

letters

ed. Of course, the misunderstanding is not surprising if "NSF accounts" are used as a source of information about European organizations. For our part, we shall continue to fly the "twin-engine, eight-passenger de Havilland" as a cost-effective replacement for a nine-hour drive from Santiago. US astronomers visiting the American observatories in Chile will continue to be welcome to use seats on the plane when space permits.

L. WOLTJER
Director General

10/83 European Southern Observatory

Your comparison between the spending of the Cerro Tololo and La Silla (ESO) observatories in Chile was highly inaccurate. The annual contributions of the member countries to the budget of the European Southern Observatory have totalled a constant DM 32.5 million (roughly \$12 million, rather than the \$25 million suggested in your article) for the last four years. This budget includes operations at ESO Headquarters in Garching (Germany). Apart from providing the necessary support for the observatory in Chile, Garching is a major research facility in its own right. It plays an ever-increasing role in fostering cooperation between European astronomers, by providing, for example, free access to plate measuring devices and image-reduction facilities (ESO will also host the European Coordinating Facility for the Space Telescope). In addition, what you describe as "a cluster of slightly smaller telescopes" is in reality an impressive array of 13 fully operational telescopes with a total collecting area well in excess of that of the telescopes at Cerro Tololo. All ESO telescopes are heavily oversubscribed, but observers on the hundreds of research proposals who are allotted telescope time every year get their trip from Europe paid for, all from the budget mentioned above. And yes, this includes the three-hundred-mile air trip from Santiago to the observatory in a chartered (and cramped) Cessna 402 (not a de Havilland); transportation on the mountain is in Renault 4s, a utility vehicle not imported in the US.

You wrongly cited the ESO as a prime example of the high cost of scientific research in Europe. In reality, ESO provides a high-quality observing facilities in a very cost-effective manner.

JAN KOORNNEEF
Space Telescope Science Institute
Baltimore, Maryland

11/83

The brief column "Observing in the High Andes" is remarkable for its

density of inaccuracy and misinformation:

► The plane leased by the European Southern Observatory is used to transport astronomers 600 km from Santiago to the foot of their site at La Silla. Cerro Tololo's Volkswagens are used solely for transportation on the mountain. In fact, most CTIO visitors travel from Santiago to La Serena by public bus (6-7 hours), which is more economical than flying, but also more tiring and time-consuming. CTIO also offers visitors the option of making the trip via domestic airlines.

► The name "Mayall" given to the Kitt Peak 4-meter telescope honors a former KPNO director. The Cerro Tololo 4-meter has no honorary name at this time.

► During eight years in Chile, I never heard any Chilean call anything "astronomy ridge." La Silla is located 180 km northeast of La Serena while Cerro Tololo is 80 km east. ESO operates 13 telescopes on La Silla, while CTIO operates 7. The largest ESO instrument is a 3.6-meter; the others are larger than or equal to their CTIO counterparts in size...

NOLAN R. WALBORN
Greenbelt, Maryland

12/83

Negative reaction

I grit my teeth when I read "Negative impact of computers" (October, page 121).

If a computer is dropped on a physicist's foot, that is an impact. If time is reversed and the physicist says "IhcuO," I might consider it a negative impact. Otherwise it is an adverse effect.

ROBERT ERCK
Argonne National Laboratory
Argonne, Illinois

10/82

Change in language

Physicists use models to represent systems of observables; human language is also an abstract model whose formal rules represent some conceptual structure. As I do not expect people arbitrarily to change axioms in current mathematical models, I was distressed when reviewing the page proofs of an article which will appear soon in *The Physical Review* to discover that, twice, the first word of an independent clause following a colon had been capitalized by the editors. They confirmed in response to my telephone call that this had been done "for stylistic reasons." Language changes and evolves, to be sure, but whatever advantage the editors see in their decision is misguided. I

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