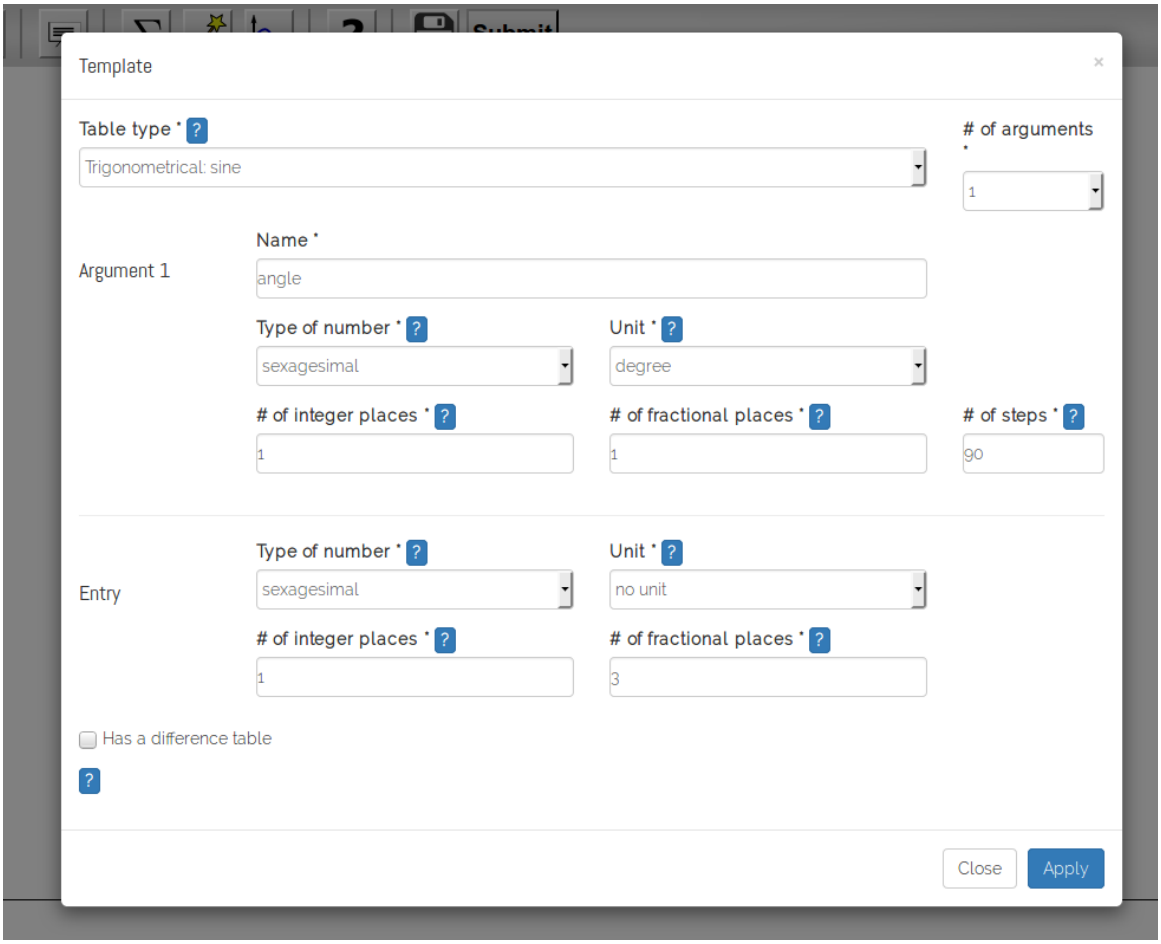
Example : Input of a Sine table

Fill in the template of the table :

