

ポリプロピレンの軸配向評価、面配向評価 比較

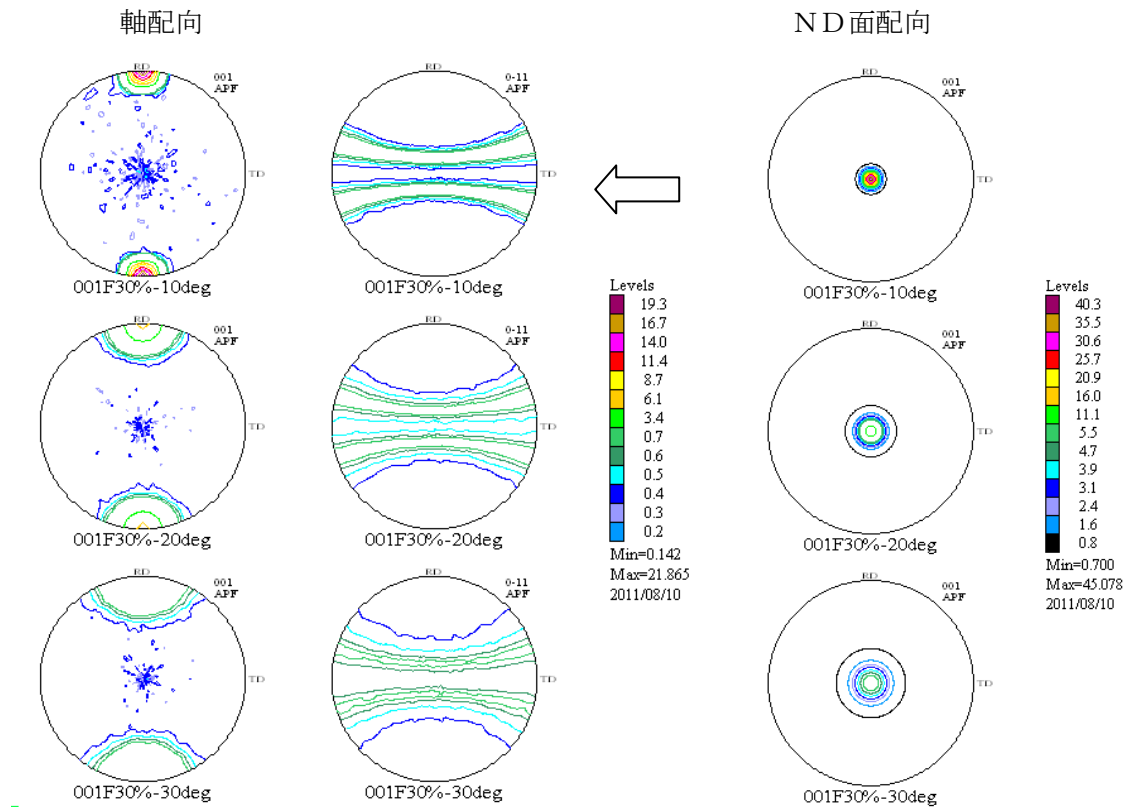
6. 63 x 20. 78 x 6. 5 < 90. 0 x 99. 5 x 90. 0 >

LaboTex 6. 5 x 6. 63 x 20. 78 < 90. 0 x 90. 0 x 80. 5 >

Monoclinic					Monoclinic				
6.63	(1.0)				6.5	(1.0)			
20.78	(3.1342)				6.63	(1.02)			
6.5	(0.9804)				20.78	(3.1969)			
90.0					90.0				
99.5					90.0				
90.0					80.5				
1.54056					1.54056				
145					145				
0	2	0	2.6	8.503	0	0	2	2.6	8.503
1	0	0	1.2	13.53	0	-1	0	1.2	13.53
1	1	0	100.0	14.187	0	-1	1	100.0	14.187
0	4	0	54.0	17.054	0	0	4	54.0	17.054
1	3	0	71.4	18.645	0	-1	3	71.4	18.645
-1	2	1	2.3	19.656	1	1	2	2.3	19.656

結晶方位が30%でEuler幅が10deg. 20deg. 30deg. の評価

(<001> FiberをLaboTexでΦ=90、φ2=90回転し作成した極点図)

