

**Tuesday 08.11.2022****Program: Day 1****Venue: PTW-Freiburg Lörracherstraße 7, 79115 Freiburg**

| <b>Start</b> | <b>End</b> | <b>Lecture</b>  | <b>Duration</b> |
|--------------|------------|---|-----------------|
| 9:00         | 9:15       | 1.1 - Welcome - introduction of the speakers, <i>Mr. Jens-Thomas Jobs</i>                                       | 0:15            |
| 9:15         | 9:30       | 1.2 - PTW VF Metrology Solutions - an Introduction of the companies, <i>Mr. Jens-Thomas Jobs</i>                | 0:15            |
| 9:30         | 10:00      | 1.3 - Common Measuring Quantities - a General Summary, <i>Dr. Ralf-Peter Kapsch</i>                             | 0:30            |
| 10:00        | 11:00      | 1.4 - Primary Standards and measurement uncertainties (PSDL), <i>Dr. Stefan Pojtinger</i>                       | 1:00            |
| 11:00        | 11:10      | Coffee break  | 0:10            |
| 11:10        | 12:10      | 1.5 - Secondary standards / traceability, <i>Dr. Damian Twerenbold</i>  | 1:00            |
| 12:10        | 12:20      | Coffee break  | 0:10            |
| 12:20        | 13:20      | 1.6 - The ISO / IEC Protocol 17025, <i>Dr. Damian Twerenbold</i>  | 1:00            |
| 13:20        | 14:05      | Lunch break   | 0:45            |
| 14:05        | 14:35      | 2. - Welcome tour through PTW's Calibration Lab, <i>Mr. Jens-Thomas Jobs, Dr. Holger Georg, Mr. Rolf Eckert</i> | 0:30            |
| 14:35        | 14:55      | 3.1 - PTW VF X-Ray Solutions, <i>Mr. Jens-Thomas Jobs</i>   | 0:20            |
| 14:55        | 15:05      | Coffee break  | 0:10            |
| 15:05        | 16:35      | 3.2 - X-ray radiation qualities: X-ray diagnostic (IEC 61267 & new MAM qualities), <i>Dr. Stefan Pojtinger</i>  | 1:30            |
| 16:35        | 16:45      | Coffee break  | 0:10            |
| 16:45        | 17:05      | 3.3 - Required instruments for X-ray beam commissioning (IEC 61267), <i>Dr. Stefan Pojtinger</i>                | 0:20            |
| 18:30        | open       | Invitation to a community dinner  |                 |

**Wednesday 09.11.2022****Program: Day 2****Venue: PTW-Freiburg Lörracherstraße 7, 79115 Freiburg**

| <b>Start</b> | <b>End</b> | <b>Lecture</b>  | <b>Duration</b> |
|--------------|------------|---|-----------------|
| 9:00         | 9:20       | 4.1 - PTW VF RT Calibration Solutions, <i>Mr. Jens-Thomas Jobs</i>  | 0:20            |
| 9:20         | 10:05      | 4.2 - Linac and 60Co qualities (IAEA TRS 398), <i>Dr. Ralf-Peter Kapsch</i>                               | 0:45            |
| 10:05        | 10:20      | Coffee break  | 0:15            |
| 10:20        | 10:50      | 4.3 - X-ray irradiation qualities for radiation therapy (DIN 6817 + and other), <i>Dr. Rolf Eckert</i>    | 0:30            |
| 10:50        | 11:00      | 4.4 - Required instruments for X-ray beam commissioning (DIN 6817), <i>Dr. Rolf Eckert</i>                | 0:10            |
| 11:00        | 11:10      | Coffee break  | 0:10            |
| 11:10        | 11:30      | 5.1 - PTW VF gamma calibration solutions for health physics, <i>Mr. Jens-Thomas Jobs</i>                  | 0:20            |
| 11:30        | 12:00      | 5.2 - Isotop irradiators and health physics qualities (ISO 4037), <i>Dr. Rolf Eckert</i>                  | 0:30            |
| 12:00        | 12:50      | Lunch break   | 0:50            |
| 12:50        | 14:20      | 5.3 - X-ray irradiation sources and qualities for radiation protection (ISO 4037), <i>Dr. Rolf Eckert</i> | 1:30            |
| 14:20        | 14:30      | Coffee break  | 0:10            |
| 14:30        | 14:50      | 5.4 - Required instruments for X-ray beam commissioning (ISO 4037), <i>Dr. Rolf Eckert</i>                | 0:20            |
| 14:50        | 15:20      | 6.1 - IAEA/WHO SSDL Network - DOLNET, <i>Mr. Jens-Thomas Jobs</i>   | 0:30            |
| 15:20        | 15:30      | Coffee break  | 0:10            |
| 15:30        | 16:30      | 6.2 - Available DOLNET services, <i>Mr. Jens-Thomas Jobs</i>  | 1:00            |
|              |            |   |                 |

