

Participant Results

Proprietary Fingerprint Template Evaluation II (PFT-II)

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Image Group

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1 1K Sample Evaluation

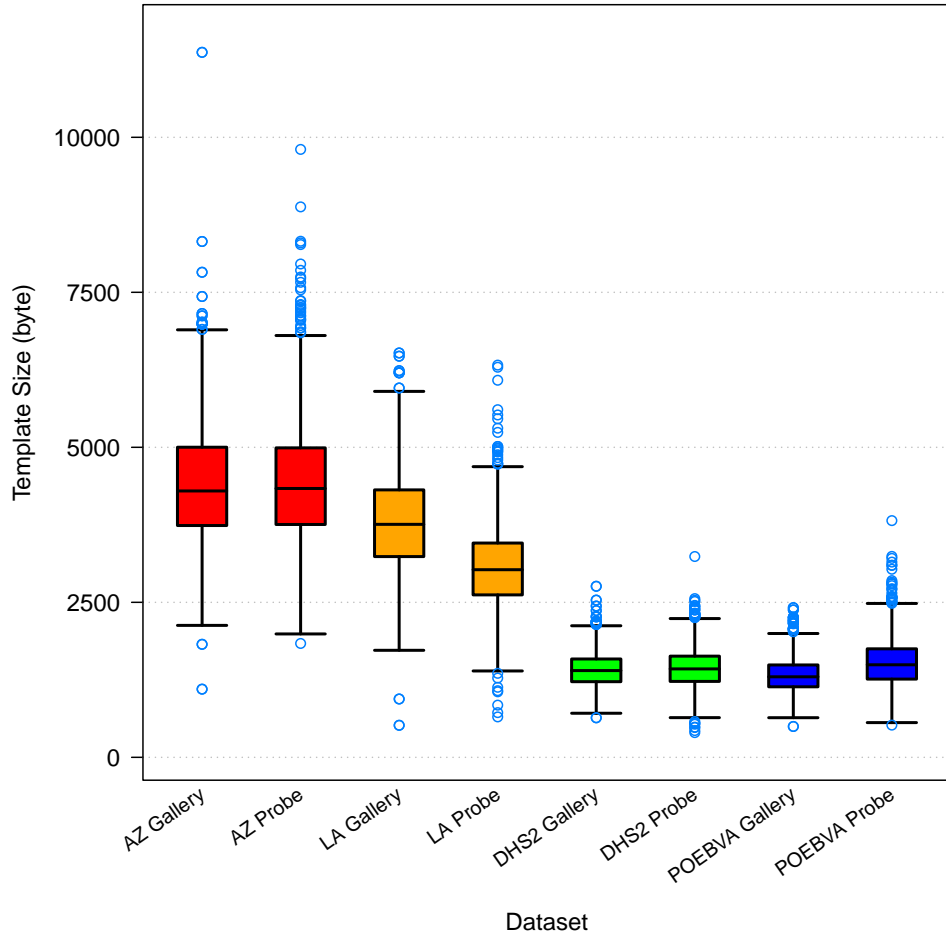


Figure 1: 1K Sample Evaluation – Template Size Distribution

	AZ		LA		DHS2		POEBVA	
	Gallery	Probe	Gallery	Probe	Gallery	Probe	Gallery	Probe
<i>Dimensions</i>	800x800	800x800	412x1000	400x776	368x368	368x368	500x500	368x368
<i>Maximum</i>	11371	9805	6522	6326	2759	3239	2414	3818
75%	5001.5	4991	4313.5	3456	1586	1632	1490	1750
<i>Median</i>	4296	4336	3757.5	3026	1399	1426	1298.5	1492.5
25%	3738.5	3755.5	3237.5	2620	1220	1224.5	1137.5	1262
<i>Minimum</i>	1100	1837	517	652	638	399	498	520

