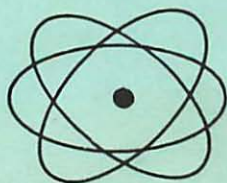
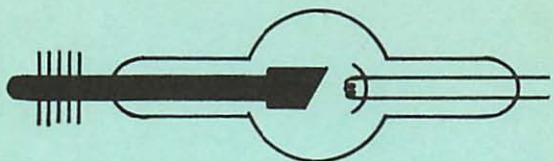


JUN 73



**MISSOURI MINUTES**

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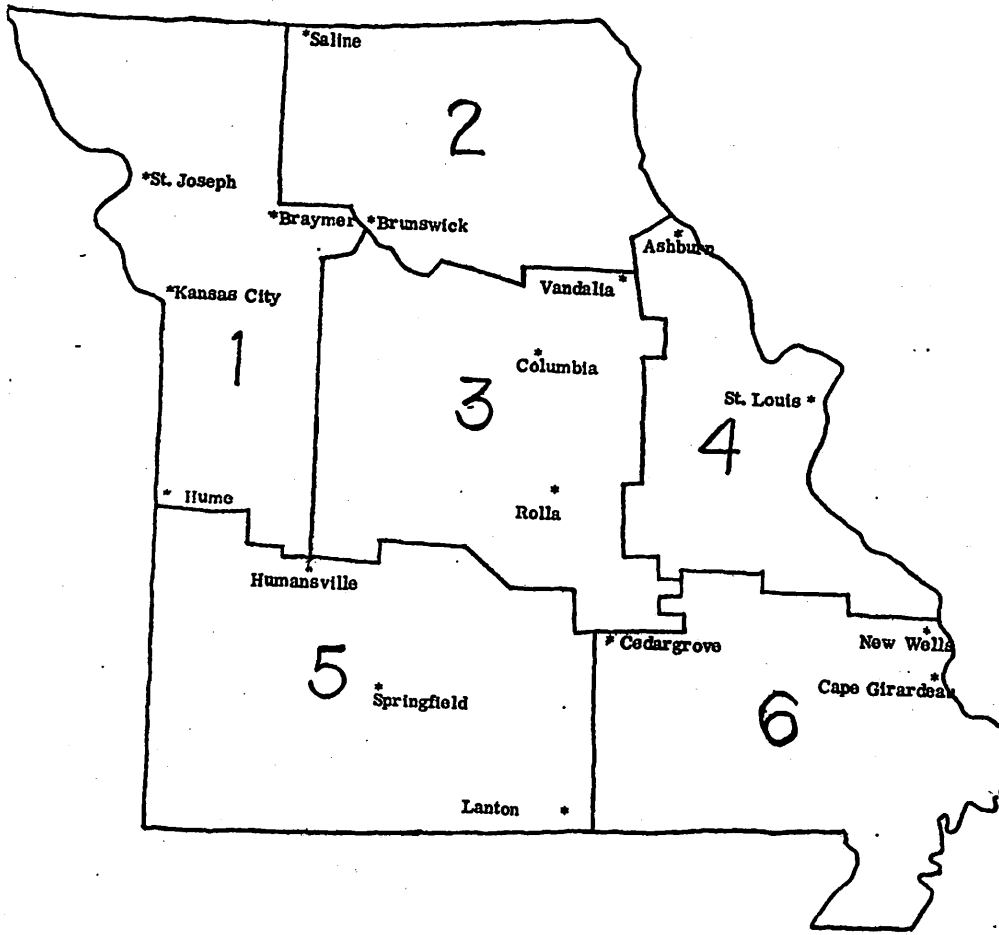
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# MSR T DISTRICT DIVISIONS



Editor

Gary S. Brink, R. T.  
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"Opinions expressed in this journal are those of the writers and do not reflect official opinions of the Missouri Society of Radiologic Technologists unless so stated. Original articles are accepted only with the understanding that they are contributed solely to the "Missouri Minutes". If and when the manuscript is published, it will become the sole property of the Journal."

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Diane Katsulis, R. T.	
Bob Feldhaus, R. T.	
Richard Chavez, R. T.	
Sharon Eisterhold, R. T.	
Bob Rein, R. T.	Advisor

## Membership

Harvey Fritz, R. T.	Chairman
District Representatives	

## Student Committee

Charles Sandlin, R. T.	Advisor
------------------------	---------

## DEADLINE DATE

Information to be included in Missouri Minutes must be submitted to the Editor no later than the 10th day of the month of publication.

"Missouri Minutes" is published four times a year. Publishing dates are: February, May, August and November.





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**JUNE 1973**

## EDITORIAL

The Missouri Society of Radiologic Technologists is working very hard to represent each of the district societies and to respond to the collective will of you, its members. One of the ways that your districts are now participating in the planning and implementing of ideas for the state is through your district representative who occupies a seat on the M. S. R. T. Board of Directors. For the first time in the history of our Society the districts can now continually represent themselves at the State level with true authority over the affairs of the State Society that represents them.

Another mechanism that very effectively facilitates your participation in the exchange of ideas throughout the State is the Missouri Minutes, the official publication of the Missouri Society of Radiologic Technologists. In providing a medium through which your district societies can converse with the entire M. S. R. T. membership, we've provided you with a most efficient means of communication.

As the editor of Missouri Minutes, and more importantly, as a member of the M. S. R. T., I am deeply concerned that each of our district societies realize the importance of their individual activities, and remain conscious of the fact that indeed the M. S. R. T. is nothing more nor less than the collective representative of the districts that comprise it.

