letters

tectors having the same mass as the Maryland antennas and similar instrumentation.

Garwin has not analyzed any of our tapes and has not studied our computer programs. I deeply regret having to say that his analyses and statements about our experiments are not correct. For example, his equation 2 (Phys. Rev. Letters 31, 178, 1973) cannot be correct because the detector relaxation time is not contained in it. A detector with infinite relaxation time will never cross threshold and never give a false alarm. Garwin has not correctly reported my remarks at CCR-5.

I do not write any computer programs and do not process any tapes. My first-hand knowledge of our experiments is based entirely on other data including real-time counting and penand-ink records. We have never reported results in publications or at meetings based entirely on computer analysis of one series of tapes. Programming errors cannot therefore change the character of our conclusions.

Our computing staff has done an enormous amount of excellent work with surprisingly few errors. I take pride in the statement of Garwin that "they [University of Maryland] acknowledged an error within a week." If significant errors are made by our computing staff, the responsibility is mine. Arrangements were made to have our programs checked long before questions were raised.

We sent several copies of one tape, our number 217, to other laboratories for analysis, and there was an error in one of our programs. However, two of the other laboratories processed the tape incorrectly making larger errors than ours and these incorrect results were widely disseminated by Garwin. Subsequently all groups reached reasonable agreement. This required 14 months. As a result we have documentation supplied by physicists at other laboratories, checking our programs. Such documents confirm that the event rate for tape 217, the one discussed by Garwin, is 8 per day, in agreement with our published data, after we corrected the error and all other known corrections are applied. Copies of these documents have been sent to editors and other workers in this field.

Our error was acknowledged and corrected data published in the *Proceedings* of the Paris Relativity Conference CNRS 220, June 1973, and CCR-5 Cambridge 1974, GR7 Tel Aviv, June, 1974, Proceedings of the Tel Aviv Conference, and other publications in press. The Tel Aviv Conference Proceedings preprint also gives data on periods when no coincidences are observed and answers the questions raised by Garwin con-

cerning selection of data, histogram widths, and calibration.

Garwin's remarks refer to experiments involving two antennas at 1661 Hz and also to unpublished data on experiments involving antennas at 1661 Hz and 710 Hz. For the latter experiments we have reported a zero-delay excess of coincidences over accidentals, but have not claimed a positive result in open-literature publications or at meetings. Review of these data, applying all known corrections, leads us to conclude that there is a zero-delay excess, which is in fact larger than reported at Warsaw in 1973.

Computing errors have been an important factor in the politics but not in the physics of our experiment.

JOSEPH WEBER University of Maryland College Park, Maryland

Journal pecking order

Herbert Inhaber's article, "Is there a pecking order in physics journals?" (May, page 39) was mildly interesting and comforting, I suppose, to AIP, though it contained no surprises. No surprises? Inhaber thought he had one surprise-the first-place ranking of Review of Modern Physics in "immediacy index.' This comes as no surprise to most physicists. There is one and only one reason for RMP's first-place ranking on immediacy. That is the appearance (annually until 1970 and now in odd years) of the "Review of Particle Properties" by the Particle Data Group. This Landolt-Bornstein of the highenergy physics world is the single most cited paper in RMP. The choice of 1969 as the comparison year also helped RMP's score. There were only 21 papers published in RMP that year, down from 70 in 1967 and 55 in 1968 (the average for the last 4 years has been 15.5).

Incidentally, if Inhaber had chosen 1972 for his comparison year, *Physics Letters* would have shown a high "immediacy index." It had the "Review of Particle Properties" that year. *Physics Letters* would then have been judged to obey the correct (that is, expected) pattern for immediacy, but for the wrong (?) reasons!

J. D. JACKSON University of California Berkeley, California

THE AUTHOR COMMENTS: Jackson is correct in his first paragraph. The high "immediacy index" of RMP in 1969 was primarily due to the article by N. Barash-Schmidt and others of the Particle Data Group, which accounted for about 60% of the same-year citations in 1969. The same situation probably prevailed in 1970, when A. Barbaro-Galtieri et al received even more citations in the

BUILD THEM BETTER AND CHEAPER IN YOUR MACHINE SHOP?