Table 1: Sample Dataset — Template Size Distribution

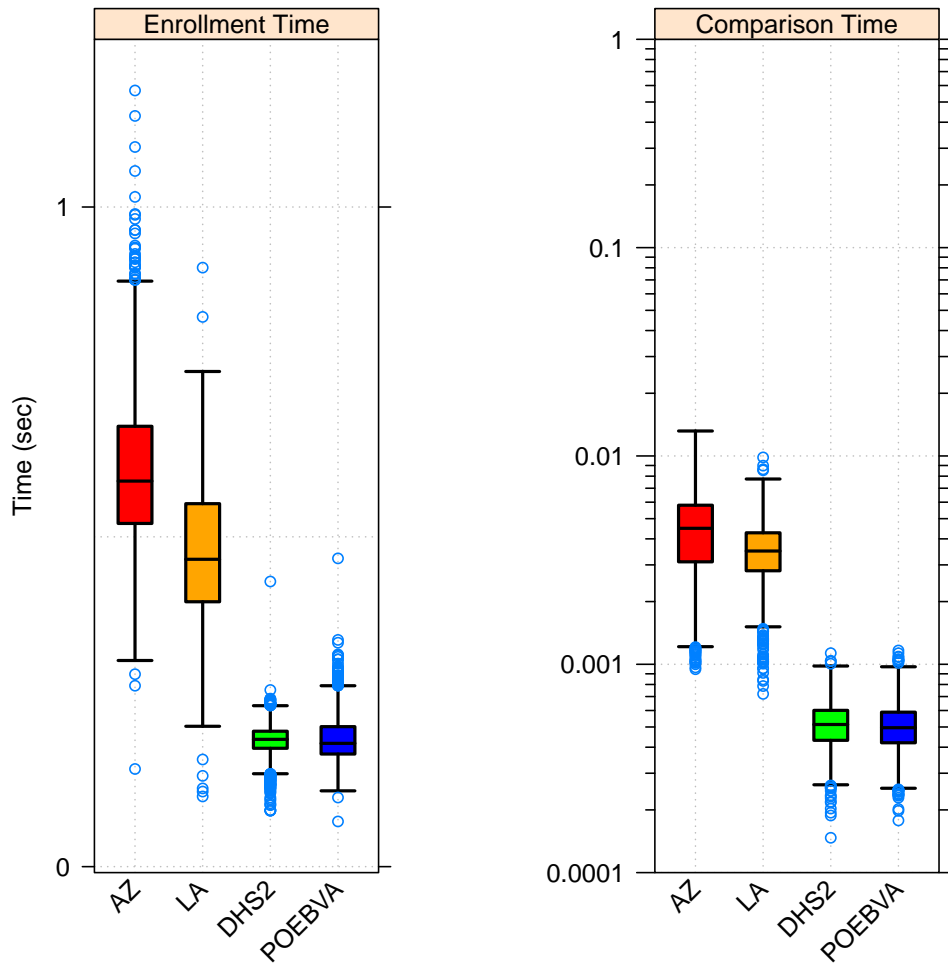


Figure 2: 1K Sample Evaluation – Enrollment and Comparison Timing

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	1.177	0.908	0.432	0.467
<i>75%</i>	0.668	0.550	0.205	0.212
<i>Median</i>	0.585	0.466	0.193	0.187
<i>25%</i>	0.520	0.402	0.179	0.171
<i>Minimum</i>	0.148	0.106	0.085	0.069

Table 2: Enrollment Times (sec)

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	0.013	0.010	0.001	0.001
<i>75%</i>	0.006	0.004	0.001	0.001
<i>Median</i>	0.004	0.003	0.001	0.000
<i>25%</i>	0.003	0.003	0.000	0.000
<i>Minimum</i>	0.001	0.001	0.000	0.000

Table 3: Comparison Times (sec)

