

# **Ion Beam Therapy: Clinical, Scientific and Technical Challenges**



## **Report of Contributions**

Contribution ID: 0

Type: **not specified**

## Welcome

*Monday, January 18, 2016 11:00 AM (15 minutes)*

**Presenter:** GREEN, Stuart (University Hospital Birmingham)

**Session Classification:** Introduction to ion beam therapy

Contribution ID: 1

Type: **not specified**

## **Aims**

*Monday, January 18, 2016 11:15 AM (15 minutes)*

**Presenter:** EDGECOCK, Rob (STFC - Rutherford Appleton Lab. (GB))

**Session Classification:** Introduction to ion beam therapy

Contribution ID: 2

Type: **not specified**

## **Clinical case for ions**

*Monday, January 18, 2016 11:30 AM (30 minutes)*

**Presenter:** SCHULTE, Reinhard

**Session Classification:** Introduction to ion beam therapy

Contribution ID: 4

Type: **not specified**

## **Dose calculations for He beam radiotherapy**

*Monday, January 18, 2016 12:00 PM (30 minutes)*

**Presenter:** FUCHS, Hermann (Medical University of Vienna)

**Session Classification:** Introduction to ion beam therapy

Contribution ID: 5

Type: **not specified**

## **Technology challenges and requirements of ion beam accelerators**

*Monday, January 18, 2016 2:30 PM (30 minutes)*

**Presenter:** JOHNSTONE, Carol (Fermilab)

**Session Classification:** Experience from existing ion facilities

Contribution ID: 6

Type: **not specified**

## Heidelberg Ion Beam Therapy centre

*Monday, January 18, 2016 3:00 PM (30 minutes)*

**Presenter:** JENSEN, Alexandra

**Session Classification:** Experience from existing ion facilities

Contribution ID: 8

Type: **not specified**

## **Centro Nazionale di Adroterapia Oncologica, Pavia**

*Monday, January 18, 2016 3:45 PM (30 minutes)*

**Presenter:** ORECCHIA, Roberto

**Session Classification:** Experience from existing ion facilities



Contribution ID: **10**

Type: **not specified**

## **OpenMed CERN**

*Monday, January 18, 2016 4:15 PM (20 minutes)*

**Presenter:** BARLOW, Roger (University of Huddersfield (GB))

**Session Classification:** New accelerator designs

Contribution ID: 11

Type: **not specified**

## **Mitsubishi Electric ion beam accelerator activities**

*Monday, January 18, 2016 4:35 PM (20 minutes)*

**Presenter:** HARADA, Sashi

**Session Classification:** New accelerator designs

Contribution ID: 13

Type: **not specified**

## **IBA developments for ion beam therapy**

*Tuesday, January 19, 2016 9:40 AM (20 minutes)*

**Presenter:** VAN DE WALLE, Jarno

**Session Classification:** New accelerator designs

Contribution ID: 14

Type: **not specified**

## **Linear accelerator options**

*Tuesday, January 19, 2016 9:00 AM (20 minutes)*

**Presenter:** DEGIOVANNI, Alberto (CERN)

**Session Classification:** New accelerator designs

Contribution ID: 15

Type: **not specified**

## **Hitachi particle therapy solutions**

*Tuesday, January 19, 2016 9:20 AM (20 minutes)*

**Presenter:** AKIYAMA, Dr.

**Session Classification:** New accelerator designs

Contribution ID: 16

Type: **not specified**

## **Clinical comparison between fixed beam lines and gantries**

*Tuesday, January 19, 2016 11:00 AM (25 minutes)*

**Presenter:** JENSEN, Alexandra

**Session Classification:** Gantry designs

Contribution ID: 17

Type: **not specified**

## **ULICE gantry**

*Tuesday, January 19, 2016 11:25 AM (20 minutes)*

**Presenter:** PULLIA, Marco (Fondazione CNAO (IT))

**Session Classification:** Gantry designs

Contribution ID: **18**

Type: **not specified**

## **NIRS superconducting gantry**

*Tuesday, January 19, 2016 11:45 AM (20 minutes)*

