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# Introduction

## RECAP 10 Jan 2023

There are some anomalies with the dataset used in all of the separate (JASP and R) processing reported on in this document so far (until 10 Jan 2023). This is associated with some duplicates in recorded data (so far, specifically, G1 and G4).

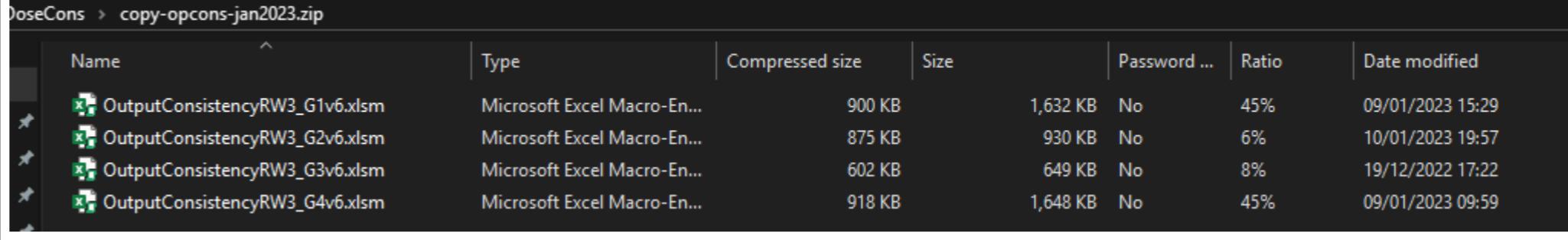
## Recap 17 Jan. 23

Duplicates referred to above are believed to have been introduced during initial conversion from original excel spreadsheets into CSV with additional rows copied down from row which characterises each measurement group (ie has full data record for the session).

It is now believed that this stage (completion of all the interim rows for the same date) is not needed for the current analysis.

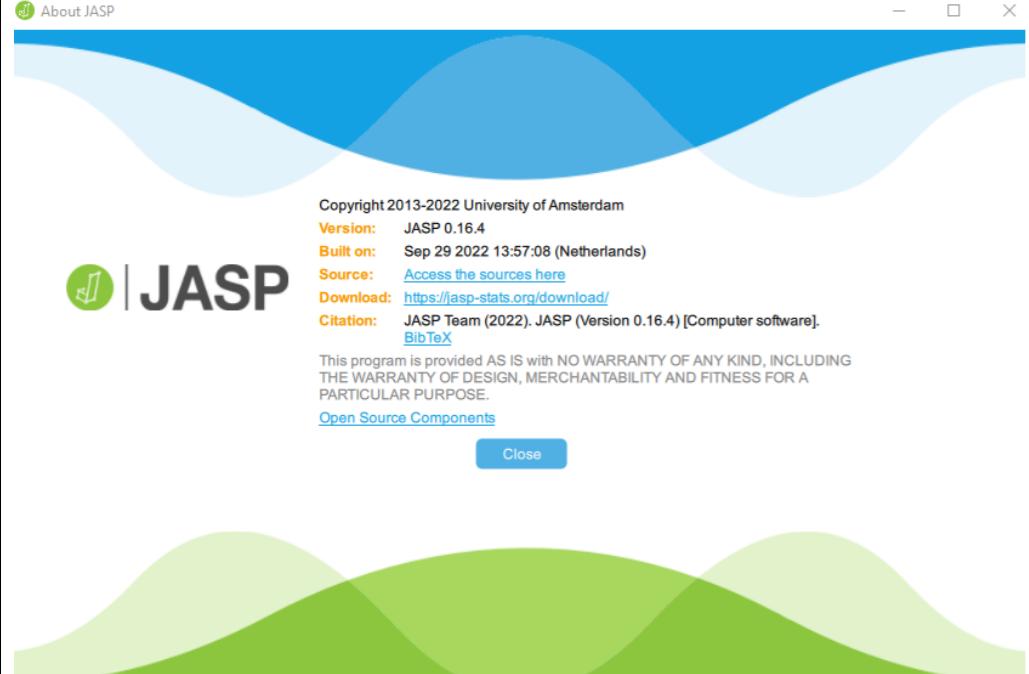
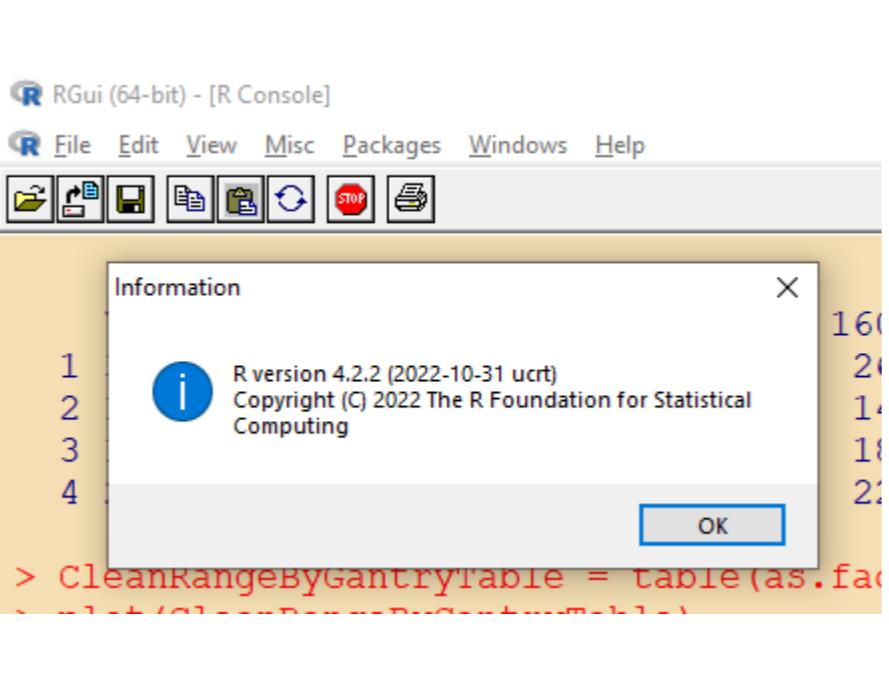
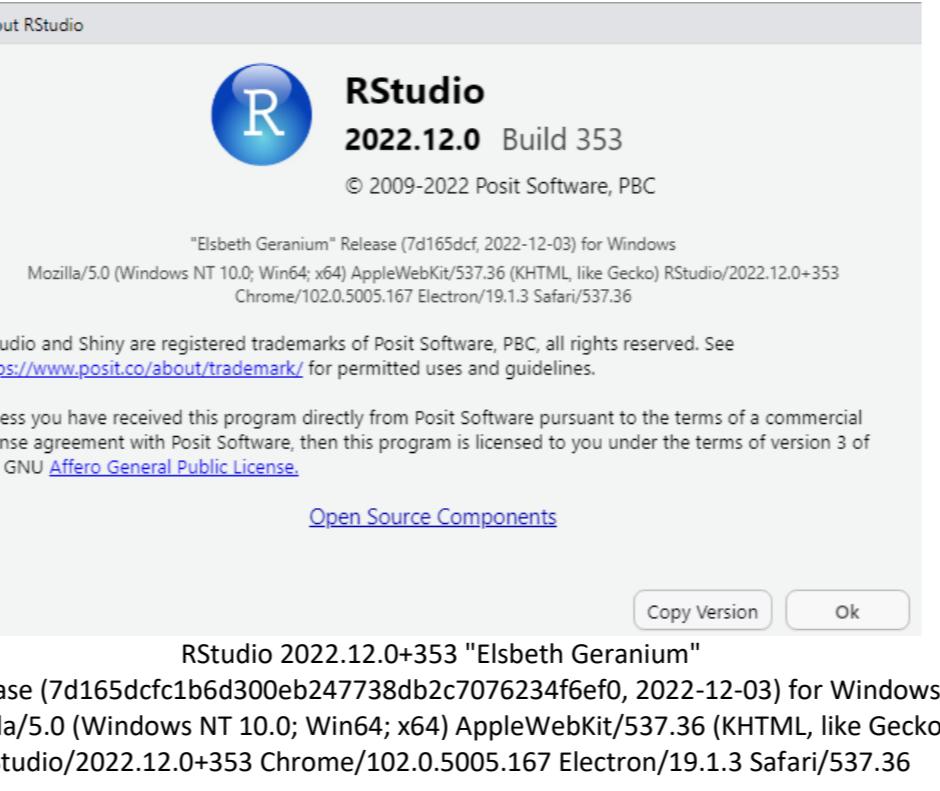
Data referred to as “Gy” in the following are taken from the CSV versions of the excel spreadsheets in the collection done on 12 Jan 2023 and listed in table below.

*Table 1 Specification of data sources for report of 18 January 2023*

Directory listing	Image in zip compressed file containing prime data versions processed further (for audit purposes)																																			
Directory of C:\Users\alemoore\Documents\DoseCons  09/01/2023 15:29 1,671,019 OutputConsistencyRW3_G1v6.xlsm 10/01/2023 19:57 951,837 OutputConsistencyRW3_G2v6.xlsm 19/12/2022 17:22 664,565 OutputConsistencyRW3_G3v6.xlsm 09/01/2023 09:59 1,687,434 OutputConsistencyRW3_G4v6.xlsm 4 File(s) 4,974,855 bytes	 <table border="1"><thead><tr><th>Name</th><th>Type</th><th>Compressed size</th><th>Size</th><th>Password ...</th><th>Ratio</th><th>Date modified</th></tr></thead><tbody><tr><td>OutputConsistencyRW3_G1v6.xlsm</td><td>Microsoft Excel Macro-En...</td><td>900 KB</td><td>1,632 KB</td><td>No</td><td>45%</td><td>09/01/2023 15:29</td></tr><tr><td>OutputConsistencyRW3_G2v6.xlsm</td><td>Microsoft Excel Macro-En...</td><td>875 KB</td><td>930 KB</td><td>No</td><td>6%</td><td>10/01/2023 19:57</td></tr><tr><td>OutputConsistencyRW3_G3v6.xlsm</td><td>Microsoft Excel Macro-En...</td><td>602 KB</td><td>649 KB</td><td>No</td><td>8%</td><td>19/12/2022 17:22</td></tr><tr><td>OutputConsistencyRW3_G4v6.xlsm</td><td>Microsoft Excel Macro-En...</td><td>918 KB</td><td>1,648 KB</td><td>No</td><td>45%</td><td>09/01/2023 09:59</td></tr></tbody></table>	Name	Type	Compressed size	Size	Password ...	Ratio	Date modified	OutputConsistencyRW3_G1v6.xlsm	Microsoft Excel Macro-En...	900 KB	1,632 KB	No	45%	09/01/2023 15:29	OutputConsistencyRW3_G2v6.xlsm	Microsoft Excel Macro-En...	875 KB	930 KB	No	6%	10/01/2023 19:57	OutputConsistencyRW3_G3v6.xlsm	Microsoft Excel Macro-En...	602 KB	649 KB	No	8%	19/12/2022 17:22	OutputConsistencyRW3_G4v6.xlsm	Microsoft Excel Macro-En...	918 KB	1,648 KB	No	45%	09/01/2023 09:59
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OutputConsistencyRW3_G3v6.xlsm	Microsoft Excel Macro-En...	602 KB	649 KB	No	8%	19/12/2022 17:22																														
OutputConsistencyRW3_G4v6.xlsm	Microsoft Excel Macro-En...	918 KB	1,648 KB	No	45%	09/01/2023 09:59																														

Among other utilities (Notepad, VSCode, cmd prompt) used for file edit, manipulation and OS work, the main processing in this report is with the software tools in Table 2.

Table 2 Icons for software used in this report

<h3>JASP software</h3>  <p><b>JASP</b></p> <p>Copyright 2013-2022 University of Amsterdam  <b>Version:</b> JASP 0.16.4  <b>Built on:</b> Sep 29 2022 13:57:08 (Netherlands)  <b>Source:</b> <a href="#">Access the sources here</a>  <b>Download:</b> <a href="https://asp-stats.org/download/">https://asp-stats.org/download/</a>  <b>Citation:</b> JASP Team (2022). JASP (Version 0.16.4) [Computer software]. BibTeX</p> <p>This program is provided AS IS WITH NO WARRANTY OF ANY KIND, INCLUDING THE WARRANTY OF DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.</p> <p><a href="#">Open Source Components</a></p> <p><b>Close</b></p>	<h3>R software</h3>  <p><b>RGui (64-bit) - [R Console]</b></p> <p><b>File Edit View Misc Packages Windows Help</b></p> <p><b>Information</b></p> <p>R version 4.2.2 (2022-10-31 ucrt)  Copyright (C) 2022 The R Foundation for Statistical Computing</p> <p>1 2 3 4</p> <p><b>OK</b></p> <p>&gt; CleanRangeByGantryTable = table(as.factor(Cl...))  &gt; CleanRangeByGantryTable</p>
<h3>Excel</h3>  <p><b>Product Information</b></p> <p><b>Microsoft</b></p> <p><b>Subscription Product</b></p> <p>Microsoft 365 Apps for enterprise</p> <p>Belongs to: alexander.moore8@nhs.net</p> <p>This product contains</p> <p><b>W X P O N P A T</b></p> <p><b>Manage Account</b> <b>Change License</b></p> <p><b>Office Updates</b>  This product will not be updated.</p> <p><b>Update Options</b></p> <p><b>About Excel</b>  Learn more about Excel, Support, Product ID, and Copyright information.  Version 2210 (Build 15726.20174 Click-to-Run)  Current Channel</p>	<h3>R Studio</h3>  <p><b>About RStudio</b></p> <p><b>RStudio</b>  <b>2022.12.0 Build 353</b>  © 2009-2022 Posit Software, PBC</p> <p>"Elsbeth Geranium" Release (7d165dcf, 2022-12-03) for Windows  Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) RStudio/2022.12.0+353  Chrome/102.0.5005.167 Electron/19.1.3 Safari/537.36</p> <p>RStudio and Shiny are registered trademarks of Posit Software, PBC, all rights reserved. See <a href="https://www.posit.co/about/trademark/">https://www.posit.co/about/trademark/</a> for permitted uses and guidelines.</p> <p>Unless you have received this program directly from Posit Software pursuant to the terms of a commercial license agreement with Posit Software, then this program is licensed to you under the terms of version 3 of the GNU <a href="#">Afferro General Public License</a>.</p> <p><b>Open Source Components</b></p> <p><b>Copy Version</b> <b>Ok</b></p> <p><b>RStudio 2022.12.0+353 "Elsbeth Geranium"</b>  Release (7d165dcfc1b6d300eb247738db2c7076234f6ef0, 2022-12-03) for Windows  Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) RStudio/2022.12.0+353 Chrome/102.0.5005.167 Electron/19.1.3 Safari/537.36</p>

# Descriptive Statistics – selected from data set as a whole, influence factors

## Pressure, temperature, PTF

Tabulation and ASSUMED ‘insignificant’ variation between the gantries has currently deprioritised inclusion of these as influence factors (on dose or its variation) worth investigation further.

