

Journal Entry: March 13, 2019.

I open the white file cabinet drawer and pull out the first drop folder. I quickly question why we are putting data in from the 1960's, when we have digital data for decades. I open the folder and find notes on the pictures drawn. We can get this same snapshot using our telescopes and computers now. This image was drawn with what could be seen with the unaided eye. As I look at the detail, I am impressed with the patience and precision of the data, but understanding that no one other than this astronomer could see this, unless another specifically asked for it.

Why is it important for scientists to share data? Why might scientist sometimes not want to share data?

Back then, astronomers jobs must have looked very different from what they do today. I turn on my computer, and can do all of my research and analysis using my computer. I can see astronomers' work from all over the world with a simple search. I can look at the same galaxy or a star from different perspectives from different times throughout the last 3 decades. This was not always the case. I pick up the glass plate and analyze the details and brief notes that are on it. These detailed images and comments are what is missing from some of these images. I do not have the patience to dictate every part of the sky the way this astronomer did.

How did technology shape the job of an astronomer?

In the 1960's, astronomers started to pair up with computer engineers and glass plates became a thing of the past. Computers were placed in telescopes and computers became a must for astronomers to do their job. Data and patterns could be collected more quickly and shared around the world. Today, I can access data from a telescope on the other side of the world. That was not always the case. Astronomers were having such a hard time transferring data due to the use of multiple different databases.

I look closer at the glass plate and look at the galaxies that are shown and only think about how this data was significant to them. Computers were introduced during the 1960's and never left our field. By the 1970's these glass plates were quickly being replaced by digital images. In 1979, astronomers across the world wanted to access everyone's data and converted everything into the File Image Transport System or FITS. Here I am, five decades later putting this data into the database.

How did technology benefit scientists? How do you think technology might have made their jobs more difficult?

As I start putting this into the FITS system, I was in awe and realized the growth my field has made over the years and in such a short period of time. I am impressed with the work that astronomers have done in the past to influence my job now. As I watch the loading icon, I cannot imagine sitting and focusing a telescope for hours three decades ago. It was not just the technology that progressed astronomy but the desire for better research and data.

How has astronomy changed over time?