

Participant Results

Proprietary Fingerprint Template Evaluation II (PFT-II)

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1 1K Sample Evaluation

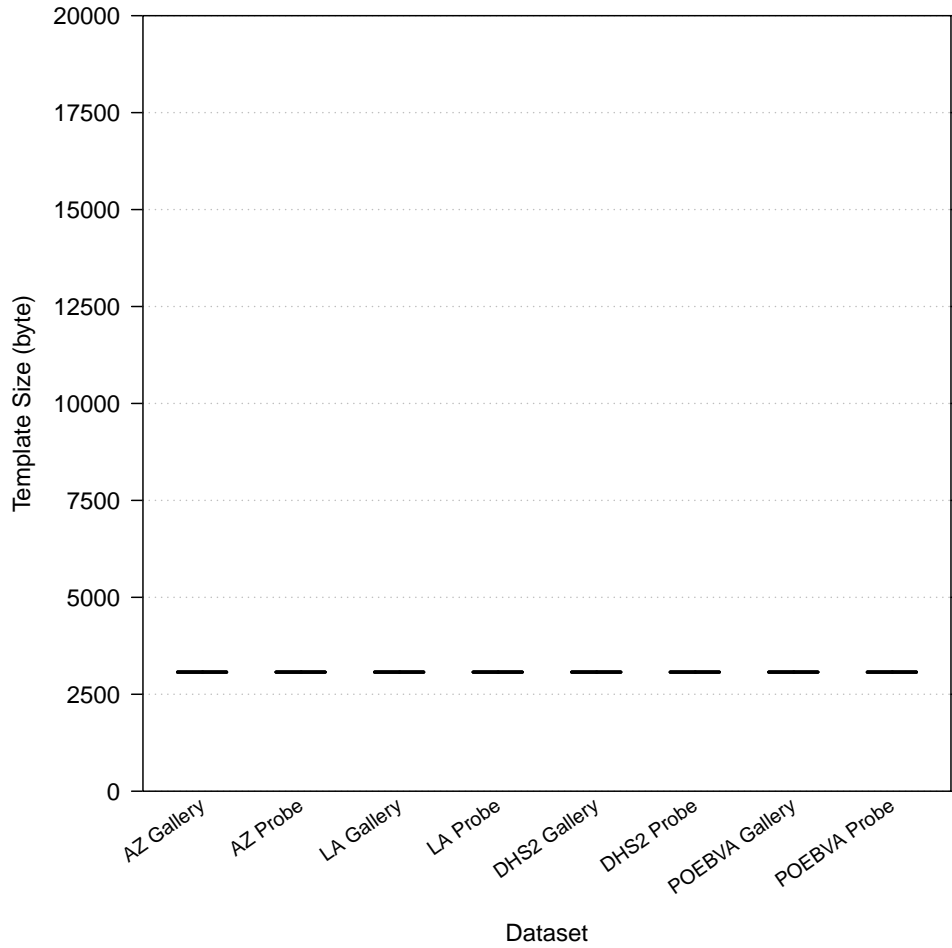


Figure 1: 1K Sample Evaluation – Template Size Distribution

	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>	3072	3072	3072	3072	3072	3072	3072	3072
75%	3072	3072	3072	3072	3072	3072	3072	3072
<i>Median</i>	3072	3072	3072	3072	3072	3072	3072	3072
25%	3072	3072	3072	3072	3072	3072	3072	3072
<i>Minimum</i>	3072	3072	3072	3072	3072	3072	3072	3072

