

Comparison of alternative kriging models

	Matern 5/2	Matern 3/2	Gaussian	exponent.	power exp.
Q2 constant trend	0.9432	0.9385	0.9501	0.7888	0.9405
Q2 1st order poly. trend	0.9612	0.9560	0.9535	0.8602	0.9605

Q2: cross validation Q2 (higher is better)

RMSE/MAE/RMA: external validation RMSE/MAE/RMA (lower is better)

Kriging meta-model estimation (standardized)

trend(intercept)	0.101	Trend specification	1st order poly.
trend(inclination)	−0.080	Correlation function	Matern 5/2
theta(n)	1.202	Cross-sample Q2	0.961
theta(omega1)	1.699	External RMSE	NA
theta(omega2)	0.593	External MAE	NA
theta(zeta1)	0.576	External RMA	NA
theta(zeta2)	1.783	DoE samples	65
theta(varPhi1)	0.479	External samples	NA
theta(varPhi2)	1.053		
theta(upsilon)	0.285		
theta(chi)	1.092		
theta(xi)	1.428		
theta(gammau)	1.927		

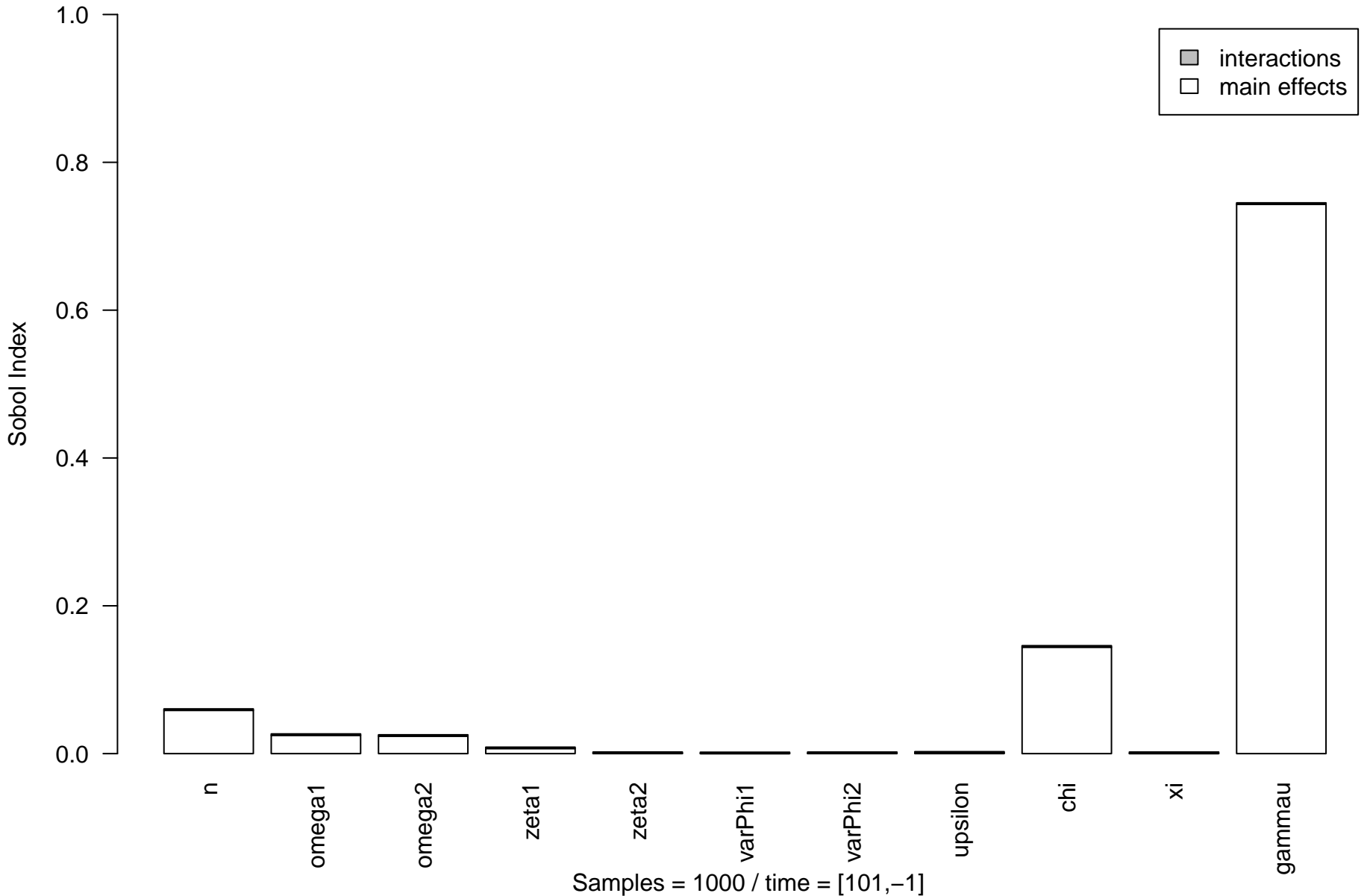
Variables rescaled to [0,1] / Average 95% CI = +/- 0.08

