

Evaluation of the environmental parameters in several places of Moscow with Electrophotonic Imaging technique

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Introduction

As part of the plan to conduct experimental studies with the Bio-Well and "Sputnik" sensor, a series of experiments to measure the parameters of space in a number of places in Moscow city was carried out on April 17 to 19, 2016.

Methods

April 17, 2016: With the blessings of Father Abbot Nicholas, a series of measurements was carried out at the Church of St. Nicholas in Tolmachy. In this temple is preserved the holy Vladimir icon of the Mother of God, brought to Russia from Constantinople at the time of the Grand Duke of Kiev, Yuri Dolgoruky (1090–1157). The histories of Moscow and of the icon of Vladimir Mother of God are eternally inseparable. How many times did the Mother of God save the capital city from enemies through the grace of her holy icon? This icon has linked Apostolic times to Byzantium, Kievan Rus to Vladimir Rus, and later to Muscovy, the Third Rome; as it is said, “there will be no Fourth.” The kingdom of Moscow was formed by divine Providence and embraced the mystical ties of ancient empires, historical experience and traditions of other Orthodox peoples. The miracle-working Vladimir icon became a symbol of unity and succession. The icon survived centuries of wars and unrest in Russia, and for many centuries, it was a symbol of God's protection of the Russian land. Since the mid-1930s, the icon has been kept in the Tretyakov Gallery exhibition in Moscow, and was later transferred to the Church of St. Nicholas.

On the morning of April 17, we were given permission to mount the sensor "Sputnik" near the Vladimir icon of the Mother of God, with the back of her hand at a distance of about one meter from the icon. The sensor operated in a continuous mode, parameters were recorded every 5 seconds, we were unable to control data before final processing, and so, the experiment was conducted in double-blind mode. During the whole time, there were over 200 people in the Temple. At the end of the Sunday service in the Temple, the registration of parameters was carried out with the same device at the entrance to the Temple, and at the exit of the Temple. The temperature was in the range of 25⁰C, humidity about 50%. Data analysis was carried out later on the Bio-Well server, when we connected to the internet.

On the evening of the same day, “Sputnik” parameters were recorded by the same device indoors of the Evangelical Lutheran Cathedral of Sts. Peter and Paul during the concert of organ music, with participation of duduk and tenor.

April 18: “Sputnik” parameters were recorded at Novodevichy Cemetery near the grave of Anton Chekhov, and on April 19 at Perepechinsky cemetery near the grave of an unknown person. On both days, the weather was clear and sunny, with a temperature of 11–12⁰C, humidity 50–60% in the absence of wind.

Results

In data processing, we are interested both in the value of environmental parameters and in the dynamic response of the “Sputnik” sensor to the events taking place in this environment.

In the Temple of St. Nicholas, the recording was held before and during the Sunday service, which was reflected in the change in the parameters. Fig. 1 shows the dynamic curve of the energy parameter within 140 minutes. The first 10 minutes of recording were carried out before the service. When the reading of the Psalter started, with the choir joining after 40 minutes, the signal was reduced; however, with the beginning of the service, it began to increase; about an hour after the beginning of the service, the signal reached a stable level, and remained there for another 40 minutes till the end of the recording, slightly decreasing by the end (Fig. 1). The “Environment Activity” index (see description in the Discussion section) was within the range of the minimum values, slightly changing during the service (Fig. 2).