As basic and easy to understand as this concept is, its implications, nevertheless, apparently remain vague and obscure to many of our members, as there continues to be a failure of the district secretaries to provide copies of the minutes of your meetings for publication in the Missouri Minutes.

The members of our Society need to be able to read

these minutes if they are to remain informed. Your plans and activities, goals and objectives, methodologies and ideologies are all important to the other members of your society. Problems that you've encountered and subsequently found solutions to are generally not unique for they are the same problems that other districts in other areas encounter as well. By making available to them your solution to some of these problems you might well be providing one of your fellow technologists with the ideas he needs to overcome a similar obstacle.

What I am requesting of you then, is your full cooperation in helping to make the Missouri Minutes a communication medium truly representative of the district societies that it serves. To do this, I would ask that one of you in each district read this editorial at your next meeting and make the motion that the minutes of your district meetings be mailed to the editor of the Missouri Minutes at the same time they are mailed to the officers of your Society. By so doing you will not only be contributing to the success of your district societies, but also to the success of your parent society, the Missouri Society of Radiologic Technologists.

As I am sure you and your members are interested in seeing your district society represented in this manner I will, therefore, take this opportunity to thank you for your cooperation in this most important matter.

Gratefully,



Gary S. Brink  
Editor

Missouri Minutes

## A. S. R. T. ANNUAL MEETING

The 45th Annual Meeting of the American Society of Radiologic Technologists will be held July 21 through 26, 1973 at the Conrad Hilton Hotel, Chicago, Illinois. The Annual Meeting Committees wish to take this opportunity to extend a most gracious invitation to our fellow technologists to come join us in the "City of the Beautiful People". It is fitting indeed that Chicago host the 45th Annual Meeting of the "Beautiful People" since it is the birthplace of radiologic technology.

The educational program offers a cross section of sub-specialty topics that are indicative of the development of our profession. Business sessions promise to be not only eventful but informative. Needless to say, the planned social events within the meeting shall be swinging, as will those activities in the City itself.

So in the words of a very prolific songwriter, Fred Fisher, come to "Chicago, Chicago that toddling town ..... you'll have the time, the time of your life .....".

MISSOURI SOCIETY OF RADIOLOGIC TECHNOLOGISTS  
BOARD OF DIRECTORS MEETING

Meeting was called to order at 11:00 a. m. , Thursday, April 5, 1973, by President, Phyllis McEnerney in Columbia, Missouri. The minutes of the previous meeting were read and approved as corrected.

Ron Ott, R. T. , Treasurer, presented the following report. Balance brought forward January 16, 1973 was \$2,507.54. Income since that date totaled \$990.27, bringing the total income to \$3,497.81. Total expenditures came to \$416.19. This brings the balance on hand as of April 5, 1973 to \$3,081.62.

COMMITTEE REPORTS

Sharon Eisterhold, Chairman of Careers Committee, reported no new slides had been added. She reported that Gary Brink was using the slides for Careers Day in St. Louis.

Convention City - no report.

Mary Sebacher gave the following report for the Education Committee. As of April 5, 1973, fifty persons had pre-registered for the Educational Seminar to be held April 6 and 7, 1973.

Licensure Committee - no report.

Membership Committee - no report.

Nominating Committee - no report.

Professional Affairs Committee: Marjorie Tolan was not present, but Miss Sebacher gave a report from

Mrs. Tolan. Mrs. Tolan felt the Committee had completed the job that was asked of them. She said both she and other Committee members would be glad to do more if the Board desired.

At this time a letter from a group of technologists in the St. Louis district was read to the Board. Discussion followed.

The motion was made and seconded to ask Mr. Walleman to speak at the M. S. R. T. Convention. Motion - carried.

The motion was made and seconded to have opposing viewpoints on Social-Economics discussed by a panel at the M.S.R.T. Convention. Motion - carried.

Sharon Eisterhold brought House Bill #314 up for discussion. A motion was made by Ron Ott, R. T. that the M. S. R. T. be prepared to send a delegation of technologists to Jefferson City to lobby against House Bill #314. The delegation to be composed of the following technologists: Bob Rein, Darrel McKay, Sharon Eisterhold, Ulysses Murray, and Gerald Casey. The motion was seconded. Motion - carried.

A motion was made by Darrel McKay, R. T. to contact Robert Best, R. T. and ask him to go with the delegation should the need arise. The motion was seconded. Motion - carried.

Jean Detring, Chairman of Resolutions and By-Laws, had no official report.

The motion was made to combine the offices of Secretary-Treasurer. The motion was seconded. Motion -

carried.

The motion was made that the Treasurer be elected for two consecutive years. The motion was seconded. Motion carried.

Jean Detring, R. T. , reported that Richard Hammer, R. T. had agreed to present the Sante Memorial Lecture at the 1973 M. S. R. T. Convention.

Jim Francis, Chairman of Convention 1973, was not present. The Convention Progress report was presented by Mrs. Clements.

Ron Ott, R. T. gave a report on Membership Dues and Recommendations of Committee for raising dues. Discussion followed. A motion was made to raise the active members dues to \$10.00, and the associate members to \$15.00. Student dues remain at \$3.50. The motion was seconded. Motion - carried.

Student Affairs - no report.

The next report was given by Doug Hausenbauer, Chairman of Student Affairs. The Secretary read a letter to the Board from Mr. Hausenbauer. Discussion followed.

A motion was made and seconded to give the Student Committee postage funds. Motion - carried.

Miss McEnerney had received a letter from Bonita Conklin, Secretary of the Student Committee. The letter concerning Student Oriented Programs at Convention was read to the Board.

