

Participant Results

Proprietary Fingerprint Template Evaluation II (PFT-II)

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1 1K Sample Evaluation

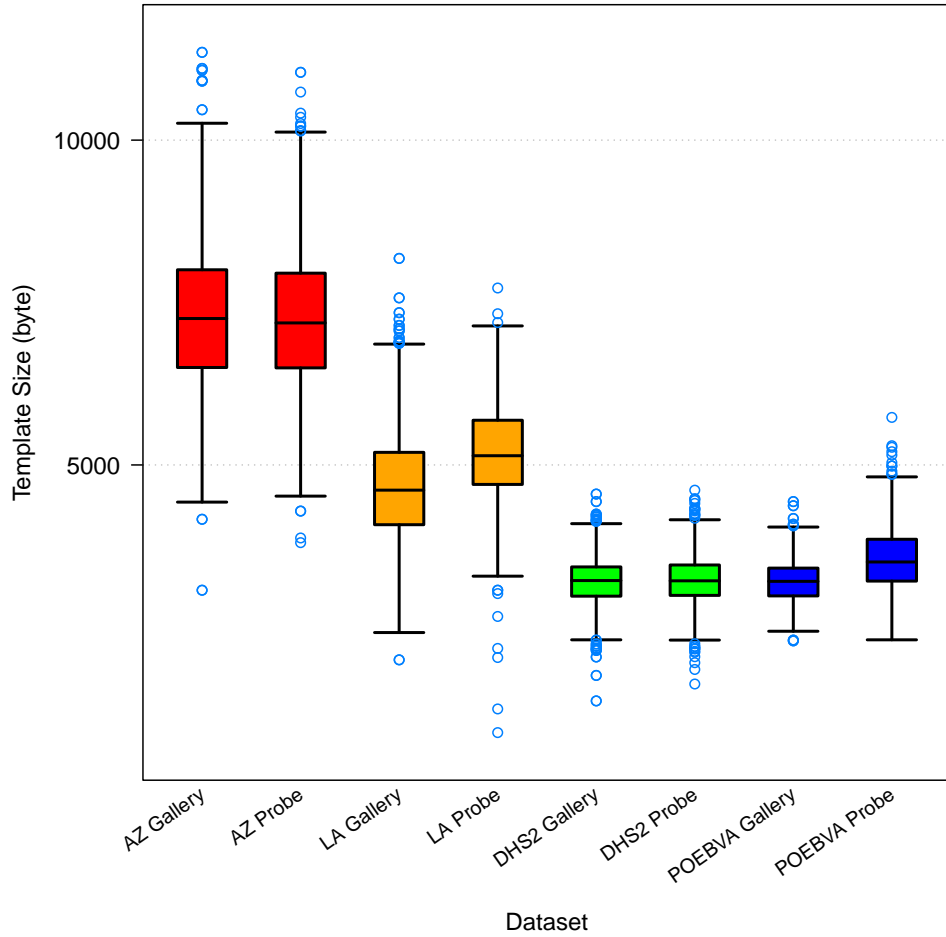


Figure 1: 1K Sample Evaluation – Template Size Distribution

	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>	11352	11044	8180	7724	4552	4612	4436	5732
75%	8004	7952	5194	5688	3430	3460	3412	3856
<i>Median</i>	7254	7186	4612	5142	3220	3216	3208	3506
25%	6500	6494	4080	4700	2980	2992	2984	3212
<i>Minimum</i>	3072	3804	2000	880	1368	1628	2292	2308

