Tinn-R - [P:\R code\application\book\parameterisation\Chapter 4.r]

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plotmat.r | shapes.R | Chapter 4.r

```
########################################
# Figure 4.1. Nonlinear fit of P-I curve
########################################

windows(5,5)
ll <- c(0.,1,10,20,40,80,120,160,300,480,700)
pp <- c(0.,1,3,4,6,8,10,11,10,9,8)

plot(ll,pp,xlab= expression("light, µEinst"~ m^(-2)~s^(-1)),
     ylab="production",pch=15,cex=1.5)

fit<-nls(pp ~pmax*2*(1+b)*(ll/iopt)/
                          ((ll/iopt)^2+2*b*ll/iopt+1),
     start=c(pmax=max(pp),b=0.005,iopt=ll[which.max(pp)]))

summary(fit)

pars <- as.list(coef(fit))

with(pars,
 curve(pmax*2*(1+b)*(x/iopt)/((x/iopt)^2+2*b*x/iopt+1),
       add=TRUE,lwd=2)   )

title(expression (frac(pmax%*%2%*%(1+beta)%*%I/Iopt,
                  (I/Iopt)^2+2%*%beta%*%I/Iopt+1)),cex.main=0.8)

########################################
# Figure 4.2. Literature parameters
########################################
```

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R Graphics: Device 2 (ACTIVE)

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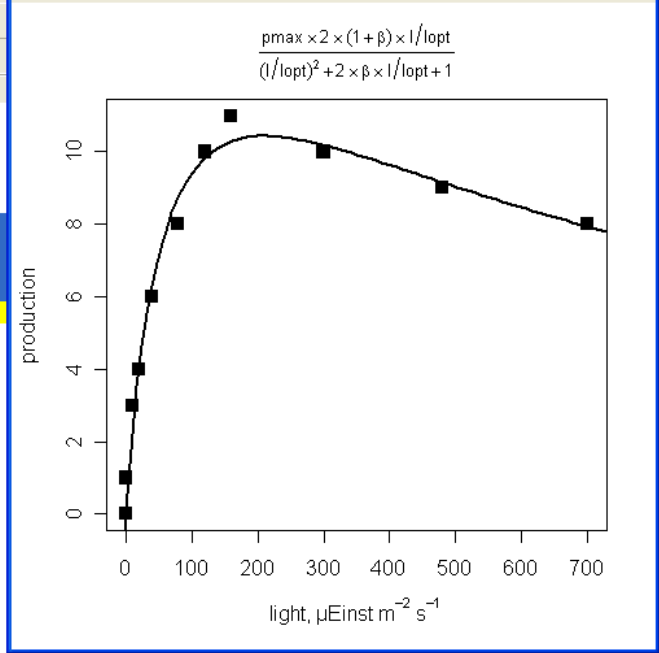

AIC(fit)
approx(x, y=)
coef(fit)
deviance(fit)
df.residual(fit)

Computes the Akaike information criterion or AIC

R Console

File Edit Misc Packages Help

```
> source(file('clipboard'))
Error in mean(sqrt(shots1[, 1]^2 + shots1[, 2]^2)) :
        object "shots1" not found
> source(file('clipboard'))
> source(file('clipboard'))
> source(file('clipboard'))
> source(file('clipboard'))
> source(file('clipboard'))
> source(file('clipboard'))
> rm(list=ls(all=TRUE))
>
```

start | Desktop | 13:50 Thursday 30-08-2007

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