

A NEW HERA CRYOGENIC CONTROL SYSTEM - REQUIREMENTS AND OBJECTIVES -

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The HERA cryogenic control system has to be updated. With regard to the high reliability of the industrial system used for many years and due to the acquired experience DESY is searching for a current generation control system with low rate of occurrences of failures and many skills related to flexibility and integration facilities. Besides the most important requirement, a reliability of more than 99,5%, there are long-dated objectives. The medium-term objectives are migration and integration of DESY controls, a long-term objective is the fully automatic control. We have started the project work in 1998 by a survey of current generation control systems. In addition we have organized a Workshop (CPC'98) at DESY to elaborate and to discuss with research laboratories from USA and Europe concepts and strategies for the next generation cryogenic controls. Based on the workshop results and our requirements we describe in the paper/presentation a DESY strategy for new cryogenic controls due to hardware (i.e. IEC1131, fieldbusses) and software (i.e. OPC, SoftPLC) and our point of view according to freeware, home-made and industrial solutions. In addition we present the results of our actual evaluation of state-of-the-art industrial controls and describe our new system after call-for-tenders (May 1999).