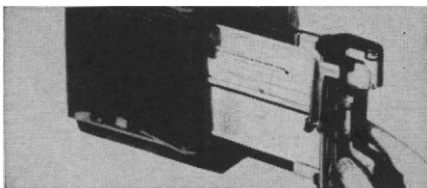
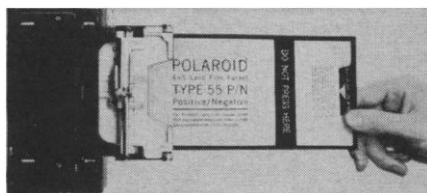


How Polaroid 4x5 Land film gives you both negative and positive in 20 seconds outside the darkroom.

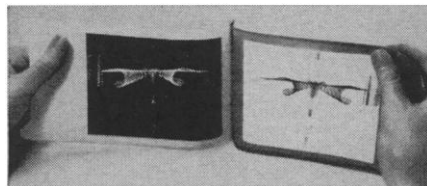
It's this simple to get both negative and positive without using the darkroom. Time required: 20 seconds.



Put a Polaroid 4 x 5 Land Film Holder in any camera that has a Graphic, Graflok or similar back.



Insert a Type 55 P/N film packet into the holder, and expose as you would with any panchromatic film rated at A.S.A. 50.



20 seconds later you have a fully developed, fine grain negative and a positive that matches the negative in every respect. Positive and negative develop in their own packet outside the camera, outside the darkroom. The negative needs only to be washed and dried to be ready to print or enlarge. Resolution is better than 150 lines per mm.

Type 55 P/N film is one of four special Polaroid Land films for 4 x 5 photography.

Type 52 film produces a virtually grainless paper print in 10 seconds. It has an A.S.A. rating of 400 and is ideal for general purpose 4 x 5 photography.

Type 57 film has an A.S.A. rating of 3200 for use in extremely low light conditions. It also produces a finished print in 10 seconds.

New Type 58 Polacolor 4 x 5 film is now available. It produces a full-color print just 60 seconds after exposure. The colors are rich and beautiful and skin tones are especially accurate. Speed is 75 A.S.A.

The Polaroid 4 x 5 Land system gives your camera more versatility, opens up new opportunities for you in 4 x 5 photography.

"POLAROID" AND "POLACOLOR"®

The proposal that reprints should be purchased directly from the publisher seems to us an excellent one. Motivated by the same considerations as the authors of that proposal, we have put an alternative scheme into practice. The reprint requester is sent by return mail a mimeographed form letter, with a request form which he fills out and returns:

Dear Dr. _____:

We (have received) (expect to receive) your request for our publication entitled _____ reference _____

Because we are swamped with requests for reprints of this paper, and have only a limited supply of reprints available, we must restrict the number of requests that we honor. We enclose therefore a form for you to fill out, in the hope that the inconvenience it causes you will be more than compensated for by a more equitable distribution of reprints than we have, heretofore, achieved.

APPLICATION FOR REPRINTS

(Please use block letters)

(I) (We) wish to apply for _____ copies of your reprint

entitled _____

and published in _____

on (date) _____

Use to which reprint will be put (personal use, reprint library, teaching, etc.) _____

Applicant's major field of interest _____

Full academic title _____

Faculty: tenure _____; nontenure _____

Scientist: full time _____; part time _____

Student: degree sought _____; date degree expected _____

Name of university or institute _____

Research supported by _____

Annual budget: \$0-\$10,000 _____; \$10,000-

\$50,000 _____; \$50,000-\$200,000 _____;

over \$200,000 _____

List your three most recent publications:

1) _____

2) _____

3) _____

Have we received reprints of these? (No or yes)

1 _____ 2 _____ 3 _____

Date _____ Signature _____

As a form of unselfish, preeminently useful international communication, reprint exchange has few parallels. Commercializing it would benefit few, not even publishers, and would hurt nearly everyone. Aside from the resulting dehumanization, increase in trouble and costs (a check for a 20-cent reprint adds 50 percent to the price), and dampening of the spirit of cooperation, commercialization would hurt those who need reprints most but can afford them least—young graduate students, scientists in areas poorly served by literature sources, and especially scientists in countries where payment problems would greatly restrict the receipt of needed reprints. . . .

FRANK T. MANHEIM

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Meetings: Do's and Don'ts

The views expressed by Page ("The globe trotters," 20 Nov. 1964, p. 1001) and Wolstenholme ("Obese degeneration of scientific congresses," 16 Sept. 1964, p. 1337) are shared by many scientists. Having attended scientific meetings since 1930, I have noticed their growth in size and their decline in usefulness as a source of information, as a forum for the free exchange of ideas, and as a source of new acquaintances. Prior to World War II, scientific and technological meetings were windows through which one was privileged to view the research and engineering activities of others. Today, not only is the view obscured by the large attendance but also the scene, if one is so fortunate as to get a peek through the window, is identical to that of a similar meeting 6 months or so earlier. It is the purpose of this letter to call attention to one scientific meeting which was planned to stimulate the intellectual curiosity of the scientists and which was a forum at which the scientists had ample opportunities to subject their ideas to critical reviews. This was the Third International Conference on Atmospheric and Space Electricity, held in Montreux, Switzerland, in May 1963.