The motion was then made that the Secretary send



minutes of the Board meetings to the Chairman of the Board for editing before they are sent to members. The motion was seconded. Motion - carried.

Mr. Brink was not present so no report was presented on the "Missouri Minutes".

Sister Francita reported on the Verifax Copy Machine Walter Anderssen had presented to the M. S. R. T.

A letter was read from Don Blancett, R. T. concerning a lecturer for the M. S. R. T. Convention. This was referred to Gerald Casey, Program Chairman.

A proposal was read from Mr. James Mom, R. T., California Society of Radiologic Technologists concerning voting of Associate members at the State meetings. Discussion followed. A motion was made and seconded not to publish the C. S. R. T. proposal in the "Missouri Minutes". Motion - carried.

The next Board meeting will be held Saturday, June 16, 1973 at 10:30 a. m. at the Holiday Inn, Lake of the Ozarks.

The meeting was adjourned at 4:45 p. m.

Respectfully Submitted,  
Ellen Clements, R. T.  
M. S. R. T. Secretary

As you will note the open letter to all A. S. R. T. members from the California Society is to be found in this issue of the Missouri Minutes and follows these comments.

Despite some apparent opposition I have taken this opportunity to exercise an editor's sacred prerogative by printing the California letter in our Journal. I do so because as editor I feel I have an obligation to the membership to provide you with information such as this which, because it affects the Affiliate Society Bylaws, will not only affect the California Society, but will also have a direct effect upon the Missouri Society as well.

Whether you decide to vote for or against the California proposal, however, is not at issue here, for decisions like that are best left to the democratic processes that we have purposely built into our Society. What is at issue is whether you are to be expected to vote intelligently and wisely, for to do so you must have some communicative channel by which to receive information about current issues, such as this one. I believe I have provided you with such - how you choose to utilize it is a matter left up to you, the members of the Missouri Society of Radiologic Technologists.

Gary S. Brink, Editor



*The California Society of Radiologic Technologists*

AFFILIATED WITH

*The American Society of Radiologic Technologists*

Open letter to the Membership of the American Society of Radiologic Technologists:

Dear ASRT Member:

For several years the California Society and other large ASRT Affiliate Societies have worked toward obtaining amendments to the ASRT Affiliate Society Bylaws which would provide voting privileges at the State level for associate members of Affiliate Societies. The membership of these societies has felt that ALL TECHNOLOGISTS in a state, whether eligible for active membership or not, must have a voice in their State organization. Under present Bylaws they do not have this right.

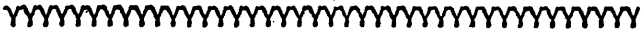
At the CSRT Annual Meeting in 1972 our active members, by two-thirds vote, changed our Corporate Bylaws to give this right to all registered and fully licensed technologists in the State. We were confident that the membership of ASRT would likewise amend the Affiliate Society Bylaws at the ASRT Annual Meeting in Denver, but unfortunately, this was not forthcoming. California now is in violation of ASRT Bylaws, and our Charter is in jeopardy.

You may be thinking, "Who cares, if California is going to be so bullheaded, who needs them?" Well, a look at the recent history of CSRT will show that the problems faced in California at various times were problems that probably will be facing the rest of the nation within a very short time, and only by working together on State as well as National levels can our profession survive. The ASRT Board of Directors has generously agreed to defer action on our

situation until following the Annual Meeting in Chicago. We are grateful for this concession, but as much as we cherish our affiliation with ASRT, we must steadfastly defend the right of our members to have a voice, through voting in State Society affairs. We know this opinion is shared by the other large affiliates who have submitted proposed Bylaw amendments to be considered in Chicago this summer.

Since I will be the President of CSRT at the time of the Annual Meeting, I will be in Chicago to work for your sanction of the concept of Affiliate Associate Member voting on State affairs. Your assistance is needed, both at the Annual Meeting and by your mail ballot, toward accomplishing this. We don't know what will happen to our affiliation if the proposed amendments do not pass this year, so please give this problem your careful consideration.

James A. Mom, RT, ARRT  
President-Elect, CSRT



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## DISTRICT NEWS

### FOURTH DISTRICT: February

The February meeting of the 4th District, M. S. R. T. was held February 15, 1973 at Faith West Hospital. The meeting was called to order at 8:20 p. m. by President, Joe Stojeba.

The speaker for the evening was Dr. Charles Berry, St. Louis University, and he spoke on the "Legal Responsibility of a Radiologic Technologist".

The Treasurer reported a balance on hand of \$1217.23.

Marty Strussion, District Representative to the M. S. R. T. Board of Directors, discussed a letter received by Polly C. Story, Chairperson of the A. S. R. T.'s Committee on legislative activities. The letter requested assistance from the membership in helping to assure passage on House Bill 673.

Mr. Strussion also reported the decision made by the State Board to postpone consideration of accepting the \$600 donation made by the Missouri Radiological Society until the next annual meeting of the M. S. R. T. At that time the general membership is to decide the course of action to be taken relating to the donation.

The Ways and Means Committee Chairman, Mike Albertina, reported that the winners of the annual raffle would be drawn at the April meeting.

Stan Eisen, Program Committee Chairman, reported that the March meeting would be held at Jewish Hospital; speaker to be announced.

Ulysses Murray, Regional Director, then discussed the A. S. R. T. Board Meeting he had recently attended. He stated that the A. S. R. T. would soon be publishing a roster and that from what he had heard at the meeting, the main topic of consideration currently in just about every state was state licensure or unionization.