Table 1: Sample Dataset — Template Size Distribution

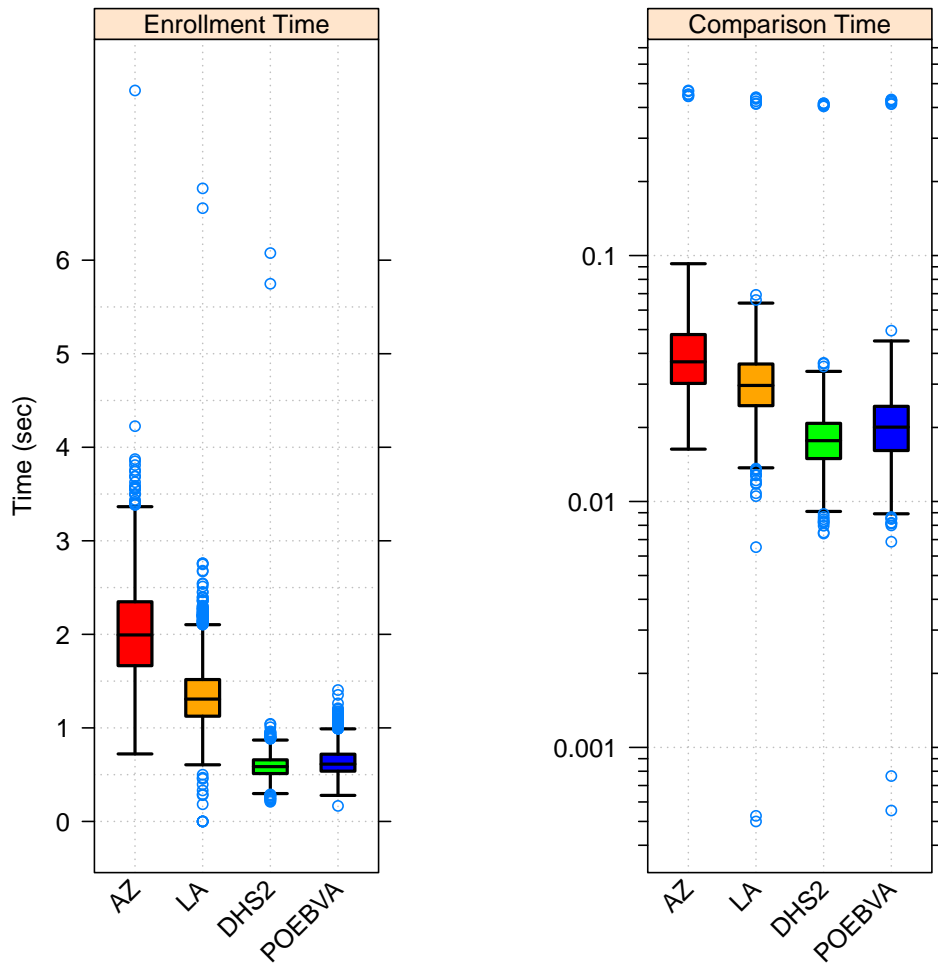


Figure 2: 1K Sample Evaluation – Enrollment and Comparison Timing

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	7.814	6.768	6.076	1.405
<i>75%</i>	2.348	1.517	0.659	0.719
<i>Median</i>	1.994	1.308	0.586	0.613
<i>25%</i>	1.665	1.125	0.512	0.538
<i>Minimum</i>	0.722	0.000	0.210	0.166

Table 2: Enrollment Times (sec)

	AZ	LA	DHS2	POEBVA
<i>Maximum</i>	0.469	0.440	0.416	0.431
<i>75%</i>	0.048	0.036	0.021	0.024
<i>Median</i>	0.037	0.030	0.018	0.020
<i>25%</i>	0.030	0.025	0.015	0.016
<i>Minimum</i>	0.016	0.001	0.007	0.001

Table 3: Comparison Times (sec)

