

Participant Results

Proprietary Fingerprint Template Evaluation II (PFT-II)

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1 1K Sample Evaluation

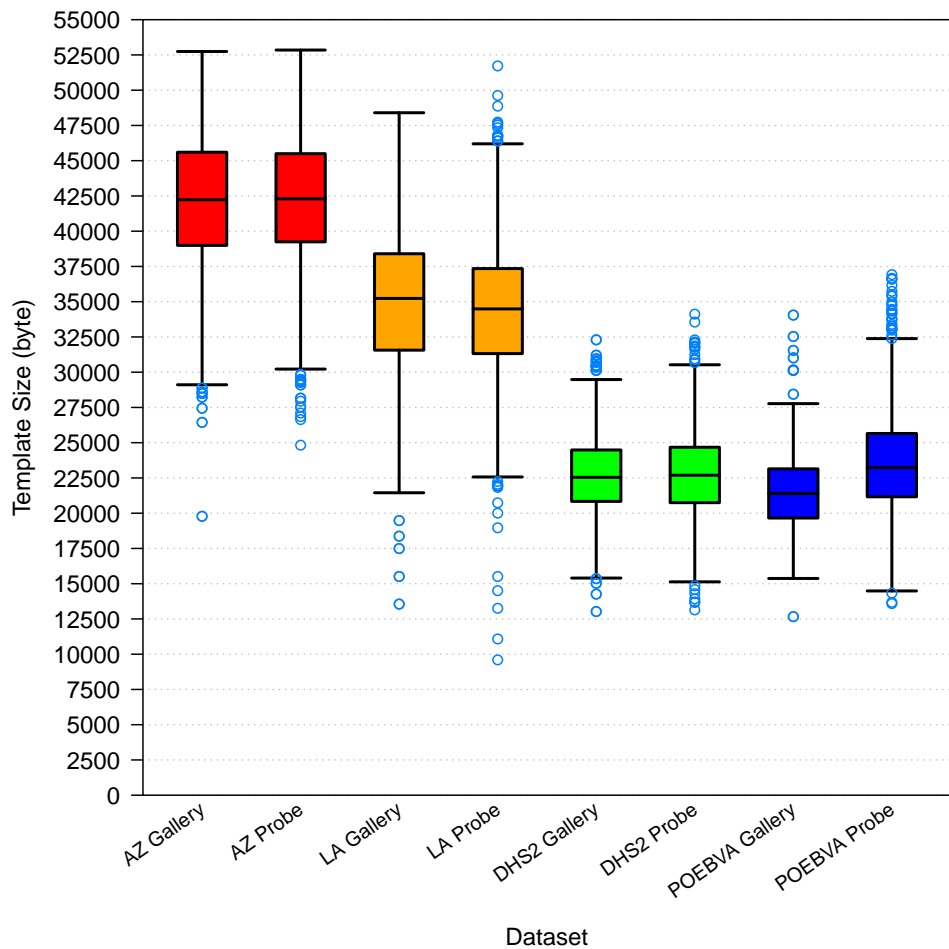


Figure 1: 1K Sample Evaluation – Template Size Distribution

	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>	52743	52846	48400	51721	32298	34118	34049	36917
75%	45600	45496.5	38400.5	37348	24484.5	24675.5	23145.5	25652.5
<i>Median</i>	42229.5	42295.5	35231.5	34488	22542.5	22692	21395	23233
25%	38991.5	39244.5	31564	31318.5	20837.5	20747	19657.5	21164.5
<i>Minimum</i>	19784	24826	13555	9601	13027	13142	12666	13586