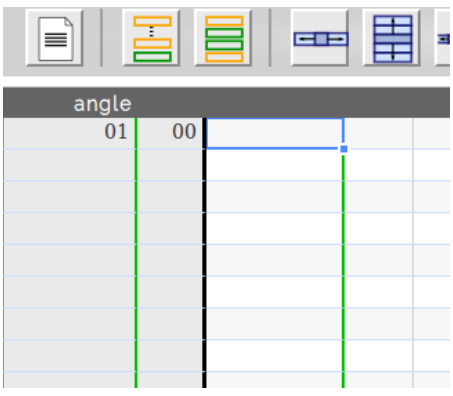
For example :

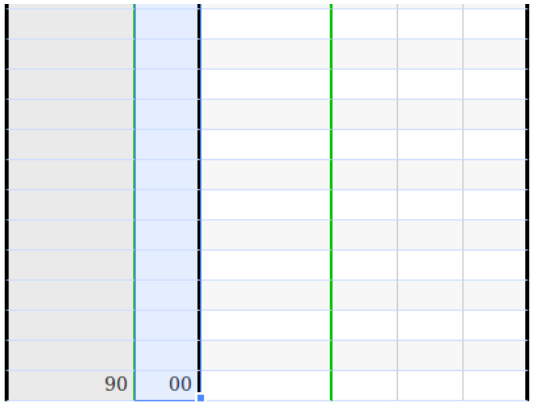


Input the the values of the argument :

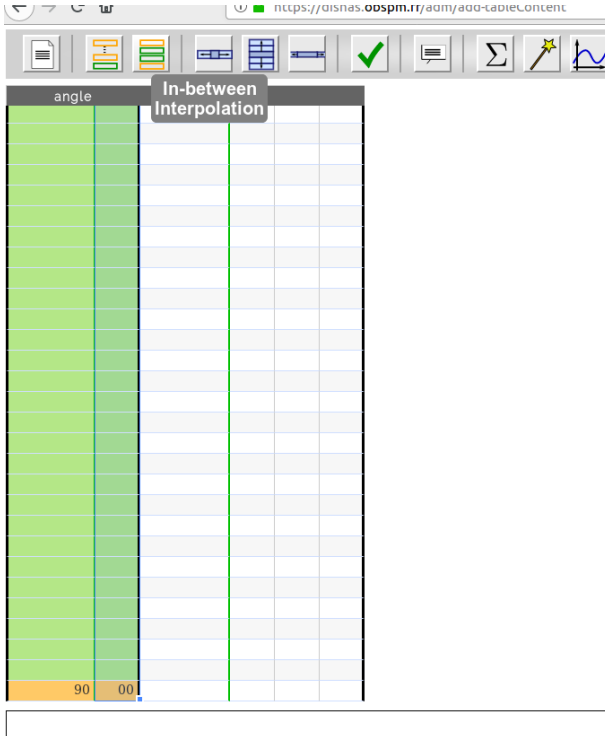
In our case we enter the first and the last values.

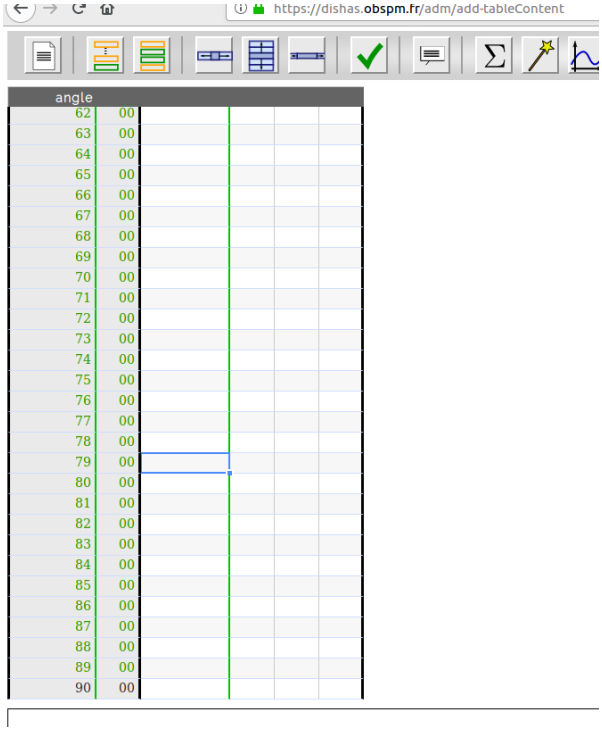
Then we select the whole column of arguments (shortcut W or S)



