

NORTH Carolina State University Invitational Track and Field Meet
Jim Graham Building, State Fairgrounds, Raleigh, N.C., February 10, 1979

Event 5--MENS 3-MILE RUN (Slow Section)--1. Carl Ivaarson (CC) 14:42.9; 2. Rich Ferguson (KJMU)--14:58.2; 3. Charley Powell (ECU) 14:59.2 4. Jan Moffett (NCS) 15:07.4; 5. P. Madreras (HPC) 15:08.2.

Event 30--MEN'S 2-MILE RUN (Slow Section)--1. Mike Benshaff (JMU) 9:15.9; 2. Kevin Amigh (ASU) 9:21.1; 3. Russell Bowles (D) 9:21.2; 4. Jack Dunkin (WFU) 9:21.2

Event 8--WOMEN'S MILE RUN--(Slow Section)--1. Lee Ann Bentrak (JMU) 5:27.4; 2. Debbie Wagner (NCS) 5:31.2; 3. Sandy Bocock (JMU) 5:34.6; 4. Anita Sutton (JUM) 6:24.0.

Event 18--MEN'S MILE RUN--(Section 2)--1. Jay Lambe (VPI) 4:19.7; 2. Steve Sawyer (VPI) 4:20.4; 3. Jon Ritson (WM) 4:21.8; 4. Rich Mann (D) and Beeker Smith (Una) 4:26.6.

Event 18--MEN'S MILE (section 3)--1. Greg Moffitt (USC) 4:22.9; 2. Adam Bean (WFU) 4:25.9; 3. Randy Prunty (WFU) 4:28.7; 4. Jim Wilde (D) 4:29.6.

Event 19--MEN'S 440 (Section 1)--1. Ray Magee (NCC) 53.5; 2. Mike Sebolt (VPI) 55.3 3. Don Summers (SA) Disqualified.

Event 19--MEN'S 440 (Section 2)--1. S. Weatherspoon (JCS) 51.9; 2. Mike Starkw (USC) 54.5; 3. Pete Baker (D) 55.3; 4. ~~XXXXXXXXXXXXXXXXXXXX~~ Frank Plantamura (D) 56.4; 5. Ray Esquilin (FAY) 58.0.

Event 19--MEN'S 440 (Section 4)--1. Rick Velgos (NCS) 51.7; 2. George Musline (VS) 52.2; 3. Jessie Vance (SA) 52.9; 4. Ken Bailey (FSU) 56.6.

Event 19--MEN'S 440 (Section 3)--1. James Bolden (CC) 52.9; 2. Mason Sizemore (VPI) 52.9; 3. Graham Erwin (FSU) 53.2.

Event 19--MEN'S 440 (Section 5)--1. Antone Holloman (ECU) 54.1; 2. Scott McDonall (WM) 54.3; 3. Danny ~~XXXX~~ Hoard (ASU) 55.6.

Event 19--MEN'S 440 (Section 6)--1. Rick Beasley (ASU) 53.1; 2. Reid Wilson (USC) 53.3.

Event 19--MEN'S 440--(Section 7)--1. Ronald Ray (Una.) 53.7; 2. Lewis Fields (NCC) 53.8; 3. James Norcom (VS) 54.0.

Event 19--MEN'S 440--(Section 8)--1. Ted Jones (JMU) 52.7; 3. John Riddick (CC) 53.1; 3. Frank Keith (NCC) 54.0;

Event 20--WOMEN'S 440 (Section)--1. Dolores Easter (JCS) 64.3; 2. Leah Sherrill (NCC) 65.4; 3. Deloise Leggett (SA) 67.0; 4. S. Barnes (HA) 69.7.

Event 20--WOMEN'S 440 (Section) 3)--1. Berris Thompson (SA) 63.1; 2. Selma Sanders (JCS) 64.8; 3. ~~XXXXXXXXXXXXXXXXXXXX~~ Judy Nicholson (NCS) 65.8 4. Susan King (JMU) 69.5. 5. Jackie Carol (HI) 75.8.