Table 1: Sample Dataset — Template Size Distribution

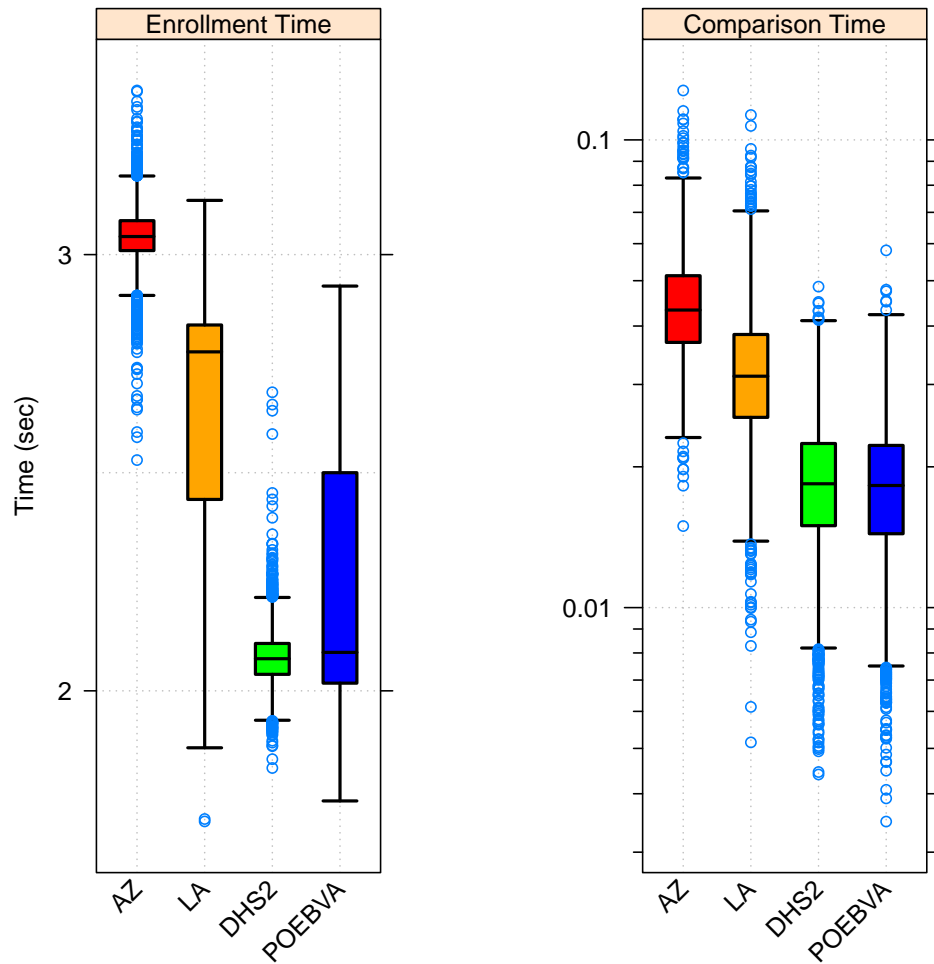


Figure 2: 1K Sample Evaluation – Enrollment and Comparison Timing

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	3.376	3.124	2.684	2.928
<i>75%</i>	3.078	2.839	2.109	2.500
<i>Median</i>	3.041	2.777	2.074	2.088
<i>25%</i>	3.009	2.439	2.038	2.018
<i>Minimum</i>	2.529	1.701	1.823	1.748

Table 2: Enrollment Times (sec)

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	0.128	0.113	0.049	0.058
<i>75%</i>	0.051	0.038	0.022	0.022
<i>Median</i>	0.043	0.031	0.018	0.018
<i>25%</i>	0.037	0.026	0.015	0.014
<i>Minimum</i>	0.015	0.005	0.004	0.003

Table 3: Comparison Times (sec)

