

OPTICS AND MECHANICS OF THE AUGER FLUORESCENCE DETECTOR

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The design of the Auger Fluorescence Detector telescopes is based on the Schmidt system which avoids the coma aberration. The main components are large spherical mirrors with 3.4 m radius of curvature, a UV transmitting filter placed on the diaphragm and a light sensitive part (camera). The field of view is about 30×30 degrees. The present baseline is a f/1 optics which will be upgraded by addition of a correcting lens of annular shape in order to increase the aperture. The camera is a matrix of 440 hexagonal pixels, equipped with light concentrators, which is located on the mirror focal surface. In this paper the properties of the telescopes and the results of the tests made on the various components are discussed.