

GammaLib - Bug #2122

Python 3 division error

06/09/2017 02:06 PM - Knödlseeder Jürgen

Status: Closed	Start date: 06/09/2017
Priority: Normal	Due date:
Assigned To: Knödlseeder Jürgen	% Done: 100%
Category:	Estimated time: 0.00 hour
Target version: 1.5.0	

Description

The following code in csresmap

```
logmap = self._resmap/modelmap
```

leads to an exception on Python 3.

Probably the GSkyMap Python interface needs the following methods added:

```
GSkyMap __div__(const GSkyMap& map)
GSkyMap __truediv__(const GSkyMap& map)
```

History

#1 - 07/31/2017 11:05 PM - Knödlseeder Jürgen

- Target version changed from 1.4.0 to 1.5.0

#2 - 08/11/2017 12:59 AM - Knödlseeder Jürgen

Following <https://stackoverflow.com/questions/21692065/python-class-div-issue>, `__truediv__` is Python 3.x while `__div__` is Python 2.x. Hence we need both to support Python 2.x and 3.x.

Here is what is implemented in GMatrix.i:

```
// Python 2.x
GMatrix __div__(const double &scalar) {
    return ((*self) / scalar);
}
// Python 3.x
GMatrix __truediv__(const double& scalar) const {
    return ((*self) / scalar);
}
// Python 2.x operator/=
GMatrix __idiv__(const double& scalar) {
    self->operator/=(scalar);
    return (*self);
}
// Python 3.x operator/=
GMatrix __itruediv__(const double& scalar) {
    self->operator/=(scalar);
    return (*self);
}
```

For the moment, GSkyMap.i has

```
// Python 2.x operator/=
```

```

GSkyMap __idiv__(const GSkyMap& map) {
    self->operator/=(map);
    return (*self);
}
// Python 3.x operator/=
GSkyMap __itruediv__(const GSkyMap& map) {
    self->operator/=(map);
    return (*self);
}
// Python 2.x operator/=
GSkyMap __idiv__(const double& factor) {
    self->operator/=(factor);
    return (*self);
}
// Python 3.x operator/=
GSkyMap __itruediv__(const double& factor) {
    self->operator/=(factor);
    return (*self);
}

```

hence we need to add

```

// Python 2.x operator/=
GSkyMap __div__(const GSkyMap& map) {
    return ((*self) / map);
}
// Python 3.x operator/=
GSkyMap __truediv__(const GSkyMap& map) {
    return ((*self) / map);
}

```

and remove

```

GSkyMap operator/(const GSkyMap& map) const;

```

#3 - 10/20/2017 03:08 PM - Knödseder Jürgen

- *Status changed from New to Closed*
- *Assigned To set to Knödseder Jürgen*
- *% Done changed from 0 to 100*

Operators were added and code was merged into devel.