Table 1: Sample Dataset — Template Size Distribution

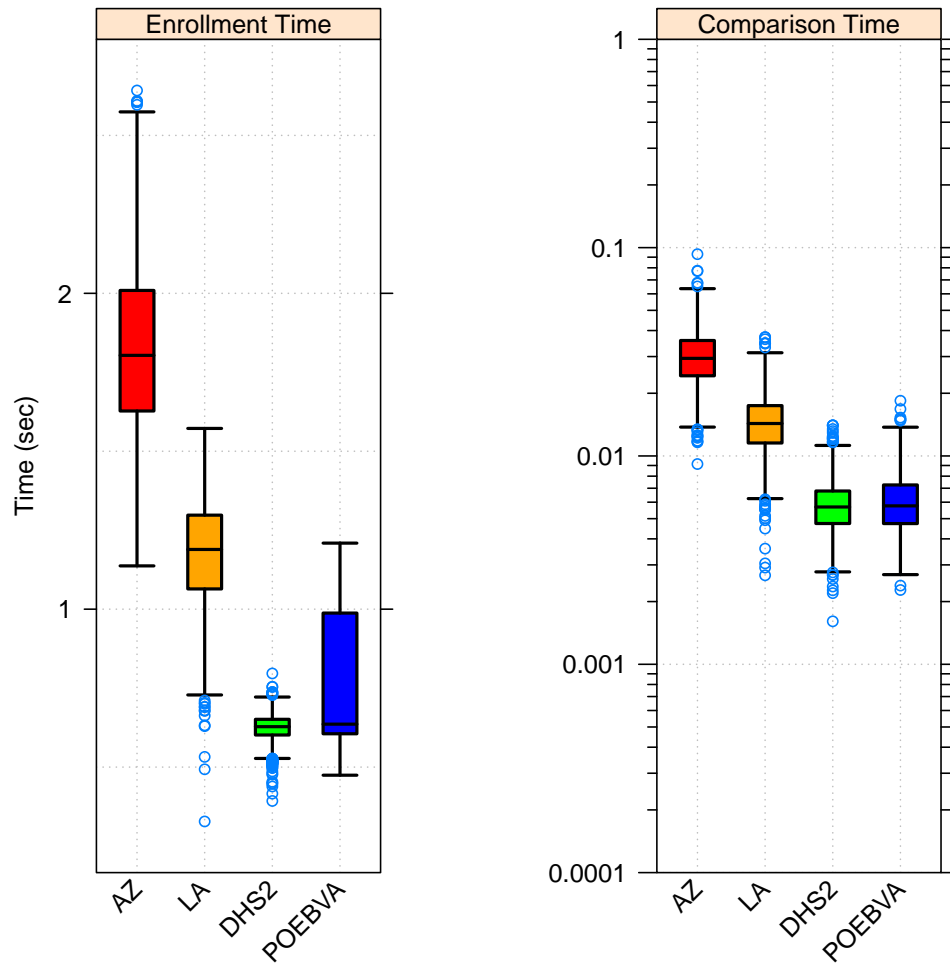


Figure 2: 1K Sample Evaluation – Enrollment and Comparison Timing

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	2.642	1.572	0.797	1.209
<i>75%</i>	2.009	1.298	0.651	0.988
<i>Median</i>	1.804	1.189	0.628	0.636
<i>25%</i>	1.627	1.064	0.602	0.605
<i>Minimum</i>	1.137	0.328	0.393	0.474

Table 2: Enrollment Times (sec)

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	0.093	0.037	0.014	0.018
<i>75%</i>	0.036	0.017	0.007	0.007
<i>Median</i>	0.029	0.014	0.006	0.006
<i>25%</i>	0.024	0.012	0.005	0.005
<i>Minimum</i>	0.009	0.003	0.002	0.002

Table 3: Comparison Times (sec)

