

ctools - Action #3455

Vectorise ctmodel

11/21/2020 01:13 PM - Knödlseider Jürgen

Status:	In Progress	Start date:	11/21/2020
Priority:	Normal	Due date:	
Assigned To:	Knödlseider Jürgen	% Done:	10%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
The ctmodel tool should make use of the vectorised response functions.			

History

#1 - 11/21/2020 02:01 PM - Knödlseider Jürgen

- Status changed from New to In Progress
- Priority changed from Immediate to Normal
- % Done changed from 0 to 10

The first thing that was needed was the addition of a `GModels::eval()` method that evaluates the model value for all events in a given observation.

`ctmodel` needs then to be modified depending on the type of input observation that is provided.

`ctmodel::fill_cube()` currently emulates event bins of the target cube for the model evaluation, and with the vectorised interface, `ctmodel::fill_cube()` would need to emulate a binned observation.

It is not clear how the ROI for unbinned observations can be handled in this case, hence in a first instance, the current `ctmodel::fill_cube()` could be used for unbinned observations.

For binned and stacked analysis, one needs to make sure that the response is properly copied over from the input observation to the emulated observation. Maybe this could also work for an unbinned observation by post-processing a cube, setting all pixels outside the ROI to zero. Yet it's not clear whether this is actually efficient.

#2 - 03/15/2022 12:50 PM - Knödlseider Jürgen

- Target version deleted (2.0.0)