2 Full Evaluation

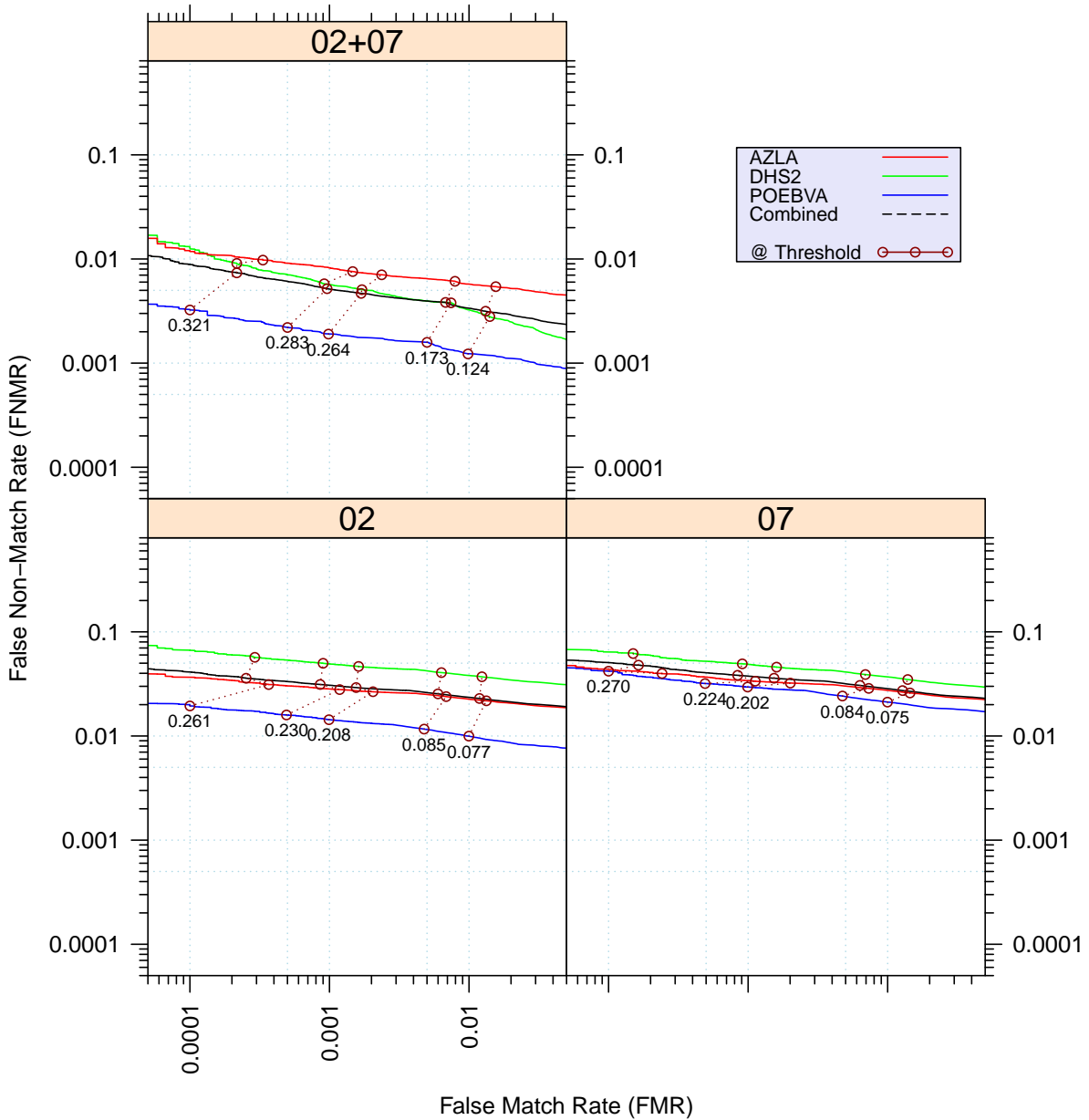


Figure 3: Full Evaluation – DET for POEBVA, DHS2, AZLA, and combined from R Index, L Index, and R/L Index

