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Students participating in the Vatican Observatory Summer School attend a lecture on data in

Students participating in the Vatican Observatory Summer School attend a lecture on data interpretation at the Specola Vaticana, the Vatican Observatory, in Albano Laziale, Italy, June 20, 2023. (CNS photo/Lola Gomez)



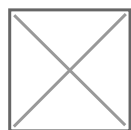
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Vatican City — June 22, 2023

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Scientists studying the cosmos should be willing to be surprised by what their research reveals about the immensity and complexity of the universe, Pope Francis said.

"In science and in philosophy alike, we can be tempted to obtain only those responses that we already expected, and not to let ourselves be surprised by new and unforeseen discoveries. My hope is that you will not remain content with the results of your research until you have also had the experience of being surprised," the pope wrote in a message to participants in the Vatican Observatory Summer School.

With its roots tracing back to the introduction of the Gregorian calendar in the 16th-century, the Vatican Observatory is one of the oldest astronomical institutions in the world. Today, the observatory, outside the pope's summer residence south of Rome, brings together a group of rising astronomers from around the world every two years for a four-week intensive summer course on different areas of astronomy.

While the students typically have a chance to meet the pope, he was in the hospital recovering from abdominal surgery on the date scheduled for their audience; his written message to them, signed June 15 at Rome's Gemelli hospital, was released by the Vatican June 20.

"The immensity of the universe has always been a source of wonder for humanity," he told the 24 students from more than 20 countries.

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"Its sheer size can be overwhelming, even frightening," the pope said. Yet as young astronomy scholars in the 21st century, participants in the summer school should seek "to grasp something of that vast expanse and to develop methods capable of better digesting and understanding the constant flow of new data."

The theme for this year's summer school is "Learning the Universe: Data Science Tools for Astronomical Surveys."

"Even with the best of tools," the pope told them, "the quality of their results depends on the wisdom and expertise of those who employ them."

The pope also encouraged the students not to neglect looking at other, non-scientific realities that are not visible through a telescope, such as love and compassion — "realities that you are no doubt encountering also in the friendships that you are forming in these days," he said.

Pope Francis underscored the particular moment in astronomy the students are living in, noting the "marvelous" images of faraway galaxies sent from the James Webb Space Telescope and the construction underway on the Vera Rubin Observatory in Chile, which is expected to track the expansion of the universe.

Yet even as humanity better understands the vastness of space, the pope said, "perhaps the most amazing thing about this universe is that it contains creatures like us, men and women who possess the ability to observe it with wonder and to 'interrogate' it."

**[Read this next: Vatican astronomer praises beauty and potential of Webb space photos](#)**