



Bill Curry speaks to basketball team and supporters at union dinner.

Health Physics Discussion On Radiation Research

Myron Fair, a research scientist with the Division of Health Physics of the National Laboratory at Oak Ridge, Tennessee, spoke here last Wednesday on new methods of radiation measurement as they relate to the health aspects of radiation physics.

Up to now, the question of just how much radiation a living body has been exposed to, and just how much of that radiation has been absorbed by that body, and just how much damage has been done to a living body by that radiation, has been rather a moot point—there has been no precise way to determine the very basic measurement of how radiation, and how much of what type of radiation, to call a unit of measurement.

Mr. Fair acquainted our interested students with an accurate means of determining the unit of measurement of radiation, the roentgen unit. It amounts to a measurement of the amount of electrical energy produced by several different particles produced by the irradiation of a given volume of air. Electrical energy, of course, is measured in coulombs, and the result is an odd figure. The radiation physicists call this amount of electrical energy a roentgen unit, and apply that term only to radiation measurement.

From here, Mr. Fair continues, we must go on to the question of how much of this radiation energy has been absorbed by the body or the air which is being irradiated. For convenience's sake, he calls this body or volume of air a "test charge". The "Absorbed Dose", in contrast to the "Exposure Dose", is that amount of radiation which actually does work—the energy which actually goes through the test charge is ignored in figuring the Absorbed Dose, since it does no work, and, in effect, might as well not exist. Up to this point, Mr. Fair pointed out, we had considered only gamma or X radiation. In figuring the absorbed dose, however, all types of radiation should be considered, since they all do work when they are absorbed by a body or system.

The unit of absorbed dose is equal to the ratio of the exposure undergone by a body or system to the mass of the system; the unit is called the rad, and is equal to 1/100 of one joule, per kilogram of mass of the system.

This took the discussion to the question of how much damage is done by a given amount of radiation absorbed by a body or system. Since there are many different types of radiation, and since they all have different ef-

fects, it is apparent that if the effect is to be measured, then there must be a means of equalizing the effects of different types of radiation. This is done by comparing the amount of work done by the one type of radiation, gamma radiation, with the amount of work done by the one type of radiation, gamma radiation, with the amounts done by the other types, alpha and beta. This comparison, expressed as a ratio of the one to the other, is called the quality factor. Gamma radiation as the standard, has a quality factor of 1, alpha and fast neutrons have a factor of 10, and slow neutrons one of 2.5. This gives the researcher a figure to work with, based on a line of mathematical reasoning which is also used by the physicists outside the biological field. The unit of effective radiation is called the rem, and is arrived at by multiplying the number of rads of absorbed radiation by the quality factor for each type of radiation. One rad multiplied by the quality factor for gamma radiation, 1, will give an answer of one rem. There is where the physicists leave off; the biologist now must take that rem and decide how much damage is done by it to different types of living tissue. This is under research now, and it is possible that a radiation researcher will be able fairly soon to assess the type and amount of damage done to any living system, by mathematics, based on the units of measurement which were introduced in Mr. White's talk here.

Practically, this is important to the individual worker in radiation laboratories. It is possible to state a figure, which the individual can understand in terms of himself, with much more accuracy than before. With improvements in determination of the basic units of radiation exposure, absorbed radiation, and biological effectiveness, there will be greater safety in radiation work, and, should we ever need it, better safety in radiological warfare. We now know more precisely the amount of radiation required to do a given amount of damage to living material, and we can measure that amount more accurately.

49'ers Hold 1st Athletic Banquet

Charlotte College held its athletic banquet in the college union, Wednesday, March 25. After the invocation by Mr. MacKay, a supper consisting of a salad, roast beef, peas, baked potatoes, and pie a la mode was served to the group consisting of everyone connected with athletics at C. C. and others. Coach Edelman introduced the guests at the banquet and wound up the introductions with the guest speaker of the night, Mr. Bill Curry, sports director of WSOC-TV.

Mr. Curry's talk was enjoyed by everyone at the banquet. It was one of the most comical talks this reporter has heard. When North Carolina's clown prince of sports casters had finished, the banquet was turned over to the coach.

Coach Edelman then introduced the cheerleaders and their adopted mother for the sports year, Miss Mildred English. Cheerleaders receiving awards were Baiba Lukevics, Gloria Ward, Ann Thompson, Bonnie Borthen, and Gween Chapman. Mr. MacKay then awarded trophies to the members of the bowling team. Members of the team who rolled enough games to receive a trophy were: Ernest Bouyoucas, Captain, Kenneth Sloop, Jan Ridenhour, Clinton Canaday, Robert Alexander, Russell Moody, and Robert Schaeffer.

Coach Edelman then took charge of the meeting to present awards to the basketball team. The Co-captains, Butch Gilbert and Jimmy James, received tie clasps and trophies.

