結晶方位の多重性を考慮した方位密度

２０１８年０７月３０日

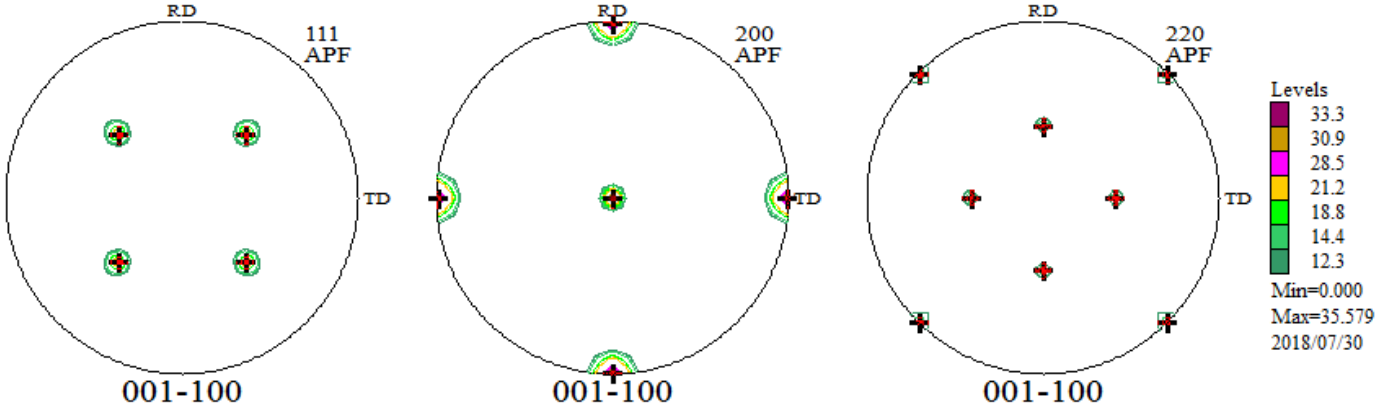
ＨｅｌｐｅｒＴｅｘ　Ｏｆｆｉｃｅ

概要

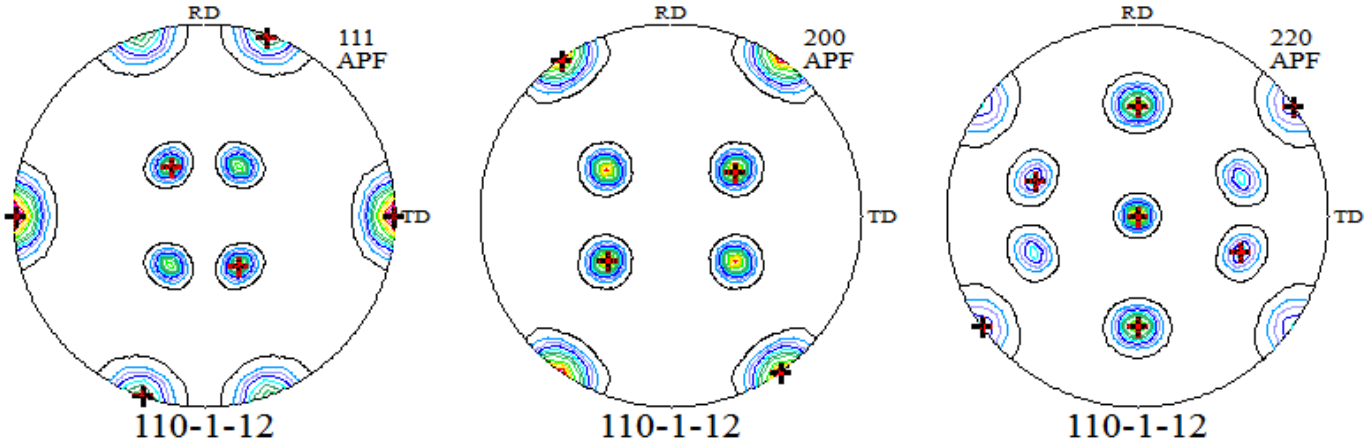
極点図やＯＤＦ図の最大方位密度順で主方位は決まらない事があります。

例えば、ｃｕｂｅとｂｒａｓｓ方位を考えると

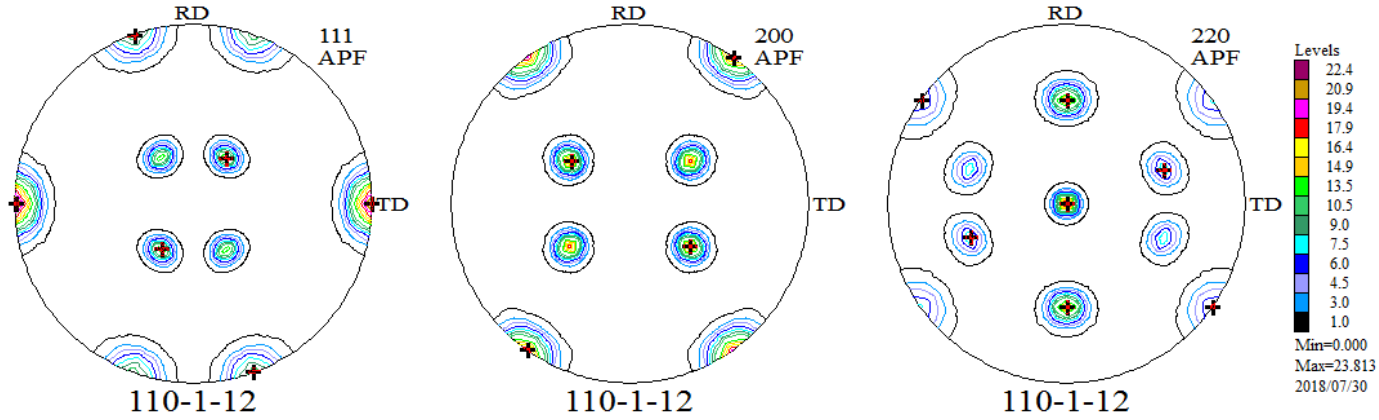
ｃｕｂｅでは、(001)[100]で全ての極が説明されますが、



ｂｒａｓｓでは、(110)[1-12]