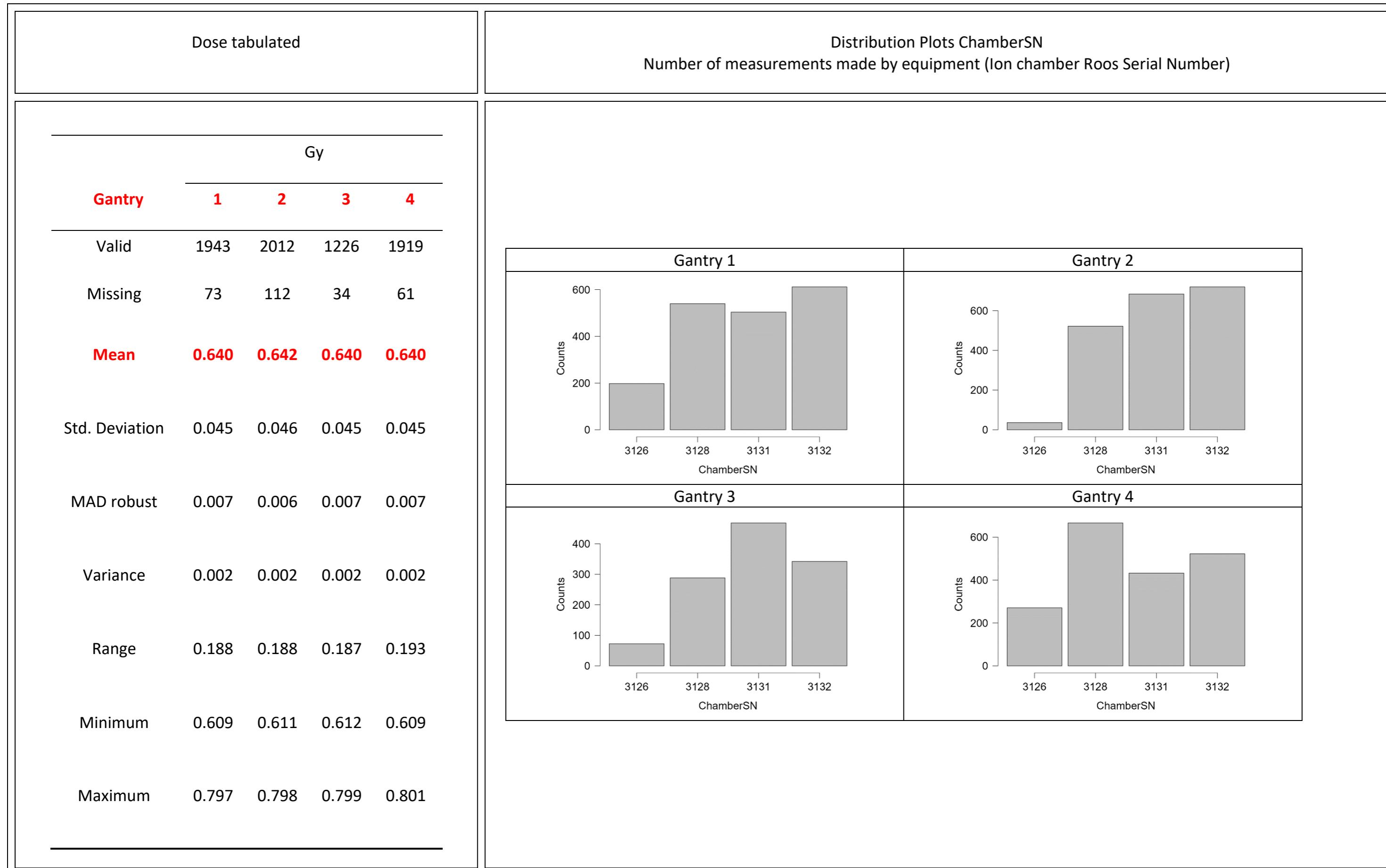
*Table 3 potential influence factors (pressure and temperature)*

GANTRY	TempC				PresshPa				TempPressC			
	1	2	3	4	1	2	3	4	1	2	3	4
Valid	1854	1962	1170	1890	1854	1962	1170	1890	1854	1962	1170	1890
Missing Data	0	0	0	0	0	0	0	0	0	0	0	0
Mean	<b>22.991</b>	<b>23.010</b>	<b>22.742</b>	<b>22.824</b>	<b>1013.226</b>	<b>1015.705</b>	<b>1013.448</b>	<b>1012.291</b>	<b>1.010</b>	<b>1.008</b>	<b>1.009</b>	<b>1.011</b>
Std. Deviation	0.394	0.302	0.518	0.313	10.375	12.164	11.184	11.029	0.011	0.012	0.012	0.011
Minimum	21.500	22.200	21.800	21.500	987.800	983.400	980.000	987.800	0.983	0.986	0.990	0.983
Maximum	23.900	23.600	23.700	23.600	1040.000	1038.600	1031.900	1040.000	1.036	1.042	1.047	1.036

*Note.* Excluded 468 rows from the analysis that correspond to the missing values of the split-by variable Gantry

# Descriptive Statistics on summary of dose and its variation with gantry identity

Table 4 Descriptive Statistics – tabulated Dose – grouped by gantry



## Descriptive Statistics – tabulated Dose [Gy] for DoseConsistency reference MU proton beam

Table 5 Descriptive Statistics – tabulated Dose – grouped by energy

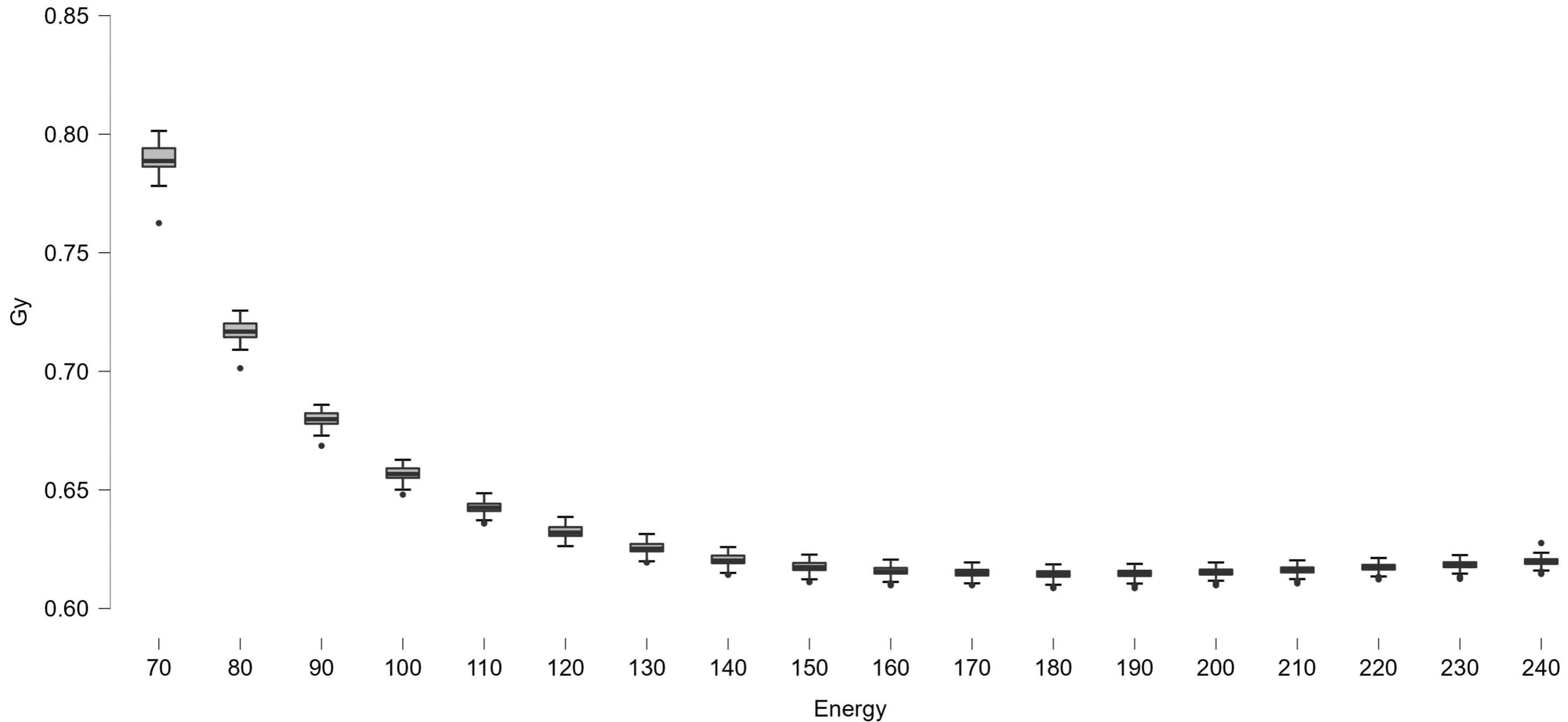
ENERGY	<u>Gy for DoseConsistency reference MU proton beam</u>																	
	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240
Valid	397	396	396	396	396	393	393	393	393	395	396	393	393	394	394	394	394	394
Missing	13	14	14	14	14	17	17	17	17	15	14	17	17	16	16	16	16	16
Mode <sup>a</sup>	0.786	0.712	0.678	0.655	0.641	0.631	0.625	0.620	0.617	0.615	0.614	0.614	0.616	0.614	0.616	0.617	0.617	0.619
Mean	0.790	0.717	0.680	0.657	0.643	0.632	0.625	0.621	0.618	0.616	0.615	0.615	0.615	0.615	0.616	0.617	0.618	0.620
Std. Deviation	0.005	0.004	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
MAD robust	0.005	0.004	0.003	0.003	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.002	0.002	0.001
Range	0.039	0.024	0.017	0.015	0.013	0.012	0.012	0.012	0.012	0.011	0.010	0.010	0.010	0.010	0.010	0.009	0.010	0.013
Minimum	0.762	0.701	0.669	0.648	0.636	0.626	0.619	0.614	0.611	0.610	0.610	0.609	0.609	0.610	0.611	0.612	0.613	0.615
Maximum	0.801	0.726	0.686	0.663	0.649	0.639	0.631	0.626	0.623	0.621	0.619	0.619	0.619	0.619	0.620	0.621	0.623	0.628

<sup>a</sup> More than one mode exists, only the first is reported

## Boxplots - Tabulated Dose [Gy] for DoseConsistency reference MU proton beam; (median and boxplot) by Energy

Information on plot – median ? – dots represent outliers – bars represent +/- 95% frequency levels (?)

Figure 1 Gy for DoseConsistency reference MU proton beam - Boxplot



## Tabulated Dose (Robust mean) by Energy and separated by Gantry

These data do NOT exclude data but were done before the latest recap.

**Table 6 Gantry 1 - dose consistency in RW3**

		Gy																	
		70MeV 80MeV 90MeV 100MeV 110MeV 120MeV 130MeV 140MeV 150MeV 160MeV 170MeV 180MeV 190MeV 200MeV 210MeV 220MeV 230MeV 240MeV																	
Valid		101	101	101	101	101	98	98	98	99	99	98	98	98	98	98	98	98	98
Missing		2	2	2	2	2	5	5	5	4	4	5	5	5	5	5	5	5	5
Mean	0.787	0.715	0.678	0.655	0.641	0.631	0.624	0.619	0.616	0.615	0.614	0.614	0.614	0.614	0.615	0.617	0.618	0.619	
Std. Deviation	0.004	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002		
Minimum	0.781	0.709	0.673	0.650	0.636	0.626	0.619	0.614	0.611	0.610	0.610	0.609	0.610	0.611	0.612	0.613	0.615		
Maximum	0.797	0.721	0.682	0.658	0.644	0.633	0.627	0.622	0.619	0.617	0.617	0.616	0.617	0.618	0.620	0.621	0.628		

**Table 7 Gantry 2 - dose consistency in RW3**

		Gy																	
		70MeV 80MeV 90MeV 100MeV 110MeV 120MeV 130MeV 140MeV 150MeV 160MeV 170MeV 180MeV 190MeV 200MeV 210MeV 220MeV 230MeV 240MeV																	
Valid		104	104	105	105	105	107	107	107	107	108	107	107	108	108	108	108	108	
Missing		5	5	4	4	4	2	2	2	2	1	2	2	1	1	1	1	1	
Mean	0.794	0.721	0.685	0.661	0.646	0.636	0.628	0.623	0.620	0.618	0.617	0.617	0.617	0.617	0.618	0.619	0.620	0.621	
Std. Deviation	0.003	0.002	0.014	0.010	0.007	0.006	0.005	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.003		
Minimum	0.788	0.715	0.678	0.654	0.640	0.628	0.621	0.617	0.614	0.612	0.611	0.610	0.611	0.611	0.613	0.613	0.616		
Maximum	0.808	0.733	0.825	0.756	0.716	0.691	0.674	0.663	0.655	0.651	0.647	0.644	0.643	0.641	0.642	0.635	0.642	0.642	

**Table 8 Gantry 3 - dose consistency in RW3**

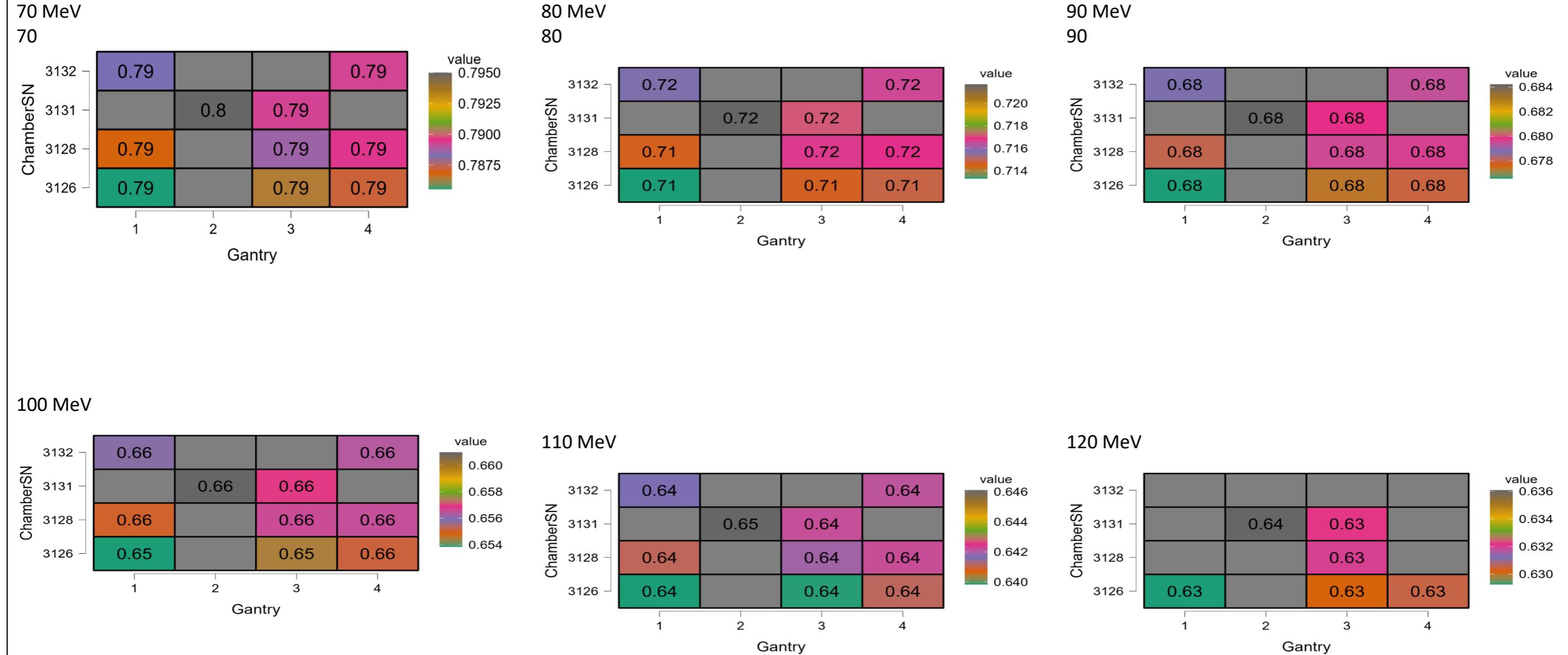
		Gy																	
		70MeV 80MeV 90MeV 100MeV 110MeV 120MeV 130MeV 140MeV 150MeV 160MeV 170MeV 180MeV 190MeV 200MeV 210MeV 220MeV 230MeV 240MeV																	
Valid	64	63	63	63	63	63	63	63	63	64	63	63	63	63	63	63	63	63	63
Missing	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2
Mean	0.789	0.717	0.680	0.657	0.642	0.632	0.625	0.621	0.618	0.616	0.615	0.614	0.614	0.615	0.616	0.617	0.618	0.620	
Std. Deviation	0.004	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Minimum	0.778	0.712	0.675	0.653	0.639	0.629	0.623	0.618	0.615	0.613	0.612	0.612	0.613	0.614	0.614	0.616	0.616	0.617	
Maximum	0.799	0.724	0.685	0.661	0.646	0.634	0.628	0.623	0.620	0.618	0.617	0.617	0.617	0.618	0.619	0.620	0.622		