The other players who received trophies were Charles Jacobs, Mike Means, Joe Sabitini, Gary Gummerson, Ronnie Robinson, David Caldwell, Ronnie Green and Gene Henderson. Lettermen on the team had met earlier to choose a captain for next year. It was announced that Butch Gilbert and Charlie Jacobs will be co-captains of the 49'ers in the coming season.

As the meeting drew to an end the basketball team gave presents to Miss English, Mr. MacKay, Coach Edelman, and Miss Cone. The Cheerleaders continued the giving by awarding a gift to Miss English. Dr. Cone summed up the feelings of all the words she offered when she said "You are all winners, Everyone is proud of you."



DIAC Conference winners Ernest Bouyoucas and Kenneth Sloop display bowling trophies.

-Reynolds Wrap- Up-

By Jim Reynolds

CROWN

Ernest Bouyoucas and Kenneth Sloop led the C. C. 49'ers bowling team to three of the seven trophies in the Dixie Intercollegiate Athletic Conference Bowling Tournament. Ernest was all events champion, and placed second place in the singles. Ernest teamed with Kenneth to take the number two spot in the doubles events.

Five members of the team tra-

veled to the event and walked off with the three trophies. Ernest and Kenneth posted an averages of 181.7 and 177.0 respectively over nine games each. Robert Alexander held a 154.3, Russell Moody had a 141.0, over nine games and Jan Ridenhour had a 138.3 over six games. A WRAP UP salute to the bowling team for a bang up job.

Golf, Tennis

Makes C. C. Debut

Charlotte College's dreams of becoming a four-year college and maybe a branch of the greater university system seem very near in the dreams of many students. The dreams of many of the sports fans of Charlotte College are also fast materializing. Two sports that are, in many schools, minor sports have become major sports to C.C. in the light of the fact that they are the third and fourth sports to be participated in by the school teams.

All home golf games will be played at the Paradise Valley Country Club, at 1:00 p.m.

According to informed sources the team looks reasonably strong. On the tennis courts the team is looking to a good first year in conference play. The tennis matches will also start at 1:00 p.m. and will be played at the Independence Courts.

These students by playing for the school are giving much of their time for the interest of the student body. Please don't let them down. Give them the moral support by attending the events.

Butch Connell, Jimmy Helms, Bill O'Herron, Rush Shull, Russell Sloss, and Skip Stanley are the members of the golf team.

The students who make up the newly organized tennis team are Bobby Burns, Rick Holt, Jay Currin, David McArthur, Barry Grice, Art Meyer, and Russ Jones (Player-Coach).

Spanish Major Is Approved

Students of Spanish at Charlotte College will be happy to know that the major in Spanish, so long in the works, has at least been approved. Dr. Pierre Macy, in an interview, stated that courses in Spanish for students pursuing the major had been offered as far as the third year, and that senior-year work would be available next year. Requirements and course offerings will be published in the forthcoming catalog. Further, according to Dr. Macy, there is now a French major being offered, and there are plans for a German major in the future.

Important!

Here is the campaigning and voting schedule for the upcoming elections. Remember these dates and VOTE!

April 13-15 — Executive Council Nominations

April 16-22 — Campaign Week

April 22 — Assembly

April 23-24 — Executive Council Elections

April 29-May 1 — Student Legislature and Judiciary Court Nominations

May 2-6 — Student Legislature Elections

Moore To Visit CC Next Monday

Judge Dan K. Moore, Democratic candidate for governor of North Carolina, will visit Charlotte College Monday, April 20th. He will speak to Dr. Don Freeman's Political Science 302 class at 9:30 a.m. During the morning break he will be at the College Union for a coffee hour and he will speak to students at that time.

Charlotte College Bowling Team

NAME	FINAL AVERAGE	STATISTICS	COMPLETE ROSTER	NO. GAMES	HIGH GAMES	HIGH THREE
Robert Alexander*	150.4			9	180	504
Larry Auten	122.0			27	192	416
Tommy Blythe	122.0			7	147	429
Chris Boyoucas	142.0			10	180	495
Ernest Boyoucas	172.0			29	209	562
Bobby Burns	128.0			20	169	420
Clint Canaday*	151.0			17	190	501
William Hough	135.0			17	183	474
Ted Kaperonis	145.0			9	162	463
Charles Medlin	121.0			6	155	404
Russell Moody*	147.0			9	172	449
Frank Perez	176.0			14	208	545
Jan Ridenhour*	148.0			9	176	482
Robert Schaeffer*	141.1			28	182	474
Kenneth Sloop**	162.5			33	223	551
Don Wise	153.0			11	219	512

* LETTERMEN (PARTICIPATED IN 10 OF 30 GAMES)

** SWEATER WINNERS (PARTICIPATED IN 20 OF 30 GAMES)

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