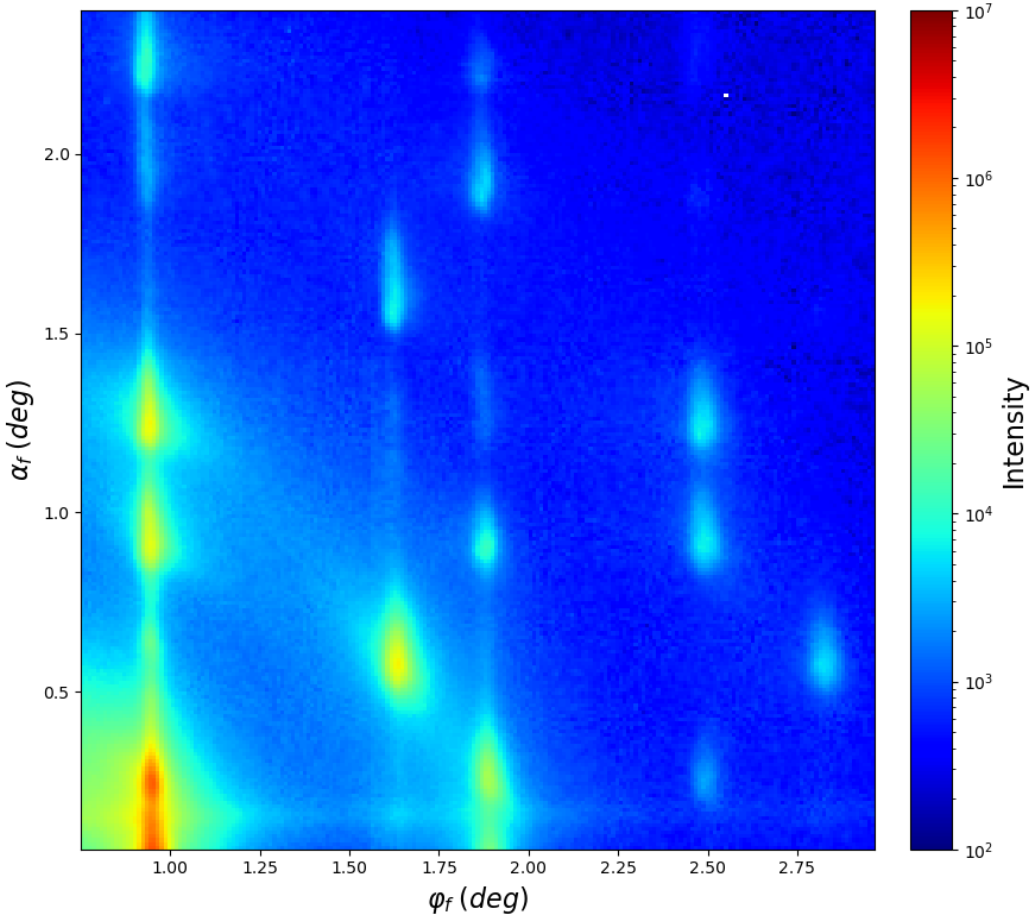
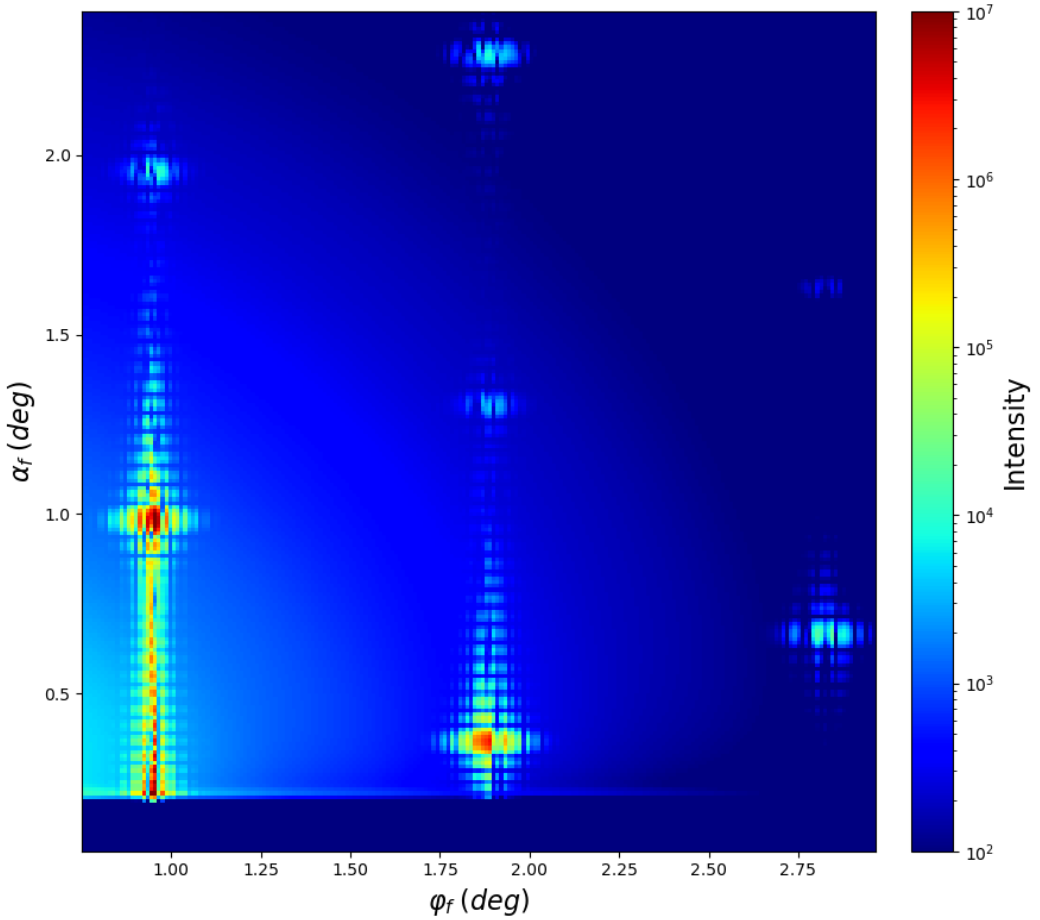

2.0
1.5
1.0
0.5
$\alpha_f\,(deg)$
1.00
1.25
1.50
1.75
2.00
2.25
2.50
2.75
$\varphi_f\,(deg)$
10^7
10^6
10^5
10^4
10^3
10^2
Intensity

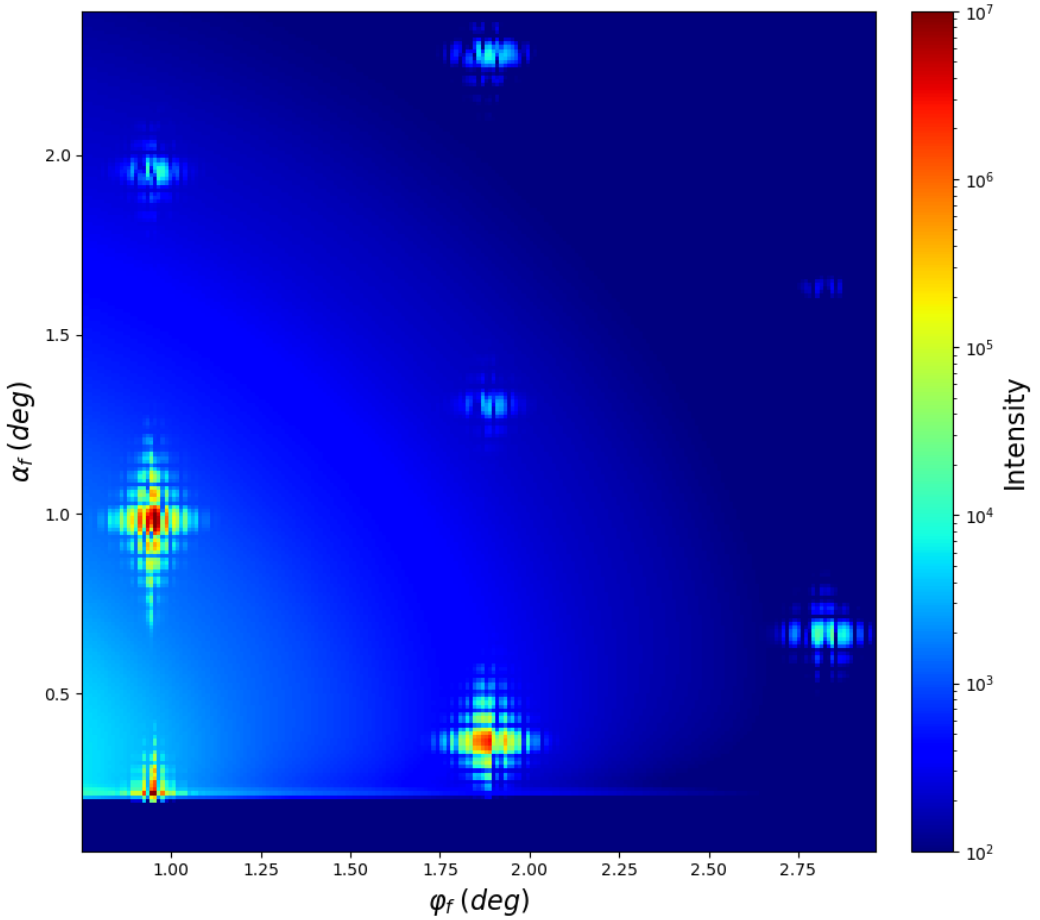