**Thursday 10.11.2022**

**Program: Day 3**

**Venue: PTW-Freiburg Lörracherstraße 7, 79115 Freiburg**

| <b>Start</b> | <b>End</b>   | <b>Lecture</b>   | <b>Duration</b> |
|--------------|--------------|--|-----------------|
|              |              |  |                 |
| <b>9:00</b>  | <b>9:30</b>  | <b>7.1 - Basic requirements, Dr. Holger Georg</b>                                | <b>0:30</b>     |
| <b>9:30</b>  | <b>10:10</b> | <b>7.2 - Calibration concepts, Dr. Holger Georg</b>                              | <b>0:40</b>     |
| <b>10:10</b> | <b>10:25</b> | <b>Coffee break</b>  | <b>0:15</b>     |
| <b>10:25</b> | <b>10:45</b> | <b>8.1 - PTW VF Lab Safety Solutions - an Introduction, Mr. Jens-Thomas Jobs</b> | <b>0:20</b>     |
| <b>10:45</b> | <b>11:45</b> | <b>8.2 - Practical safety aspects, Dr. Rolf Eckert</b>                           | <b>1:00</b>     |
| <b>11:45</b> | <b>12:00</b> | <b>Coffee break</b>  | <b>0:15</b>     |
| <b>12:00</b> | <b>12:30</b> | <b>8.3 - Laboratory climate, Dr. Holger Georg</b>                                | <b>0:30</b>     |
|              |              |  |                 |
| <b>12:30</b> | <b>13:15</b> | <b>Lunch break</b>   | <b>0:45</b>     |
|              |              |  |                 |
|              |              | <b>Hands-on Calibrations @ PTW's SSDL - Part 1</b>                               |                 |
|              |              |  |                 |
| <b>13:15</b> | <b>16:15</b> | <b>9.1 - Hands-on Isotope Calibrations (RP, RT)</b>                              | <b>3:00</b>     |
|              |              |  |                 |

**Friday 11.11.2022****Program: Day 4****Venue: PTW-Freiburg Lörracherstraße 7, 79115 Freiburg**

| <b>Start</b> | <b>End</b> | <b>Lecture</b>  | <b>Duration</b> |
|--------------|------------|---|-----------------|
| 9:00         | 9:50       | Calibration certificate, Dr. Holger Georg   | 0:50            |
| 9:50         | 10:05      | Coffee break  | 0:15            |
| 10:05        | 10:35      | Example for a measurement uncertainty calculation (SSDL), Dr. Holger Georg              | 0:30            |
| 10:35        | 11:05      | PTW VF Dosimetry Calibration Lab Software Solutions - an Overview, Mr. Jens-Thomas Jobs | 0:30            |
| 11:05        | 11:20      | Coffee break  | 0:15            |
| 11:20        | 12:05      | Common errors and pitfalls, Dr. Holger Georg  | 0:45            |
| 12:05        | 13:00      | Lunch break   | 0:55            |
|              |            | <b>Hands-on Calibrations @ PTW's SSDL - Part 2</b>                                      |                 |
| 13:00        | 16:00      | Hands-on X-Ray Calibrations (RD, MAM, RP, RT), Dr. Rolf Eckert                          | 3:00            |