Under "New Business" the President requested the Student Committee to recommend to the Board three students as possible recipients of the Mallinckrodt Fellowship for Continuing Education.

The next item of business brought before the assembly concerned the annual film exhibit competition scheduled for April. It was brought to the attention of the membership that virtually no preparation for the exhibit competition had been made by the chairman of the committee Rick Chavez, and that, therefore, it was doubtful whether an exhibit competition would be possible this year.

After discussion the President, Joseph Stojeba, announced that the 1973 Film Exhibit Competition would be cancelled. A motion was also passed that Mr. Chavez be removed from his position as committee chairman and that he be notified in writing of this decision.

The meeting adjourned at 10:35 p. m.

#### **FOURTH DISTRICT: March**

The March meeting of the 4th District, M. S. R. T. was held March 15, 1973 at Jewish Hospital. The meeting was called to order at 8:10 p. m. by President, Joseph Stojeba.

The speaker for the evening was Robert Francis,



M. D. , Mallinckrodt Institute of Radiology and he spoke on "Pancreatic Angiography".

The Treasurer reported a current balance in the district's treasury of \$1272.22

The minutes from the February Board of Directors Meeting were read and approved.

Bob Feldhaus, Chairman of the Professional Affairs Committee and member of the State Professional Affairs Committee reported on a meeting of the state committee at which the Missouri Labor Laws and the National Labor Relations Act were discussed. The consensus was that since technologists working in not-for-profit hospitals were not covered by the N. L. R. A. , and since Missouri Labor Laws were grossly devoid of protection provisions for collective bargaining activities that might be undertaken by the membership, any attempt at collective bargaining by the technologists in Missouri should be done under careful guidance and with prudent judgement and leadership.

After reading and discussing House Bill 314, a motion was passed to write the State Representatives who sponsored the bill and notify them of our opposition to its passage.

Steve Horrall, Co-Chairman of the Program Committee, reported that the April meeting would be held at Missouri Baptist Hospital with the students to present the scientific program for the evening entitled "Contrast Media".

Entertainment Committee Chairman, Phil Sotir, reported that on May 19, 1973 at 7 p. m. the Installation of Officers Banquet would be held. The price for admission was set at \$5.00.

Meeting adjourned at 10:00 p. m.

**FOURTH DISTRICT: April**

The April meeting of the 4th District, M. S. R. T. was held April 19, 1973 at Missouri Baptist Hospital. The meeting was called to order at 8:15 p. m. by President, Joseph Stojeba.

The scientific program for the evening was presented by the students of the 4th District. Misses Diane Lloyd, Nancy Hirstein, Mary Jane Schultz, and Mr. Dennis Long each presented a portion of the presentation entitled "Contrast Media". Their lecture was supported by slides and billboard illustrations.

The minutes from the March meeting were read, corrected and approved.

The Treasurer reported a \$1,599.92 cash balance on hand.

The Board of Directors minutes from the March meeting were read and approved.

Discussion by the membership then took place on the April 5th State Board Meeting. Mr. Strussion, District Representative to the M. S. R. T. Board of Directors, stated that a motion had been passed by the State Board of Directors to the effect that all discussion taking place at the State Board meetings could be kept secretive, and that no tape recordings of the meeting would be allowed with the exception of the secretary's.

The consensus of the 4th District membership was that this was a violation of the member's rights and a breach of the trust placed in the members of the State Board of Directors.

A motion was made and passed that the 4th District Representative, Mr. Strussion, relay the district's strong opposition to this ruling and explain the reasons for its opposition.

The Program Committee Chairman, Stan Eisen, announced that the May meeting would be held at St. Luke's Hospital with the election of officers to take place at that meeting.

Bob Feldhaus, Chairman of the Professional Affairs Committee, reported that several letters had been prepared relating to various pending legislative bills affecting technology both on a state and a national level. He requested that the membership sign each of the letters as they left the meeting and announced that they would be sent to the appropriate legislators to inform them of our opinions.

Under "New Business", Mr. Warren Dixon informed the membership that the 4th District Board of Directors had passed a motion to establish a special lectureship. The purpose of which would be to annually procure one speaker of national renown to provide the 4th District, M. S. R. T. with a professional lecture pertinent and timely to the members.

The Lectureship award, an engraved plaque, was presented to Armand Diaz and a motion was made and passed by the membership to establish the "Diaz Professional Education Lectureship".

The meeting adjourned at 10:45 p. m.

The 4th District has also announced the preparation of the District's cash budget for next year. See below:

**FOURTH DISTRICT, M. S. R. T.  
CASH BUDGET**

**Per Year Ending June 30, 1974**

**Receipts:**

**Dues:**

77 technologists at \$5	\$385.00	
48 students at \$1	48.00	
10 associate at \$7	<u>70.00</u>	\$503.00

**Annual Raffle** 600.00

**Mallinckrodt Co. Fellowship** 200.00

**Entertainment:**

Christmas Party	\$125.00	
Spring Party	<u>125.00</u>	\$250.00

50/50 Club		82.00
<b>Total Cash Receipts</b>		<u>\$1635.00</u>

**Disbursements:**

**Delegates to A. S. R. T. Annual Meeting, 2** \$300.00

**Delegate to M. S. R. T. Annual Meeting** 50.00

**Annual Raffle:**

1st Prize	\$100.00	
2nd Prize	50.00	
3rd Prize	<u>25.00</u>	\$175.00

**Office Supplies** 75.00

**Postage** 150.00

**Committees:**

Program		\$250.00
Membership		25.00
Professional Affairs		25.00
Public Relations		20.00
Nominating		15.00

**Committees: (Cont.)**

Entertainment	10.00
Ways and Means	10.00
Education	10.00
Student	10.00
Film Exhibit	5.00
Licensure	5.00
<b>Total Cash Disbursements</b>	<b><u>\$135.00</u></b>
<b>Increase or (Decrease) in Cash</b>	<b>\$ 500.00</b>
<b>Cash Balance, June 30, 1973 (estimated)</b>	<b>\$ 1492.00</b>
<b>Cash Balance, June 30, 1974 (estimated)</b>	<b>\$ 1992.00</b>

**FIFTH DISTRICT: December**

The December meeting of the 5th District of the Missouri Society of Radiologic Technologists was held December 19, 1972 at Cox Medical Center, Springfield, Missouri at 7:30 p. m.