Predicted output at defaults: Lev = 0.27, 95% CI = [0.21,0.34], time = [101,−1]

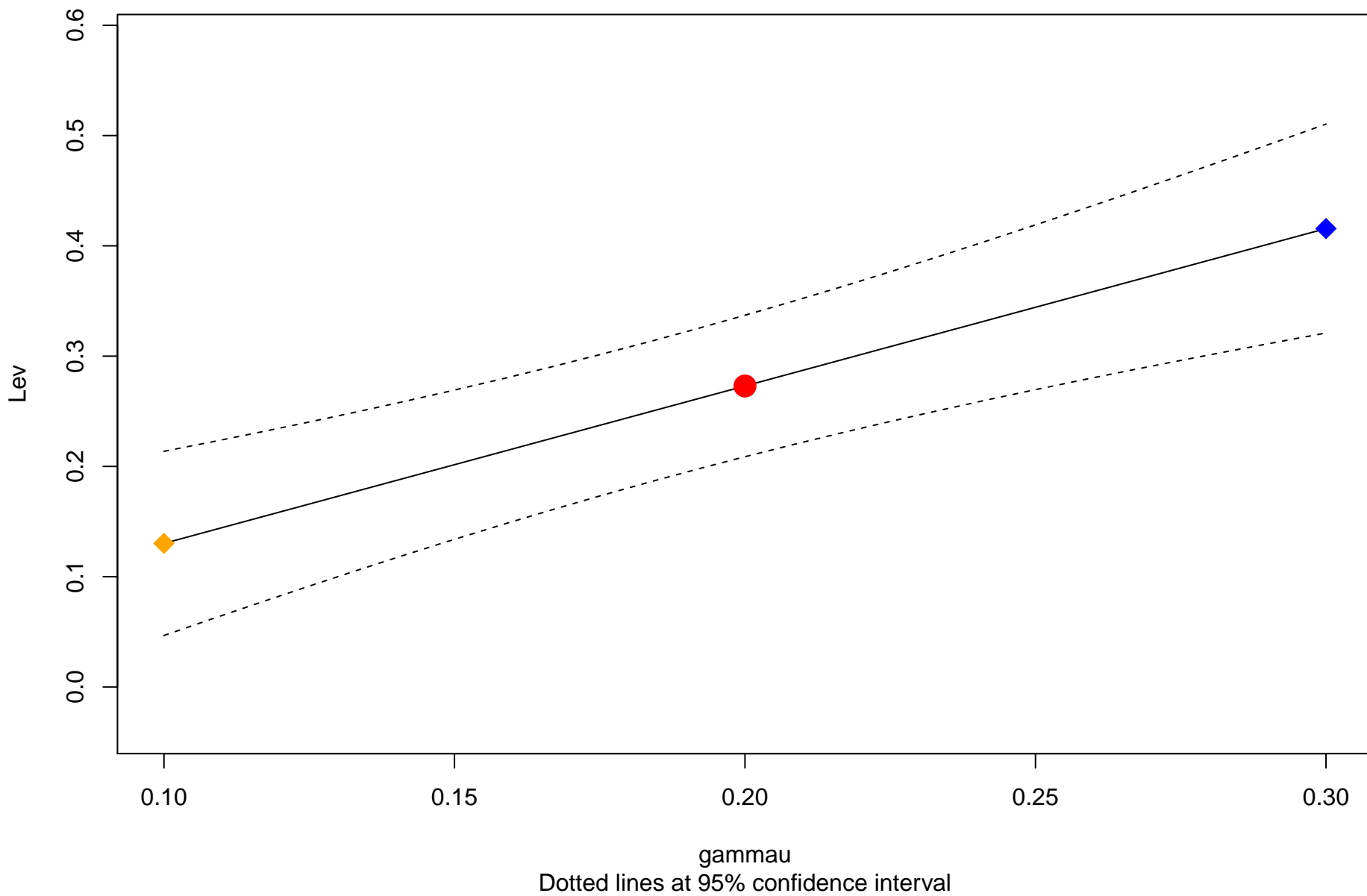
Sobol decomposition indexes (Lev)