2 Full Evaluation

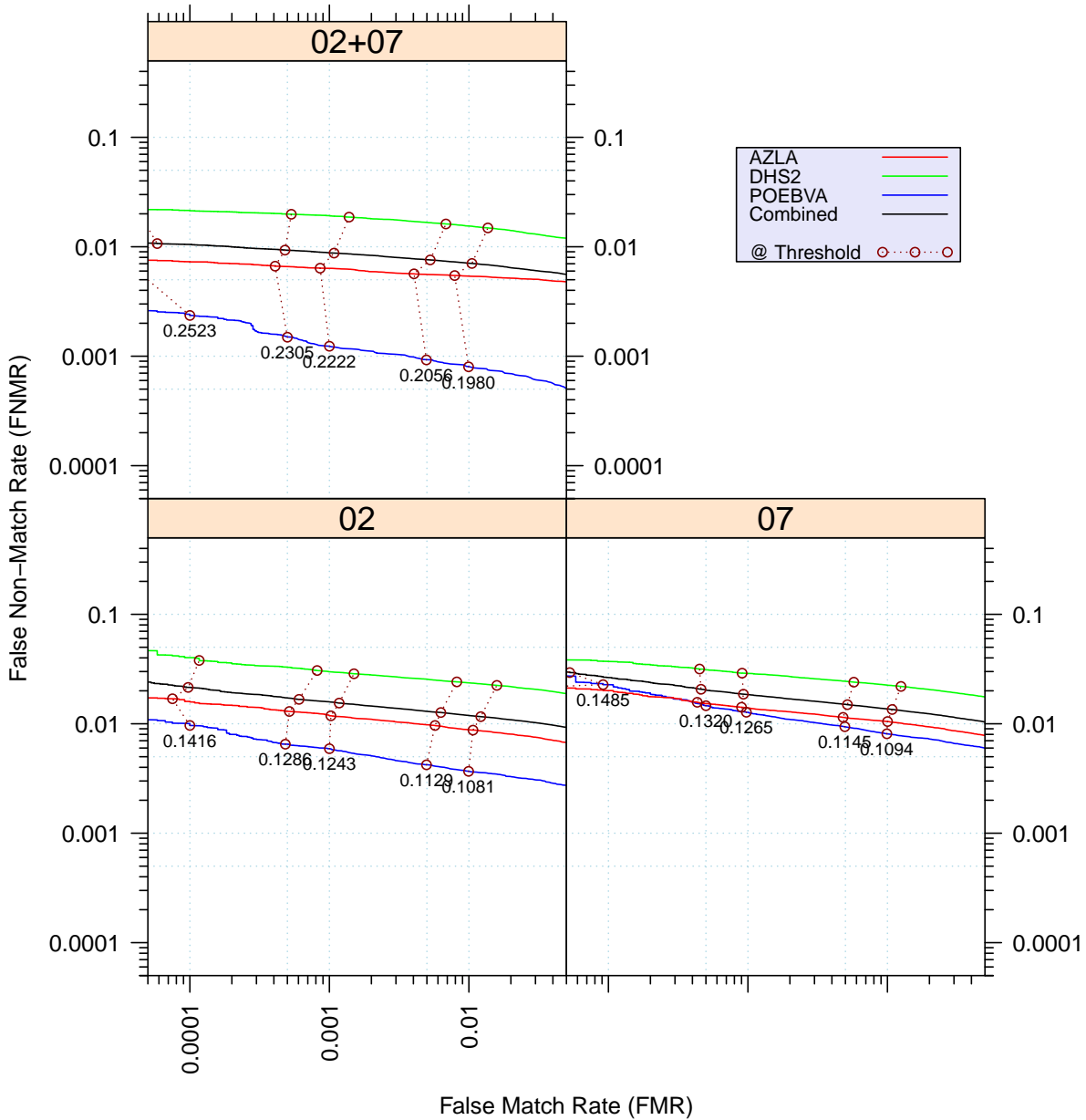


Figure 3: Full Evaluation – DET for POEBVA, DHS2, AZLA, and combined from R Index, L Index, and R/L Index

