ABSTRACT ONLY

A DIDACTIC EXPERIENCE IN THE STUDY OF THE PROPER MOTION OF STARS IN THE CLASSROOM

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The proper motion of stars is a very important topic in an Astronomy course. In principle, it allows us to measure the spatial speed of the stars in relation to the Sun and, from this, determine distances and other stellar parameters, allowing us to probe the proximities of the solar neighborhood and the speed of the local stars in the galaxy. That is why a work carried out by the Physics teachers in the subject of Astronomy II of the "Héctor Medici" Institute is presented. The work unifies a historical view of how and what was interpreted in the year 1718 when Edmund Halley found that the stars Sirius, Arthur and Aldebaran had moved in the sky more than half a degree since the observations made by Hipparcos, along with a didactic sequence. That is where students, through actions, link their knowledge and previous experiences, with some question that comes from reality and with information about an object of knowledge, managing to differentiate the improper movements of the stars, in which the coordinates stars are affected to the same extent by the movement of precession, nutation and aberration of light, deducing that only the proper movement corresponds to the real movement of the stars. One of the examples that has been highlighted in class is the proper motion of Barnard's Star moving 10.2"/year. One of the tools on which the work is based is the information from the Tycho catalog, as well as measurements made by Hipparcos and Gaia satellites.

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