Event 20--WOMEN'S 440 (Section 2) 1. Tania Brown (FSU) 61.1; 2. Susan Broadrus (JMU) 62.6; 3. Princess Morrison (HI) 69.8;

Event 20--WOMEN'S ~~440~~ 440 (Section 4) 1. Thelma Johnskin (SA) 66.5; 2. Diane Fitzpatrick (JMU) 74.6;.

Event 26-- MEN'S 1000 (Section 1) 1. Jim Abbott (VPI) 2:17.1 2. Steve Dye (WM) 2:18. 3. Warren Borden (NCC) 2:20.4; 4. Ron Caton (ASU) 2:20.5 5. William Freeman (VS) 2:21 6. Jim Byrd (CC) 2:25.7 7. Rex Conley (JCS) 2:27.6.

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Event 26 --MEN'S 1000 -- (Section 2)-- 1. Kyle Poplin (GA) 2:17.5 2. Frank Hum (D) 2:18.8; 3. Chris Slominski (WM) 2:19.1; 4. Jimmy Butler (SA) 2:19.3; 5. Don Szpak (USC) 2:22.1 6. Randy Harzelere (NPC) 2:24.7; 7. Reynold Hawkins (JCS) 2:25.6; 8. Reg Davis (FAY) 2:44.1.

Event 26-- MEN'S 1000--(Section 3)-- 1. James Ford(SA) 2:18.9; 2. Brad Rogers (CC) 2:21.4; 3. John Nepolitan (USC) 2:23.1; 4. Mike Rother (NCS) 2:23.9.
2:24.4

Event 27--WOMEN'S 880 -- (Section 1)--1. Debbie Kemp (FSU) ~~2:24.4~~; 2. Elva Lassiter (HI) ~~2:36.2~~; 3. Sandy Bocoock (JMU) 2:36.9 .

Event 25-- MEN'S 600-- (Section 1)-- 1. Tony McKoy (ECU) 1:14.7; 2. Mike Ruffin (HI) 1:14.8; 3. Harmon Rogers (JCS) 1:15.5; 4. Cornell Freeman (CC) 1:16.9; 5. Tracy Starnes (WFU) 1:17.9; 6. Jim Sanders (ASU) 1:18.6;.

Event 25 MEN'S 600 (Section 2)-- 1. Wilmer Leon (HI) 1:14.5; 2. Steve Davis (CU) 1:16.9; 3. Donovan Goode (JCS) 1:18.1; 4. Andy Sailor (NCS) 1:18.1; 5. Angelo Clark (VS) 1:20.8; 6. Aaron Bain (FSU) 1:22.1.

Event 25--MEN'S 600 -- (Section 3)-- 1. Jason Lowe (JCS) 1:13.9; 2. Ray Daley (CU) 1:15.2; 3. Ward Jarvis (ASU) 1:15.4; 4. Ernie Washington (JMU) 1:18.1; 5. Derek O'Neal (WM) 1:20.4; .

Event 25--MEN'S 600--(Section 4)-- 1. Steve Hatch (VS) 1:16.2; 2. Don Bell (JCS) 1:18.6; 3. Erwin Graham (FSU) 1:21.4; 4. Scott Buck (D) 1:22.9; .

Event 11-- HS BOYS 60 yd HH--(Semi-finals)-- 1. Kenny Simon (Lee, HS, AL) 7.35; 2. Mike Benjamin (New Bern) 7.48 ; 3. Redgie Towns (Broughton, Ral) 7.65;.

Event 11--HS BOYS 60 YD HH --(Semi-finals)--1. Rodney Wilson (Barthram HS, Phila.) 7.31 ; 2. Willie Miles (Mont. Lee, AL) 7.80; 3. Jim Orr (Independence, Char) 8.04; 4. John Baldwin (Richmond Cty) 8.23.

Event 9--MEN'S 60 YD HH -- (Section 1) 1. Lamont Bowles (VS) 7.73; 2. John Franklin (HI) 8.01; 3. John Crist(Fla. Tr. Club) 8.06; 4. Tim Snyder (WM) 8.12.

