

A Portable Telescope Based on the Alibava System for Test Beam Studies

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A test beam telescope has been built using the ALIBAVA system to drive its data acquisition. The basic telescope planes consist in four XYT stations. Each station is built from a detector board with two 80-micron-pitch sensors, mounted one in each side and their strips crossing at 90 degrees. The ensemble is coupled to an ALIBAVA daughter board. These stations act as reference frame and allow a precise track reconstruction. The system is triggered by the coincidence signal of the two scintillators located up and down stream. The telescope can hold several devices under tests. Those may be mounted on detector boards coupled to the ALIBAVA daughter board. Each ALIBAVA daughter board (either linked to XYT station or a device under test) is subsequently read by its corresponding mother board. The acquisition system can hold up to 16 mother boards. The whole system is controlled by a master board that synchronizes all the mother boards and collects all the data. The off-line analysis software has been developed to study the charge collection, cluster width, tracking efficiency, resolution, etc, of the devices under test. Moreover, the built-in ALIBAVA TDC allows the analysis of the time profile of the device signal. The ALIBAVA Telescope has been successfully operated in two test runs at the DESY and CERN-SPS beam lines. The complete telescope system will be described and the preliminary results will be presented.

Primary authors: Dr RODRIGUEZ, Joaquin (IMB-CNM Barcelona); LOZANO FANTOBA, Manuel (Universidad de Valencia (ES)); MARTI I GARCIA, Salvador (IFIC-Valencia (UV/EG-CSIC))

Co-authors: GREENALL, Ashley (University of Liverpool (GB)); LACASTA LLACER, Carlos (IFIC-Valencia); Prof. GARCIA, Carmen (IFIC Valencia (ES)); FORSHAW, Dean Charles (University of Liverpool (GB)); CASSE, Gianluigi (University of Liverpool (GB)); PELLEGRINI, Giulio (Universidad de Valencia (ES)); TSURIN, Ilya (University of Liverpool (GB)); BERNABEU VERDU, Jose (Universidad de Valencia (ES)); Dr ULLAN COMES, Miguel (Universidad de Valencia (ES)); LACUESTA MIQUEL, Vicente (IFIC (CSIC - UV))

Presenter: LOZANO FANTOBA, Manuel (Universidad de Valencia (ES))

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