2 Full Evaluation

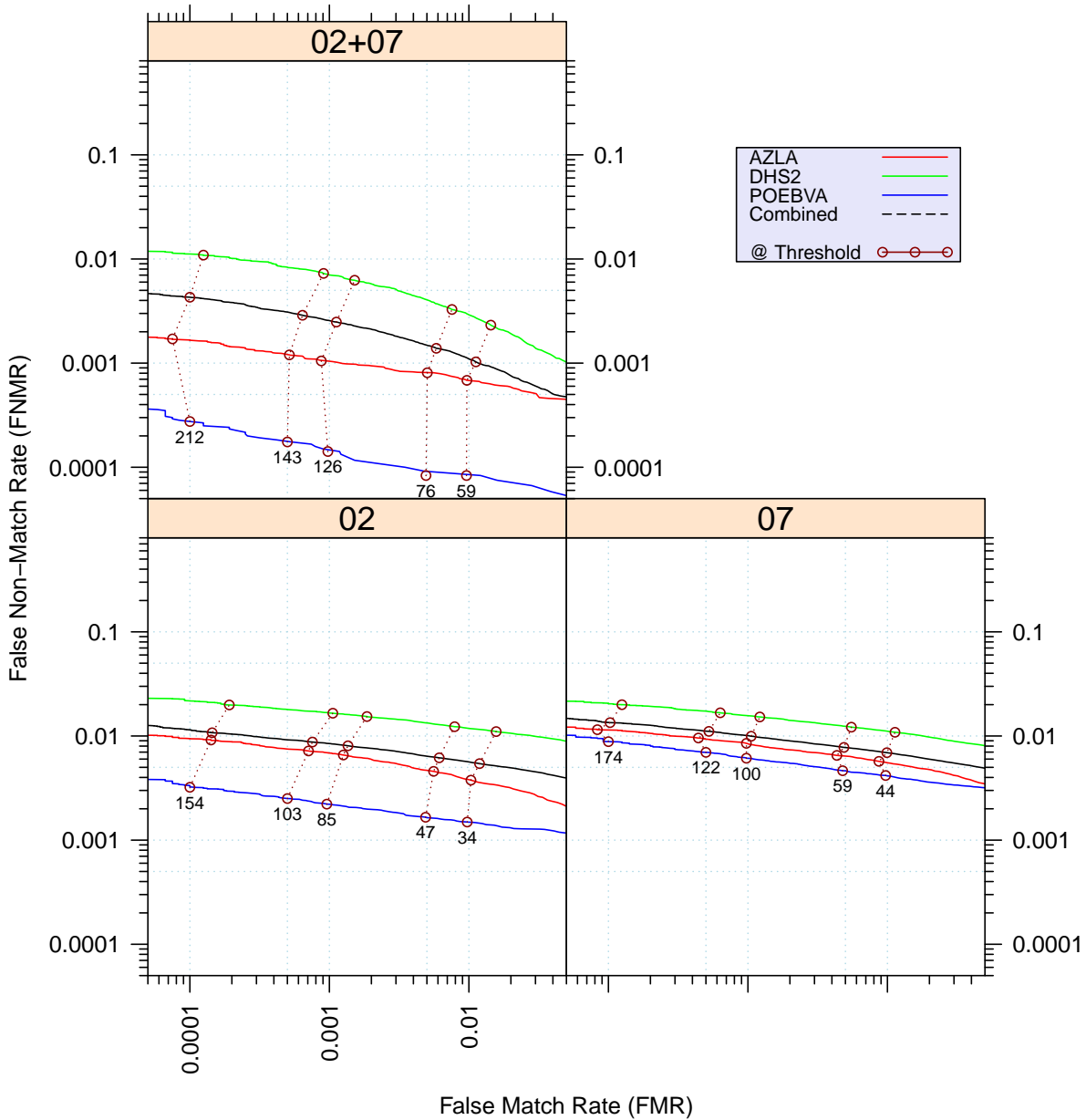


Figure 3: Full Evaluation – DET for POEBVA, DHS2, AZLA, and combined from R Index, L Index, and R/L Index

