

# Cosmic Vision Technology Test Vehicle Design and Evaluation Activities

This presentation provides a summary of two concluded ESA contracts devoted to the development of a set of mixed signal IPs and ASICs for instrumentation applications, namely: 4000101556/10/NL/AF “Front-end readout ASIC technology study and development test vehicles for front-end readout ASICs” (also referred to as Cosmic Vision MF as it evaluates the technology for frequencies up to 10MHz ) and 4000101621/10/NL/AF “Radiation Tolerant analogue/mixed signal technology survey and test vehicle design” (also known as Cosmic Vision HF as it explores the use of the technology for instrumentation applications for signal frequencies above 10MHz). In both contracts Arquimea was acting as prime contractor and was supported by a design team of experts from three Spanish institutions: CSIC, UPC and UC3M.

In the frame of these projects three different ASICs were realised and tested: ARQ-CVA001, ARQ-CVB001 and CVC001, containing signal amplification and conditioning circuits as well as ADCs and DACs operating at MF and HF frequencies. The obtained test results on the instrumentation circuits on the ASIC as the signal amplifier, ADC and DAC will be presented. Their use for space instrumentation applications will be discussed. The presentation will give further details on the developed IPs and will illustrate the re-use of them into two currently on going ESA contracts.