

# Workshops



# Mechanical Workshop

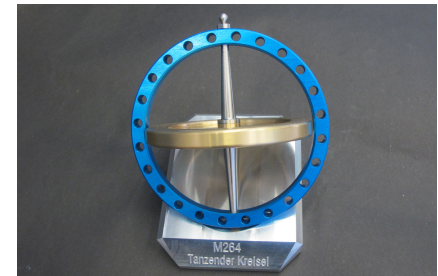
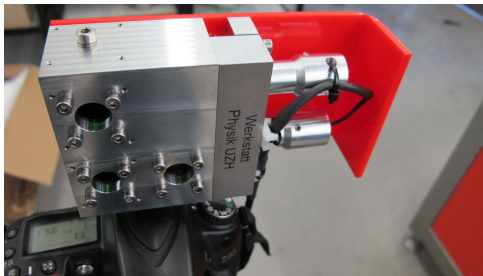
The **mechanical workshop** produces complex parts for all the experiments in house as well as for the large-scale astrophysics and particle physics experiments our groups are contributing to and helps to find solutions for techni-

cal problems. The high competence of the workshop is well appreciated also by other institutes of the university or external companies.

<http://www.physik.uzh.ch/groups/werkstatt>



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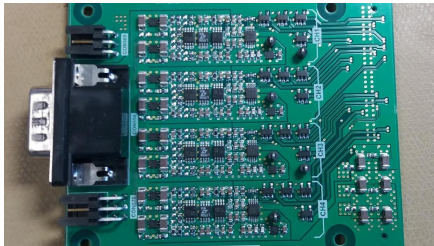
*The three photograph are examples for work done in our workshop for external institutes (left: anatomy institute), research groups (middle, group Chang) and education (right).*

# Electronics Workshop

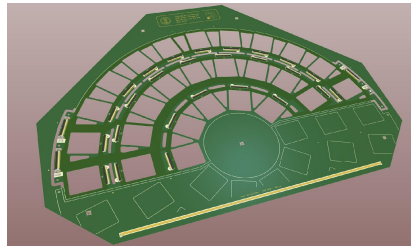
Besides maintenance work for the existing laboratory infrastructure the **electronics workshop** continuously supports the groups of our institute with technical advice, prototypes and new developments for ongoing projects.

Our projects in 2018 included the development of a 4 GHz

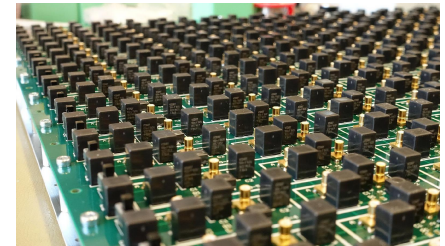
preamplifier for fast oscilloscopes, a programmable fast pulse generator with  $<100\text{ps}$  rise-/fall time, and a SALT128TB testboard for the UT detector of LHCb the design of low-temperature high frequency printed circuit boards, silicon photomultiplier testboards as well as documentation and testing of the FlashCam for CTA.



*First prototype boards for the 20 bit, 1.5MS/s ADC for DAMIC-M.*



*Printed circuit board for power supply and data connections for the silicon sensors for the CMS TEPX detector.*



*Close-up view of a two-dimensional grid of resonant circuits to model lattice band structures.*