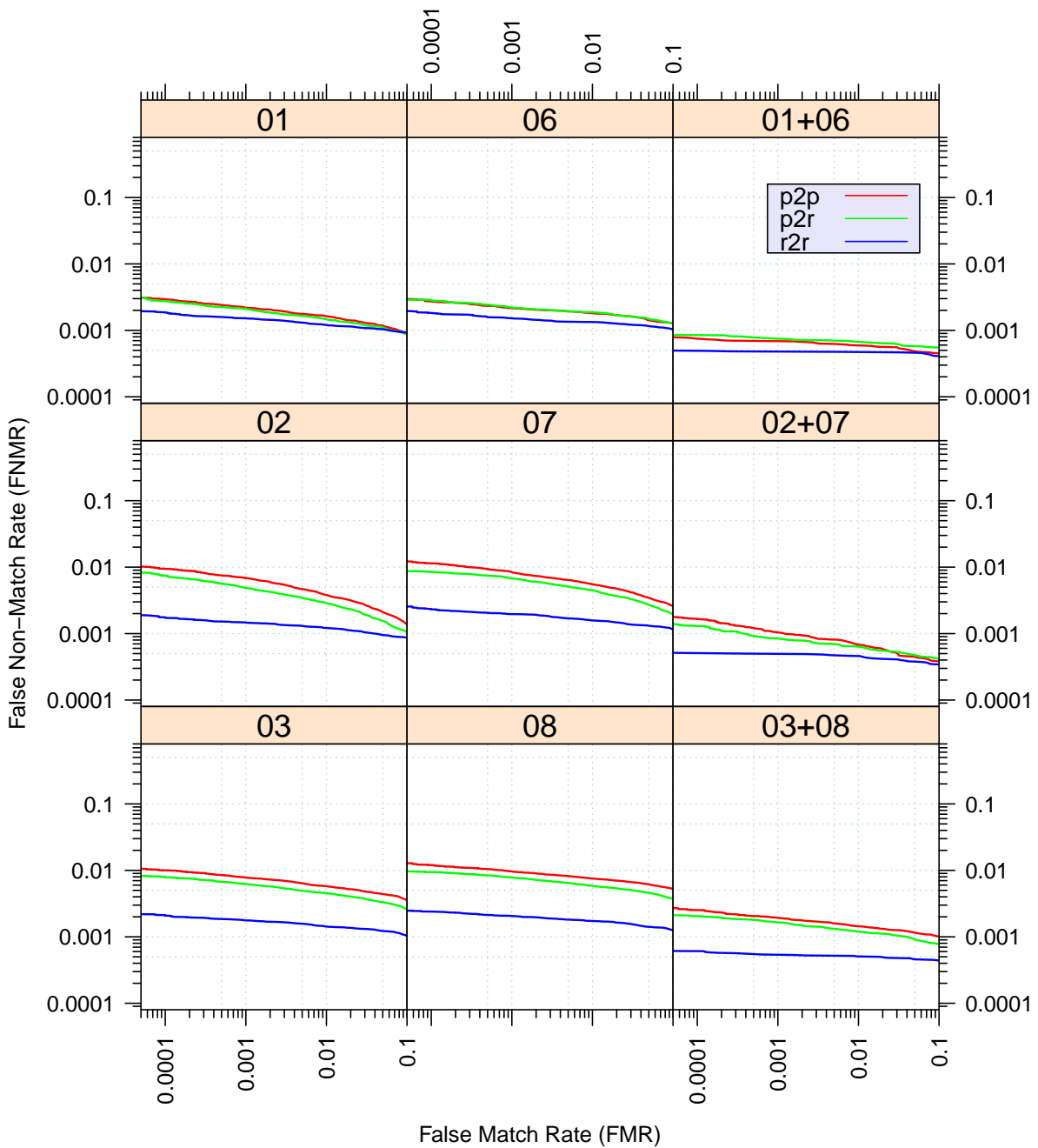


Figure 4: Full Evaluation – DET for all finger positions from AZLA

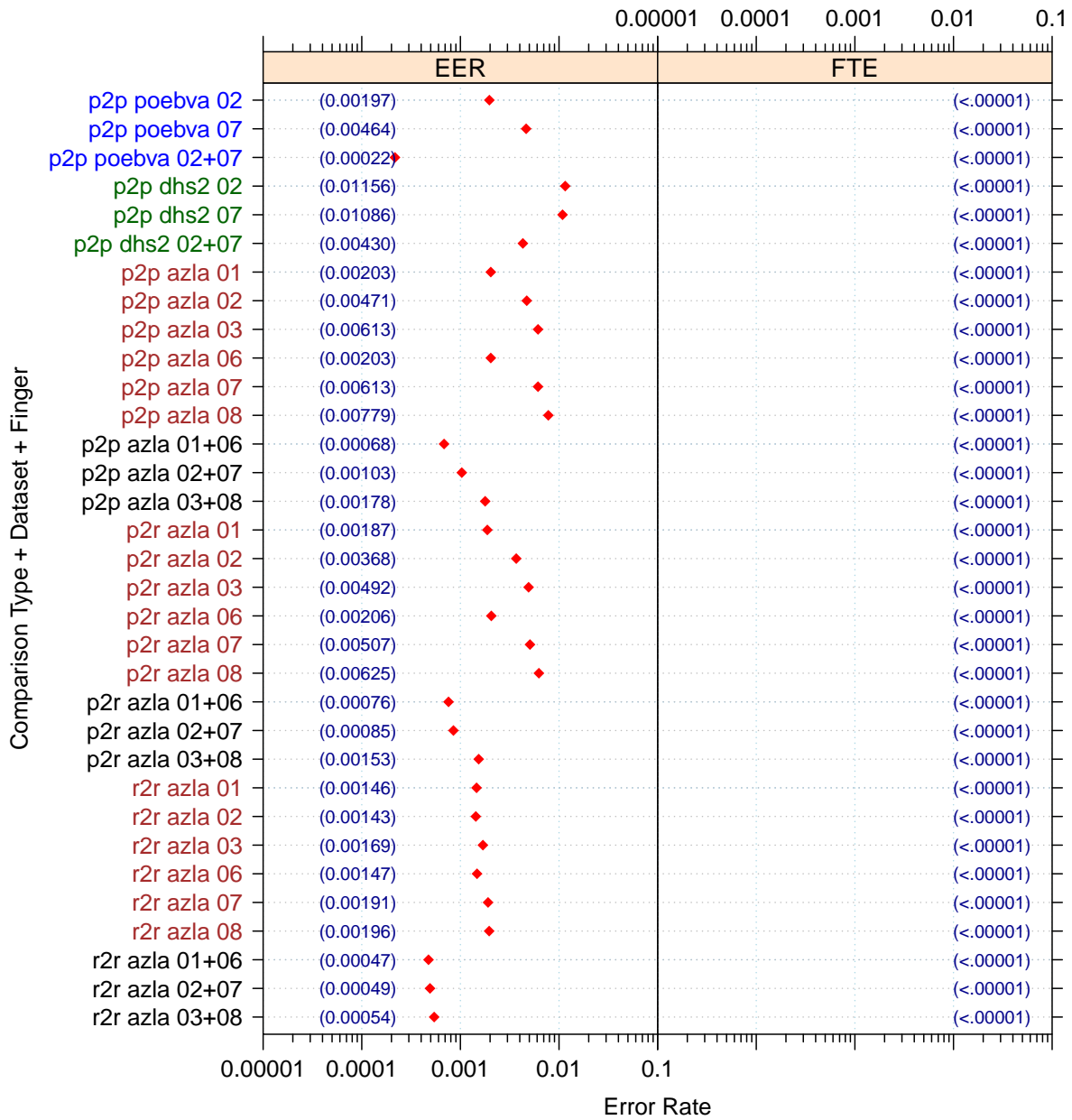