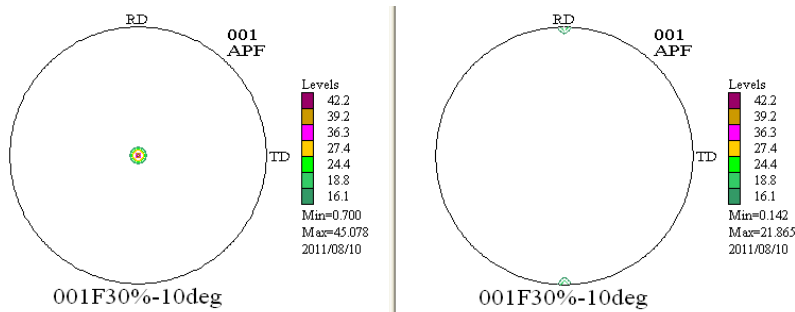


面配向の場合、NDに対し、Edge Viewで実現する。

解析結果

ポリプロピレン	001 F30%FWH1 0deg	001 F30%FWH2 0deg	001 F30%FWH3 0deg
配向度評価	NG	88.90%	83.30%
配向度関数{1 00}			
f-n	-0.1458	-0.1392	-0.1279
f-r	0.2915	0.2789	0.256
f-t	-0.1455	-0.1395	-0.1279
FiberSimple Orientation			
fa {040}から計算	0.2916	0.2732	0.2634
fb =-(fa+fc)	-0.1437	-0.1325	-0.1324
fc {110}から計算	-0.1477	-0.1406	-0.1308
ND{040}面配向			
f-n	0.301	0.2814	0.2582
f-r	-0.1504	-0.1406	-0.129
f-t	-0.1504	-0.1406	-0.129
FiberSimple Orientation			
fb、z (ND) Edge{040}	0.2916	0.2732	0.2634

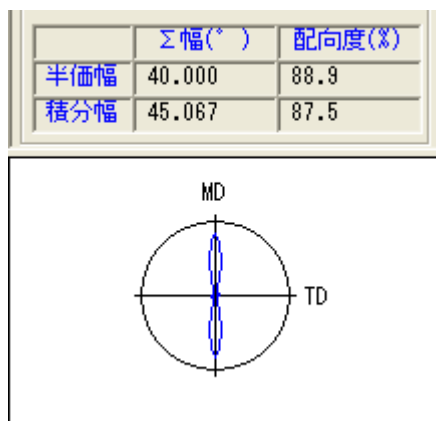
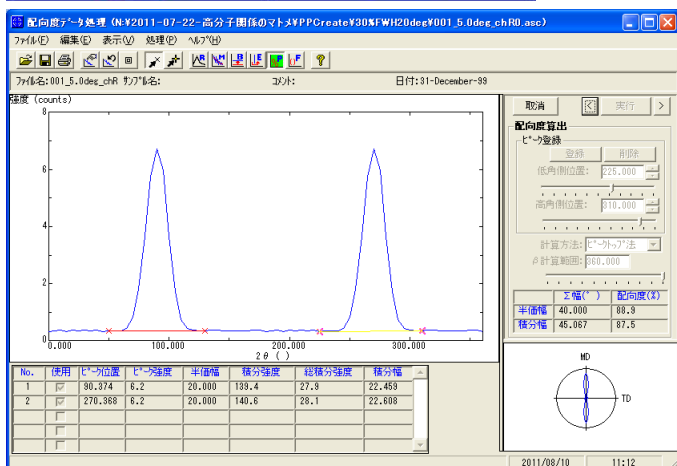
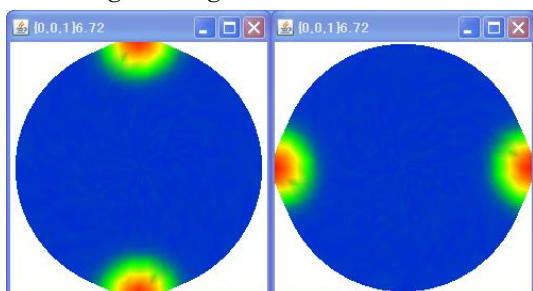
面配向の場合、NDに対し、Edge Viewで実現する。シミュレーションでは、軸変換で強度が低下する事を留意すべき



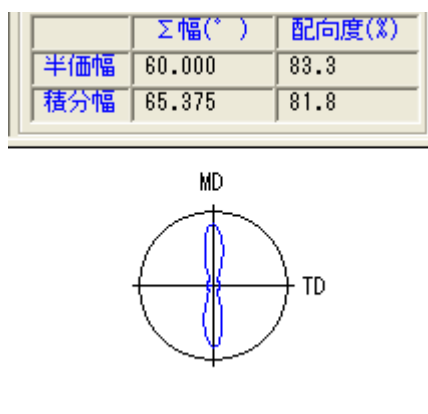
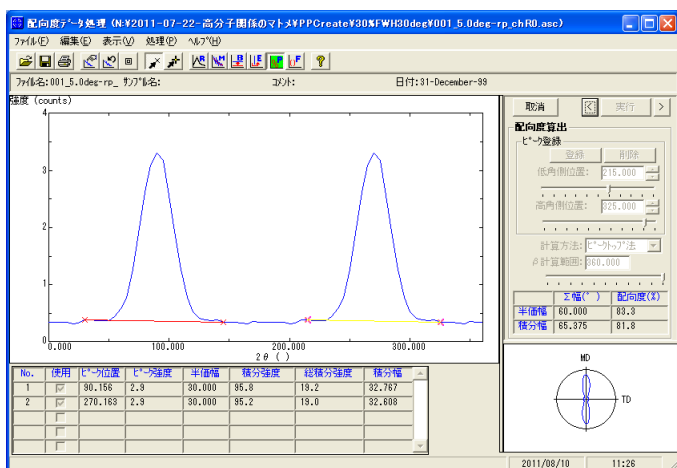
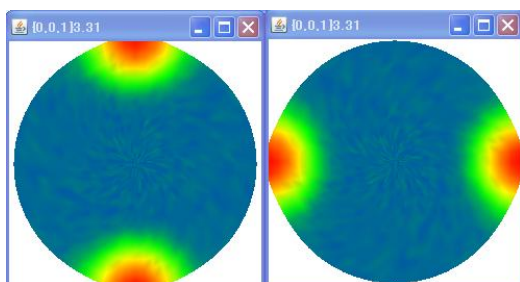
軸配向度評価

