
Hum + WSpd + WDir	5	4.7167	-61.1665	20.3884	1.29945E-05
Temp + Vis + Moon + Cloud + Press	7	4.0243	-60.8817	20.6732	1.12696E-05
Hum + Vis + Moon + Cloud + Press + WSpd + WDir	9	3.3262	-60.8180	20.7369	1.09165E-05
Hum + Moon + Press + WDir	6	4.4023	-60.7536	20.8013	1.05704E-05
Temp + Hum + Moon + Cloud + WSpd + WDir	8	3.6874	-60.6959	20.8590	1.02699E-05
Cloud + WSpd + WDir	5	4.7970	-60.5591	20.9958	9.59084E-06
Temp + Cloud + WSpd	5	4.7977	-60.5539	21.0010	9.56593E-06

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
Vis + Cloud + WSpd	5	4.7985	-60.5478	21.0071	9.5367E-06
Vis + Moon + Cloud + Press	6	4.4341	-60.4946	21.0603	9.2864E-06
Vis + WSpd + WDir	5	4.8059	-60.4923	21.0626	9.27571E-06
Temp + Vis + WSpd	5	4.8060	-60.4917	21.0632	9.27318E-06
Temp + Vis + Moon + Press + WDir	7	4.0716	-60.4611	21.0938	9.13227E-06
Temp + WSpd + WDir	5	4.8123	-60.4446	21.1102	9.05751E-06
Temp + Hum + Press + WDir	6	4.4415	-60.4341	21.1207	9.00997E-06
Temp + Vis + Cloud + Press + WDir	7	4.0806	-60.3818	21.1731	8.77713E-06
Moon + Cloud	4	5.1983	-60.3764	21.1784	8.75388E-06
Hum + Moon	4	5.2114	-60.2861	21.2688	8.36728E-06
Temp + Moon + Cloud + Press + WDir	7	4.1082	-60.1395	21.4154	7.7757E-06
Temp + Hum + Vis + Moon + Press	7	4.1115	-60.1107	21.4442	7.6646E-06
Temp + Moon	4	5.2382	-60.1015	21.4534	7.62947E-06
Vis + Moon + Cloud + Press + WDir	7	4.1145	-60.0838	21.4711	7.56226E-06
Hum + Vis + Moon + Press	6	4.4863	-60.0731	21.4818	7.52185E-06
Vis + Moon	4	5.2436	-60.0638	21.4911	7.48689E-06
Temp + Vis + Cloud + Press + WSpd + WDir	8	3.7530	-60.0618	21.4931	7.47947E-06
Temp + Hum + Vis + Cloud + Press + WSpd	8	3.7572	-60.0213	21.5336	7.32948E-06
Hum + Moon + Cloud + Press	6	4.4947	-60.0057	21.5492	7.27256E-06
Moon + WDir	4	5.2604	-59.9486	21.6062	7.06811E-06
Hum + Vis + Cloud + Press	6	4.5063	-59.9132	21.6417	6.94387E-06
Hum + Vis + Cloud + Press + WSpd + WDir	8	3.7697	-59.9011	21.6538	6.90212E-06
Temp + Hum + Press + WSpd + WDir	7	4.1419	-59.8452	21.7097	6.71174E-06
Temp + Hum + Moon + Cloud + Press + WSpd + WDir	9	3.4259	-59.7549	21.8000	6.41544E-06
Hum + Vis + Cloud + Press + WDir	7	4.1637	-59.6561	21.8988	6.1062E-06
Temp + Hum + Moon + Cloud + Press	7	4.1699	-59.6027	21.9522	5.94533E-06
Temp + Hum + Vis + Moon + Cloud + Press + WSpd + WDir	10	3.0971	-59.5102	22.0446	5.67676E-06
Temp + Hum + Vis + Cloud + Press	7	4.1816	-59.5013	22.0535	5.6516E-06
Temp + Hum + Cloud + Press + WDir	7	4.1989	-59.3532	22.2017	5.24813E-06
Temp + Hum + Vis + Moon + Cloud + WSpd + WDir	9	3.4746	-59.2466	22.3082	4.97578E-06
Hum + Moon + Cloud + Press + WDir	7	4.2169	-59.1988	22.3561	4.85816E-06
Hum + Vis + Moon + Press + WDir	7	4.2335	-59.0574	22.4975	4.52654E-06
Temp + Hum + Cloud + Press + WSpd + WDir	8	3.8774	-58.8877	22.6671	4.15841E-06
Temp + Hum + Vis + Press + WDir	7	4.2540	-58.8838	22.6711	4.15025E-06
Temp + Hum + Vis + Press + WSpd + WDir	8	3.8924	-58.7486	22.8063	3.87894E-06

