

The SL-9/ESO Web Encounter

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The ESO Information System on the World-Wide Web (address: <http://www.hq.eso.org/eso-homepage.html>) was very much in the firing line during the Jupiter/Shoemaker-Levy 9 event. It was Monday morning, July 18, after the first impacts, when the WWW server collapsed with 250 simultaneous users, compared to a more usual figure of 10 before that. More simultaneous users were permitted, even if this meant that the system slowed to a halt. So it was to remain for many days.

The graph shows the impact caused locally, from July 16. "File accesses" includes the ornamental files – icons and so on. These are generally small, so they can be discounted in the number of bytes transferred. By Tuesday July 19, we were touching on a transfer of 0.7 GB. On Wednesday there was a slackening off. The intense media interest in the Q impacts led to a new high on Thursday.

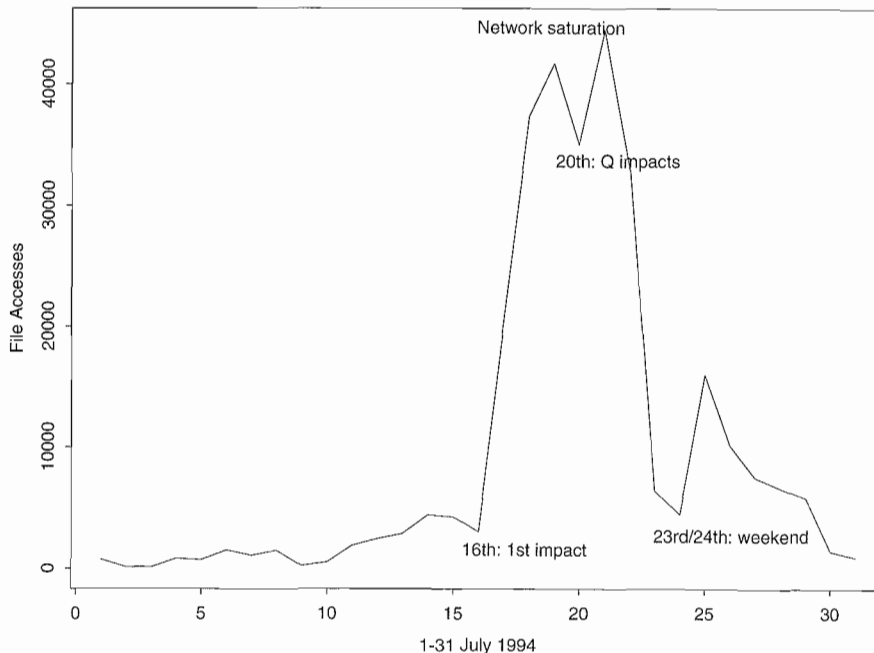
About 5 to 6% of the intense traffic was local in origin. The largest national affiliations of users of the ESO Web at that time (as derived from the email addresses of users) were (1) Germany – 80,000; (2) USA educational, commercial and governmental – 73,500; (3) ESO Garching and La Silla – 17,000; and (4) France – 12,000. Distribution of data by anonymous FTP also took place on a heroic scale. In addition, there were animations, and material was made available in many different forms, to cater for the unquenchable thirst of the television crews, the in-

terested public, and astronomers for visual information.

Other sites experienced similar impacts from SL-9. The Shoemaker-Levy homepage at JPL recently (early September) reported that their access count since mid-July had passed the 2 million mark. Commercial information

providers also saturated when faced with the new requirements to deliver images and text, colourfully and fast. By July 27, on CompuServe (ESO's press releases appear in the Astronomy Forum), 37 observatories had material available, with 25.3 GB of data being downloaded during the "comet week".

ESO WWW Server during SL-9 event: Daily Accesses



The Comet, Jupiter, and Everything: SL-9 and the Media – a Strictly Personal Impression

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It is not often that Richard West shows up in my office. "Don't plan on getting sick next week", he said. What had happened? The number of registrations for the media event at the occasion of the impact of fragment A had exceeded 100.

With just a few days to go, gigantic trucks had started to appear behind the ESO building, deploying huge dishes and pointing them at the sky. Bundles of cables were running down the circuitous hallways of the ESO building, camera positions were constructed in the auditorium and in the remote control room.

We were starting to get nervous. With the observers on La Silla we were just a few astronomers facing what in the end turned out to be about 120 media representatives. And

remember, at that time we were not at all sure that we were going to see anything spectacular. Dim memories of the Comet Kohoutek media disaster in 1974 came to our minds.

With the help of many of our colleagues, the ESO infrastructure was moulded into a support system for the event. The Council Room was turned into a press centre. The speaker system in the auditorium was connected to the telephone for remote call-in. A huge crane lifted a telescope onto the roof of the ESO building. Gotta have a telescope if you are an observatory, right? The idea was to connect a TV camera to the telescope and show the image in the auditorium.