Euler10deg はエラー

Eulerangle20deg



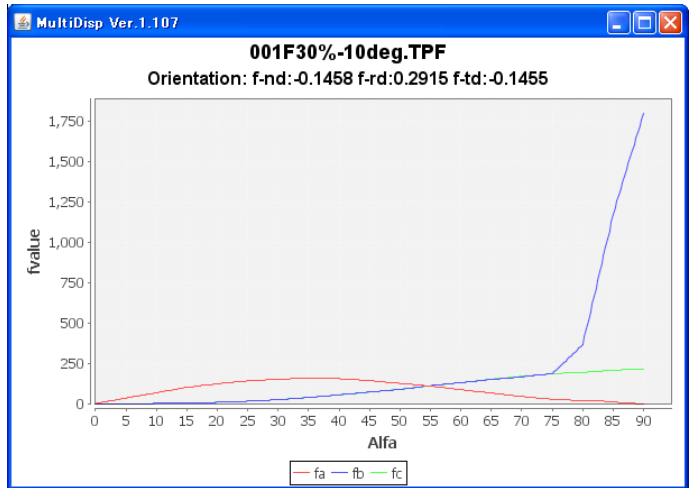
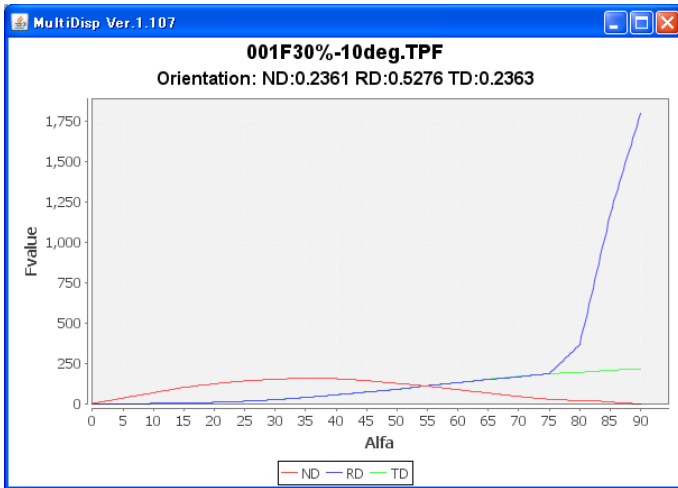
EulerAngle30deg



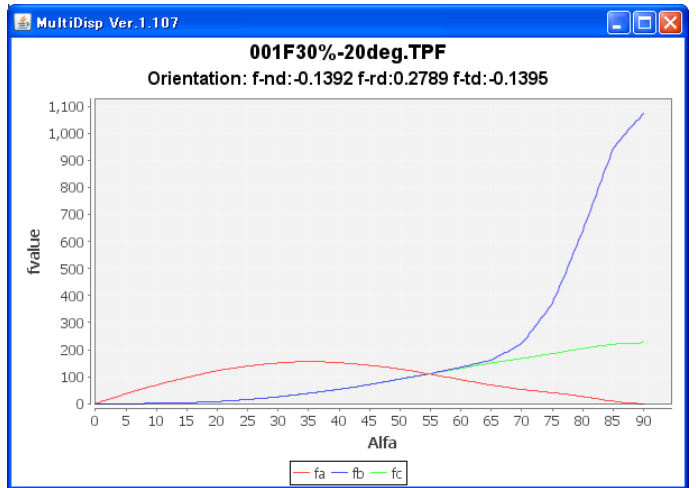
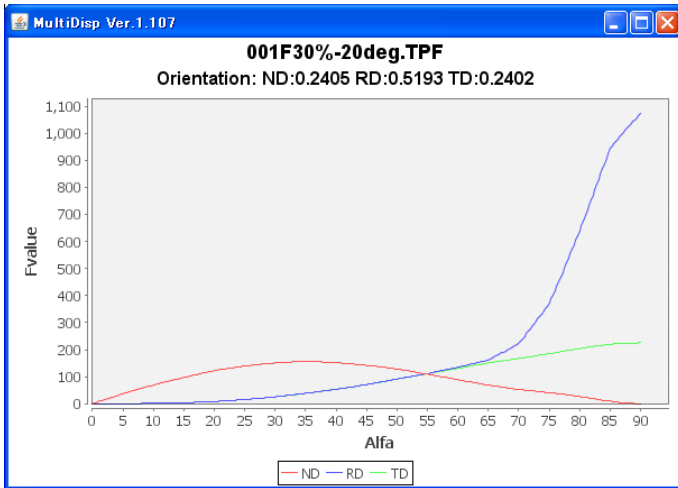
配向度関数