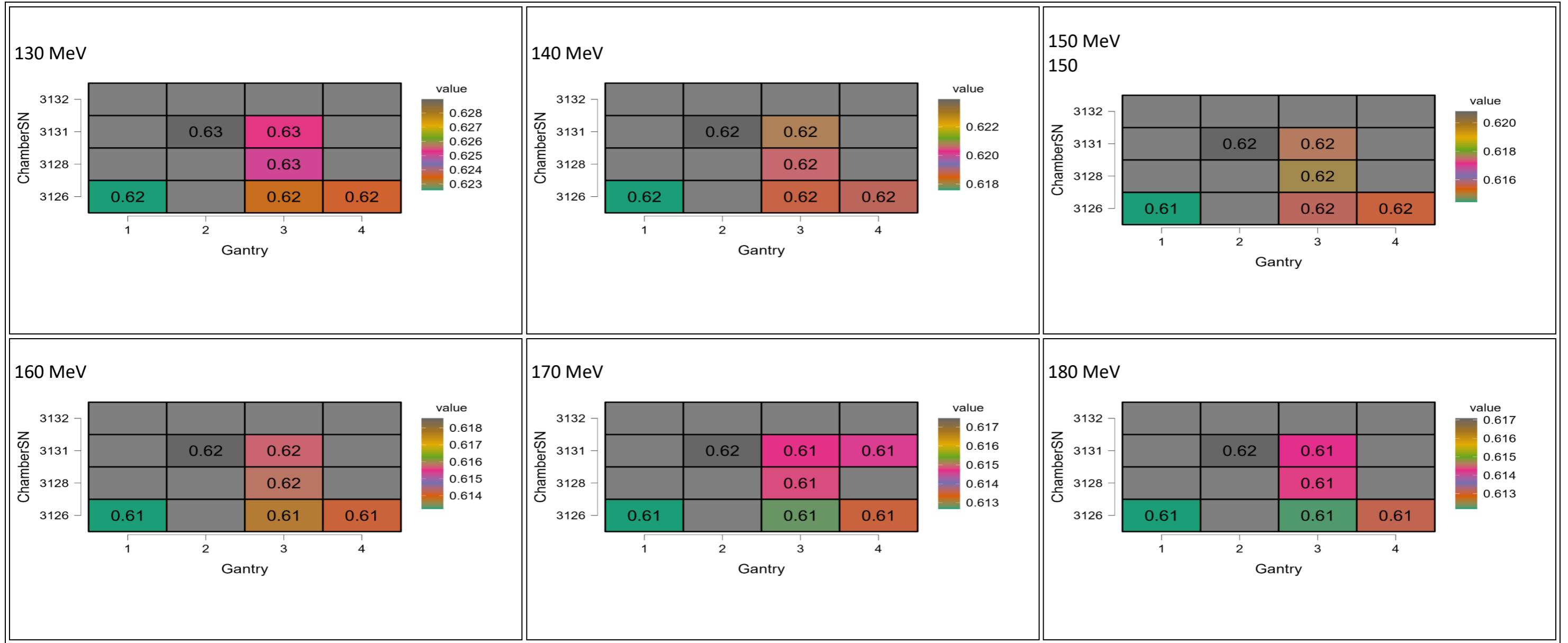
**Table 9 Gantry 4 - dose consistency in RW3**

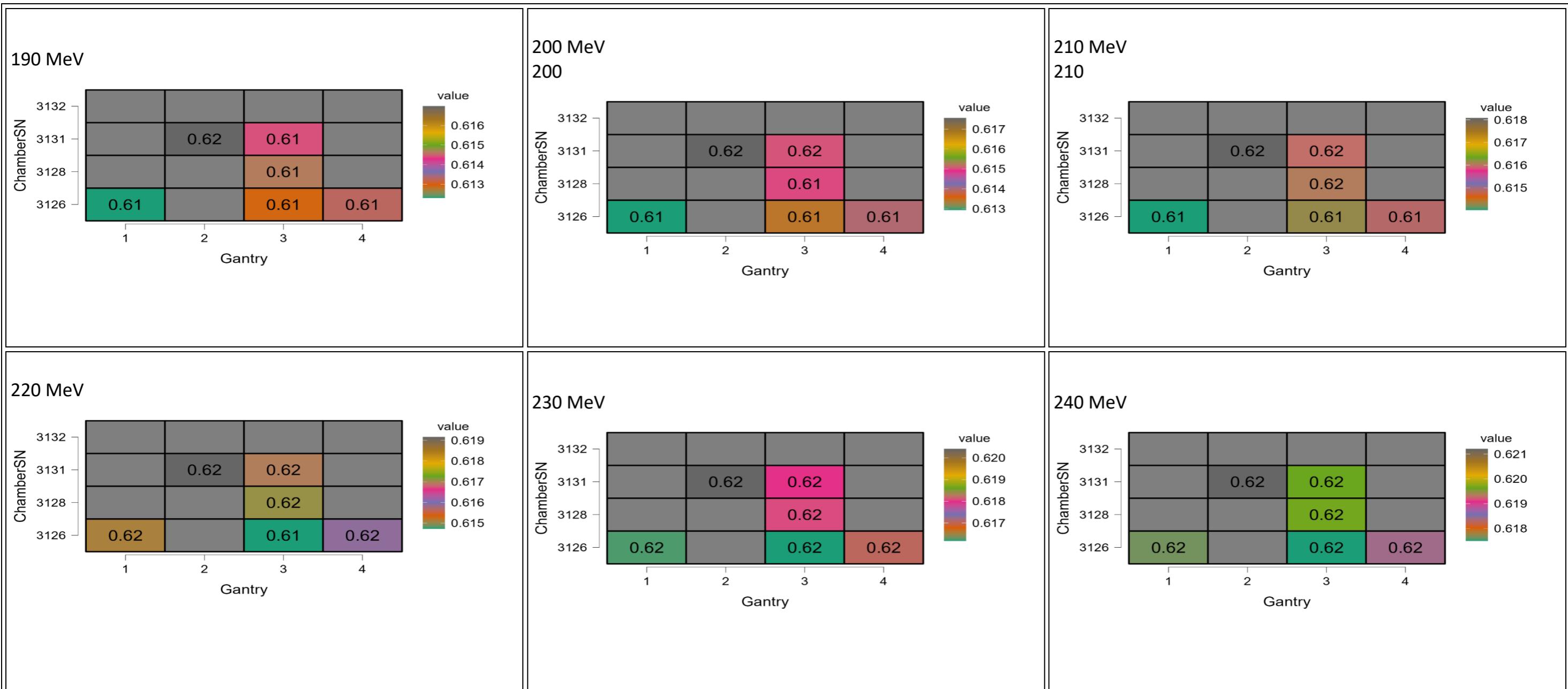
		Gy																	
		70MeV 80MeV 90MeV 100MeV 110MeV 120MeV 130MeV 140MeV 150MeV 160MeV 170MeV 180MeV 190MeV 200MeV 210MeV 220MeV 230MeV 240MeV																	
Valid	103	103	103	103	103	101	101	101	101	102	101	101	101	101	101	101	101	101	
Missing	2	2	2	2	2	4	4	4	4	3	4	4	4	4	4	4	4	4	
Mean	0.788	0.716	0.679	0.656	0.642	0.631	0.625	0.620	0.617	0.615	0.615	0.614	0.614	0.615	0.616	0.617	0.618	0.620	
Std. Deviation	0.005	0.004	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
Minimum	0.781	0.709	0.673	0.650	0.636	0.626	0.619	0.614	0.611	0.610	0.610	0.609	0.609	0.610	0.611	0.612	0.613	0.615	
Maximum	0.801	0.726	0.685	0.662	0.646	0.636	0.629	0.625	0.621	0.620	0.619	0.618	0.619	0.619	0.620	0.621	0.622	0.628	

## Heatmaps Dose Gy chambers by energy and gantry

This is a representation of relative response of the chambers by energy and gantry. (are you sure?)





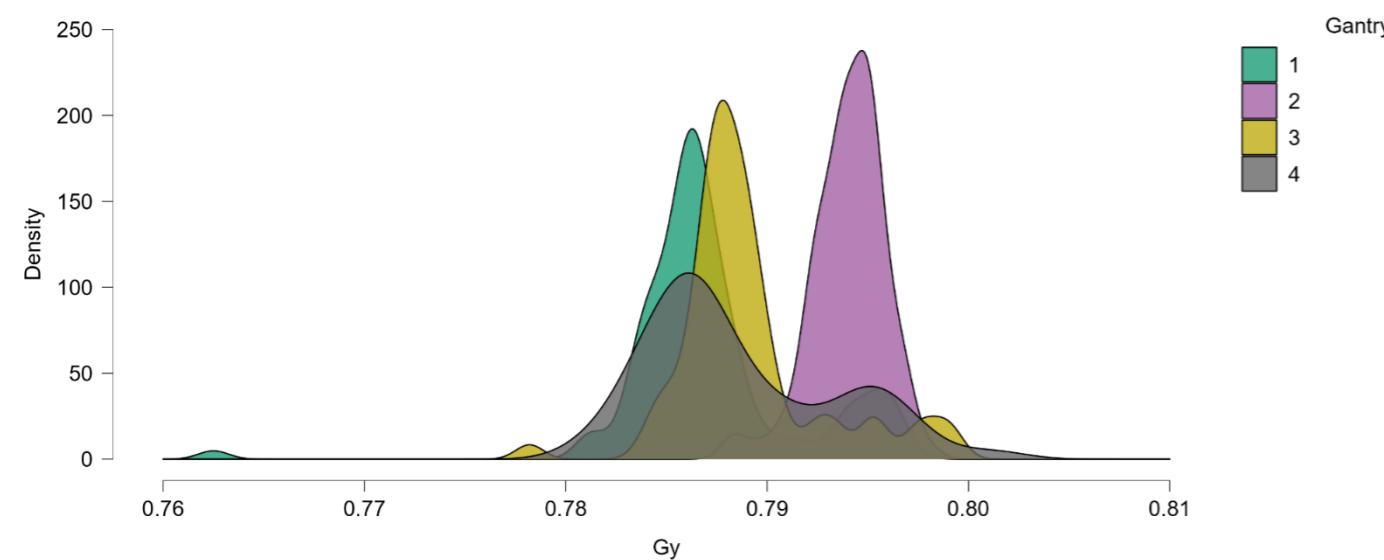


# Density Plots – Absolute Dose [Gy] for reference dosimetric consistency beam

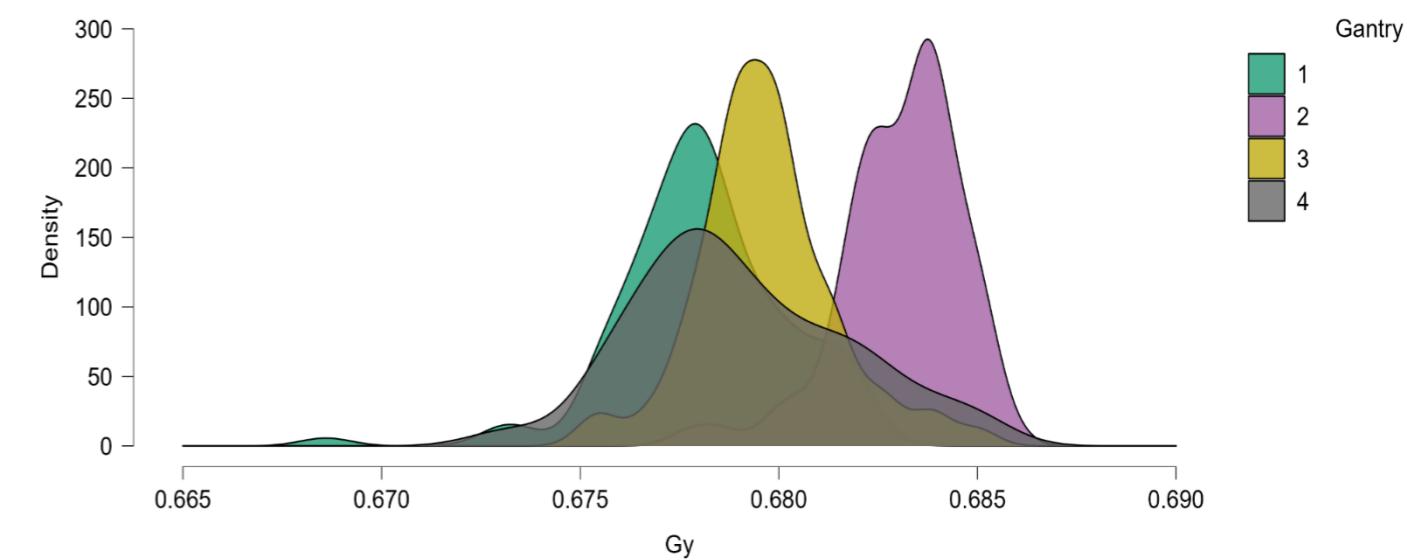
Overlays of different gantry histogrammed for distribution separated by **energy**