Event 9--MEN'S 60 YD HH -- (Section 2) 1. Bobby Phillips (ECU) 7.66; 2. Peter Duncan (CC) 7.67; 3. Calvin Lanier (NCS) 7.76; 4. Gary Boyer (VPI) 7.94.

Event 9--MEN'S 60 YD HH-- (Section 3) 1. Rusty Buchanan (Unatt.) 7.73; 2. Walter Maxwell (HI) 7.83; 3. Tony Black (ASU) 7.91; 4. Ken Womack (VS) 7.97; .

Event 9 --MEN'S 60 YD HH-- (Section 4) 1. Bill Richards (UGA) 7.44 2. Gus Kirkland (USC) 7.44; 3. Ken Lewis (VPI) 7.52; 4. Herb Stiger (NCC) 8.04.

Event 9--MEN'S 60 YD HH-- (Section 5)--1. John Sease (CU) 7.68; 2. Allen Ballentine (ASU) 8.14; 3. Monroe (VS) 8.23 4. Flynn Edmundson (CC) 8.27; .

Event ~~25~~ 9--MEN'S 60 YD HH--(Section)6-- 1. Val Robinson (ECU) 7.59 2. Mike Quick (NCS) 7.67 3. Melvin Pinckney (VS) 7.76; 4. Jerome Ballew (SA) 7.79; 5. Cornelius Wilson (FSU) 7.91; 6. Louis Fields (NCC) 7.99;.

Event 9--MEN'S 60 YD HH--(Section 7)-- 1. Marvin Rankins (ECU) 7.58; 2. John Dyer (VPI) 7.90; 3. Larry Staley (SA) 7.91; 4. Warren Richmond (CC) 8.43; 5. Steve Shankle (D) 8.58.

Event 25--MEN'S 600 --(Section 5)--1. J. George (WM) 1:14.9; 2. T. Turner (VS) 1:15.3; 3. Hardy (JCS) 1:17.5; 4. Littlejohn (NCC) 1:19.4; 5. Tom Flournoy (D) 1:2

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Event 13 - MEN'S 60

(Section 1)--- 1. Larry Fallen (VPI) 6.44; 2. Vic Cozart (JCS) 6.59; 3. Dan Dortman (D) 6.68; 4. Charlie Brown (Pacesetters) 6.84.

wilfred Hargrove (VS)

(Section 2)--- 1. Ted Brown(NCS) 6.51; 2. ~~CHARLES BARNES (JCS)~~ 6.52; 3. Al Barnes (JCS) 6.60; .

(Section 3)--- 1. Desai Williams (CU) 6.28; 2. John Ward (WFU) 6.56; 3. James Jones (CC) 6.65; .

(Section 4) ---1. Anthony Fields (ECU) 6.52; 2. Warren Ratchford (CU) 6.57; 3. Zack Clark (JMU) 6.76; 4. Mike Raynor (CC) 6.80.

(Section 5) ---1. Tom Shipman (NCC) 6.63; 2. Ray Magre (NCC) 6.78; 3. Charles Sandefur(FSU) 6.82;.

(Section 6)---1. Anthony Whitaker (VS) 6.42; 2. Bill Breeding (UGA) 6.59; 3. Willie Williams (HI) 6.74.

(Section 7)---1. Mike Lawson (SA) 6.40; 2. Calvin Lanier (NCS) 6.51; 3. Forest Palmer (Wi) 6.61; 4. Jerry Davis (NCC) 6.87.

(Section 8)---1. Mel Abernathy (Phil.Pio.) 6.38; 2. Alfonso Brown (SA) 6.45; 3. George Thomas (USC) 6.48; 4. ~~XXXXXXXXXXXXXXX~~ Kevin Singleton (VS) 6.58; 5. ~~XXXXX~~ Chris Porter (ASU) 6.80.

(Section 9)---1. Richard Whitehead (HI) 6.41; 2. Leo Ford (SA) 6.47; 3. Chris Castor (D) 6.54; 4. Ron Richardson (FSU) 6.56; 5. Ed McIntire (NCS) 6.57; 6. Aaron Copeland (VS) 6.71.

