

RHEOLOGY BULLETIN

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THE SOCIETY OF RHEOLOGY EXECUTIVE COMMITTEE - 1993-95

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Bingham Medal Nominations

Nominations for the 1995 Bingham Medal should be submitted **before January 15, 1995**; more details will appear in the July 1994 Bulletin. Revised rules governing the Bingham Medal Award and guidelines for the Bingham Award Committee were published in the July 1993 Bulletin. A complete list of previous Bingham Medalists can be found in the Membership Directory.

Student-Member Travel Grants are available.

Page charges for the Journal of Rheology have been dropped.

66th ANNUAL MEETING PHILADELPHIA OCTOBER 2-6, 1994

The next annual meeting of the Society of Rheology will be held in Philadelphia. The meeting organizers are:

Technical Program Chair:

Antony Beris
Department of Chemical Engineering
University of Delaware
Newark, DE 19716
(302) 831-8018, Fax: (302) 831-1048
Email: beris@che.udel.edu

Local Arrangements Chair:

Norman Wagner
Department of Chemical Engineering
University of Delaware
Newark, DE 19716
(302) 831-8079, Fax: (302) 831-1048
Email: wagner@che.udel.edu

Philadelphia is one of America's oldest and most historic cities. Located at the start of the Delaware Bay along the Delaware River, Philadelphia has been and continues to be one of the most important ports along the Atlantic seaboard. A continuous stream of immigration and trade has left its mark on the rich ethnic and historic life. Well known for the Liberty Bell, the Continental Congress, and Society Hill, Philadelphia also proudly invites visitors to enjoy its Art Museum, Franklin Institute, Academy of Music, Academy of Fine Arts, Walnut Street theaters, and ethnic and antique markets. The Amish country, New Jersey's aquarium, Atlantic City, and Longwood Gardens are just a few of the surrounding attractions. The warm Indian summer days (in the upper 70s) and pleasantly cool nights (lows in the 50s) of October not to mention the turning foliage, make Philadelphia's restaurant and entertainment offerings all the more attractive.

RHEOLOGY BULLETIN
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(505) 844-9132 (Secretary)
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The meeting will be held in the Hotel Atop the Bellevue, located at Broad and Walnut Streets on the "Avenue of the Arts" in center city, a hotel that has been consistently rated as one of the city's best and the choice of Presidents since its founding in 1904. This historic national landmark has recently been renovated to include the most modern of amenities; the Bellevue offers tea, cocktail, and library rooms, along with superb restaurants, a food court, a dozen of the city's finest shops, a European Spa and a 93,000 square foot health club; access to the latter being free to guests of the hotel. The complete concierge services can provide entertainment and sporting tickets, along with tour and travel arrangements. Conveniently located just 25 minutes from Philadelphia International and 10 minutes from Amtrak's 30th street station, there is also ample parking adjacent to the hotel. Special conference rates will extend to stays before and after the meeting. Also, an accompanying persons program is planned to run during the course of the meeting.

TECHNICAL PROGRAM

Authors wishing to present a paper in Philadelphia should submit a **camera-ready abstract on the enclosed form to the Technical Program Chairman, Antony N. Beris, with a copy to the appropriate symposium chair by May 13, 1994.** The symposia and their organizers are:

General Papers

Ronald G. Larson
AT&T Bell-Laboratories, Rm GE-320
600 Mountain Ave.
Murray Hill, NJ 07974-0636
(908) 582-6158, Fax: (908) 582-5570
Email: rgl@likewise.att.com

Experimental Methods in Rheology

Wesley R. Burghardt
Department of Chemical Engineering
Northwestern University
Evanston, IL 60208
(708) 467-1401, Fax: (708) 491-3728
Email: wesley@casbah.acns.nwu.edu

Non-Newtonian Flows: Mathematical Analysis and Numerical Simulations

Bamin Khomami
Department of Chemical Engineering
Washington University
Campus Box 1087
St. Louis, MO 63130
(314) 935-6065, Fax: (314) 935-7211
Email: bam@wuche1.wustl.edu

Microscopic Analysis of Rheological Behavior: Theory and Numerical Simulations

Sangtae Kim
Department of Chemical Engineering
University of Wisconsin
1415 Johnson Dr.
Madison, WI 53706
(608) 262-5921, Fax: (608) 262-0832
Email: stkim@luther.che.wisc.edu