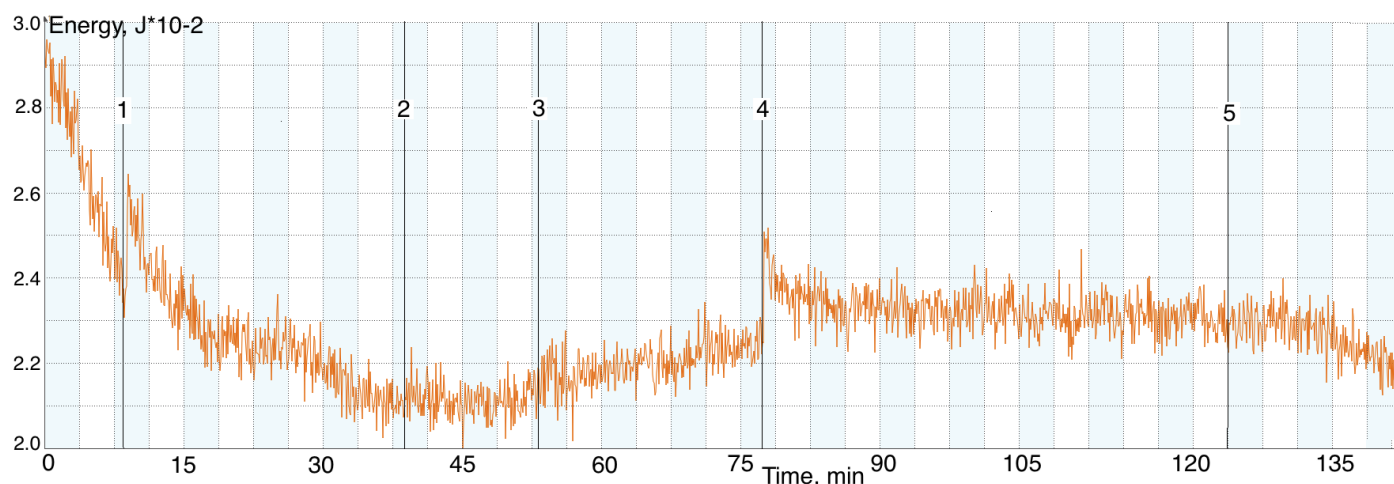


Fig. 1. Temporal dynamics of the energy parameter before and during the Sunday service in the Temple of St. Nicolas. Service points: 1 - the beginning of the Psalter reading; 2 - choir; 3 - the beginning of the service; 4 - the beginning of a sermon; 5 - the general singing.

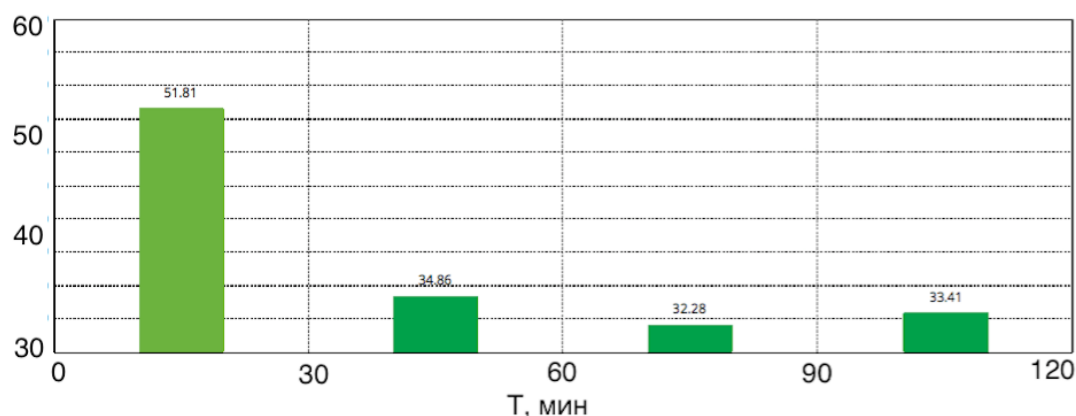


Fig.2. Temporal dynamics of the “Environment Activity” index during the Sunday service.

Comparison of parameters measured near the Vladimir icon of the Mother of God, in the Temple at a distance of about 20 meters from the icon, and at the exit of the Temple, showed a significant difference between them (Figure 3.): The amounts of energy inside and outside the Temple were similar, being significantly lower than the energy level near the icon.