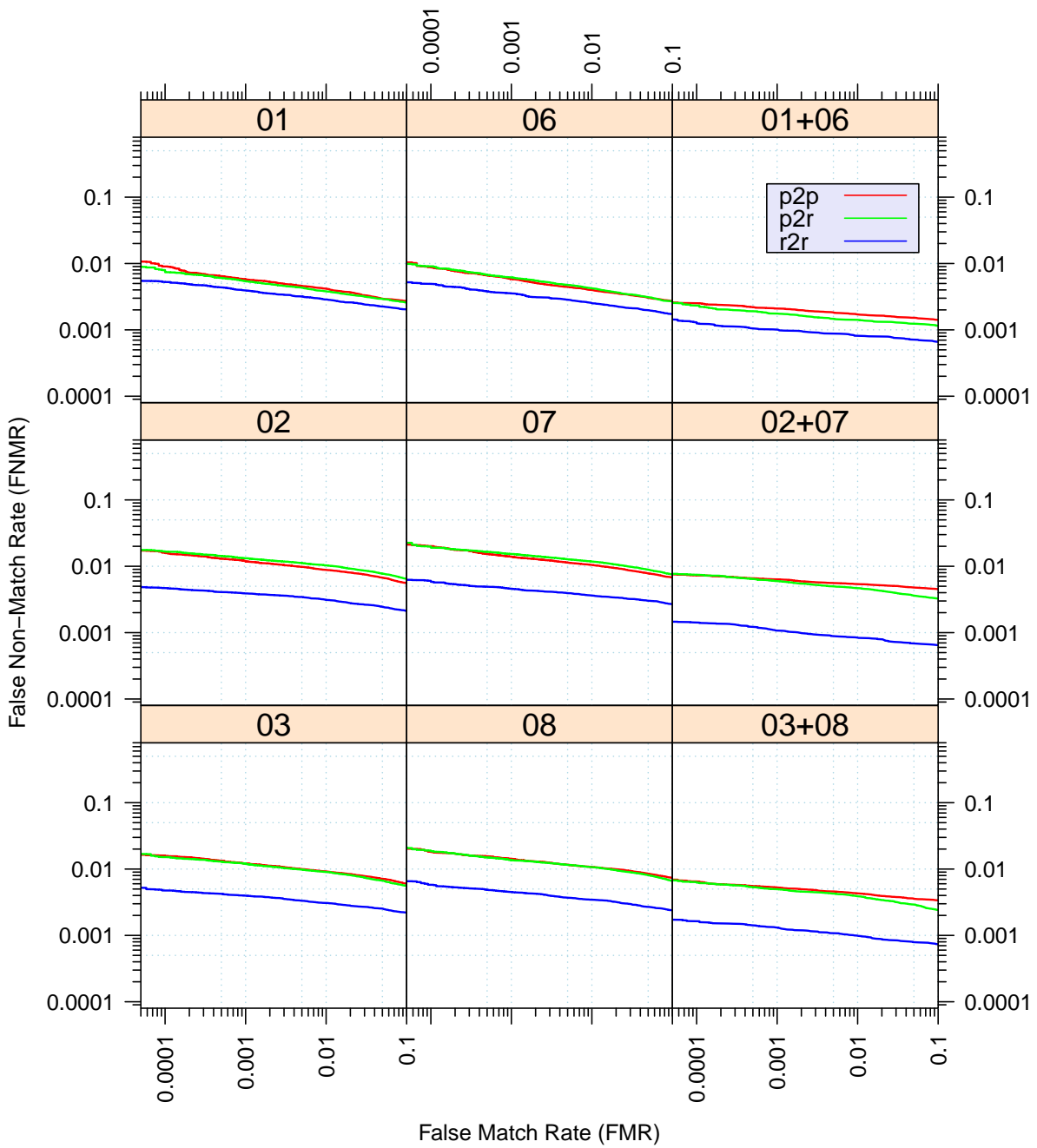


Figure 4: Full Evaluation – DET for all finger positions from AZLA

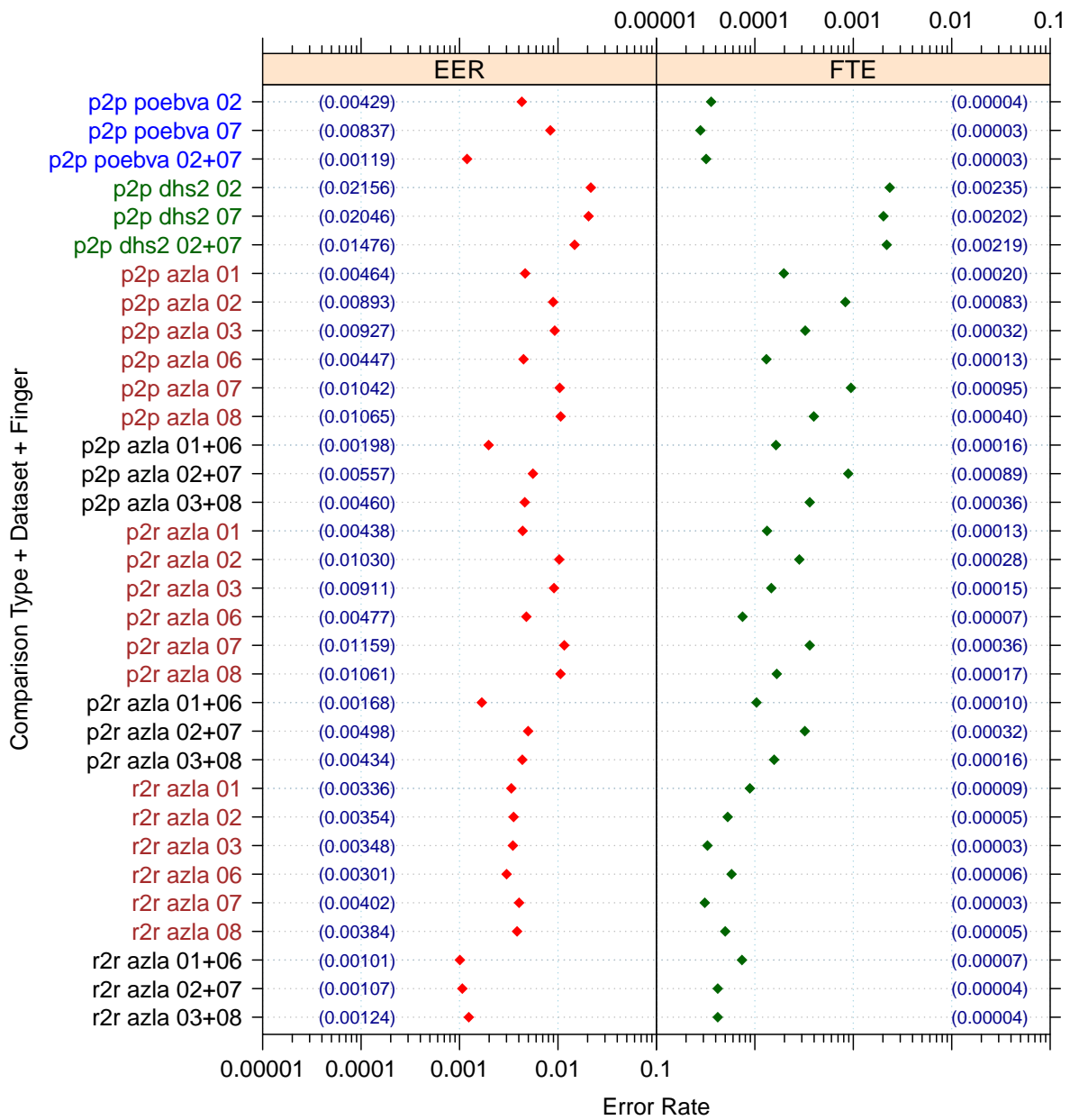