Figure 5: Full Evaluation – EERs and FTEs

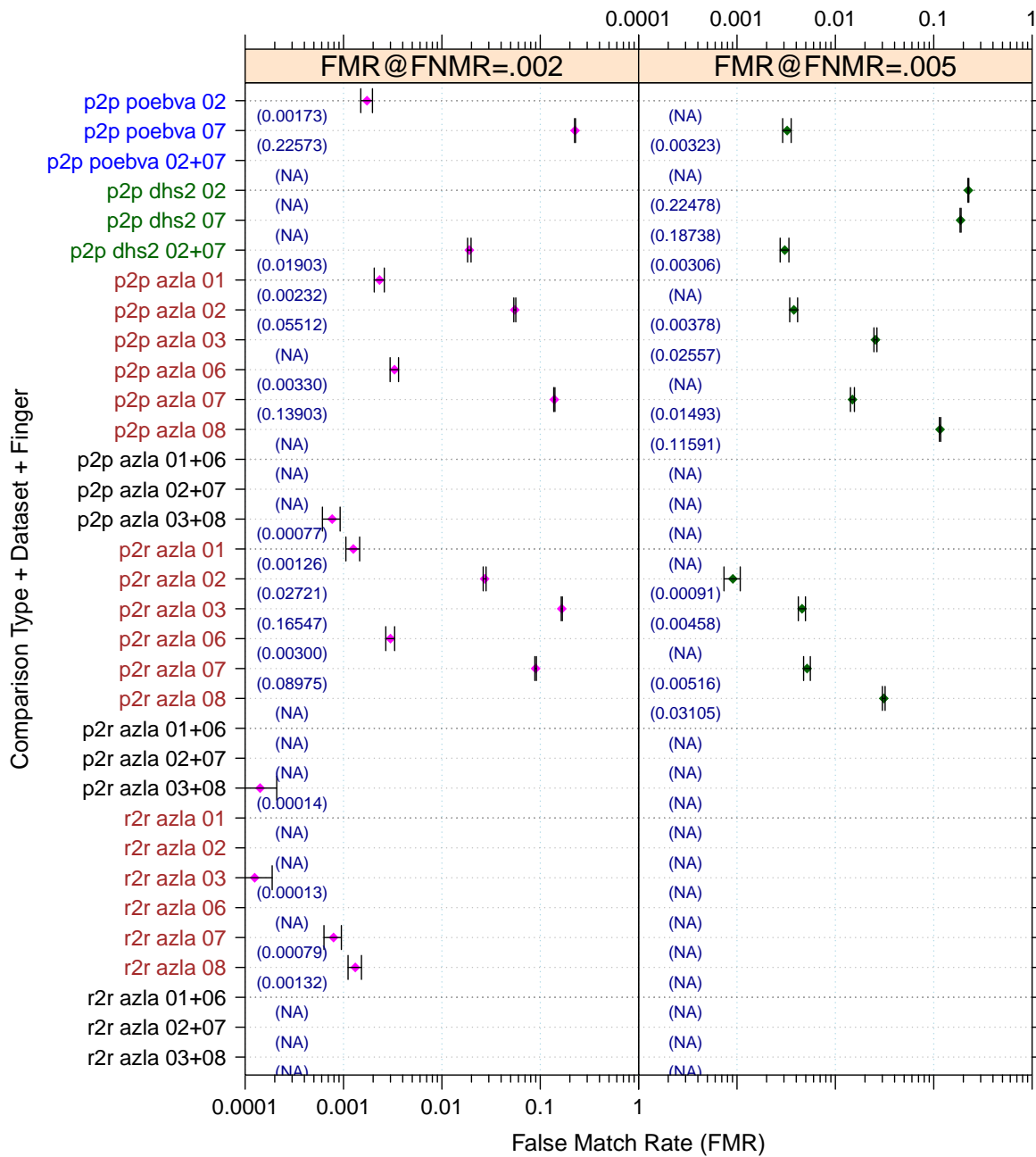


Figure 6: Full Evaluation – FMR@FNMR = (0.002, 0.005) and 95% Confidence Intervals

