

# Contents

|  |     |   |
|--|-----|---|
| Foreword   | v   |   |
| List of Corporate Sponsors   | vii |   |
| SNEAP: Past, Present and Future  | ix  |   |
| <b>Session I: Opening Remarks and Ion Stripping: <i>Chris Westerfeldt, Chair</i></b>   |     |   |
| How Western Michigan University Got Its Tandem<br><i>R. E. Shamu, Western Michigan University</i>  | 3   |   |
| Grid Supported C Foils for Tandem Terminal Beam Stripping<br><i>T. J. Gray, Kansas State University</i>  | 7   |   |
| Terminal Laser Stripper for Molecular Beams<br><i>O. Heber, Weizmann Institute of Science</i>  | 16  |   |
| Spontaneous Discussion of Components Used Inside the Tank, O-rings,<br>Power Supplies, and Sulfur-hex Leaks  | 2   | 2 |
| <b>Session II: Cooling Water Systems: <i>David Weisser, Chair</i></b>  |     |   |
| Round Table Discussion of Cooling Water Systems<br><i>C. Westerfeldt, Triangle Universities Nuclear Laboratory</i><br><i>T. Gray, Kansas State University</i><br><i>R. Corrion, Koolant Coolers of Kalamazoo</i> | 29  |   |
| Recent Experience with the Closed-Loop Chilled Water System at the<br>James R. Macdonald Laboratory<br><i>T. J. Gray and R. D. Krause, James R. Macdonald Laboratory</i>   | 40  |   |
| Electronic Hydrotreater<br><i>C. R. Lu, Fudan University</i>   | 57  |   |

**Session III: Belts and Resistors: *W. Weitkamp*, Chair**

|   |    |
|---|----|
| A New Charging Belt for an EN<br><i>S. M. Ferguson and J. R. Hiltbrand, Western Michigan University</i>   | 63 |
| Investigation of a New Type Charging Belt<br><i>N. L. Jones, Oak Ridge National Laboratory</i>  | 66 |
| Resistor Standards for Length, Perpendicularity, and Voltage Stress Induced Resistance Change   | 79 |
| New Resistor Voltage Grading System at the Oak Ridge National Laboratory 25URC Tandem Accelerator; Installation and First Experience<br><i>M. J. Meigs, D. L. Haynes, C. M. Jones, and R. C. Juras, Oak Ridge National Laboratory</i> | 83 |

**Session IV: SNEAP Business and Vacuum Systems: *J. McKay*, Chair**

|   |     |
|---|-----|
| Business Meeting  | 95  |
| Vacuum Valves and Dry Pumps Used in <b>Synchrotron</b> Systems and Accelerators .<br><i>H. Luedi, Midwest Vacuum Inc.</i> | 106 |

**Session V: Ion Sources and Terminal Electronics: *E. Berners*, Chair**

|  |     |
|--|-----|
| Situation and Future of the Accelerator Combination and One-Year Operation of BECRIS at ISL-Berlin<br><i>P. Amdt, Hahn-Meitner Institute</i> | 133 |
| Terminal Ion Source for the UW Tandem<br><i>G. C. Harper, University of Washington</i>   | 144 |
| Terminal Computer for the UW Tandem<br><i>G. C. Harper, University of Washington</i>   | 149 |

**Session VI: Accelerator Upgrades: N. Jones, Chair**

|   |     |
|---|-----|
| Operating Experience with the Upgraded UW Tandem<br><i>W. G. Weitkamp, D. T. Corcoran, G. C. Harper, M. A. Howe,<br/>C. E. Linder, A. W. Myers and T. D. Van Wechel, University of<br/>Washington</i> | 161 |
| Upgrading the FN Tandem Van de Graaff at Notre Dame<br><i>E. D. Berners, University of Notre Dame</i>   | 172 |
| Status of the PRIME Lab Accelerator Upgrade<br><i>K. A. Mueller et al., Purdue University</i>   | 181 |
| Status of the Rochester Tandem<br><i>C. Long, University of Rochester</i>   | 196 |

**Session VII: Boosters: M. Meigs, Chair**

|  |     |
|--|-----|
| The Superconducting Linac Booster at the ANU<br><i>D. C. Weisser, Australian National University</i> | 199 |
|--|-----|

**Session VIII: 'Beam Optics and Radioactive Ions: K. Mueller, Chair**

|  |     |
|--|-----|
| High Mass Tandem Beams<br><i>J. W. McKay, AECL Research, Chalk River Nuclear Laboratory</i>  | 219 |
| Incorporation of a Combination of Gap Lenses in the Buffer Tube<br>at the Entrance of the 16 MV Pelletron at NSC<br><i>M. M. Narayanan, K. M. Jayan, D. Kanjilal, and<br/>S. Chopra, Nuclear Science Center, New Delhi</i> | 228 |
| Status Report on the Holifield Radioactive Ion Beam Project<br><i>M. J. Meigs et al., Oak Ridge National Laboratory</i>  | 235 |
| Spontaneous Discussion on Pelletron Upgrades   | 251 |
| A Video Strip Chart Program<br><i>N. L. Jones, Oak Ridge National Laboratory</i>   | 256 |