

Urgent Safety Notice

PTW BeamAdjust 2.2 / VeriSoft 8.0 Firmware

Date: August xx, 2020

Attention: When a measurement with a PTW detector array is performed with the software BeamAdjust 2.2 or VeriSoft 8.0, a measurement error can occur. This error can lead to a too-low or too-high measured absolute dose which affects patient plan verification results. The error can occur when a zeroing of the detector is performed and an air density correction is defined.

The error cannot occur when the detector is cross-calibrated (no air density correction).

Affected software:

Software BeamAdjust version 2.2, Software VeriSoft version 8.0

Problem description:

When using the air density correction in BeamAdjust 2.2 in the menu "Tools → Measurement Options..." or in VeriSoft 8.0 in the dialogue "Measurement Parameters" all temperature and air pressure values that result in an air density correction of $k_{TP} \neq 1.000$ lead to incorrect zeroing values. Subsequent dose rate measurements show a constant offset. During dose measurements this error is then continuously added up.

The size of the error is varying and depends on the temperature and air pressure values used, the interval time, the measurement duration, the total dose during the measurement and the measurement range used. Deviations in the double-digit percentage range cannot be excluded.

Erroneous dose measurements acquired with OCTAVIUS detector arrays directly affect patient plan verification results obtained in VeriSoft 8.0. Comparison results can be both erroneously better and erroneously worse than they were without any measurement error influence. The absolute dose values shown in VeriSoft 8.0 and BeamAdjust 2.2 during detector array measurements are not reliable.

Advice for users and distributors:

PTW will provide free-of-charge software updates. Users who have use BeamAdjust 2.2/VeriSoft 8.0 according to the above described application should update the software to VeriSoft 8.0.1/BeamAdjust 2.2.1 prior to further use of the software. For all other users PTW recommends using BeamAdjust 2.2.1/VeriSoft 8.0.1 too.

Until the software updates are available PTW recommends avoiding the air density correction method. As a workaround, if air density correction should still be applied a manually calculated air density correction value can be entered as a k_{User} keeping k_{TP} untouched ($k_{TP} = 1.000$!).

Please also note, machine QA measurements performed with PTW detector arrays within the PTW software MultiCheck are not affected.

Measures taken by the manufacturer:

PTW has fixed the bug in the software and provides all affected users with software updates.

Communication of this safety notice:

This notice needs to be passed on all those who need to be aware within your organisation or to any organisation where the affected software has been transferred.