$$\{0\ 0\ 1\} \rightarrow \{0\ 4\ 0\}$$

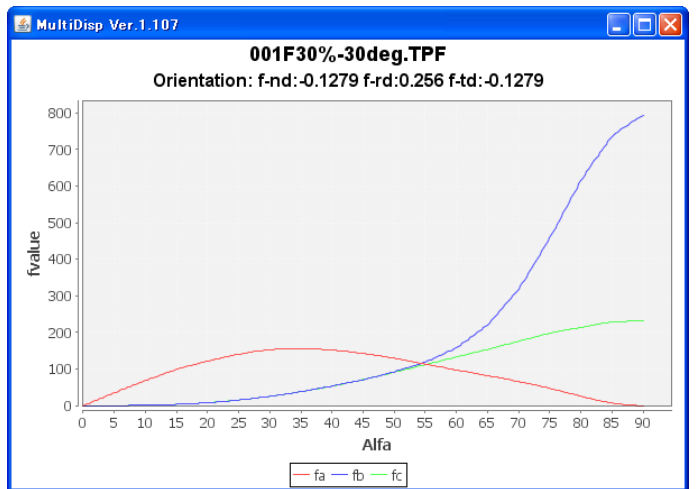
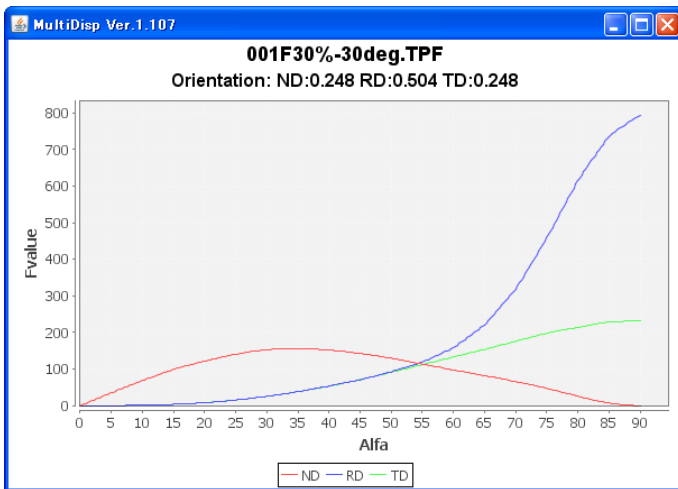
EulerAngle10deg



