HISTORY REPLAY IMAGES

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May 18, 1990

One night during an observing shift...

TO: "OD, TO. Changing to SWP format for a read."

OD: "Copy. We're green for the read."

TO: "OD, TO. We've just lost several minor frames. Is Wallops seeing these hits?"

OD: "Standby."

OD: "Wallops, IUE. We've just taken several hits. Did you see them on your strip chart?"

Wallops: "IUE, Wallops. We didn't see any hits."

OD: "OD, TO. Wallops didn't see any hits. They were probably system hits."

TO: "Copy. We'll have to request a history replay."

OD: "Roger. We will have Wallops save the analog tape."

The path that your IUE image takes to get from the satellite to your GO tape is a rather convoluted one. On rare occasions the signal received at the Wallops tracking station is interrupted, perhaps due to an antenna tracking failure or because the signal is weak. Because the camera readout is destructive, data lost at this point cannot be recovered.

A much more vulnerable path is the one that the data take AFTER the Wallops tracking station has received the telemetry from the satellite. From Wallops the data are blocked and relayed through an RCA communications satellite, to a Goddard antenna, through the NASA communications network (NASCOM), through the Telemetry Handling System (THS), to the Sigma computer, which then collects the data, reconstructs the original image, and writes it to disk and to tape. Fortunately if data are lost along this path, it is possible to have the Wallops station "replay" the data from their analog tapes so that the data may be recovered. These are known as "history replay" images.