

Table 1. Properties of the raw, tweaked, and centroid grids; numerical columns are for grid levels 4 through 8. ArcA is arc between adjacent primary cell corners or momentum cell centers. ArcC is arc between nearby primary cell centers or momentum cell corners. Point D is intersection of ArcA and ArcC. Radius is square root of cell area divided by 2π . Ideal number is 1 for the first nine properties; ideal is 0 for last two properties.

Smallest primary cell area divided by largest

Raw	.74170	.73610	.73468	.73433	.73424
Tweaked	.94809	.95050	.95206	.95249	.95270
Centroid	.36786	.30111	.24662	.20203	.16550

Smallest momentum cell area divided by largest

Raw	.76986	.76912	.76894	.76889	.76888
Tweaked	.94152	.94876	.95211	.95382	.95463
Centroid	.50368	.41317	.33881	.27767	.22753

For most extreme primary cell: smallest ArcA length divided by largest

Raw	.53034	.52689	.52602	.52580	.52575
Tweaked	.53803	.53145	.52857	.52718	.52648
Centroid	.85152	.85083	.85069	.85066	.85065

For most extreme momentum cell: smallest ArcC length divided by largest

Raw	.85110	.85076	.85068	.85066	.85065
Tweaked	.83810	.83617	.83543	.83515	.83504
Centroid	.85091	.85070	.85066	.85065	.85065

Smallest ArcA length divided by largest

Raw	.53034	.52689	.52602	.52580	.52575
Tweaked	.51775	.50686	.50183	.49942	.49824
Centroid	.71520	.64737	.58593	.53033	.48000

Smallest ArcC length divided by largest

Raw	.83746	.83692	.83678	.83675	.83674
Tweaked	.79070	.78783	.78680	.78645	.78634
Centroid	.67448	.61055	.55256	.50012	.45266

Smallest arc length from primary cell corner to D divided by half of ArcA length

Raw	.80648	.80655	.80656	.80657	.80657
Tweaked	.96796	.98366	.99174	.99585	.99792
Centroid	.87402	.87354	.87344	.87342	.87341

Smallest arc length from momentum cell corner to D divided by half of ArcC length

Raw	1.00000	1.00000	1.00000	1.00000	1.00000
Tweaked	1.00000	1.00000	1.00000	1.00000	1.00000
Centroid	.87296	.87274	.87269	.87268	.87268

Smallest angle between ArcA and ArcC at D divided by largest

Raw	1.00000	1.00000	1.00000	1.00000	1.00000
Tweaked	1.00000	1.00000	1.00000	1.00000	1.00000
Centroid	.94590	.94325	.94197	.94133	.94107

Largest distance from centroid to center for primary cells divided by cell radius

Raw	.09710	.09710	.09710	.09710	.09710
Tweaked	.04250	.04000	.03899	.03865	.03857
Centroid	.00000	.00000	.00000	.00000	.00000

Largest distance from centroid to center for momentum cells divided by cell radius

Raw	.28473	.28571	.28595	.28601	.28603
Tweaked	.28461	.28568	.28594	.28601	.28603
Centroid	.00000	.00000	.00000	.00000	.00000