Gy

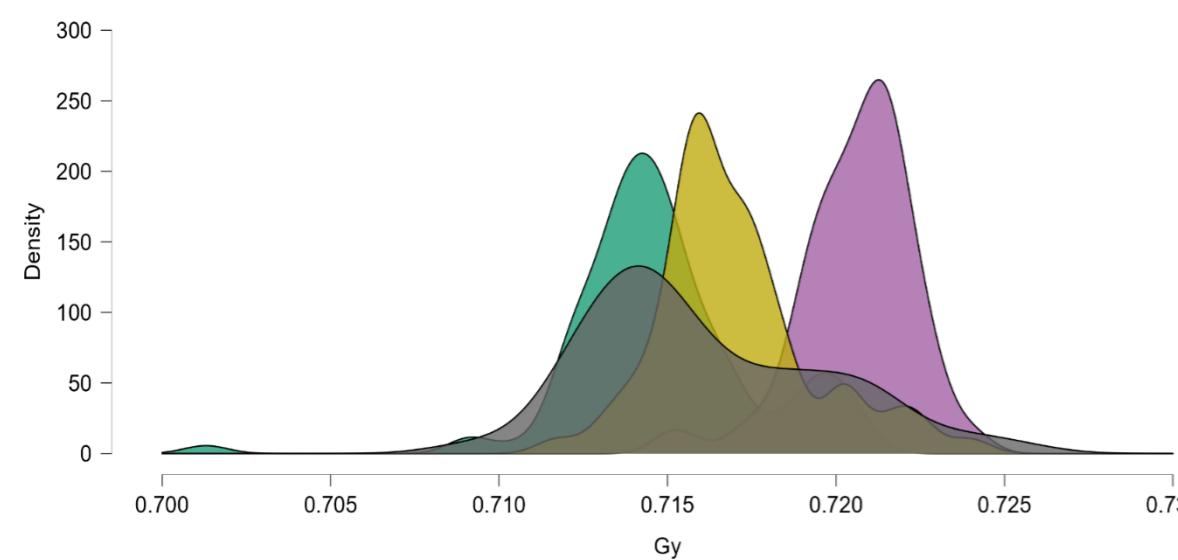
70



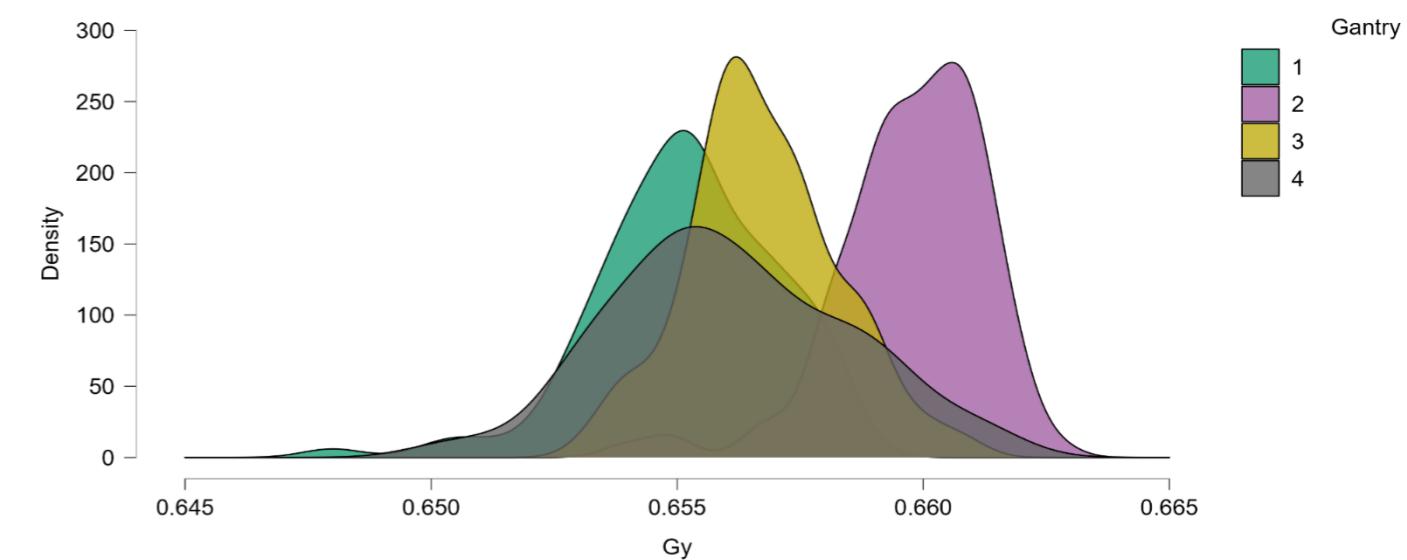
90

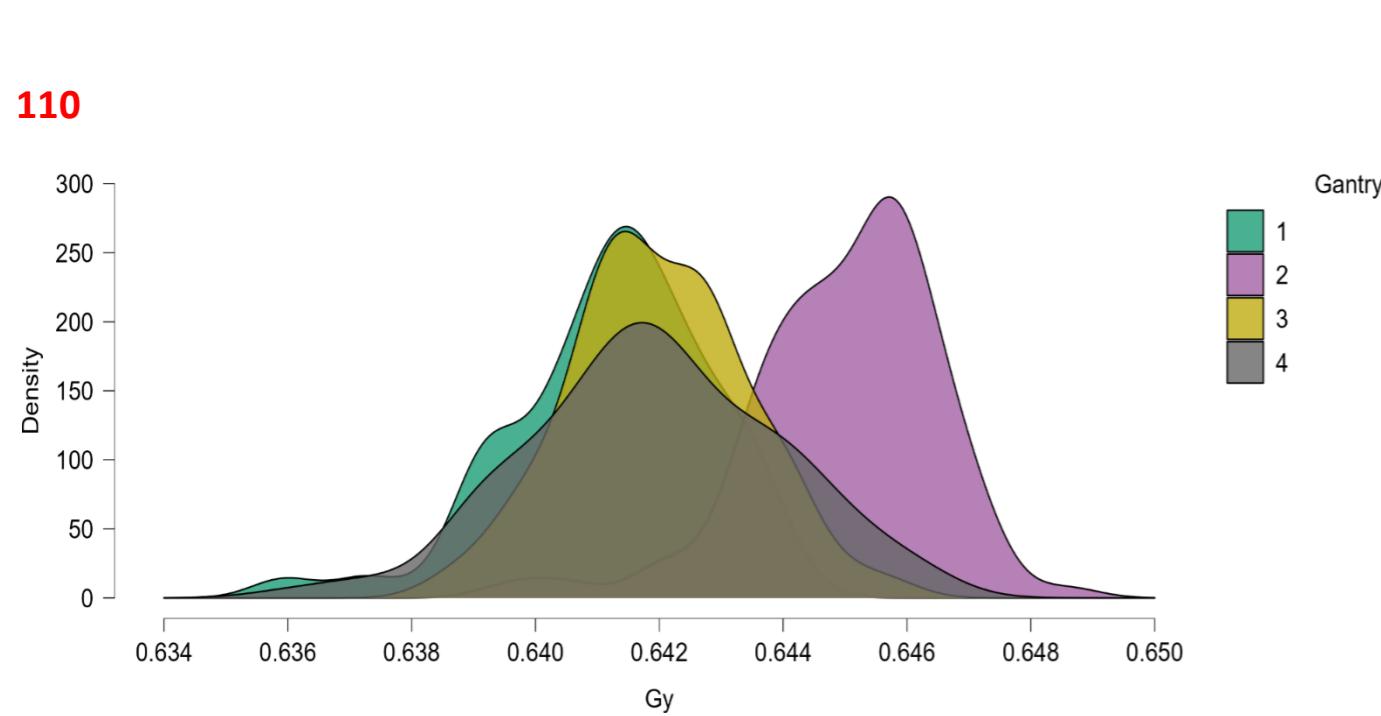
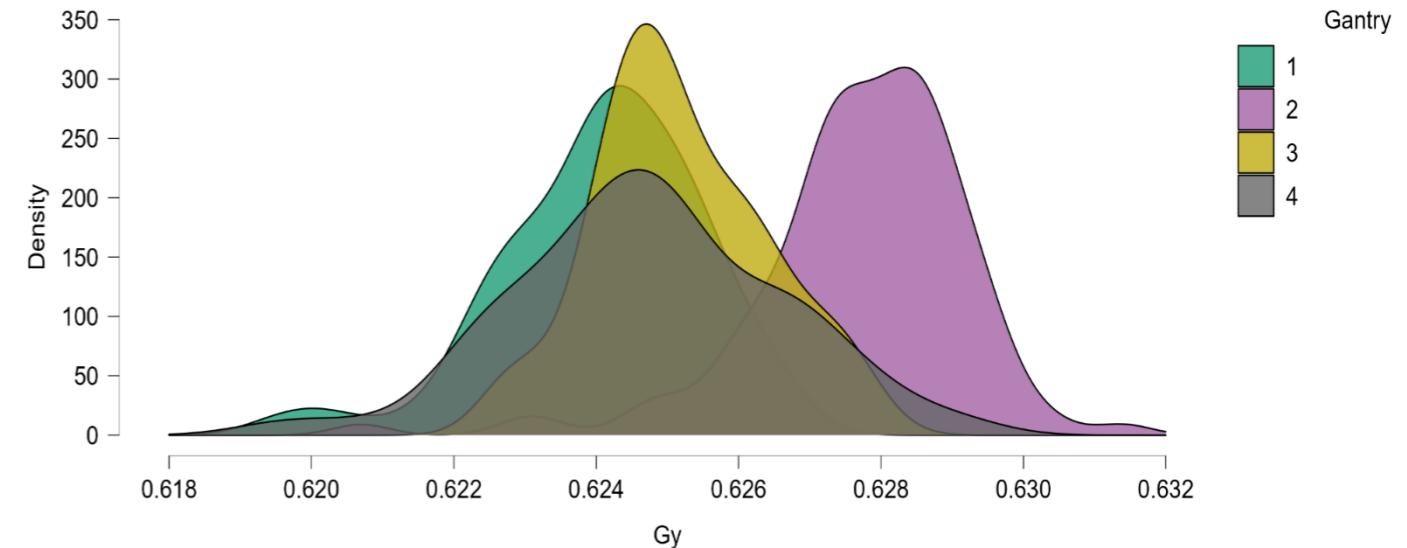
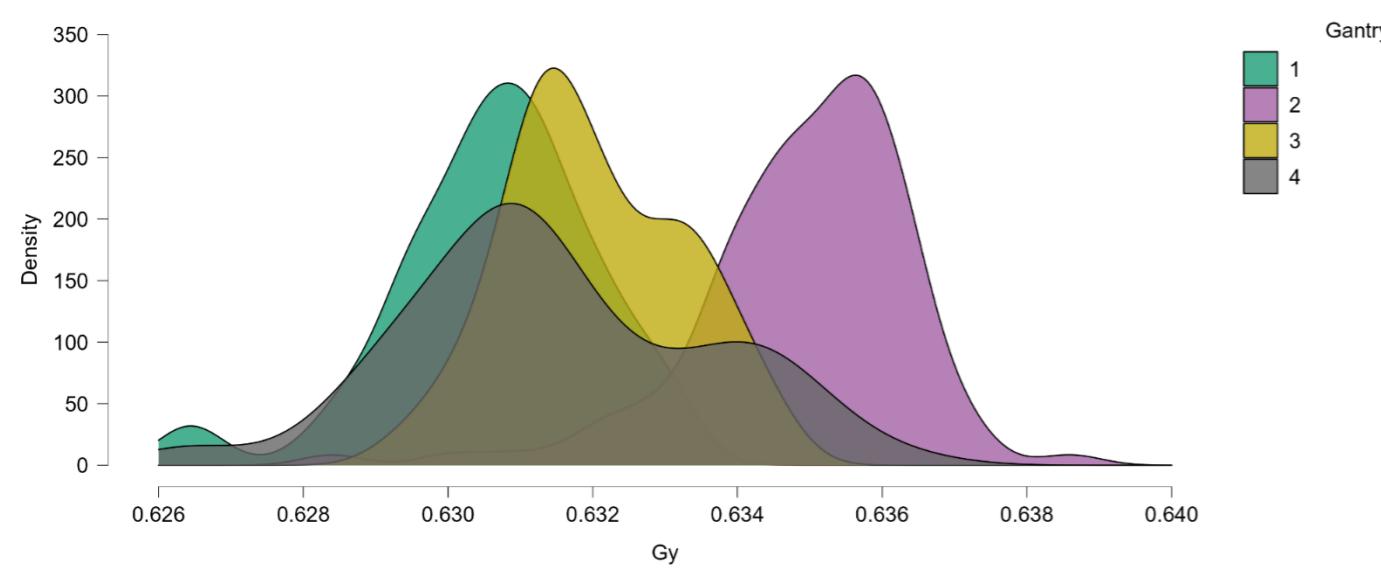
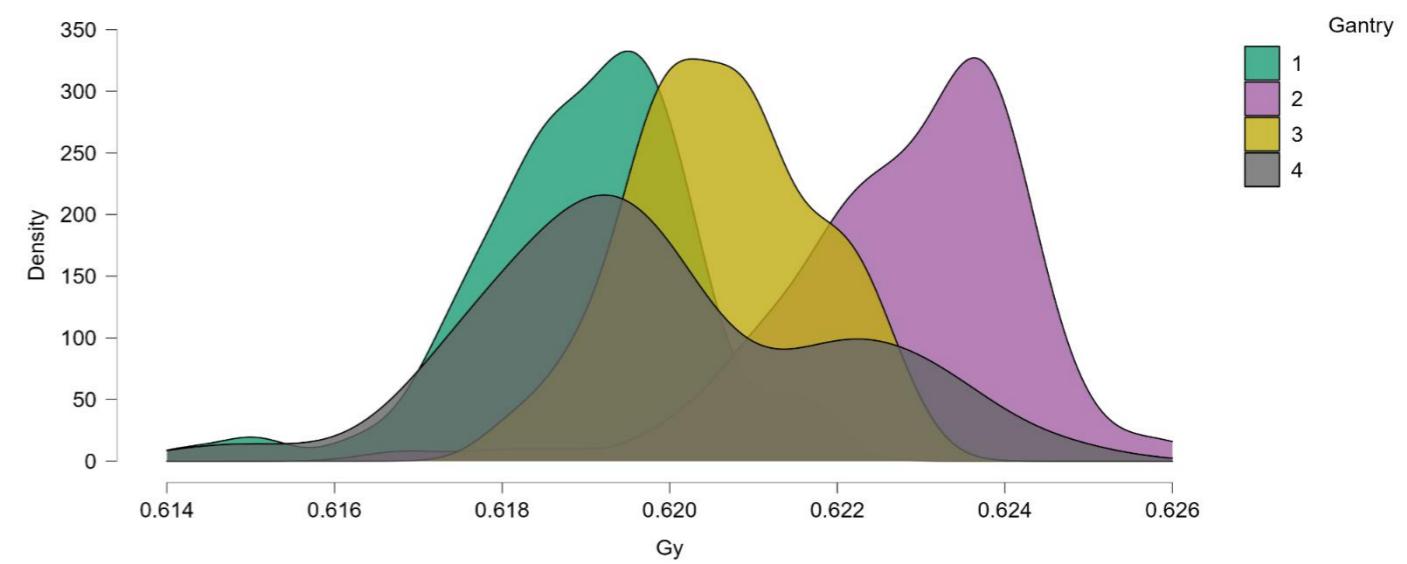


