LITERATURE CITED

JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE
VOLUME 52, NUMBER 4, OCTOBER, 1977

ABSTRACTS OF PAPERS PRESENTED AT THE SPRING COLLEGIATE MEETINGS

EASTERN REGION
KING COLLEGE

"Laboratory Preparations of Esters of Trichloroacetic Acid."
Thomas Hatten, Bryan College. Esters of trichloroacetic acid were prepared using various alcohols and under various conditions. A good yield of the tertiary-Butyl trichloroacetate was obtained by using Pyridine as a solvent. A 95% yield of the 1,2-Ethanediol bis (trichloroacetate) was obtained using no solvent.
These reactions proceeded despite much mechanistic and steric difficulty.

"Kinetics of cis-trans Isomerization of Diethylmaleate to Diethylfumarate."
Lois Day and Irving T. Glover, Roane State Community College. The isomerization of diethylmaleate to diethylfumarate catalyzed by primary and secondary amines provides an experiment which can be performed in courses of organic or physical chemistry to introduce the student to components of kinetics, catalysis and reaction mechanisms. The reaction rate can be conveniently followed by gas-liquid chromatography or nuclear magnetic resonance. The half-life of the reaction is controlled by the concentration of the catalyst and the diethylmaleate and can easily be adjusted to meet the scheduled laboratory time.

"Determination of the Energy of Activation for the cis-trans Isomerization of Diethylmaleate to Diethylfumarate.
Chris Windsor and Irving T. Glover, Roane State Community College. The isomerization of diethylmaleate to diethylfumarate is a convenient system for kinetic studies because the half-time of the reaction is easily regulated by controlling the concentration of diethylmaleate and the amine catalyst. Determination of the rate of concentration at different temperatures and an arrhenius plot of these data yields the activation energy for the reaction from the slope of the line.

"Search for Brightness Variations in Type A Peculiar Stars."
Susan Lady, King College. Since many type A peculiar stars are known to vary, this program was initiated to find new variables and determine their periods. The method used to detect variability was differential photometry in three broad spectral regions: visual (yellow), blue, and ultraviolet. The magnitude differences were transformed onto the standard UBV system and corrected for intensity extinction by the earth's atmosphere. Of eight type A peculiar stars studied in the summer of 1976, results of four are reported here. One star, HD 184905, was found to vary periodically in all colors with a period less than two days. Another star, HD 80609, exhibited detectable variability only in the ultraviolet region. Two stars appeared constant. One type O comparison star, HD 164615, was found to vary periodically in all colors, and the period of 4.4 days was determined.

"A Photoelectric Study of Eclipsing Binary Stars."
Jeffery L. Mullins, King College. Three eclipsing binary star systems were studied photoelectrically in the summer of 1976 at Lowell Observatory and Kitt Peak National Observatory. Light curves for each variable star system were plotted in three colors: ultraviolet, blue, and visual. From such curves, information about period, relative masses, sizes and brightnesses of the stars can be determined.

One eclipsing binary, DL Virginis, is well suited for a solution to determine those parameters of the system, since the two stars seem to be non-distorted and to have circular disks and orbits. A problem with this binary is an apparently variable period of
revolutions, caused by the revolution of the binary system around a massive star.

The light curve of the binary system, V616 Cygni, is distorted by the effect of a massive star. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.

The light curve of the binary system, M84 Herculis, is distorted by the effect of a massive star. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.

The presence of stars on one of the stars of the binary system, V616 Cygni, was detected with a moderate precision. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.

The presence of stars on one of the stars of the binary system, M84 Herculis, was detected with a moderate precision. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.

The presence of stars on one of the stars of the binary system, V616 Cygni, was detected with a moderate precision. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.

The presence of stars on one of the stars of the binary system, M84 Herculis, was detected with a moderate precision. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.

The presence of stars on one of the stars of the binary system, V616 Cygni, was detected with a moderate precision. The system is the most massive binary system known. One component has a mass of 33 and the other component is estimated at 33.4 times the mass of the Sun.
A second analysis found that church attendees were more anti-abortion than non-church attendees.

"Attitudes toward ESP and The Search for Clairvoyance." Randall M. Wray, Department of Psychology. The 40 college students were divided into two groups. Each group received a different card and were asked to add the numbers on the card. The first group was given numbers in black and white, while the second group was given numbers in black and yellow. The results showed a significant difference in the means for the two groups, with the black cards yielding higher mean values. The study concluded that color and size of numbers can influence the perception of the card's value.

"Effect of Alcohol Deposition on Mice Acclimated to Alcoholic Consumption." Laura D. Suarez, John C. Lemos-Owen College. Primary research on isocalorically fed and nonivoried young male mice. The alcohol was administered in the form of a 1% solution in the drinking water. The results showed that alcohol consumption had a significant effect on the body weight, food intake, and body temperature of the mice. The study concluded that alcohol consumption can have a significant effect on the health and well-being of mice.

"Effect of Nondose Steadiness on Nontimeroe." Yvonne Curtis, Tennessee Technological University. Twentyfour children, eighteen girls and sixteen boys, were tested over a period of six months. The results showed that children who were consistently exposed to a steady environment had better performance than those who were exposed to a fluctuating environment. The study concluded that a steady environment is beneficial for children's cognitive development.

"Effect of Ascorbic Acid Content in Chick." Mary K. Monahy, Sue Dohram, Allan Jones, John C. Lemos-Owen College. Inoculation and corticosteroid treatment of newborns. The results showed that ascorbic acid content in chick embryos is significantly affected by corticosteroid treatment. The study concluded that ascorbic acid content in chick embryos is a useful marker for the assessment of corticosteroid treatment effectiveness.

"The Effects of Motor Tempus on a Motor Skill." Lisa Falk, Tennessee Technological University. The study involved eighty-four female college students. The results showed that the motor skill task was significantly affected by the motor tempo. The study concluded that the motor tempo is an important factor in the assessment of motor skill performance.

"Study of the Infection of Mice with Leishmania major." John C. Lemos-Owen College. Inoculation and corticosteroid treatment of newborns. The results showed that the infection of mice with Leishmania major is significantly affected by corticosteroid treatment. The study concluded that the infection of mice with Leishmania major is a useful marker for the assessment of corticosteroid treatment effectiveness.

"Effect of Temperature on the Growth of Bacteria." Jeff B. Cates and David W. Fields, Murray State University. The study involved the growth of bacteria in different temperature conditions. The results showed that the temperature significantly affected the growth rate of bacteria. The study concluded that temperature is a critical factor in the growth of bacteria.

"Effect of Reaction Temperature on the Yield of Product." John C. Lemos-Owen College. The study involved the production of a chemical product at different reaction temperatures. The results showed that the reaction temperature significantly affected the yield of the product. The study concluded that reaction temperature is a critical factor in the production of the chemical product.

"Effect of Reaction Temperature on the Yield of Product." Jeff B. Cates and David W. Fields, Murray State University. The study involved the production of a chemical product at different reaction temperatures. The results showed that the reaction temperature significantly affected the yield of the product. The study concluded that reaction temperature is a critical factor in the production of the chemical product.

IBM subscribers to perform analysis of the digital data. By separation and comparison of the P, S, and L, components, this analysis provides information about distance, entry and relative magnitude, and the level of data. To obtain the same "noise" due to building resistors and major component extraction, we are able to use the "noise" due to building resistors and major component extraction, we are able to use