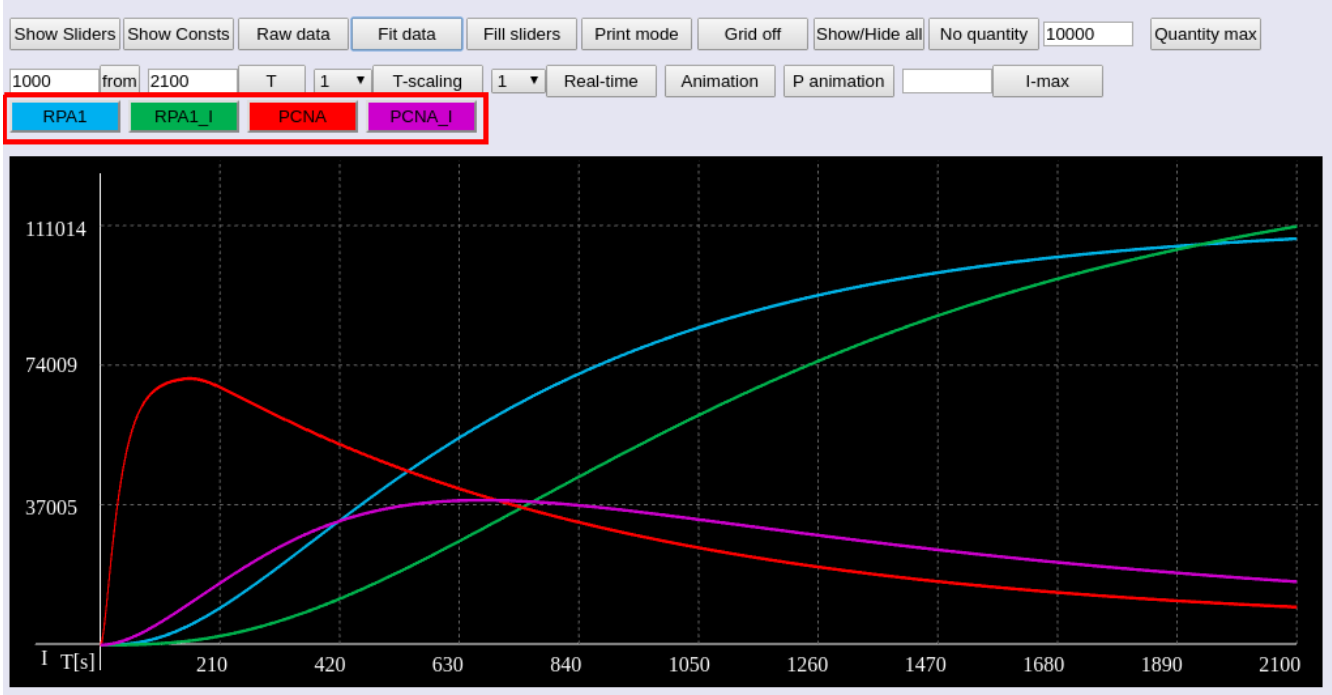
2. Fit data, color handling and constants