2 Full Evaluation

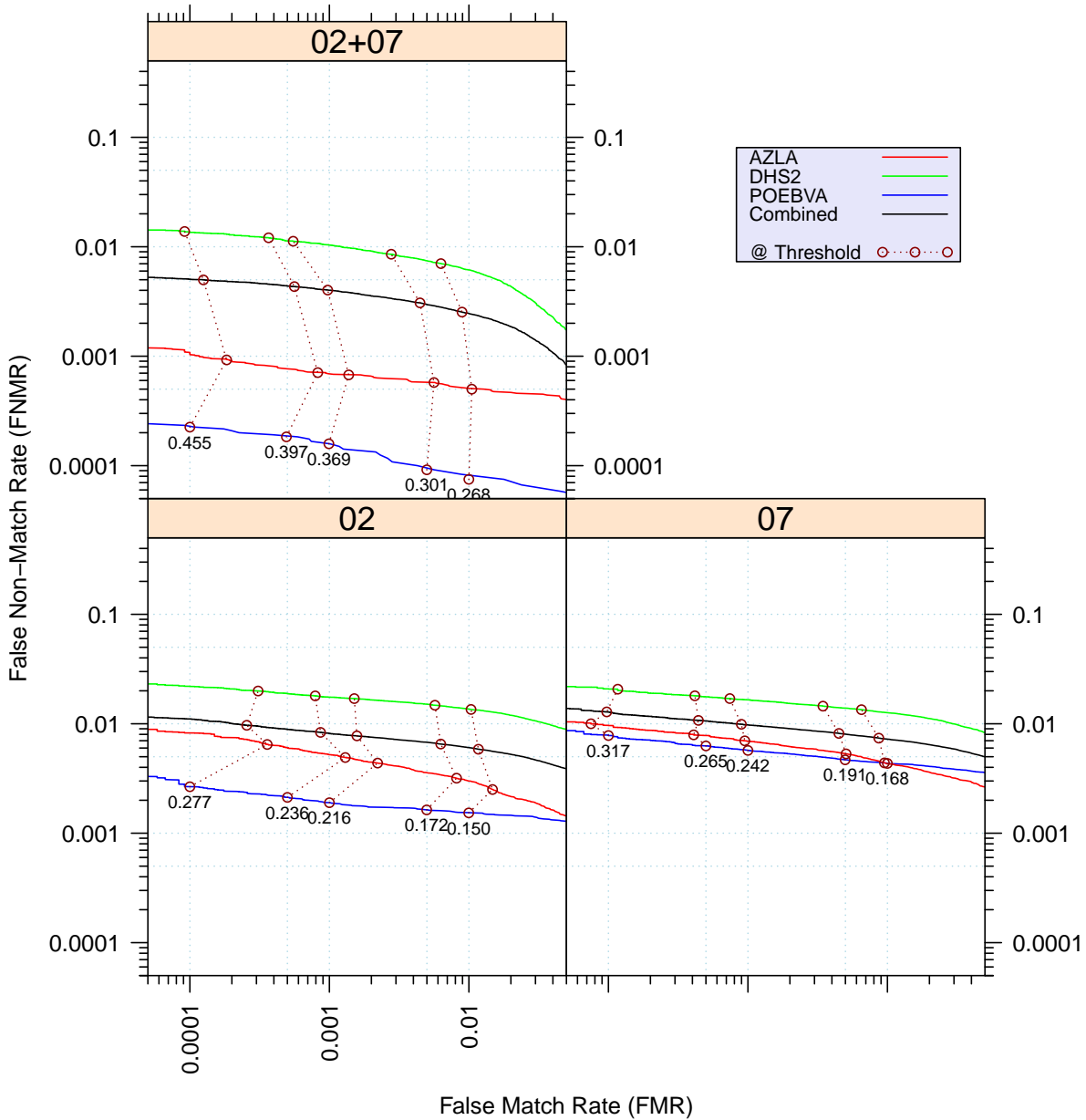


Figure 3: Full Evaluation – DET for POEBVA, DHS2, AZLA, and combined from R Index, L Index, and R/L Index

