

Add GSkyMap::array() method to Python interface

12/01/2017 02:47 PM - Knödlseider Jürgen

<b>Status:</b>	Closed	<b>Start date:</b>	12/01/2017
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>	Knödlseider Jürgen	<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	1.5.0		
<b>Description</b>			
Add a GSkyMap::array() method to the Python interface that returns a list of lists that can be directly displayed using the matplotlib imshow() function.			

History

#1 - 12/01/2017 03:56 PM - Knödlseider Jürgen

- Status changed from New to Closed
- % Done changed from 0 to 100

I added the following code to the GSkyMap.i interface

```
%extend GSkyMap {
...
// Add pixel access operator as Python array
PyObject* array(const int& imap = 0) {
    if (imap < 0 || imap >= self->nmaps()) {
        throw GException::out_of_range("GSkyMap::array(int&)", "Map index",
            imap, self->nmaps());
    }
    PyObject* array = PyList_New(self->ny());
    int offset = imap * self->nx() * self->ny();
    for (int iy = 0; iy < self->ny(); ++iy, offset += self->nx()) {
        PyObject* row = PyList_New(self->nx());
        for (int ix = 0; ix < self->nx(); ++ix) {
            PyList_SetItem(row, ix, PyFloat_FromDouble((self->pixels())[ix+offset]));
        }
        PyList_SetItem(array, iy, row);
    }
    return array;
}
};
```