The meeting was called to order by President, Sister Joyce Marie. The minutes of the November meeting were read and approved. The Treasurer reported a balance of \$224.17 plus \$5.00 from the 50-50 Club, making a new balance of \$229.17.

Dale Crouch, Chairman of the Student Affairs Committee, agreed to call together the student representatives for a planning meeting. The Program Committee reported the January meeting would be held at St. John's Hospital, Springfield, Missouri. The Nominating Committee was reminded that the annual elections would be held at this meeting.

A lively question and answer session for the students

was conducted by Mr. Jim Francis.

Mr. Jim Francis, R. T., Educational Director of Cox Medical Center, Springfield, Missouri, presented our program for the evening. Mr. Francis spoke on Nuclear Medicine, and to better illustrate his talk Mr. Francis showed photographic projections of various organs after they had absorbed a radioactive isotope.

The meeting was adjourned and refreshments were served.

#### FIFTH DISTRICT: January

The January meeting of the Fifth District was held January 26, 1973 at St. John's Hospital in Springfield, Missouri.

The meeting was called to order by Sister Joyce Marie, President. The minutes were read and approved. The Treasurer reported the new balance at \$231.17.

The Membership Committee reported an increase in membership in 1972. Jim Francis, reporting for the Professional Affairs Committee, stated a Life Membership for Margaret Brown was to be presented to her by the Fifth District.

Jim Francis, Jerry Casey, and Ellen Clements reported on the State Board of Directors meeting held in Rolla on January 20, 1973. Jim reported the following on the 1973 Convention: The Board of Directors voted the State meeting back to the Lake of the Ozarks. The Convention will be held the first week-end in October.

Program Committee had no report. The place of

the February meeting will be announced by Jim Francis, the new President.

Dale Crouch, Student Affairs Committee, reported on a meeting of the Fifth District students held January 12, 1973 at Springfield. He presented the Fifth District with a list of "Student Grievances" drawn up during the January 12 meeting. These grievances are to be presented to a panel at the February meeting.

The Program Committee held the 50-50 Club and \$15.50 was collected. A total of \$7.75 was to be added to the Treasury.

Sister Joyce Marie gave a word of thanks to the 1972 officers and committee members for their service in the past year.

Sister Joyce Marie read a letter from Polly Story concerning Legislative Bill HR 673. She asked each member of the Fifth District to write to his/her congressman and senator asking them to support Bill HR 673.

Next point of business was election of officers for 1973. Patty Knight, Chairman of the Nominating Committee asked Treasurer Dale Crouch for rollcall of members to determine the voting eligibility. Nominees were as follows:

- |                  |                               |
|------------------|-------------------------------|
| President:       | Jim Francis<br>Ellen Clements |
| Vice-President:  | Mike McMasters<br>Dick Evans  |
| President-Elect: | Ken Tuter<br>Mary Estep       |
| Secretary:       | Janis Frazier<br>Donna Boyer  |

Treasurer: Jerry Harris  
Cleo Morris  
Dale Crouch

Candidates were introduced and the voting was held.  
The new officers for 1973 are as follows:

President	Jim Francis
Vice-President	Dick Evans
President-Elect	Ken Tuter
Secretary	Donna Boyer
Treasurer	Jerry Harris

Newly-elected President, Jim Francis, gave an address to the members.

New business was called for. A meeting of the Missouri Society Student Affairs Committee is to be held on February 17, 1973 in Hannibal at 1 p.m. Because of the location of the meeting, students were in agreeance to write a letter of complaint to Charles Sandlin and Phyllis McEnerney asking that the meeting place be changed to a better geographic location.

Jim Francis made a motion that read as follows: "Each year the Fifth District will appropriate one-half of its treasury to be divided between three students, one from each school in the district. This money would be used by these candidates to help pay their way to the M. S. R. T. Convention. Students must be members of the Fifth District and the M. S. R. T. Each student will be selected by the Technical Director and Chief Technologist and the student technologists of the Schools. The allocated money must be used for convention costs, or be returned to the general treasury of the Fifth District. The motion passed.



**FIFTH DISTRICT: February**

The monthly meeting of the Fifth District of the Missouri Society of Radiologic Technologists met at Cox Medical Center, Wednesday evening, February 28, 1973.

The business meeting was called to order by the president, Jim Francis. The Secretary and Treasurer reports were read and approved. The Treasurer reported a balance of \$243.92. The 50-50 Club presented \$5.35 to the treasury making the new balance \$249.27.

New Business was called for. An announcement was made that the M. S. R. T. Annual Convention would be held the first Thursday, Friday and Saturday in October at the Holiday Inn. Chairmen of the convention committees are:

<b>Program:</b>	<b>Jerry Casey</b>
<b>Entertainment:</b>	<b>Ellen Clements</b>
<b>Publicity:</b>	<b>Sister Joyce Marie</b>
<b>Properties:</b>	<b>Mike McMasters</b>
<b>Registration:</b>	<b>Suzanne Hasler</b>
<b>Exhibits:</b>	<b>Patti Knight</b>

It was decided that this year Sister Joyce Marie would take treasury money to send students to the convention.

