

Participant Results

Proprietary Fingerprint Template Evaluation II (PFT-II)

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1 1K Sample Evaluation

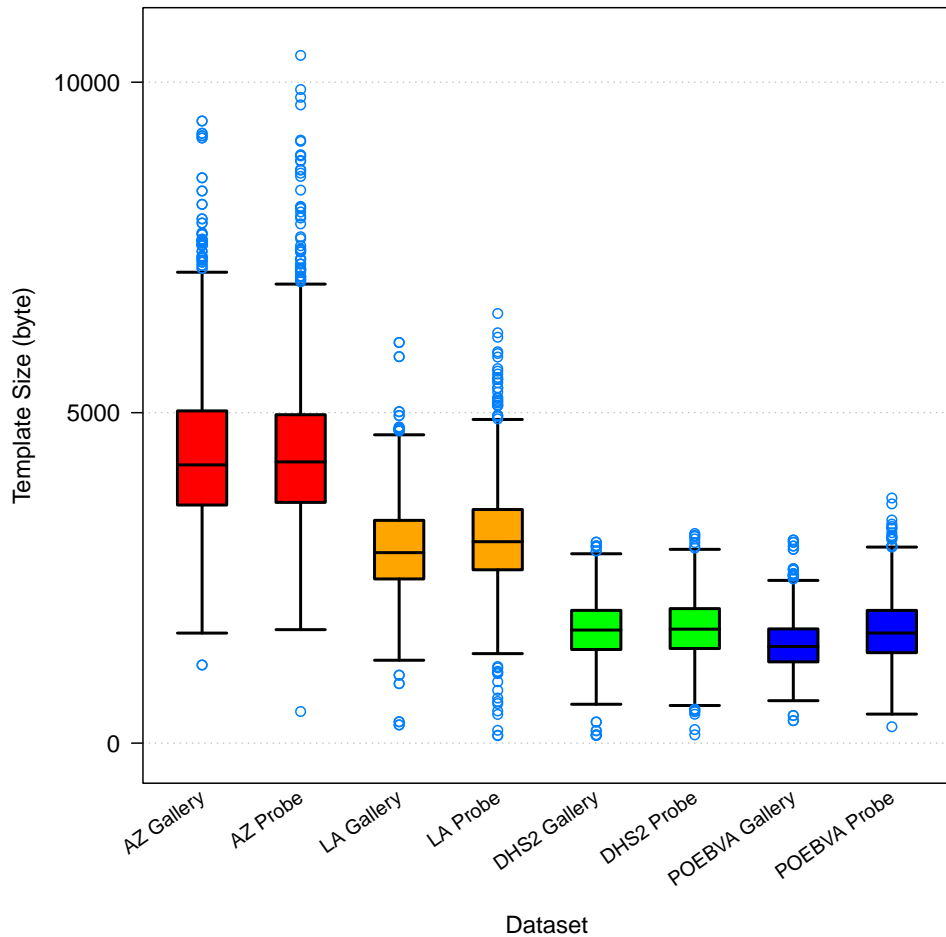


Figure 1: 1K Sample Evaluation – Template Size Distribution

	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>	9414	10407	6062	6501	3042	3173	3074	3709
75%	5027	4969	3370.5	3534.5	2008.5	2035	1728	2008
<i>Median</i>	4209.5	4255	2882	3047.5	1711	1724.5	1462.5	1665.5
25%	3602.5	3642	2484	2622.5	1416.5	1431.5	1229.5	1368.5
<i>Minimum</i>	1183	479	276	114	118	126	341	248