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

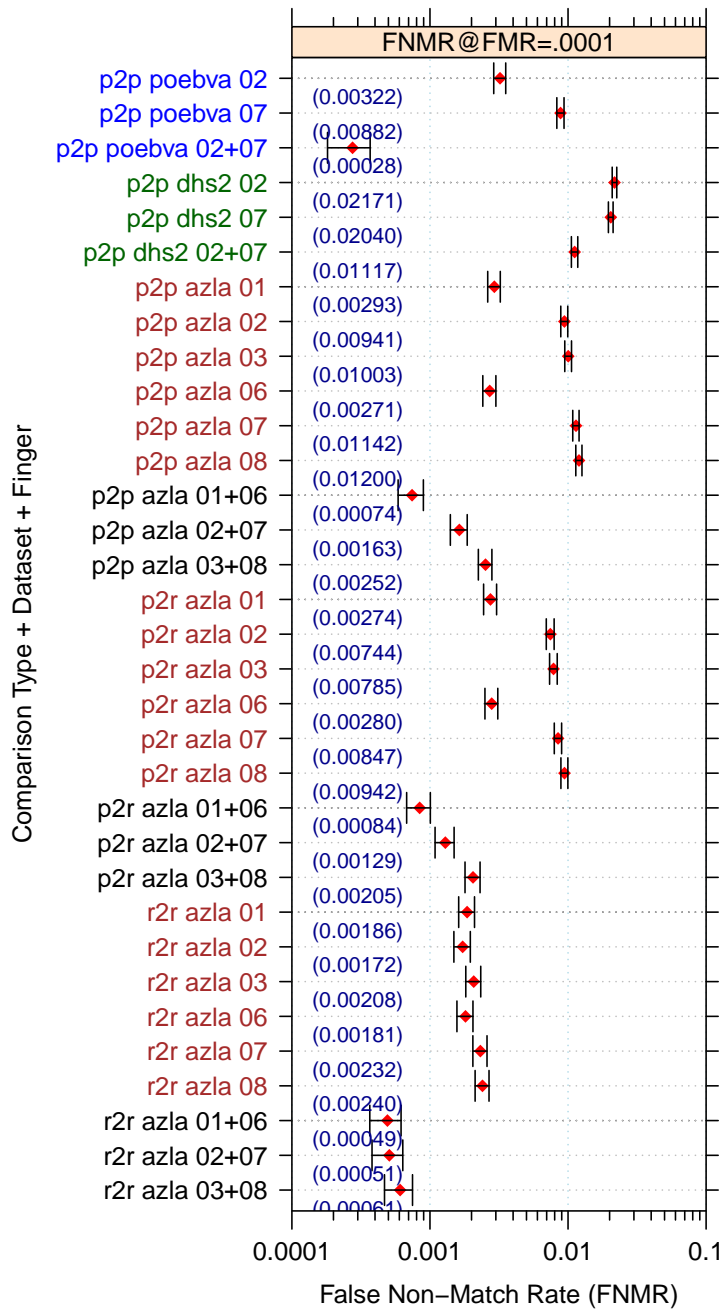


Figure 7: Full Evaluation – FNMR@FMR = 0.0001 and 95% Confidence Intervals

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>	0.0020	0.0000
	<i>R Index</i>	0.0047	0.0000
	<i>R Middle</i>	0.0061	0.0000
	<i>L Thumb</i>	0.0020	0.0000
	<i>L Index</i>	0.0061	0.0000
	<i>L Middle</i>	0.0078	0.0000
	<i>R/L Thumb</i>	0.0007	0.0000
	<i>R/L Index</i>	0.0010	0.0000
	<i>R/L Middle</i>	0.0018	0.0000
Plain to Rolled	<i>R Thumb</i>	0.0019	0.0000
	<i>R Index</i>	0.0037	0.0000
	<i>R Middle</i>	0.0049	0.0000
	<i>L Thumb</i>	0.0021	0.0000
	<i>L Index</i>	0.0051	0.0000
	<i>L Middle</i>	0.0063	0.0000
	<i>R/L Thumb</i>	0.0008	0.0000
	<i>R/L Index</i>	0.0008	0.0000
	<i>R/L Middle</i>	0.0015	0.0000
Rolled to Rolled	<i>R Thumb</i>	0.0015	0.0000
	<i>R Index</i>	0.0014	0.0000
	<i>R Middle</i>	0.0017	0.0000
	<i>L Thumb</i>	0.0015	0.0000
	<i>L Index</i>	0.0019	0.0000
	<i>L Middle</i>	0.0020	0.0000
	<i>R/L Thumb</i>	0.0005	0.0000
	<i>R/L Index</i>	0.0005	0.0000
	<i>R/L Middle</i>	0.0005	0.0000

Table 4: EER and FTE — Dataset AZLA

	EER	FTE Rate
<i>R Index</i>	0.0116	0.0000
<i>L Index</i>	0.0109	0.0000
<i>R/L Index</i>	0.0043	0.0000

Table 5: EER and FTE — Dataset DHS2

	EER	FTE Rate
<i>R Index</i>	0.0020	0.0000
<i>L Index</i>	0.0046	0.0000
<i>R/L Index</i>	0.0002	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>	0.0029 ±0.00031	0.0023 ±0.00027	n/a
	<i>R Index</i>	0.0094 ±0.00055	0.0551 ±0.00129	0.0038 ±0.00035
