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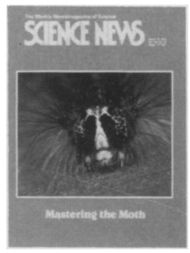
This Week

Research Notes

Articles



Departments

Letters

Careful study led to GRO reboost

The successful reboost of the Compton Gamma Ray Observatory (GRO) required NASA to solve some very complex, novel problems ("Drama in space: GRO gets much-needed boost," SN: 1/1/94, p.6). Through a methodical study process, over a 2-year period, we determined the cause and characteristics of the propulsion system anomaly. With this information, we developed and successfully used a safe, innovative approach to pressurize the propulsion system.

Several options were considered before we selected the one we employed. We did not spend 2 years with "unsuccessful maneuvers and anxious analyses."

The successful completion of this planned reboost was a significant accomplishment for NASA.

Thomas A. LaVigna
National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Md.

Questioning psi-ence

Bem and Honorton's experiments on telepathy probably do follow conventional rules on the design of statistical experiments, at least in outline ("Scientists Peer into the Mind's Psi," SN: 1/29/94, p.68). However, their application of the null hypothesis seems to be completely erroneous.

Pictures and video clips inevitably convey affect. Consciously or unconsciously, viewers may be inclined to favor one over another. Therefore, the outcome of that selection cannot properly be postulated to be random.

Assume that one of the pictures somehow suggests the mystical or metaphysical. "Receivers," knowing the purpose of the experiment, might well be consciously or unconsciously inclined to favor the selection of that particular picture, thus affecting all the probabilities involved. Since tested images and decoys are randomly selected, this would not challenge the definition of a "hit," a "miss," or the counting of same.

But consider the effect in the actual absence of psi. What would occur would be a rise in the true probability of hits. The smaller side of a set of odds is increased proportionately more than the larger in the presence of an additive probability increment.

So here one has the experimenters claiming success if they achieve a hit rate greater than .25, when the true probability may lie well above that. In fact, if the senders were dismissed without the knowledge of the receivers, the experimenters might continue to see the same "positive" outcomes.

Warner Clements
Beverly Hills, Calif.

In a further analysis of his data, Bem finds that receivers did not express preferences for particular clips or pictures based on content. However, receivers tended to identify as targets those clips that appeared either first or last in the four-item judging sequence. In addition, actual targets appeared most frequently in the third position. Bem argues that the mismatch between receivers' "position bias" and the bias in target presentation actually worked against successful psi performance. Bem's current ganzfeld study includes a no-sender condition. — B. Bower