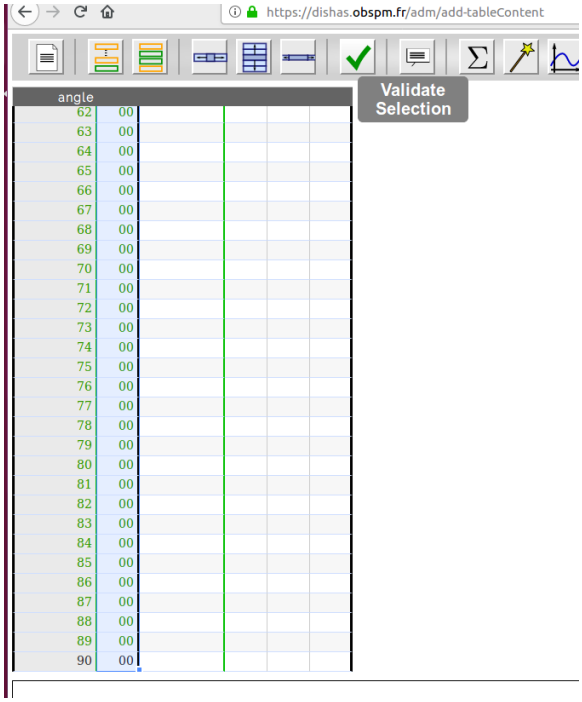


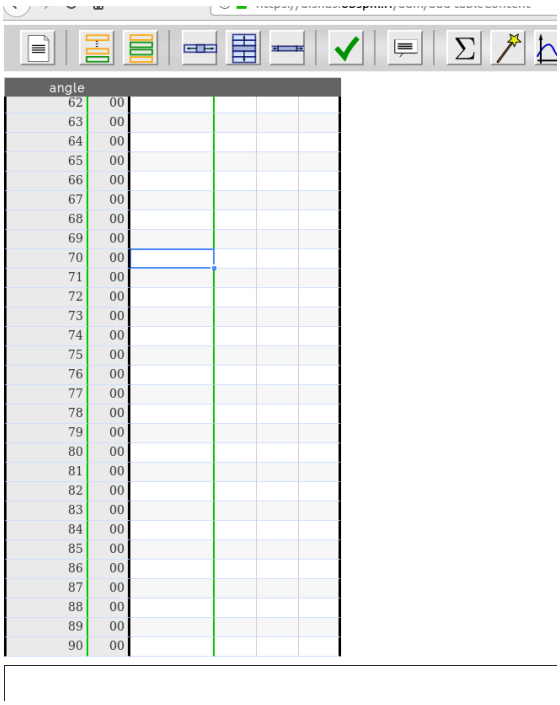
and we compute the others with the in-between tool (shortcut : B)





The values suggested by the tool appear in green. This means they need to be validated before beeing taken into account. This can be done with the validate button (shortcut SPACE).



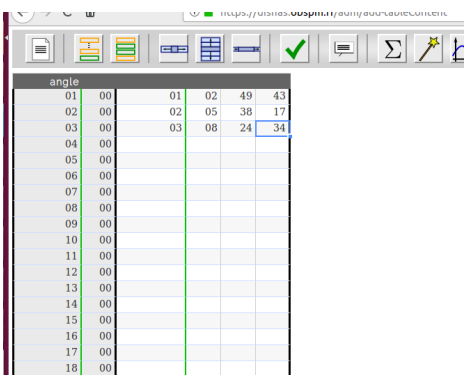


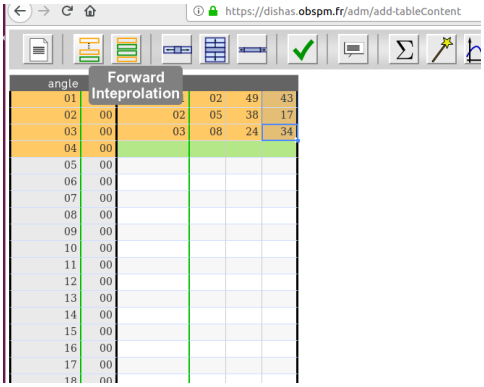
Input the values of the entry :

With interpolation tools :

The most general way of filling the entry values is thanks to the interpolation tools.