Event 14--WOMEN'S 60

(Section 1)---1. Michelle ~~XXXXXXXX~~ Glover (Unat) 7.13; 2. Catherine Jennette (NCC) 7.34; 3. Suzette Moulton (SA) 7.44; 4. Lorratta Leads (HI) 7.93; 5. ~~XXXXXX~~ Irene Kilete (JCS) 8.00.

(Section 2)---1. Catherine Crawford (SA) 7.37; 2. Katherine Williams (SA) 7.64; 3. Zochil Pinkman (HI) 8.51.

(Section 3)---1. Sherri Funn (VS) 7.22 2. Antoinette Gilbert (Sa) 7.64; 3. Terri Slaton (JMU) 8.08; 4. Sharron Barr (JMU) 8.24.

Event 15--HS BOYS 60

(Section 1)--- 1. Dwayne Green (Broughton) 6.58; 2. Walter Bond (Windson,) 6.65; 3. William Farrington (Apex) 6.68; 4. Perry Williams (Richmond Cty) 6.69; 5. Tim Sidburg (Wilmington) 6.71; 6. Ricky Woods (Independence, Char) 6.74.

(Section 2)---1. Nicky White(Kinston) 6.44; 2. Carl Lewis (Willingboro)NJ) 6.45; 3. Kenny Simmon (Mont. Lee, AL) 6.50; 4. June Wall (Northern Dar) 6.53; 5. William Hoggard (Bertie) 6.54; 6. Don Covington, (Richmond Cty) 6.61.

North Carolina State University Invitational Indoor Track Meet
N Jim Graham Building, State Fairgrounds, Raleigh, N.C. February 10, 1979

Event 34--MEN'S ONE MILE RELAY

(Section 1) — 1. East Carolina : 3:25.4 2. Hampton Institute: 3:25.5
3. William & Mary : 3:31.9 4. James Madison: 3:36.0 5. Fayetteville State: 3:36.8

(Section 2)— 1. J.C. Smith: 3:25.2 2. Campbell : 3:30.6 3. Virginia Tech: 3:32
4. Duke: 3:33.5 5. N.C. Central : 3:41.0

COLLEGIATE FINALS

Event 3--WOMEN'S SHOT PUT-- 1. Lynette Antoine (SA) 42' 11" ; 2. Becky Brown (NCS) 34' 6 1/2" ; 3. Betty Parker (NCS) 33' 9" ; 4. S. Warner (VS) 31' 0" ; 5. S. Hill (VS) 24' 7" . (Antoine sets new meet record, old record 38' 1" by Rosie Riddick (UNC-Chapel Hill

Event 12--WOMEN'S 60 YD HURDLES-- 1. Carol Lewis (Unatt.) 8.31 2. Tanja Brown (FSU) 8.48; 3. Berris Thompson (SA) 9.43.

Event 1--MEN'S TRIPLE JUMP-- 1. Amp Brown (UGA) 49' 1/2" ; 2. Peter Duncan (CC) 48' 7" ; 3. Bill Echols (UGA) 48' 3 1/4" ; 4. Sam Onwuli (JMU) 47' 2" ; 5. Arnold Bell (NCS) 47' 2" ; 6. Thomas Jeter (JCS) 47' 1 1/4" .

Event 4-- WOMEN'S LONG JUMP-- 1. Carol Lewis (Unat) 19' 1/4" ; 2. Tonja Brown (FSU) 17' 2" ; 3. Quandra Turner (JCS) 17' 1/2" ; 4. Carmen Blakely (SA) 15' 9 3/4 " ; 5. Ellie Teed (JMU) 15' 6 3/4 " ; 6. Mary Semmes (JMU) 15' 2 1/4" .

Event 5-- MEN'S THREE MILE RUN--1. Steve Pinard (VPI) 14: 21.0; 2. Pat Henner (VPI) 14: 28.6; 3. Jim ~~EXX~~ Dill (ECU) 14:30.2; 4. Gary Geyman (UGA) 14:36.9; 5. Ira Meyers (WM) 14:41.5; 6. J. Carnes (UGA) 14:43.1; 7. Tim Dowd (WM) 15: 25.8; 8. Chris Espenshade (WFU) 15:32.7.