Single and Multiphase Polymer Melt Rheology

H. Henning Winter
Chemical Engineering Department
Goessmann Lab
University of Massachusetts
Amherst, MA 01003
(413) 545-0922, Fax: (413) 545-1647
Email: winter@ucsvax.ucs.umass.edu

Suspensions and Colloids

David T. Leighton, Jr
Department of Chemical Engineering
University of Notre Dame
Notre Dame, IN 46556
(219) 631-6698, Fax: (219) 631-8366
Email: dtl@darwin.cc.nd.edu

Polymer Processing, Mixing & Dispersions

A.V. Ramamurthy
Polyolefins R&D
Union Carbide Chemical & Plastics
Co., Inc.
Bound Brook, NJ 08805
(908) 563-5713, Fax: (908)-563-5452

Biorheology and Food Rheology

Stuart L. Cooper
Department of Chemical Engineering
University of Delaware
Newark, DE 19716
(302) 831-8017, Fax: (302) 831-1048
Email: stuart.cooper@mvs.udel.edu

Electrorheology, Ferrofluids, and Particulate Flows

Montgomery T. Shaw
Institute of Materials Science
University of Connecticut
Storrs, CT 06269-3136
(203) 486-3980, Fax: (203) 486-4745
Email: shawmt@uconnvm.uconn.edu

Charles (Chip) F. Zukoski
Department of Chemical Engineering
University of Illinois
Urbana, IL 61801
(217) 333-7379, Fax: (217) 244-8068
Email: zukoski@aries.scs.uiuc.edu

Non-Isothermal Rheology

Tony W. Liu
Central Science & Engineering
E. I. duPont de Nemours & Co., Inc.
Experimental Station 1/101
P.O. Box 80101
Wilmington, DE 19880
(302) 695-7414, Fax: (302) 695-2645
Email: liu@esspt0.dnet.dupont.com

Rheology Short Course

A two-day short course on *Optical Rheometry: Optical Methods for Structure and Dynamics* will be taught in Philadelphia by Gerald G. Fuller from Stanford University. More information is available from Peter Clark, University of Alabama, Box 870207, Tuscaloosa, AL 35487.

Instrument Exhibit

Several companies will exhibit rheological instrumentation in Philadelphia.

Registration and housing forms, abstracts, a short-course announcement, and other information concerning the Philadelphia Meeting will be included with the July Rheology Bulletin.

Student-Member Travel Grants Available for Philadelphia

The Society of Rheology is again offering grants to support the cost of public transportation to the annual meeting to any second or third year graduate student who is a member of the Society as of July 1, 1994, and whose faculty advisor is also a member as of that date. Each grant will be a maximum of \$350, available on a first-come, first-served, basis, until available funds are exhausted. To apply, the student should write a letter requesting the grant. The student's faculty advisor should add a letter of support, certifying that both the advisor and the student are members of the Society of Rheology, and

that the student is a second or third year graduate student. Only one application per faculty advisor will be accepted. The letters from the student and the advisor should be mailed in the same envelope **before September 1, 1994** to:

Ronald G. Larson
AT&T Bell-Laboratories, Rm GE-320
600 Mountain Ave.
Murray Hill, NJ 07974-0636
(908) 582-6158, Fax: (908) 582-5570
Email: rgl@likewise.att.com

If the application is accepted, the student will be reimbursed for travel expenses upon submission of the appropriate receipts to the Treasurer of the Society following the meeting.

TA Instruments, Inc. Supports The Journal of Rheology Publication Award

TA Instruments, Inc. has agreed to support the new Journal of Rheology Publication Award at the level of \$1000 per year for the next five years. Rules governing this award were published in the July 1993 Rheology Bulletin. The Society wishes to express its gratitude to Dr. Peter Whittingstall of TA Instruments for helping to establish this support.

MESSAGE FROM THE PRESIDENT

Page charges relax in response to member stress

In response to member input at the last several business meetings and the financial health of the Society, the Executive Committee voted in December to drop page charges for papers appearing in the Journal of Rheology, effective with the March/April 1994 issue. We believe this is consistent with the mission of the Society to facilitate the increase and dissemination of knowledge of rheology. The Executive Committee is also considering making a certain number of reprints free with each paper published, but has deferred this decision until a clearer picture of the impact of free reprints on our finances is available.