	<i>R Middle</i>	0.0100 ±0.00056	n/a	0.0256 ±0.00089
	<i>L Thumb</i>	0.0027 ±0.00029	0.0033 ±0.00032	n/a
	<i>L Index</i>	0.0114 ±0.00060	0.1390 ±0.00196	0.0149 ±0.00069
	<i>L Middle</i>	0.0120 ±0.00062	n/a	0.1159 ±0.00181
	<i>R/L Thumb</i>	0.0007 ±0.00015	n/a	n/a
	<i>R/L Index</i>	0.0016 ±0.00023	0.0000 ±0.00003	n/a
	<i>R/L Middle</i>	0.0025 ±0.00028	0.0008 ±0.00016	n/a
Plain to Rolled	<i>R Thumb</i>	0.0027 ±0.00030	0.0013 ±0.00020	n/a
	<i>R Index</i>	0.0074 ±0.00049	0.0272 ±0.00092	0.0009 ±0.00017
	<i>R Middle</i>	0.0078 ±0.00050	0.1655 ±0.00210	0.0046 ±0.00038
	<i>L Thumb</i>	0.0028 ±0.00030	0.0030 ±0.00031	n/a
	<i>L Index</i>	0.0085 ±0.00052	0.0897 ±0.00162	0.0052 ±0.00040
	<i>L Middle</i>	0.0094 ±0.00055	n/a	0.0311 ±0.00098
	<i>R/L Thumb</i>	0.0008 ±0.00016	n/a	n/a
	<i>R/L Index</i>	0.0013 ±0.00020	n/a	n/a
	<i>R/L Middle</i>	0.0021 ±0.00026	0.0001 ±0.00007	n/a
Rolled to Rolled	<i>R Thumb</i>	0.0019 ±0.00024	0.0000 ±0.00004	n/a
	<i>R Index</i>	0.0017 ±0.00023	0.0000 ±0.00003	n/a
	<i>R Middle</i>	0.0021 ±0.00026	0.0001 ±0.00006	n/a
	<i>L Thumb</i>	0.0018 ±0.00024	0.0000 ±0.00002	n/a
	<i>L Index</i>	0.0023 ±0.00027	0.0008 ±0.00016	n/a
	<i>L Middle</i>	0.0024 ±0.00028	0.0013 ±0.00020	n/a
	<i>R/L Thumb</i>	0.0005 ±0.00013	n/a	n/a
	<i>R/L Index</i>	0.0005 ±0.00013	n/a	n/a
	<i>R/L Middle</i>	0.0006 ±0.00014	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>	0.0217 ±0.00082	n/a	0.2248 ±0.00236
<i>L Index</i>	0.0204 ±0.00080	n/a	0.1874 ±0.00221
<i>R/L Index</i>	0.0112 ±0.00060	0.0190 ±0.00077	0.0031 ±0.00031

