

## DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2016/03/14
Person Assigned	Ulrich Busch ( <a href="mailto:ulrich.busch@varian.com">ulrich.busch@varian.com</a> )
Submitter Name	Vladimir Calahorrano
Submission Date	2015/09/07

Correction Number	CP-1531
Log Summary: Additional Tags For Ion Eye Treatment	
Name of Standard PS3.3, PS3.6 2016a	
Rationale for Correction: At the moment multiple manufactures are using private tags for transferring clinical data related to eye treatments. These data is related to: <ul style="list-style-type: none"> <li>- The eye used as reference for the fixation in eye treatments. In some cases the eye that will be treated cannot be used as reference for the fixation.</li> <li>- The height of the chair head frame is also a parameter required for setting the planned position of the chair.</li> <li>- For comparing the planned and current position of the chair and fixation parameters some tolerances are missing in the standard.</li> </ul> The purpose of this change proposal is to align and standardize the definition of these parameters adding new tags into the standard.	
Correction Wording:	

*In PS 3.3, section C.8.8.25 RT Ion Beams Module, add the following tags*

### C.8.8.25 RT Ion Beams Module

**Table C.8.8.25. RT Ion Beams Module Attributes**

Attribute Name	Tag	Type	Attribute Description
>Fixation Light Azimuthal Angle	(300A,0356)	3	Azimuthal angle (degrees) of the fixation light coordinate around IEC BEAM LIMITING DEVICE Y-axis. Used for eye treatments. See Section C.8.8.25.6.4.
>Fixation Light Polar Angle	(300A,0358)	3	Polar angle (degrees) of the fixation light coordinate. Used for eye treatments. See Section C.8.8.25.6.4.

>Fixation Eye	(300A,0150)	3	<b>The eye used for fixation.</b> <b>Enumerated Values:</b> <b>L - left eye</b> <b>R - right eye</b>
...			
>Ion Control Point Sequence	(300A,03A8)	1	Sequence of machine configurations describing Ion treatment beam. The number of items shall be identical to the value of Number of Control Points (300A,0110). See Section C.8.8.25.7.
>>Head Fixation Angle	(300A,0148)	3	Angle (in degrees) of the head fixation for eye treatments with respect to the Table Top Pitch Angle (300A,0140) coordinate system. Positive head fixation angle is the same direction as positive Table Top pitch. See Section C.8.8.25.6.4.
>>>Chair Head Frame Position	(300A,0151)	3	<b>A device-specific value that specifies the relationship between the chair in which the patient is sitting and the head frame in which their head is fixed.</b> <b>It shall be expressed as a distance in mm, such that positive is towards the patient's head away from the seat.</b> <b>Note: This value is not intended to be used for geometric calculations, however, for the same device, the relative distance is meaningful.</b> <b>Typically used for eye treatments.</b>

*In PS 3.3, section C.8.8.26 RT Ion Beams Session Record Module, add the following tags*

### C.8.8.26 RT Ion Beams Session Record Module

**Table C.8.8.26-1. RT Ion Beams Session Record Module Attributes**

Attribute Name	Tag	Type	Attribute Description
>Fixation Light Azimuthal Angle	(300A,0356)	3	Azimuthal angle (degrees) of the fixation light coordinate around IEC BEAM LIMITING DEVICE Y-axis. Used for eye treatments. See Section C.8.8.25.6.4.
>Fixation Light Polar Angle	(300A,0358)	3	Polar angle (degrees) of the fixation light coordinate. Used for eye treatments. See Section C.8.8.25.6.4.

>Fixation Eye	(300A,0150)	3	<b>The eye used for fixation.</b> <b>Enumerated Values:</b> <b>L - left eye</b> <b>R - right eye</b>
...			
>Ion Control Point Delivery Sequence	(300A,0041)	1	Sequence of beam control points for current ion treatment beam. One or more items shall be included in this sequence. The number of items shall be identical to the value of Number of ControlPoints (300A,0110). See Section C.8.8.21.1.
>>Head Fixation Angle	(300A,0148)	3	Angle (in degrees) of the head fixation for eye treatments with respect to the Table Top Pitch Angle (300A,0140) coordinate system. Positive head fixation angle is the same direction as positive Table Top pitch. See Section C.8.8.25.6.4.
>>>Chair Head Frame Position	(300A,0151)	3	<b>A device-specific value that specifies the relationship between the chair in which the patient is sitting and the head frame in which their head is fixed.</b> <b>It shall be expressed as a distance in mm, such that positive is towards the patient's head away from the seat.</b> <b>Note: This value is not intended to be used for geometric calculations, however, for the same device, the relative distance is meaningful.</b> <b>Typically used for eye treatments.</b>

*In PS 3.3, section C.8.8.24 RT Ion Tolerance Tables Module; add the following tags.*

### C.8.8.24 RT Ion Tolerance Tables Module

**Table C.8.8.24 RT Ion Tolerance Tables Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Ion Tolerance Table Sequence	(300A,03A0)	1	Sequence of ion tolerance tables to be used for delivery of treatment plan. One or more Items shall be included in this Sequence. See Note 1.
...			

>Snout Position Tolerance	(300A,004B)	3	Maximum permitted difference (in mm) between planned and delivered Snout Position.
> <u>Head Fixation Angle Tolerance</u>	<u>(300A,0152)</u>	<u>3</u>	<u>Maximum permitted difference (in degrees) between planned and delivered Head Fixation Angle (300A,0148).</u>
> <u>Chair Head Frame Position Tolerance</u>	<u>(300A,0153)</u>	<u>3</u>	<u>Maximum permitted difference (in mm) between planned and delivered Chair Head Frame Position (300A,0151).</u>
> <u>Fixation Light Azimuthal Angle Tolerance</u>	<u>(300A,0154)</u>	<u>3</u>	<u>Maximum permitted difference (in degrees) between planned and delivered Fixation Light Azimuthal Angle (300A,0356).</u>
> <u>Fixation Light Polar Angle Tolerance</u>	<u>(300A,0155)</u>	<u>3</u>	<u>Maximum permitted difference (in mm) between planned and delivered Fixation Light Polar Angle (300A,0358).</u>

In PS 3.6, Section 6, add the following new attributes:

<b>(300A,0150)</b>	<b><u>Fixation Eye</u></b>	<b><u>FixationEye</u></b>	<b><u>CS</u></b>	<b><u>1</u></b>
<b>(300A,0151)</b>	<b><u>Chair Head Frame Position</u></b>	<b><u>ChairHeadFramePosition</u></b>	<b><u>DS</u></b>	<b><u>1</u></b>
<b>(300A,0152)</b>	<b><u>Head Fixation Angle Tolerance</u></b>	<b><u>HeadFixationAngleTolerance</u></b>	<b><u>DS</u></b>	<b><u>1</u></b>
<b>(300A,0153)</b>	<b><u>Chair Head Frame Position Tolerance</u></b>	<b><u>ChairHeadFramePositionTolerance</u></b>	<b><u>DS</u></b>	<b><u>1</u></b>
<b>(300A,0154)</b>	<b><u>Fixation Light Azimuthal Angle Tolerance</u></b>	<b><u>FixationLightAzimuthalAngleTolerance</u></b>	<b><u>DS</u></b>	<b><u>1</u></b>
<b>(300A,0155)</b>	<b><u>Fixation Light Polar Angle Tolerance</u></b>	<b><u>FixationLightPolarAngleTolerance</u></b>	<b><u>DS</u></b>	<b><u>1</u></b>