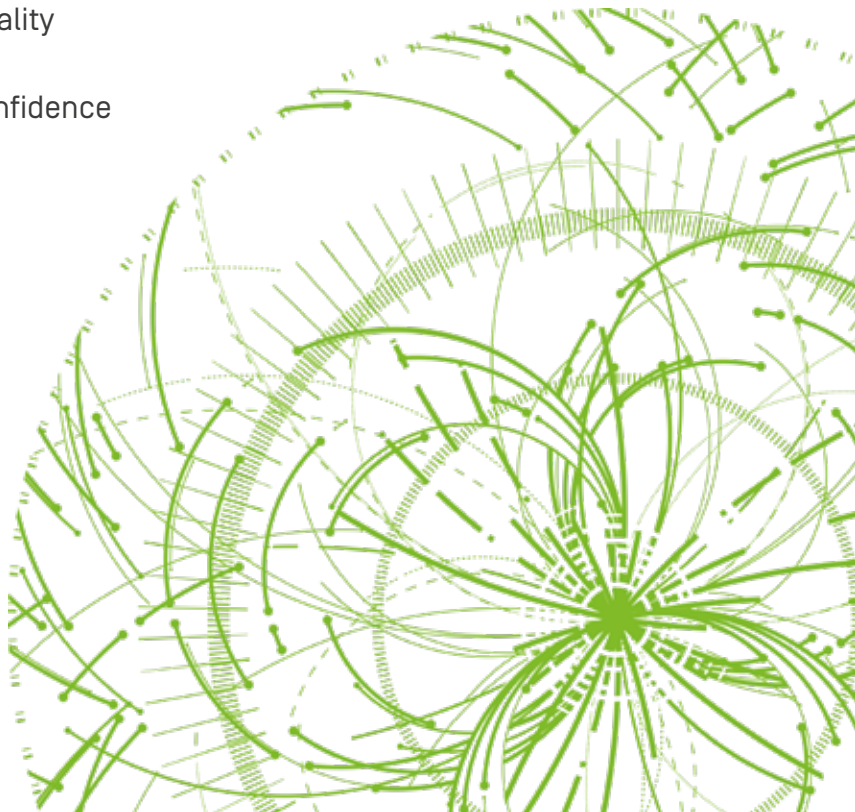


# BEAM DATA VERIFICATION AUDIT WITH MONTE CARLO

- Gain confidence in the accuracy of your TPS commissioning data
- Receive guidance for improving beam data quality in case of inconsistencies
- Go live with your Linac faster and with high confidence



# BEAM DATA VERIFICATION AUDIT SERVICE

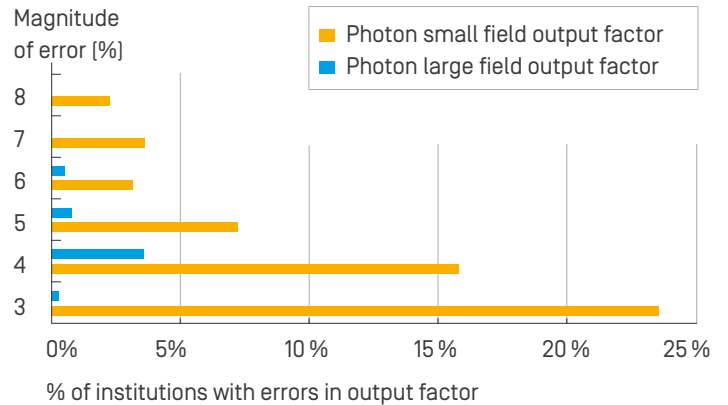
## The Challenge:

Poor commissioning data causes errors throughout the treatment chain.

Errors in beam data collection are reported to frequently lead to flawed TPS beam models and thus to systematic dose computation errors. These systematic beam data errors are difficult to spot and to eliminate<sup>1)</sup>.

- Commissioning is a challenging process requiring in-depth experience, especially for small field dosimetry.
- Commissioning is usually done under time pressure, and the job is repetitive and error-prone.
- International recommendations for independent audit of the data by a qualified medical physicist (e.g. AAPM TG-106, AAPM TG-53, ESTRO Booklet 10...).

## Dosimetric Issues in Radiation Therapy

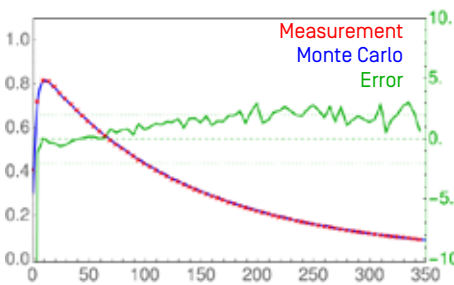


### RT Deficiencies Identified During On-Site Dosimetry...

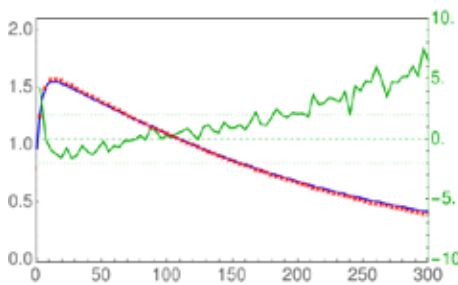
S. Kry et.al.: IJROBP, Vol 99, 5, 2017 P1094-1100

## Typical beam data errors detected with Monte Carlo beam data verification.

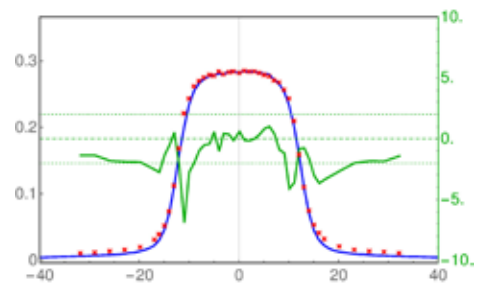
### Degrading Diode



### Wrong Voltage



### Penumbra Discrepancy



## The Solution: Independent Monte Carlo-based Beam Data Verification Audit.

Gain clarity and the peace of mind that the quality of your new or existing beam data is accurate, or know how to improve it if needed.



- Simply submit your commissioning data for the audit and gain full insight into the quality of your dataset.
- The report includes comprehensive details of the sources of inconsistencies or errors and provides guidance on how to resolve them.
- The audit is available for beam data of any water phantom and for all standard C-Arm Linacs, Halcyon™, Ethos™ CyberKnife®, TomoTherapy®/ Radixact®.\*



“ I have validated our beam commissioning data using the Monte Carlo modeling within SciMoCa. The comprehensive validation report provided guidance to improve the PDD and MLC leaf calibrations in the TPS. We now have the confidence that our beam data is correct and that our treatment plan calculations are of high quality. ”

**M. Kowatsch, Senior Medical Physicist, LKH Feldkirch, Austria**

Watch Webinar



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<sup>1)</sup> Kowatsch, M. et.al. (2018). Monte Carlo based Quality Assurance of Base Data for Beam Modeling in Treatment Planning Systems.

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**DOSIMETRY**