	Direct effects	Interactions
n	0.059	0.002
omega1	0.025	0.002
omega2	0.024	0.002
zeta1	0.007	0.002
zeta2	0.000	0.002
varPhi1	0.000	0.002
varPhi2	0.000	0.002
upsilon	0.001	0.002
chi	0.144	0.002
xi	0.000	0.002
gammau	0.743	0.002

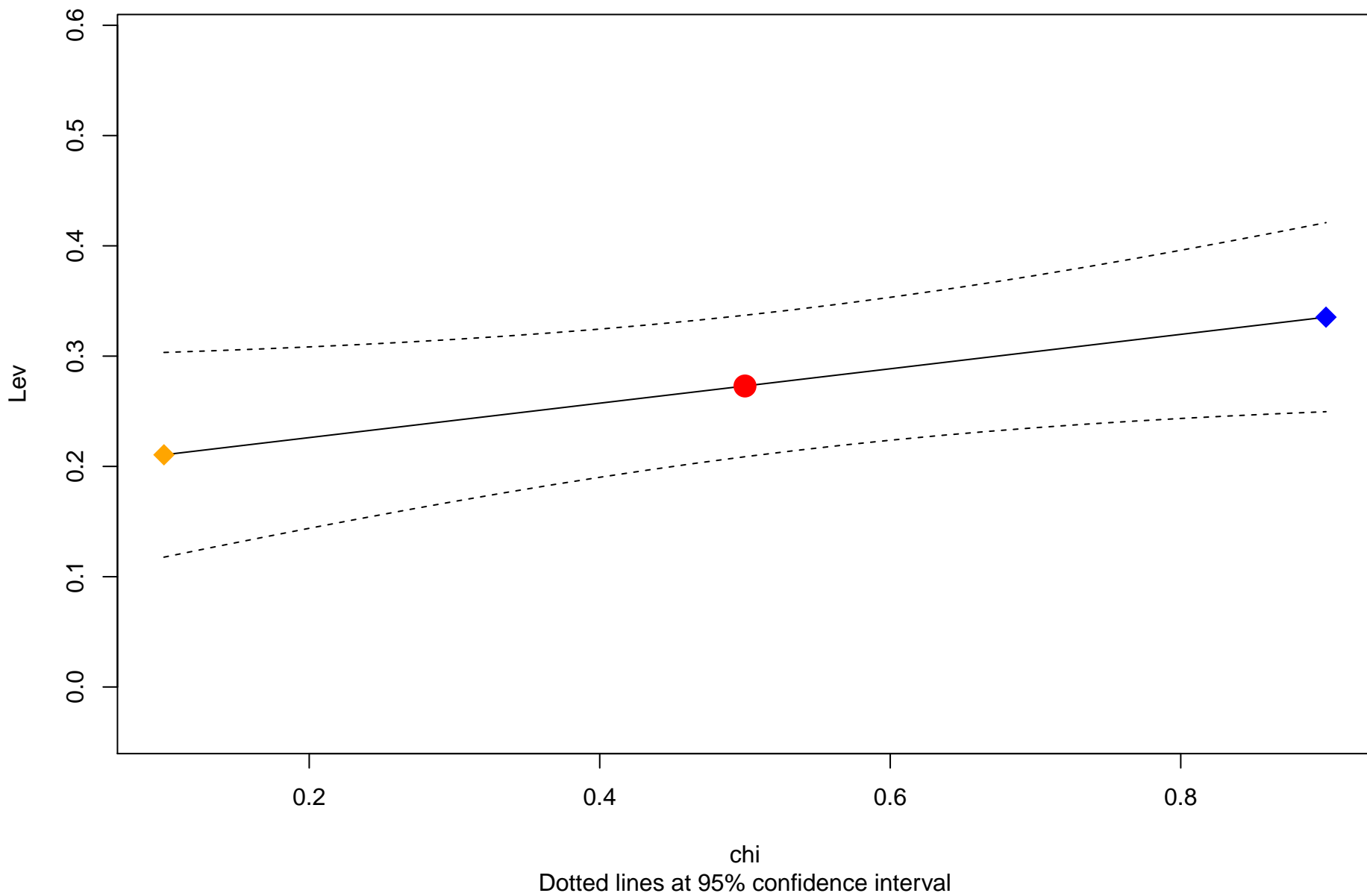
Sobol decomposition indexes (Lev)