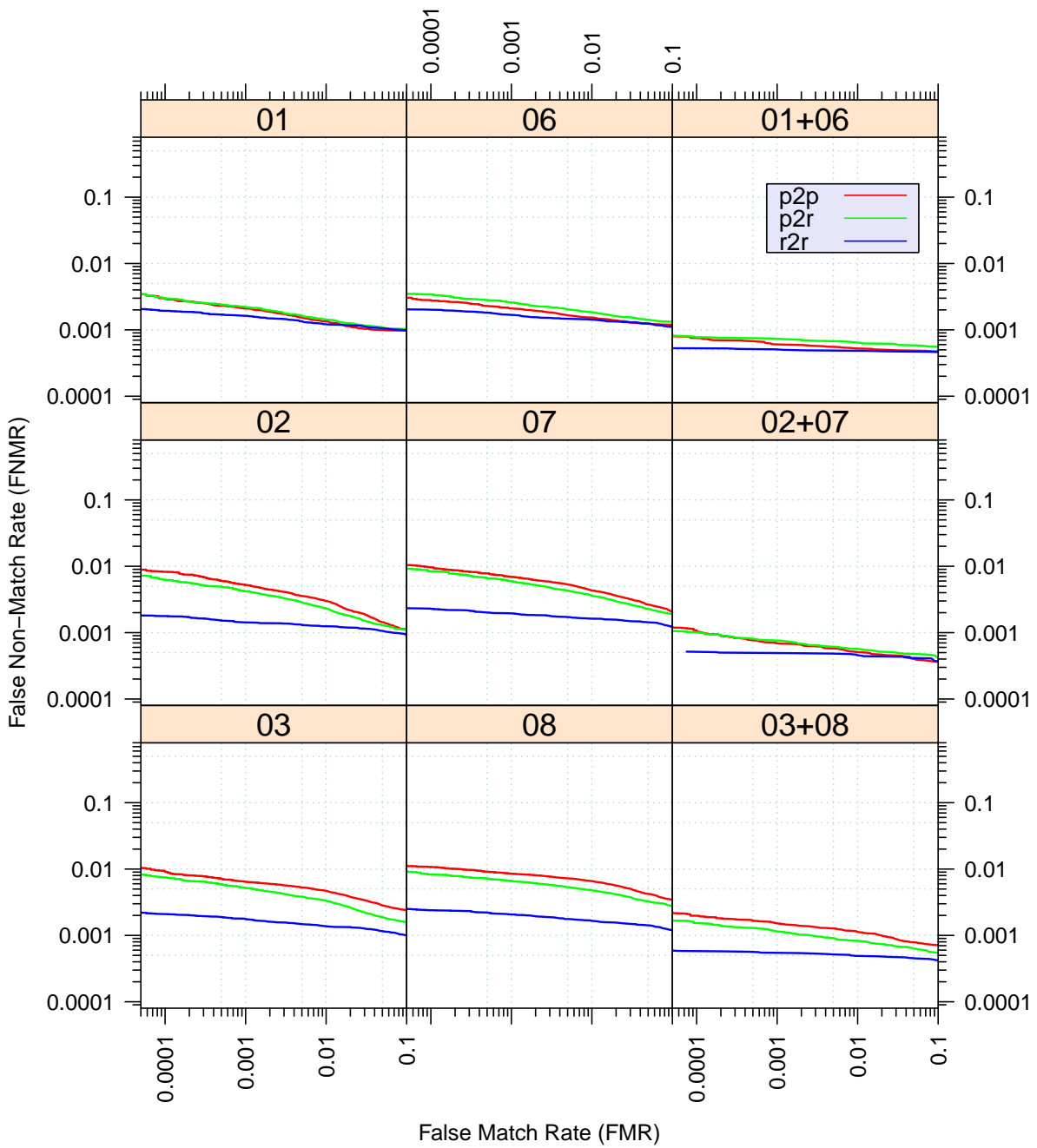


Figure 4: Full Evaluation – DET for all finger positions from AZLA

