

To whom it may concern:

I have two educations: recently (Oct 2008) I pass a **Ph.D.** in Physics, specializing in “Experimental Techniques, Physics of instruments, Automation of Physical Research” and I hold the **MS** equivalent diploma in aircraft engineering. Also I have a hobby to create by myself for some purpose the electrical devices (more than 25 years such experience).

From 1999, over 10 years of my professional career as specialist in high energy physics was devoted to the research at DLNP/JINR (Dubna) and at the CDF experiment at FNAL (USA) at proton-antiproton accelerator Tevatron. I am focused on the hardware and software development and maintenance of the detectors based on the plastic scintillation plates, also on research to improve the efficiency of the muon system at CDF. This research always requires thorough preparation and planning, which involves software development, engineering modeling and statistical analysis. I also have about 6 years work experience as laboratory assistance in Aerodynamic laboratory at Aviation Institute, Tbilisi Technical University (Rep. of Georgia, 1993 – 1999).

I have a large experience as a hardware-to-software developer. Also I am experienced in C/C++, Fortran, Pascal, Visual Basic, LabView, AutoCAD. In my researches I widely use the one-photoelectron method to determine some properties of detectors with photomultipliers or photodiodes.

My duties at HMPR department at DNLP/JINR also include the system administration to maintain and operate a computer system and local network. Have some web-design experience. Have some experience with php, html, MySQL.

Due to large experience as a “radiofan” I can design and to create up to medium complexity electrical devices (I already made things such as the multipurpose amplifier-discriminator or some kind of level adapters/translators and more).

My previous experience as engineer allows me to easily collaborate in design and creation a MTBS detector for ATLAS.

At CDF I with colleagues have contributed in creation of software of the monitoring and control system for muon scintillation counters at CDF. This is also includes the code in C++ and Visual Basic as environment the code for the CAMAC and VME crate readout.

Using the absolute one-photoelectron calibration method we provided accurate measurements of light yield in photoelectrons to investigate of the natural aging properties of existed at CDF scintillation counters lot (during the 1999 – 2007 y. period). One can see that the one-photoelectron method use sensitive apparatuses and it is highly necessary to minimize the general noise problem of the electronic tract and to suppress of the background. I created the several setups based on CAMAC, NIM and VME crate modules (at CDF and JINR) to provide the amplitude and timing measurement of the plastic scintillation detectors using the PMT or new generation of MAPD/SiPM photodiodes.

Currently I with my colleagues do investigation of the LYSO crystal properties, such as light yield, energy resolution, timing.

In present I have some idea (and I already done some staffs on this way) to use the system of scintillation strips with special readout as muon trigger against the drift chambers with scintillation counters. This experience, I hope, will be useful for plan such experiments like ILC.

Attached please find my CV and list of publications, which further details my professional and educational background. Should you have any questions or require additional information, please feel free to contact me at your convenience.

Respectfully,
Dr. Davit Chokheli