

ECASA - Assessing goodness of fit for ECASA models

Table 1:

Model Description			
Model name	EcoWin2000		
State variable	Chlorophyll a		
site at which tested	Loch Creran		
n, number of independent observations used in test	12 (1 station, 2 years)		
Model Performance			
r^2 , % of variance	0.8522	p , on null hypothesis	$P < 0.01$
$\hat{\beta}_0$, regression intercept	-0.0818	$se_{\hat{\beta}_0}$	0.0682
$t = (\hat{\beta}_0 - 0)/se_{\hat{\beta}_0}$	-1.1988	p	$P > 0.05$
$\hat{\beta}_1$, regression slope	0.7909	$se_{\hat{\beta}_1}$	0.0221
$t = (\hat{\beta}_1 - 1)/se_{\hat{\beta}_1}$	-9.4606	p	$P < 0.001$
Model Conclusion †			
Model explain a significant part of variance in observations	YES/NO		YES
Model reliability Class	1, 2, 3, 4 or Excellent, Good, Fair, Poor		GOOD

† Delete what does not apply

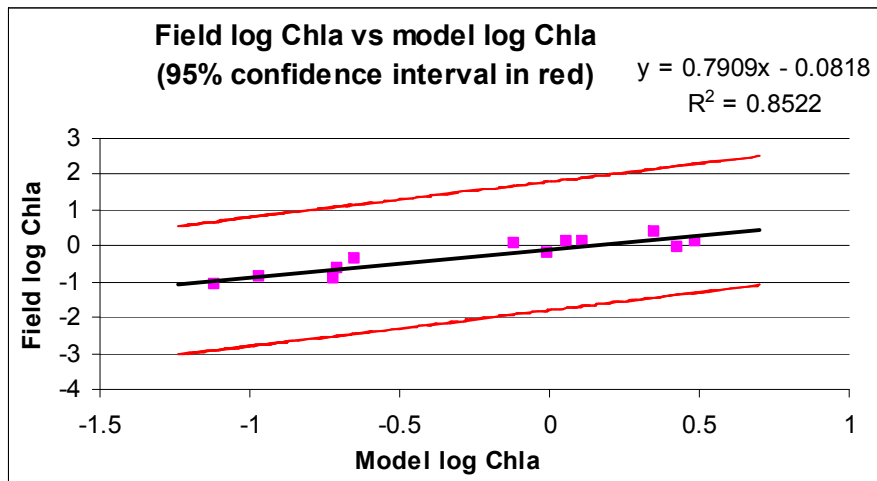


Figure 1: Model and field data observation with 95% prediction error bands for log-transformed values of observed vs modeled Chlorophyll *a*:

Black line – trendline
Pink dots – log of observed values vs log of modeled values
Red lines – 95% confidence intervals.

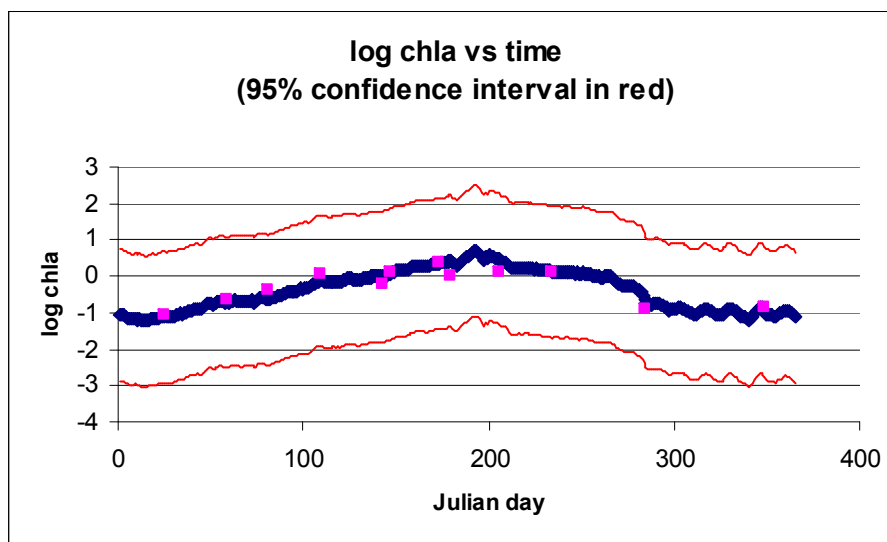


Figure 2: Prediction bounds containing 95% of the field data for time series of log-transformed Chlorophyll *a*:

Blue line – log of modeled values
Pink dots – log of observed values
Red lines – 95% confidence intervals.