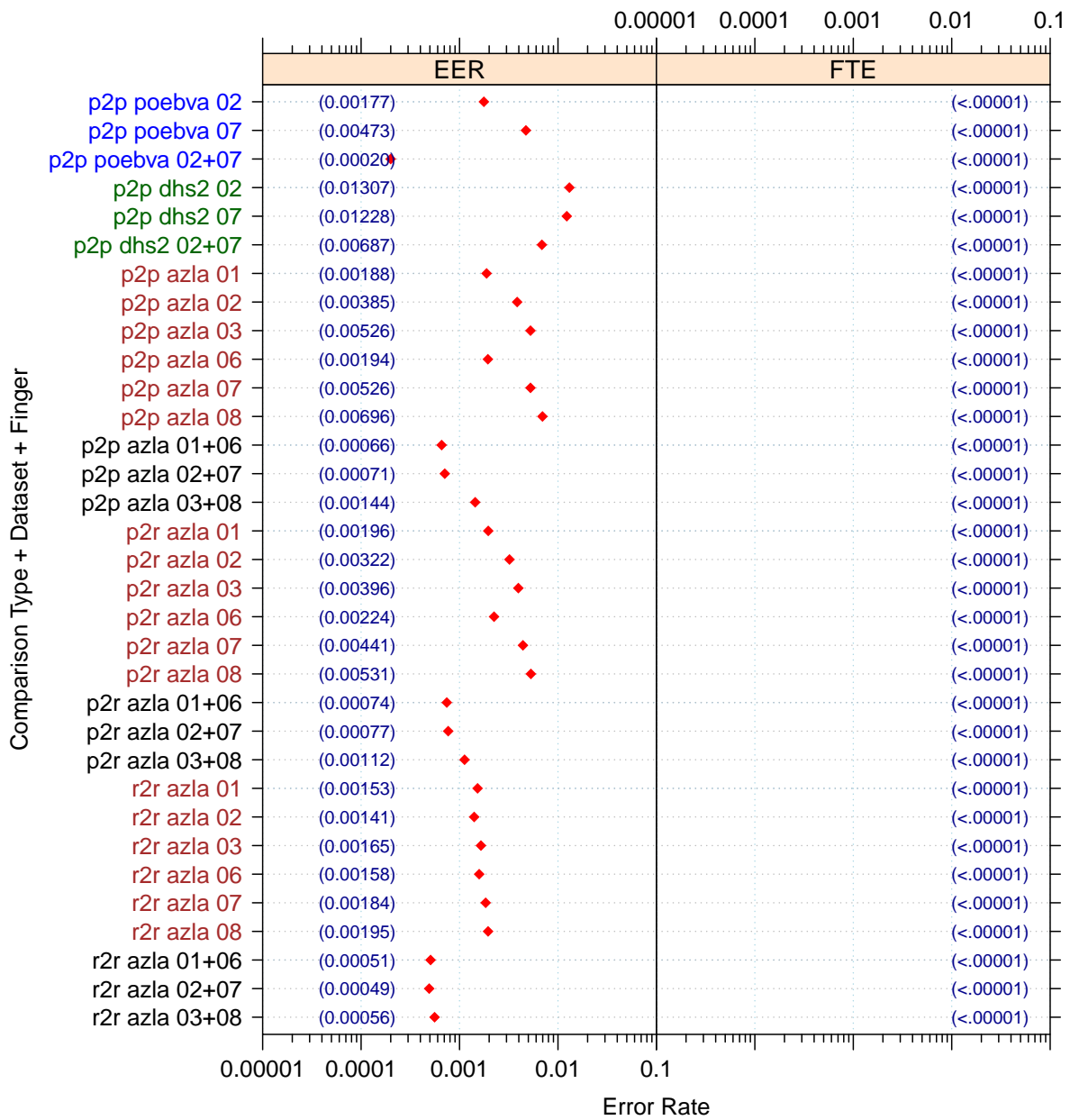


Figure 5: Full Evaluation – EERs and FTEs