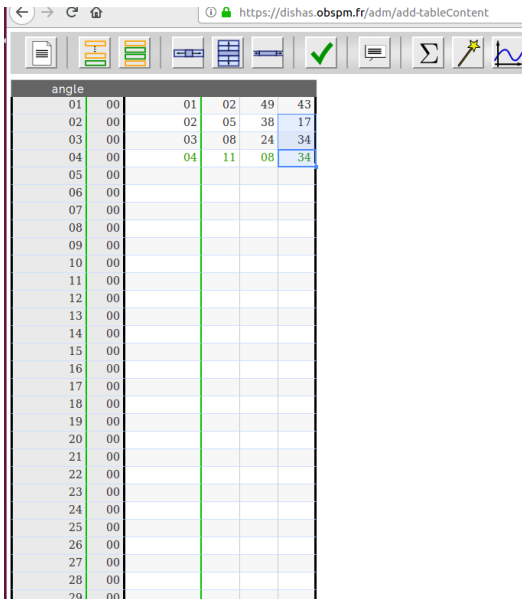
In our example we enter the first 3 values and we whish to perform a parabolic interpolation to predict the fourth. To do so, we select the 3 values we just entered (and which will be used to evaluate the parameters of the parabole) and use the forward interpolation tool (shortcut S).

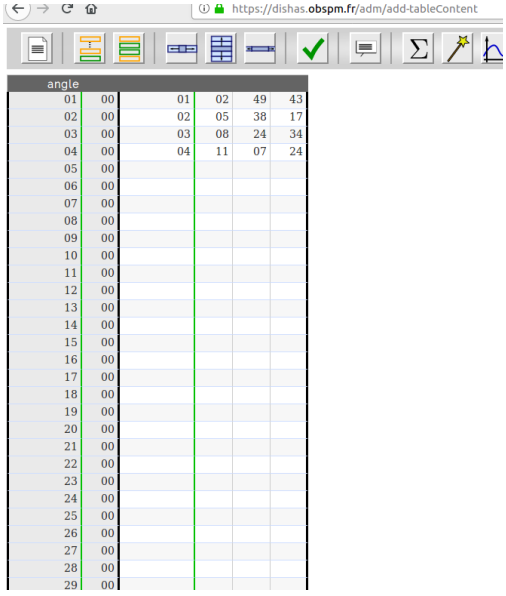




The values used to compute the parameters of the interpolation are colored in orange, while the target cells are colored in green.

Once the value is predicted, we correct it according to the table we are copying.





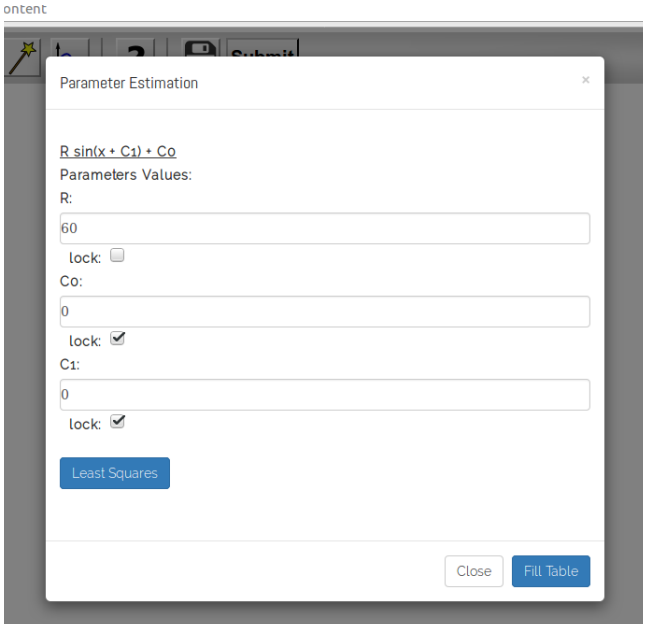
Tip : You can add +/-1 to the number in a selected cell by pressing Q (-1) or E (+1).