PRECISION

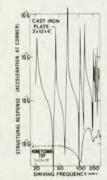


Precision ball movement on hardened ways. Unique dovetail track mounting of the drive mechanism allows either right or left hand drive configuration and the drive block to be positioned anywhere along the sides of the stage. The Model 420-0.5 shown here is 3x3x1" in size and incorporates a ½" drive micrometer (\$75). Also available with a 1" travel screw drive (420-S1 at \$65). Larger 2" movement version with 1" micrometer travel 430-1 (\$95), and with 2" micrometer 430-2 (\$120). All versions stackable.



- MM-1 1"x1" mini mount \$29
- MM-2 2"x2" as shown (without base) can be used as a tilt table \$26
- MM-2-0 has 1.25" aperture; ideal for 1" mirror, lens, or beamsplitter (\$30)
 With base, MM-2-B \$35, MM-2-0-B \$39
 Rotational Stage \$45

ADVANCED TECHNOLOGY TABLE SYSTEMS



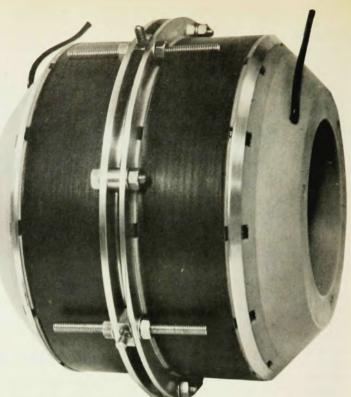
Four years ago, NRC was a newcomer. Today, NRC outsells all its competitors four times over. Why? NRC vibration isolated table systems offer orders of magnitude better performance, immediate delivery and competitive pricing.

Curve shows unmatched dynamic rigidity of NRC table top with proprietary internal damping system — the only effective system against typical acoustic excitations!



Circle No. 15 on Reader Service Card

superconductive magnets or a complete cryomagnetic system



OXFORD INSTRUMENTS...FOR
INTEGRATED SYSTEMS MANUFACTURED BY A SINGLE COMPANY

Strong magnetic fields to 11.OT and accurately controlled variable temperatures down to .3K. These are the high performance parameters you'll get from a cryomagnetic system constructed for you by Oxford Instruments. We'll help you determine the most efficient design and components for magnets, cryostats, elec-

tronics, computer interfacing and accessories to assure the most precise facility for spectroscopy, magneto optics, nuclear studies and magnetic susceptibility. Please contact us for detailed information, literature or prices. Call us today and discuss your application with a fellow scientist.

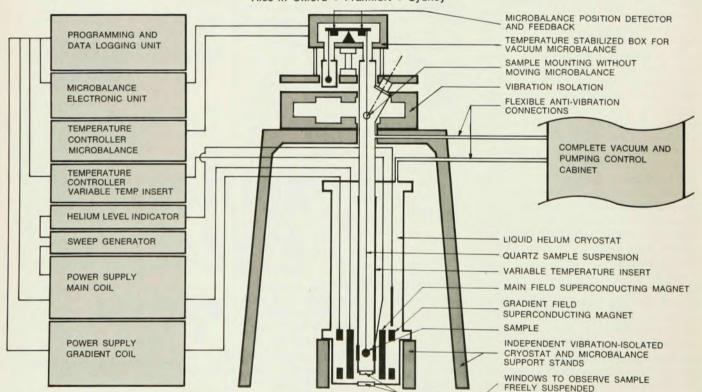
(E)(E

alus

OXFORD INSTRUMENTS, INCORPORATED

48 Maryland Avenue • Annapolis, Maryland 21401 • Phone (301) 268-2350

Also in Oxford • Frankfurt • Sydney



Typical magnetic susceptibility system supplied by Oxford Instruments

Circle No. 16 on Reader Service Card

letters

same year than Barash-Schmidt had received in 1969. However, since then the number of citations to Particle Data Group articles in the year of publication has decreased markedly, to about 7 per year from the 1969-70 average of 43. Since Physics Letters receives far more citations than RMP generally (a ratio of 2.4 in 1969), I think it unlikely that the former journal's immediacy index was significantly affected by the inclusion of the Particle Data Group's article in 1972.

HERBERT INHABER Environment Canada Ottawa, Canada

I was disappointed that the Journal of the Electrochemical Society was not listed in Inhaber's study.