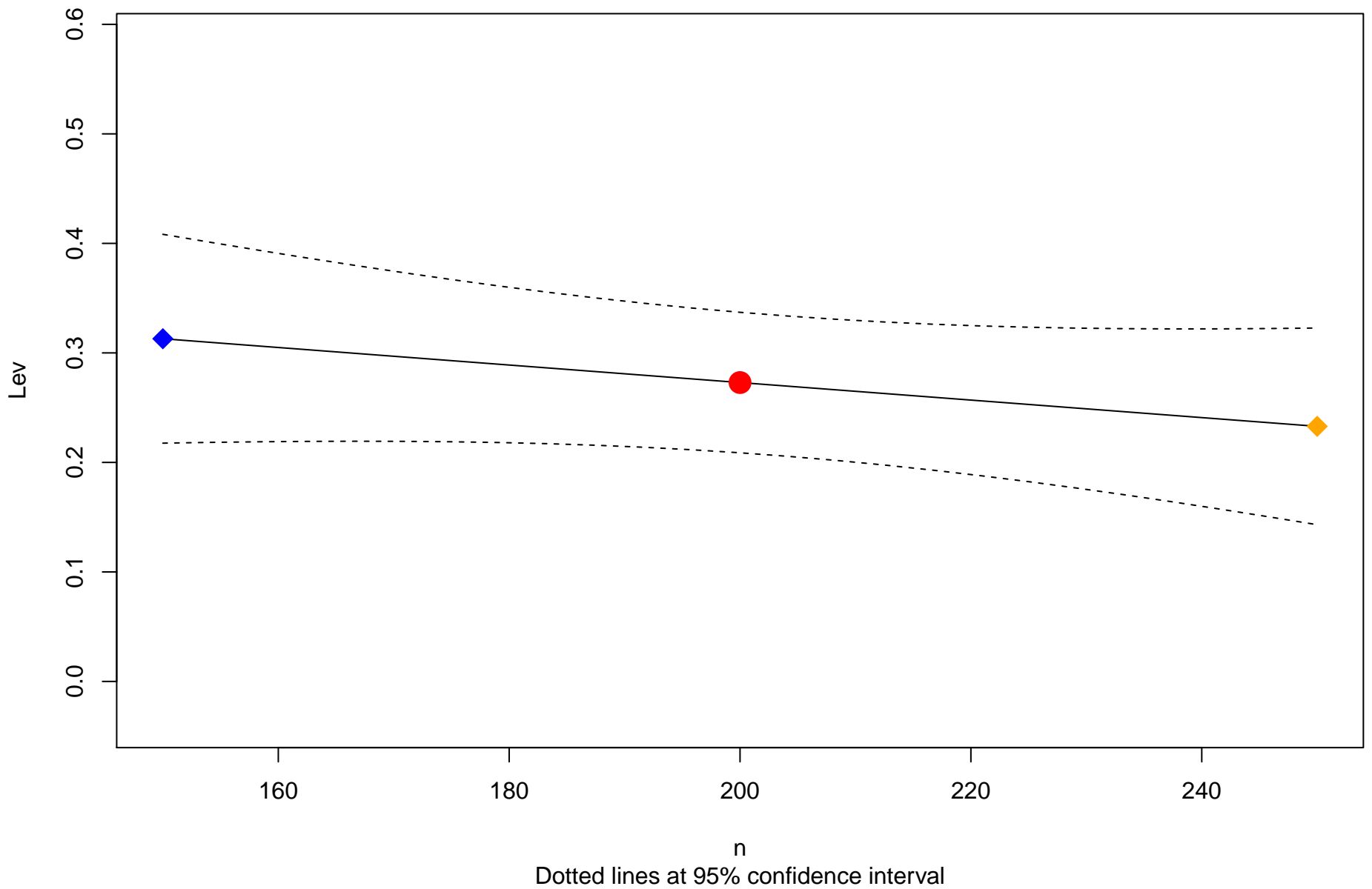
Meta-model response for parameter 'gammau'