As chairman, I had no constraints imposed on me. I was given complete freedom to formulate the program and to organize the meeting. Letters were dispatched to all the scientists active in the discipline, inviting them to define what, in their views, were the im-

portant problems in atmospheric and space electricity. The response, even from the U.S.S.R. scientists, was practically 100 percent. From these "data" I formulated a scientific program, which was circulated to all concerned with a request for suggestions and constructive criticisms. These were duly studied. The salient suggestions were included in the final program, which consisted of approximately 20 important problems.

My next choice was to find speakers who were willing to discuss each of these problems in a short, concise paper. I had more volunteers than problems. Each speaker was required to submit his paper not later than one year before the conference. The papers were reproduced and distributed for comments and criticism to all the invited scientists. These comments and suggestions were edited and redistributed. Inserted in the last distribution was a note informing everyone that only a résumé of the paper would be presented at the conference, and that each conferee should come prepared to discuss each paper. They did.

The papers were grouped into problem areas or sessions. The most important task in a meeting of this type is the selection of knowledgeable and articulate chairmen of the sessions. Fortunately, a large number were available. Each chairman was "primed" to provoke discussions and arguments. (This proved unnecessary, because all the discussions were vigorous and heated.)

The meeting place selected had a long history of catering to international geopolitical gatherings. The Montreux Palace Hotel provided complete hotel accommodations to the conferees and a large, well-equipped meeting room with cloth-covered tables. On each table there were two microphones which were under the control of a monitor. No one had to stumble over chairs in order to get to a microphone. The proceedings were recorded professionally on tape and immediately transcribed by a battery of secretaries. The transcriptions were reproduced and available to everyone.

Two years of effort were required to organize this conference and to implement its plan. What results accrued from it? I have received many letters from the 180 conferees extolling all aspects of the conference, but more important was the information that

they have initiated new research programs based on ideas acquired at the conference. Prior to the conference, there were about 20 countries actively engaged in atmospheric and space electricity, whereas today there are about 36, indicating an expansion of research efforts and also an attraction to it of younger scientists.

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Herbstreit's report on the recent Radio Meteorology and Weather Radar Conference (1 Jan., p. 76) speaks favorably of the manner of its organization. The organization consisted of an advance printing of all accepted papers in lieu of their oral presentation, coupled with the use of "lead speakers" to present review papers and to introduce the discussion of new developments reported in the contributed papers. Herbstreit says that "This method of operation for the most part worked extremely well, and except for a few instances in which the conference participants had not done their homework, resulted in participation in the discussions of almost the entire assembly of over 300 scientists and engineers. . . ." I attended many of the sessions of this conference, and my observations were considerably at variance with Herbstreit's.

The preprints were very useful in alerting me to what I wanted to hear more about and to what I wanted to question. Unfortunately, many of the authors were not in attendance and thus contributed nothing in person to the conference. Publication in a regular journal, in more complete format than that of the preprints, would have been as effective, if not more so, through reaching a wider audience.

The lead speakers seemed to come in three types. The first type consisted of those who detailed their own work, thus functioning as normal contributors to a normal conference. However, they mainly tried to direct questions and comments away from their own work to the contributed papers. Here again, the absence of the authors was unfortunate. The second type consisted of those who hadn't done their own homework, as Herbstreit said of some participants, and who seemed to be "marching to a different drum." Fortunately, this type was small in number.

The rarest was the third type: those few lead speakers who spoke to the subjects of the contributed papers and led off and controlled the ensuing discussion.

In the absence of authors, the discussions contained much guessing and deducing. With poor leadership, there was much trotting out and displaying of favorite horses. Far from "participation . . . of almost the entire assembly," most of the discussing seemed to be done by a handful of loquacious participants, among whom I must number myself.

My ultimate comment concerns the inadvisability of ever so organizing such a conference again. If the experiment is repeated, perhaps it should be modified by requiring a heavy attendance deposit from all authors, and convening the lead speakers one day prior to the conference to go over their review papers and instruct them in spreading the discussion around. I still claim that the ideal conference is the author standing beside you in an otherwise deserted bar with plenty of paper napkins for sketching upon.

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Addendum

I found Dael Wolfe's recent editorial on the AAAS support of Goddard's work (25 Dec. 1964, p. 1639) most interesting and refreshing, particularly as a stark contrast to current concepts of the amount of funds necessary to support worthwhile research. I should like to insert in the record, with what I believe to be justifiable pride, the fact that the funds provided by the Smithsonian Institution in support of Goddard's work were given to the Smithsonian for that specific purpose by Research Corporation. To those of us who are currently associated with Research Corporation, these grants for the support of Goddard's work exemplify many similar grants made early in the history of the foundation that impress us with the wisdom and prescience of our predecessors.

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