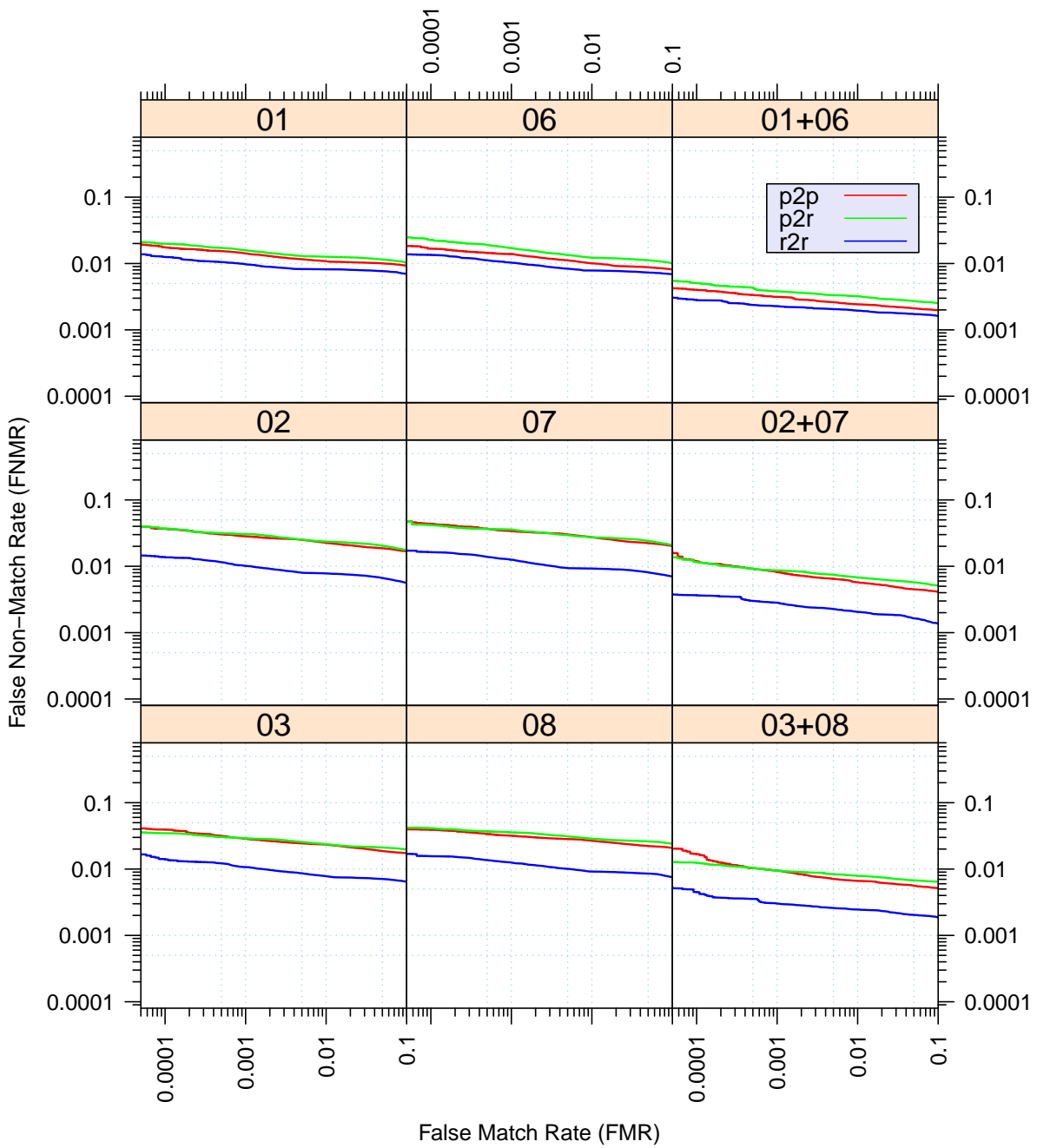


Figure 4: Full Evaluation – DET for all finger positions from AZLA

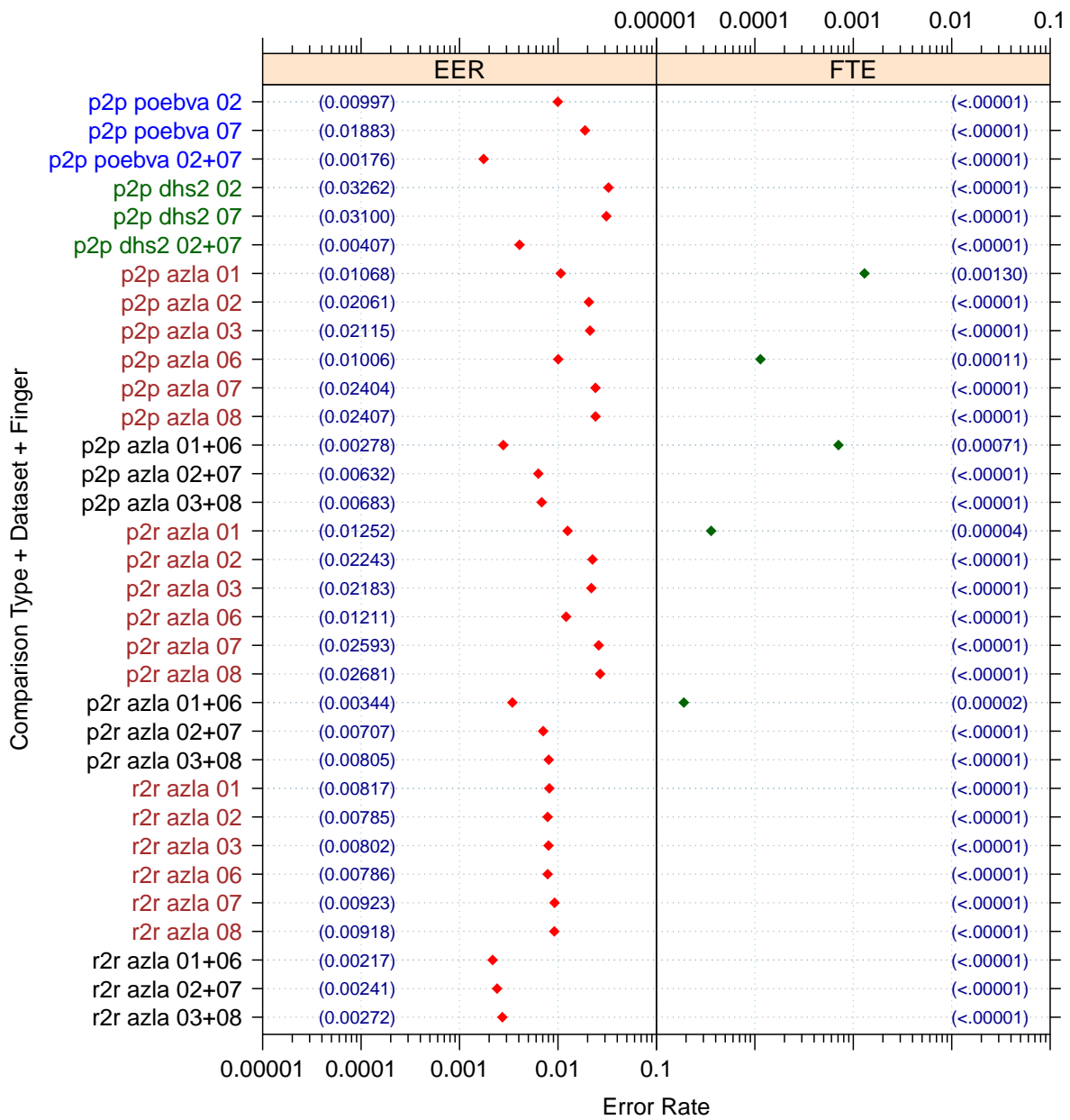


