

### **3.3-P02. ANGLE 4 – new version of quantitative gamma-spectrometry software suitable for CTBTO radionuclide stations and supporting laboratories**

ANGLE software for quantitative gamma-spectrometry is routinely exploited in hundreds gamma spectrometry based laboratories worldwide [www.angle.dlabac.com](http://www.angle.dlabac.com). Its applicability in CTBTO test-ban-related radionuclide monitoring was demonstrated earlier (SnT2013). ANGLE allows for accurate determination of the activities of gamma spectroscopic samples for which no “replicate” standard exists, in terms of geometry and matrix. A semi empirical “efficiency transfer” approach is employed, combining advantages and minimizing drawbacks of both absolute (e.g. Monte Carlo) and relative (traceable source based) methods to determine sample activity. New version (ANGLE 4) was developed meanwhile and is about to be released by Q2 2015. In the present paper ANGLE 4 characteristics, making it even more suitable for CTBTO radionuclide stations and supporting laboratories, are outlined – particularly those concerning automation, networking, standardization and advanced data processing. New XML based file format allows easy manipulation of input/output files by third party software and, thus automation and complex analyses. There is also a scaled graphical preview of input/output parameters, exportable to bitmap or vector file formats, multilanguage support, upgraded user interface, etc. Fully transparent to the user, its educational and training potential, notably for distance learning, is outstanding.

**Primary author:** JOVANOVIC, Slobodan (University of Montenegro, Centre for Nuclear Competence and Knowledge Management (UCNC))

**Presenter:** JOVANOVIC, Slobodan (University of Montenegro, Centre for Nuclear Competence and Knowledge Management (UCNC))

**Track Classification:** 3. Advances in sensors, networks and processing