EulerAngle20deg

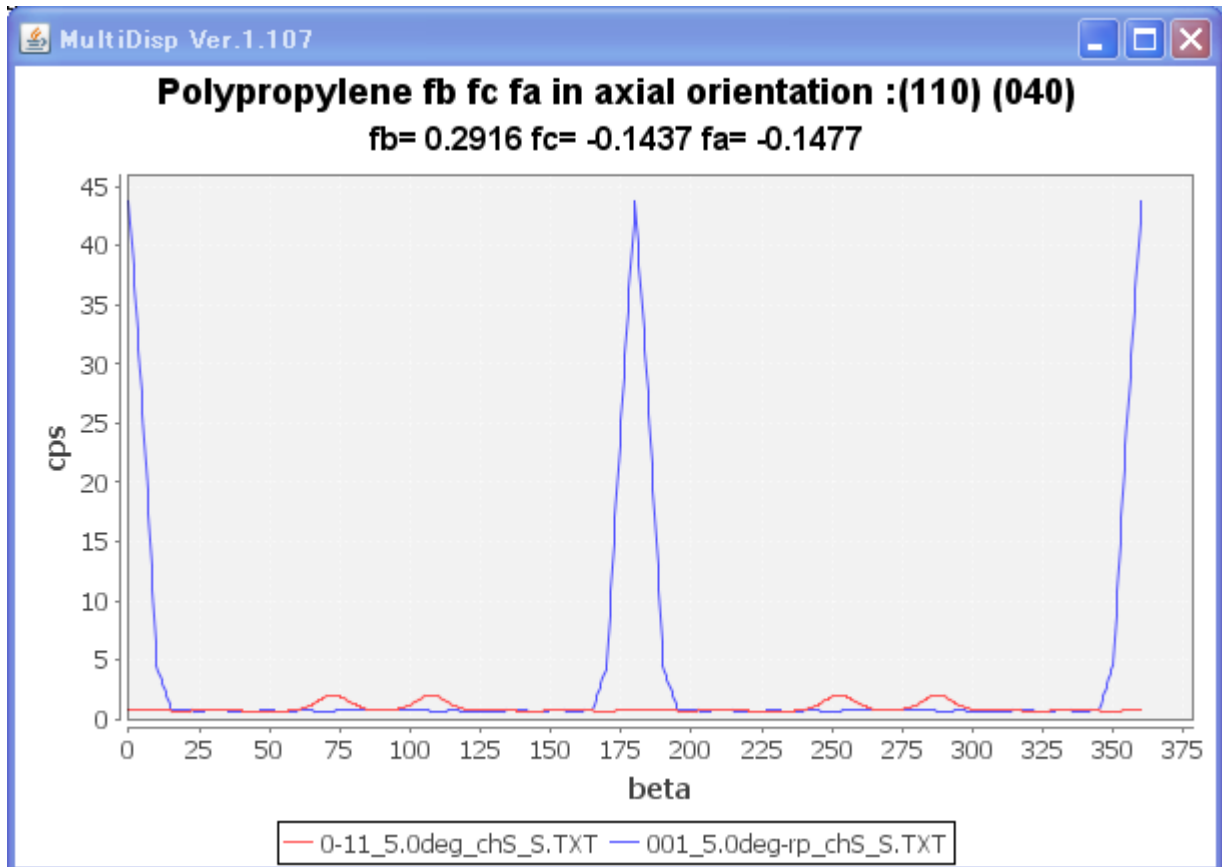


EulerAngle30deg

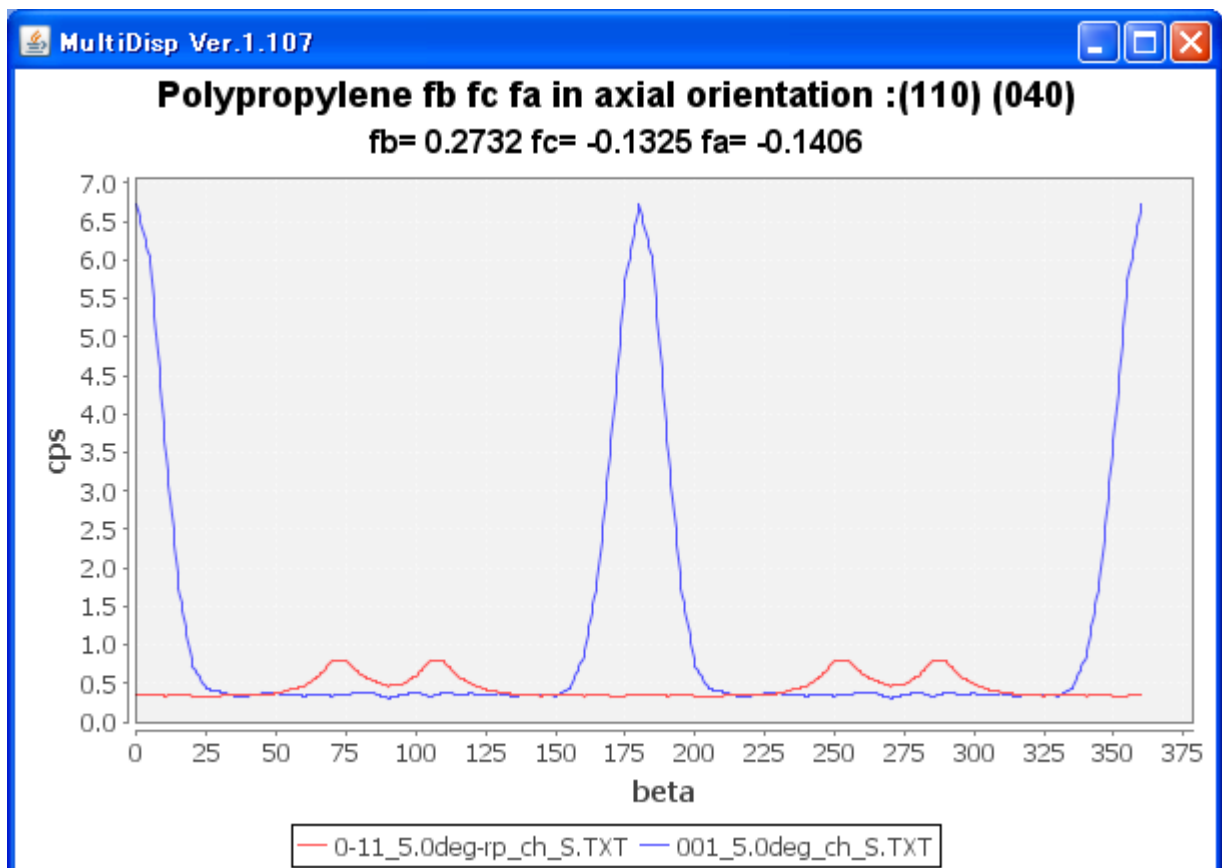