Figure 5: Full Evaluation – EERs and FTEs

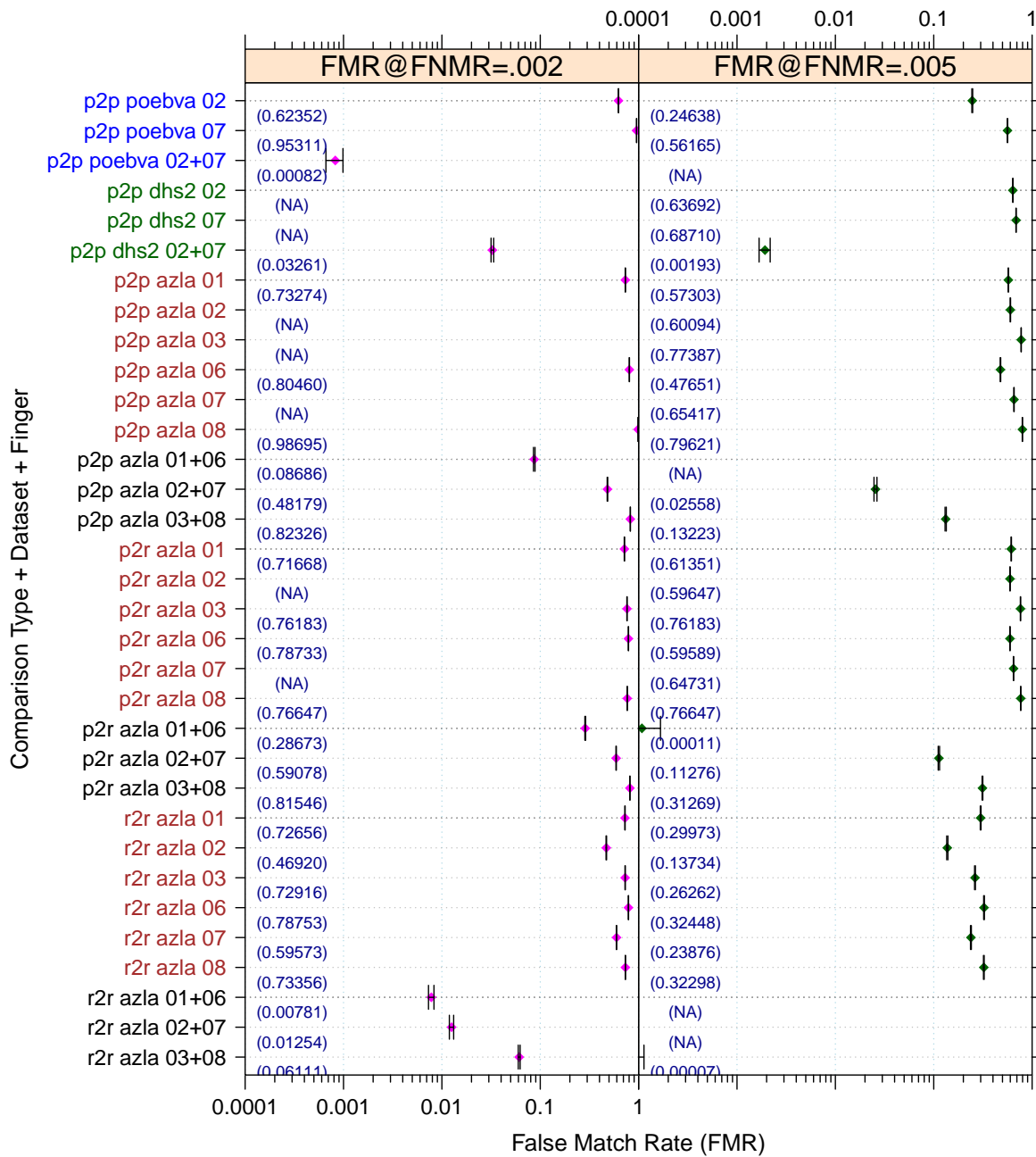


Figure 6: Full Evaluation – FMR@FNMR = (0.002, 0.005) and 95% Confidence Intervals