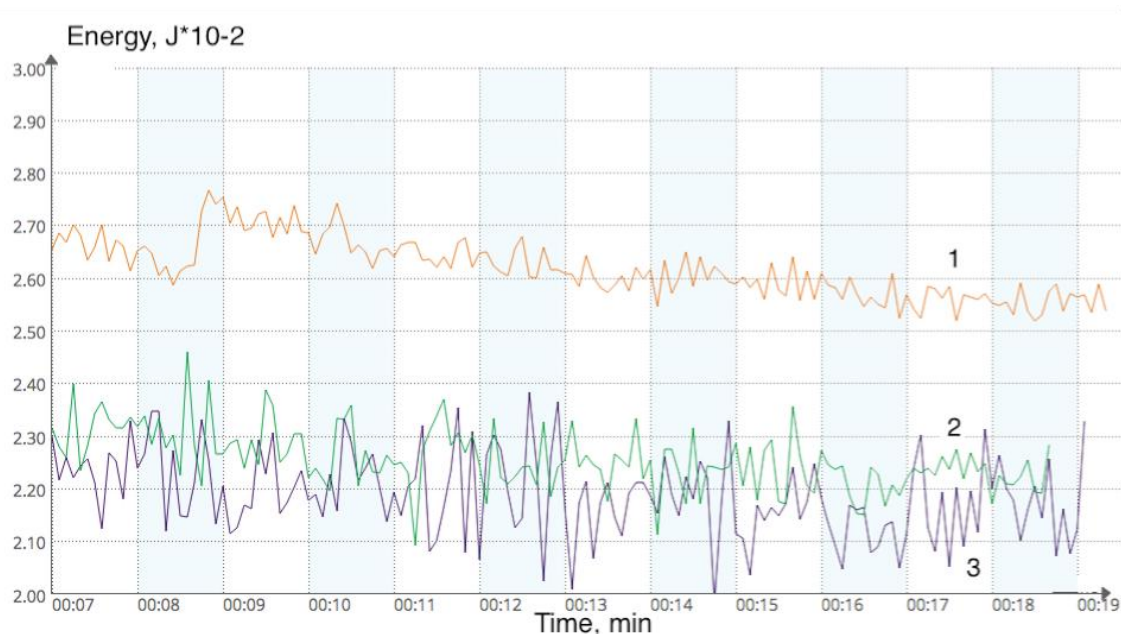


Fig. 3. Temporal dynamics of the energy parameter in various places of the Temple. 1 – near the Vladimir icon of the Mother of God; 2 - inside the temple; 3 - at the exit of the temple.

Temporary dynamics of the sensor signal measured during an organ concert reflected the main points of performance (Fig. 4). The level of this signal was below the signals measured at the Cathedral of St. Nicholas (Fig. 5).

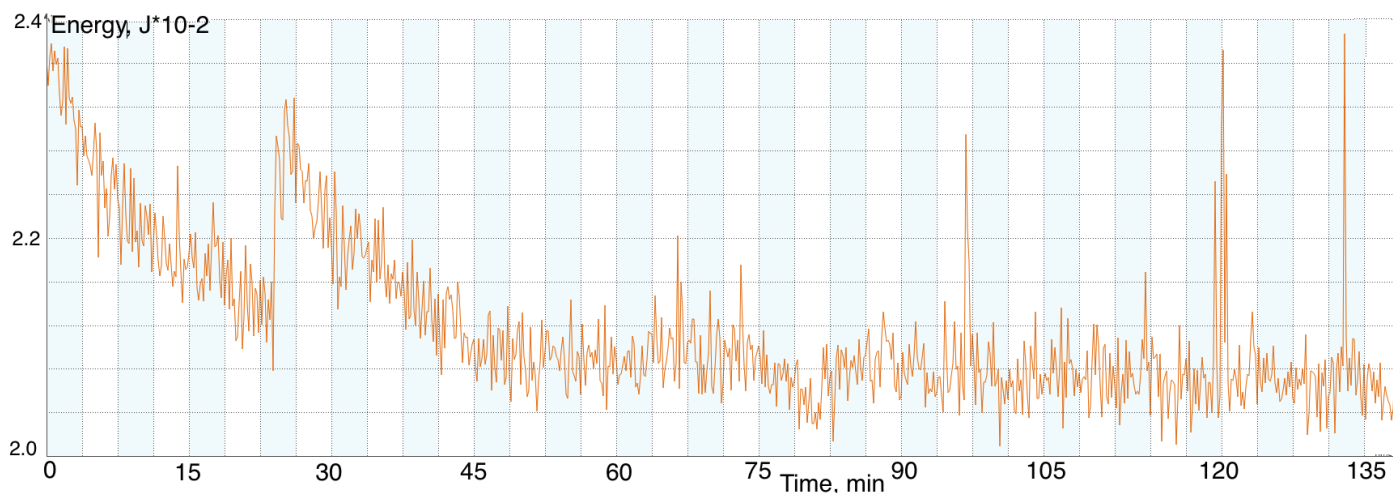


Fig. 4. Temporal dynamics of the Energy parameter of the sensor "Sputnik" during a concert of organ music in Sts. Peter and Paul Cathedral.

