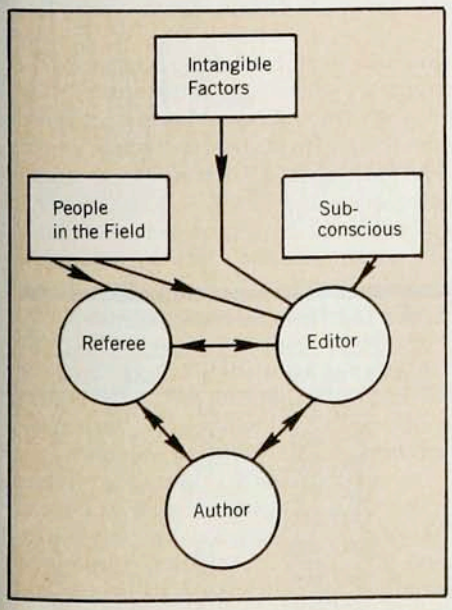
letters

More on editormanship

It is unfortunate that Author (A) Agnes M. Herzberg is not up-to-date with the bibliographical list of her otherwise challenging article (April, page 9). It is distressing that the Referees (R) and Editors (E) of PHYSICS TODAY did not notice that her most recent reference dates back 10 years!

In the course of these years the Game of Editormanship underwent some subtle changes. In one variety, the number of players is not limited to three (A, R, E) any more, but is open to People in the Field (PF) as well. Thus Referees of *Solid State Communications*, in order to be able to "arrive at sensible decisions" are urged to "use as a guide" the following question: "Will people in the field be 'glad to have seen it'?" (the article).[1] It would be erroneous to conclude that the R is required to poll the PF: Virtual interaction is perfectly acceptable. A similar interaction may also take place between the E and the PF: ". . . . the E has other factors to consider . . . there is his view of what the journal should be like, subject to possible gradual modification as a result of feedback from the community he serves." [2]

Another entertaining possibility is that the rules are changed midgame by E and, moreover, the new rules are kept undisclosed to both A and R: "We insist . . . that as long as we are called to make judgements, we are not obligated to disclose all the factors that were considered. Indeed, some of them are obviously intangible and may often even be subconscious." [2] Clearly one is confronted with a manybody problem: The relevant interactions are shown in the figure.



Incidentally, the present letter illustrates well the art of Pointsmanship, as practiced by an A. The Pointsmanship Index (PI) is defined as the number of readers of an article divided by the number of *work* days dedicated to writing it (estimates). (The definition may be readily generalized to the cases that the paper is coauthored by two or more authors and that the same work (with slight changes) is published in two or more journals.) For example, PI $\sim$ 1 for a typical article in the *Physical Review* (100 readers/100 days). On the other hand, for this letter PI $\sim 10^5$ (30 000 readers/0.3 work days)!

References

1. Solid State Commun. **28**, v (1978).
2. Phys. Rev. Letters **42**, 545 (1979).

P. HALEVI
Universidad Autonoma de Puebla
Puebla, Mexico

5/15/79

France in 30's = US in 70's?

I enjoyed Spencer Weart's article "Jean Perrin and the Reorganization of Science." (June, page 42). However, the description of the situation in the French physics community in the early 1930's seems strangely familiar; "The operating expenses of most laboratories were dictated . . . by government bureaucrats (who) . . . worked closely with a small circle of established professors, some of whom had done little productive research for many decades . . . There was little room for new blood . . . the number of science students rose to about double . . . but the number of university professors actually declined . . . students whose careers were blocked . . . the academy of sciences dominated by aged conservatives" and so on. If I had not read the introductory paragraphs, I would be almost certain that this was a description of the situation in physics in the US in the

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A. Transmission of NH_3 near 1248 cm^{-1} showing 8 weak absorption lines (pressure x path length product = 88.56 cm Torr).The sloping background is due to increase in source intensity.

B. First derivative spectrum of *A* illustrating accentuation of weaker NH_3 lines.

C. Second derivative of *A* showing further accentuation of weak NH_3 lines. Note that the second derivative signal has been used for exceptionally low level detection of NH_3 (< 0.1 ppb).

D. Frequency calibration with 0.0297 cm^{-1} fringe spacing.

E. Calibration results using adjacent $10^{0}0\text{-}00^{0}0$ N_2O lines as reference frequencies.

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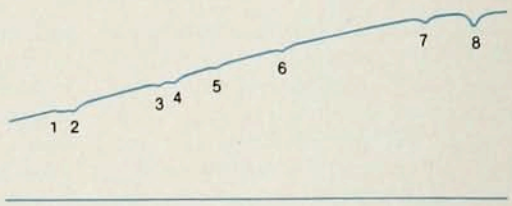
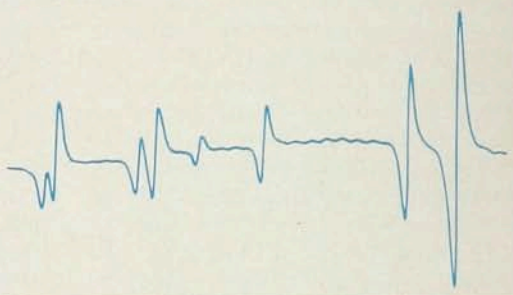
A. Transmission Spectrum - ν_2 band of NH_3

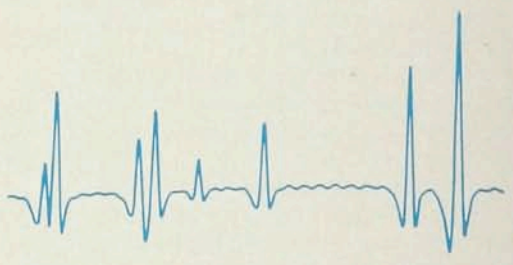
Pressure: 5.4 torr.
Path length: 16.4 cm