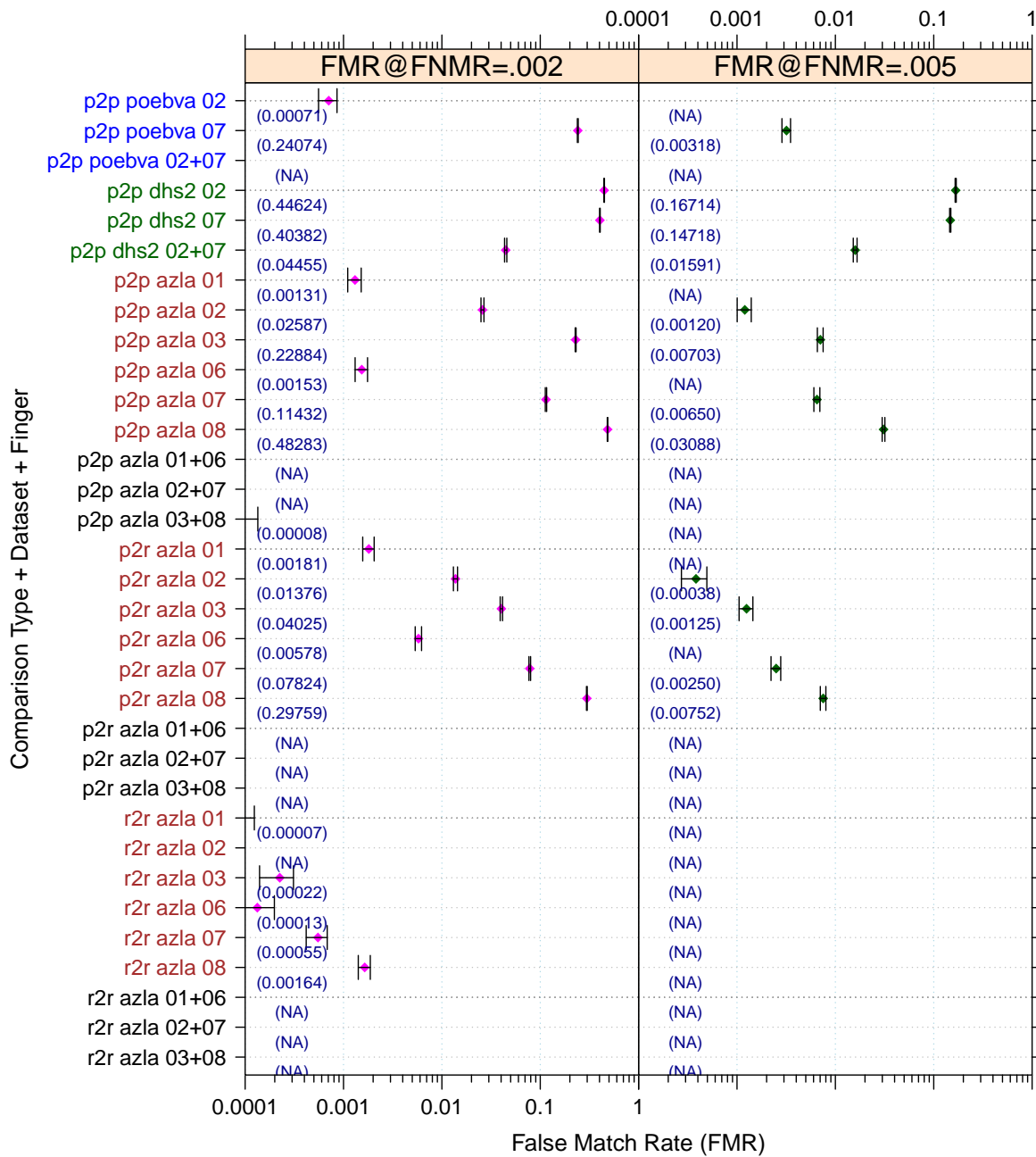


Figure 6: Full Evaluation – FMR@FNMR = (0.002, 0.005) and 95% Confidence Intervals