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>	0.0032 ±0.00032	0.0017 ±0.00023	n/a
<i>L Index</i>	0.0088 ±0.00053	0.2257 ±0.00236	0.0032 ±0.00032
<i>R/L Index</i>	0.0003 ±0.00009	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

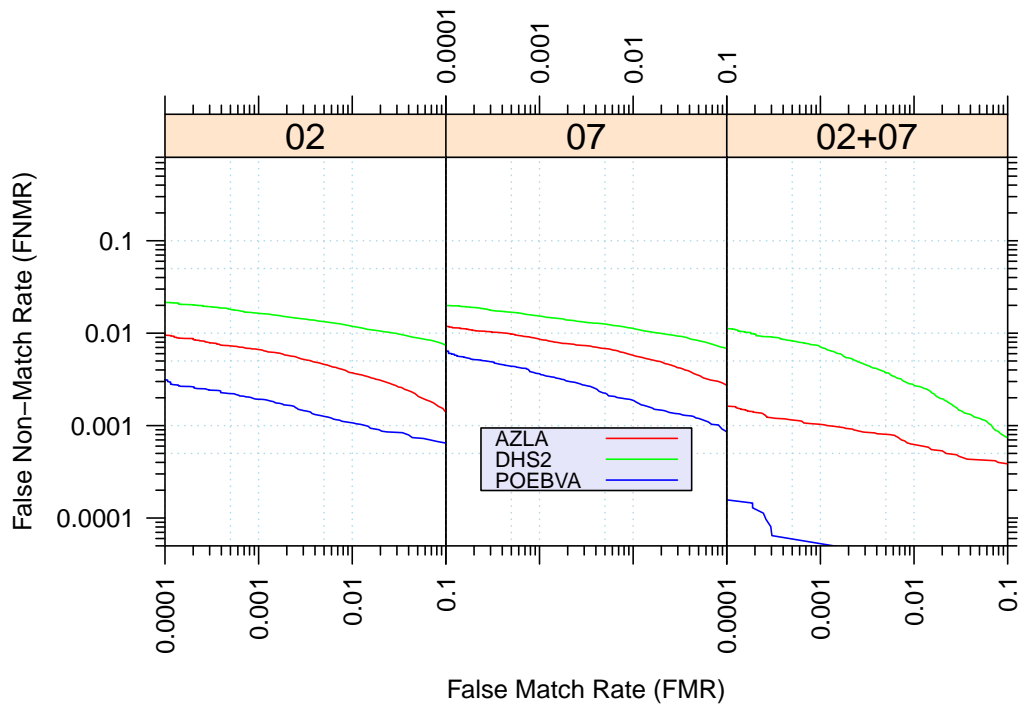


Figure 8: Original PFT Dataset – DET

		EER	FNMR@FMR = 0.0001	FMR@FNMR = 0.005
AZLA	<i>R Index</i>	0.0046	0.0095	0.0036
	<i>L Index</i>	0.0065	0.0118	0.0173
	<i>R/L Index</i>	0.0010	0.0016	n/a
DHS2	<i>R Index</i>	0.0115	0.0215	0.2395
	<i>L Index</i>	0.0110	0.0199	0.2289
	<i>R/L Index</i>	0.0040	0.0112	0.0024
POEBVA	<i>R Index</i>	0.0017	0.0031	n/a
	<i>L Index</i>	0.0028	0.0064	0.0003
	<i>R/L Index</i>	0.0001	0.0001	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.