Table 1: Sample Dataset — Template Size Distribution

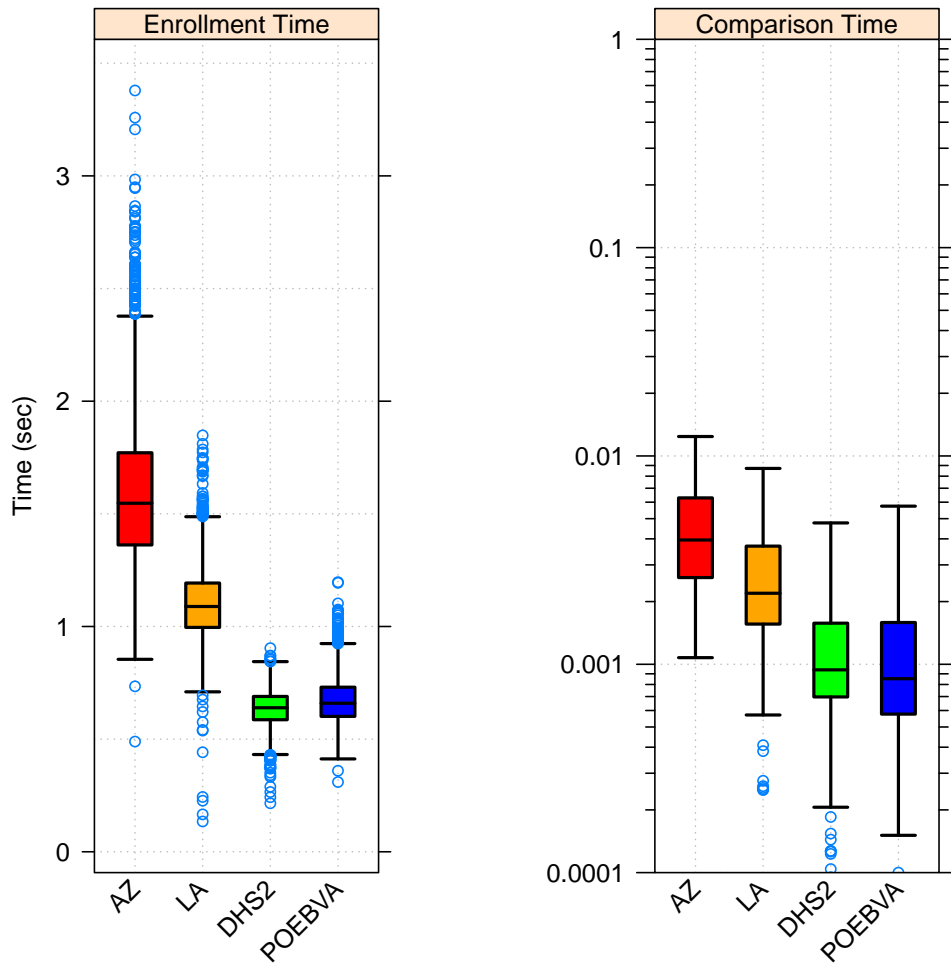


Figure 2: 1K Sample Evaluation – Enrollment and Comparison Timing

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	3.379	1.848	0.904	1.197
<i>75%</i>	1.771	1.193	0.689	0.731
<i>Median</i>	1.547	1.089	0.639	0.659
<i>25%</i>	1.362	0.996	0.586	0.601
<i>Minimum</i>	0.489	0.135	0.216	0.310

Table 2: Enrollment Times (sec)

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	0.012	0.009	0.005	0.006
<i>75%</i>	0.006	0.004	0.002	0.002
<i>Median</i>	0.004	0.002	0.001	0.001
<i>25%</i>	0.003	0.002	0.001	0.001
<i>Minimum</i>	0.001	0.000	0.000	0.000

Table 3: Comparison Times (sec)

