

**Very High Energy Electron  
Radiotherapy Workshop  
(VHEE'2020)**

**Report of Contributions**

Contribution ID: 1

Type: **not specified**

# Novel high-gradient accelerators for radiotherapy and imaging

*Monday, October 5, 2020 3:25 PM (20 minutes)*

**Presenter:** NANNI, Emilio (SLAC)

**Session Classification:** State of the Art

Contribution ID: 2

Type: **not specified**

## **Clinical perspectives for FLASH therapy**

*Monday, October 5, 2020 3:00 PM (20 minutes)*

**Presenter:** BOURHIS, Jean (CHUV)

**Session Classification:** State of the Art

Contribution ID: 3

Type: **not specified**

## **Dosimetry of electron beams - challenges and possible solutions for VHEE and FLASH**

*Monday, October 5, 2020 3:50 PM (20 minutes)*

**Presenter:** SCHÜLLER, Andreas (PTB)

**Session Classification:** State of the Art

Contribution ID: 4

Type: **not specified**

## Welcome Speech

*Monday, October 5, 2020 4:15 PM (10 minutes)*

**Presenter:** CORSINI, Roberto (CERN)

Contribution ID: 5

Type: **not specified**

## **Neuroprotective effects of FLASH-RT in the juvenile and adult brain**

*Monday, October 5, 2020 4:35 PM (15 minutes)*

**Presenter:** LIMOLI, Charles (University of California, Irvine)

**Session Classification:** Mechanism and Innovation for FLASH RT

Contribution ID: 6

Type: **not specified**

## Tumor response to FLASH-RT

*Monday, October 5, 2020 4:55 PM (15 minutes)*

**Presenter:** VOZENIN, Marie-Catherine (CHUV)

**Session Classification:** Mechanism and Innovation for FLASH RT

Contribution ID: 7

Type: **not specified**

## **Electron dose rate and oxygen depletion protect zebrafish embryo from radiation damage**

*Monday, October 5, 2020 5:15 PM (15 minutes)*

**Presenter:** BEYREUTHER, Elke (Helmholtz-Zentrum Dresden - Rossendorf)

**Session Classification:** Mechanism and Innovation for FLASH RT



Contribution ID: 8

Type: **not specified**

## **Oxygen depletion and radical recombination after pulsed Ultra-high dose rate irradiations**

*Monday, October 5, 2020 5:45 PM (15 minutes)*

**Presenter:** GRILJ, Vejlko (CHUV)

**Session Classification:** New indications and hot topics

Contribution ID: 9

Type: **not specified**

## **FLASH-RT in the lung: What we know and what we would like to know**

*Monday, October 5, 2020 6:05 PM (15 minutes)*

**Presenter:** FOUILLADE, Charles (Institut Marie Curie)

**Session Classification:** New indications and hot topics

Contribution ID: **10**

Type: **not specified**

# **VHEE experiments and future plans at Stanford and Indiana**

*Monday, October 5, 2020 6:25 PM (15 minutes)*

**Presenter:** MAXIM, Peter (SLAC)

**Session Classification:** New indications and hot topics

Contribution ID: **11**

Type: **not specified**

## Closing

**Session Classification:** New indications and hot topics

Contribution ID: 12

Type: **not specified**

## **CLEAR for Radiotherapy Research**

*Tuesday, October 6, 2020 3:00 PM (15 minutes)*

**Presenter:** FARABOLINI, Wilfrid (Université Paris-Saclay (FR))

**Session Classification:** Facilities description, current and planned ones (Chaired by Claude Bailat)

Contribution ID: 13

Type: **not specified**

## **Full energy beam exploitation possibilities on CLARA at Daresbury Laboratory**

*Tuesday, October 6, 2020 3:20 PM (15 minutes)*

**Presenter:** ANGAL-KALININ, Deepa (STFC)

**Session Classification:** Facilities description, current and planned ones (Chaired by Claude Bailat)

Contribution ID: 14

Type: **not specified**

## High-gradient RF systems for compact accelerators

*Tuesday, October 6, 2020 3:40 PM (15 minutes)*

**Presenter:** WUENSCH, Walter (CERN)

**Session Classification:** Facilities description, current and planned ones (Chaired by Claude Bailat)

Contribution ID: 15

Type: **not specified**

