

**Supplementary Information**

**How winter prevailing weather conditions influence the bat activity patterns?**

**Hints from a Mediterranean region**

P. Barros, S. Faria, M. Pereira, J.A. Santos, J.A. Cabral

**Table S1:** Specification of all variables considered in this study, respective acronyms and description (standard units).

Variable	Acronym	Description
<b>Explanatory variables</b>		
<i>Fixed effects</i>		
Precipitation	PREC	Rainfall (mm) recorded per hour of survey
Precipitation_48	PREC_48	Total rainfall (mm) recorded in the last 48 hours before surveys
Wind speed	WS	Mean of wind speed (m/s) recorded per hour of survey
Wind speed_48	WS_48	Mean of wind speed (m/s) recorded in the last 48 hours before surveys
Temperature	TEM	Mean of temperature (°C) recorded per hour of survey
Temperature_48	TEM_48	Mean of temperature (°C) recorded in the 48 hours before survey
Humidity	HUM	Mean of relative humidity (%) recorded per hour of survey
Humidity_48	HUM_48	Mean of relative humidity (%) recorded in the 48 hours before survey
Wind direction	WD	Dominant wind direction categorized by quadrants, where each quadrant was centered about one of the four principal compass directions (North, East, South and West)
Wind direction_48	WD_48	Dominant wind direction in the 48 hours before survey categorized by quadrants, where each quadrant was centered about one of the four principal compass directions (North, East, South and West)
<i>Random effects</i>		
Sampling hour	HOUR	Period sampling in the night survey (1 <sup>st</sup> , 2 <sup>nd</sup> or 3 <sup>rd</sup> hour)
Sampling site	SITE	Sampling sites of acoustics bat recorded
<b>Response variables</b>		
<i>Tadarida teniotis</i> presence	NSHBS	Presence or absence of <i>Tadarida teniotis</i> activity recorded per sample corresponding to one hour
Others bats presence	SHBS	Presence or absence of others bats activity recorded per sample corresponding to one hour

