

# TECH TALK TECH TALK TECH TALK TECH TALK

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

April 15, 1971

## RUMFORD PREMIUM

An MIT scientific group Wednesday night was named a co-recipient of the 1971 Rumford Premium, America's oldest scientific prize, for pioneer work in very long baseline interferometry (VLBI), the paired radio telescope technique that enables astronomers to record the fine structure of quasars and other radio sources in outer space.

The prize, established by Count Rumford in 1796 and administered by the American Academy of Arts and Sciences, was presented at an Academy meeting in Boston. A group from Cornell University and the National Radio Astronomy Observatory at Greenbank, W.Va., and another group from several institutions in Canada shared the 1971 prize with the MIT scientists.

VLBI began in the mid-1960s. The early MIT work dealt with measuring oxygen-hydrogen (OH) clouds in interstellar space using the Haystack antenna at Tynsgboro, then operated by Lincoln Laboratory, and paired with radio telescopes at NRAO and elsewhere.

The MIT group honored as VLBI pioneers includes: Professors Alan H. Barrett and Bernard F. Burke of the Department of Physics and the Research Laboratory of Electronics' radio astronomy group; James M. Moran, Jr., and Alan E. E. Rogers who at the time of the experiments worked alternately on the Haystack staff and as thesis students in RLE; Joseph Carter of the Haystack scientific staff; Patricia P. Crowther, formerly of Haystack; and John A. Ball,

now of the Harvard Observatory who then was a Harvard graduate student doing thesis research at Haystack.

This year was the first time the Academy presented the Rumford Premium to groups of people instead of to an individual. The presentation was the occasion for a two-day symposium on recent developments in VLBI arranged by Professor Burke. At the award ceremony, Professor Burke presented the principal paper entitled: "Long Baseline Interferometers—Radio Telescopes as Large as the Earth."

## FACULTY MEETING AGENDA

At next Wednesday's regular meeting the faculty will discuss several important items.

Along with several other items of business, the faculty will take up the proposal that a Department of Philosophy be established separate from the Department of Humanities.

Also, the Task Force on Equal Opportunity will present its findings, and the Independent Activities Period Evaluation Committee will give its report and recommendations on continuing IAP.

## SURPRISE EASTER GREETING

The Institute took time out for a surprise Easter egg hunt Friday—courtesy of the freshman class.

As a stunt, the class purchased 12,000 jelly beans and 3,000 marshmallow eggs earlier in the week. A group of freshmen spent all Thursday night filling 1,500 transparent plastic bags with the Easter sweets



Holly Horton, '74, hides a bag of Easter goodies.

--Photo by Margaret Foote

and discarded computer punch cards bearing the message: "Happy Easter. Happy Passover. Smile. From the Class of 1974."

Then, early Friday morning before others awoke, members of the class fanned out across the campus hiding the 1,500 bags everywhere—behind pictures, under desks and chairs, in bushes and trees, around paintings and sculptures, in cafeterias, etc. One was taped to the door of President Howard Johnson's office when he arrived at work and another was suspended on a string inside the dome over the main lobby 80 feet above the floor.

"People will be finding jelly bean bags and messages for the next six months," said David Withee, president of the class, who thought up the idea. "We just wanted people to have a happy Easter weekend."



Left to right, Bob Pacheco and Jim Keefe put Graphic Arts' new binding machine through its paces.

### NEW PRINTING EQUIPMENT

A new offset printing press recently installed at Graphic Arts has increased GA's flexibility and efficiency on many printing jobs. The 19x25½ inch Original Heidelberg is the Cadillac of the printing field. Its operating speed of ten thousand sheets per hour is 25 percent faster than the old Solna Model 124 press. The larger plate size has cut printing and collating times in half for normal size booklets and pamphlets.

To go along with the press, Graphic Arts also has purchased a new binding machine. The Sulby Minabinder uses the "perfect binding" process in which a single layer of glue spread on the spine of the book binds both the pages and the cover. Because the process is one continuous operation, the new binder is much faster than machines using other processes. The new binder also can handle a greater range of book thicknesses.