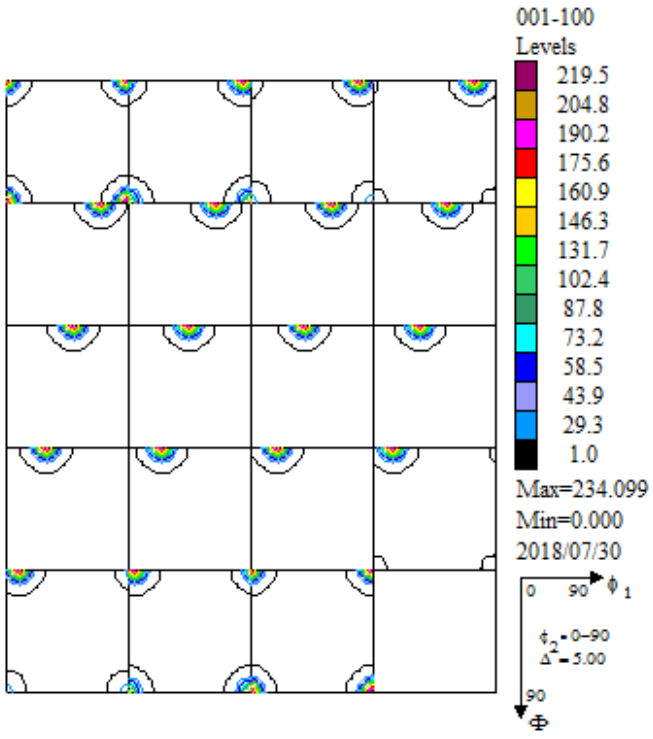


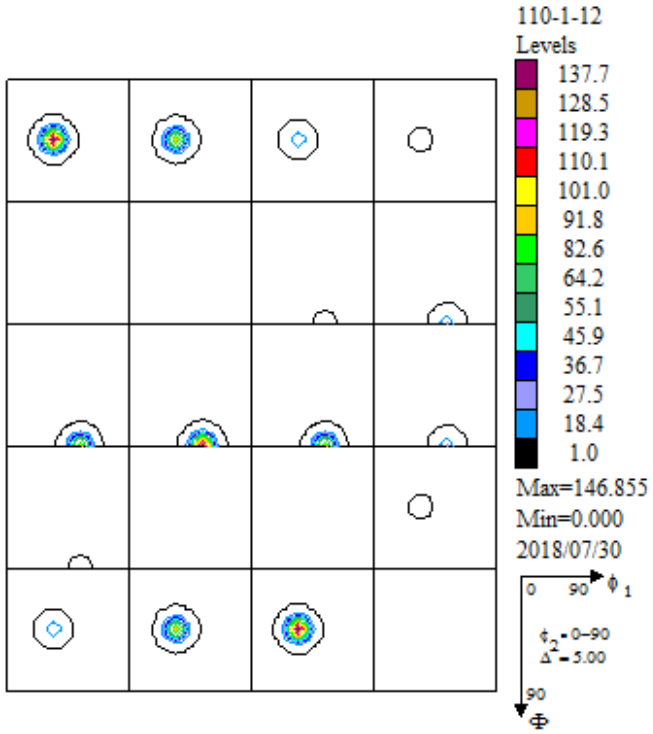
と(101)[-1-21]の２方位で説明されます。



この結果ＯＤＦ図では、

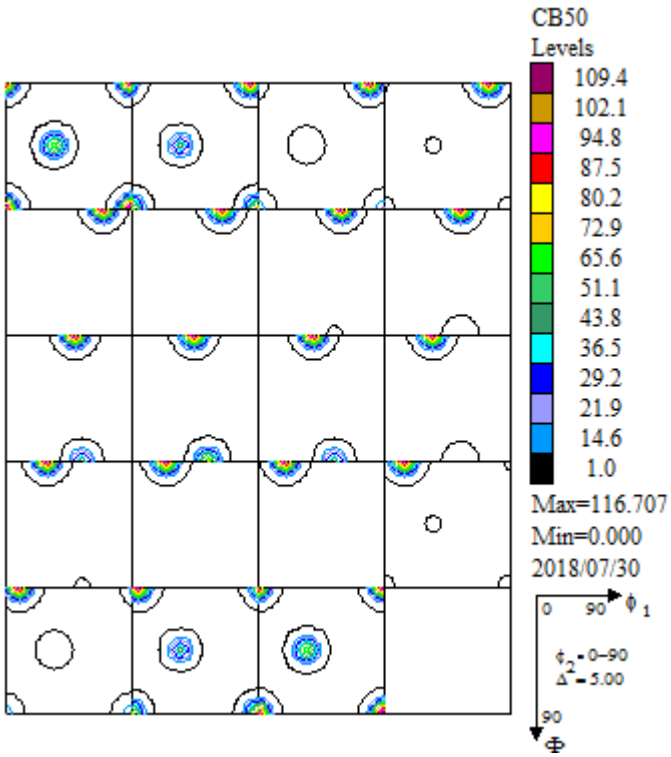
ｃｕｂｅ　　ｂｒａｓｓ

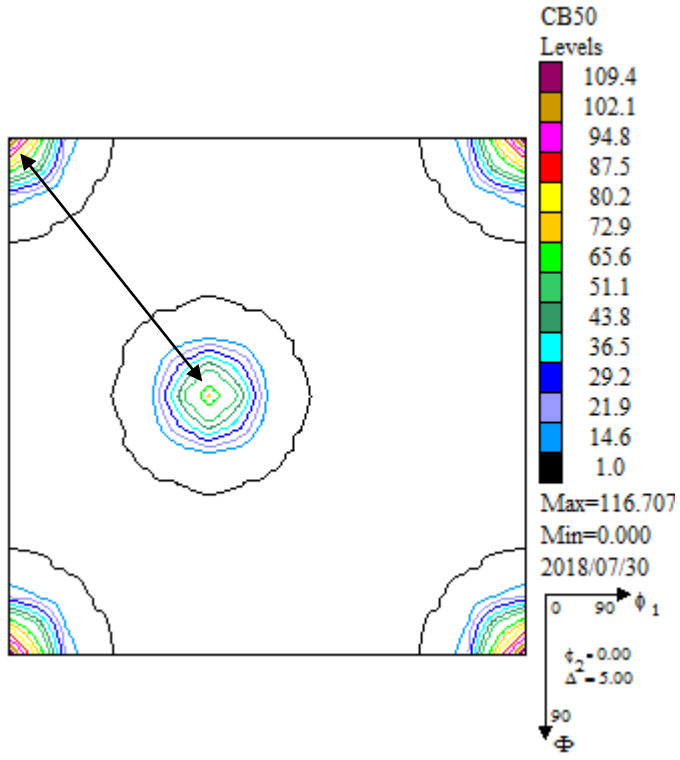




最大方位密度はｃｕｂｅ　２３４、ｂｒａｓｓ　１４６を示します。

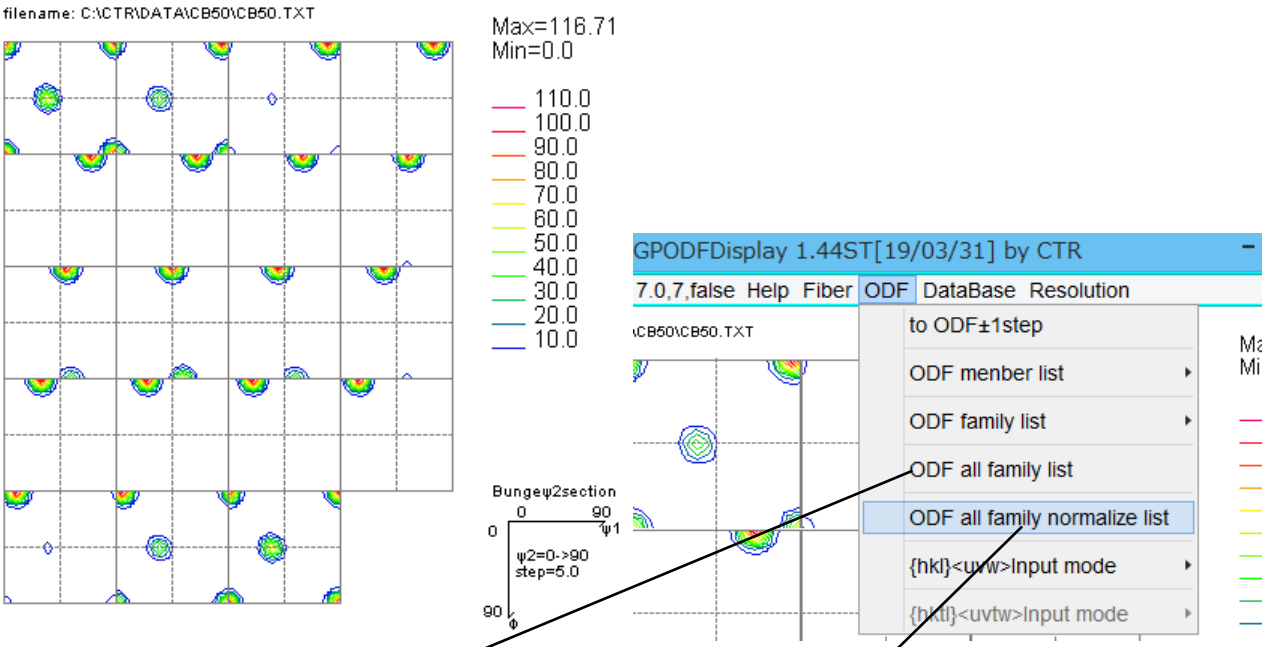
VolumeFraction がｃｕｂｅ５０％　ｂｒａｓｓ５０％では





方位密度が異なります。

GPODFDisplay で表示



多重性を考慮

```
{hkl}<uvw>,labotex
{001}<100>,116.71
{101}<-1-21>,73.64
