

Haec aurea templa: the Palatine temple of Apollo and its polychromy

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The polychromy of Rome's marble temples has almost entirely escaped us. Traces of colour have been observed on marble temples sporadically but there has never been an archaeometric investigation of their pigments, let alone an attempt to reconstruct the colour scheme of a Roman marble temple.¹ In the context of a field project dedicated to reconstructing the Palatine temple of Apollo, H. Piening analyzed several of its architectural marble fragments for remains of pigments. By means of ultraviolet spectrometry in combination with architectural documentation and 3D computer modeling, it was possible to reconstruct the intricate colour scheme of the temple's exterior: a brightly painted entablature supported by white marble columns that were crowned by gilded capitals. The results of the pigment analysis show that colours were an integral part of the temple's exterior design: they enhanced the legibility of the carved ornamentation but also conveyed the symbolic message of a "golden temple". For the first time we possess a material basis for Augustan literary references that suggest a profound embellishment of Rome's urban texture through the lavish use of gold in sacred architecture.

Methods: *Bauforschung* and UV-VIS Absorption Spectrometry

Our method brings together traditional architectural documentation (*Bauforschung*) and UV-VIS Absorption Spectrometry, a portable and non-destructive technology that H. Piening has previously applied in pigment analysis of ancient sculpture.² In combination with 3D computer modeling (Autodesk Maya software), these techniques allow an evidence-based approximation of the temple's original colour scheme and its visual appearance.

Bauforschung

During 5 field campaigns (2005 to 2009) the temple's surviving foundations and its architectural marble fragments were documented in scale drawings. Extant remains of the temple are scarce but a fragment from almost every zone of its elevation has survived on site, allowing for a reconstruction of the façade (fig. 1). As of March 2009, the most important fragments were:

- a column base (either from the interior order or from an engaged half-column);
- a drum of a full column (the lowest drum of a shaft);
- a lower and an upper part of engaged Corinthian capitals (each capital was in two parts);
- two pieces of architraves (the larger from the exterior order since its depth matches the extant capitals);

1 The list of monumental marble architecture at Rome that has been subject to systematic pigment analysis is a short one; it includes the marble revetments in the *Aula del Colosseo* (Forum of Augustus) and a few pigment traces found on the Ara Pacis (its recently-reconstructed colour scheme, as presented by C. Rossini at the conference "I colori di Augusto" on March 11, 2009, remains mostly hypothetical). On the *Aula del Colosseo* see L. Ungaro, "Il rivestimento dipinto dell'Aula del Colosseo nel Foro di Augusto," in P. Liverani (ed.), *I colori del bianco. Policromia nella scultura antica* (Roma 2004) 275-80 and U. Santamaria, F. Morresi and M. delle Rose, "Indagini scientifiche dei pigmenti e leganti delle lastre marmoree dipinte dell'Aula del Colosseo del Foro di Augusto," *ibid.* 281-89. Some remains of colour have been observed at the Temple of Mars Ultor (coffers of the pteron): J. Ganzert, *Der Mars Ultor Tempel auf dem Augustusforum in Rom* (Sonderschr. 12, DAI Rom 1996) 161-62, Besl. 22 (annotation to drawing); on the cornice of the Temple of Portunus; on an architrave of the Tabularium; and at the Colosseum: see M. Campisi, "L'evidenza archeologica: architettura," in A. Melucco Vaccaro (ed.), *I colori perduti. La policromia nell'architettura e nella scultura classica* (Archeo Dossier 29, 1987) 42 (without documentation).

2 See most recently H. Piening and H. Stege, "Pigment analysis of the sculptures of the Aphaiia Temple of Aegina," in V. Brinkmann and R. Wünsche (edd.), *Color in color. Painted sculpture of classical antiquity* (exh. cat., Sackler Museum, Harvard Univ. 2007) 99-99, and H. Piening, "A colorful legacy: the colorants of the Alexander-Sarcophagus in Istanbul," *ibid.* 168-71.