### EARTH DAY

Ecology will be the focus of attention next Wednesday (April 21) during Earth Day 1971. This national event is not meant to be the only day during the year when we worry about pollution, but rather a contin-

uing appraisal of environmental problems and ongoing attempts to solve them.

Earth Day at MIT will feature an all-day series of seminars on ecology-related topics and a panel discussion entitled "Growth versus Maintaining a Livable Environment." The discussion and seminars are open to the community. Exact times and locations will be listed in the Institute Calendar.

In the year since Earth Day 1970, the Institute has made a serious effort to reduce its harmful impact on the environment. Waste compacting machines located outside Building 4, the Student Center and MacGregor House are mashing 701 cubic yards, or 44 tons, of trash per week. The compactors are fed loose solid waste, which is first shredded then reduced to one-quarter its former size. While the main purpose of the compactors is to reduce the bulk of MIT's waste products, ongoing experiments in recycling the compacted trash may provide a positive use for it in the future.

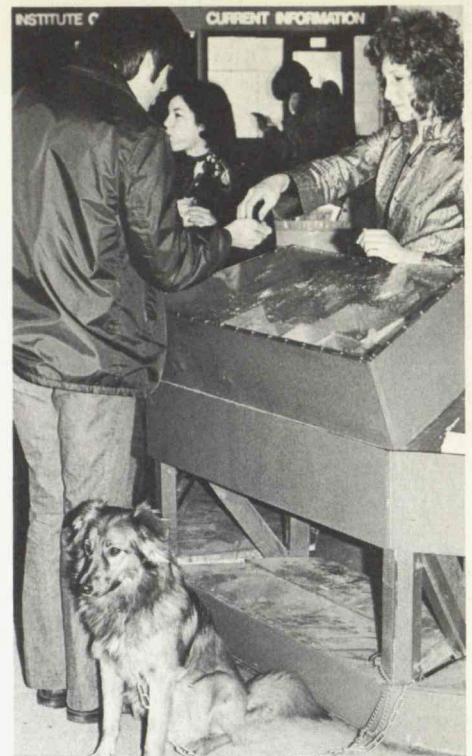
An experiment is now under way to recycle old newspapers around the campus. Pickup containers are located at Eastgate, Ashdown House, MacGregor House, Baker House, McCormick Hall, and East Campus. Old newspapers should be left at the designated pickup locations since only those will be recycled.

The largest expense for lowering pollution is due to the rising cost of power at the Institute. The price of fuel oil has jumped from \$1.83 to \$4.50 per barrel. The cost of electricity also has increased by 30 percent as a result of inflated oil prices. MIT has spent an additional \$600,000 this year due to rising power rates and will spend an added one million dollars next year.

### HAVEN FOR THE HUNGRY

Skipping breakfast isn't as bad as it used to be.

Since the Class of 1971 opened the donut stand their freshman year, many people have been grabbing a quick bite in the morning at the stand in the Lobby of Building 7. The stand opens around 8 o'clock weekday mornings, and stays open



Barbara Bloom, '72, and her dog, Kilo, regularly tend the booth on Fridays.

--Photo by Margaret Foote.

until the donuts run out at about noon.

This year's seniors have accomplished several things with the modest profits from their venture. Money from the donut stand has paid for the class newsletter, *The 71'er*, two Tom Rush concerts, a feedback program on freshman subjects in 1968, Thing '68, a class party, and a donation to the Julie Fassett Memorial Garden. The seniors plan to have another class party, and also a quiet evening of entertainment for faculty, administration, and parents the night before their commencement. Whatever money they have left over will go toward the class gift.

Originally, students manned the stand on a volunteer basis. Because the original enthusiasm has waned, the class has been paying students to staff the stand.