2 Full Evaluation

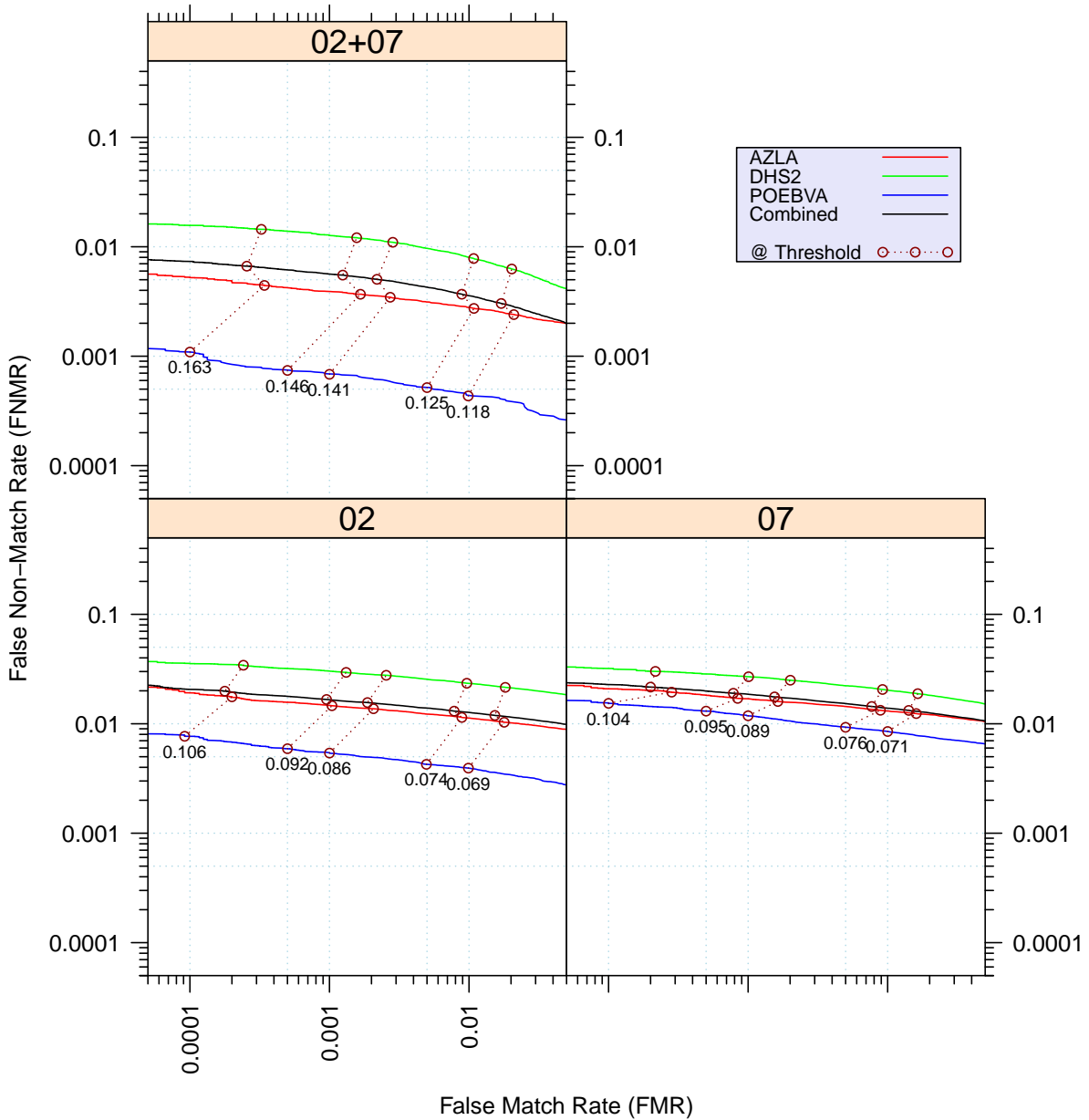


Figure 3: Full Evaluation – DET for POEBVA, DHS2, AZLA, and combined from R Index, L Index, and R/L Index