The program for the evening was a panel discussion conducted by the student technologists. The program dealt with student problems, both in classes and practical work. There was a discussion on the college based programs versus hospital based programs and the advantages and disadvantages of both programs.

**FIFTH DISTRICT: March**

The March meeting of the Fifth District of the

Missouri Society of Radiologic Technologists was held March 29, 1973 at Smith-Glynn-Callaway Clinic, Springfield, Missouri.

The meeting was called to order by President, Jim Francis. Betty Gartin introduced the guest speaker Mr. Kenneth Nobels, Director of Security at Southwest Missouri State University. Mr. Nobels spoke on "Drugs and Drug Abuse". Along with his lecture Mr. Nobels presented a display of drugs and drug instruments.

After a short break the business meeting was called to order.

The Secretary's report was read and corrected. The Treasurer reported a balance of \$239.19. The 50-50 Club collected \$13.75.

The Program Committee reported that the next meeting was to be held at St. John's Medical Center, Joplin, Missouri.

The President read an article from the A. S. R. T. Scanner about Senate Bill S667 and requested every member to write to both Senator Symington and Senator Eagleton concerning the bill.

FIFTH DISTRICT: April

The April program was presented by Dr. W. W. Hurst, Orthopodist at St. John's Hospital in Joplin, Mo. He presented slides of his travels to Japan, Switzerland, and Hawaii and gave a very interesting and humorous program.

There was no business meeting.

**SIXTH DISTRICT: March**

The Sixth District, M. S. R. T. met on March 13 at Memorial Hospital, St. Genevieve, Missouri.

Routine business was conducted by the membership and a discussion ensued regarding the members not present at the meeting.

The program for the evening consisted of a general discussion of the legislative bills now pending in the House and Senate and the impact that they will have on registered technologists if they should be passed.

**SIXTH DISTRICT: May**

The May meeting of the Sixth District, M. S. R. T. was held at St. Francis Hospital, Cape Girardeau, Mo.

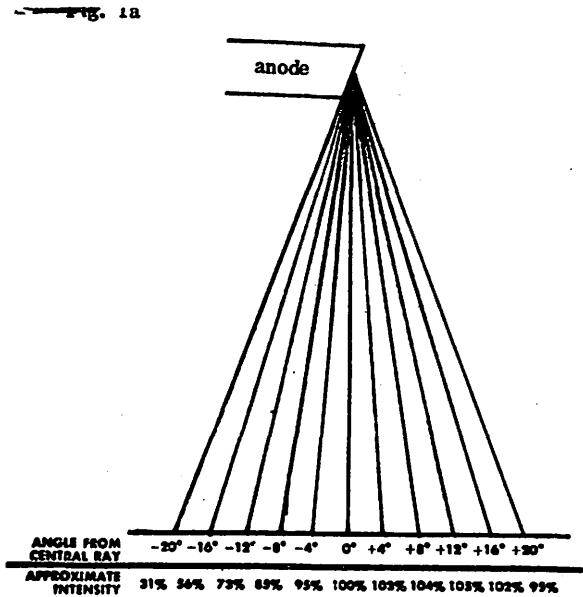
Routine business was conducted and was followed by a discussion of various interesting topics introduced by each of the members present.

The scientific program for the evening dealt with radiologic cardiac catheterization procedures.

## TECHNICAL TALK

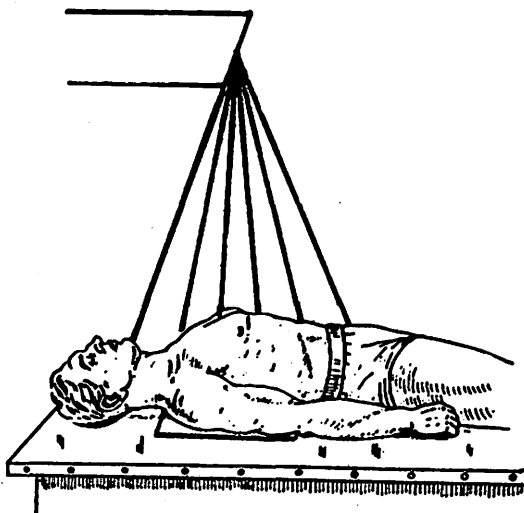
One of the earlier observations made by the pioneers in roentgenology was the recognition that radiation was not emitted uniformly from the x-ray tube. In fact, tests indicated that there was a definite and recognizable loss of beam intensity on the anode side of the divergent x-ray beam. This phenomena has been commonly referred to then, and now, as the "heel" effect and is frequently used to advantage when radiographing long anatomical parts that exhibit greater tissue thickness at one end than the other.

In Figure 1A a cross section of the x-ray beam is presented as it emanates from the tube. The numbers re-



present the percentage of beam intensity relative to the central beam, which is considered to be 100%. To exploit the "heel" effect, Figure 1B, for thoracic spine radiography, for example, the patient is oriented so that the thinner portion of the thorax falls beneath the weakest (anode side) portion of the beam. The net effect of this arrangement, as can be determined empirically, is one of equalized radiographic density extending from T1, where the thorax is thinnest, to T12, where the thorax reaches its maximum dimension.