SimpleOrientation

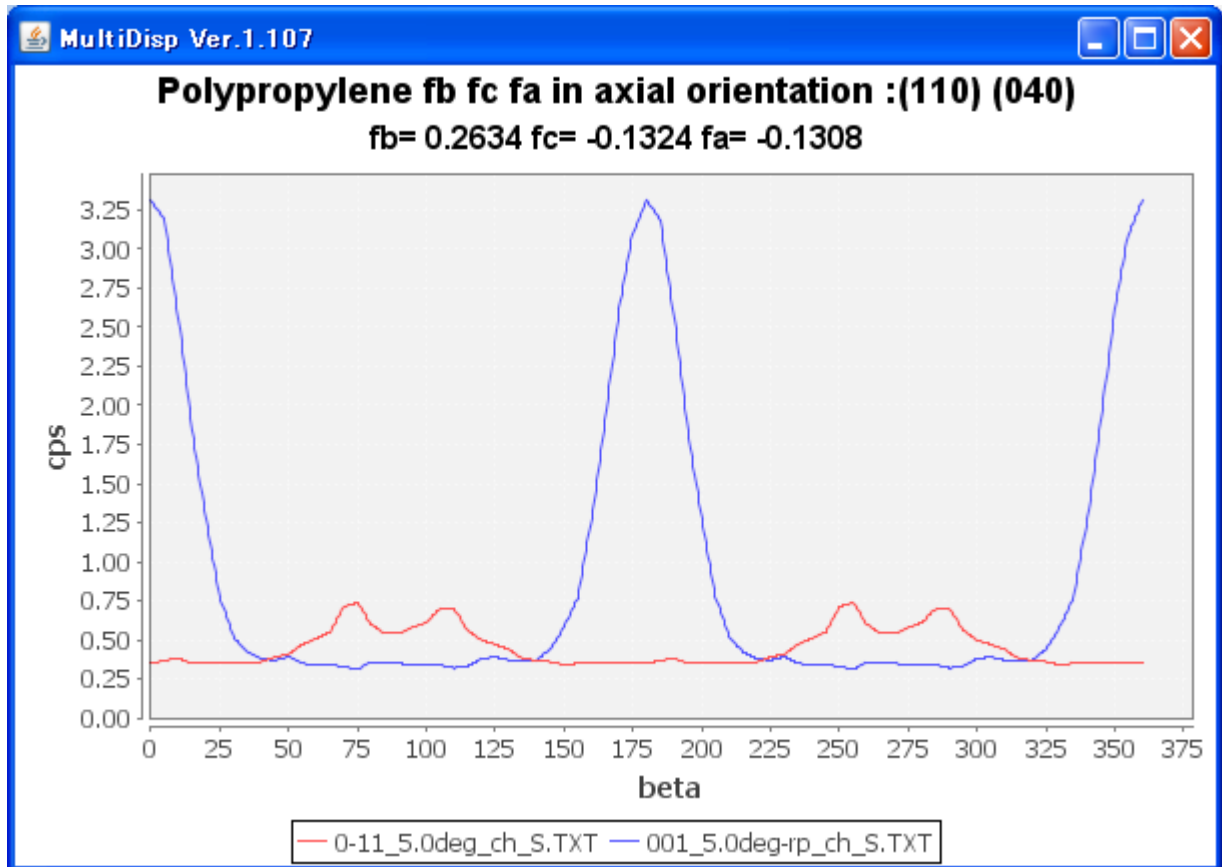
Euler10deg



EulerAngle20deg