Figure 5: Full Evaluation – EERs and FTEs

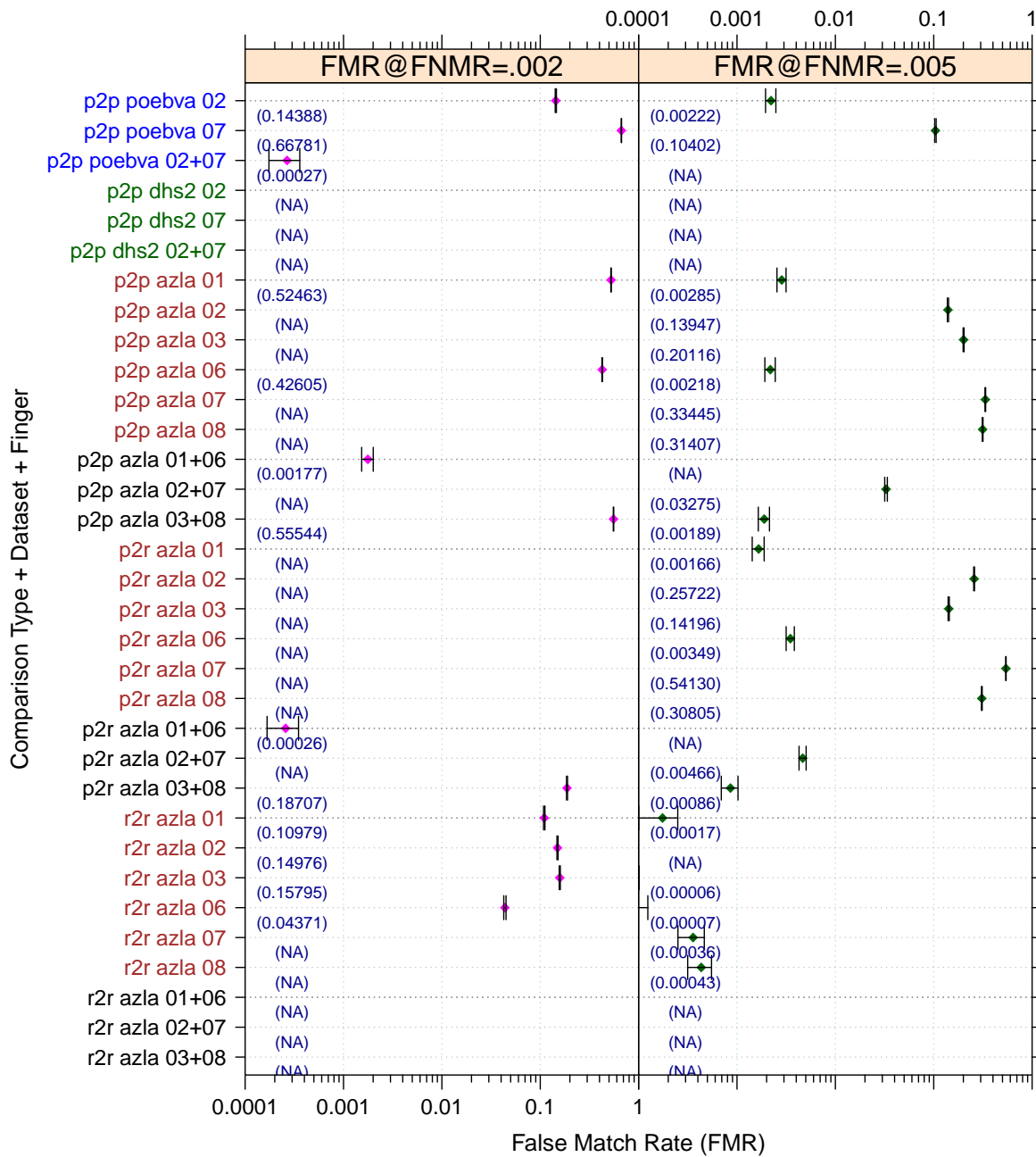


Figure 6: Full Evaluation – FMR@FNMR = (0.002, 0.005) and 95% Confidence Intervals