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

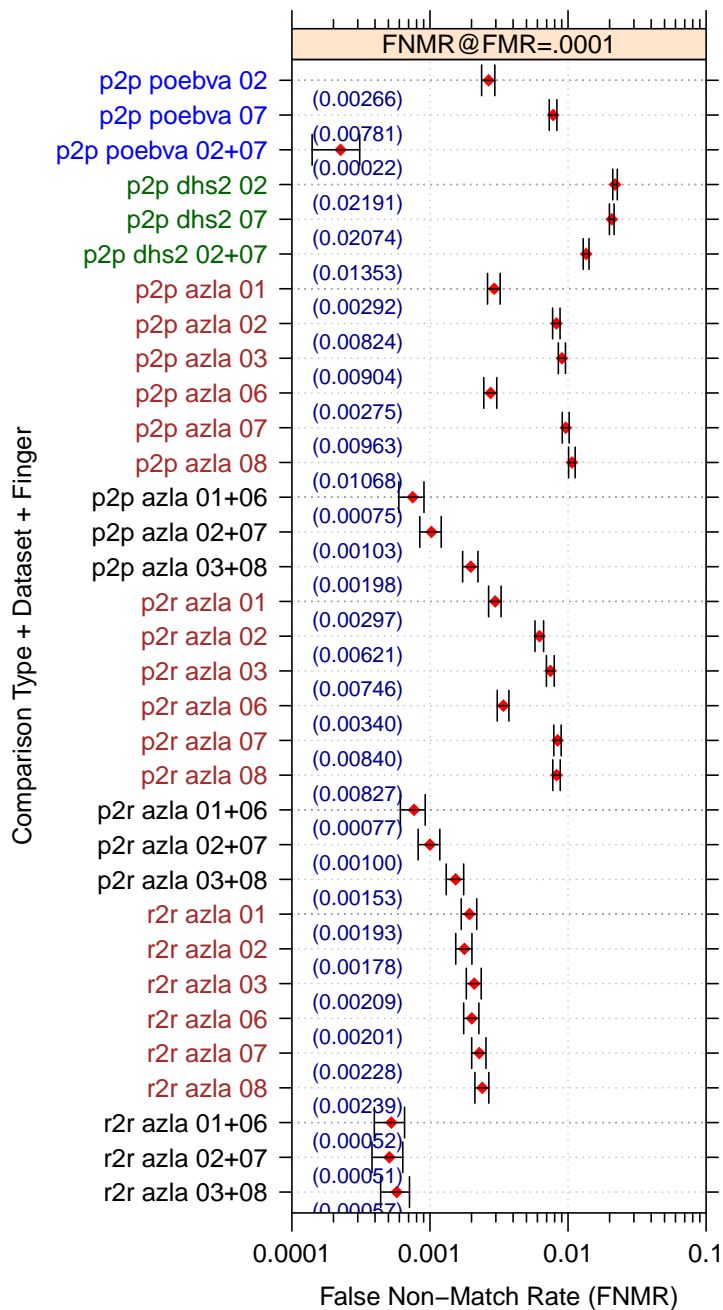


Figure 7: Full Evaluation – FNMR@FMR = 0.0001 and 95% Confidence Intervals

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>	0.0019	0.0000
	<i>R Index</i>	0.0039	0.0000
	<i>R Middle</i>	0.0053	0.0000
	<i>L Thumb</i>	0.0019	0.0000
	<i>L Index</i>	0.0053	0.0000
	<i>L Middle</i>	0.0070	0.0000
	<i>R/L Thumb</i>	0.0007	0.0000
	<i>R/L Index</i>	0.0007	0.0000
	<i>R/L Middle</i>	0.0014	0.0000
Plain to Rolled	<i>R Thumb</i>	0.0020	0.0000
	<i>R Index</i>	0.0032	0.0000
	<i>R Middle</i>	0.0040	0.0000
	<i>L Thumb</i>	0.0022	0.0000
	<i>L Index</i>	0.0044	0.0000
	<i>L Middle</i>	0.0053	0.0000
	<i>R/L Thumb</i>	0.0007	0.0000
	<i>R/L Index</i>	0.0008	0.0000
	<i>R/L Middle</i>	0.0011	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>	0.0016	0.0000
	<i>L Thumb</i>	0.0016	0.0000
	<i>L Index</i>	0.0018	0.0000
	<i>L Middle</i>	0.0019	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>	0.0006	0.0000

Table 4: EER and FTE — Dataset AZLA

	EER	FTE Rate
<i>R Index</i>	0.0131	0.0000
<i>L Index</i>	0.0123	0.0000
<i>R/L Index</i>	0.0069	0.0000

Table 5: EER and FTE — Dataset DHS2

	EER	FTE Rate
<i>R Index</i>	0.0018	0.0000
<i>L Index</i>	0.0047	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 ±0.00030	0.0013 ±0.00020	n/a
	<i>R Index</i>	0.0082 ±0.00051	0.0259 ±0.00090	0.0012 ±0.00020
	<i>R Middle</i>	0.0090 ±0.00054	0.2288 ±0.00238	0.0070 ±0.00047
	<i>L Thumb</i>	0.0027 ±0.00030	0.0015 ±0.00022	n/a
	<i>L Index</i>	0.0096 ±0.00055	0.1143 ±0.00180	0.0065 ±0.00046
	<i>L Middle</i>	0.0107 ±0.00058	0.4828 ±0.00283	0.0309 ±0.00098
	<i>R/L Thumb</i>	0.0008 ±0.00015	n/a	n/a
	<i>R/L Index</i>	0.0010 ±0.00018	n/a	n/a
	<i>R/L Middle</i>	0.0020 ±0.00025	n/a	n/a
Plain to Rolled	<i>R Thumb</i>	0.0030 ±0.00031	0.0018 ±0.00024	n/a
	<i>R Index</i>	0.0062 ±0.00044	0.0138 ±0.00066	0.0004 ±0.00011
	<i>R Middle</i>	0.0075 ±0.00049	0.0403 ±0.00111	0.0013 ±0.00020
	<i>L Thumb</i>	0.0034 ±0.00033	0.0058 ±0.00043	n/a
	<i>L Index</i>	0.0084 ±0.00052	0.0782 ±0.00152	0.0025 ±0.00028
	<i>L Middle</i>	0.0083 ±0.00051	0.2976 ±0.00259	0.0075 ±0.00049
	<i>R/L Thumb</i>	0.0008 ±0.00016	n/a	n/a
	<i>R/L Index</i>	0.0010 ±0.00018	n/a	n/a
	<i>R/L Middle</i>	0.0015 ±0.00022	n/a	n/a
Rolled to Rolled	<i>R Thumb</i>	0.0019 ±0.00025	n/a	n/a
	<i>R Index</i>	0.0018 ±0.00024	n/a	n/a
	<i>R Middle</i>	0.0021 ±0.00026	0.0002 ±0.00009	n/a
	<i>L Thumb</i>	0.0020 ±0.00025	0.0001 ±0.00006	n/a
	<i>L Index</i>	0.0023 ±0.00027	0.0006 ±0.00013	n/a
	<i>L Middle</i>	0.0024 ±0.00028	0.0016 ±0.00023	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>	0.0219 ±0.00083	0.4462 ±0.00281	0.1671 ±0.00211
<i>L Index</i>	0.0207 ±0.00081	0.4038 ±0.00278	0.1472 ±0.00200
<i>R/L Index</i>	0.0135 ±0.00065	0.0445 ±0.00117	0.0159 ±0.00071

