

The Secret of Brunellesci's Dome

Roberto Corazzi

Abstract The dome of Santa Maria del Fiore is unique in its kind. For centuries it has been the subject of research by scholars who tried to ferret out the 'secret' of its construction. The studies allowed:

- Knowledge of 'the object' with clarification of the areas to be explored.
- Knowledge of the various theories hypothesized up to now.
- Elaboration of data that consists in a study of the electrical characteristics of the materials constituting the sections, and precisely the speed of propagation of the electromagnetic waves and relative electrical permittivity (dielectric constant) and depths reached.
- Interpretation of data and creation of radar-grams, that is, interpretive graphics.
- Comparison between the results thus obtained and present knowledge of the dome.
- Creation of an experimental model of a portion of the vela, with the same qualities as the real one, and made with the same materials, placed according to information that came out of the studies. The comparison between the results of the study carried out on the model and on the dome allowed for the making of precise affirmations on the typology of the structure.

Keywords Dome, Geometry, Survey.