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Moon + Press + WDir	7	4.2912	-58.5705	22.9843	3.54854E-06
Temp + Hum + Vis + WSpd	6	4.6966	-58.4243	23.1306	3.29836E-06
Hum + Vis + WSpd + WDir	6	4.6968	-58.4227	23.1322	3.29564E-06
Hum + Vis + Cloud + WSpd	6	4.6970	-58.4210	23.1339	3.29285E-06
Temp + Hum + Cloud + WSpd	6	4.7126	-58.3017	23.2532	3.10219E-06
Temp + Hum + WSpd + WDir	6	4.7165	-58.2720	23.2829	3.05651E-06
Temp + Vis + Moon + Cloud + Press + WDir	8	3.9564	-58.1611	23.3938	2.89157E-06
Hum + Cloud	4	5.5390	-58.0911	23.4638	2.79213E-06
Vis + Cloud	4	5.5522	-58.0054	23.5495	2.67504E-06
Hum + Vis	4	5.5529	-58.0007	23.5542	2.6688E-06
Temp + Moon + Cloud	5	5.1585	-57.9437	23.6112	2.59377E-06
Hum + WDir	4	5.5657	-57.9179	23.6370	2.56057E-06
Temp + Hum	4	5.5678	-57.9042	23.6507	2.54304E-06
Cloud + WDir	4	5.5690	-57.8967	23.6582	2.5335E-06
Temp + Cloud	4	5.5700	-57.8903	23.6645	2.5255E-06
Temp + Hum + Moon	5	5.1779	-57.8085	23.7463	2.42431E-06
Vis + WDir	4	5.5853	-57.7915	23.7634	2.40369E-06
Temp + Vis	4	5.5858	-57.7882	23.7666	2.39981E-06
Hum + Moon + Cloud	5	5.1858	-57.7532	23.8016	2.35818E-06
Moon + Cloud + WDir	5	5.1878	-57.7394	23.8155	2.34193E-06
Vis + Moon + Cloud	5	5.1983	-57.6670	23.8879	2.25867E-06
Hum + Moon + WDir	5	5.1987	-57.6642	23.8906	2.25555E-06
Vis + Cloud + WSpd + WDir	6	4.7968	-57.6642	23.8907	2.25546E-06
Temp + Cloud + WSpd + WDir	6	4.7969	-57.6631	23.8918	2.25421E-06
Temp + Vis + Cloud + WSpd	6	4.7974	-57.6596	23.8953	2.25028E-06
Temp + Hum + Vis + Moon + Cloud + Press	8	4.0166	-57.6177	23.9372	2.20364E-06
Temp + Vis + WSpd + WDir	6	4.8055	-57.5987	23.9561	2.18287E-06
Hum + Vis + Moon	5	5.2110	-57.5787	23.9762	2.16111E-06
Temp + Vis + Moon	5	5.2142	-57.5567	23.9981	2.13752E-06
Hum + Vis + Moon + Cloud + Press	7	4.4267	-57.4512	24.1037	2.02763E-06
Vis + Moon + WDir	5	5.2342	-57.4188	24.1361	1.99502E-06
Temp + Moon + WDir	5	5.2376	-57.3956	24.1592	1.97208E-06
Temp + WDir	4	5.6705	-57.2465	24.3084	1.83034E-06
Temp + Hum + Vis + Cloud + Press + WDir	8	4.0672	-57.1671	24.3878	1.75915E-06
Temp + Hum + Vis + Moon + Press + WDir	8	4.0715	-57.1293	24.4256	1.72621E-06