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

	FNMR@FMR = 0.0001	FMR@FNMR = 0.002	FMR@FNMR = 0.005
<i>R Index</i>	0.0027 ±0.00029	0.0007 ±0.00015	n/a
<i>L Index</i>	0.0078 ±0.00050	0.2407 ±0.00242	0.0032 ±0.00032
<i>R/L Index</i>	0.0002 ±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

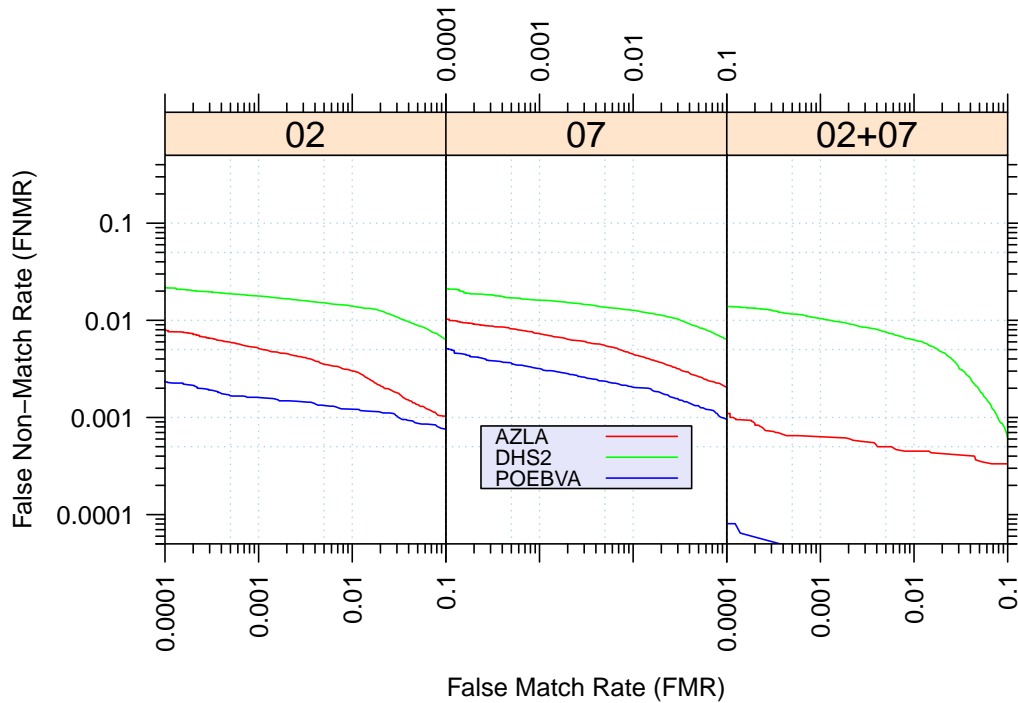


Figure 8: Original PFT Dataset – DET

		EER	FNMR@FMR = 0.0001	FMR@FNMR = 0.005
AZLA	<i>R Index</i>	0.0039	0.0078	0.0011
	<i>L Index</i>	0.0054	0.0103	0.0073
	<i>R/L Index</i>	0.0006	0.0011	n/a
DHS2	<i>R Index</i>	0.0133	0.0216	0.1517
	<i>L Index</i>	0.0122	0.0211	0.1493
	<i>R/L Index</i>	0.0069	0.0139	0.0180
POEBVA	<i>R Index</i>	0.0015	0.0023	n/a
	<i>L Index</i>	n/a	0.0051	0.0001
	<i>R/L Index</i>	n/a	n/a	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.