

THE CHURCHES' ORIENTATION TOWARD EAST-WEST DIRECTION IN CLUJ NAPOCA

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Introduction

The Nicean Council in 325 and then Saint Athanasius from Alexandria established that the church has to be oriented with the sanctuary (with apse and sacristies) at the east.

In this case the Christians could to pray eastward in church: „*ecclesiarum situs plerumque talis erat, ut fideles facie altare versa orientem solem, symbolum Christi qui est sol iustitia et lux mundi interentur ...* „

In our days is very easy to build a church with a certain orientation, but with some centuries ago, even if the compass was known, people had to be guided by stars (e.g. Polaris).

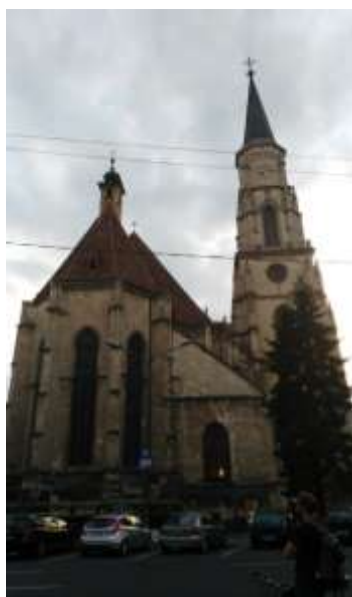
What is the orientation of some churches from Cluj Napoca? We verified some old and new churches, catholic, reformed or orthodox ones.



Catholic churches

First we stopped to the Roman Catholic „Saint Michael” Church, an important gothic edifice from our country. It was built between 1350 and 1480, being the first hall church from Transylvania.

We found a deviation of 8° from the real direction East – West.



The St. Michael Church

Then we visited the Franciscan Church, which was built between 1260 and in the tardo – roman style. This is the oldest catholic church from Cluj Napoca. **Its orientation is deviated with 9° from the right direction.**



The Franciscan Church



The compass near the Franciscan Church

The next church is the Piarist Church or the University Church, dedicated to the Holy Trinity. It was finished in 1725 as the first baroque church from the region.



The Piarist Church



As you can see the deviation from the east – west direction in this case is 6° (measured with a regular compass) and 7° (measured with the iPad compass application).

The last Catholic Church in this presentation is **Saint Peter and Paul Church**. The present day Neo-Gothic church was built between 1844-1848. In this case, the deviation measured with the iPad compass is 22° but with a regular compass is 30° . The church is in a middle of an avenue and it is located parallel with the two parts of it.



Saint Peter and Paul Church



The Reformed Church

The fortress church was built in gothic style by the king Mathias Corvin between 1486 and 1516. The copy of the George equestrian statue of Márton and György Kolozsvári was placed in front of the church. The original was made to the order of Karoly IV and actually is placed in the fortress of Prague. The orientation is very good, deviation only 1° .



Reformed Church



Orthodox churches

The Holy Trinity Church is the first Orthodox Church from the city. It was built in 1796 in baroque style.



The Holy Trinity Church



This church was built on the direction east - west and we found a deviation of 4° .

The next churches are new ones, they were built after 1989.

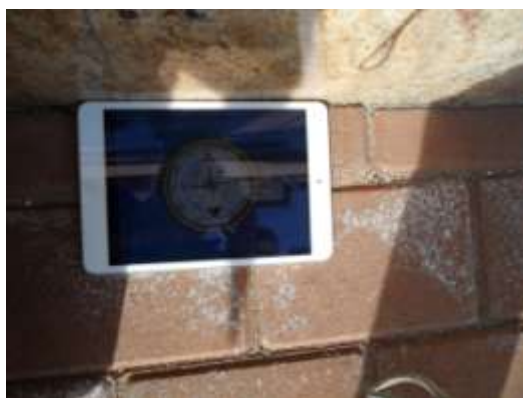
The Exaltation of the Holy Cross Church is not oriented east – west because the deviation is 48° . This is due to its location along the street.



The Exaltation of the Holy Cross Church



The Descent of the Holy Spirit Church is better orientated. The deviation from the east – west direction is only 5° .



In the used iPad application there were two possibilities of measurements: true north pole and magnetic pole with a difference of 3° between them. We used the indication for true north pole.

The orientation of the last two churches was checked not with an application on iPad but with a standard compass.



The **Saint Dmitry the New Church** has a deviation of 8° from the good orientation east – west.



The Nativity Church has a greater deviation, about 22° .



Conclusion

These are some examples of churches' orientations in our city. There are many other churches, which are not at all oriented in the good direction because they were built in tight places and they respect the streets' systematization.

We founded some old or new churches very well oriented in the east – west direction.