80

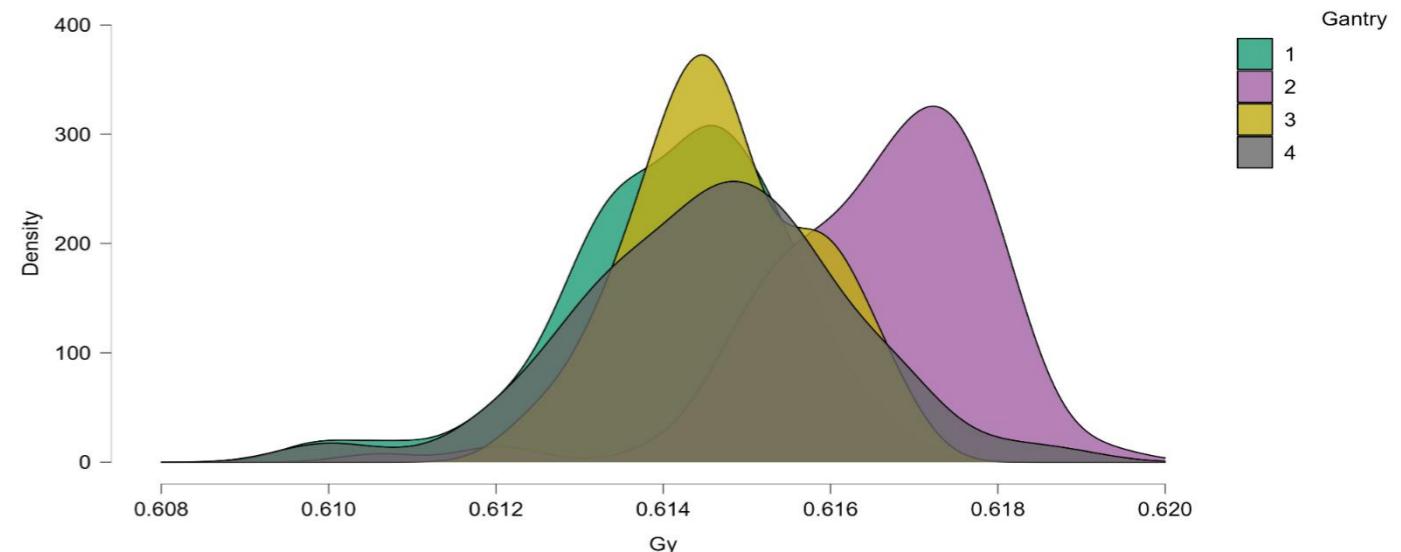


100

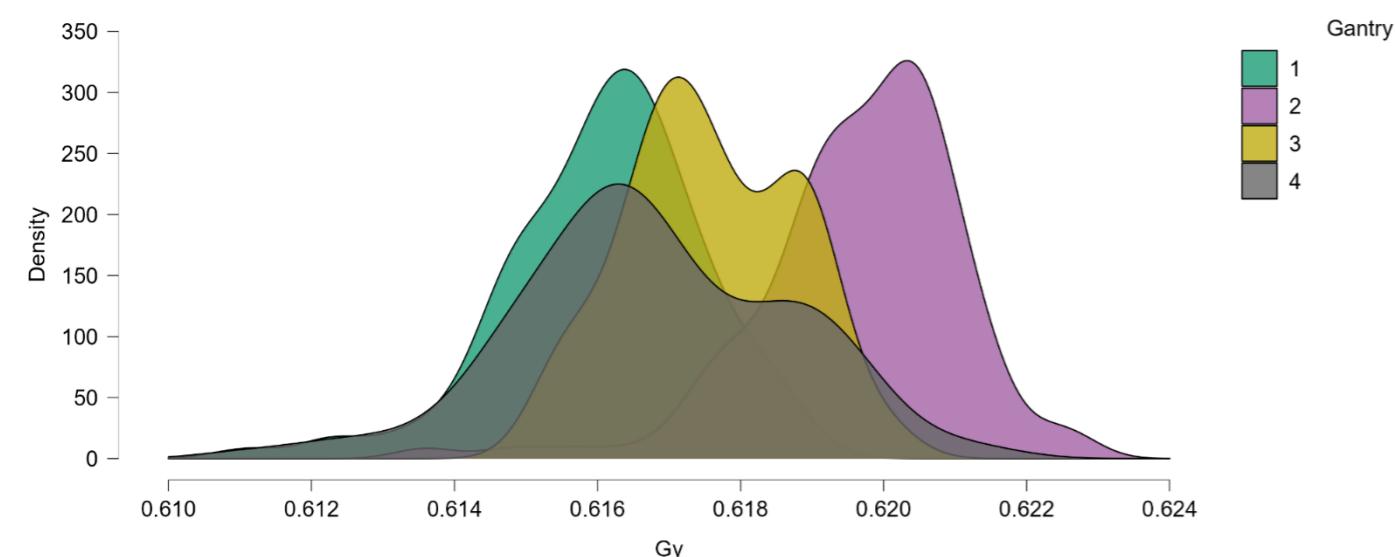


**110****130****120****140**

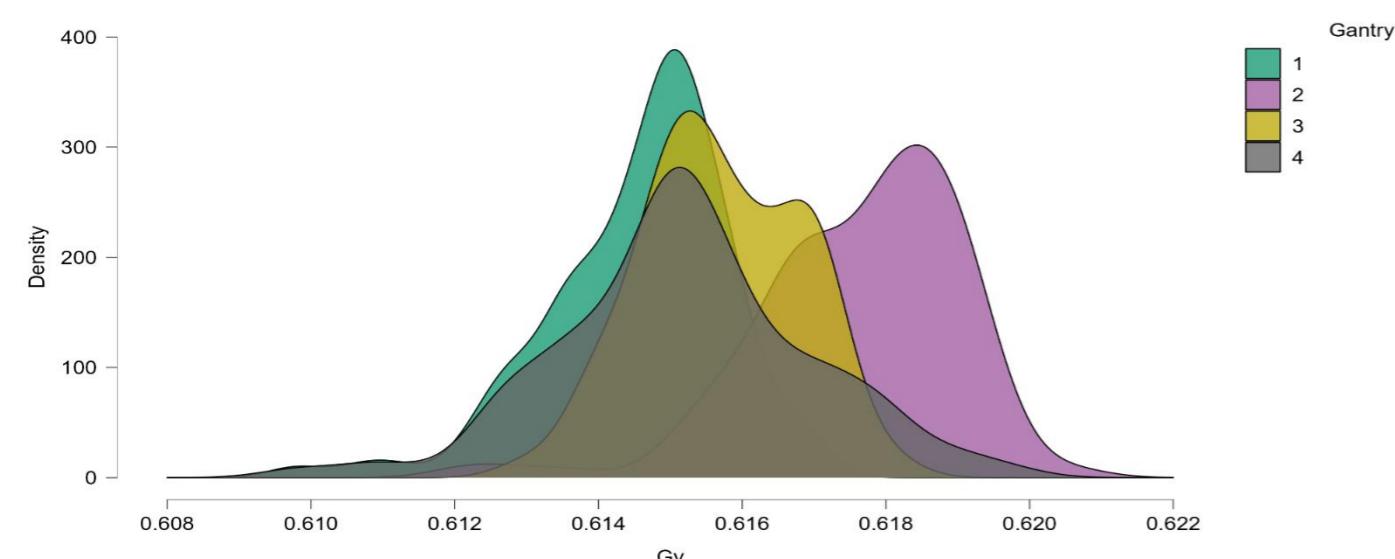
**170**



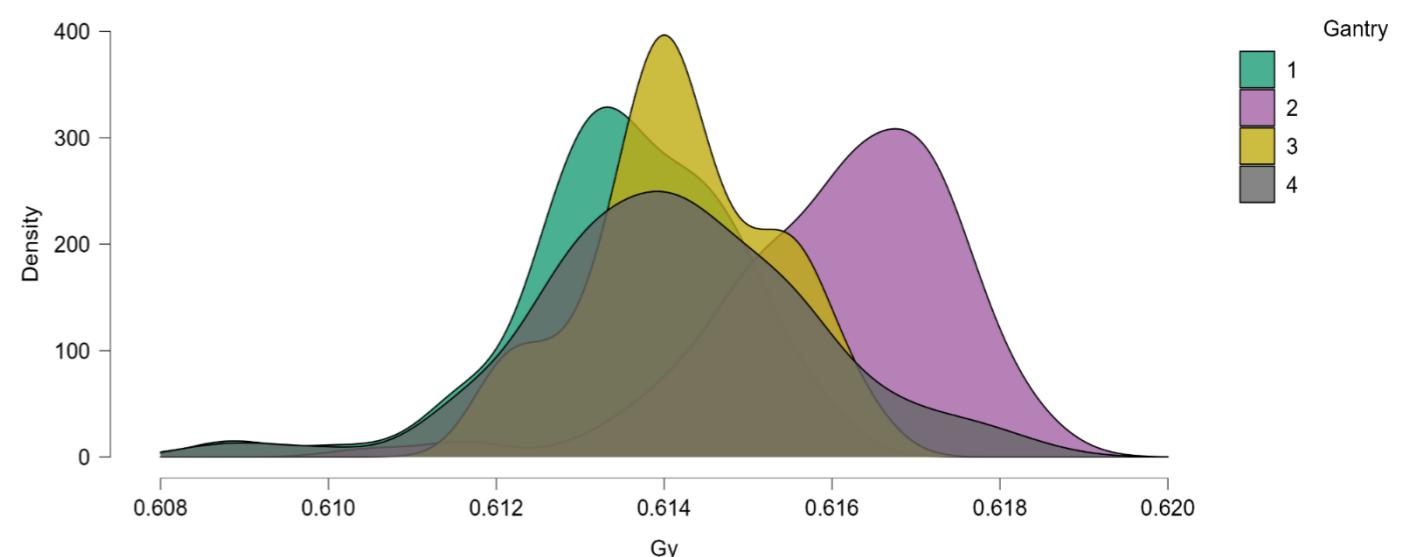
**150**

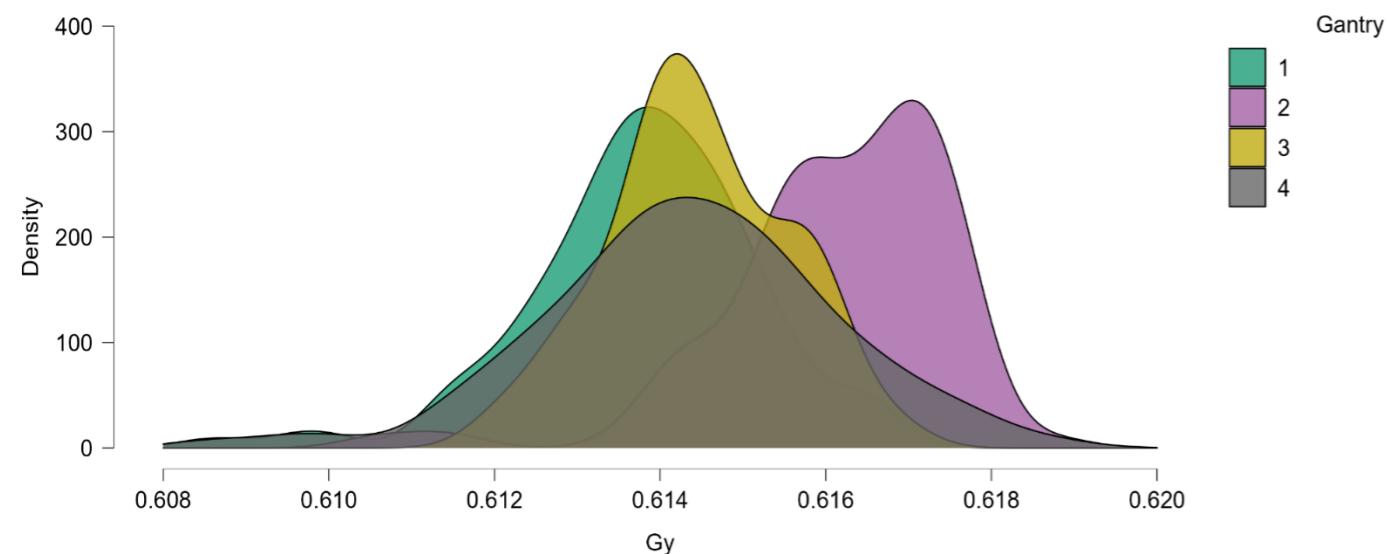
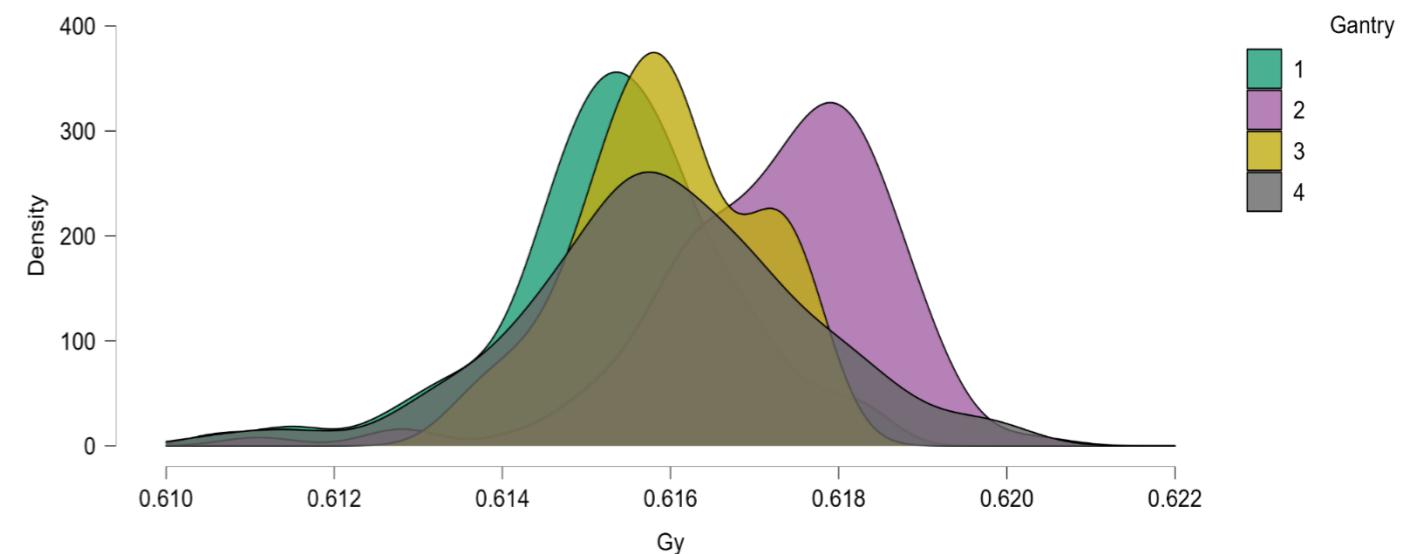
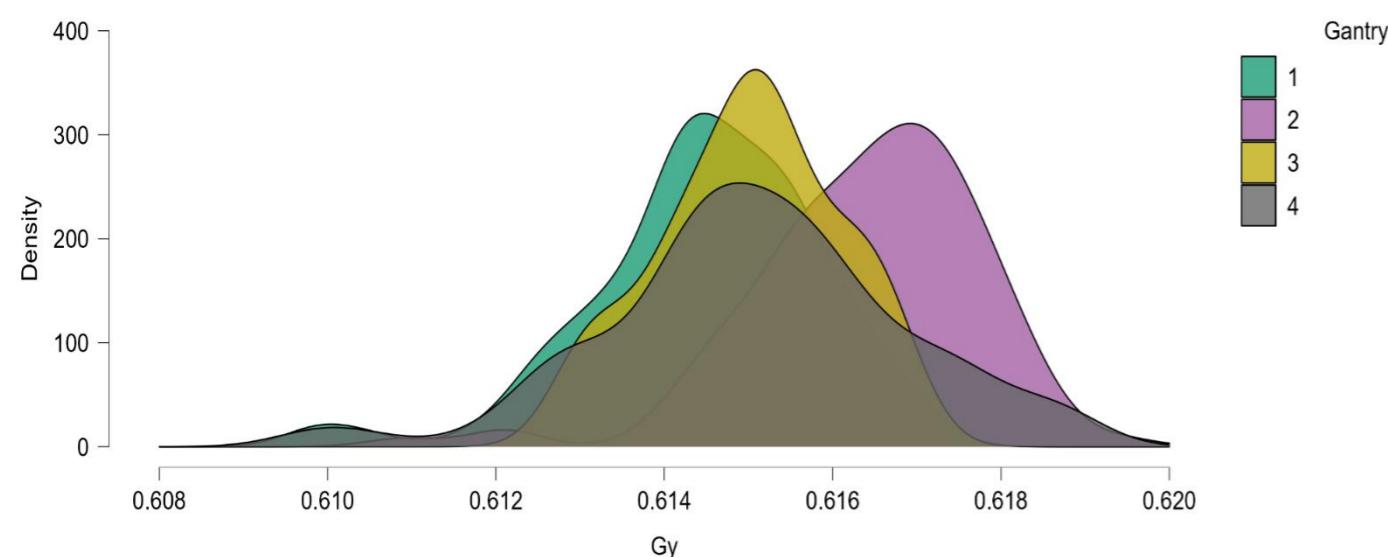
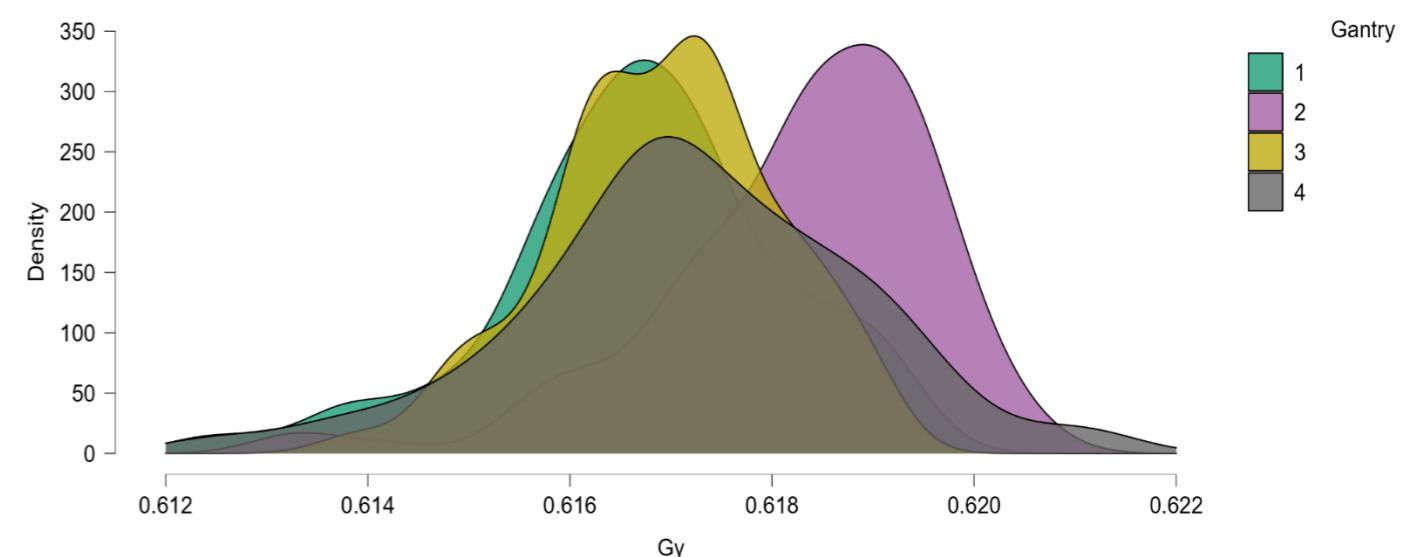