**Presenter:** IWATA, Yoshiyuki

**Session Classification:** Gantry designs



Contribution ID: 19

Type: **not specified**

## **Large momentum acceptance superconducting and permanent magnet FFAG gantry for carbon/proton cancer therapy**

*Tuesday, January 19, 2016 12:05 PM (20 minutes)*

**Presenter:** TRBOJEVIC, Dejan (Brookhaven National Laboratory)

**Session Classification:** Gantry designs

Contribution ID: 20

Type: **not specified**

## **Gantries for pCT**

*Tuesday, January 19, 2016 12:25 PM (20 minutes)*

**Presenter:** OWEN, Hywel (University of Manchester)

**Session Classification:** Gantry designs

Contribution ID: 21

Type: **not specified**

## **Clinical requirements**

*Tuesday, January 19, 2016 4:30 PM (30 minutes)*

**Presenter:** SANGHERA, Paul

**Session Classification:** Imaging

Contribution ID: 23

Type: **not specified**

## **Complete control of respiratory motion**

*Tuesday, January 19, 2016 5:00 PM (30 minutes)*

**Presenter:** PARKES, Mike

**Session Classification:** Imaging

Contribution ID: 24

Type: **not specified**

## **MRI guided radiotherapy**

*Wednesday, January 20, 2016 9:50 AM (20 minutes)*

**Presenter:** NORDIN, Bernt

**Session Classification:** Imaging

Contribution ID: 25

Type: **not specified**

## **Silicon tracking detectors for hadron beam monitoring and imaging**

*Wednesday, January 20, 2016 9:30 AM (20 minutes)*

**Presenter:** ALLPORT, Philip Patrick (University of Birmingham (UK))

**Session Classification:** Imaging

Contribution ID: 26

Type: **not specified**

## **Dosimetry**

*Wednesday, January 20, 2016 10:10 AM (20 minutes)*

**Presenter:** PALMANS, Hugo

**Session Classification:** Imaging

Contribution ID: 27

Type: **not specified**

## Discussion

*Tuesday, January 19, 2016 10:20 AM (10 minutes)*

**Session Classification:** New accelerator designs



Contribution ID: 28

Type: **not specified**

## Discussion

*Tuesday, January 19, 2016 12:45 PM (15 minutes)*

**Session Classification:** Gantry designs

Contribution ID: **31**

Type: **not specified**

## **FFAG options**

*Tuesday, January 19, 2016 10:00 AM (20 minutes)*

**Presenter:** JOHNSTONE, Carol (Fermilab)

**Session Classification:** New accelerator designs

Contribution ID: **32**

Type: **not specified**

## **STFC accelerator capabilities**

*Wednesday, January 20, 2016 9:00 AM (30 minutes)*

**Presenter:** BLAIR, Grahame

Contribution ID: 33

Type: **not specified**

## Registration and coffee

*Monday, January 18, 2016 10:15 AM (45 minutes)*

Contribution ID: **34**

Type: **not specified**

## **Discussion**

*Monday, January 18, 2016 12:30 PM (30 minutes)*

**Session Classification:** Introduction to ion beam therapy

Contribution ID: 35

Type: **not specified**

## Coffee and pastries

Contribution ID: 36

Type: **not specified**

## **Imaging with protons**

*Monday, January 18, 2016 2:00 PM (30 minutes)*

**Presenter:** SCHULTE, Reinhard

**Session Classification:** Experience from existing ion facilities

Contribution ID: 37

Type: **not specified**

## **Consideration of heavy ions at MDAnderson**

*Tuesday, January 19, 2016 3:00 PM (30 minutes)*

**Presenter:** MOHAN, Radhe

**Session Classification:** New accelerator designs



Contribution ID: **38**

Type: **not specified**

## **Radiobiology aspects of ion therapy**

*Tuesday, January 19, 2016 4:00 PM (30 minutes)*

**Presenter:** HEUSKIN, Anne-Catherine

**Session Classification:** Imaging

Contribution ID: 39

Type: **not specified**

## Treatment planning

*Wednesday, January 20, 2016 11:00 AM (30 minutes)*

**Presenter:** TRANEUS, Erik

**Session Classification:** Imaging