Event 7--MEN'S DISTANCE MEDLEY RELAY-- 1. Virginia Tech: 10:12.3 (Tom Goode, Macon Sizemore, Mike Burns, Ray Ackenbom) 2. Georgia: 10:12.6 3. Clemson: 10:19.1 4. Duke: 10: 27.2 5. Wake Forest: 10:38.0 6. Appalachian State: 10: 38.0 7. J.C. Smith: 11:04.4.

Event 8--WOMEN'S ONE MILE RUN--1. Kathy Sherer (WM) 5:10.0 2. Leslie Sullivan (FSU) 5:12.1; 3. Debbie Revolta (NCS) 5:22.1 4. Darlin Andrews (FSU) 5:29.0.

Event 34--WOMEN'S HIGH JUMP-- 1. Susan Broadus (JMU) ~~5'10"~~ ^{X 5'0"} ; 2. V. Holmes (VS) 4'10".

Event 9-- MEN'S 60 yd. HIGH HURDLES-- ~~X~~ 1. Ken Lewis (VPI) 7.41; 2. Marvin Rankins (ECU) 7.46; 3. Bill Richards (UGA) 7.48; 4. Gus Kirkland (USC) 7.51; 5. Mike Quick (NCS) 7.54; 6. Val Robinson (ECU) 7.58.

Event 13--MEN'S 60 YD DASH-- 1. Desai Williams (CU) 6.25 2. Mike Lawson ((SA) 6.33 3. Anthony Whitaker (VS) 6.34 4. Larry Fallen (VPI) 6.42 5. Mel Abernathy (Phila. Pio.) 6.43 6. Richard Whitehead (HI) 6.46.

Event 14-- WOMEN'S 60 YD DASH--1. Michelle Glover (Unat.) 6.83, new meet record, old record: 7.1 by Catherine Crawford (SA) and Carolyn Brinkley (Univ. D.C.); 2. Sherri Funn (VS) 7.18 3. Catherine Jennette (NCC) 7.24; 4. Catherine Crawford (SA) 7.33 5. Suzzette Moulton (SA) 7.34; 6. ~~XXXXX~~ Antoinette Gilbert (SA) 7.50; 7. Katherine Williams (SA) 7.57.