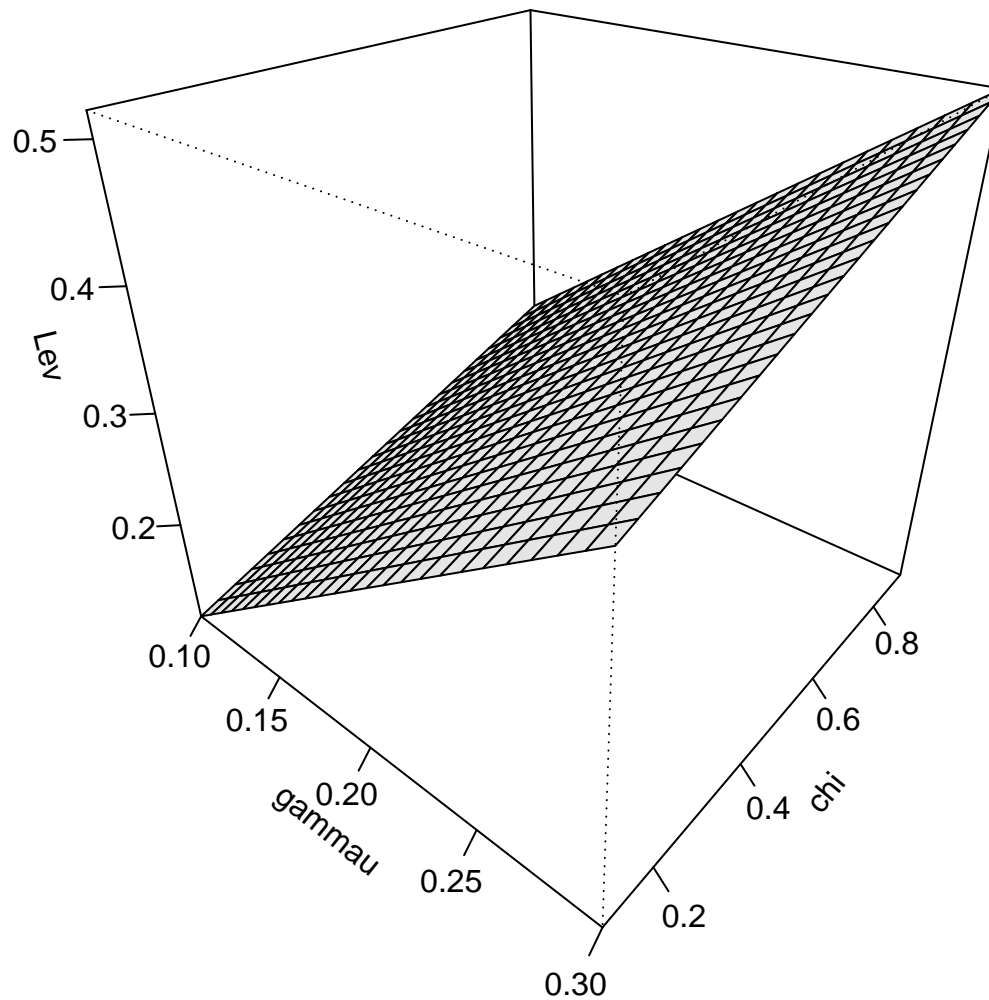
Meta-model response for parameter 'chi'



Meta-model response for parameter 'n'

