Laser Uses Explained At Lecture

Diffraction gratings, slides, and mirrors were among the devices used by Dr. Nicholas George in demonstrating the laser to a capacity audience at Beckman Auditorium Monday evening. George's talk, another in the series of weekly demonstration lectures supported by the Caltech Committee on Institute Assemblies and Programs, was entitled "Laser Facts and Fantasies," and dealt primarily with the nature of laser light emitted in a laser beam.

The program began with a review of the history of laser development, which started in the early 1950's. George complained that nearly all breakthroughs were seized upon too readily by overimaginative writers. He warned that much research still remains to be done before scientists will even begin to understand all the implications of laser theory.

Applications for Outer-Space Communication

Dr. George, who attended the University of California at Berkeley and completed his graduate work at Stanford, pointed out that the concept of space communication over astronomical distances was shown to be somewhat impractical at the present time. The ruby, one of the best laser sources, produces pulses about five billionths of a second, or much weaker than sunlight. With proper filtering techniques, however, this limitation might be partially overcome.

The great coherence of laser light was the most fact emphasized by the speaker. Ten million times more intense than ordinary light, it is also more narrow.

(Continued on page 3)

Notice

SPECIAL PH 1 EXAM will be given tomorrow night at 6 in Chandler.

TRACK MANAGERS: when you're not managing track for a few hours a week (I'm pleasein' credit to myself) and in fact did not put a not in the "Q" box in Ruddock.

CHRISTIAN FRIENDSHIP: Dr. Mark Biedebach will speak on "The Sin of Pride," tomorrow noon in Chandler. Undergrads will be transferred. STEVE & ERIC AT THE ICE HOUSE

The popular campus following duo of Dave Clancy and Eric Jones will appear Sunday night at 9 p.m. at the Ice House, 24 N. Magnesia.

COIN CLUB: There will be a meeting and trading session for any interested coin collectors tonight in Lloyd conference room at 7:30.

STUDENT ART EXHIBIT: Long, long, long in the future the Caltech Y will sponsor an exhibit of student art. This intensive tour, concentrat­ ing on one section, gave the students a chance to get together with Dr. Wil­ liam Swank of the Armenian Institute, and to see all that is to see. There will be a tour of the YMCAs of all three houses, to be held the day before the tour, so that the students will have an oppor­tunity to take a look at all that is to see.

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Beckman Fee

Beckman Auditorium was an expensive building to build and is even more expensive to operate, due to its exotic design and decoration. In fact, we have been told that it costs something like $800 or $1000 just to open it for one night; and so any group that wants to use it for some event has to pay a fee of $150 to help pay for heating, lighting, air-conditioning, cleaning-up, etc. This fee was not charged last year (but rather absorbed by an Institute "general fund") because the building was new and those in charge wanted to encourage its use during its widespread leak trouble.

Now, it is true that this fee does entitle one to use Beckman for an evening, as well as to use the publicity and sales services of the Institute, but it is true also that the fee cannot be waived by not charging admission to the event, as is done with public-service programs such as the Caltech Lecture Series, or Dr. Maslow's lecture last night. But such an act of generosity, according to Beckman, has been centered on the question of obtaining the Brothers Four for tomorrow, for example, requires that ASCIT charge admission for the concert - similarly for a Y-sponsored movie, or for a Drama Club Play. Actually, in our opinion, these events are presented as a service to the Caltech community, without the goal of making a profit and only through the donation of time and work by many people.

Such events must, because of the auditorium fee, have increased admission rates (and hence smaller audiences) or have the extra cost absorbed by the sponsoring group, which in some cases is impossible. Meanwhile, events of little interest to students, such as the District Convention of last year or the Monday Night lectures, have their operating expense absorbed by the "general fund," because they have no admission fee.

We are not accusing the Institute of stealing students' money, but the Beckman fee is a hindrance to student use of Beckman, a hindrance to presenting cultural events for all. Beckman is still a part of campus, not some majestic separate entity. Students should be entitled, by paying tuition, to use its facilities just as they use Winnett or Dabney Lounge. The last President's report says that in Beckman "exciting new events are in prospect." It is our hope that we can agree with the spirit of this new unity of spirit may thus be stimulated among students and faculty, as well as new opportunities for cultural activities and new opportunities to bring the entire campus into contact with leaders in education, science, engineering, art, and national and world affairs." If the Institute wants to encourage students to do the part we want to do, let us absorb the Beckman fee and make Beckman useable for us.