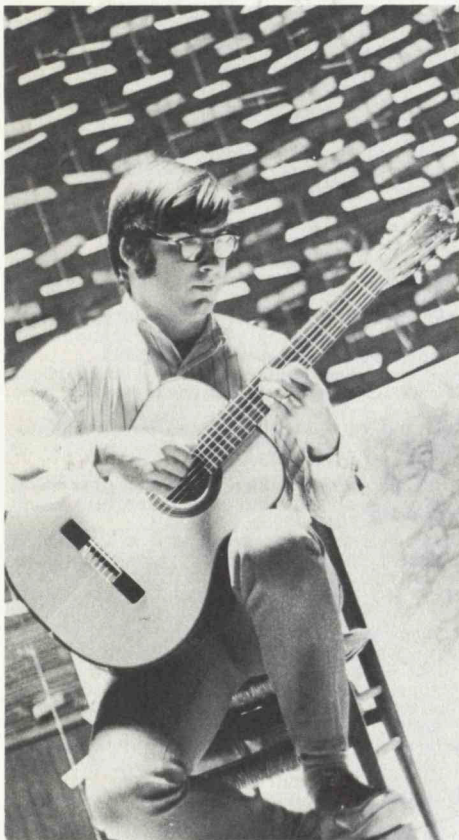
This summer, management of the stand will pass to the class of 1972. In years to come each succeeding class will run the stand during its junior year.

### HERE AND THERE

-Nominations are being sought for the Karl Taylor Compton Awards. These annual prizes are usually given to seniors, graduate students or organizations in recognition of significant contributions to the

quality of life at the Institute. Nominations should include supporting material and may be made by the Institute. Nominations should be sent to Professor Roy Feldman, Room E 53-490. The Compton Awards are donated by the Boston Stein Club.

—Hannes Kaestner, the organist of Bach's church of St. Thomas in Leipzig will give a recital of the music of Bach in Kresge Auditorium at 8:30 p.m. on Wednesday, April 28. The recital, sponsored by the Department of Humanities, is open to the public, and admission is free.



Jan Wissmuller, '71, plays a classical composition during a recital at the Chapel.

—Photo by Margaret Foote

—There are still a few concerts left in this year's Thursday Noon-Hour Concert Series. These concerts, sponsored by the Department of Humanities, are given in the Chapel at 12:10 p.m. on most Thursdays, and are open to everyone free of charge.

Performers include both members of the MIT community and visitors from outside. Last Thursday's concert, a guitar recital, was given by Jan Wissmuller, a senior in physics. Wissmuller presented an all-Bach program, including some pieces he had arranged himself.

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## BRUINS FEVER



MIT Bruins fans have been gathering in the lobby of Bldg. 7 recently for videotape replaying of the Stanley Cup Playoff games involving Boston and Montreal—all courtesy of the Audio Visual Department (Jerry Adler, director). AV's Harris Eigabroadt has been taping the games at night and he and co-worker Norman Lang have been running them over and over again on two monitors set up in the Lobby of Building 7 the following day. The game tonight (Thursday) will be shown tomorrow.

—Photo by Margaret Foote

## COHEN CHAIRS STUDY GROUP

Professor Morris Cohen has been selected head of a National Academy of Sciences group which will study the contributions materials science can make to society.

Dr. Cohen, Ford Professor of Materials Science and Engineering, will lead a 20-man Committee on the Survey of Materials Science and Engineering. Over the next 18 months the committee will explore such areas as the nation's needs for materials, recycling, and waste disposal.

## D.C. ART IN HAYDEN

Five artists from the Washington, D.C., area will have an exhibition of their paintings in the Hayden Gallery beginning Saturday (April 17) and running until May 25.

Tim Corkery, Sam Gilliam, Sheila Isham, Ed McGowin, and Enid Sanford have only one thing in common as artists—they all live in the same area. Their works were chosen

as a sampling of the varied styles among artists in Washington today and do not represent a particular cohesive school of artists.

Gallery hours are from 10 a.m. to 5 p.m. Monday through Thursday, 10 a.m. to 9 p.m. Friday, and 1 to 5 p.m. weekends.