Fig. 1b

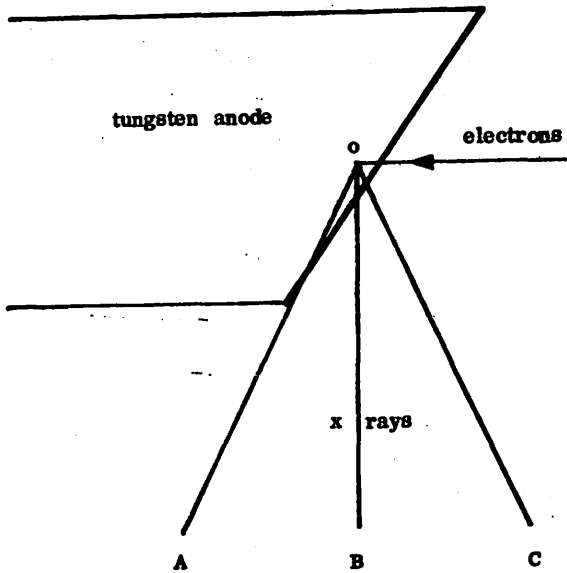


The knowledge of the "heel" effect and how to utilize it effectively is one of the fundamental lessons presented to student technologists. All too often, however, the principles that underly the phenomena are skipped-over, much to the chagrin of inquiring minds. It is therefore to be the purpose of this monologue to first explain the physical principles that give rise to the heel effect; second, to consider the significance of the heel effect in the context of modern x-ray tube design; and third, to focus upon a strange and unique problem only recently recognized as being associated with newer x-ray tubes that utilize small angle ( $10^{\circ}$ - $12^{\circ}$ ) high speed rotating anodes.

To understand why the heel effect occurs at all one has to illustrate the production of x-rays as it occurs within the tube.

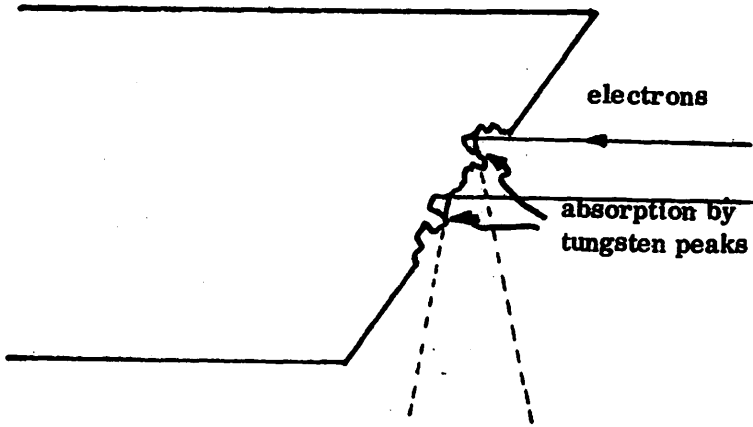
Figure 2 is a schematic representation of x-ray production as it occurs in the anode. From the illustration it can be noted that many of the electrons that bombard the anode during an "exposure" do not interact with the anode at its surface. Instead, a large proportion of these high-speed electrons manage to penetrate the surface and travel to some depth within the anode before their energy is ultimately transformed into x-rays. The result of having x-rays originate within the anode is that those being produced in the direction of A and B tend to be more absorbed by the anode than are those emitted in the direction between C and B. Figure 2 shows how x-rays so produced have to pass through a greater thickness of tungsten to escape the tube and are thus absorbed to a greater extent.

Fig. 2



When a target has been in use for some time and especially if it has been misused by the use of excessive Kv-MaS combinations, the target surface becomes rough and pitted (see Figure 3). When this occurs x-rays produced within the "valleys" of the roughened surface are absorbed to a great extent by the "peaks" of the pitted anode and thus the amount of "heel" effect is increased.

Fig. 3



The design of modern x-ray tubes generally employs the use of small-angle anodes to reduce the effective focal spot size. One result of this is that the anode tends to absorb more of the radiation being produced as the angle of the anode is decreased. (Compare the length of the tungsten paths (TP) through which the x-ray photons must pass in order to escape the tubes in Figure 4, A and B).

The third and final point to be considered concerns



Fig. 4a

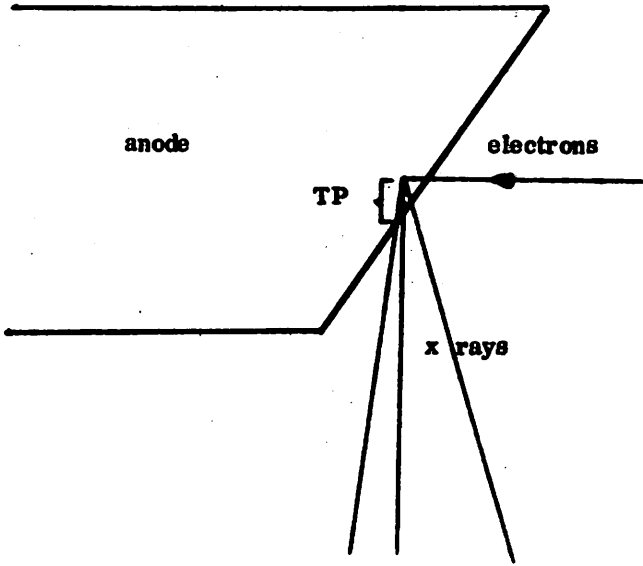
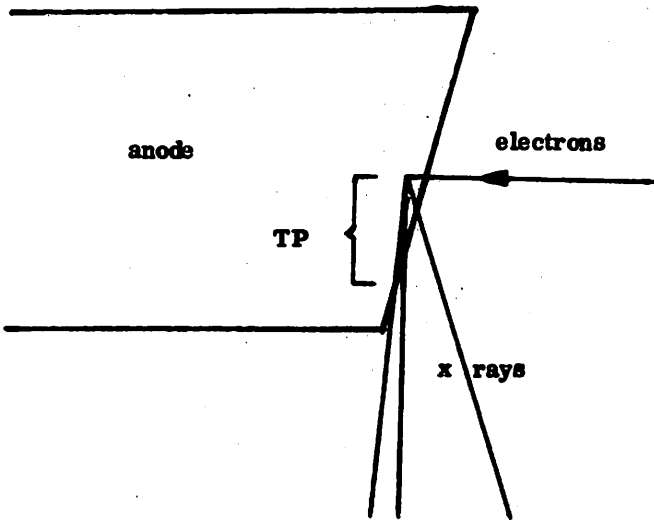


