Class diagrams

Hans Fangohr

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Contents

1 OOMMF Classes

Inheritance structure taken from `http://math.nist.gov/oommf/doc/userguide12a6/userguide/Standard_Oxs_Ext_Child_Clas.html#BA`, with additional reading of source code in `oommf/app/oxs/base` and `oommf/app/oxs/ext`

1.1 Atlasses

Figure 1 on page 2 shows the OOMMF Atlas classes.

1.2 Meshes

Figure 2 on page 2 shows the OOMMF Mesh classes.

1.3 Energies

1.3.1 Anisotropy energy

Figure 3 on page 3 shows the OOMMF anisotropy energy classes.
#+LATEX

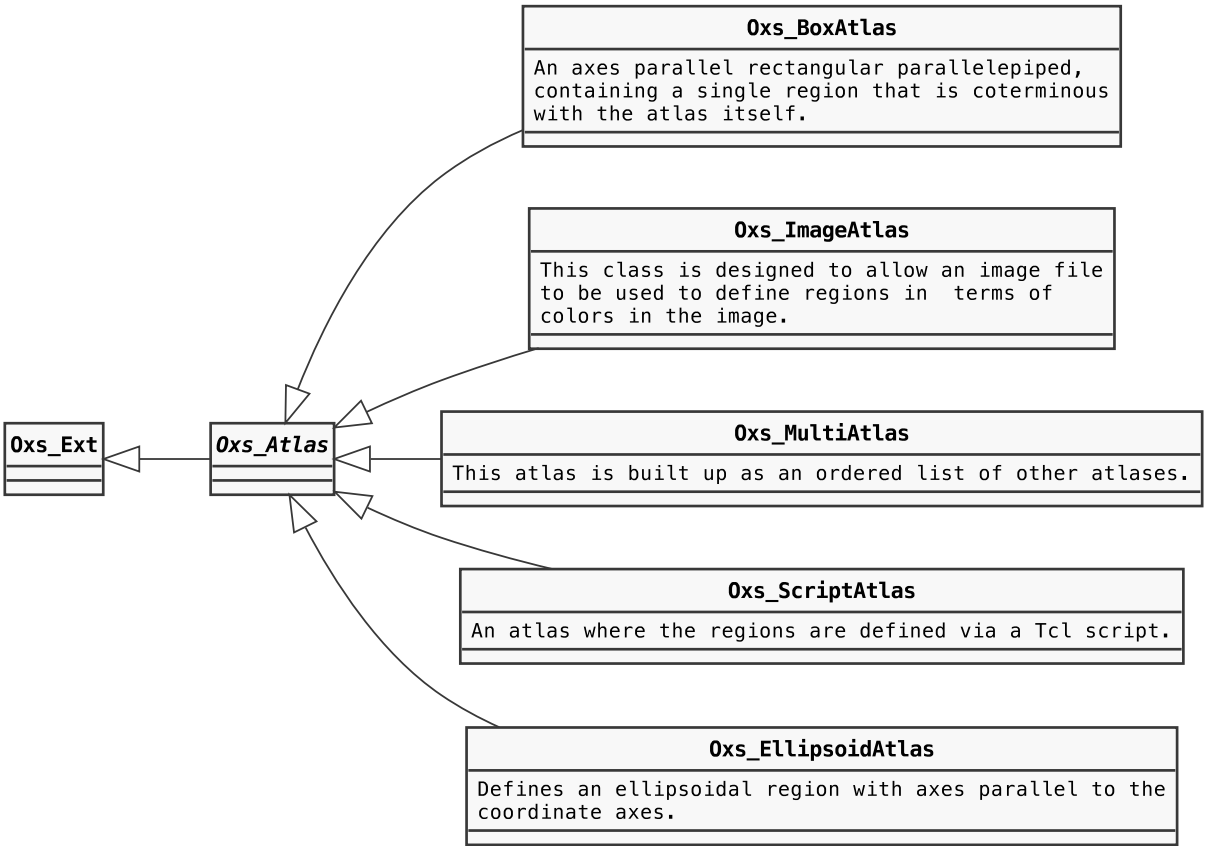

Figure 1: OOMMF Atlas classes

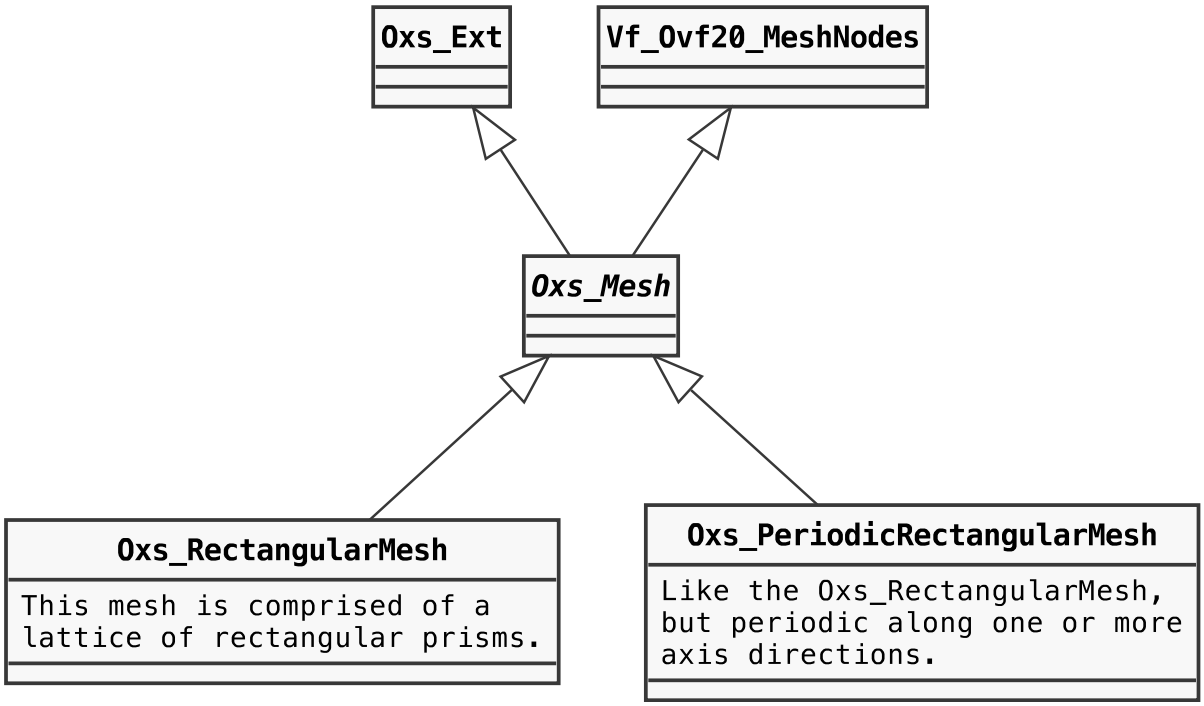

Figure 2: Mesh classes

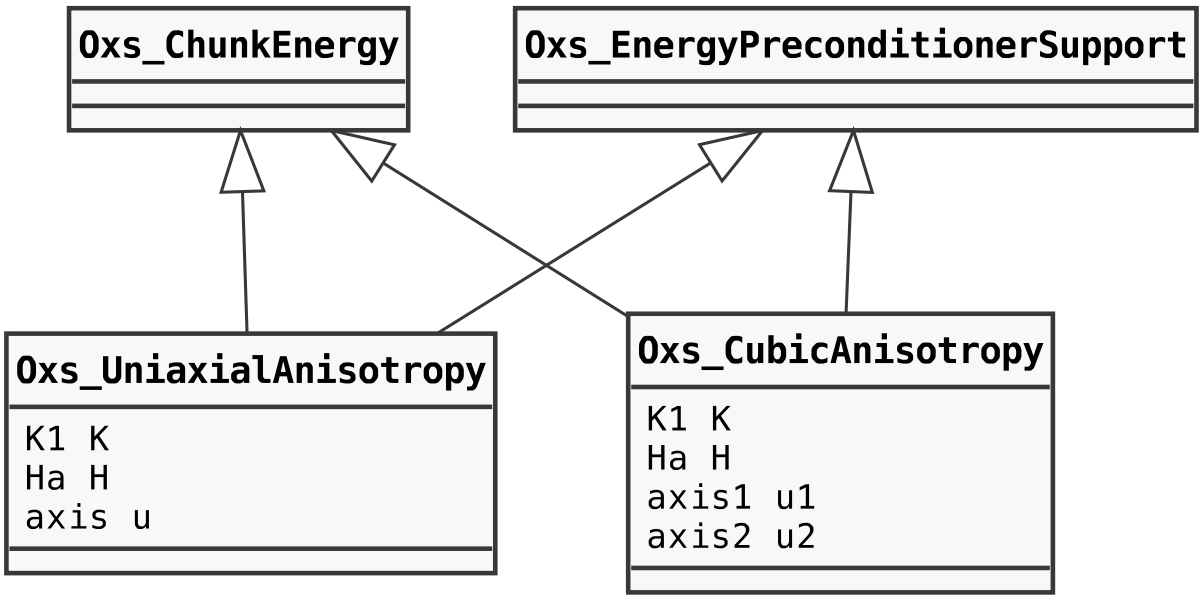

Figure 3: Anisotropy energy classes

2 Setting up your system to compile this file

2.1 Mini tutorial generating UML diagrams

- Install 'plantuml' on your system
  - `brew install plantuml` on OS X
- Tell Emacs where to find the plantuml jar file (in ~.emacs):

```
(setq org-plantuml-jar-path~
    (expand-file-name "/usr/local/Cellar/plantuml/8031/plantuml.8031.jar"))
```

- Tell Emacs to parse plantuml code (also python, sh, dot in this example):

```
;; enable python for in-buffer evaluation
(org-babel-do-load-languages
 'org-babel-load-languages
 '(
   (python . t)
   (sh . t)
   (plantuml . t)
   (dot . t)
   ))

;; all plantuml and dot code to execute without confirmation
(defun my-org-confirm-babel-evaluate (lang body)
(not (or (string= lang "plantuml") (string= lang "dot"))))
(setq org-confirm-babel-evaluate 'my-org-confirm-babel-evaluate)
```

- To re-execute the plantuml code, use `C-c C-c` when the cursor is in that block.
- Let's add `*.eps` files to the repository, so that we only need this setup for creating new class diagrams.

2.2 To compile the pdf from this file (watch how the screen changes):

`C-c C-e l p`