## **New FLASH radiation therapy R&D options at PITZ**

*Tuesday, October 6, 2020 4:10 PM (15 minutes)*

**Presenter:** STEPHAN, Frank (DESY)

**Session Classification:** Facilities description, current and planned ones (Chaired by Charles Limoli)



Contribution ID: 16

Type: **not specified**

## **Radiation biology with laser-accelerated electrons at LOA**

*Tuesday, October 6, 2020 4:30 PM (15 minutes)*

**Presenter:** FLACCO, Alessandro (ENSTA)

**Session Classification:** Facilities description, current and planned ones (Chaired by Charles Limoli)

Contribution ID: 17

Type: **not specified**

## **Novel high-gradient accelerators for radiotherapy and imaging**

*Tuesday, October 6, 2020 4:50 PM (15 minutes)*

**Presenter:** LOO, Bill (Stanford University)

**Session Classification:** Facilities description, current and planned ones (Chaired by Charles Limoli)

Contribution ID: **18**

Type: **not specified**

## **Diamond-based detector development for pulsed beam monitoring for medical applications**

*Tuesday, October 6, 2020 5:20 PM (15 minutes)*

**Presenter:** GALLIN-MARTEL, Marie-Laure (CNRS)

**Session Classification:** Dosimetry and Detectors (Chaired by Marie-Catherine Vozenin)

Contribution ID: 19

Type: **not specified**

## **Dosimetry of particle beams with ultra-high pulse dose rates**

*Tuesday, October 6, 2020 5:40 PM (15 minutes)*

**Presenter:** SUBIEL, Anna (NPL)

**Session Classification:** Dosimetry and Detectors (Chaired by Marie-Catherine Vozenin)

Contribution ID: 20

Type: **not specified**

## **The challenges of Ultra high dose rate dosimetry for preclinical irradiation**

*Tuesday, October 6, 2020 6:00 PM (15 minutes)*

**Presenter:** BAILAT, Claude (CHUV)

**Session Classification:** Dosimetry and Detectors (Chaired by Marie-Catherine Vozenin)

Contribution ID: 21

Type: **not specified**

## **VHEE initial inception and future potential**

*Tuesday, October 6, 2020 6:30 PM (15 minutes)*

**Presenter:** DESROSIERS, Colleen (Indiana University)

**Session Classification:** Treatment Planning, Modelling and Imaging (Chaired by Roger Jones)

Contribution ID: 22

Type: **not specified**

## Imaging challenges for VHEE

*Tuesday, October 6, 2020 6:50 PM (15 minutes)*

**Presenter:** VAN HERK, Marcel (Manchester University)

**Session Classification:** Treatment Planning, Modelling and Imaging (Chaired by Roger Jones)

Contribution ID: 23

Type: **not specified**

## **Treatment planning with Very High Energy Electron Scanned Beams**

*Tuesday, October 6, 2020 7:10 PM (15 minutes)*

**Presenter:** HANCOCK, Louie (Manchester University)

**Session Classification:** Treatment Planning, Modelling and Imaging (Chaired by Roger Jones)



Contribution ID: 24

Type: **not specified**

# Compact high-energy electron accelerator at Tsinghua University

*Wednesday, October 7, 2020 3:00 PM (15 minutes)*

**Presenter:** SHI, Jiaru

**Session Classification:** Accelerators R&D and Technologies for medical (Chaired by Frank Stephan)

Contribution ID: 25

Type: **not specified**

## **Sources for high dose rate electron and proton irradiation at the ELBE center Dresden**

*Wednesday, October 7, 2020 3:20 PM (15 minutes)*

**Presenter:** SCHRAMM, Ulrich

**Session Classification:** Accelerators R&D and Technologies for medical (Chaired by Frank Stephan)

Contribution ID: 26

Type: **not specified**

## **Research and Development of High Efficiency, High Gradient Accelerator Systems for VHEE at SLAC**

*Wednesday, October 7, 2020 3:40 PM (15 minutes)*

**Presenter:** SNIVELY, Emma (SLAC)

**Session Classification:** Accelerators R&D and Technologies for medical (Chaired by Frank Stephan)

Contribution ID: 27

Type: **not specified**

## **Outline of the roadmap involved in taking a working design through to something that is approved to treat clinical**