## CAREERS SEMINARS

The Alumni Association is offering a series of three weekend seminars to help scientists, engineers and managers plan the development of their careers over the next five to ten years. This coming weekend (April 17 and 18), the seminar will analyze economic trends over the next decade, including projected changes in governmental spending. On April 24 and 25, the seminar will focus on "Engineering Opportunities in the Health Care Industry," and on May 1 and 2, the topic will be "Providing Energy for the Future."

The seminars, which include both discussions and workshops, will be led by experts in management, teaching and research. Further information is available from the Alumni Association, Ext. 3768.

## GUGGENHEIM FELLOWS

Nine members of the faculty have been awarded Guggenheim Fellowships for 1971 by the John Simon Guggenheim Memorial Foundation.

They are: Noam Chomsky, Ferrari P. Ward Professor of Modern Languages and Linguistics; Robert Goodman, Assistant Professor of Architecture; Lee Grodzins, Professor of Physics; Thomas Huang, Associate Professor of Electrical Engineering; Kenneth A. Johnson, Professor of Physics; J. David Litster, Assistant Professor of Physics; Willem V. R. Malkus, Professor of Applied Mathematics; James R. Melcher, Professor of Electrical Engineering; and Nathan Sivin, Associate Professor of the History of Science.

They are among 354 US and Canadian Fellows for 1971.

## FOR SALE, ETC.

Fiberglass boat, 12', 7/2 hp Evinrude & access, both exc cond, \$175. x310 Draper 7 or 893-7585.

Cannon 814 super 8 movie camera, 8-2-1 pwr zoom, lists \$399, w/ sacrifice at \$200. Call 864-7952.

Free gerbils. Hanneke, 926-0528.

Chrysler 15' fibergls boat, 75 hp eng w/tilt trailer, complete w/all reg safety xtras & ski equip, ready for water, \$1450. Bob, x6891.

Rambler tire mtd on rim, sz 6. 85x15, \$5. Arthur, x2720.

Port manual Olympia typwtr; Coleman cooler. Mary, x3795 or 547-3121 evgs.

New Ethan Allen honey, maple spoonfoot harvest DR drop leaf tbl, 22x45x66, w/leaves ext, \$100 firm. Call 868-3078 evgs.

Unused radio-tv tubes (200), and tube caddy, \$50. Harold, x5461.

AKC champ miniature schnauzers, 2 fem, 1 male, \$200 ea, ready last wk in May. Ethel Vokey, x358 Linc of 667-7994 evgs.

Tektronix mod 503 scope, mint cond, lists \$700, sell \$225. Beau, x4192.

Used GE elec dishwshr, bronze, gd cond, under counter, \$20, come & get it. Don, x419 Linc.

Oil painting on gold leaf, French scene, 57"x25", orig \$200, asking \$100, perf cond. Call 696-6295.

Bonanza mini-bike, 2 1/2 hp Tecumseh eng, w/helmet, xtra tire, \$75; 6 string folk guitar, w/hard shell case, \$20; 19" Zenith VHF tv, \$30. Call 272-9582.

MIT Flying Club memberships, save \$25. Bill Mack, x2207 or 862-7254 evgs.

Guinea pigs (2), 1 tan fem, 1 brwn & wht male, \$3 ea. x3762 or 862-0166.

Port typwrtrs (2), \$25 ea. Florence, x3135.

Outboard 7 1/2 hp, long-shaft, middle aged, \$110; skis, 200 cm, Sailer, w/Tyrolea heel & Marker toe, \$50; children's Head JR 60's, 120 cm, w/Tyrolea bndgs & poles, \$40. x6047.

Nikkor & Nikkormet cameras, cheap. Sak, x4433.

AKC German Shepherd puppies for pet or show, \$100 to \$200. x105 Draper 7 or 358-7659.

Tires (5), 6.50x13, w/wheels, for Falcon, slightly used. x3485.

Hnywl Tilt-A-Mite flash gun w/case \$6. x5445.

Sailboat O'Day Mariner, 19', centerboard, 2 berths, many xtras, \$2700. Call 862-5918 evgs.

