

STSM Report

Spectral Investigation of Serbian Baroque Icons for their Scientific Documentation

REFERENCE: Short Term Scientific Mission, COST TD1201

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Abstract

The main aim of the STSM has been the scientific documentation of selected icons, representative for the Serbian baroque epoch and several times subjected to incorrect or incompletely reported restorations. View the importance of scientifically reliable, functional, up-dated data bases in CH preservation and restoration, our purpose has been to elaborate new passports of these artefacts in correspondence with the actual needs and criteria. This intended the recovery of technical and historic information, its verifying and updating by microscopic surface analyses confronted with other ND investigations in Vis (direct and raking), UV, IR light, as well as limited EDXRFS analysis, but also the critical review of older attributions.

The second goal of the STSM has been to learn more about the technical and technological changes that accompanied the transition from tempera to oil painting in orthodox art, as well as the specificities of the Serbian iconographic school between the other contemporary art centers.

The third task of the mission envisaged the generation of referential databases in support to the ND recognition of materials specific for this heritage, together with the exploration of new horizons for the modern, interdisciplinary exploitation of the knowledge on natural compounds it has

preserved like resins, gums, oils, natural dyes etc.

All the measuring conducted during this STSM belong to a further data processing project in the frame of the COSCH 2014-6 case study dedicated to the more efficient use of spectral techniques in the attribution of easel painting.

It has been realized during this Mission that there is great need between the more popular and extended categories of end-users for such a practical level of application of spectral techniques. We corrected several attributions and dating hypothesis, discovered fakes and over paintings, reconstructed methods for restoration in Serbia since the 1940-ies, so also other museums, as the National in Belgrade, expressed the wish to update the passports of their easel painting collections.

For the realization of the third task of the STSM - creation of data bases, that require particular technical tools, competences and personnel, meetings with external partners of the Gallery have been organized, and the STSM beneficiary donated a collection of natural organic compounds mentioned in the painters treatises that will serve as base for future interdisciplinary research and collaboration.

The STSM has been also an important occasion to inform about pioneer analytical approaches, measuring ND techniques and databases on baroque painting existing in Russia and other Eastern Europe counties, with important heritage of orthodox icons. As regards COSCH, they concern particularly the investigations of absorption & reflection in border transparent areas (the multi layers formed by transparent and colored varnishes on the baroque icons); and on distinguishing between natural and electronic luminescence.

Other findings of fundamental interest to COSCH problematic which will be introduced in occasion of the publications resulting from this STSM match the potential of IR spectra as reliable marker of organic substances and on the color of these last as phenomenon of the quantum chemistry.

Furthermore, the icons from the baroque period are distinguished by the wide introduction of many decorative techniques that speculate with the optical properties of materials, whose precise recognition, documentation and reproduction closely concerns the problematic of the Action.