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC _C	Δ_i	w_i
Temp + Hum + Vis + Cloud + Press + WSpd + WDir	9	3.6939	-57.0432	24.5116	1.65348E-06
Hum + Vis + Moon + Cloud + Press + WDir	8	4.0989	-56.8871	24.6678	1.52932E-06
Temp + Hum + Moon + Cloud + Press + WDir	8	4.1058	-56.8274	24.7275	1.48431E-06
Hum + Vis + Cloud	5	5.5348	-55.4085	26.1464	7.30174E-07
Hum + Cloud + WDir	5	5.5368	-55.3957	26.1591	7.2553E-07
Temp + Hum + Cloud	5	5.5390	-55.3814	26.1735	7.20338E-07
Temp + Hum + Vis + Cloud + WSpd	7	4.6962	-55.3233	26.2316	6.9972E-07
Temp + Hum + Vis + WSpd + WDir	7	4.6965	-55.3212	26.2337	6.9898E-07
Hum + Vis + Cloud + WSpd + WDir	7	4.6965	-55.3210	26.2338	6.98928E-07
Hum + Vis + WDir	5	5.5506	-55.3058	26.2490	6.93631E-07
Vis + Cloud + WDir	5	5.5509	-55.3042	26.2507	6.93073E-07
Temp + Vis + Cloud	5	5.5522	-55.2958	26.2590	6.90176E-07
Temp + Hum + Vis	5	5.5527	-55.2922	26.2627	6.88921E-07
Temp + Hum + WDir	5	5.5625	-55.2291	26.3258	6.67526E-07
Temp + Cloud + WDir	5	5.5682	-55.1919	26.3629	6.55236E-07
Temp + Hum + Moon + Cloud	6	5.1469	-55.1281	26.4268	6.34651E-07
Temp + Vis + WDir	5	5.5821	-55.1024	26.4524	6.26557E-07
Temp + Moon + Cloud + WDir	6	5.1576	-55.0531	26.5017	6.11303E-07
Temp + Vis + Moon + Cloud	6	5.1583	-55.0482	26.5066	6.0981E-07
Hum + Moon + Cloud + WDir	6	5.1734	-54.9427	26.6122	5.78465E-07
Temp + Hum + Vis + Moon	6	5.1778	-54.9125	26.6424	5.6979E-07
Temp + Hum + Moon + WDir	6	5.1779	-54.9121	26.6428	5.69668E-07
Hum + Vis + Moon + Cloud	6	5.1838	-54.8704	26.6844	5.57939E-07
Vis + Moon + Cloud + WDir	6	5.1878	-54.8432	26.7117	5.5039E-07
Hum + Vis + Moon + WDir	6	5.1984	-54.7694	26.7855	5.3044E-07
Temp + Hum + Vis + Moon + Cloud + Press + WDir	9	3.9446	-54.6795	26.8754	5.0713E-07
Temp + Vis + Moon + WDir	6	5.2140	-54.6616	26.8933	5.02606E-07
Hum + Vis + Cloud + WDir	6	5.5326	-52.5263	29.0286	1.72807E-07
Temp + Hum + Vis + Cloud	6	5.5348	-52.5120	29.0429	1.71573E-07
Temp + Hum + Cloud + WDir	6	5.5354	-52.5082	29.0467	1.71251E-07
Temp + Hum + Vis + WDir	6	5.5476	-52.4293	29.1256	1.64625E-07
Temp + Vis + Cloud + WDir	6	5.5497	-52.4156	29.1392	1.63506E-07
Temp + Hum + Vis + Moon + Cloud	7	5.1429	-52.0523	29.5025	1.36345E-07
Temp + Hum + Moon + Cloud + WDir	7	5.1466	-52.0267	29.5282	1.34609E-07
Temp + Hum + Vis + Cloud + WSpd + WDir	8	4.6962	-51.9902	29.5647	1.32175E-07

Appendix 4: AIC table for dependent variable total birds

Model	K	SSE	AIC_C	Δ_i	w_i
Temp + Vis + Moon + Cloud + WDir	7	5.1574	-51.9513	29.6035	1.29631E-07
Hum + Vis + Moon + Cloud + WDir	7	5.1713	-51.8545	29.7003	1.23507E-07
Temp + Hum + Vis + Moon + WDir	7	5.1778	-51.8091	29.7458	1.20732E-07
Temp + Hum + Vis + Cloud + WDir	7	5.5311	-49.4330	32.1219	3.68014E-08
Temp + Hum + Vis + Moon + Cloud + WDir	8	5.1425	-48.7218	32.8330	2.57888E-08