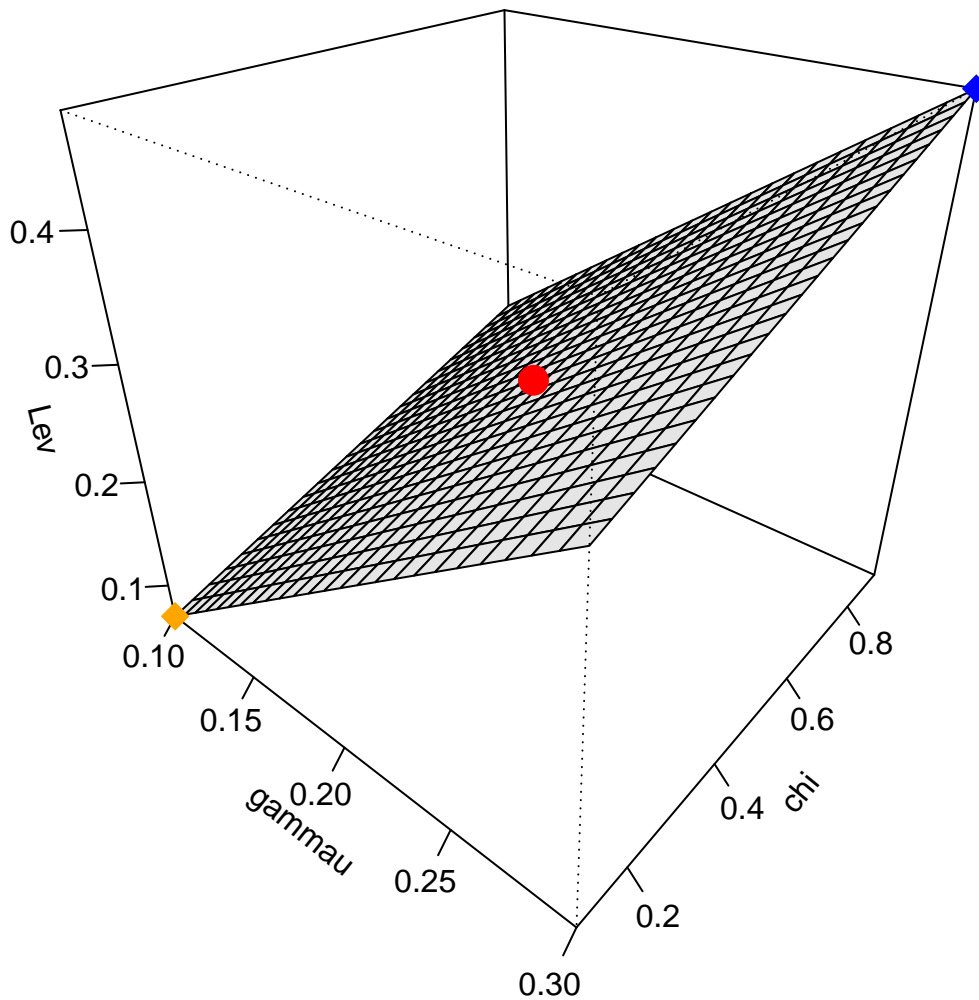


Meta-model response surface (n = 150)



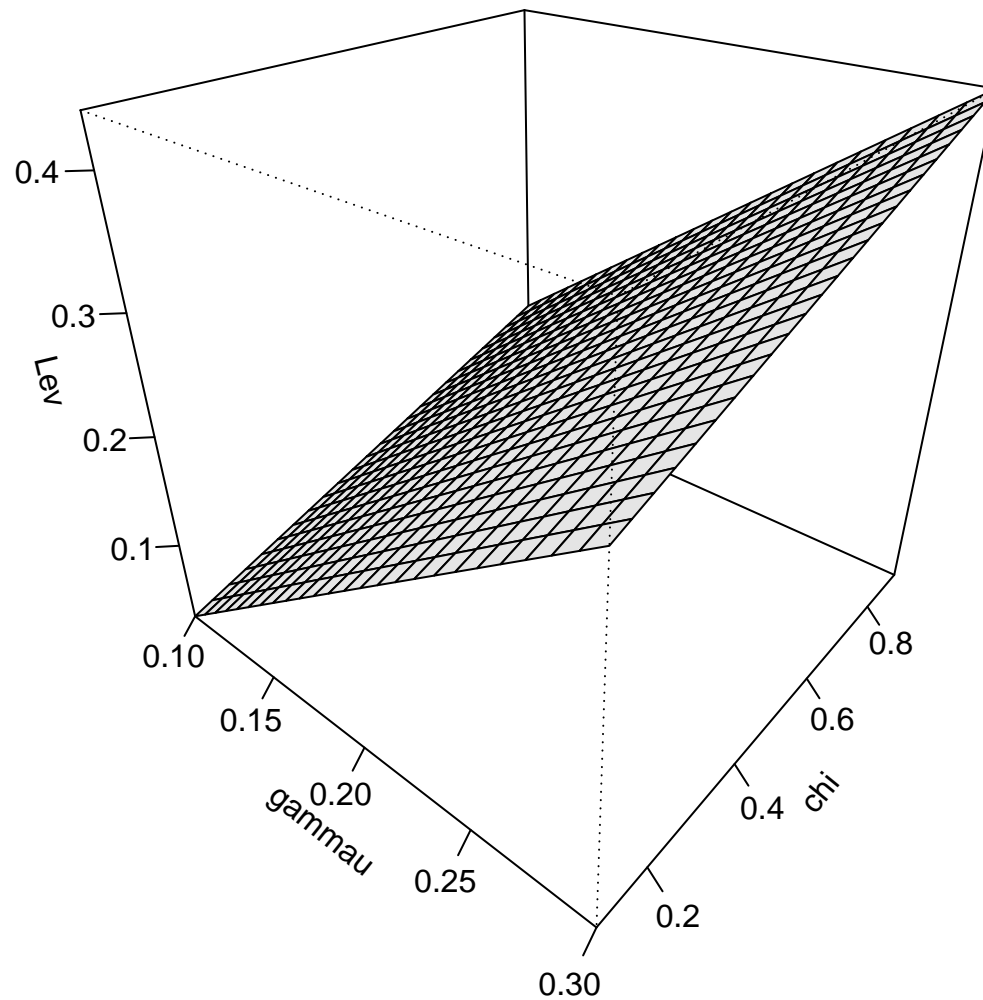
All other parameters are at default settings