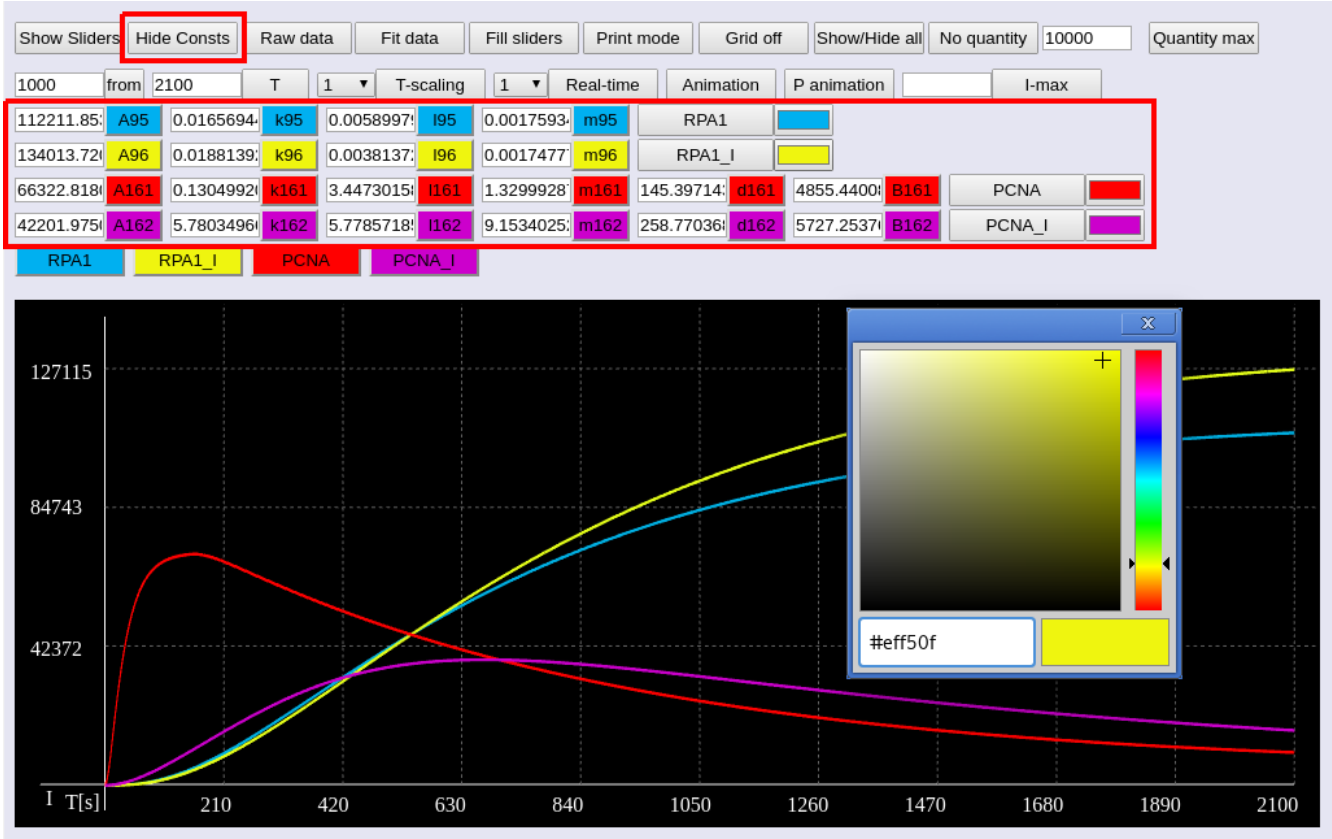
Button “Fit data”
This button will prompt you to upload a file. Content’s file format is discussed later.

Upload file RPA.txt located in directory 2_Fit_Data. The result should be following:



On the Y axis is shown the intensity of recruitment and removal of proteins treated both with and without BMN.
The X axis shows how the intensity changes over time in seconds during the DNA repair processes and we can see that as ones start to recruit, others concentration lowers.
Additionally buttons with the names and colors of the plotted graphics appeared.
For example, the red plotted graphic is PCNA and RPA1 is the blue graphic.

Button “Show consts”
This button displays the constants used in the equations to generate the graphics as well as their current values. Each value can be interactively modified from the end user as well as each color from the rightmost button on each row.



Here we changed RPA1_I constants’ values as follows:
A96: 132013.720034804 → 134013.720034804
k96: 0.00381392331001804 → 0.01881392331001804
l96: not changed
m96: 0.00124777264634967 → 0.00174777264634967
Value change can be applied with both key Enter or with left mouse click on the button with the name of the constant.

As a result, the RPA1_I chart changed and the displayed intensity scaled automatically to provide once again fully scaled graphics on the canvas.

Color handling

The graphics of RPA1 and RPA1_I are now too close to each other so we decided to change the color of RPA1_I from RPA1_I’s color button. In this way we can easily distinguish proteins with similar behavior.

Button “Hide consts”

When we stop modifying colors and values we can hide the expanded information by pressing the “Hide consts” button showed at the picture above.