The action on page charges reflects the interesting and challenging position in which we find ourselves as a Society, because of the positive effects on our finances of moving the publication of the Journal from John Wiley to AIP. Elimination of page charges for the Journal and offering student-member travel grants are two ways we have allocated these resources. What else should we do? Should we engage in more or different educational activities to promote and disseminate information about the field of rheology? Should we consider sponsoring small topical meetings focused on specific problems and opportunities in rheology?

Not all the issues in our future are financial. For example, it has been suggested at our annual business meeting that we shift the timing of our annual meeting from the fall to spring. This has the advantage of moving it out of a very busy meeting period in the fall, and it means that we would not have to move the annual meeting to winter every fourth year to avoid close proximity to the International Meeting. The obvious disadvantage is that this would break with a long standing tradition, and perhaps some members feel strongly about this. I am anxious that the Society serve its members well. The best way to ensure this is for you to make your wishes known. You can do this by phoning me or other members of the Executive Committee, contacting us via email, by personal contact, or by coming to the annual business meeting. We are a relatively small society in terms of membership, and this makes it easy for any member to contribute. I encourage and welcome your input and participation in the debate and discussion on the future of the Society.

Bob Armstrong
President

MINUTES OF THE EXECUTIVE COMMITTEE MEETING October 17, 1993

The Executive Committee Meeting was called to order at 9:00 a.m. on October 17, 1993 at the Parker House Hotel in Boston. Executive Committee Members in attendance included: Joe Goddard, Bob Armstrong, Art Metzner, Ed Collins, Bob Mendelson, Ron Larson, Dale Pearson, and Andy Kraynik.

The minutes of the February 7, 1993 Executive Committee Meeting, which appeared in the July 1993 Rheology Bulletin, were approved as read. The secretary announced that newly elected officers for the 1993-1995 term included: Robert C. Armstrong, President, Kurt F. Wissbrun, Vice President, and Ronald G. Larson and William B. Russel, Members-at-Large.

Ron Larson announced that six Student-Member Travel Grants were being distributed to support travel to the Boston Meeting.

Ed Collins gave the Treasurer's report and projected a net income of \$74,415 for 1993, which would give a balance of \$363,814 by year end 1993. The projected net revenue for 1993 from the Journal of Rheology was \$52,359.

Art Metzner, Editor, and Kurt Wissbrun, Assistant to the Editor, reported on marketing, subscription, and finance issues relating to the Journal of Rheology. John Terry Scott, AIP Manager of Editorial Operations, discussed publishing activities at the American Institute of Physics that relate to the Journal of Rheology.

Jeff Giacomini, Chairman of the Membership Committee, reported 1303 members in the Society as of September 1993.

Bill Russel and Bob Armstrong reported on the technical program and local arrangements for the Boston meeting,

where over 175 papers were presented. Antony Beris and Norm Wagner discussed plans for the 1994 annual meeting in Philadelphia. Bob Powell outlined local arrangements and budget for the 1995 annual meeting in Sacramento, where Gerry Fuller will coordinate the technical program. The next International Congress on Rheology will convene in Quebec City in 1996.

Kurt Wissbrun reported on AIP Executive Committee activities and related issues. Margaret Wiley has accepted a promotion within AIP. The Executive Committee expressed its gratitude to Margaret for her service to the Society at AIP headquarters. Janis Bennett and Carolyn Gehlbach will now assist with Society matters at AIP; we welcome them.

In reporting on activities of the AIP Committee on Education, Monty Shaw noted that opportunities may exist for rheologists to contribute to AIP education projects, such as the publication *Wonder Science*.

The meeting was adjourned at 5:40 p.m.

MINUTES OF THE BUSINESS MEETING October 19, 1993

The Business Meeting was called to order at 5:30 p.m. in the Parker House Hotel in Boston.

The minutes of the February 9, 1993 Business Meeting, held in Santa Barbara, CA, were read and approved as they appeared in the July 1993 Rheology Bulletin. Newly elected officers for the 1993-1995 term were announced and included: Robert C. Armstrong, President, Kurt F. Wissbrun, Vice President, and Ronald G. Larson and William B. Russel, Members-at-Large.

