

Orvieto Cathedral

Orvieto Cathedral, begun in 1290 by Arnolfo di Cambio, is one of the most important examples of Gothic architecture in Italy.

Purpose of monitoring:

The microclimatic monitoring was held parallel to the restoration, and other analyzes to characterize the nature of materials and degradation mechanisms.



The microclimate survey, in particular, was aimed at verifying the behavior of thermal condition near the original glass, and for the evaluation of the benefits obtained after the installation, in the last century, of a false window to protect the original glass. The combination of microclimatic checks, with the chemical, materials analysis of glass has led to the conclusion that the false window has contributed significantly to protecting the artifact.

Installed system:

The via radio system, the RadioClimart, had a series of peripheral sensors for the measurement of temperature, relative humidity of the air and the surface temperature of the glazing and the false window.

The sensors were positioned so as to form a vertical composed of three measuring points, for the detection of the conditions within the apse, in the interspace between the glass and the false and outside of the latter.