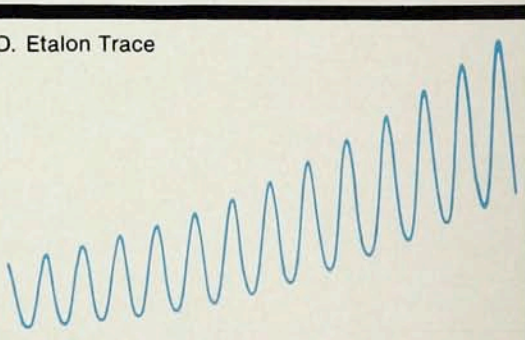
B. First Derivative



C. Second Derivative



D. Etalon Trace



E. Line Positions and Tentative Assignments

Line ID#	Line Pos. (cm^{-1})	J	ΔJ	K
1	1247.317	14	1	6
2	1247.325	14	1	9
3	1247.393	14	1	5
4	1247.412			
5	1247.441			
6	1247.493	14	1	4
7	1247.604	14	1	3
8	1247.642	14	1	10

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letters

'70's rather than France in the '30's. It seems to me that the main problem that we face today is the domination of the decision-making apparatus in the physics community in the US by a small group of individuals who came into prominence during the Manhattan Project era or slightly after, and are now unwilling to relinquish their power to make way for new blood and new ideas. Jean Perrin where are you now that we really need you?

ROBERT JOEL YAES
Memorial University of Newfoundland
Newfoundland, Canada

7/3/79

Bathroom mystery

I was fascinated by the code number on my White Cloud bathroom tissue, 2998MC2, since the first four numbers suggest the speed of light in cm/sec, and the last three symbols suggest mc^2. I assume that this is not a coincidence. Either this is Proctor & Gamble's way of celebrating Einstein's birthday or it is a coded message by a physicist pleading "Help. I'm trapped in the White Cloud factory!" Who done it?

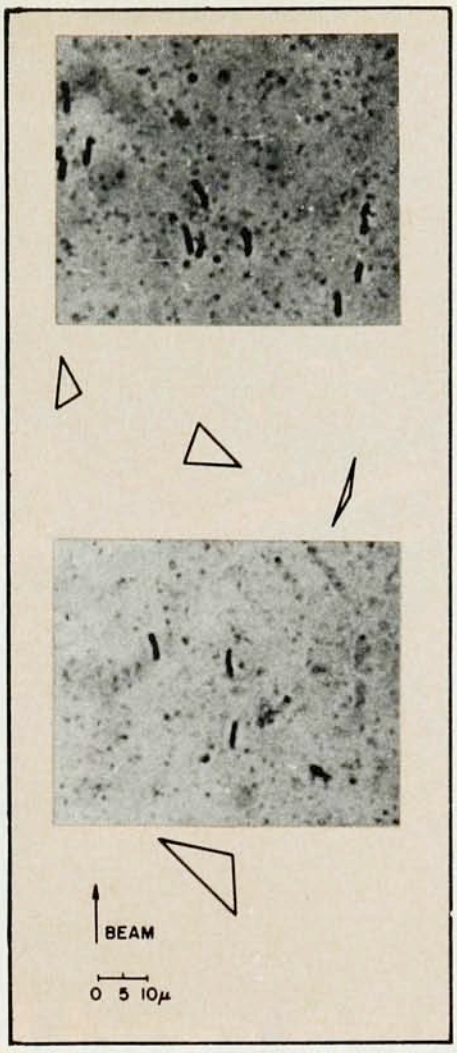
HOWARD GEORGI
Harvard University
Cambridge, Massachusetts

3/19/79

Molecular Ions

We enjoyed reading your well-written news report: "Fast ion beams reveal structures of molecular ions" (May, page 17). In fact, one of us (Z.V.) had the pleasure of collaborating with Don Gemmell in many of the studies described in the article. At the Weizmann Institute we started a research group (after a visit of Don Gemmell in 1975) on similar lines and made some contributions of our own.[1,2]

We believe that the picture of the "state of art" conveyed in your article cannot be complete without mention of the special experimental technique used by us for the structure determination of the H_3^+ molecule (in ref. 4 of your article). Nuclear emulsions were employed to record the fragments of H_3^+ dissociations. The photographs display tracks of 700-keV protons which appear in clusters of three. The three protons result from explosion of a single H_3^+ molecule in a 100-Å-thick carbon foil. The unique feature of the "snapshot" of a molecular explosion is that the three-body correlation is immediately apparent. For example, it is enough to observe one triangular set of proton tracks to conclude that the H_3^+ structure is nonlinear. This is the only experiment in which all three exploded components were simultaneously recorded. The three-body correlation plays an important role when events like those in the picture are statistically compared with theoretical hypotheses of molecular structure.



An extension of this technique to ions other than protons and to molecules containing more than three atoms has been made possible by our development of a new type of silicon detector for particles, which will soon be used to measure a variety of molecular ions.

References

1. A. Faibis, G. Goldring, Z. Vager, Phys. Rev. Lett. **39**, 695 (1977).
2. A. Breskin, A. Faibis, G. Goldring, M. Hass, R. Kaim, Z. Vager, N. Zwang, Phys. Rev. Lett. **42**, 369 (1979).

ZEEV VAGER
GVIROL GOLDRING
The Weizmann Institute of Science
Rehovot, Israel

5/30/79

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I wish to remedy an omission in the news story "Fast ion beams reveal molecular-ion structure." In listing the collaborators involved in our work at Argonne, the name of Zeev Vager (Weizmann Institute, Israel) was unfortunately left out. Vager

continued on page 102