Single meso, sigma_meso_height


```
{
"sample_builder_type": "SampleBuilderVer1",
"roughness": 6.0,
"surface_filling_ratio": 0.25,
"average_layer_thickness": 600,
"meso_elevation": 0,
"meso_factory_type": "SingleMesoFactory",
"meso_builder_type": "MesoCrystalBuilder",
"lattice_length_a": 12.45,
"lattice_length_c": 31.0,
"nparticles": 10,
"nanoparticle_radius": 5.0,
"sigma_nanoparticle_radius": 0.3,
"meso_height": 200,
"meso_radius": 800,
"sigma_meso_height": 2.0,
"sigma_meso_radius": 20.0,
"sigma_lattice_length_a": 0.5,
"rotation_x": 0.0,
"rotation_z": 0.0
}
```

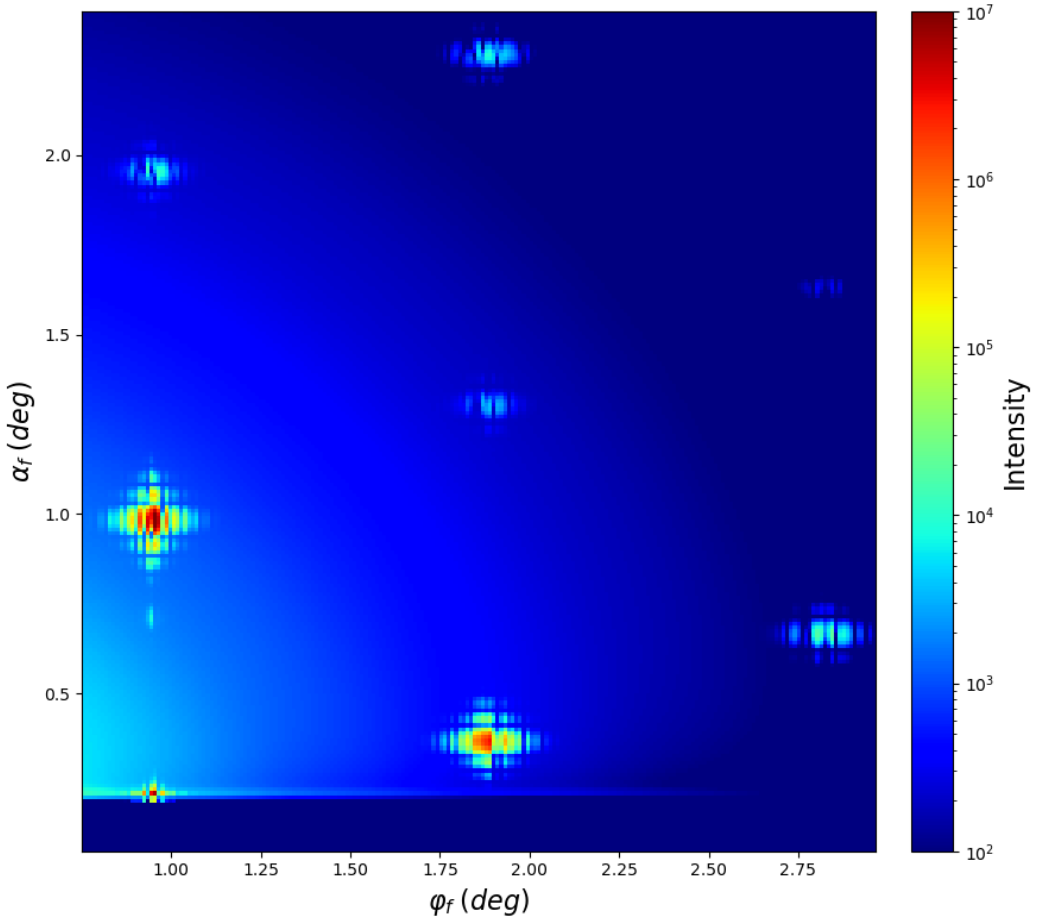
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  11.9,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  21.8,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