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

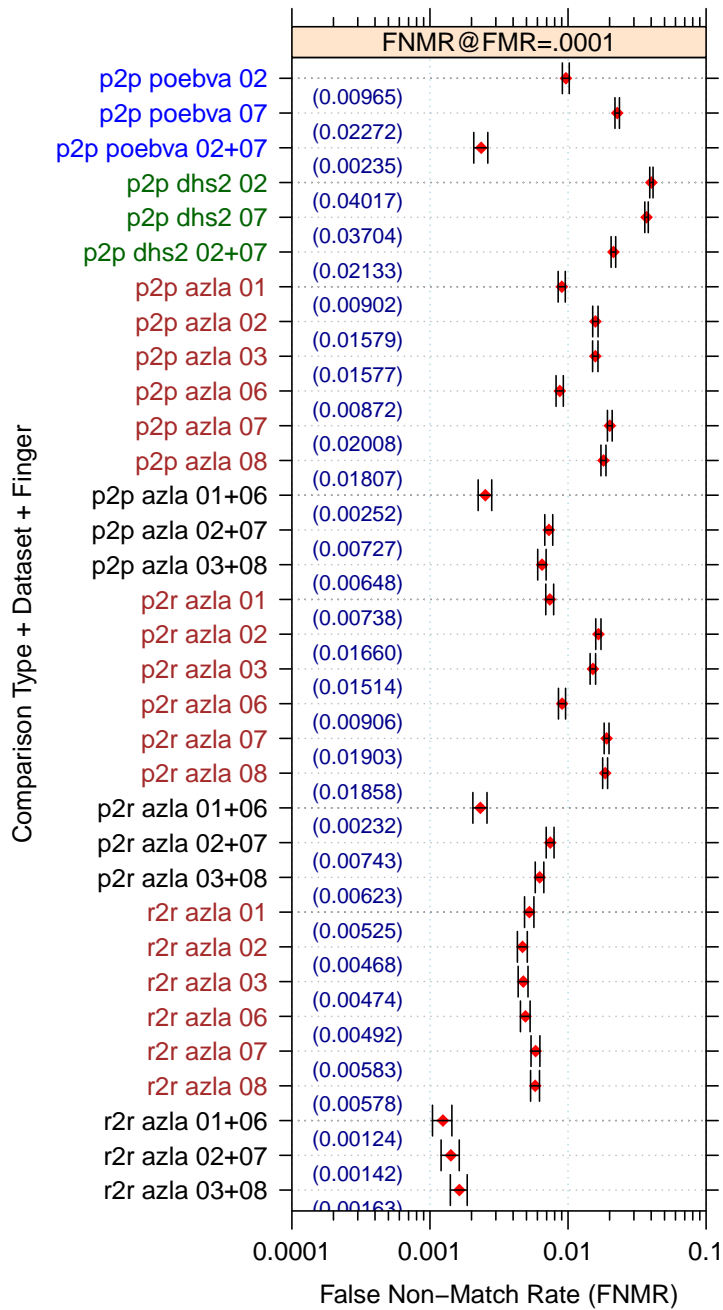


Figure 7: Full Evaluation – FNMR@FMR = 0.0001 and 95% Confidence Intervals

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

		EER	FTE Rate
Plain to Plain	<i>R Thumb</i>	0.0046	0.0002
	<i>R Index</i>	0.0089	0.0008
	<i>R Middle</i>	0.0093	0.0003
	<i>L Thumb</i>	0.0045	0.0001
	<i>L Index</i>	0.0104	0.0009
	<i>L Middle</i>	0.0106	0.0004
	<i>R/L Thumb</i>	0.0020	0.0002
	<i>R/L Index</i>	0.0056	0.0009
	<i>R/L Middle</i>	0.0046	0.0004
Plain to Rolled	<i>R Thumb</i>	0.0044	0.0001
	<i>R Index</i>	0.0103	0.0003
	<i>R Middle</i>	0.0091	0.0001
	<i>L Thumb</i>	0.0048	0.0001
	<i>L Index</i>	0.0116	0.0004
	<i>L Middle</i>	0.0106	0.0002
	<i>R/L Thumb</i>	0.0017	0.0001
	<i>R/L Index</i>	0.0050	0.0003
	<i>R/L Middle</i>	0.0043	0.0002
Rolled to Rolled	<i>R Thumb</i>	0.0034	0.0001
	<i>R Index</i>	0.0035	0.0001
	<i>R Middle</i>	0.0035	0.0000
	<i>L Thumb</i>	0.0030	0.0001
	<i>L Index</i>	0.0040	0.0000
	<i>L Middle</i>	0.0038	0.0001
	<i>R/L Thumb</i>	0.0010	0.0001
	<i>R/L Index</i>	0.0011	0.0000
	<i>R/L Middle</i>	0.0012	0.0000

Table 4: EER and FTE — Dataset AZLA

		EER	FTE Rate
<i>R Index</i>	0.0216	0.0023	
<i>L Index</i>	0.0205	0.0020	
<i>R/L Index</i>	0.0148	0.0022	

Table 5: EER and FTE — Dataset DHS2

		EER	FTE Rate
<i>R Index</i>	0.0043	0.0000	
<i>L Index</i>	0.0084	0.0000	
<i>R/L Index</i>	0.0012	0.0000	

Table 6: EER and FTE — Dataset POEBVA

		FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