I learned about the society's important contributions in my freshman year at East Texas State University, when I was asked to present a paper at a society meeting.

The contributions extensively covered in the journal are in such fields as solid-state technology, including luminescence and semiconductors, corrosion, and electronics.

Surely such a journal would be cited enough to be included in the study, unless many physicists do not know such a society exists. I will admit, the journal is specialized, and does lean toward applied research.

Anyone interested in the Electrochemical Society may write: Electrochemical Society

> P.O. Box 2071 Princeton, New Jersey 08540 GLEN SPIELBAUER Quincy, Illinois

Status of women

The Committee on the Status of Women of the American Physical Society conducts several programs which we would like to bring to the attention of

the physics community.

One of the Committee's principal activities is an employment information clearing house, which is operated by Dr Mary Shoaf, 335 East 45th Street, New York, New York 10017. Women physicists seeking employment should register by writing to Shoaf. Prospective employers are urged to send job descriptions to her, allowing sufficient time to circulate the information to potential candidates. A model resume is being prepared to serve as a guide for women who need assistance in presenting their qualifications for the positions they are seeking. Copies will be available from Shoaf at the address given above.

We would also like to remind pro-

spective employers of the "Roster of Women in Physics," which can be ordered from the Placement Service. American Institute of Physics, 335 East 45th Street, New York, New York 10017. This document also contains some statistical information; more information is available in the report of the Committee on Women in Physics, the Bulletin of the American Physical Society, Series 11, 7, No. 6, p. 740, June

A number of people have proposed that the Committee concern itself actively in legal activities in connection with grievances arising from unfair employment practices. The Committee does not consider that it can effectively provide legal services or advice, but we are prepared to give information about the existing laws, and about organizations that can give specific advice about legal matters.

We hope these activities will be of practical use to women physicists, and that by helping to establish equal opportunity they will also serve the community at large. We welcome any suggestions about ways this committee can be of service.

MILDRED WIDGOFF Brown University Providence, Rhode Island

NSF support for studies

In the "APS News" section of the June

result of a meeting called by H. Guyford Stever, Director of the National Science Foundation, with presidents of most of the major scientific societies of the nation. Stever expressed his interest in improving communications between the science societies and the Foundation, and in encouraging the societies to expand their capabilities to provide scientific advice to the government. The APS responded vigorously to this call and developed two proposals; one is the Summer Study on Reactor Safety, held in August of 1974 in Los Alamos, and the other is a study of the physicist's role in energy conservation, held in July 1974 at Princeton.

Both of these studies were extremely policy relevant and are being supported by the NSF Office of Energy R&D Policy, an office established by Stever to fulfill his new responsibilities (as of 1 July 1973) as Science Adviser to the President.

To ensure maximum coordination within the Federal Government, the Office of Energy R&D Policy arranged that both studies be jointly funded with the agency having primary responsibili-

4" 9732R 50 1250 10 9709R 50 1350 15 Note that the anode dark current is given for the overall voltage at the specified overall sensitivity. The maximum overall sensitivity is 10 times the values given above. Each Tube is individually calibrated and data is supplied with the tube. Send for our new 64 page catalog giving data and technical information on the complete range of EMI photomultipliers.

The new range of EMI photomultipliers with

"SUPER" S-11 photocathodes will enhance your

project performance. High quantum efficiency,

(23/24%) high gain at relatively low overall

voltage, and low dark current at the rated over-

all sensitivity are typical of these types. They

maintain the EMI standard of excellent gain stability and linearity. The narrow spread in

characteristics makes these types ideal for sys-

tems or for multiple installations. The table

below gives the typical values for the signifi-

Amps/

Lumen

50

50

200

Volts/

Overall

1150

1250

1300

Anode Dark

Current

Nanoamps

2

5

25

cant parameters.

Dia.

2"

3"

3.5"

Type No.

9656R

9708R

9531R

flying spot

GENCOM DIVISION

80 EXPRESS STREET, PLAINVIEW, N Y 11803 TELEPHONE (516) 433 5900

Circle No. 17 on Reader Service Card

issue (page 59) a note appears describing the APS Summer Study on Reactor Safety. The following facts relating to this study should be of interest to the physics community. The APS study was developed as a

continued on page 63

PHYSICS	TODAY	DECEMBER	1974
---------	-------	----------	------