

Supplementary Material:

Automated correlation of single particle tilt pairs for random conical tilt and orthogonal tilt reconstructions

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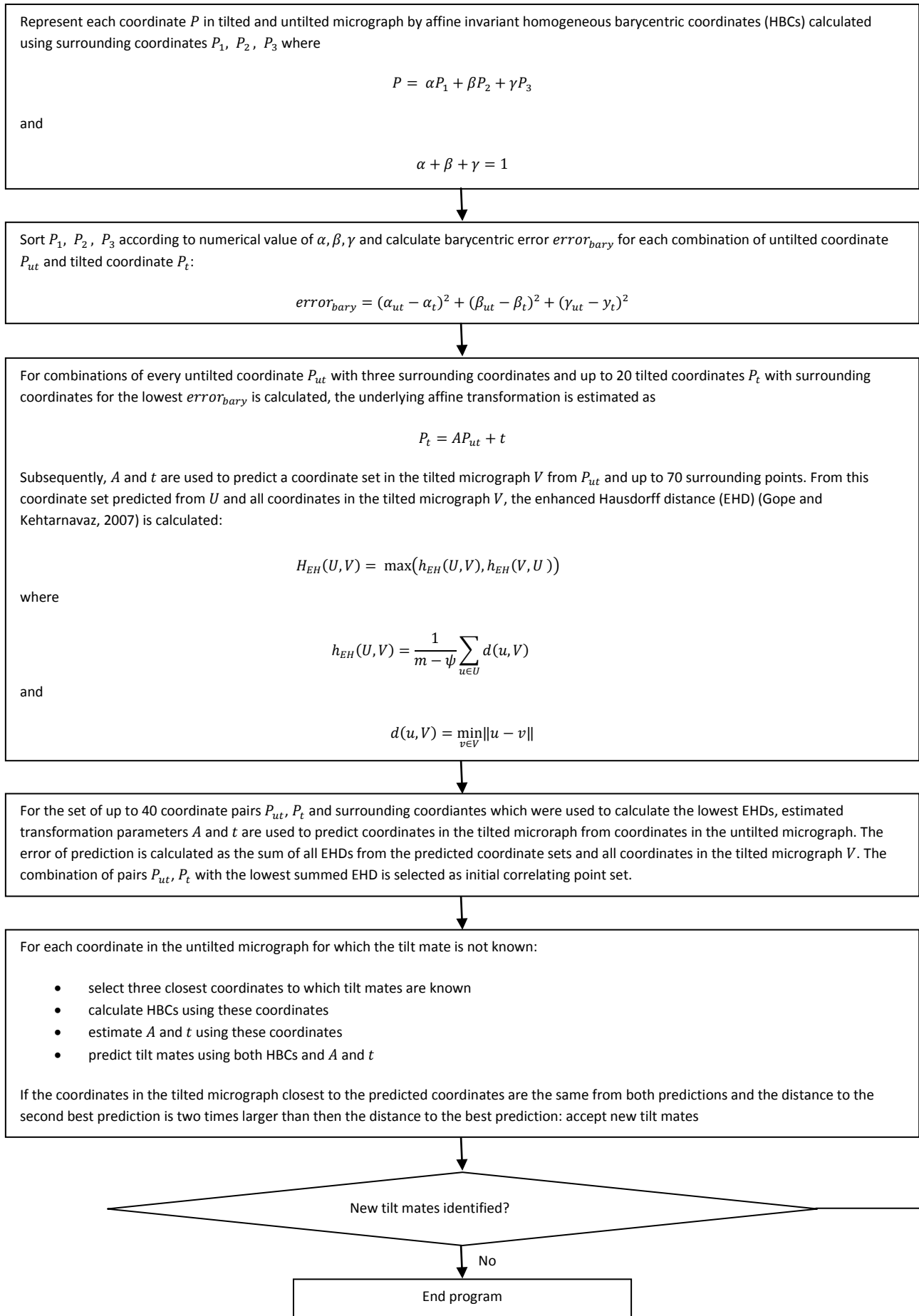
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Supplementary Information:

Supplementary Figure 1

Supplementary Table 1



Supplementary Figure 1 Flow Chart of the *MaverickTilt* Software.

