



Figure S6: Sum-of-squares (SS) between PC1 and PC2 computed from called genotypes from genotype posterior probabilities (on x-axis) or with the new proposed method which does not rely on genotype calling (on y-axis). We did not normalize the standardized allele frequencies to have the same variance. We simulated 3 populations of 20 individuals at 2X, 6X and 20X sequencing coverage. Populations are differentiated by  $F_{ST}$  of 0.4 - 0.15, 0.2 - 0.05 and 0.1 - 0.02. We simulated 10,000 sites with 2% and 10% of sites being variable in the population.