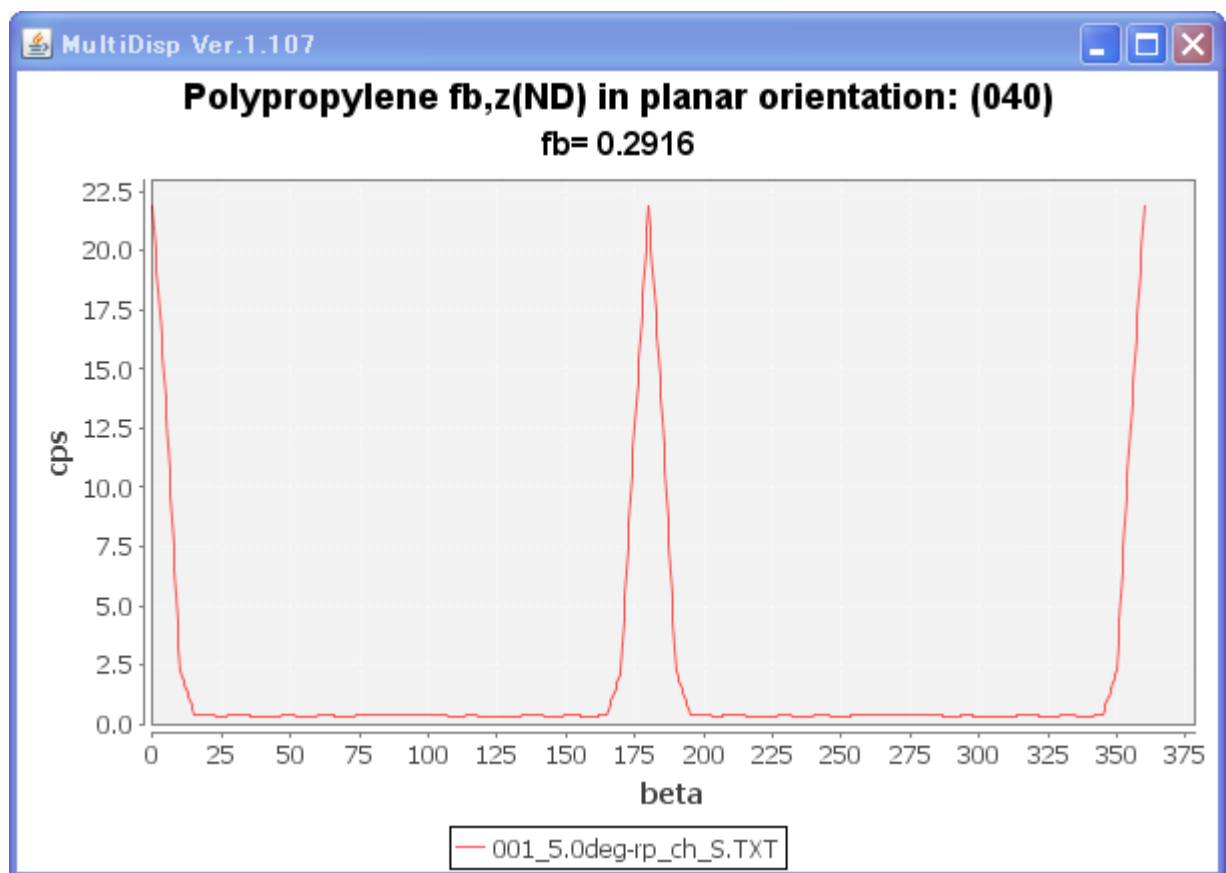
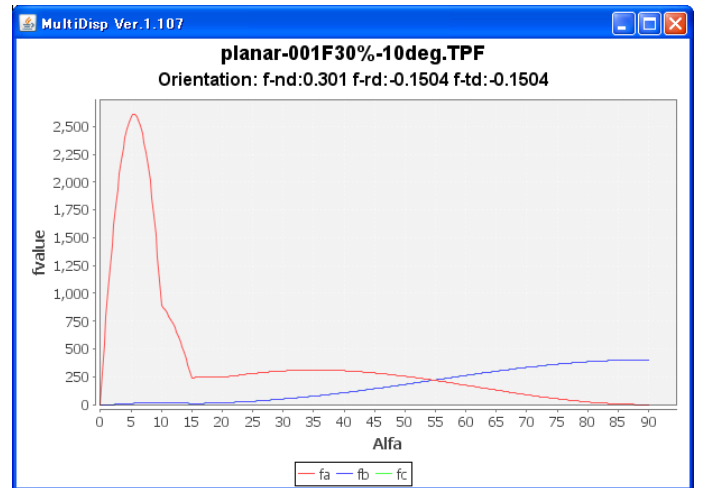
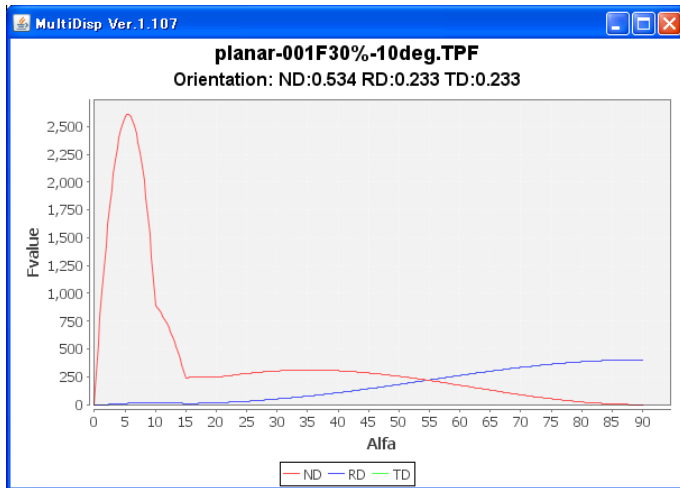


