

De Vaticana Specula Astronomica Restituenda Et Amplificanda

English translation of the document issued by Pope Leo XIII re-founding the Vatican Astronomical Observatory

So that they might display their disdain and hatred for the mystical Spouse of Christ, who is the true light, those borne of darkness are accustomed to calumniate her to unlearned people and they call her the friend of obscurantism, one who nurtures ignorance, an enemy of science and of progress, all of these accusations being completely contrary to what in word and deed is essentially the case.

Right from its beginnings all that the Church has done and taught is an adequate refutation of these impudent and sinister lies. In fact, the Church, besides her knowledge of divine realities, in which she is the unique teacher, also nourishes and gives guidance in the practice of philosophy which is essential to understanding the scientific foundations of knowing - to make its principles clear, to suggest the criteria necessary for rigorous research and for a systematic presentation of the results, to investigate the soul's faculties, to study life and human behavior - and she does this so well that it would be difficult to add anything worth mentioning and it would be dangerous to dissociate oneself from her teachings.

Furthermore, it is to the great merit of the Church that the legal code has been completed and perfected, nor can we ever forget how much she has contributed through her doctrine, her example and her institutions to addressing the complex issues arising in the so-called social sciences and in economics.

In the meantime the Church has not neglected those disciplines which investigate nature and its forces. Schools and museums have been founded so that young scholars might have a better opportunity to deepen those studies. Among the Church's children and ministers there are some illustrious scientists whom the Church has honored and assisted as much as she could by encouraging them to apply themselves with complete dedication to such studies.

Among all of these studies astronomy holds a preeminent position. It proposes to investigate those inanimate creatures which more than all others proclaim the glory of God and which gave marvelous delight to the wisest of beings, the one who exulted in his divinely inspired knowledge, especially of the yearly cycles and of the positions of the heavenly bodies (Wisdom VII.19).

The Church's pastors were motivated, among other considerations, to see to progress in this science and to support its followers by the possibility that it alone offered to establish with certainty those days on which the principal religious solemnities of the Christian mystery should be celebrated. So it was that the Fathers at Trent, well aware that the calendar reform done by Julius Caesar had not been perfect so that time calculations had changed, urgently requested that the Roman Pontiff would, after consulting experts in the field, prepare a new and more perfect reform of the calendar.

It is well known from historical documents how zealously and generously committed was Our Predecessor Gregory XIII in responding to this request. He saw to it that at the place judged to be best for



an observatory within the confines of the existing Vatican buildings an observing tower was constructed and he equipped it with the best instruments of those days. It was here that he held the meetings of the experts he had selected for the reform of the calendar. This tower still exists today and it brings back the memory of its illustrious and generous founder. The meridian constructed by Ignazio Danti from Perugia is to be found there. Along the meridian line there is a round marble tablet whose lines are designed with such wisdom that when the sun's rays fall on them it becomes obvious how necessary it was to reform the old calendar and how well the reform conformed to nature.

That tower, a splendid memory to a Pontiff who is to be much praised for his contribution to the progress of literary and scientific studies, was, toward the end of the last century after a long period of inactivity, restored to its original use as an astronomical observatory by the auspicious orders of Pius VI. Through the initiatives of a Roman Monsignor Filippo Gili, other types of research were also undertaken on terrestrial magnetism, meteorology and botany. But, after the death in 1821 of this very capable scientist, this monument to astronomical research went into neglect and was abandoned. Right after this Pius VII died and the energies of Leo XII were completely taken up with the reform of studies in the worldwide Church, a huge undertaking aimed at promoting all branches of learning. Such a reform, which had already been planned by his immediate and immortal predecessor, came by his efforts to a happy ending with the Apostolic Letter, *Quod divina sapientia*. In this letter he established certain rules with respect to astronomical observatories, the observations which were to be made regularly, the daily list of data to be made, and the information that was to be distributed internally concerning discoveries made by others.

The fact that the tower in the Vatican was no longer used as an observatory, after others in Rome had been equipped for that very purpose, came about because those who were competent to judge were of the opinion that the nearby buildings, and especially the dome which crowns the Vatican basilica, would have obstructed observations. And so it was deemed preferable to have observatories in other higher places where unobstructed observations could be carried out.

It then happened that, after those observing sites along with the whole city of Rome fell into the hands of others, we were given, on the occasion of our 51st anniversary as a priest, many excellent instruments for research in astronomy, meteorology, and earth physics, as well as other gifts. It was the opinion of the experts that no place was better to house them than the Vatican tower, where, it seems, Gregory XIII had already in some way made preparations. After having evaluated this proposal and having examined the structure itself of the building, the history of its past glories, and the equipment already gathered there, as well as the opinions of persons renowned for their knowledge and judgement, we were persuaded to give orders that the observatory be restored and that it be equipped with all that would be required to carry out research not only in astronomy but also in earth physics and in meteorology. As to the lack of an unobstructed view of the heavens in all directions from this Vatican tower, we saw fit to consider providing the nearby ancient and solid Leonine fortification where there is a quite high tower which, since it rises on the summit of the Vatican hill, provides for complete and perfect observation of the heavenly bodies. We, therefore, added this tower to the one of Gregory and we had installed there the large equatorial telescope for photographing the stars.

To this purpose we chose conscientious men, prepared to do all that was necessary for such an undertaking, and we proposed to them a most competent scholar in astronomy and physics, Father Francesco Denza of the Clerks Regular of Saint Paul, also called the Barnabites. Relying on their dedicated work, we agreed wholeheartedly that the Vatican Observatory be chosen to collaborate with other renowned astronomical institutes in the project to reproduce from photographic plates an accurate map of the whole sky.

Considering the fact that we wish this work of restoring the Specola to be a lasting one and not one that terminates after a short time, we have established bylaws for it with rules to be observed both for internal administration and for the services which others require of it. Furthermore, we have appointed a Board of carefully selected persons whose responsibility it is to govern the observatory and they have the highest authority after our own for all decisions respecting the internal administration.

And so with the present letter we confirm those bylaws and that Board and we also assign the various jobs and all that, with our order or consent, has been done with respect to the Specola. And we desire that the Specola be considered at the same level as the other Pontifical Institutes founded to promote the sciences. In order to provide in a more secure way for the stability of this work, we even designate a sum of money which should suffice to cover the expenses required to keep it operating and to maintain it. Nevertheless, we trust that such a work will find its justification and support in the favor and help of Almighty God more than in what humans can do. In fact, in taking up this work we have become involved not only in helping to promote a very noble science which, more than any other human discipline, raises the spirit of mortals to the contemplation of heavenly events, but we have in the first place put before ourselves the plan which we have energetically and constantly sought to carry out right from the beginning of Our Pontificate in talks, writings, and deeds whenever we were provided the opportunity. This plan is simply that everyone might see clearly that the Church and her Pastors are not opposed to true and solid science, whether human or divine, but that they embrace it, encourage it, and promote it with the fullest possible dedication.

We wish, therefore, that everything that has been established and announced in the present letter will remain into the future confirmed and ratified as it is proposed herein and we declare null and void any attempt at changes by whatsoever person. And it remains established and confirmed, despite any previous contrary declaration.

Given in Rome at St. Peter's, 14 March 1891, the Fourteenth of Our Pontificate.