Picnic hampers, flat wicker & reg, nvr used, \$2 - \$3.50. Call 395-6061.

Free: kittens, 3 pure blk, 2 pure wht. Ed, x3993.

Thompson boat, 17' wdn, 40 hp eng, canvases inc. Joan, x2766 or 391-5431 evgs.

Spring coat, sz 12, lime green, wool dbl breasted, worn once, \$55. Sally, x5975 or x5961.

Bicycle, boy's & girl's convert, 20", gd cond, high rise handlebar & banana seat, \$15. Charlie, x3967.

Trundle bed; round DR tbl/4 chrs; drop leaf dsk; bureau; bkshelves, walnut. Lore Liepmann, 484-0907.

Open boat, 21' fibreglassed, 8' beam, nds wk inside hull, Evinrude outboard, 75 hp/elec shift, asking \$585. x262 Draper 7 or 369-1036, Concord.

Furn: teak student tbl, 38x58, w/matching bkcase, (5) 31x12 shelves, w/2 drawers, \$40; 2 snlg beds, posturepedic matt, bx spring & frame, \$25 ea. Call 275-0785.

Digital computer memory sys, 4K by 6 bits core, self-testing & error loc, 5 microsec cycle, complete sys, lk new, '67 cost \$7000, best offer. Mike, 484-4894.

Telescope lens, high pwr, 4 mm Orthoscopic, \$7. Charles, x7174.

Deep fryer, br new, \$6. Dave, x3959.

Free: '61 VW bug, no motor, W. Oliver, x4019.

Craftsman 10" radial arm saw, stand & acces, \$130. Dick, x5568.

Kestrel sailboat, fast, safe day sailer, 16'8", fibergls hull, new spinnaker, exc cond, \$750. Call 261-3226 evgs.

Hnywl-Pentax, mod H-1A, br new, nvr used, orig \$169, SLR 35mm, sell for highest bid, warr 3/31/72 on all parts. James Sherwood, x2898.

Closet sale: dresses, sz 8-13, purses, sweaters, shoes, sz 8, cheap; nd Calif \$, Kathleen Nelson, 776-6275.

'69 Apache Eagle tent trailer, sleeps 6, w/full canopy, \$600 firm. x7726 Linc or 851-2589 evgs.

Grumman alum canoe, 17', \$150; Simplicity riding tractor, 7 hp, elec starter, 36" rotary mower, 30" snow blower & chains, \$450; 1/3 yard cement mixer, 1/2 hp elec motor \$75; misc yard & wrk tools. Mario, x417 Linc.

Beautiful \$150 wedding gwn, chantilly lace w/cathedral train, bodice pearl embroidered, sz 12, \$50. Call 354-5996 evgs.

Camping equip: stoves, lanterns, etc. all in gd cond. Call 527-9110 evgs.

Maternity & children's spring clothes; Thayer 3 in 1 carriage \$26; Collier stroller \$20; infant seat \$2; ass't women's clothes. Call 484-5357.

Colorado Blue Spruce, reas price. Paul, x3996.

'36 Cord Phaeton, complete & orig, 1500 mi since major eng overhaul, \$7000. Hardy Prince, x5528 Linc.

'58 Chevy Impala, 2 dr hrdrtp, auto, pwr st, 2 snows w/rims, gd transpnt, 82K, \$50 or best. Porter, x4332.

'60 Austin Healy 3000, new batt, top, exhaust, strtr, xtra parts, manuals, etc, asking \$375 Kal, x7333.

'60 Chevy Impala, 6 cyl, '61 eng, 4 dr, hrdrtp, pwr st, auto, R&H, \$80. Ron, x3619.

'62 VW bus, best offer. Norman Berube, x5334 or 438-5487.

'62 Rambler Classic for parts, \$20, fairly gd tires. x7565 Linc.

'63 Dodge Polara, V-8, auto, pwr st & brks, R, 55K, gd cond, \$300. Williams, 492-7555, am & all evgs.

