**RITEDos In Vivo Dosimetry Manual**

**Here is my basic manual for the RITEDos program. You should add more as you see fit.**

**Commissioning**

The commissioning function, RITEDosCommission, requires that you enter the field sizes, widths, and displacements used for the F and f datasets, as well as the depths and field sizes your TPR was taken at.

When you have changed these, call the function and it will prompt you to select the directories containing the treatment planning system’s output files for the F data, as well as the directories containing the F and f datasets. Finally, you will need to select the TPR data, which should be in the form of a MATLAB variable file (.mat) with depth on the vertical and field size on the horizontal, as it usually is.

At the end of the function is where the results are saved. You can change this file name directly in the function, but you can also just rename it after it has been created.

The output of the program is many figures which you can use to determine if commissioning was successful. If the doses are not matching well, you may have entered an above parameter incorrectly. If you do not want this, you can also comment out those lines in the makeGaussianCorr commissioning function.

**Patient Calculation**

The patient calculation function, RITEDosPatientCalc, requires the same initial input as the commissioning function, with the various field sizes, widths, and displacements for f and F, and the field sizes and depths for TPR.

You should also change the name of the CommissFile to be whatever commissioning data you would like to use, which should have been saved in the previous step. You will also need to enter the gantry angle you’d like to calculate for and the number of fractions in the plan.

After you have entered these, call the function and it will prompt you to select the directory containing the patient EPIDs and the corresponding treatment planning system output file.

The program will output 3 figures, comparing the doses with the treatment planning system with no convolution, with convolution, and with convolution and horn corrections, all relative to the max of the treatment planning system.