The sensor signal measured at both cemeteries was distinguished by high variability, significantly higher than the signals in the church of St. Nicholas and Sts. Peter and Paul (Fig. 6). The energy level and “Environment Activity” index in cemeteries was 10 times higher than that in the temple (Figs. 6, 7). At the same time, near the tomb of Anton Chekhov, the “Environment Activity” index was twice as high as near the tomb of the unknown person (Fig. 7).

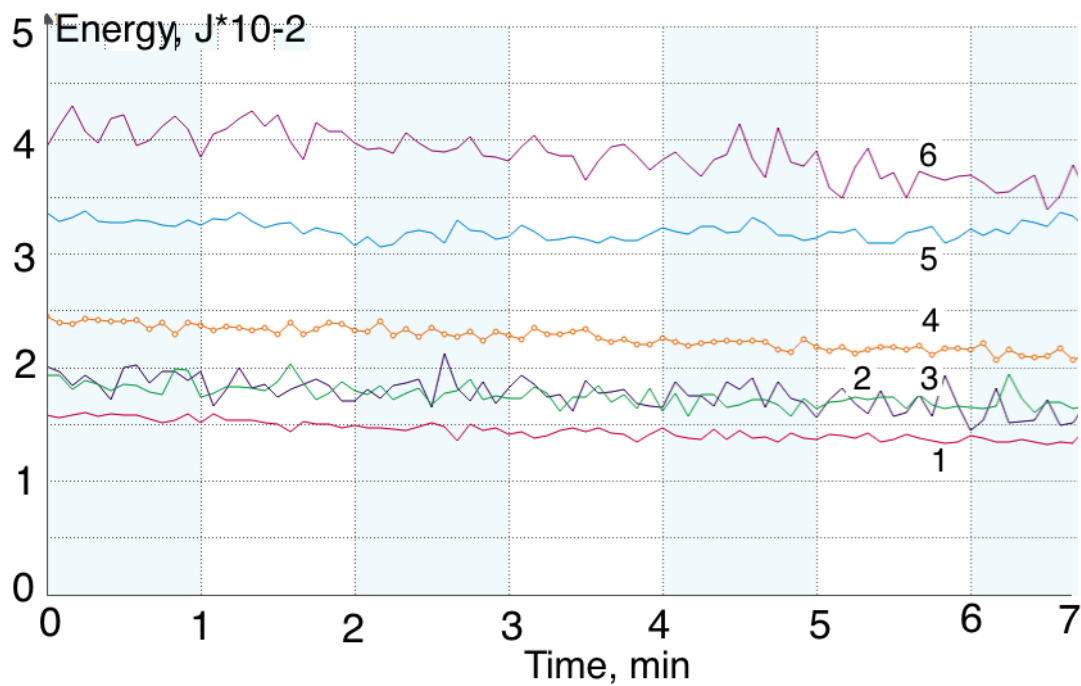


Fig. 5. Temporal dynamics of the energy parameter at different places of Moscow: 1 - Cathedral of Sts. Peter and Paul; 2, 3 - Church of St. Nicholas; 4 - Church of St. Nicholas near the Vladimir icon of the Mother of God; 5 - Novodevichy Cemetery; 6 - Perepechinsky cemetery.