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

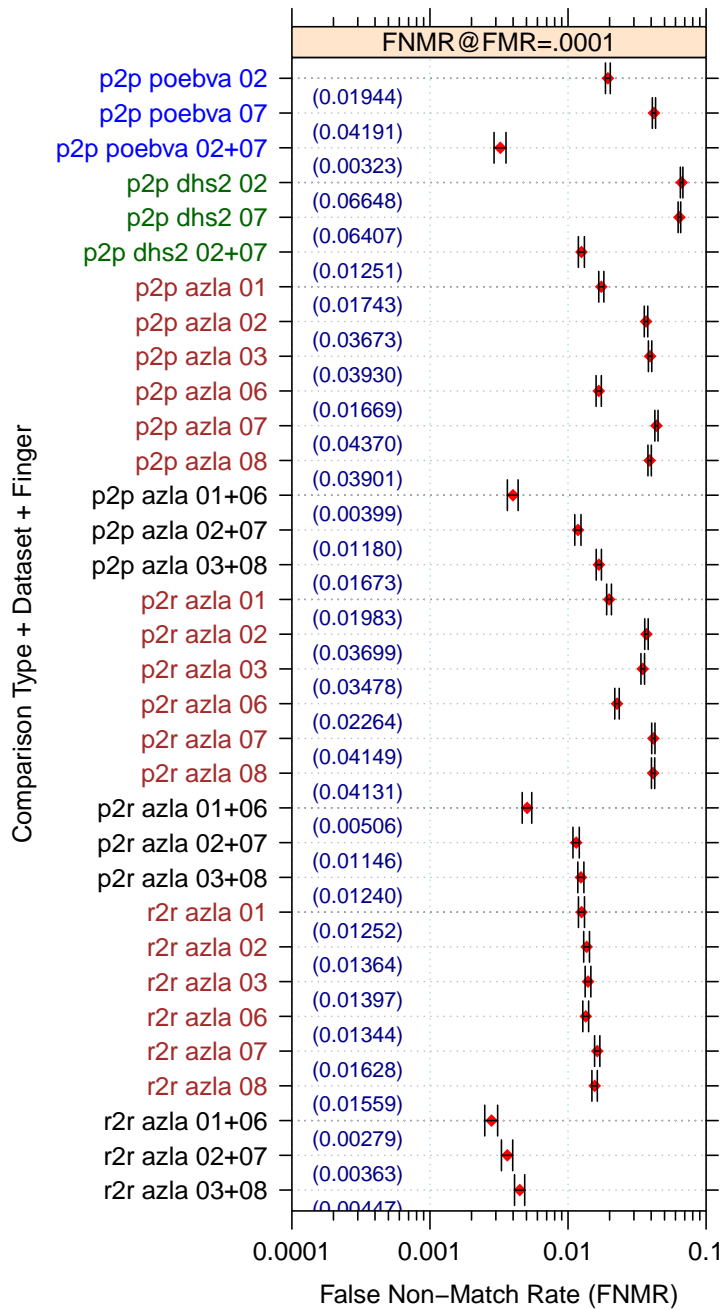


Figure 7: Full Evaluation – FNMR@FMR = 0.0001 and 95% Confidence Intervals

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>	0.0107	0.0013
	<i>R Index</i>	0.0206	0.0000
	<i>R Middle</i>	0.0211	0.0000
	<i>L Thumb</i>	0.0101	0.0001
	<i>L Index</i>	0.0240	0.0000
	<i>L Middle</i>	0.0241	0.0000
	<i>R/L Thumb</i>	0.0028	0.0007
	<i>R/L Index</i>	0.0063	0.0000
	<i>R/L Middle</i>	0.0068	0.0000
Plain to Rolled	<i>R Thumb</i>	0.0125	0.0000
	<i>R Index</i>	0.0224	0.0000
	<i>R Middle</i>	0.0218	0.0000
	<i>L Thumb</i>	0.0121	0.0000
	<i>L Index</i>	0.0259	0.0000
	<i>L Middle</i>	0.0268	0.0000
	<i>R/L Thumb</i>	0.0034	0.0000
	<i>R/L Index</i>	0.0071	0.0000
	<i>R/L Middle</i>	0.0080	0.0000
Rolled to Rolled	<i>R Thumb</i>	0.0082	0.0000
	<i>R Index</i>	0.0078	0.0000
	<i>R Middle</i>	0.0080	0.0000
	<i>L Thumb</i>	0.0079	0.0000
	<i>L Index</i>	0.0092	0.0000
	<i>L Middle</i>	0.0092	0.0000
	<i>R/L Thumb</i>	0.0022	0.0000
	<i>R/L Index</i>	0.0024	0.0000
	<i>R/L Middle</i>	0.0027	0.0000

Table 4: EER and FTE — Dataset AZLA

	EER	FTE Rate
<i>R Index</i>	0.0326	0.0000
<i>L Index</i>	0.0310	0.0000
<i>R/L Index</i>	0.0041	0.0000

Table 5: EER and FTE — Dataset DHS2

	EER	FTE Rate
<i>R Index</i>	0.0100	0.0000
<i>L Index</i>	0.0188	0.0000
<i>R/L Index</i>	0.0018	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>	0.0174 ±0.00074	0.7327 ±0.00250	0.5730 ±0.00280
	<i>R Index</i>	0.0367 ±0.00106	n/a	0.6009 ±0.00277
	<i>R Middle</i>	0.0393 ±0.00110	n/a	0.7739 ±0.00237