Decentering Noise	Noise Coordinates	Precision	STD Precision	Recall	STD Recall	Selection Rate	STD Selection Rate	False Discovery Rate	STD False Discovery Rate	n
0	0	1	0	0.8255	0.210743327	0.8255	0.210743327	0	0	10
0	10	0.995871473	0.002976758	0.8632	0.146063548	0.8632	0.146063548	0.004128527	0.002976758	10
0	100	0.862661052	0.026858188	0.603	0.170082921	0.603	0.170082921	0.137338948	0.026858188	10
0	20	0.988696098	0.00732746	0.7326	0.240389767	0.7326	0.240389767	0.011303902	0.00732746	10
0	30	0.976480855	0.005764423	0.7562	0.140306664	0.7562	0.140306664	0.023519145	0.005764423	10
0	40	0.970919194	0.013979522	0.712	0.179055299	0.712	0.179055299	0.029080806	0.013979522	10
0	50	0.964360468	0.013929022	0.7258	0.188341074	0.7258	0.188341074	0.035639532	0.013929022	10
0	60	0.947375339	0.023136342	0.6064	0.233739684	0.6064	0.233739684	0.052624661	0.023136342	10
0	70	0.919922406	0.022485077	0.679	0.210800854	0.679	0.210800854	0.080077594	0.022485077	10
0	80	0.901140179	0.019716726	0.7512	0.048292442	0.7512	0.048292442	0.098859821	0.019716726	10
0	90	0.888267318	0.042590568	0.5598	0.205045263	0.5598	0.205045263	0.111732682	0.042590568	10
10	0	0.995256357	0.005012364	0.7228	0.316220429	0.7228	0.316220429	0.004743643	0.005012364	10
10	10	0.98885908	0.007131323	0.8408	0.103186046	0.8408	0.103186046	0.01114092	0.007131323	5
10	20	0.968193457	0.017740522	0.5848	0.237704354	0.5848	0.237704354	0.031806543	0.017740522	5
10	30	0.951660711	0.033149527	0.5712	0.286642914	0.5712	0.286642914	0.048339289	0.033149527	5
10	40	0.927326223	0.048944562	0.4228	0.288109979	0.4228	0.288109979	0.072673777	0.048944562	5
10	50	0.862077474	0.086754327	0.348	0.184629358	0.348	0.184629358	0.137922526	0.086754327	5
15	0	0.981949795	0.015667978	0.7356	0.118374997	0.7356	0.118374997	0.018050205	0.015667978	10
20	0	0.951736703	0.050327341	0.479	0.213142675	0.479	0.213142675	0.048263297	0.050327341	10
20	10	0.771523283	0.14861919	0.2584	0.10555302	0.2584	0.10555302	0.228476717	0.14861919	5
20	20	0.808086483	0.139563432	0.208	0.154909006	0.208	0.154909006	0.191913517	0.139563432	5
20	30	0.666563832	0.1962268	0.1636	0.120660847	0.1636	0.120660847	0.333436168	0.1962268	5
20	40	0.386601281	0.21582275	0.1048	0.084300415	0.1048	0.084300415	0.613398719	0.21582275	5
20	50	0.294134151	0.281006162	0.0392	0.05070069	0.0392	0.05070069	0.705865849	0.281006162	5
25	0	0.832706513	0.148798178	0.2706	0.173967928	0.2706	0.173967928	0.167293487	0.148798178	10
30	0	0.819092778	0.145685236	0.2008	0.118210659	0.2008	0.118210659	0.180907222	0.145685236	10
35	0	0.571258633	0.157654037	0.092	0.063516927	0.092	0.063516927	0.428741367	0.157654037	10
40	0	0.573266884	0.185204701	0.0792	0.040290942	0.0792	0.040290942	0.426733116	0.185204701	10
40	10	0.320572451	0.368204882	0.0104	0.011757551	0.0104	0.011757551	0.679427549	0.368204882	5
40	20	0.069565217	0.139130435	0.0096	0.0192	0.0096	0.0192	0.930434783	0.139130435	5
40	30	0.02586437	0.026392463	0.0024	0.002939388	0.0024	0.002939388	0.97413563	0.026392463	5
40	40	0.019230769	0.038461538	0.002	0.004	0.002	0.004	0.980769231	0.038461538	5
40	50	0.021626794	0.024608708	0.002	0.00219089	0.002	0.00219089	0.978373206	0.024608708	5
45	0	0.545950286	0.142724772	0.0452	0.031801887	0.0452	0.031801887	0.454049714	0.142724772	10
50	0	0.323475844	0.251342523	0.0174	0.019880644	0.0174	0.019880644	0.676524156	0.251342523	10
55	0	0.193919974	0.13376291	0.0156	0.014527216	0.0156	0.014527216	0.806080026	0.13376291	10
5	0	1	0	0.8736	0.151902074	0.8736	0.151902074	0	0	10
5	10	0.993653808	0.005652453	0.7476	0.264854375	0.7476	0.264854375	0.006346192	0.005652453	5
5	20	0.988981339	0.001521907	0.8304	0.156743868	0.8304	0.156743868	0.011018661	0.001521907	5
5	30	0.964021881	0.010209796	0.8616	0.025531157	0.8616	0.025531157	0.035978119	0.010209796	5
5	40	0.957164644	0.007709008	0.5836	0.249175922	0.5836	0.249175922	0.042835356	0.007709008	5
5	50	0.962050702	0.019981352	0.5384	0.328515205	0.5384	0.328515205	0.037949298	0.019981352	5
60	0	0.194947402	0.238085929	0.0124	0.0188	0.0124	0.0188	0.805052598	0.238085929	10

Supplementary Table 1: Statistical Analysis of the performance of the algorithm on simulated data. STD: standard deviation. For an in-depth discussion of parameters listed in the table, see (Langlois and Frank, 2011)