Fig. 4b



a problem that has only recently shown up with certain newly designed tubes. It is related directly to the anode angle, the speed of its rotation, and the heat buildup that occurs within the body of the anode.

To further reduce the effective focal spot size for special application tubes, manufacturers have reduced the anode angle from the typical  $17^\circ$  to as little as  $10^\circ$  or  $12^\circ$ , thus making possible a focal spot size of approximately .3mm. The results from having reduced the anode angle to this extent are two.

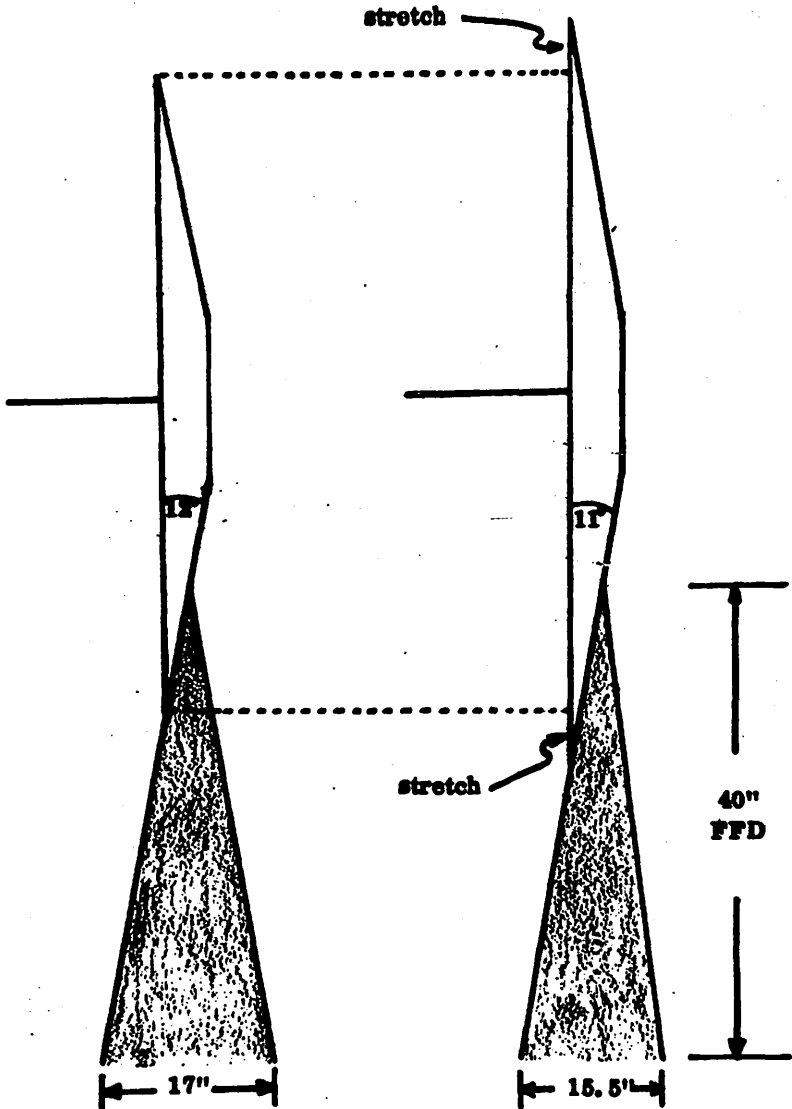
The first is a noticeable increase of the heel effect as can be observed directly from a radiograph produced by such a tube or as can be easily predicted from geometrical considerations.

The second effect, and by far the more intriguing of the two, has to do with the radiation coverage available from such tubes. As was previously noted, an x-ray tube utilizing a  $12^\circ$  anode just barely covers a 17-inch cassette (17.0048 inches). After such a tube has been used for a time, however, a strange thing begins to happen. The anode, because of its high rotational speed (10,000 rpm), experiences a tremendous centrifugal force. The effect of this centrifugal force coupled with an anode that becomes somewhat malleable when very hot, causes an outward expansion or stretching of the anode. Figure 5 demonstrates how the anode angle is actually reduced because of the stretching process, and how this ultimately reduces the amount of radiation coverage available to the user of such a tube.

From the illustration it can be noted that a  $1^\circ$  reduction on a  $12^\circ$  anode has the effect of reducing the beam coverage from a full 17 inches to 15.5 inches when a 40" FFD is employed. Thus, it becomes quite probable that an x-ray

tube can be purchased that has the ability to expose an entire 14 x 17 inch film when new, but which, because of the gradual stretching process that takes place, can lose some of its coverage capability and thus yield radiographs with radiation "cut off" at either end of a 14 x 17 inch film.

Fig. 5





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AT

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