And then they came. The serious representatives of government TV and the agile oper-

ators from the private stations; respected science writers and people from tabloid newspapers. Lights, camera, action! What will we see? We told you, we don't know. What will happen to Jupiter? Nothing. What will happen to the Earth? Nothing. What will happen to the comet? Crash! What would happen to the Earth if it were hit by the comet. Crash!

"Would you be available for a comment during a 30-second newsbreak following the impact?" one of the private operators was asking. "Sure", I said. Big mistake. They dragged me into the remote control room; they had established a phone link to Sutherland Observatory; the newsflash started exactly at the theoretical time of the impact; the reporter on the phone says to David Laney down in Suther-



Figure 1: Richard West juggling languages while tracking down the observers on La Silla. The path of the comet is indicated on the blackboard.

land: "Dr. Laney, thirty seconds ago the first fragment impacted, what do you see?" "Nothing", says David. A camera turns around and somebody sticks a microphone into my face. "We were just told that there is nothing to see; what do you have to say?". I really can't remember just what I said in the 20 seconds which were mine to say it in.

But within minutes we were vindicated. An e-mail message popped up, Calar Alto reported a huge fireball on the limb of Jupiter. And although it was still daylight in Chile, the impact was recorded just a few minutes later on La Silla. We asked for the image to be sent through the computer network. On the screen in the auditorium the image started to build in chunks from the top down. The lower left quadrant of a fuzzy disk took shape. When the display routine got to the 7 o'clock position, a large explosion became visible. Applause in the auditorium. Relief among the ESO people. But there was a moment of tension. "Wait", somebody said, "this might be a Jovian satellite". It was not. But it did take several minutes to clear things up.

The night wore on, but with the excitement thus kindled and impact B expected to be well visible from Chile, most people decided to stay. Food appeared in the ESO cafeteria, and it became apparent that some of the TV support crews must have had access to adequate amounts of good cheer.

Impact B was a surprise of a different kind – it was just about invisible. But reports kept coming in about A, so everybody was happy during the Sunday morning press briefing, especially since the photolab people had cranked out hundreds of hard copies of the images. Impacts C and D cooperated and produced nice fireworks. I called it quits at midnight on Sunday, Richard West stayed on: it was just getting night in Chile, and the bulletin for the Monday morning press briefing had to be produced.

Well, we thought, this worked out all right. It gave a nice show, we successfully projected the image of astronomy as a modern natu-

ral science, we showed them the world wide cooperation, the coordination between ground and space, and on and on. Now let's go back to work. Right? Wrong.

One of the few things we had not arranged was for Germany to be eliminated from the Soccer World Cup. In other words, some of the media were looking for something spectacular to concentrate on. So with fireballs having been seen, and the largest fragments yet to come, everybody decided to get a piece of the action.

For a vivid description of what happened, talk to Mrs. Völk, Richard West's secretary, who ably managed to channel the onslaught. It was only my knowledge of the internal passage ways of the ESO building which allowed

me to get from my office to a bathroom without being swamped.

Mrs. Völk will also be able to tell you some of the questions which she got from the public. One of the largest circulation daily papers had published her telephone number; she got all the questions which you can possibly imagine and a lot more which you cannot.

The wording "organic molecules" appeared in some of the messages from the observatories. Organic, as in organism, as in life. Life on Jupiter! Or on the comet? The comet inseminating Jupiter? Microscopic dinosaurs living on clouds of liquid hydrogen being mass-extinguished by the comet. Great stuff!

Thus inspired and further motivated by the fact that the largest impact, fragment Q, was going to happen during evening prime time, a "live show" was demanded. Three hours of continuous live coverage! What had started as an interesting experience on Saturday had turned into tedious work by Thursday. Also, the lack of sleep was beginning to catch up with us. The questions were becoming repetitive, and one of my main problems was to keep my answers from sounding that way.

During impact week we had no chance of seeing the results of our efforts in the media. When we finally did, weeks later, we found a considerable number of quite good accounts, we were surprised at some of the reports, amused by others, and angry about a few. Of course we were called astrologers at times; some of the condensed versions of some of the interviews had taken on a slant which was totally surprising to the interviewee.

Altogether it worked out quite well. ESO as a scientific organization came out quite positively; it is also nice to think that we might have kindled the interest for science in some of the kids who were watching.

I got what is probably the most relevant question from a young lady working for a Munich private radio station. "This is all very exciting", she said as she watched pandemonium unfold itself in the auditorium, "but is it interesting?"



Figure 2: One of the daily press briefings. Richard Hook (centre, in front of the terminal) keeping watch over the computer network.