President Joe Goddard reminded members that a Journal of Rheology Publication Award had been established.

Ed Collins presented the Treasurer's report and projected lower net revenue for the Journal of Rheology in 1994 due to increased AIP publishing costs and an anticipated increase in the number of pages being published.

Art Metzner, Editor, thanked reviewers of articles submitted to the Journal of Rheology. He also indicated that twelve subscriptions to the Journal were being donated to institutions in Eastern Europe and the Former Soviet Union. A member expressed the opinion that some articles published in the Journal were too verbose, contained too many figures, or represented unwarranted duplication of papers that appeared elsewhere. Highlights of the recent membership poll included: requests for tutorials and more invited speakers at Society meetings, and requests that more review articles be published in the Journal.

Jeff Giacomini, Chairman of the Membership Committee, reported that 54 new members since December 1992 brought the total membership of the Society to 1303 as of September 1993. This total includes 151 student members.

Under new business, a motion was passed urging the Executive Committee to abolish page charges for the Journal of Rheology, or else explain why this action would not be prudent.

The meeting was adjourned at 6:45 p.m.

Dale Sheldon Pearson 1942-1993

The light in the rheological community dimmed a bit on October 30, 1993 with the passing of Dale S. Pearson in Santa Barbara, CA. Those of us who were fortunate enough to have known Dale as a colleague and friend (always one and the same in Dale's mind), will of course miss his fine intellect and always probing mind, but most of all we will miss his seemingly boundless good nature and kind spirit.

It is certain that Dale's contributions to the field of rheology will be remembered, and indeed carried on, by the long list of colleagues with which he interacted for over 25 years and across many continents -- from the U.S. to Europe and Japan. Probably the most telling insight into Dale's character was that he was equally at ease and enthusiastic whether working with the beginning student or a leading researcher in the field. Dale was truly a pleasure to work with -- always providing stimulation without intimidation, generous with his praise, and selfless with his appropriation of credit where credit was due. In any research discipline in which there is intense competition for funding and recognition -- even in a healthy sense -- these are rare qualities in an individual. And as those who knew him will surely attest -- Dale was that rare, genuinely nice "character". For this reason, above all others, he will surely be missed.

Dale received a B.S. in ChE from Iowa State University (1964), an M.S. in ChE from the University of Akron (1971), and a Ph.D. in Materials Science and from Northwestern University (1978). His professional experience included: Firestone Tire and Rubber Company (1965-74), AT&T Bell Laboratories (1978-83), Exxon Research and Engineering Company (1983-87), and the Department of Chemical and Nuclear Engineering and Engineering Materials Department, University of California, Santa Barbara since 1987. He was a Fellow of the American Physical Society and received the John H. Dillon Medal of the APS in 1988. Dale was also a birder.

Dale Pearson is survived by his wife Joan and two sons: Jimmy and Steven.

Meeting Announcements

May 23-25, 1994: International Symposium on Polymer Analysis and Characterization, Les Diablerets, Switzerland. Contact: Prof. M. Rinaudo, CERMAV-CNRS, B.P. 53 X, 38041 Grenoble cedex, France, (33) 76 54 11 45, Fax: (33) 76 54 72 03 or ISPAC Registration, 815 Don Gaspar, Santa Fe, NM 87501 USA, (505) 989-4735, Fax: (505) 989-1073.

June 1-3, 1994: Annual Meeting in Copenhagen, Nordic Rheology Society. Contact: NRS Meeting 94, Soren Hvidt, Hus 17.2, Roskilde U., DK-4000 Roskilde, Denmark, Fax: +45-46-757721.

June 19-22, 1994: Second International Meeting on Extensional and Shear Flow of Polymer Fluids from the

Solution to the Melt, U. St. Andrews, St. Andrews, Scotland. Contact: Prof. J. Ferguson, Dept. Pure & Applied Chemistry, U. Strathclyde, Glasgow, U.K., 44 (0)41 552 4400 ext 2161, Fax: 44 (0)41 552 5664.