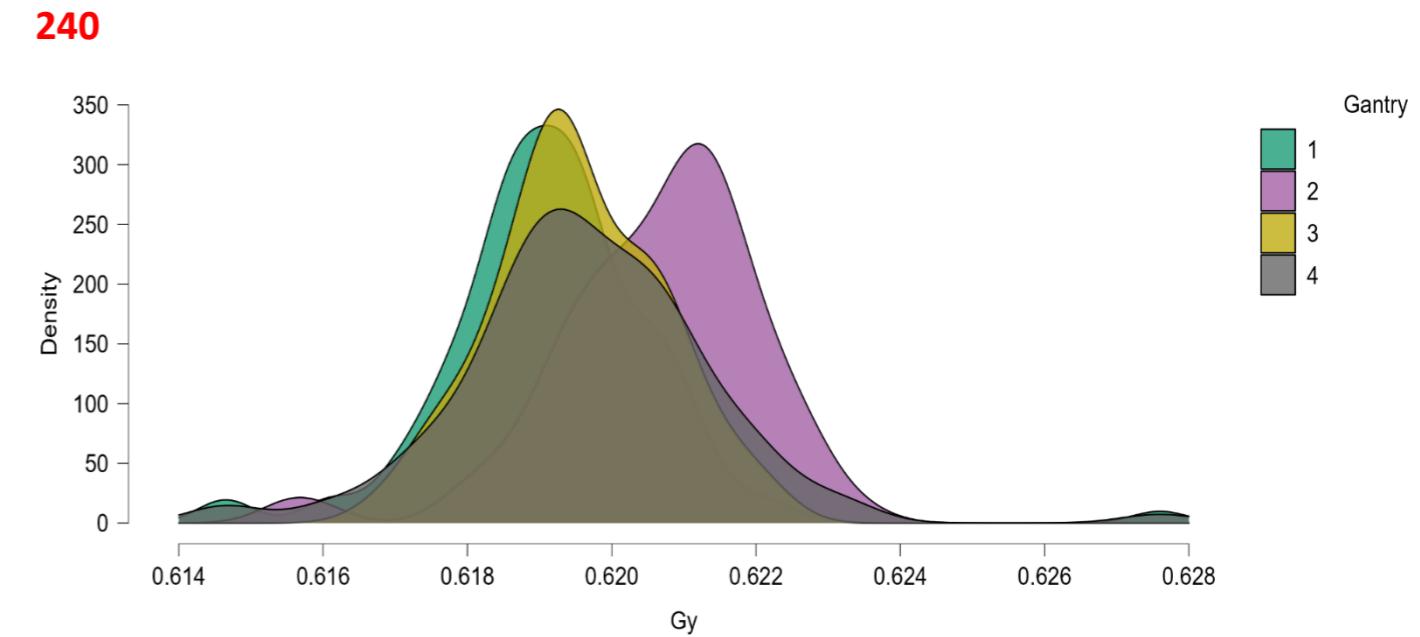
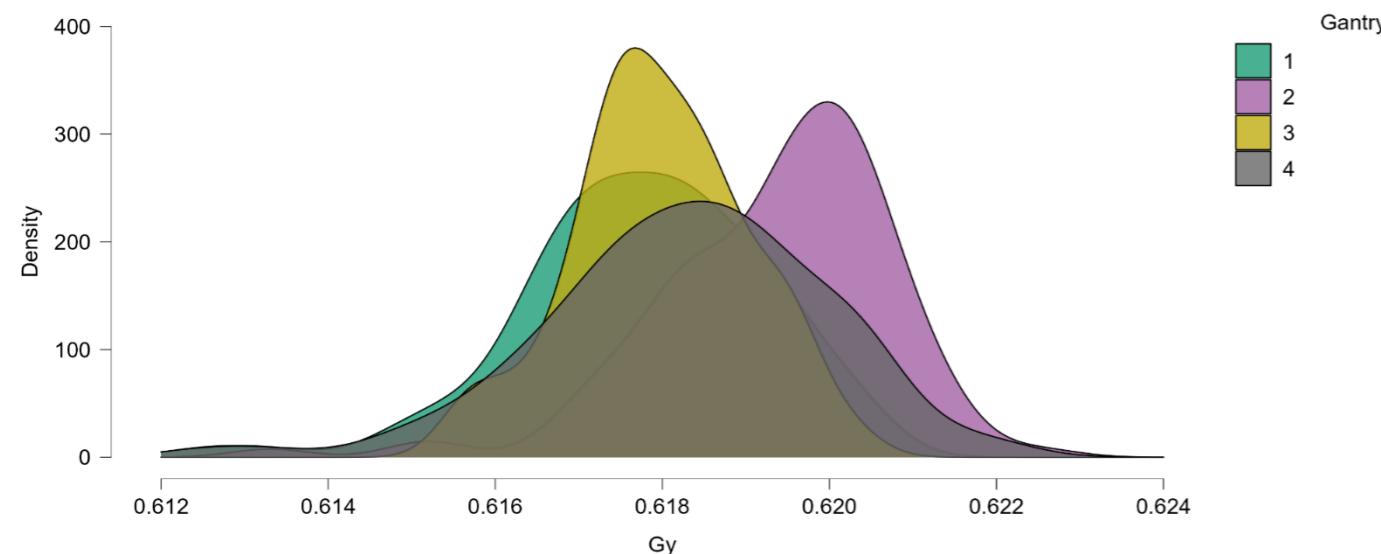
**160**



**180**



**190****210****200****220**



**Figure 2 Frequency distribution of dose consistency output - Gantry 1 - all energies superposed**

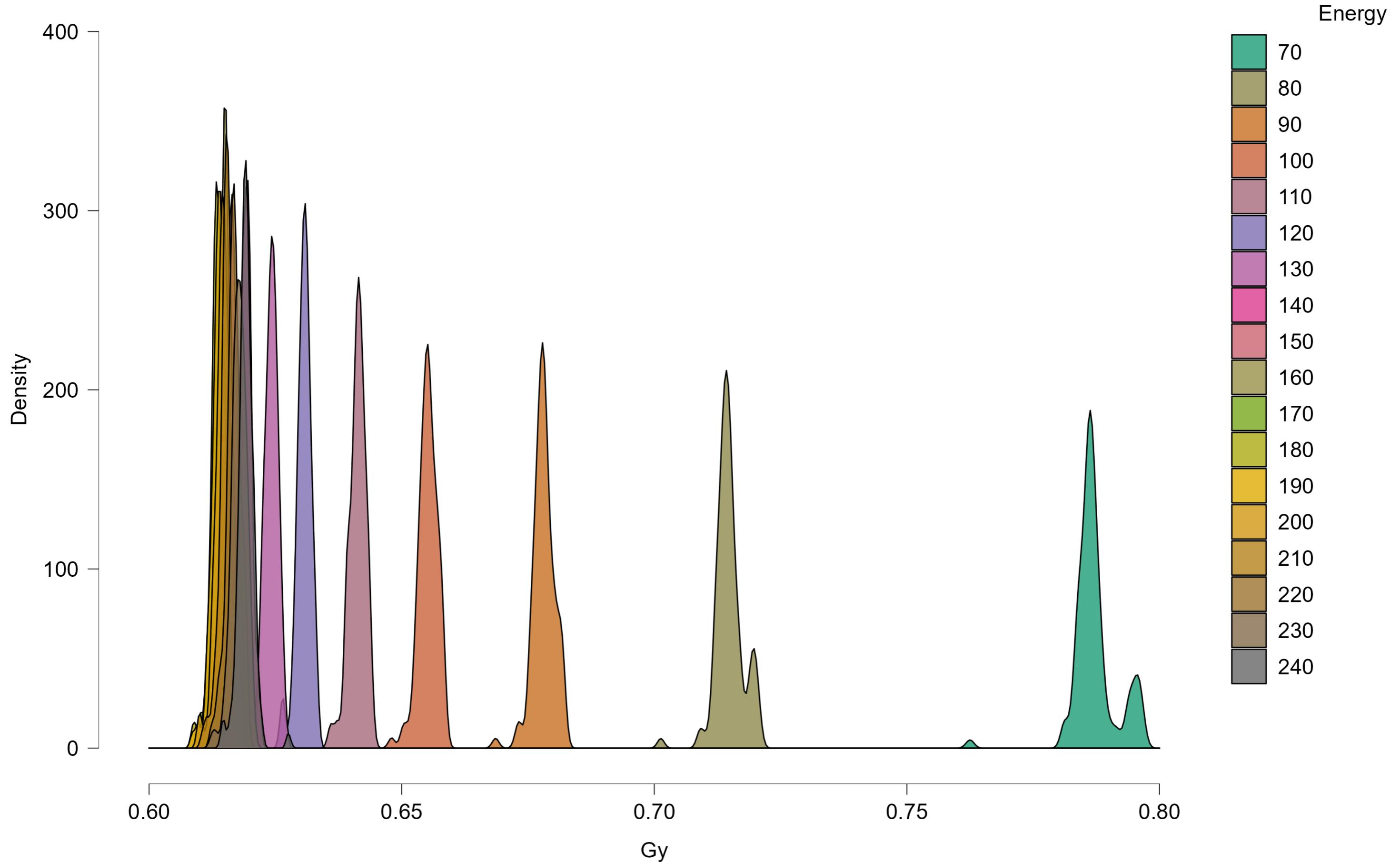
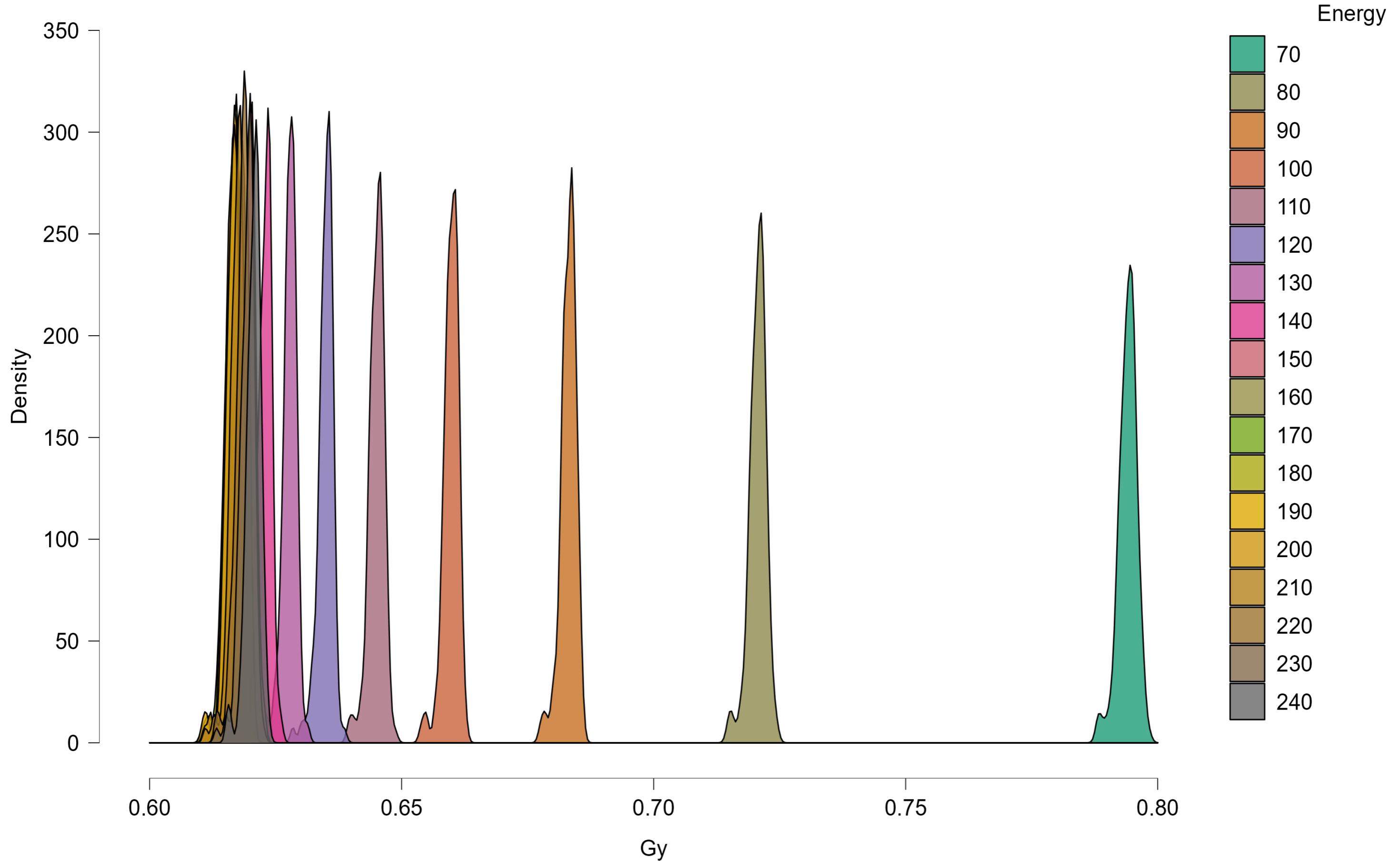
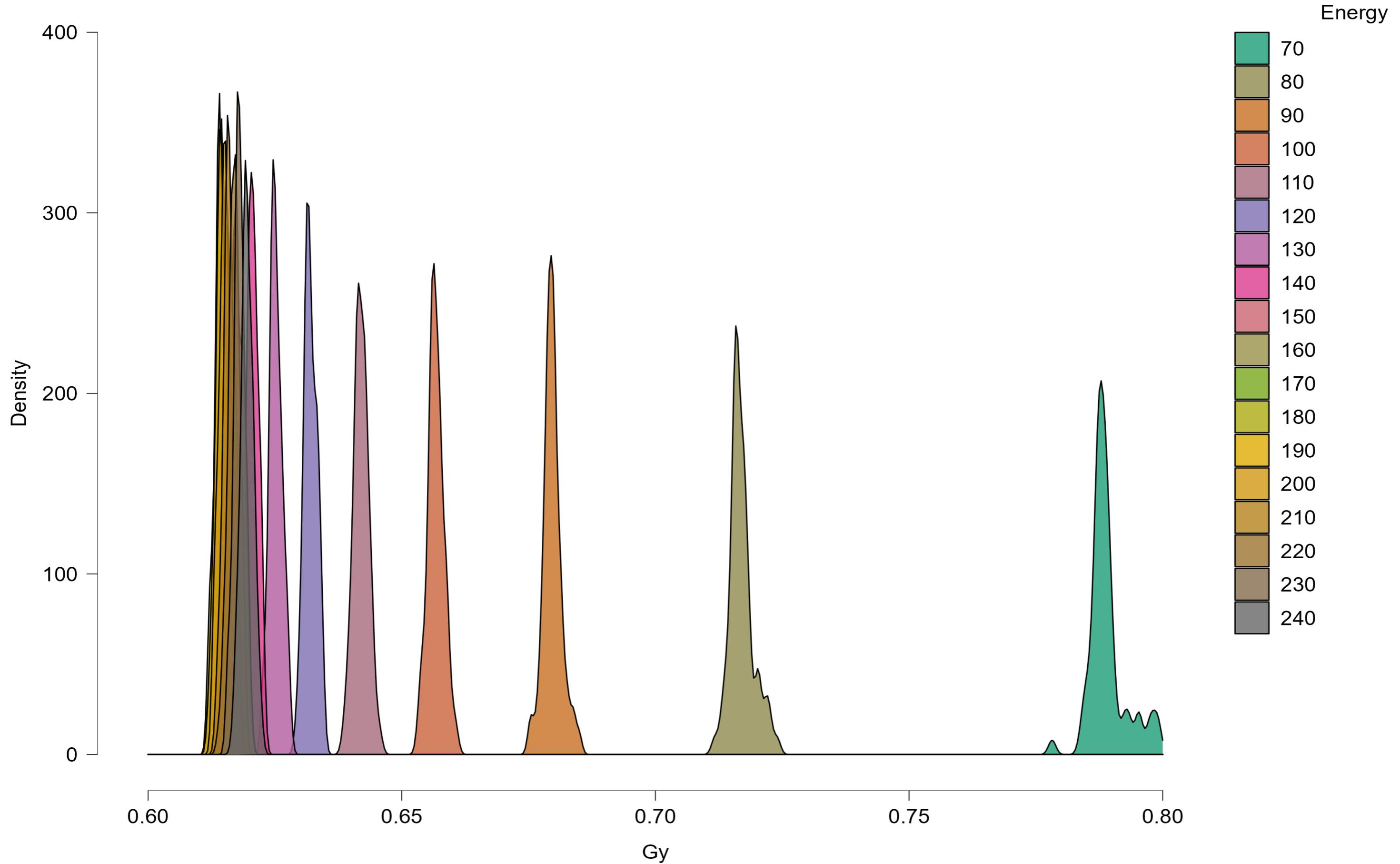