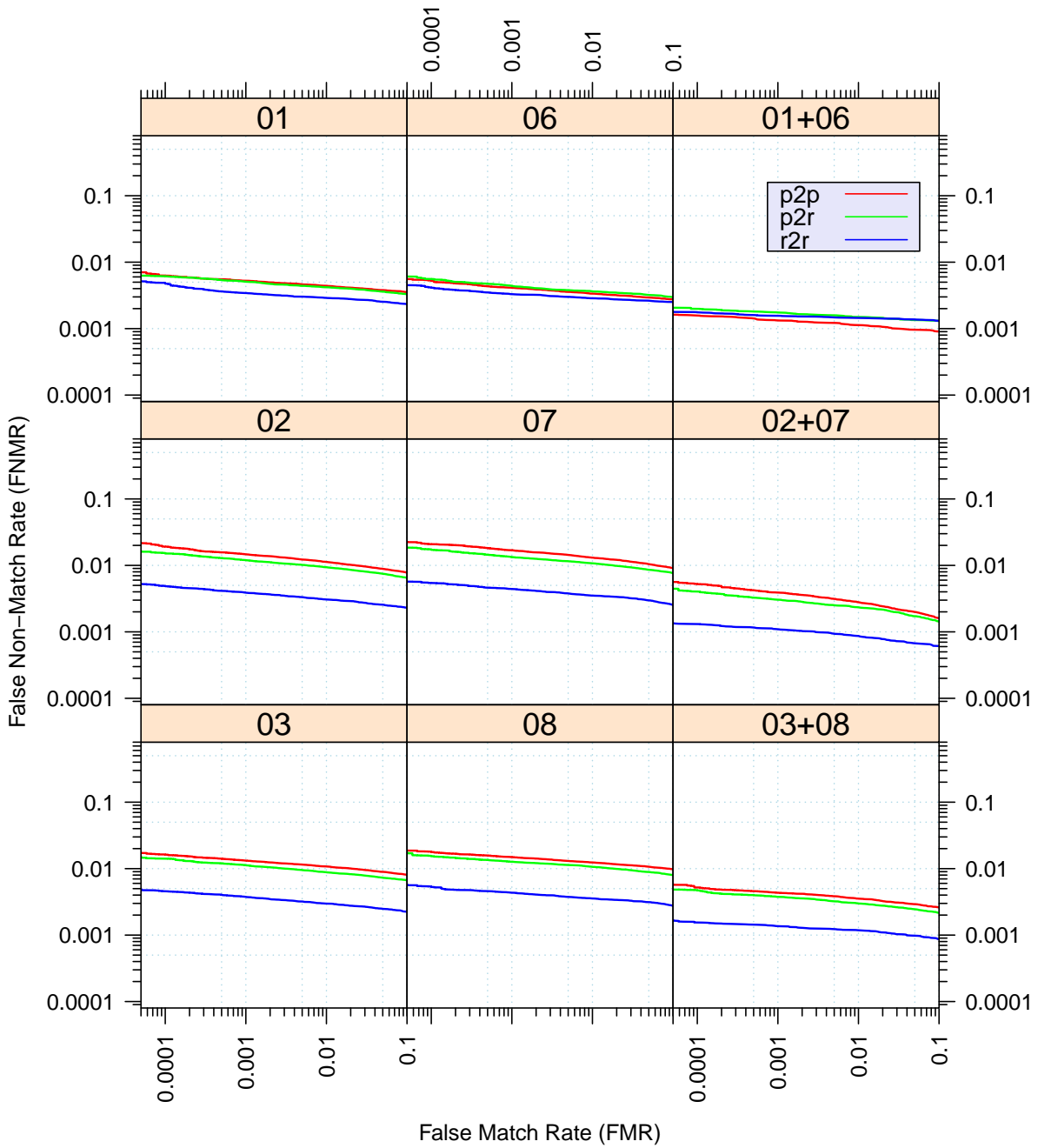


Figure 4: Full Evaluation – DET for all finger positions from AZLA

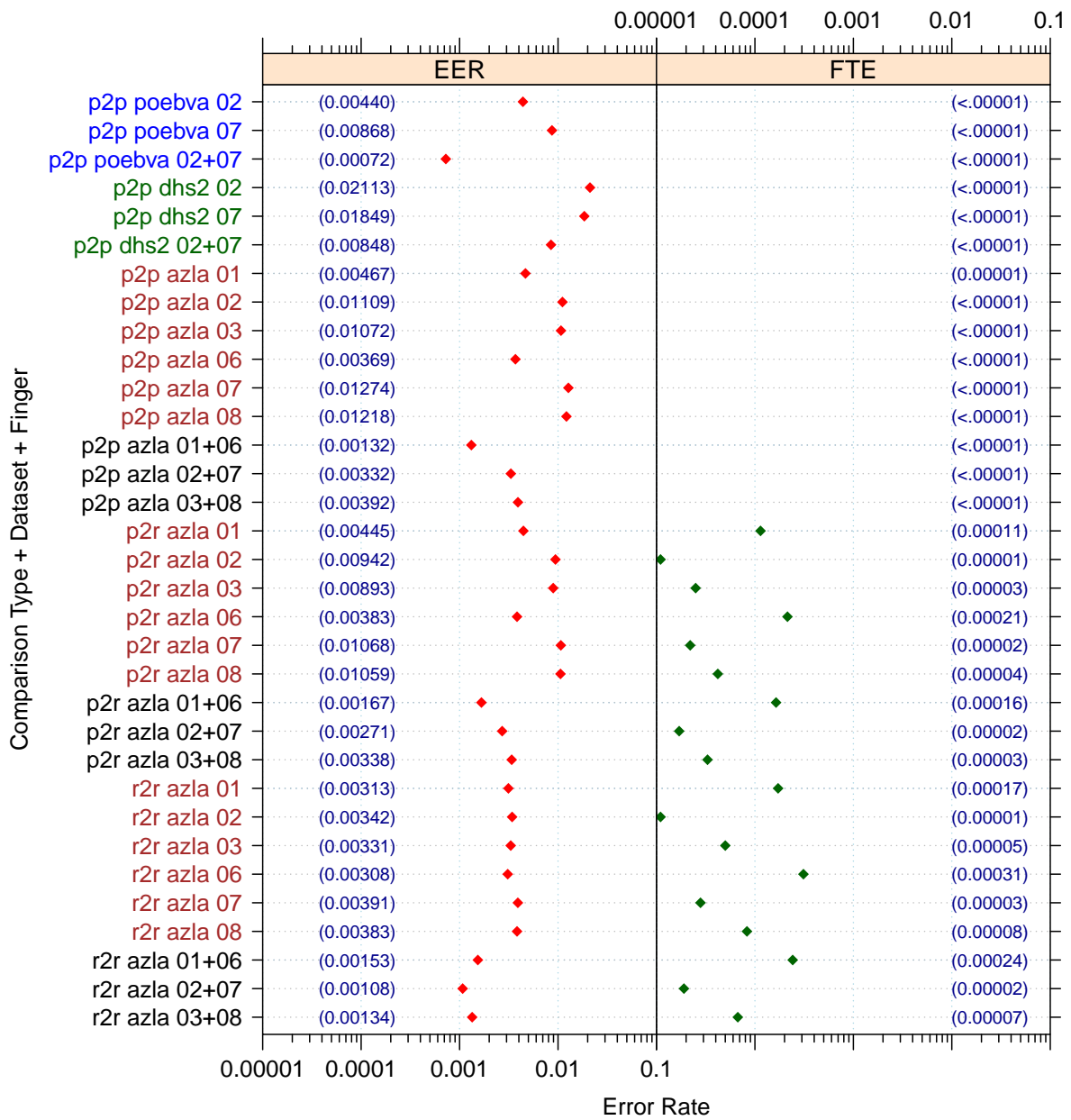