*Wednesday, October 7, 2020 4:25 PM (5 minutes)*

**Presenter:** ALLEN, John (ELEKTA)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: 28

Type: **not specified**

## **Perspectives for industrial superconducting accelerators for isotope production and radiation therapy**

*Wednesday, October 7, 2020 4:35 PM (5 minutes)*

**Presenter:** SERPICO, Claudio

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: 29

Type: **not specified**

## **Progress status for the 40 MeV Rhodotron and the new very high dose rate 10 MeV Flash platform at Aérial/Feerix**

*Wednesday, October 7, 2020 4:45 PM (5 minutes)*

**Presenter:** BRISON, Jeremy (IBA)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: **30**

Type: **not specified**

## **Inverse Compton scattering X-ray source optimized for radiotherapy**

*Wednesday, October 7, 2020 4:55 PM (5 minutes)*

**Presenter:** HORNBERGER, Benjamin (Lynceantech)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: 31

Type: **not specified**

## **Compact linac design for FLASH radiation therapy**

*Wednesday, October 7, 2020 5:05 PM (5 minutes)*

**Presenter:** GANGULY, Arundhuti (TiBaRay)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)



Contribution ID: 32

Type: **not specified**

## **High Frequency (12 GHz) RF generated electrons (100 MeV)**

*Wednesday, October 7, 2020 5:15 PM (5 minutes)*

**Presenter:** BARTY, Christopher (Lawrence Livermore National Laboratory)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: 33

Type: **not specified**

## **The challenge of high dose rate for ionisation chambers**

*Wednesday, October 7, 2020 5:25 PM (10 minutes)*

**Presenter:** POPPINGA, Daniela (PTW)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: **34**

Type: **not specified**

## Main topics

*Wednesday, October 7, 2020 6:15 PM (15 minutes)*

**Presenters:** DOSANJH, Manjit; FAUS-GOLFE, Angeles

**Session Classification:** Where are we going? Which experiments/facilities are needed?  
(Chaired by Jean Bourhis)

Contribution ID: 35

Type: **not specified**

## Free slot contributions

**Session Classification:** Where are we going? Which experiments/facilities are needed?  
(Chaired by Jean Bourhis)

Contribution ID: 36

Type: **not specified**

## **Experience with electron linear accelerators for low-energy FLASH Intraoperative RT with perspectives on VHEE beams**

*Wednesday, October 7, 2020 4:00 PM (10 minutes)*

**Presenter:** FAILLACE, Luigi (University di Roma)

**Session Classification:** Accelerators R&D and Technologies for medical (Chaired by Frank Stephan)

Contribution ID: 37

Type: **not specified**

## **Capabilites of the AWA facility for potential medical applications**

*Wednesday, October 7, 2020 5:35 PM (7 minutes)*

**Presenter:** CHUNGUANG, Jing

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: **38**

Type: **not specified**

## **Single electron imaging of samples using multiple coulomb scattering**

*Wednesday, October 7, 2020 5:45 PM (7 minutes)*

**Presenter:** JANSEN, Hendrick

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)

Contribution ID: 39

Type: **not specified**

## **Plans for growth in accelerator physics in Australia: medical and VHEE applications**

*Wednesday, October 7, 2020 5:55 PM (7 minutes)*

**Presenter:** SHEEHY, Suzie (University of Melbourne)

**Session Classification:** Industries for medical (Chaired by Gerardo D'Auria and Sami Tantawi)



Contribution ID: 40

Type: **not specified**

## Roundtable discussion

*Wednesday, October 7, 2020 6:30 PM (45 minutes)*

**Presenters:** DOSANJH, Manjit; FAUS-GOLFE, Angeles

**Session Classification:** Where are we going? Which experiments/facilities are needed?  
(Chaired by Jean Bourhis)

Contribution ID: 41

Type: **not specified**

## Concluding remarks

*Wednesday, October 7, 2020 7:15 PM (15 minutes)*

**Presenters:** DOSANJH, Manjit; FAUS-GOLFE, Angeles

**Session Classification:** Where are we going? Which experiments/facilities are needed?  
(Chaired by Jean Bourhis)