

**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, 5 October 2020 15:35 (20 minutes)

Presenter: NANNI, Emilio (SLAC)

Session Classification: State of the Art

Contribution ID: 2

Type: **not specified**

Clinical perspectives for FLASH therapy

Monday, 5 October 2020 15:10 (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, 5 October 2020 16:00 (20 minutes)

Presenter: SCHÜLLER, Andreas (PTB)

Session Classification: State of the Art

Contribution ID: 4

Type: **not specified**

Welcome Speech

Monday, 5 October 2020 15:00 (10 minutes)

Presenter: CORSINI, Roberto (CERN)

Contribution ID: 5

Type: **not specified**

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

Monday, 5 October 2020 16:35 (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, 5 October 2020 16:55 (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, 5 October 2020 17:15 (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, 5 October 2020 17:45 (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, 5 October 2020 18:05 (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, 5 October 2020 18:25 (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, 6 October 2020 15:00 (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, 6 October 2020 15:20 (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, 6 October 2020 15:40 (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, 6 October 2020 16:10 (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, 6 October 2020 16:30 (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, 6 October 2020 16:50 (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, 6 October 2020 17:20 (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, 6 October 2020 17:40 (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, 6 October 2020 18:00 (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, 6 October 2020 18:30 (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, 6 October 2020 18:50 (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, 6 October 2020 19:10 (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, 7 October 2020 15:00 (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, 7 October 2020 15:20 (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, 7 October 2020 15:40 (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, 7 October 2020 16:25 (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, 7 October 2020 16:35 (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, 7 October 2020 16:45 (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, 7 October 2020 16:55 (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, 7 October 2020 17:05 (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, 7 October 2020 17:15 (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, 7 October 2020 17:25 (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, 7 October 2020 18:15 (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, 7 October 2020 16:00 (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, 7 October 2020 17:35 (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, 7 October 2020 17:45 (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, 7 October 2020 17:55 (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, 7 October 2020 18:30 (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, 7 October 2020 19:15 (15 minutes)

Presenters: DOSANJH, Manjit; FAUS-GOLFE, Angeles

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