Figure 5: Full Evaluation – EERs and FTEs

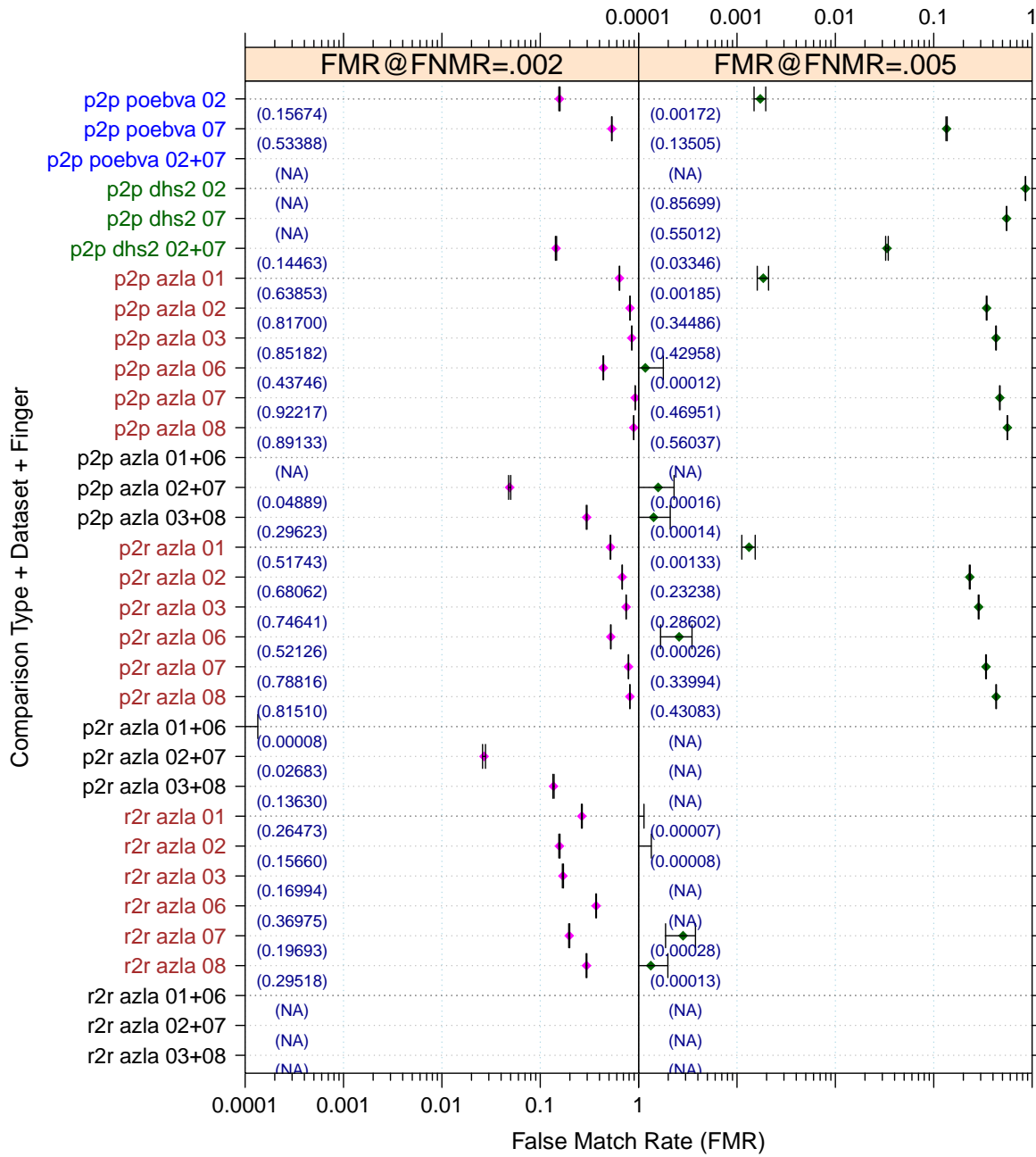


Figure 6: Full Evaluation – FMR@FNMR = (0.002, 0.005) and 95% Confidence Intervals