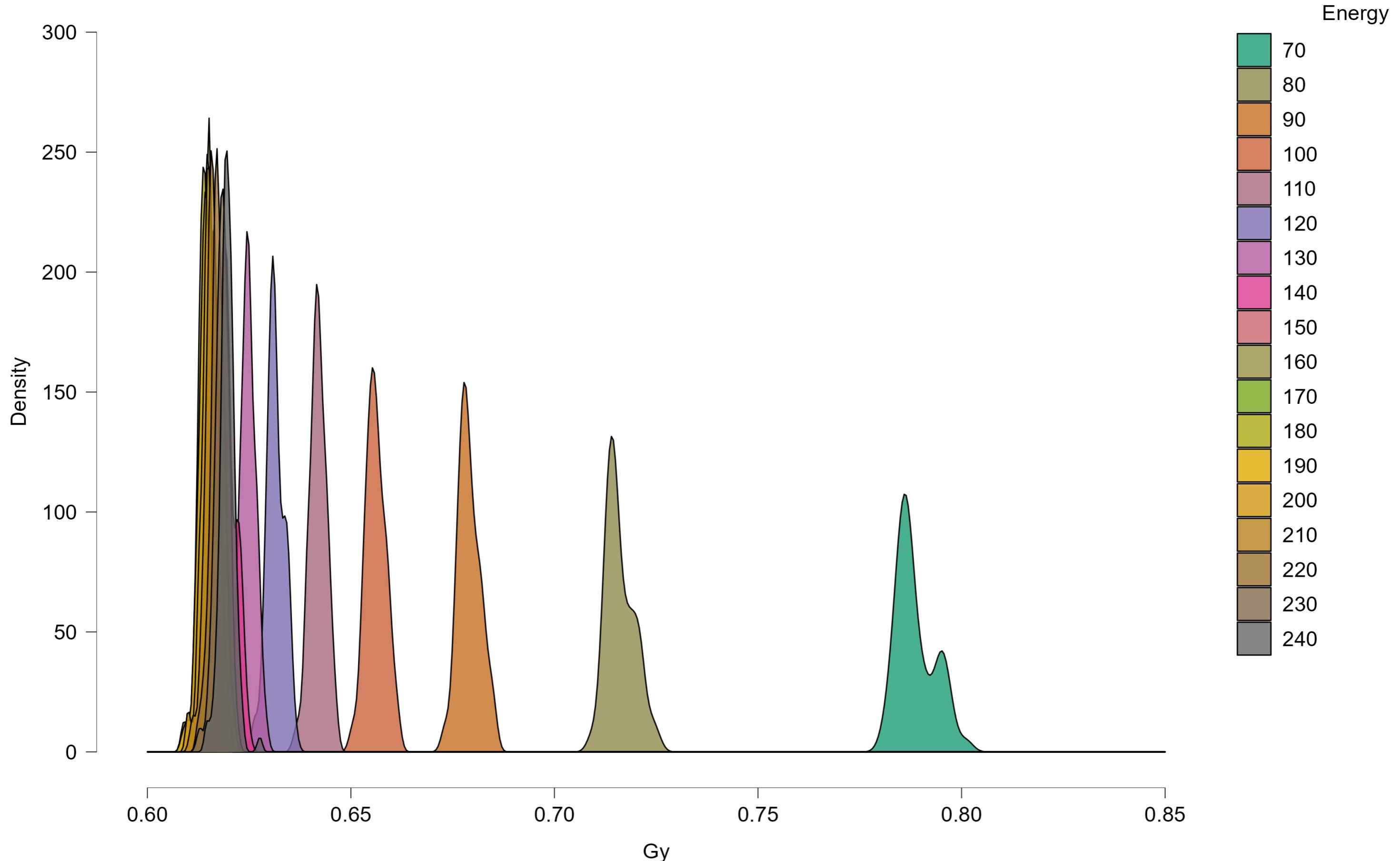
Figure 3 Frequency distribution of dose consistency output - Gantry 2 - all energies superposed



**Figure 4 Frequency distribution of dose consistency output - Gantry 3 - all energies superposed**



**Figure 5 Frequency distribution of dose consistency output - Gantry 4 - all energies superposed**

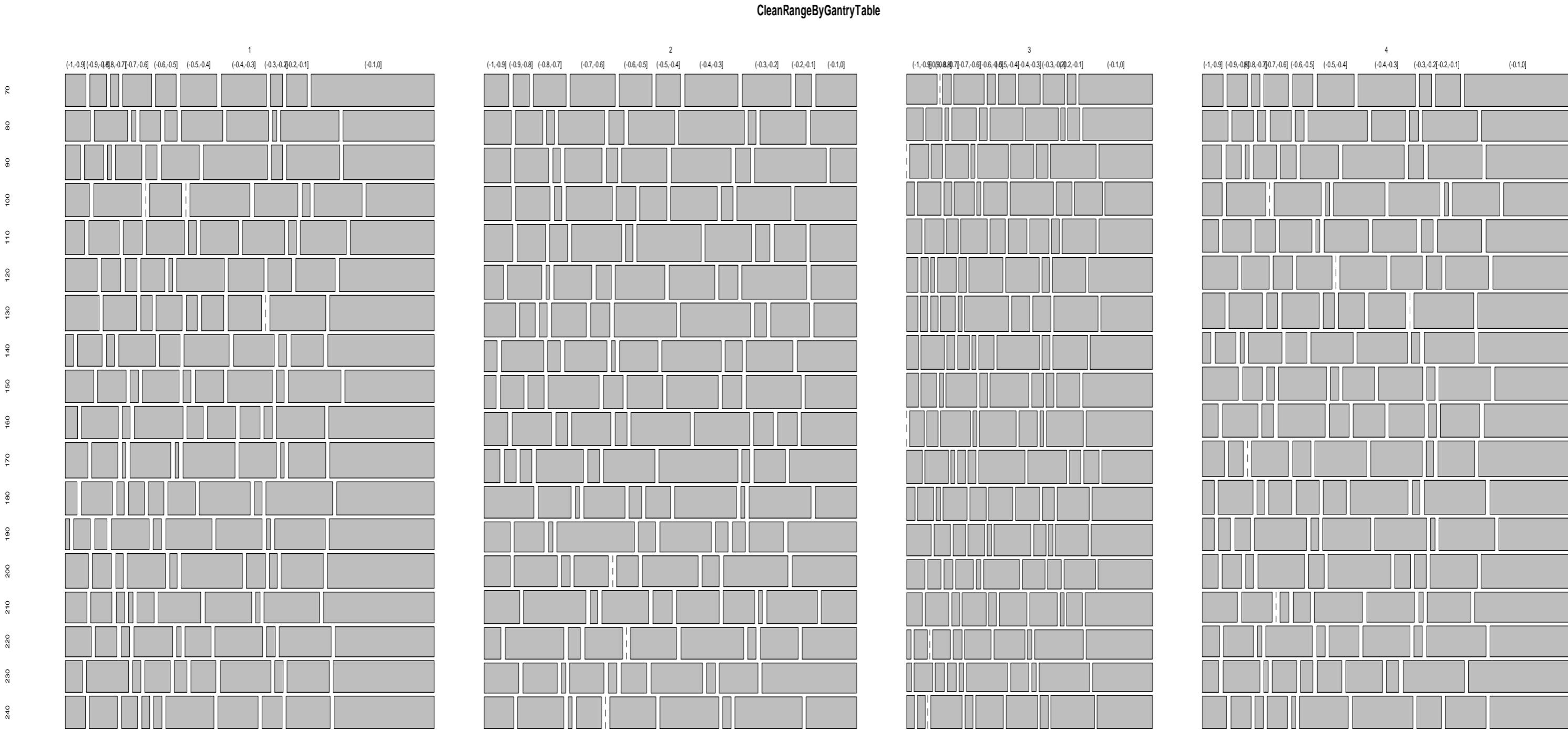


## Range of readings - Table and plots by gantry (and energy)

Some interest was expressed to examine the range between the individual readings within a single estimate of dose for a given energy (a row in the spreadsheet).

Range among separate readings taken for output plotted by Gantry (and energy): NB in these tables and plot, the 'range' has been multiplied by 100 to help with the visualisation of the RELATIVE variation in range between readings between the gantries (where such a range can be sensibly defined – ie more than one reading).

**Figure 6 Range Among separate readings taken for output Plotted by Gantry (and divided into Energy bands)**



**Tables: Range Among separate readings taken for output Plotted by Gantry (and divided into Energy bands)**

, , CleanRangeF = (-1,-0.9] **LARGEST RANGE**

GANTRY	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	5	6	4	6	5	8	9	2	7	3	6	3	1	6	5	6	4	5	
2	6	7	7	7	8	5	8	3	3	6	4	12	6	6	9	4	8	7	
3	7	4	0	2	4	3	3	3	3	0	4	2	6	4	4	1	1	2	
4	5	6	5	5	4	9	6	2	9	4	6	3	3	4	8	4	4	6	

, , CleanRangeF = (-0.9,-0.8]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	4	8	5	12	8	5	9	6	7	9	7	8	4	5	5	5	10	7	
2	4	7	9	9	8	9	4	10	6	10	3	8	7	10	16	14	8	11	
3	0	4	5	6	5	2	2	6	4	4	6	4	4	3	6	3	4	2	
4	5	5	4	10	7	7	9	5	5	9	4	9	3	5	7	7	9	5	

, , CleanRangeF = (-0.8,-0.7]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	2	1	1	0	5	3	3	2	2	2	1	2	3	2	2	2	2	4	
2	8	2	2	2	5	1	2	3	4	3	3	1	1	2	2	3	1	1	
3	2	1	3	2	3	1	2	2	1	3	1	1	3	2	2	0	2	0	
4	2	2	1	0	5	5	3	1	2	3	0	2	4	2	0	1	1	2	

, , CleanRangeF = (-0.7,-0.6]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	7	5	7	8	10	6	7	9	9	12	11	4	9	10	1	9	6	2	
2	11	12	10	12	14	10	9	10	13	10	12	10	18	8	12	9	8	6	
3	7	6	6	5	7	5	4	3	8	8	2	6	4	4	6	4	2	8	
4	6	5	6	12	8	9	10	8	12	12	10	6	13	12	2	11	6	5	

, , CleanRangeF = (-0.6,-0.5] **MIDDLE RANGE**

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	5	3	3	0	2	1	3	5	2	4	1	4	2	2	4	1	3	2	
2	8	4	3	5	2	4	5	1	5	3	3	3	4	0	5	0	2	0	
3	2	2	1	1	4	2	1	1	2	1	2	4	1	1	2	2	1	2	
4	5	2	4	1	1	0	3	5	2	5	5	6	2	4	4	2	3	1	

, , CleanRangeF = (-0.5,-0.4]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	9	10	10	15	10	12	6	11	7	7	14	7	11	16	10	6	6	12	
2	6	12	12	7	18	13	16	9	9	15	13	6	12	5	11	11	6	11	
3	4	8	8	6	5	9	12	4	10	10	12	6	9	8	7	6	9	7	
4	9	14	10	13	11	12	7	10	8	8	14	6	12	16	11	7	6	12	

, , CleanRangeF = (-0.4,-0.3]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	11	10	17	11	11	9	9	10	11	5	10	13	11	5	11	11	12	10	
2	13	17	16	12	13	12	18	14	13	14	20	15	3	13	8	15	12	14	
3	5	8	6	11	5	9	5	11	3	5	10	6	3	5	7	7	4	8	
4	14	8	16	13	11	8	10	12	11	9	14	15	13	4	11	11	9	15	

, , CleanRangeF = (-0.3,-0.2]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	3	1	3	2	2	6	0	2	2	2	1	2	1	2	1	2	2	5	
2	12	2	4	3	4	5	3	4	5	5	2	1	3	4	1	2	2	2	
3	5	1	3	4	2	2	5	2	2	1	3	3	1	3	1	1	1	2	
4	3	2	4	1	3	4	0	2	2	2	2	2	1	3	1	2	3	6	

, , CleanRangeF = (-0.2,-0.1]

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	5	14	14	12	12	10	15	8	13	12	10	17	12	11	13	12	10	11	
2	4	12	19	14	9	17	10	11	14	5	8	15	8	15	13	9	9	16	
3	2	3	12	7	9	9	12	9	6	10	4	8	8	7	4	11	11	11	
4	6	13	14	12	11	11	16	12	13	10	10	16	14	12	10	14	15	10	

, , CleanRangeF = (-0.1,0] **LOWEST RANGE**

	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	
1	30	22	24	17	22	24	28	26	22	26	28	25	25	28	26	23	24	25	
2	10	12	7	16	13	12	11	14	13	14	17	10	16	15	9	13	22	12	
3	17	17	14	12	14	17	14	16	18	18	13	15	15	12	17	15	13	14	
4	26	21	22	17	21	20	25	22	19	22	25	21	18	23	22	19	25	20	

## Plots of Dose measured by time

Following an inspection of the previous dataset, the set were reexported. The import into R used a parser that could type the data into columns and assign R class such as ‘double’ for numeric data, “date” for date formatted strings with appropriate decoding, and “factor” for potential influence factors in an analysis such as the chamber serial number, the gantry number (eg Gantry 1) and so forth.