June 26 - July 1, 1994: 12th U.S. National Congress of Applied Mechanics, U. Washington, Seattle. Contact: Prof. Albert Kobayashi, Dept. Mechanical Eng., FU-10, U. Washington, Seattle, WA 98195, (206) 543-5488, Fax: (206) 685-8047, kobayashi@u.washington.edu.

June 27 - July 1, 1994: 17th International Regional Symposium on Rheology, Saratov, Russia. Contact: Prof. Valery Kulichikhin, Institute of Petrochemical Synthesis, 29 Leninsky Pr., Moscow 117912 Russia, (095) 952-4145, Fax: (095) 230-2224.

July 6-8, 1994: 7th National Congress on Rheology, Australian Society of Rheology, U. Queensland, Contact: Prof. Michael E. Mackay, Dept. Chemical Engineering, U. Queensland, St. Lucia, Brisbane 4072, Queensland, Australia, Email: m.mackay@cheque.uq.oz.au, Fax: 61-7-365-4199.

September 4-9, 1994: 4th European Rheology Conference, Seville, Spain. Contact: Prof. C. Gallegos, Departamento de Ingenieria Quimica, Universidad de Sevilla (Edificio de Quimica) 41071 Seville, Spain, 34-5-462 44 06, Fax: 34-5-462 49 52.

September 26-30, 1994: Pacific Conference on Rheology and Polymer Processing, Kyoto, Japan. Contact: Secretariat-PCR '94, Research Center for Biomedical Engineering, Kyoto University, Kyoto 606-01, Japan, Fax: +81 (75) 751-4141.

November 13-18, 1994: Symposium on "Material Instabilities", ASME Winter Annual Meeting, Chicago, IL. Contact: Prof. R. C. Batra, Dept. Mechanical Eng., U. Missouri-Rolla, Rolla, MO 65401-0249, (314) 341-4589, Fax: (314) 341-4607.

November 13-18, 1994: Symposia on "Electrorheological Flows II" and "Developments in Non-Newtonian Flows", ASME Winter Annual Meeting, Chicago, IL. Contact: Prof. Dennis A. Siginer, Dept. Mechanical Eng., Auburn U., Auburn, AL 36849-5341, (205) 844-3331, Fax: (205) 844-3307, Email: dsiginer@eng.auburn.edu.

October 8-12, 1995: 67th Annual Meeting of the Society of Rheology, Sacramento, CA.

CHANGE OF ADDRESS

If you are moving, be sure to inform: Janis Bennett, American Institute of Physics, 500 Sunnyside Boulevard, Woodbury, NY 11797, (516) 576-2403, Fax: 576-2223, or Carolyn Gehlbach, Same Address, (516) 576-2404.

JOURNAL OF RHEOLOGY
STATEMENTS OF REVENUE AND EXPENSE
AS OF OCTOBER 1993

	<u>1992</u> <u>Budget</u>	<u>1992</u> <u>Actual</u>	<u>1993</u> <u>Budget</u>	<u>1993</u> <u>Projected</u>	<u>1994</u> <u>Budget</u>
REVENUES					
SUBSCRIPTION, ADVERTISING AND SALES	\$ 197,840	\$ 196,360	\$ 208,800	\$ 201,153	\$ 200,191
PAGE CHARGES	13,000	9,975	8,000	8,293	8,763
MISCELLANEOUS	<u>6,990</u>	<u>7,147</u>	<u>7,223</u>	<u>7,669</u>	<u>8,076</u>
TOTAL REVENUE	<u>217,830</u>	<u>213,482</u>	<u>224,023</u>	<u>217,115</u>	<u>217,030</u>
EXPENSES					
ADVERTISING AND MARKETING	15,000	25,270	15,600	16,245	12,050
SINGLE COPY AND REPRINTS	9,250	7,448	7,954	5,058	8,825
AIP EDITORIAL	30,600	31,963	27,097	27,128	35,280
SOR EDITORIAL	33,000	25,906	34,500	32,000	33,000
PRODUCTION COSTS	53,750	52,947	43,431	41,371	57,309
PRINTING AND MAILING	44,880	44,598	36,129	32,457	49,503
SUBSCRIPTION FULFILLMENT	<u>10,900</u>	<u>10,470</u>	<u>10,729</u>	<u>10,528</u>	<u>11,307</u>
TOTAL EXPENSE	<u>197,380</u>	<u>198,602</u>	<u>175,440</u>	<u>164,787</u>	<u>207,274</u>
NET INCOME	<u>\$ 20,450</u>	<u>\$ 14,880</u>	<u>\$ 48,583</u>	<u>\$ 52,328</u>	<u>\$ 9,756</u>