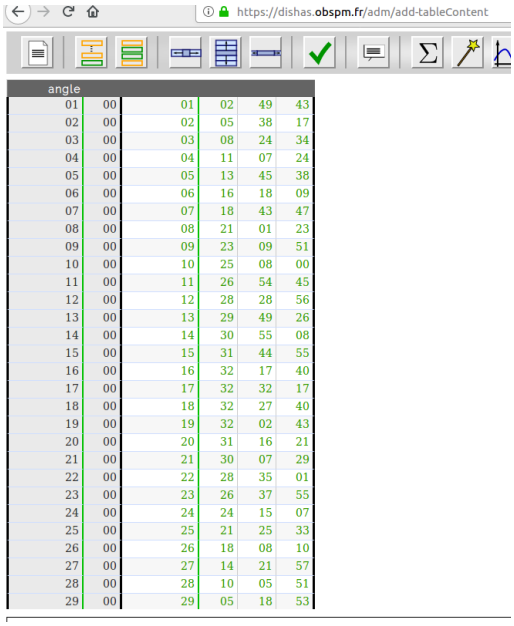
By using a model :

If you know the parameters of the model your table is based on, you can use it to fill all the entry values. Just click on the ‘Fill with model’ button and enter the value of the parameters.

In our example :

We know our Sine table uses a radius R of 60, so we enter this value and then we click on ‘Fill Table’.



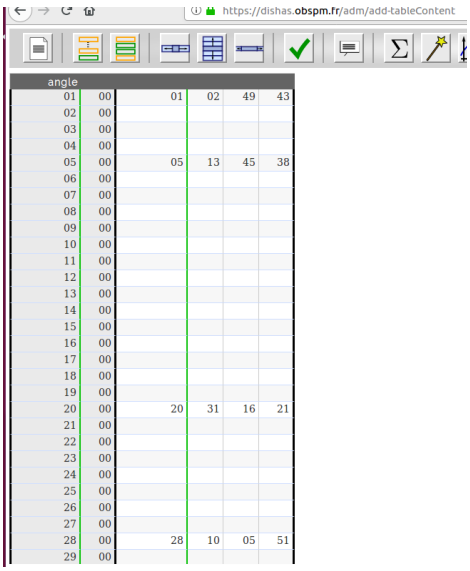


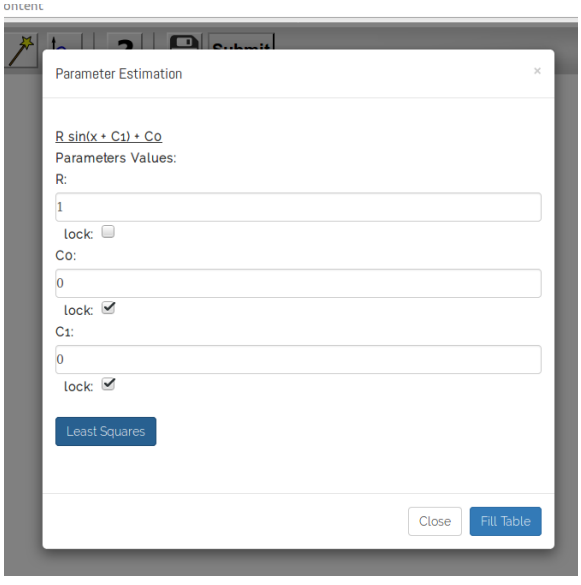
Then we can proceed to check and correct every suggested value according to the historical document.

