

I have worked for many years in the field of astronomy, using instruments to collect and focus photons onto very sensitive detectors to image light from the most distant reaches of the universe. I follow the development of new and innovative techniques in this area, and have studied the reports of many scientists involved in it. It is fascinating to see how technology is used to visualize the awesome patterns of the stars and galaxies in the cosmos.

Some time ago, I got a request from an acquaintance of mine to come see his latest research. Oddly enough, he said that I needed to come on a rainy day. He worked not far away, and when I had a free day or two, I went to visit him. He greeted me warmly, and then ushered me into his laboratory. He asked me how I was doing, and I told him that I was a bit wet from the rain. He just laughed and took my coat.

He inquired about my work, and I told him that imaging light from the far corners of the universe and analyzing the patterns I saw was very fascinating. In my enthusiasm I went on for some time talking about constellations and galaxies and other unique features of the cosmos.

He listened politely, but as soon as I hesitated for a moment he steered me over to a custom-made apparatus and began to talk about his own current project. As he explained it, I found myself wondering about his mental state. Perhaps he was actually a crackpot or some kind of “mad scientist”.

He introduced his subject by talking about how much like my work it was. Where I imaged light from beyond the solar system, he was actually imaging the rain! He had developed new technologies to collect, quantify, and catalog the raindrops that fell from the clouds. While I captured and measured photons that came down in parallel from great distances, he was trying to perform a corresponding action with the rain, though their source was not very far away.

I began to argue with him about the differences between raindrops and photons. I had compelling reasons that I thought would prove to him that you can not focus rain and form images as you can with light.

But he just cocked his head a little, listening to the gentle rain, and pointed to the eyepiece of his contraption. He indicated that I should look, and so I decided to humor him. I worked the knobs to try to make some sense of something that I knew did not make any sense. I was skeptical as I moved through “focus”, but suddenly I was stopped by appearance of images forming in the field of view. I looked up from the eyepiece as though trying to connect back to reality, but when I looked again, I could still see the patterns. They weren’t like the constellations that I had studied since my childhood, but they were nonetheless characterizable. They were also dynamic, apparently moving with changes in the weather.

I couldn’t really understand what I was seeing. I knew the origin of rain, and the randomness of it. I had always thought of rain as something that obscured vision, not something that could show something meaningful. Of course, I knew about chaos theory, and understood that there was a certain sense of order involved in anything. But I wasn’t sure if the patterns I saw were significant or if I was just looking at a new type of Rorschach test. Was my friend’s instrument some kind of a higher order kaleidoscope?

He began to explain that his technique ultimately enabled the visualization of the statistics of the rain, rather than a direct image. Individual scenes don’t really mean anything, but the overall pattern of statistics gives evidence of the higher-level processes involved.

I thought about a similar situation that occurs when we view a rainbow. It is a virtual image, so to speak, because you can’t reach out and touch it. And if you move to another location relative to the sun and the water droplets or crystals, you lose the image entirely. I began to realize that my friend might really have something.

I asked myself, “Is God in control of every raindrop? Or is it more important to realize that he is in overall control of the statistics?” In a world where there is randomness and the uncertainty principle, this thought gave more meaning to the idea that He makes all things work together¹. This ultimate control is what Grace and Providence are all about. Suddenly the activity of God in the world made a lot more sense.

We talked together about all of this, and finally I had to leave. As I walked away, I asked him what was next, imaging snow? He just put a knowing smile on his face and gave me a wave goodbye.

1. Romans 8:28