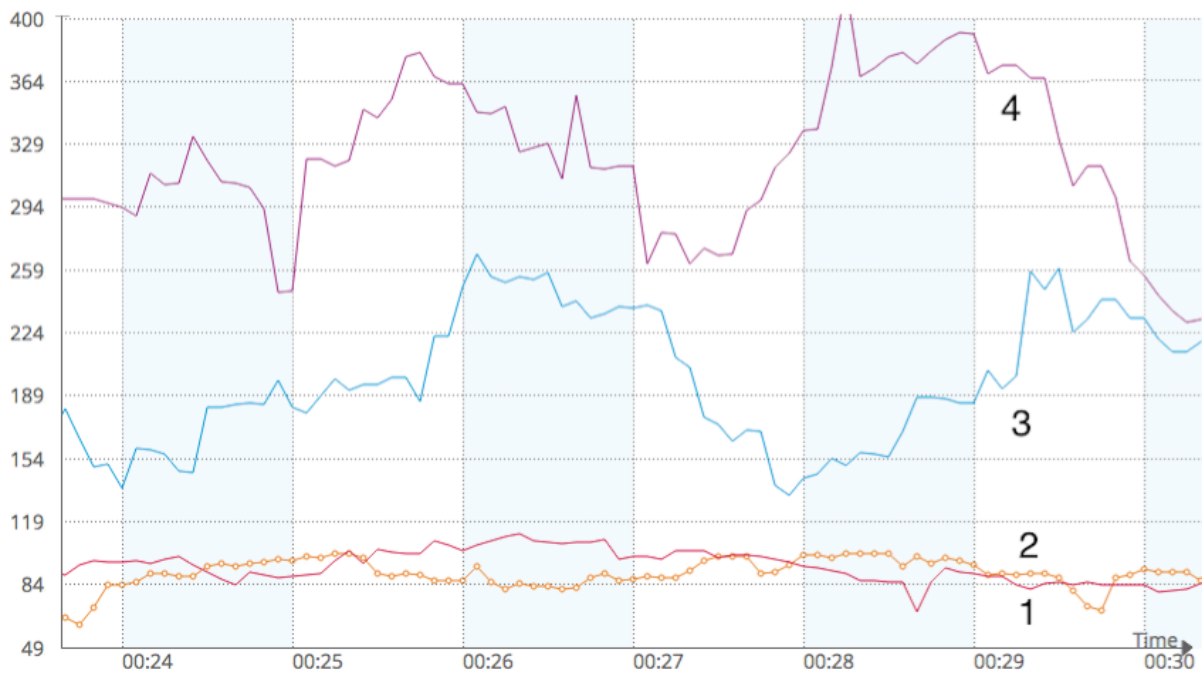


Fig. 6. Temporal dynamics of the standard deviation of the signal amplitude in various parts of Moscow. 1 – Temple of Sts. Peter and Paul; 2 - Temple of St. Nicholas; 3 - Perepechinsky cemetery; 4 - Novodevichy Cemetery.

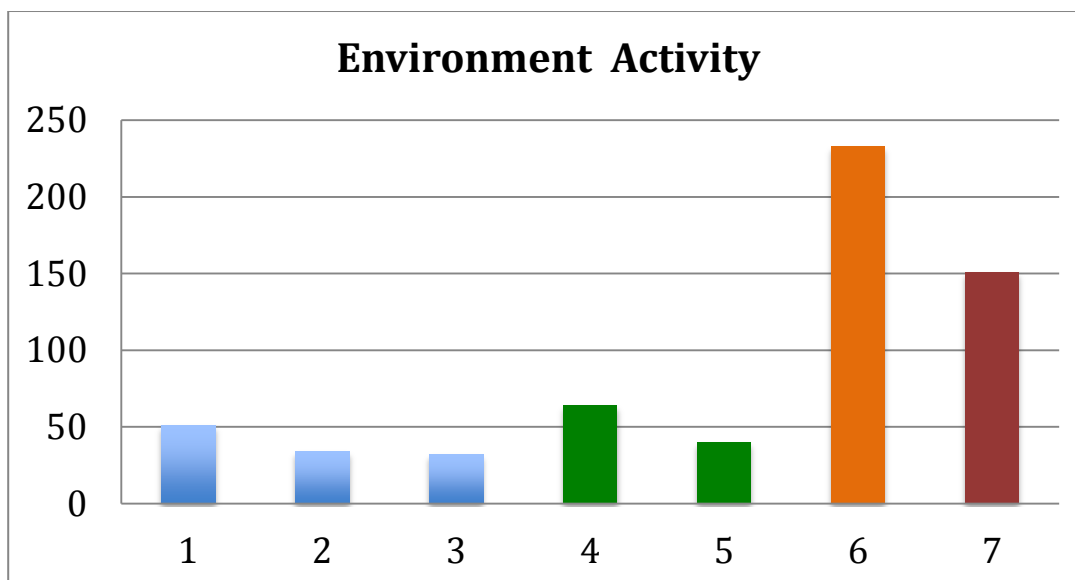


Fig. 7. “Environment Activity” index in different parts of Moscow. 1, 2, 3 – Temple of St. Nicholas; 4, 5 – Temple of Sts. Peter and Paul; 6 - Novodevichy Cemetery; 7 - Perepechinskoe cemetery.