'63 Ford Galaxie 500, 4 dr sedan, auto, pwr st, V-8, R&H, \$200 or best. Al, x3619 or 868-8841.

'65 Triumph Herald 1200 conv, \$425 or best. Paul, x439 Linc.

'65 Porsche 356C, exc cond, xtras, \$2650. x7365 or 491-8932.

'66 Ford Mustang, pwr st, 289-V8, auto, \$850. x5649.

'66 Mustang auto, 8 cyl, gd cond, \$1000. Ed Lahy, x564 Draper 7.

'66 Buick LeSabre, 2 dr, hrdrtp, auto, pwr st & brks, new muffler, alst new tires, 49K, \$600. Call 277-8112.

'67 TR4A, 42K, \$1250. Call 484-9380.

'67 VW conv, \$1150. Mike, x3909 or 523-4906 evgs.

'67 Land Rover, safari conversion, tropical rf, short wheel base, \$2500 or best. Call 731-0224.

'68 VW 1500 sedan, sunrf, exc cond, 24K, \$1300. x7140 or 332-6159.

'69 Cougar, 351 cid, 4 spd, competition handling suspension, Michelin X tires, AM-FM, vinyl rf, active 50 K warr. x7143 or 625-9456 evgs.

'69 Opel Kadet, exc cond, \$1500. x7920 or x6634.

'69 Nova Coupe, 4 spd, 17K, vinyl rf, \$2100 or best. Call 391-6539 evgs.

'69 International Scout, 4 by 4, 4 wheel drive, stndrd, V-8, 15K, 4 studded snows mtd on wheels inc as xtra, nvr off the road. Call 389-7996.

'69/'70 Simca 1204 GLS sedan/wgn, exc cond, 8K, radials, leaving country. Jacques, x7174 or 868-0740 (7-10 pm).

'70 VW, auto stick shift, AM-FM, 8 K left on warr, exc cond, \$1750. Paula, x4701.

'70 Opel GT Sport Coupe, 3K, asking \$2800. Jay DiSpirito, x7387 or 335-0173 evgs.

## WANTED & MISC.

LOST: red & wht embroidered knee sock, Macedonian & shoe, vic of Student Ctr. Skip Burger, x6153.

MISSING: Men's brwn 1thr coat, dbl breasted, from E52-274A, reward for recovery or info leading to recovery. x3644.

FOUND: 2 keys nr Vassar St lot, across from bldg 20. Art Wright, x4192.

LOST: red eyeglass case w/prescrip sunglasses, Fri, Apr 2. Laura, x5658.

LOST: fine silver bangle bracelet at Coop Apr 6. x6410.

Apt, 2BR, unfurn, residen area, nr T, 2 mature adults, references exchanged, nd by June or July. Call 536-8299 evgs.

Apt to sublet, 2BR, 6/18-8/31, around \$150, respectable party. Call x7666.

Fem rmmate, remod carriage house in Camb, share rm, \$80. Beverly, x6014.

Used sew mach, Call 666-5474 evgs.

Amp & pre-amp unit in gd cond, 10-15 w/ch, trntbl w/stereo diamond cart, \$50 or less. Barbara Saulenas, x6151.

Guitar teacher for fam of 4 adults, to come to our home in Watertown, reas price. x4879.

Top carrier for VW. Max, x4368.

Daily ride, Brighton (Wash St/Comm Ave) to & from MIT, 9-5, wl pay. Linda, x2701 or 782-7899.

Riders, Malden Up Highlnds area to Linc Lab, leave betw 7:45-8 am wkdays. Robert Cary, Jr., x5738 Linc.

Siamese kitten, fem, pref cocoa pt. Paul Mascall, x5461.

Dbl bed, bx spring matt, w/frame; and 19" port tv. Call 646-4299 evgs.

Girl's bike, 3 spd. Elaine, 738-2595.

Boy's hip boots, sz 5 or 6. George Kelloway, x3463.

Man's bicycle. Lalit, x2338.