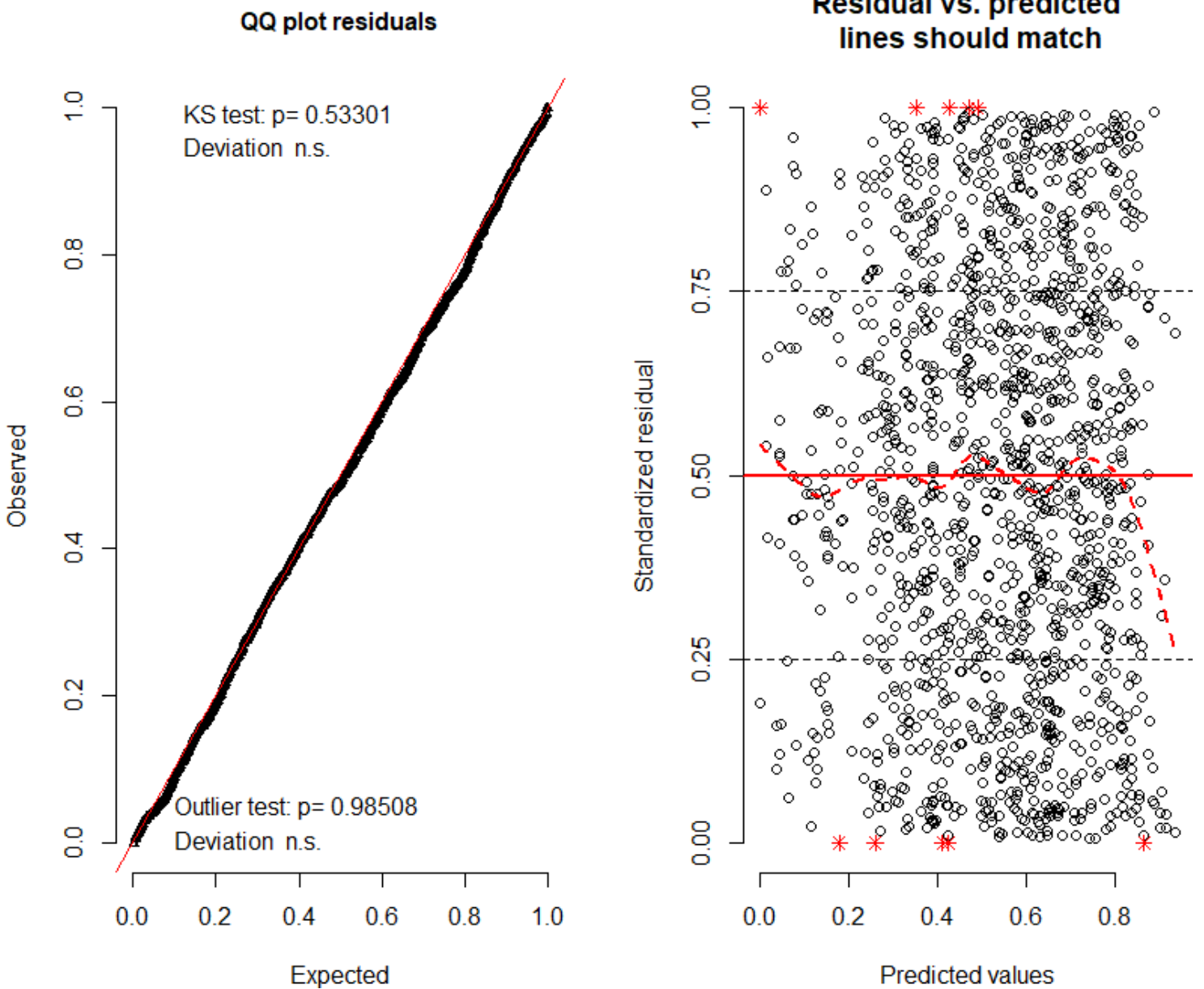
**Supplementary Information**

**How winter prevailing weather conditions influence the bat activity patterns?**

**Hints from a Mediterranean region**

P. Barros, S. Faria, M. Pereira, J.A. Santos, J.A. Cabral

DHARMA scaled residual plots



**Figure S2:** Diagnostic plots for NSHBS best models. Residual QQ plots showing the observed fitted model residual values as a function of the expected residual values (left). Fitted residual values as a function of the predicted residual values for the explanatory variables (right)

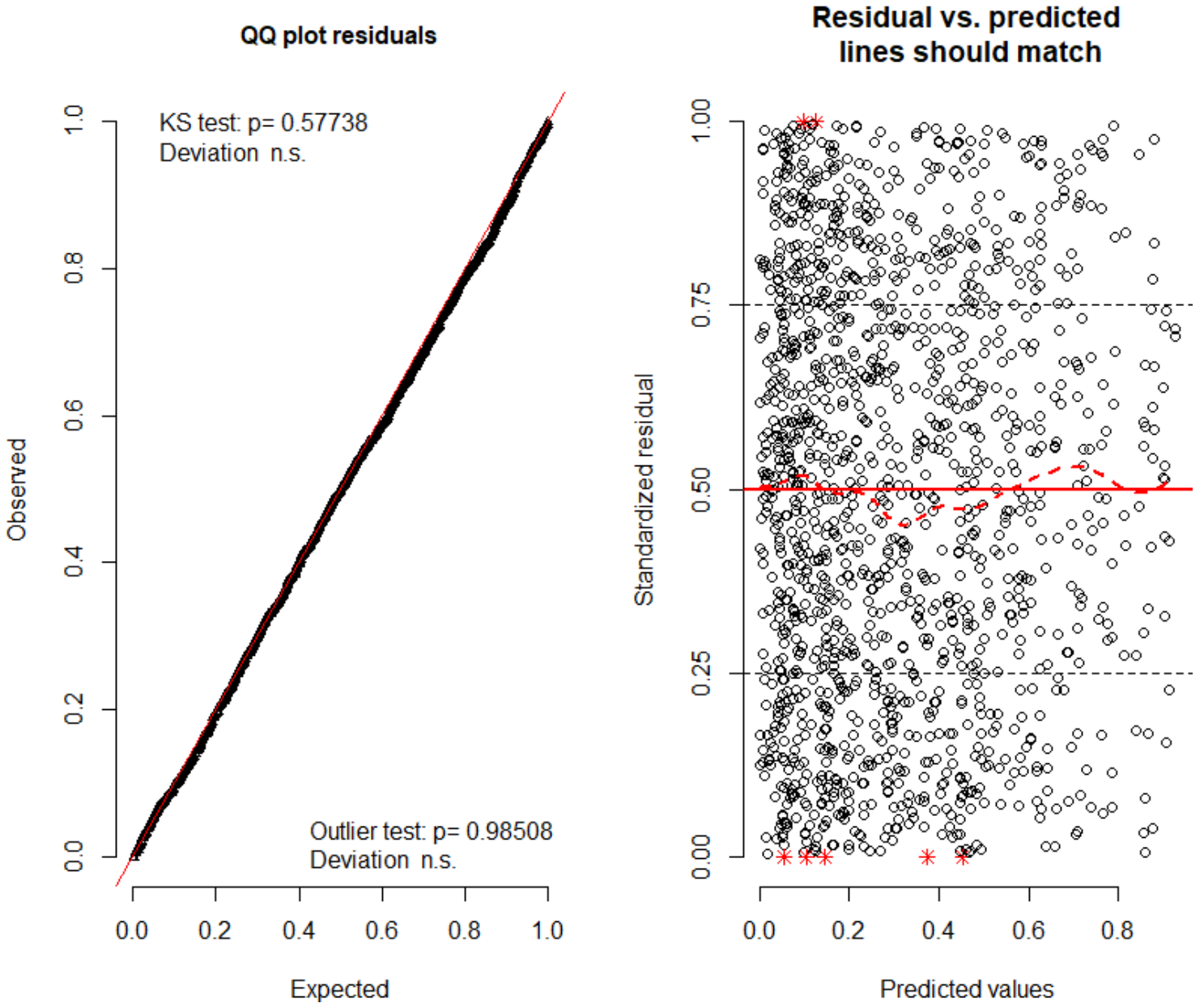
Supplementary Information

How winter prevailing weather conditions influence the bat activity patterns?

Hints from a Mediterranean region

P. Barros, S. Faria, M. Pereira, J.A. Santos, J.A. Cabral

DHARMA scaled residual plots



**Figure S3:** Diagnostic plots for SHBS best models. Residual QQ plots showing the observed fitted model residual values as a function of the expected residual values (left). Fitted residual values as a function of the predicted residual values for the explanatory variables (right)