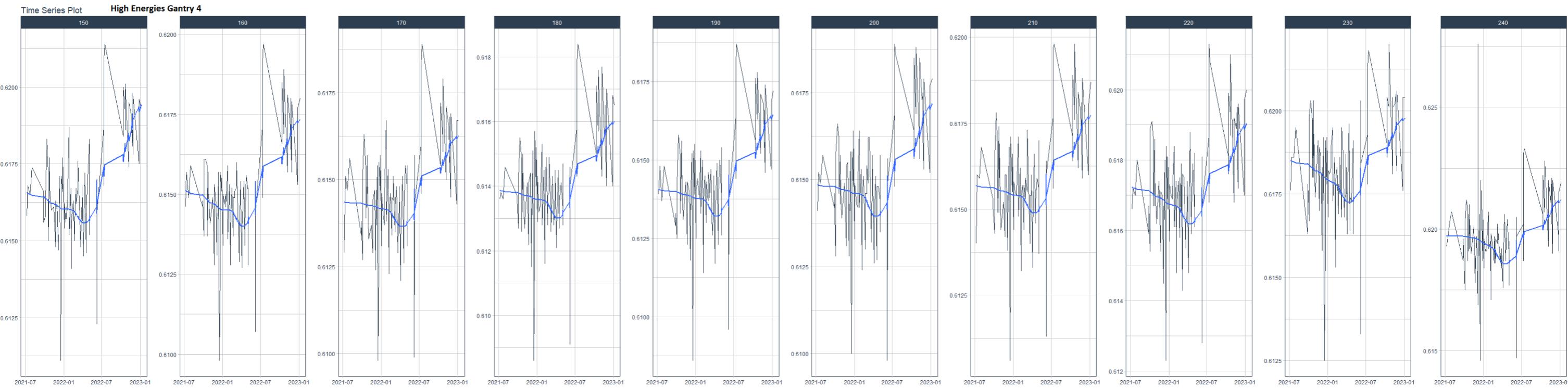
Using technology in R to store the data in highlevel data storage objects (in R environment) permits relatively straightforward query and filter of the dataset to derive potentially useful extracts for graphing or further analysis.

The following graphs were derived following an example in the timetk CRAN/website/github site.

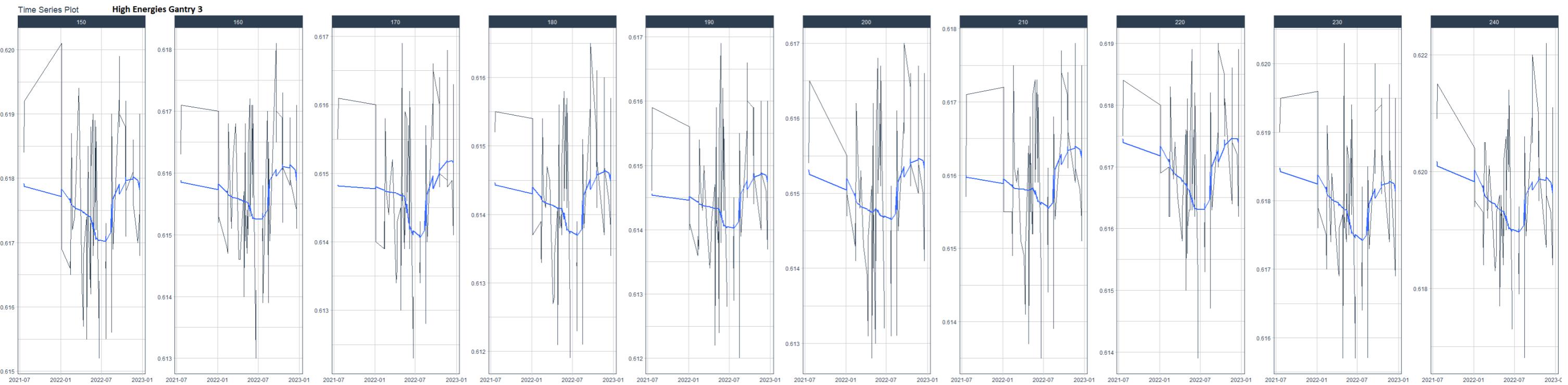
**NB CAVEAT** currently I have not identified what the techniques used to plot the ‘fit line’ in the tabulated curves, and NO data has been rejected from the input ‘raw files’ exported from monthly excel files.

[https://cran.r-project.org/web/packages/timetk/vignettes/TK04\\_Planning\\_Time\\_Series.html](https://cran.r-project.org/web/packages/timetk/vignettes/TK04_Planning_Time_Series.html)

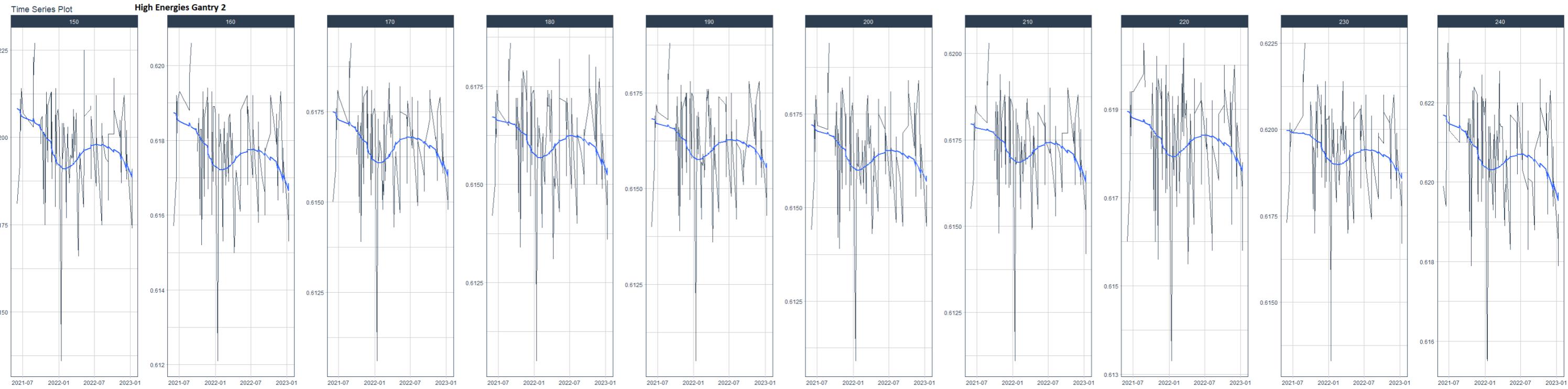
**Figure 7 High Energies, Gantry 4**



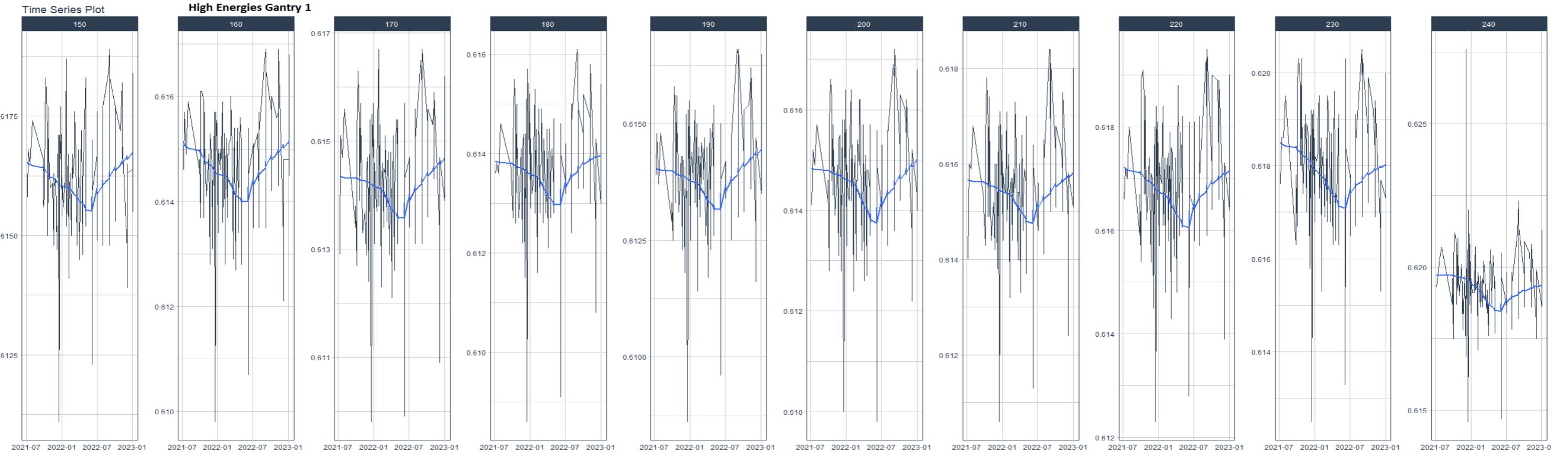
**Figure 8 High Energies, Gantry 3**



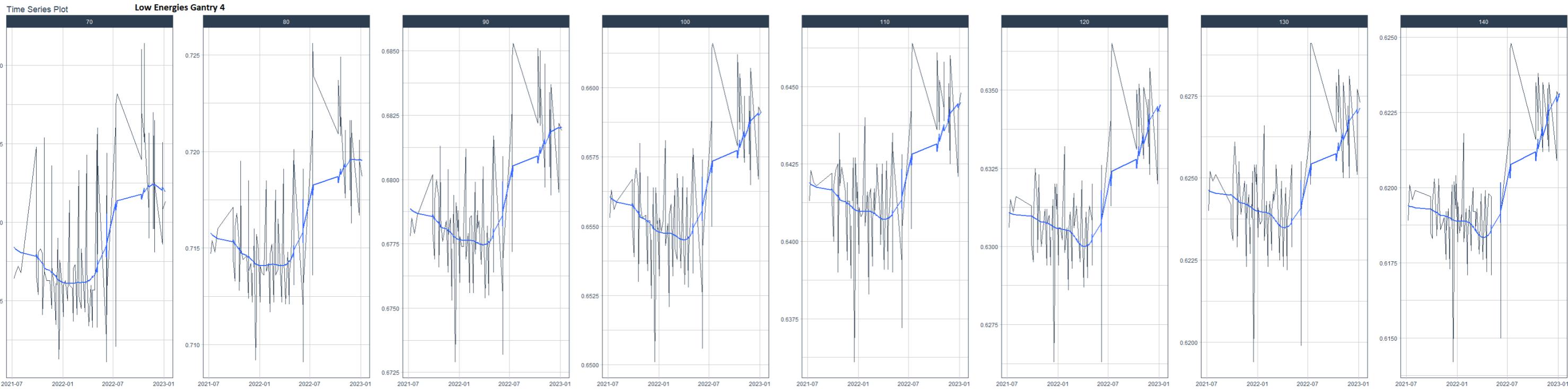
**Figure 9 High Energies, Gantry 2**



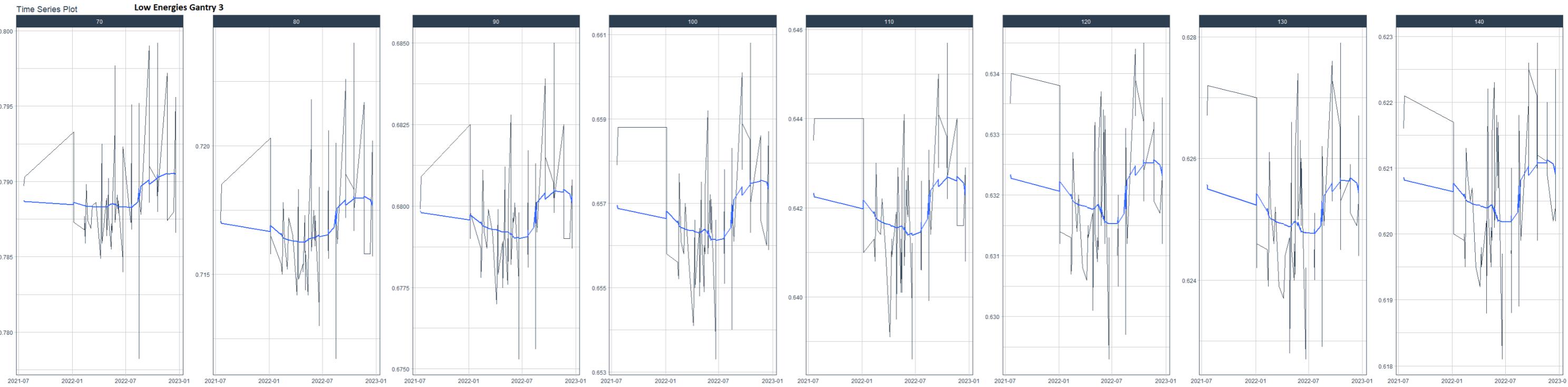
**Figure 10 High Energies, Gantry 1**



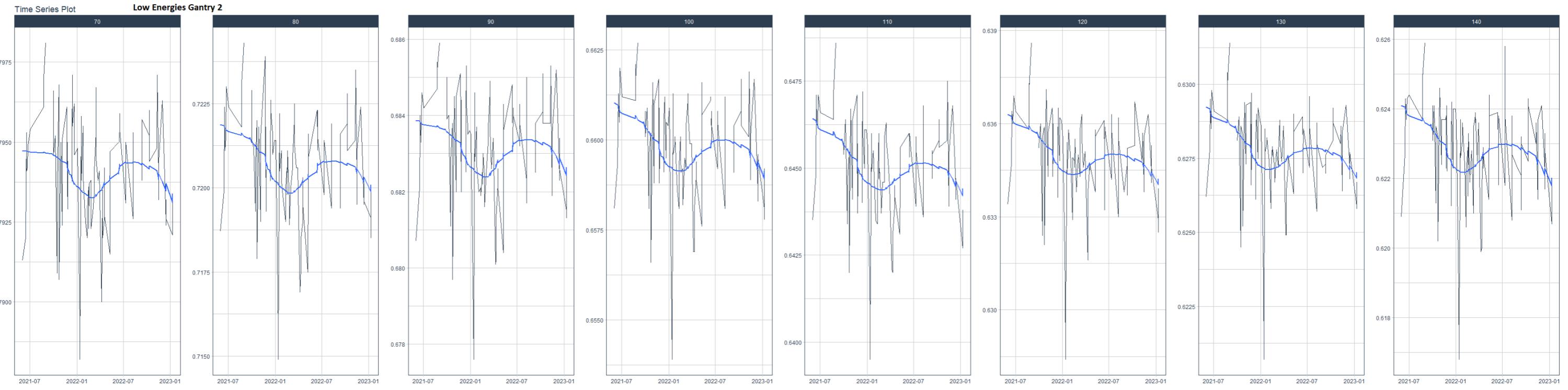
**Figure 11 Low Energies, Gantry 4**



**Figure 12 Low Energies, Gantry 3**



**Figure 13 Low Energies, Gantry 2**



**Figure 14 Low Energies, Gantry 1**