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COLLEGIATE FINALS

- Event 18--MEN'S MILE RUN--1. Mabry McCray (UGA) ~~4:13.06~~ 4:14.26; 2. George Bogel (CU) ~~4:14.26~~ 4:14.26; 3. Mark McCallister (D) ~~4:14.26~~ 4:14.26; 4. John Barnes (VPI) 4:14.26; 5. Darryl Robinson (WFU) 4:14.57; 6. Mike Fussell (UGA) 4:19.06.
- Event 19--MEN'S 440--1. Tony DeLevoe (GT) 50.08; (new meet record, old record 50.1 by Charlie Moss (ECU) 2/12/77; 2. ~~Rich West (HI) 50.59~~ Rich West (HI) 50.59; 3. Clifford Bryant (VS) 50.61; 4. Terry Perry (ECU) 50.66; 5. Beasley (ASU) 51.68; 6. Buddy Simmons (NCS) 52.37.
- Event 20--WOMEN'S 440--1. Debbie Kemp (FSU) 1:00.79; 2. Tanja Brown (FSU) 1:01.1; Susan Broadhus (JMU) 1:02.6; 3. Berris Thompson (SA) 1:03.1; 5. Selma Sanders (JCS) 1:04.8; 6. Judy Nicholson (NCS) 1:05.8.
- Event 25--MEN'S 600-YD RUN--1. Ken Dotson (SA) 1:12.20; 2. Peter Beltres (NCS) 1:13.28; 3. Jason Lowe (JCS) 1:13.9; 4. Ron Foreman (NCS) 1:13.98; 5. Wilmer Leon (HI) 1:14.5; 6. Jeff Fain (UGA) 1:14.68.
- Event 26--MEN'S 1000 YD RUN--1. Greg Wade (GT) 2:15.27; 2. Tim Elrod (ASU) 2:16.39; 3. Lamont Bird (ECU) 2:16.91; 4. Jim Abbott (VPI) 2:17.1; 5. Bryan Allf (D) 2:17.12; 6. Steve Dye (WM) 2:18.4.
- Event 27--WOMEN'S 880-YD RUN--1. Debbie Kemp (FSU) 2:24.4; 2. Leslie Sullivan (FSU) 2:25.27; 3. Elva Lassiter (HI) 2:36.2; 4. Sandy Bockock (JMU) 2:36.9; 5. Anita Sutton (JMU) 2:37.05; 6. Varmen Black (SA) 2:41.30.
- Event 16--MEN'S SHOT PUT--1. Joe Hannah (NCS) 56' 4 1/2"; 2. Dean Leavitt (NCS) 55' 1 1/2"; 3. Carlos Tanbison (GT) 54' 2"; 4. Red Garst (JMU) 49' 11 1/2"; 5. Coleman Keeter (ASU) 48' 8 1/2"; 6. Clyde Hoy (JMU) 48' 8".
- Event 29--WOMEN'S 3000-METER RUN--1. Mary Shea (Unat.) 10:03.40; 2. Kim Sharp (NCS) 10:05.30; 3. Nance McCormac (FSU) ~~10:21.42~~ 10:21.42; 4. LeAnn Buntrock (JMU) 11:13.0.
- Event 30--MEN'S TWO MILE RUN--1. Steve Francis (NCS) 9:06.81; 2. Larry Delaplanie (WFU) 9:07.64; 3. Scott Haack (CU) 9:10.16; 4. Bill Lynch (D) 9:11.86; 5. Wayne Coffman (CU) 9:14.50; 6.
- Event 31--MEN TWO MILE RELAY--1. Virginia Tech. 7:44.08 (Tom Goode, Jim Abbott, Mike Burns, Ray Ackenbom), new meet record, old record 7:45.4 by Pembroke State, 2/26/77; 2. Duke 7:49.59; 3. St. Augustines 7:52.46; 4. Georgia 7:59.70; 5. Appal. State 8:01.39; 6. USC 8:04.68.
- Event 33--WOMEN'S one mile relay--1. St. Augustine's, 4:29.9; 2. Madison, 4:30.5
- Event 10--MEN'S LONG JUMP--1. Carl Lewis, (Unat.) 24' 7", new meet record, old record 23' 9 1/2" by Bob Calhoun, MD, 2/25/78; 2. Darryl Simmons (UGA) 24' 3/4"; 3. Rodney Strachan 23' 9 3/4"; 4. Tony DeLevoe (GT) 23' 8 1/2"; 5. Daryl McCoy (ECU) 22' 9 3/4"; 6. Dave McKnight ~~22' 9"~~ (CU) 22' 9".

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1. The first part of the paper is devoted to a discussion of the various methods which have been proposed for the determination of the rate of reaction of a substance with oxygen. It is found that the most reliable method is that of measuring the volume of oxygen consumed at a constant pressure and temperature.

2. The second part of the paper describes the apparatus used for the measurement of the rate of reaction. It consists of a gasometer, a manometer, and a gas absorber.

3. The third part of the paper gives the results of the experiments. It is found that the rate of reaction increases with increasing temperature and with increasing concentration of the substance.

4. The fourth part of the paper discusses the mechanism of the reaction. It is suggested that the reaction proceeds by a free radical mechanism.

5. The fifth part of the paper gives the conclusions of the experiments. It is found that the rate of reaction is determined by the concentration of the substance and the temperature.

6. The sixth part of the paper gives the references.

PETROLE (Broughton)

1. The first part of the paper is devoted to a discussion of the various methods which have been proposed for the determination of the rate of reaction of a substance with oxygen. It is found that the most reliable method is that of measuring the volume of oxygen consumed at a constant pressure and temperature.