By evaluating the parameters of the model

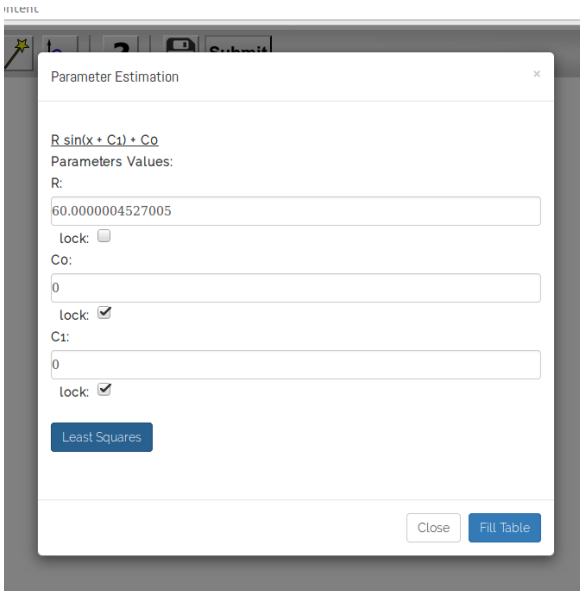
If you don’t know the value of the parameter in your table, you can enter some values of the entry (preferably the more significant ones for parameter estimation) and estimate the value of the parameters thanks to the least squares method.

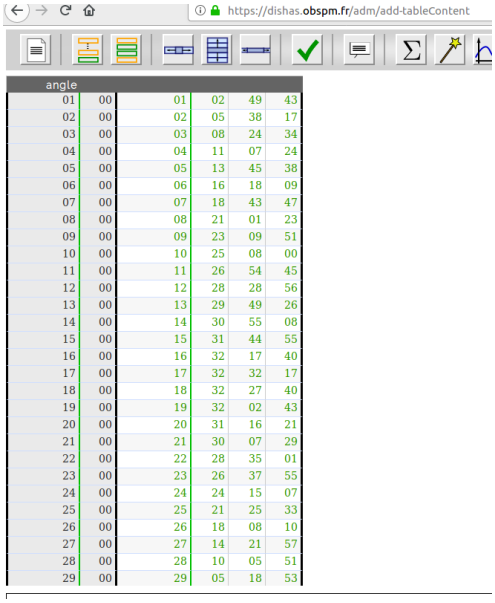
In our example, we fill in some entry values, and chose 1.0 as a starting value for R (LSQ is an iterative method so choosing a correct starting point is important).





After clicking on the ‘Least Squares’ button, several iterations are performed and the new value of the parameters are displayed. We can correct this value (here we would probably round the result to 60.0), perform more iterations, or fill the table.





01	00	01	02	49	43
02	00	02	05	38	17
03	00	03	08	24	34
04	00	04	11	07	24
05	00	05	13	45	38
06	00	06	16	18	09
07	00	07	18	43	47
08	00	08	21	01	23
09	00	09	23	09	51
10	00	10	25	08	00
11	00	11	26	54	45
12	00	12	28	28	56
13	00	13	29	49	26
14	00	14	30	55	08
15	00	15	31	44	55
16	00	16	32	17	40
17	00	17	32	32	17
18	00	18	32	27	40
19	00	19	32	02	43
20	00	20	31	16	21
21	00	21	30	07	29
22	00	22	28	35	01
23	00	23	26	37	55
24	00	24	24	15	07
25	00	25	21	25	33
26	00	26	18	08	10
27	00	27	14	21	57
28	00	28	10	05	51
29	00	29	05	18	53

Tip : When there are several parameters in the model, you can lock the value of some of them so they are not optimized by the LSQ method.

NB : This parameter estimation is only an input help tool. It must NOT be used to evaluate the actual value of the parameters used by the historical actor (for example this procedure will not detect interpolated values or outliers).