EulerAngle30deg

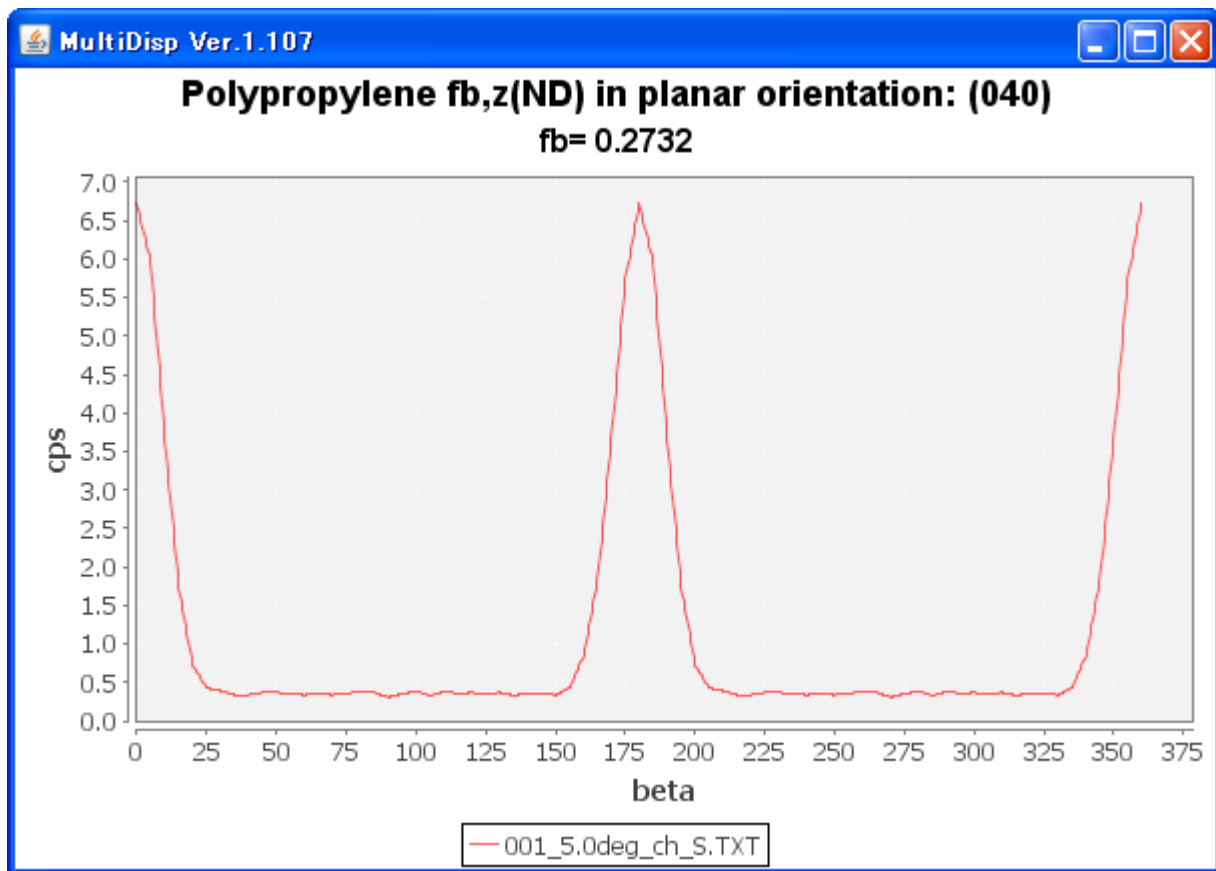
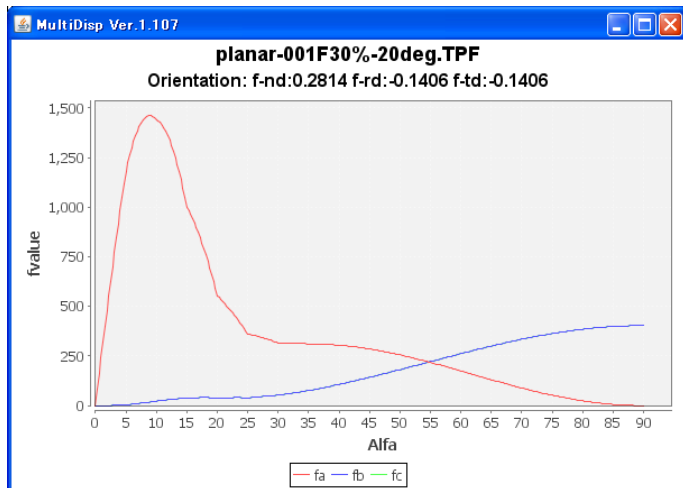
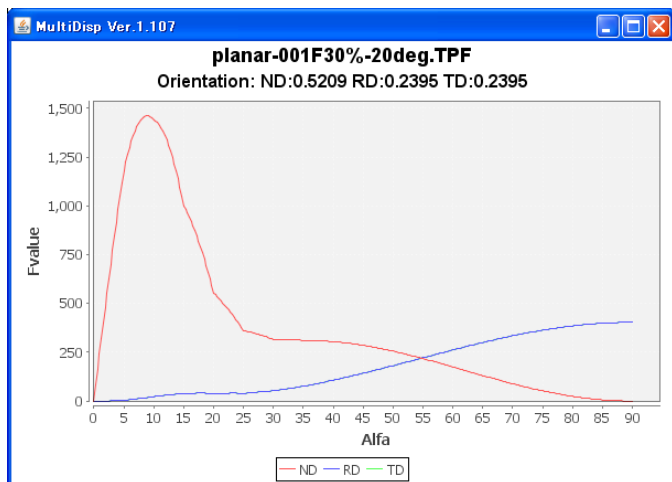


面配向評価

Eulerangle10deg



EulerAngle20deg



EulerAngle30deg

