

APPLICATION NOTE

Measuring Mo/Rh on the Giotto IMS For Piranha and MPD

This application note contains a correction table for the kV measured on the Giotto Unit from IMS using the Red Piranha, Barracuda MPD and the Black Piranha.

The Giotto Unit from IMS comes with Molybdenum anode or Tungsten anode with a total of four different anode/filter combinations; Mo/30 μm Mo, Mo/25 μm Rh, W/50 μm Rh, and W/50 μm Ag.

This application note's corrections comes from a limited amount of measured data.
Due to the limited data there can be variations in kV because the data is not based on tubes of different aging.



Introduction

Use this table when you are measuring on the IMS giotto with the Red Piranha, Barracuda MPD and Black Piranha.

The below table are valid for Red Piranhas and Barracuda MPD calibrated after 2013-03-01
 And on Black Piranhas

Mo/Rh (Using M3)		
Tube voltage (kV)	Large focal spot	Large focal spot
	Red Piranha&MPD	Black Piranha
25	+ 1,3	+0,4
26	+1,4	+0,5
27	+1,5	+0,6
28	+1,9	+1,3
29	+1,9	+1,4
30	+1,9	+1,3
31	+1,9	+1,2
32	+1,9	+1,2
33	+2,0	+1,1

Instruction

The table values correct the measured (displayed) tube voltage value depending on set kV and focal spot size, when measuring 60 mm from the chest wall.

The table should be used with RTI QABrowser/ oRTIgo or Ocean measuring tube voltage and the correct RQ Code (M3) selected in the program. The detector is placed in the radiation field and the user makes an exposure. Finally the measured tube voltage is read in the display and then manually corrected with a number from the applicable table.

Note! These corrections are valid if your system is calibrated after 2013-03-01 [For Red Piranha & MPD] and you are using QABrowser v4.3A or oRTIgo v6.4 or Ocean v2012.10.02.83 (or newer).

Note2! You must use the correct column whether you're using a red piranha and/or Barracuda MPD or if you're using a Black Piranha

Example

Measured or set tube voltage: 26 kV
 Radiation quality: Mo/Rh (M3)
 Focal spot: Large (Red Piranha column)
 Measured tube voltage: 24,4 kV
 Correction: +1,4 for 26 kV
 Corrected tube voltage: 24,4 + 1,4 = 25,8 kV