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

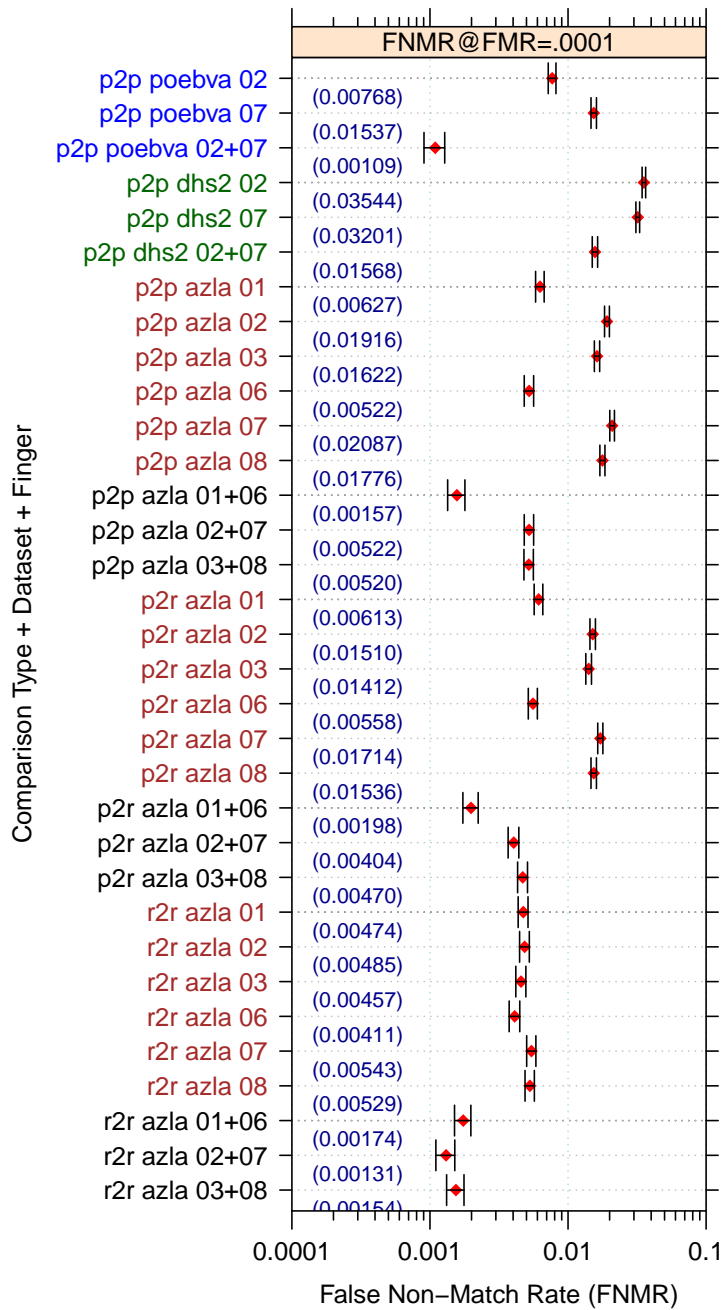


Figure 7: Full Evaluation – FNMR@FMR = 0.0001 and 95% Confidence Intervals

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>	0.0047	0.0000
	<i>R Index</i>	0.0111	0.0000
	<i>R Middle</i>	0.0107	0.0000
	<i>L Thumb</i>	0.0037	0.0000
	<i>L Index</i>	0.0127	0.0000
	<i>L Middle</i>	0.0122	0.0000
	<i>R/L Thumb</i>	0.0013	0.0000
	<i>R/L Index</i>	0.0033	0.0000
	<i>R/L Middle</i>	0.0039	0.0000
Plain to Rolled	<i>R Thumb</i>	0.0044	0.0001
	<i>R Index</i>	0.0094	0.0000
	<i>R Middle</i>	0.0089	0.0000
	<i>L Thumb</i>	0.0038	0.0002
	<i>L Index</i>	0.0107	0.0000
	<i>L Middle</i>	0.0106	0.0000
	<i>R/L Thumb</i>	0.0017	0.0002
	<i>R/L Index</i>	0.0027	0.0000
	<i>R/L Middle</i>	0.0034	0.0000
Rolled to Rolled	<i>R Thumb</i>	0.0031	0.0002
	<i>R Index</i>	0.0034	0.0000
	<i>R Middle</i>	0.0033	0.0001
	<i>L Thumb</i>	0.0031	0.0003
	<i>L Index</i>	0.0039	0.0000
	<i>L Middle</i>	0.0038	0.0001
	<i>R/L Thumb</i>	0.0015	0.0002
	<i>R/L Index</i>	0.0011	0.0000
	<i>R/L Middle</i>	0.0013	0.0001

Table 4: EER and FTE — Dataset AZLA

	EER	FTE Rate
<i>R Index</i>	0.0211	0.0000
<i>L Index</i>	0.0185	0.0000
<i>R/L Index</i>	0.0085	0.0000

Table 5: EER and FTE — Dataset DHS2

	EER	FTE Rate
<i>R Index</i>	0.0044	0.0000
<i>L Index</i>	0.0087	0.0000
<i>R/L Index</i>	0.0007	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>	0.0063 ±0.00045	0.6385 ±0.00272	0.0019 ±0.00024
	<i>R Index</i>	0.0192 ±0.00078	0.8170 ±0.00219	0.3449 ±0.00269
	<i>R Middle</i>	0.0162 ±0.00072	0.8518 ±0.00201	0.4296 ±0.00280