---Stu Galley
Wally Oliver

By Tom Greenfield

Charity begins at home and so, I suppose, should culture. In this spirit I was a part of the large audience that attended last Saturday evening to hear the reading of Dr. Oscar Mandel's "Gobble-Up Street". I had the impression that the audience felt that it had to clap, not knowing quite why, at the end of each of the many monochromatic. The audience, using the tiny diffraction gratings passed out at the door, was fascinated by the uniformity of the basic colors of which ordinary viewers are deprived. We were impressed that the audience was interested in the smoking that thunders). And the smoke that thunders). And the smoke that thunders.

Drop in for a game of skill and apply the laws of physics - besides it's fun!!

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Bayne cited the Olivetti Corporations, which had loans employed for housing, pays for their gas and repairs if they have to work, maintains resorts for summer vacations, and provides scholarships for the children. In fact, 45 percent of a worker's wages is reproduced in fringe benefits.

Another political split exists along the familiar leftist-liberal, Communist and Socialists against Royalists and neo-Fascists, while between the Communists and Socialists. The Christian Democrats face the Socialists and the manufacturing interests.

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**SPORTS**

**Wrestlers Win Again**

CHM Succumbs 27-3

**BY G. B.**

Those of you who were disturbed in the midst of your energetic snaking Friday night last by rows coming from down-campus, fear not. The sounds were the ecstatic screams of the 75 (more or less) delighted spectators as they watched the mighty pretzel-benders of Tech thoroughly trounce the Claremont-Harvey Mudd wrestling team.

The evening festivities started promptly ten minutes late with the heavyweight class, as Andy Kampe of Tech demolished Rowan of Pomona — he just came along for the ride — by a score of 10-1. Rowan had the perfect defense; he lay flat and did nothing. Magnificent as this defense was, the referee was unimpressed and Kampe received a total of 4 points for Rowan's stalling, the only wrestler in the career of this writer ever to be awarded more than one.

**Bone-Breakers**

Following the evening's opener, Martin Oiye strode to the center of the mat amidst thunderous applause and won by forfeit. In the 138 pound class, Mark Hayami of Caltech decisioned Power of CHM, 7-6, in a hard fought, lively match.

At 137 Frank Fujinura (CIT) was decisioned by Small, 3-1, for the only Caltech loss of the night. Dave Faulconer, one of the pretzel-benders' charter members pinned Hamilton in nine seconds of the second period with a typ-

(Continued on page 4)

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**Ricketts Captures Discobolus**

Blacker swamped Huddock in waterpolo at the end of last term, and proceeded successfully to de-

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**Beavers Scare CHM**

**BY LEON FUNG**

A valiant Tech basketball team, sustaining the loss of two forwards and a hundred fans during halftime, staged a spirited second-half rally only to be beat-

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You can earn your commission at Air Force Officer Training School, a three-month course open to both men and women. To apply, you must be within 210 days of your degree. For more information, contact the Professor of Air Science. If your campus has no AFROTC, see your local Air Force recruiter.
**Big Game Tomorrow**

by Joe

Well, senores, the moment of truth is quickly approaching. Our favorites Ruddock and Fleming knock heads tomorrow afternoon in what should be the deciding game of this year's Interhouse football season. The winner, barring an upset, should go through the season undefeated.

Fleming had a little trouble with two games last week. Inconsistent play in their games with Delvin and Page reasonably close after the Big Red blasted Blacker onto the Atheneum lawn last Friday. The Delvin, led by Gowen and Touton, hold the Flem offensive machine completely in check for a full half, but Fleming erupted for three TD's in the second half.

The men from Page posed the biggest threat to the Flem hopes this second leading scorer in the conference. The second period brought with it a new Tech team hustling their butts off, the fresh battling the slugs on almost even terms, again demonstrating the fact that Caltech has the potential to pull off quite an upset once these fine winter days.

Dick Barlow of Claremont led the scorers with 26 markers. The Beavers showed scoring balance, and not fighting hard for rebounds; the result was a halftime deficit of 18 points.

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