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| **Author:** | **Time:** | **Institution:** | **Abstract:** |
| Registration | 8:30-9:00 | | |
| "Welcome Address"  Wade Sick | 9:00 am | Southwest Community College, Creston, Iowa |  |
| Jay Cutler | 9:10 | Charles City High School | **Title:**  "PDA in the Classroom"  A short discussion of the advantages and disadvantages of using a PDA with interface in the science classroom.  Concentration will be on the Palm  m130 and ImagiWorks interface and software. |
| William Cox | 9:30 | Dowling High School | **Title:**  "Resistance in Series & Parallel Circuits"  A 60 W bulb and a 100 W bulb are wired in parallel and then in series.  Predictions, then calculations of resistance, current, voltage, and power are made for the bulbs in each circuit. |
| John Zwart | 9:50 | CPPS Department, Dordt College, Sioux Center | **Title:**  "High Precision 19th Century Spectroscopy"  Highly precise measurements of emission spectra wavelengths played a key role in the development of quantum mechanics, from the Balmer series and the Bohr model, to fine structure effects.  Reported wavelength measurements of five or six significant figures were not uncommon.  In this talk I will shed some light on the technology behind this precision. |
| Break | 10:15 | | |
| Arnold E. Sikkema | 10:30 | Physics Department, Dordt College, Sioux Center | **Title:** "Droplet Formation: Two Demonstrations of the Rayleigh Instability"  A cylinder of one fluid in another is unstable to the formation of spheres due to surface tension.  I will show how this phenomenon, known as the Rayleigh instability, can be demonstrated on a small scale in a couple of seconds by anyone with absolutely no equipment.  A large-scale classroom demonstration with colored water in oil will also be performed.  The history and physics of the phenomenon (Mariotte 1686, Savart 1833, Plateau 1849, Rayleigh 1879) will be discussed, as will a number of related phenomena of current interest. |
| "Key Note Address", by Professor Craig Kletzing | 10:50 | Department of Physics and Astronomy, University of Iowa | **Title:**  "The Aurora Borealis: Nature's Light Show in the Sky" |
| Ron Newland | 11:30 | College Community Schools, Cedar Rapids | **Title:**  "Quarknet Update and Highlights"  Ron Newland, physics teacher from Prairie High School, Cedar Rapids, will share the results of the second and final QuarkNet workshop for Iowa.  Nineteen physics teachers from around the state attended a 2 and 1/2 week workshop from June 17 to July 3, 2002.  The workshop was run by Bill Cox of Dowling HS and Ron Newland.  Their mentors were Dr. Yasar Onel, U of Iowa, Dr. John Hauptman, ISU, and Tom Jordan, FermiLab.  Participants toured facilities, labs, conducted experiments, heard talks, and took field trips to FermiLab and UNI.  All this and more will be highlighted. |
| Dale Stille | 11:45 | University of Iowa | **Title:**  "Classical Experiment Myths"  Many classical experiments do not work in the manner reported, or actually misrepresent what is actually happening.  Several of these will be presented with some explanations, and much discussion.. |
| **Lunch** - Courtesy of Southwest Community College Physics Department.  They have reserved a room at a local Chinese restaurant.  Buffet style luncheon. | 12:00 or 12:15 - 1:30 |  |  |
| Business Meeting of the AAPT-Iowa Section | 1:30-2:00 |  | Business Meeting of the AAPT-Iowa Section 1:30-2:00 1) Election of officers 2) Discussion of future meeting dates 3) Secretary and Treasurer's report 4) Other business. |
| Wade Sick | 2:00-3:00+ | Southwest Community College | Title: "Tour of undergraduate laboratories and facilities at Southwest Community College". |
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