

# Contents

## Preface

<b>1. Historical review of radiation dosimetry for the Hiroshima-Nagasaki atomic bombings</b>	<b>1</b>
HASAI Hiromi (Hiroshima Kokusai Gakuin University)	
<b>2. Residual <math>^{152}\text{Eu}</math> and <math>^{60}\text{Co}</math> activity measurement in Hiroshima and Nagasaki</b> .....	<b>7</b>
SHIZUMA Kiyoshi (Hiroshima University)	
<b>3. <math>^{152}\text{Eu}</math> measurement at Kanazawa University (I)</b> .....	<b>14</b>
NAKANISHI Takashi (Kanazawa University)	
<b>4. Measurements of Atomic Bomb induced <math>^{152}\text{Eu}</math> at Kanazawa University (II)</b> .....	<b>21</b>
KOMURA Kazuhisa (Kanazawa University)	
<b>5. AMS- <math>^{36}\text{Cl}</math> measurements for the Hiroshima A-bombed granite</b> .....	<b>31</b>
NAGASHIMA Yasuo, SEKI Riki, MATSUHIRO Takeshi, TAKAHASHI Tsutomu, SASA Kimikazu, SUEKI Keisuke (University of Tsukuba), HOSHI Masaharu (Hiroshima University), FUJITA Shoichiro (RERF), SHIZUMA Kiyoshi (Hiroshima University), HASAI Hiromi (Hiroshima Kokusai Gakuin University)	
<b>6. <math>^{63}\text{Ni}</math> measurements by liquid scintillation method</b> .....	<b>36</b>
SHIBATA Seiichi (Kyoto University)	
<b>7. Intercomparison of <math>^{152}\text{Eu}</math> and <math>^{36}\text{Cl}</math> measurements</b> .....	<b>42</b>
HOSHI Masaharu, ENDO Satoru (Hiroshima University), ISHIKAWA Masayori (University of Tokyo), KOMURA Kazuhisa (Kanazawa University), NAGASHIMA Yasuo (University of Tsukuba), FUKUSHIMA Hiroto (Japan Chemical Analysis Center), IMANAKA Tetsuji (Kyoto University)	
<b>8. TL measurements for <math>\gamma</math>-radiation dosimetry in Hiroshima and Nagasaki</b> .....	<b>49</b>
MARUYAMA Takashi (NIRS), NAGATOMO Tsuneto (Nara University of Education), HOSHI Masaharu (Hiroshima University), KUMAMOTO Yoshikazu (NIRS), FUJITA Shoichiro, Harry CULLINGS (RERF)	
<b>9. Comparison of TLD measured values to DS02</b> .....	<b>65</b>
Harry CULLINGS (RERF), George KERR (Kerr Consultant), FUJITA Shoichiro (RERF), MARUYAMA Takashi (NIRS), HOSHI Masaharu (Hiroshima University), Stephen EGBERT (SAIC)	
<b>10. Re-evaluation of the Hiroshima hypocenter based on data in ABCC Technical Reports 12-59 and 3-69: Some initial ideas and results</b> .....	<b>82</b>
Harry CULLINGS, FUJITA Shoichiro (RERF), HOSHI Masaharu (Hiroshima University)	
<b>11. Measurement of natural neutrons in Hiroshima</b> .....	<b>101</b>
ENDO Satoru (Hiroshima University)	
<b>12. Measurement of excitation function for <math>^{63}\text{Cu}(n,p)^{63}\text{Ni}</math> by radiochemical method</b> .....	<b>108</b>
TAKAMIYA Koichi (Kyoto University)	
<b>13. Measurement of water component in the granite rock</b> .....	<b>113</b>
IWATANI Kazuo (Hiroshima Prefectural College of Health Sciences), HASAI Hiromi (Hiroshima Kokusai Gakuin University), SHIZUMA Kiyoshi, HOSHI Masaharu, ENDO Satoru (Hiroshima University), OKA Takamitsu (Kure University), IMANAKA Tetsuji (Kyoto University)	

<b>14. Hydrogen analysis for granite samples by using proton-proton elastic recoil coincidence spectrometry .....</b>	<b>120</b>
KOMATSUBARA Tetsuro, SASA Kimikazu, ISHII Satoshi YAMATO Yoshihiro, MIYAKAWA Kazutaka, SATO Kenichiro, KUROSAWA Masanori (University of Tsukuba)	
<b>15. Outline of the calculation system for DS02 and related calculations in Japan .....</b>	<b>124</b>
IMANAKA Tetsuji (Kyoto University)	
<b>16. Comparison of DS02 calculation with measured data .....</b>	<b>134</b>
ENDO Satoru (Hiroshima University)	
<b>17. DS02 survivor dose estimation at RERF .....</b>	<b>142</b>
FUJITA Shoichiro, Harry CULLINGS, Dale PRESTON, FUNAMOTO Sachiyo, TERANISHI Sachiko, Eric GRANT, WATANABE Tadaaki (RERF)	
<b>18. Neutron induced radiation dose by the atomic bombings in Hiroshima and Nagasaki based on the DS02 methodology .....</b>	<b>150</b>
IMANAKA Tetsuji (Kyoto University)	
<b>19. Estimation of cumulative exposure from radioactive fallout .....</b>	<b>155</b>
SHIZUMA Kiyoshi (Hiroshima University)	
<b>20. U-235/U-238 ratios detected in the black rain from the Hiroshima A-bomb .....</b>	<b>164</b>
FUJIKAWA Yoko (Kyoto University), SHIZUMA Kiyoshi, ENDO Satoru (Hiroshima University), FUKUI Masami (Kyoto University)	
<b>21. Distribution and behavior of fallout plutonium released by the Nagasaki A-Bomb: Surveys at the Nagasaki area for the local fallout and at Agassiz ice cap for the global fallout .....</b>	<b>169</b>
MAHARA Yasunori, KUDO Akira (Kyoto University)	
<b>22. Residual radioactivity and radiation dose due to black rain by the atomic bomb in Hiroshima .....</b>	<b>184</b>
MARUYAMA Takashi (NIRS), YOSHIKAWA Tomoaki (Meteorological Research Institute)	
<b>Appendix: Free-in-air kerma and neutron activation at 1 m above the ground based on DS02 .....</b>	<b>196</b>

**Workshop program**

**Participant list**