It should be noted that the presence at the divine service significantly affects the state of the parishioners. For example, Fig. 8 presents a picture of the human energy field before and after the service. As can be seen, despite standing for more than two hours during the service, the energy has increased substantially.

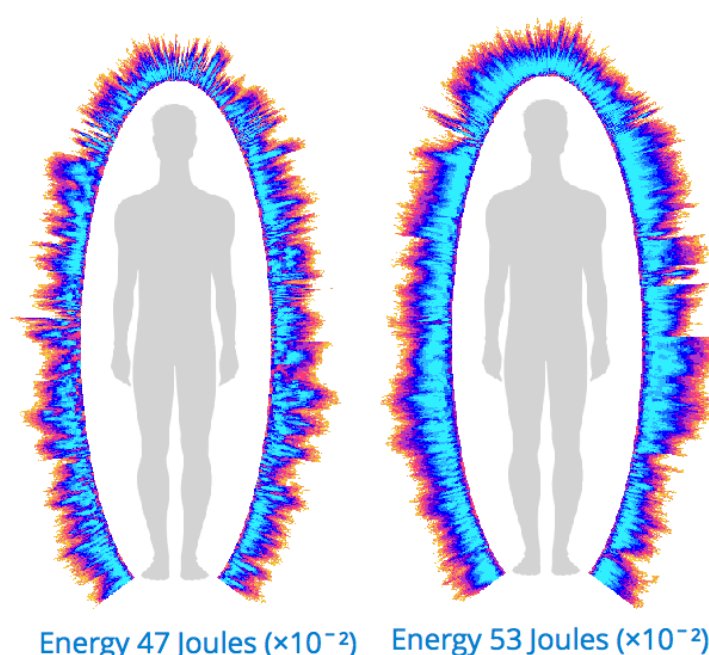


Figure 8. Picture of human energy field before and after the presence at the service in the Temple.

Discussion

In processing data from the Bio-Well device and "Sputnik" sensor, the most important parameters are the energy and activity of the environment.

The energy parameter represents the energy of the photons emitted by the metal sensor of the Bio-Well device under the influence of the electromagnetic field generated by the instrument modulated by the environment parameters [1,2].

The “Environment Activity” index is an assessment of the standard deviation of the signal of the device for 30 minutes. This parameter ranges from 0 to 300, and one can carry out the following analogy: from 0 to 60—it is like a calm sea; 60–100—it is similar to a wavy sea; 100–200—it is akin to a storm; more than 200—the conditions are those of a hurricane.

During the service at the Cathedral of St. Nicholas in the Temple, there were more than 200 people, so we may expect that the atmosphere in the room was changing due to their breathing and body vapors. It is natural to expect that it would have affected the sensor readings. Indeed, in the first 40 minutes, we see a significant decrease in the signal, which can be related to the influence of this factor (Fig. 1). It should be noted that the majority of parishioners came to the Temple before the service, that is, 10–15 minutes after the start of the recording signal. However, with the start of service (Area 3 in Fig. 1), the signal increased, and remained almost constant thereafter, but at the beginning of Father Nicholas’s sermon, we see a marked signal peak (Region 4 in Fig. 1). This suggests that the signal was not strongly dependent on a change in the composition of the atmosphere under the influence of a large number of people, but was influenced by other factors.

Also to be noted is that the “Environment Activity” index decreased in the first half-an-hour after the start of recording, and later remained at a low level (Fig. 2), indicating the harmonization of the environment under the influence of worship.

The statistically significant difference of signals measured near the Vladimir icon of the Mother of God, and at other places of the Temple, is impressive. This confirms the idea of a strong influence of this Holy icon on the environment.

At the cemeteries, both the energy and “Environment Activity” indices were extremely high. This is indicative of a particular condition of space in these places, but the one-time measurements are insufficient to reach any conclusions. From our experience with “Sputnik” sensor measurements [3], such high values of parameters may be unfavorable for long-term human activity.

All measurements were carried out in double-blind mode, i.e., signal recording was done automatically, with the analysis of the parameters on the server. Assessment of the results of the measurements was possible only some time after their completion and the impact on the result was impossible.

Conclusion

The above data confirm the idea of the favorable influence of the atmosphere of the Temple and Church service, as well as of the old icons, on the parameters of the surrounding space and the condition of the people present there. Further experiments are required to update these data.

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References