Plain to Plain	<i>R Thumb</i>	0.0090 ±0.00053	0.5246 ±0.00283	0.0029 ±0.00030
	<i>R Index</i>	0.0158 ±0.00071	n/a	0.1395 ±0.00196
	<i>R Middle</i>	0.0158 ±0.00071	n/a	0.2012 ±0.00227
	<i>L Thumb</i>	0.0087 ±0.00053	0.4260 ±0.00280	0.0022 ±0.00026
	<i>L Index</i>	0.0201 ±0.00079	n/a	0.3345 ±0.00267
	<i>L Middle</i>	0.0181 ±0.00075	n/a	0.3141 ±0.00263
	<i>R/L Thumb</i>	0.0025 ±0.00028	0.0018 ±0.00024	n/a
	<i>R/L Index</i>	0.0073 ±0.00048	n/a	0.0328 ±0.00101
	<i>R/L Middle</i>	0.0065 ±0.00045	0.5554 ±0.00281	0.0019 ±0.00025
Plain to Rolled	<i>R Thumb</i>	0.0074 ±0.00048	n/a	0.0017 ±0.00023
	<i>R Index</i>	0.0166 ±0.00072	n/a	0.2572 ±0.00247
	<i>R Middle</i>	0.0151 ±0.00069	n/a	0.1420 ±0.00198
	<i>L Thumb</i>	0.0091 ±0.00054	n/a	0.0035 ±0.00033
	<i>L Index</i>	0.0190 ±0.00077	n/a	0.5413 ±0.00282
	<i>L Middle</i>	0.0186 ±0.00076	n/a	0.3080 ±0.00261
	<i>R/L Thumb</i>	0.0023 ±0.00027	0.0003 ±0.00009	n/a
	<i>R/L Index</i>	0.0074 ±0.00049	n/a	0.0047 ±0.00038
	<i>R/L Middle</i>	0.0062 ±0.00044	0.1871 ±0.00221	0.0009 ±0.00017
Rolled to Rolled	<i>R Thumb</i>	0.0053 ±0.00041	0.1098 ±0.00177	0.0002 ±0.00007
	<i>R Index</i>	0.0047 ±0.00039	0.1498 ±0.00202	n/a
	<i>R Middle</i>	0.0047 ±0.00039	0.1580 ±0.00206	n/a
	<i>L Thumb</i>	0.0049 ±0.00040	0.0437 ±0.00116	n/a
	<i>L Index</i>	0.0058 ±0.00043	n/a	0.0004 ±0.00011
	<i>L Middle</i>	0.0058 ±0.00043	n/a	0.0004 ±0.00012
	<i>R/L Thumb</i>	0.0012 ±0.00020	n/a	n/a
	<i>R/L Index</i>	0.0014 ±0.00021	n/a	n/a
	<i>R/L Middle</i>	0.0016 ±0.00023	n/a	n/a