	<i>L Thumb</i>	0.0052 ±0.00041	0.4375 ±0.00281	0.0001 ±0.00006
	<i>L Index</i>	0.0209 ±0.00081	0.9222 ±0.00152	0.4695 ±0.00282
	<i>L Middle</i>	0.0178 ±0.00075	0.8913 ±0.00176	0.5604 ±0.00281
	<i>R/L Thumb</i>	0.0016 ±0.00022	n/a	n/a
	<i>R/L Index</i>	0.0052 ±0.00041	0.0489 ±0.00122	0.0002 ±0.00007
	<i>R/L Middle</i>	0.0052 ±0.00041	0.2962 ±0.00258	0.0001 ±0.00007
Plain to Rolled	<i>R Thumb</i>	0.0061 ±0.00044	0.5174 ±0.00283	0.0013 ±0.00021
	<i>R Index</i>	0.0151 ±0.00069	0.6806 ±0.00264	0.2324 ±0.00239
	<i>R Middle</i>	0.0141 ±0.00067	0.7464 ±0.00246	0.2860 ±0.00256
	<i>L Thumb</i>	0.0056 ±0.00042	0.5213 ±0.00283	0.0003 ±0.00009
	<i>L Index</i>	0.0171 ±0.00073	0.7882 ±0.00231	0.3399 ±0.00268
	<i>L Middle</i>	0.0154 ±0.00070	0.8151 ±0.00220	0.4308 ±0.00280
	<i>R/L Thumb</i>	0.0020 ±0.00025	n/a	n/a
	<i>R/L Index</i>	0.0040 ±0.00036	0.0268 ±0.00091	n/a
	<i>R/L Middle</i>	0.0047 ±0.00039	0.1363 ±0.00194	n/a
Rolled to Rolled	<i>R Thumb</i>	0.0047 ±0.00039	0.2647 ±0.00250	n/a
	<i>R Index</i>	0.0049 ±0.00039	0.1566 ±0.00206	n/a
	<i>R Middle</i>	0.0046 ±0.00038	0.1699 ±0.00213	n/a
	<i>L Thumb</i>	0.0041 ±0.00036	0.3698 ±0.00273	n/a
	<i>L Index</i>	0.0054 ±0.00042	0.1969 ±0.00225	0.0003 ±0.00010
	<i>L Middle</i>	0.0053 ±0.00041	0.2952 ±0.00258	0.0001 ±0.00006
	<i>R/L Thumb</i>	0.0017 ±0.00024	n/a	n/a
	<i>R/L Index</i>	0.0013 ±0.00020	n/a	n/a
	<i>R/L Middle</i>	0.0015 ±0.00022	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>	0.0354 ±0.00105	n/a	0.8570 ±0.00198
<i>L Index</i>	0.0320 ±0.00100	n/a	0.5501 ±0.00281
<i>R/L Index</i>	0.0157 ±0.00070	0.1446 ±0.00199	0.0335 ±0.00102

