



Light Effects of the Rose Windows in Mallorca Cathedral

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Abstract

This research shows the light effects and geometric alignments created by the sunlight passing through the stained glasses of the Eastern rose window in Mallorca cathedral and projecting on the inner side of the cathedral's main façade. Besides, we show other novel effects which occur in coincidence with certain religious festivities.

Keywords Design analysis · Geometric analysis · Representation of architecture · Descriptive geometry · Sacred geometry

Introduction

It is well known, particularly in Mallorca, that every year on the same dates, and almost at the same time, the morning sunlight passes through the giant Eastern rose window and projects on the inner side of the main façade right underneath the Western rose window, thus forming the celebrated "Eight Effect" or "Festival of Light" (Daniel and Pol 2010). This light effect occurs every 2nd of February (Candlemas Day) and every 11th of November (Saint Martin of Tours). These dates are 40 days and 43 days off Christmas, respectively, and the positions of both projections differ slightly. Also, in the days prior to the winter solstice, the sunlight passing through the Eastern rose projects almost exactly on the Western rose window, thus creating another light effect which can be seen from outside the cathedral.

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