Table 7: Details for FNMR@FMR = 0.0001 and FMR@FNMR = (0.002, 0.005) — Dataset AZLA

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

	FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
<i>R Index</i>	0.0402 ±0.00111	n/a	n/a
<i>L Index</i>	0.0370 ±0.00107	n/a	n/a
<i>R/L Index</i>	0.0213 ±0.00082	n/a	n/a

Table 8: Details for FNMR@FMR = 0.0001 and FMR@FNMR = (0.002, 0.005) — Dataset DHS2

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

	FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
<i>R Index</i>	0.0097 ±0.00055	0.1439 ±0.00199	0.0022 ±0.00027
<i>L Index</i>	0.0227 ±0.00084	0.6678 ±0.00266	0.1040 ±0.00173
<i>R/L Index</i>	0.0024 ±0.00027	0.0003 ±0.00009	n/a

Table 9: Details for FNMR@FMR = 0.0001 and FMR@FNMR = (0.002, 0.005) — Dataset POEBVA

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.

3 Original PFT Dataset

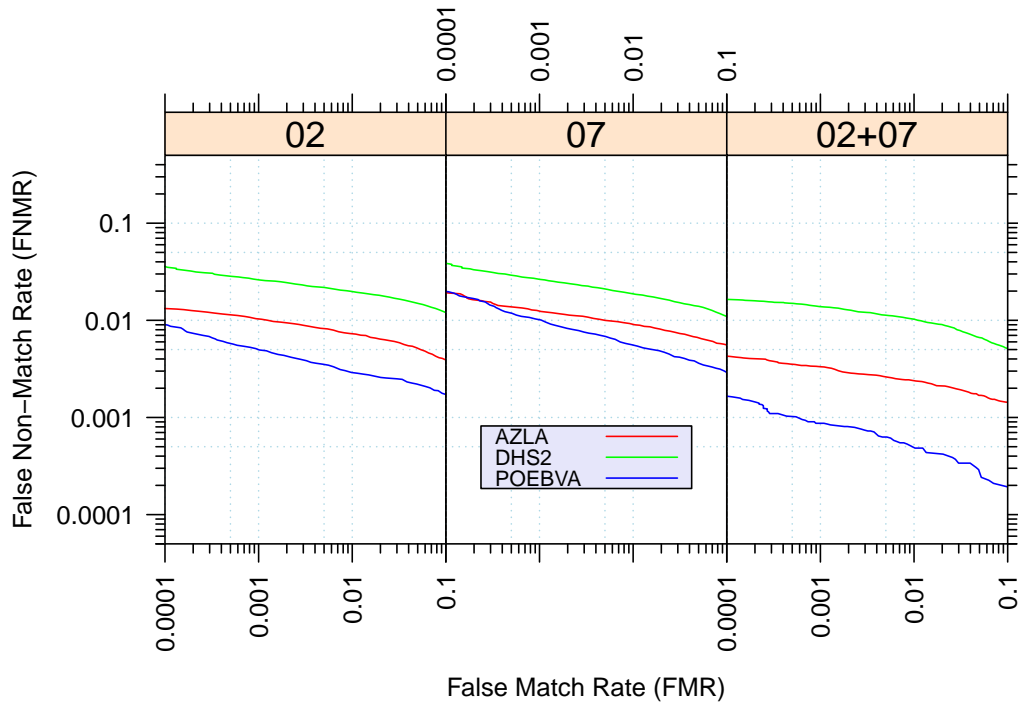


Figure 8: Original PFT Dataset – DET

		EER	FNMR@FMR = 0.0001	FMR@FNMR = 0.005
AZLA	<i>R Index</i>	0.0074	0.0132	0.0532
	<i>L Index</i>	0.0090	0.0193	0.1382
	<i>R/L Index</i>	0.0028	0.0043	n/a
DHS2	<i>R Index</i>	0.0181	0.0352	0.4954
	<i>L Index</i>	0.0169	0.0379	0.4234
	<i>R/L Index</i>	0.0100	0.0164	0.1028
POEBVA	<i>R Index</i>	0.0036	0.0089	0.0010
	<i>L Index</i>	0.0064	0.0198	0.0161
	<i>R/L Index</i>	0.0009	0.0017	n/a

Table 10: Details for EER, FNMR@FMR = 0.0001, and FMR@FNMR = 0.005 — Original PFT Dataset

Note: “n/a” indicates that the value could not be reliably measured with the available sample size.