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>	0.0077 ±0.00049	0.1567 ±0.00206	0.0017 ±0.00023
<i>L Index</i>	0.0154 ±0.00070	0.5339 ±0.00282	0.1351 ±0.00193
<i>R/L Index</i>	0.0011 ±0.00019	n/a	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

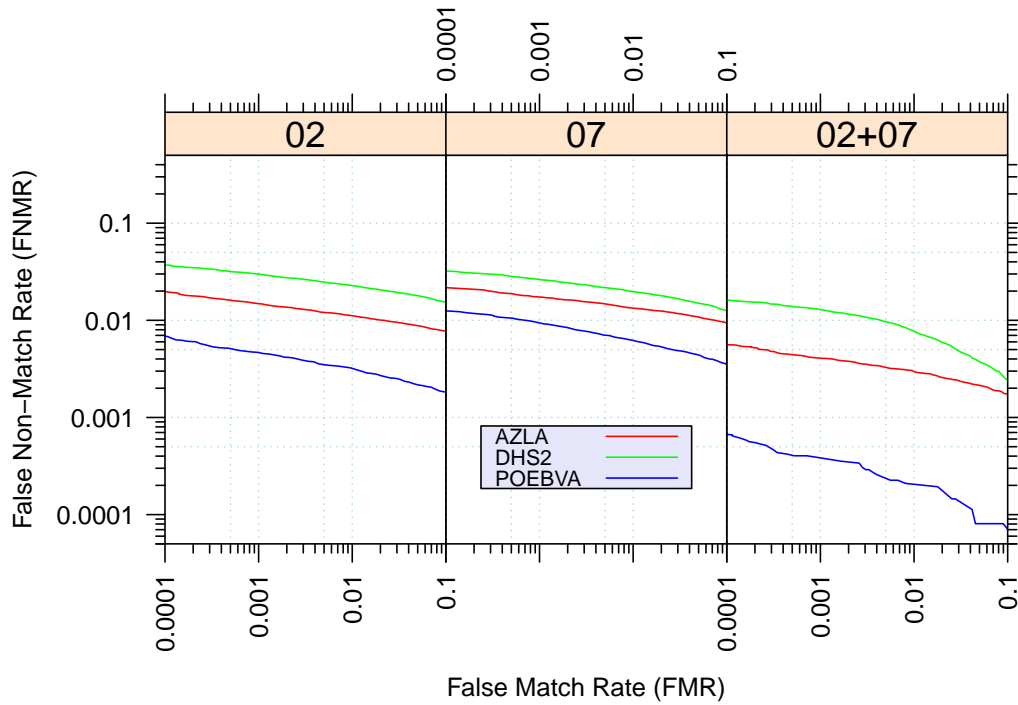


Figure 8: Original PFT Dataset – DET

		EER	FNMR@FMR = 0.0001	FMR@FNMR = 0.005
AZLA	<i>R Index</i>	0.0108	0.0197	0.3321
	<i>L Index</i>	0.0129	0.0218	0.4853
	<i>R/L Index</i>	0.0034	0.0056	0.0002
DHS2	<i>R Index</i>	0.0204	0.0370	0.8318
	<i>L Index</i>	0.0181	0.0322	0.5716
	<i>R/L Index</i>	0.0082	0.0161	0.0285
POEBVA	<i>R Index</i>	0.0037	0.0068	0.0006
	<i>L Index</i>	0.0066	0.0124	0.0262
	<i>R/L Index</i>	0.0004	0.0007	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.