Bike, 3-spd, 26". Joyce, x1891 or 491-4012.

Reliable person to care for 2 sml children in Winchester, full time while mother wrks, exc pay, may have rm & board, pos avail in Sept. Call 729-7310.

Girl's touring or N spd racing bicycle. Dick, x3568.

Fem rmmate to share furn, air cond, 3BR house, w/2 other girls, free prking, Chestnut Hill/Newton, \$135/mo. Judy Bomstein, x6419. Man's light weight multi-spd bike. Hal, x7859 Linc.

Med sz freezer around \$100. Abby, x5755 Linc or 862-4035.

Pr of Volvo 142 rims. Miki, x7020 or 864-9099 evgs.

Furn or unfurn house to rent, Sept '71. Azad Bolour, x4695.

Aquariums (1 or more), 25 gal plus, w/ or w/out equip, wl discuss price. x6153.

WI do typing: tech and reg. Marsha, x2342.

WI do typing. Joan, 284-3269 evgs.

National Conservatory in Paris grad wl give French conversation or piano instructions. M Smith-Hutton, 232-6585.

WI do gen & tech typing. Ron, x7273.

WI bbsyt in my apt in Cent Sq. Call 868-4723.

Furn, 1 BR, air cond apt, 10 min walk from MIT, across from Pru, \$210/mo. Marie, 449-3310 (9-5) or Janet after 6.

Sublease w/option to renew, avail 7/1, on T line, mod 1 BR apt, all elec, free prking, \$165/mo. Linda, x4270 or 282-7042 evgs.

Furn apt overlooking Charles river, 3 rms, 2 min to MIT, tile B & shower, gas ht, suit for cpl. Call 354-6353.

Apt betw Harv & Cent Sqs, 1 BR, mod, avail 5/1 w/option to lease, \$175/mo. Call 354-2850 evgs.

Arlingtn, furn, mod, 2BR apt, for MIT affiliated fam, summer only or unfurn w/option to renew lease, \$225/mo. Call 648-2693.

Back Bay, furn studio apt, 12-15 mo sublease from 6/1, in attractive apt house, suitable for 1 person, \$170/mo. x3382.

Back Bay sublet, 1BR, gd bldg on Comm Ave, avail 5/1-8/31, \$210/mo. Vic, x1818 or 267-9227.

Brookline summer sublet, mod 1BR, gd sz rms & closets, panelled, nr trans & shops, furn & rent neg. Call 734-0977 or 731-4819.

Camb unfurn apt, 5 rms, mod K & B, finished playrm, no pets, 1st flr, nr Fresh Pond, \$225/mo. Ralph Pupa, x6455.

Camb apt nr Cent Sq, 4BR, LR, ww, newly remod, furn for sublet, 6/1-9/1, \$280/mo. Call 868-8331.

Lexington, 8 rm cape house, 4BR, 1 & 1/2 B, lrg LR w/frplace, panelled fam rm w/frplace, stone wall frontage, 300 ft wooded lot, attached breezway & gar, laundry & shr in basement, \$41,900. Call 862-2115.

Watertown house for rent, June, July, Aug, quiet street, conven to Harv Sq by bus, 4BR, fam rm, lrg garden. Call 926-2493.

Westgate apt sublet, 6/1-9/15, mod, furn, efficiency, snlg or cpl, \$135/mo. Call 492-7615.

Cape Cod, waterfrnt, Harwich, Long Pond, priv beach, 2BR, K, LR, B, screen porch, hot water, boat. Call 545-9399 after 2 pm.

Cottage for rent, on priv lake, 7 mi. from Laconia, NH. Call 846-5084.

Camp, Wakefield, NH, lrg, all conv, beach, dock, avail July & last wk Aug. Don, x5869 Linc.

Winnepesaukee, 4BR chalet, rent by wk or mo, pool, horses, club, etc. Call 277-8605.

Nr Lake Winnepesaukee, mod, 3BR, furn cottage, lake front, priv beach, avail by wk & mo. Call 729-8227 after 7 pm.