



PHYS2131 Spherical astronomy and mathematical astronomy

[22.5h+15h exercises] 3 credits

This course is taught in the 1st semester

Teacher(s): Pascale Defraigne, Jean-Pascal van Ypersele de Strihou
Language: French
Level: Second cycle

Aims

This course aims to deepen certain chapters of PHYS 1120 and to give the necessary bases to pick up the more specialized courses or personal research in the fields of geodesy, geodynamics, the study of artificial satellite movement, astrophysics (star mass, light and rays).

Main themes

The course covers the main domains of astrometry, notably:

- reference signs, movement proper to stars
- atmospheric refraction, parallaxe, aberration
- solar system movement in the Galaxy
- orbital movements in double stars, stellar evolution
- N body problems and movements of planets in the solar system

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: differential and integral calculus, rational mechanics, solids rotation, course PHYS 1120.

Openings: general interest course for everybody concerned by space sciences and earth environment.

Other credits in programs

MAP22	Deuxième année du programme conduisant au grade d'ingénieur civil en mathématiques appliquées	(3 credits)
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