Meta-model response surface (n = 200)



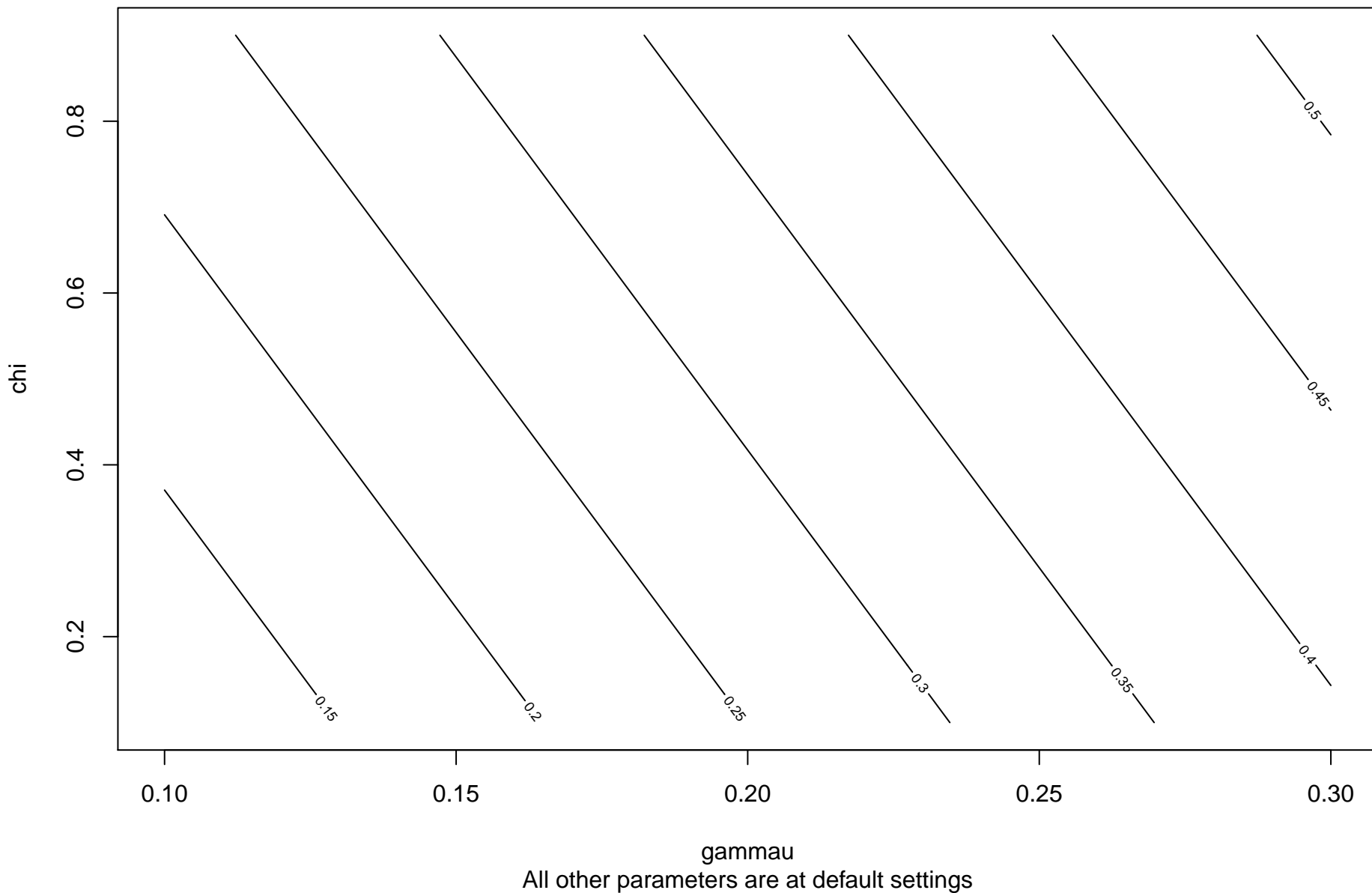
95% confidence interval: Lev = [0.21,0.34] at defaults (red dot)