THE SOCIETY OF RHEOLOGY
STATEMENTS OF REVENUE AND EXPENSE
AS OF OCTOBER 1993

	<u>1992</u> <u>Budget</u>	<u>1992</u> <u>Actual</u>	<u>1993</u> <u>Budget</u>	<u>1993</u> <u>Projected</u>	<u>1994</u> <u>Budget</u>
REVENUES					
Dues	\$ 46,000	\$ 45,540	\$ 47,000	\$ 46,500	\$ 47,000
Interest	19,000	14,710	11,000	13,974	14,000
Journal of Rheology	217,830	213,482	224,023	217,115	217,030
Mailing list Sales	350	168	300	200	200
Annual Meetings	-	-	5,000	7,784	4,000
Short Courses	-	-	6,000	8,500	4,500
TOTAL REVENUE	<u>283,180</u>	<u>273,900</u>	<u>293,323</u>	<u>294,073</u>	<u>286,730</u>
EXPENSES					
AIP Administrative Service	6,000	6,000	6,000	6,000	7,000
AIP Billing	800	-	-	-	-
AIP Member Society Dues	2,400	3,330	3,200	3,600	4,800
AIP Member Records	7,500	-	-	-	-
AIP Financial Handling	3,000	3,471	4,000	3,800	4,000
AIP Physics Olympiad	1,000	-	1,000	1,000	1,000
Renewal Billing	-	1,432	1,500	1,500	1,500
Journal of Rheology	197,380	198,602	175,440	164,787	207,274
Bulletins & Abstracts	5,000	13,053	6,000	7,629	6,500
Short Courses	-	25	6,000	6,800	4,500
Bingham Award	3,000	-	6,500	6,000	3,000
Executive Cmt. Meeting	2,500	3,406	8,000	4,200	6,500
Pres. Discretionary Fund	1,000	500	1,500	950	1,500
Trea. Discretionary Fund	1,000	508	1,500	800	1,500
Program Chm. Discre. Fund	-	-	2,000	2,000	2,000
Secretarial Services	1,000	-	1,000	800	1,000
Mailing	2,500	118	5,000	4,200	5,000
Office Expenses	1,500	464	2,500	1,200	1,500
Banking Services	50	5	25	25	25
Liability Insurance	150	182	200	182	182
Council of Sc. Society Pres.	250	-	-	-	-
Membership Directory	2,500	6,584	-	85	4,500
Membership Brochure	500	202	1,500	800	1,000
Accountant	1,000	1,450	1,500	1,100	1,500
Student Member Travel Grant	-	-	3,500	1,648	5,000
Advance Deposit For Future Mtg.	-	-	-	1,250	1,000
Miscellaneous	-	2,500	500	500	500
TOTAL EXPENSE	<u>240,030</u>	<u>241,832</u>	<u>238,365</u>	<u>220,856</u>	<u>272,281</u>
NET INCOME	<u>\$ 43,150</u>	<u>\$ 32,068</u>	<u>\$ 54,958</u>	<u>\$ 73,217</u>	<u>\$ 14,449</u>

Application for Membership in THE SOCIETY OF RHEOLOGY

I wish to apply for membership in THE SOCIETY OF RHEOLOGY dating from January 19

Name

(Please print)

Mail Address

Telephone Number

E-Mail Number

Fax Number

Please indicate in the boxes provided below the code letter from the list at right, which best describes your areas of interest in order of decreasing importance.

| | PRIMARY
SECONDARY
TERTIARY

Professional Affiliation

- Academic
 Industrial
 National Laboratory
 Other

INTEREST AREA

Biorheology
Experimental methods
Foods
Inks, Paints, Coatings
Materials Science
Petroleum Production
Plastics Processing
Polymer Dilute Solutions
Polymer Melts and Cone. Solns.
Rational Mechanics
Rubbers and Elastomers
Solid Polymers
Suspensions
Theory of Viscoelasticity
Electrorheology
Composite Materials
Other

CODE

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