{112}<-1-11>,0.0
{011}<100>,0.0
{001}<1-10>,0.0
{110}<1-11>,0.12
{111}<-1-12>,0.0
{011}<2-55>,0.0
{525}<1-51>,0.0
{013}<100>,0.15
{122}<2-21>,0.0
{113}<1-10>,0.0
{112}<1-10>,0.0
{233}<0-11>,0.0
{111}<0-11>,0.0
{213}<-1-42>,0.0
{132}<6-43>,0.0
{114}<-1-72>,0.03
{4411}<-11-118>,0.0
{001}<2-10>,0.0
{012}<100>,0.0
{113}<-3-32>,0.0
{362}<8-53>,0.0
{011}<5-22>,46.69
```

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norm{hkl}<uvw>,labotex
{001}<100>,58.355
{101}<-1-21>,73.64
{112}<-1-11>,0.0
{011}<100>,0.0
{001}<1-10>,0.0
{110}<1-11>,0.12
{111}<-1-12>,0.0
{011}<2-55>,0.0
{525}<1-51>,0.0
{013}<100>,0.15
{122}<2-21>,0.0
{113}<1-10>,0.0
{112}<1-10>,0.0
{233}<0-11>,0.0
{111}<0-11>,0.0
{213}<-1-42>,0.0
{132}<6-43>,0.0
{114}<-1-72>,0.06
{4411}<-11-118>,0.0
{001}<2-10>,0.0
{012}<100>,0.0
{113}<-3-32>,0.0
{362}<8-53>,0.0
{011}<5-22>,46.69
```

Ｃｕｂｅの方位密度を１／２しています。