Meta-model response surface (n = 250)

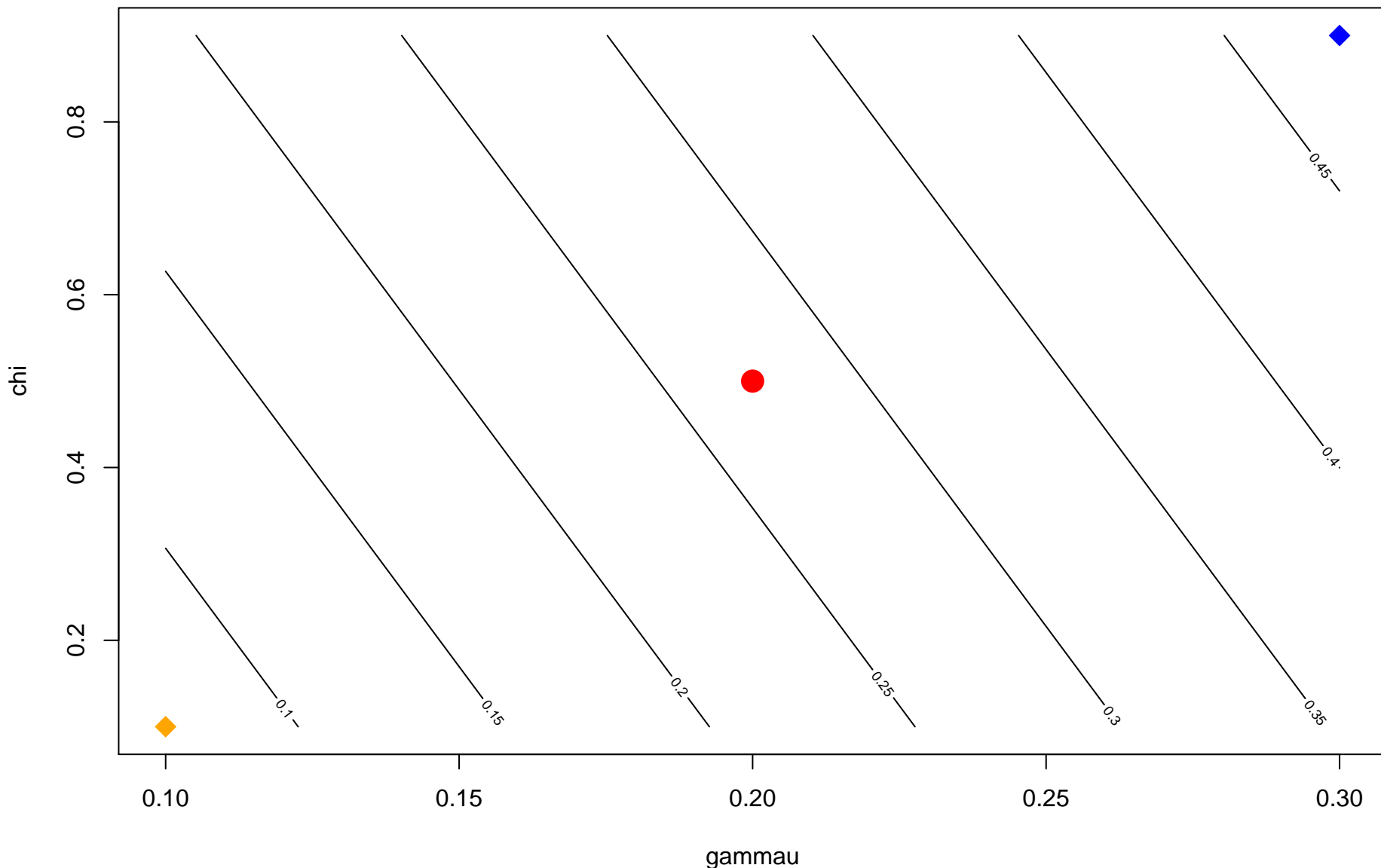


All other parameters are at default settings

Meta-model response surface (n = 150)



Meta-model response surface (n = 200)



Meta-model response surface (n = 250)