	<i>L Thumb</i>	0.0167 ±0.00072	0.8046 ±0.00224	0.4765 ±0.00283
	<i>L Index</i>	0.0437 ±0.00116	n/a	0.6542 ±0.00269
	<i>L Middle</i>	0.0390 ±0.00110	0.9869 ±0.00064	0.7962 ±0.00228
	<i>R/L Thumb</i>	0.0040 ±0.00036	0.0869 ±0.00159	0.0000 ±0.00002
	<i>R/L Index</i>	0.0118 ±0.00061	0.4818 ±0.00283	0.0256 ±0.00089
	<i>R/L Middle</i>	0.0167 ±0.00073	0.8233 ±0.00216	0.1322 ±0.00192
Plain to Rolled	<i>R Thumb</i>	0.0198 ±0.00079	0.7167 ±0.00255	0.6135 ±0.00276
	<i>R Index</i>	0.0370 ±0.00107	n/a	0.5965 ±0.00278
	<i>R Middle</i>	0.0348 ±0.00104	0.7618 ±0.00241	0.7618 ±0.00241
	<i>L Thumb</i>	0.0226 ±0.00084	0.7873 ±0.00231	0.5959 ±0.00278
	<i>L Index</i>	0.0415 ±0.00113	n/a	0.6473 ±0.00270
	<i>L Middle</i>	0.0413 ±0.00113	0.7665 ±0.00239	0.7665 ±0.00239
	<i>R/L Thumb</i>	0.0051 ±0.00040	0.2867 ±0.00256	0.0001 ±0.00006
	<i>R/L Index</i>	0.0115 ±0.00060	0.5908 ±0.00278	0.1128 ±0.00179
	<i>R/L Middle</i>	0.0124 ±0.00063	0.8155 ±0.00219	0.3127 ±0.00262
Rolled to Rolled	<i>R Thumb</i>	0.0125 ±0.00063	0.7266 ±0.00252	0.2997 ±0.00259
	<i>R Index</i>	0.0136 ±0.00066	0.4692 ±0.00282	0.1373 ±0.00195
	<i>R Middle</i>	0.0140 ±0.00066	0.7292 ±0.00251	0.2626 ±0.00249
	<i>L Thumb</i>	0.0134 ±0.00065	0.7875 ±0.00231	0.3245 ±0.00265
	<i>L Index</i>	0.0163 ±0.00072	0.5957 ±0.00278	0.2388 ±0.00241
	<i>L Middle</i>	0.0156 ±0.00070	0.7336 ±0.00250	0.3230 ±0.00265
	<i>R/L Thumb</i>	0.0028 ±0.00030	0.0078 ±0.00050	n/a
	<i>R/L Index</i>	0.0036 ±0.00034	0.0125 ±0.00063	n/a
	<i>R/L Middle</i>	0.0045 ±0.00038	0.0611 ±0.00136	0.0001 ±0.00005

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>	0.0665 ±0.00141	n/a	0.6369 ±0.00272
<i>L Index</i>	0.0641 ±0.00139	n/a	0.6871 ±0.00262
<i>R/L Index</i>	0.0125 ±0.00063	0.0326 ±0.00101	0.0019 ±0.00025

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>	0.0194 ±0.00078	0.6235 ±0.00274	0.2464 ±0.00244
<i>L Index</i>	0.0419 ±0.00113	0.9531 ±0.00120	0.5616 ±0.00281
<i>R/L Index</i>	0.0032 ±0.00032	0.0008 ±0.00016	0.0000 ±0.00002

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

3 Original PFT Dataset

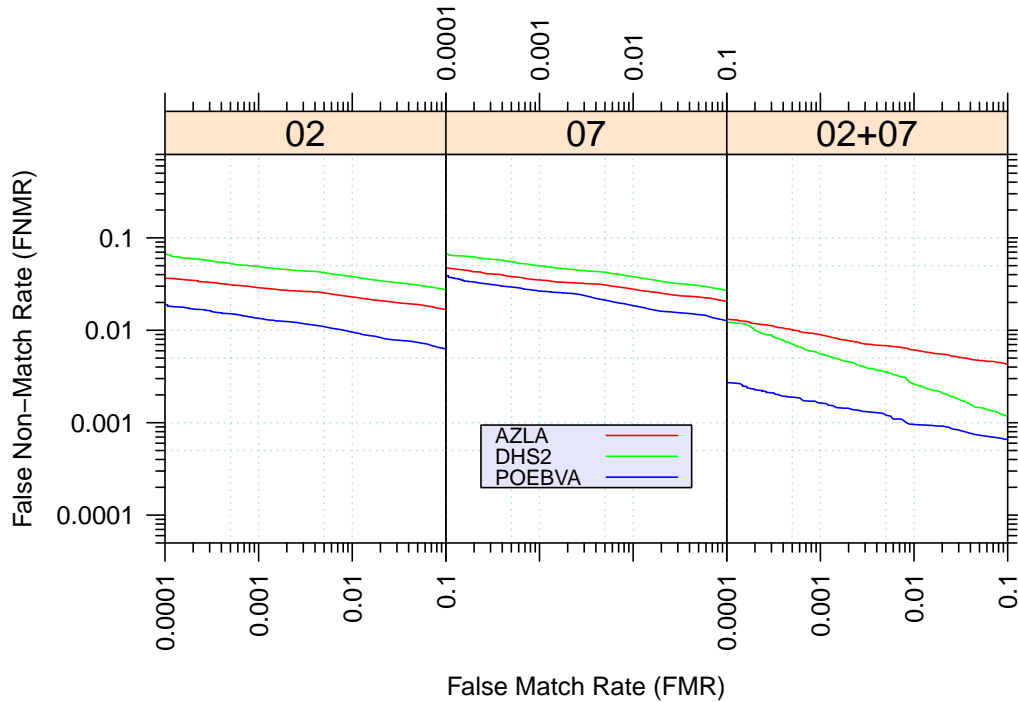


Figure 8: Original PFT Dataset – DET

		EER	FNMR@FMR = 0.0001	FMR@FNMR = 0.005
AZLA	<i>R Index</i>	0.0207	0.0365	0.6025
	<i>L Index</i>	0.0244	0.0474	0.9656
	<i>R/L Index</i>	0.0066	0.0132	0.0354
DHS2	<i>R Index</i>	0.0322	0.0661	0.6376
	<i>L Index</i>	0.0318	0.0660	0.6926
	<i>R/L Index</i>	0.0037	0.0123	0.0014
POEBVA	<i>R Index</i>	0.0096	0.0188	0.2230
	<i>L Index</i>	0.0165	0.0387	0.5296
	<i>R/L Index</i>	0.0015	0.0027	0.0000

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