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"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  31.700000000000003,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```
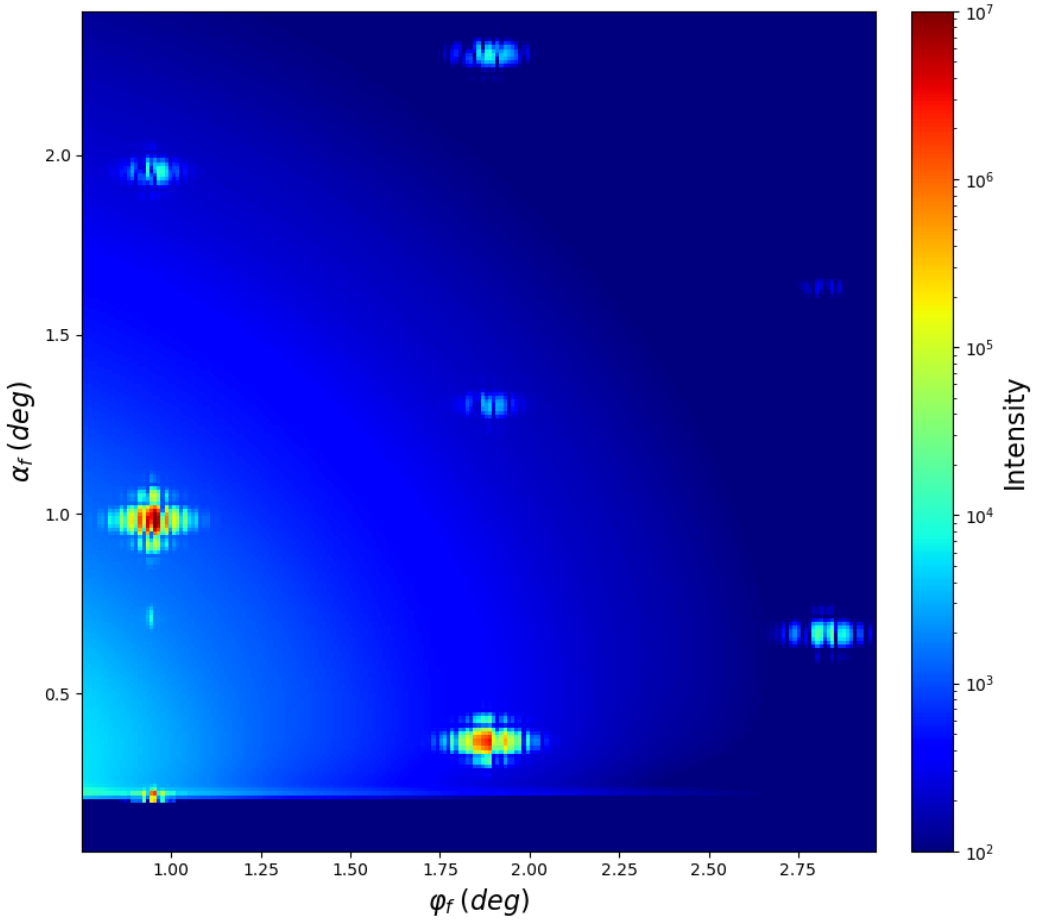
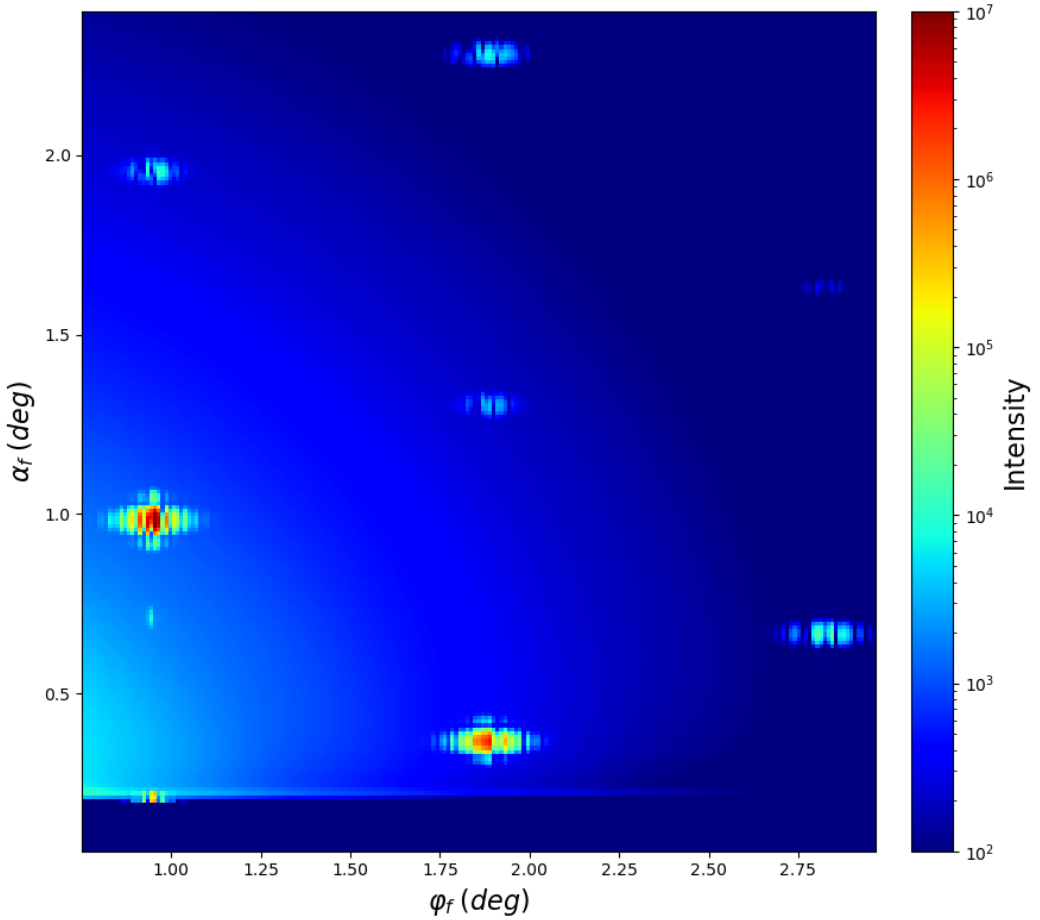




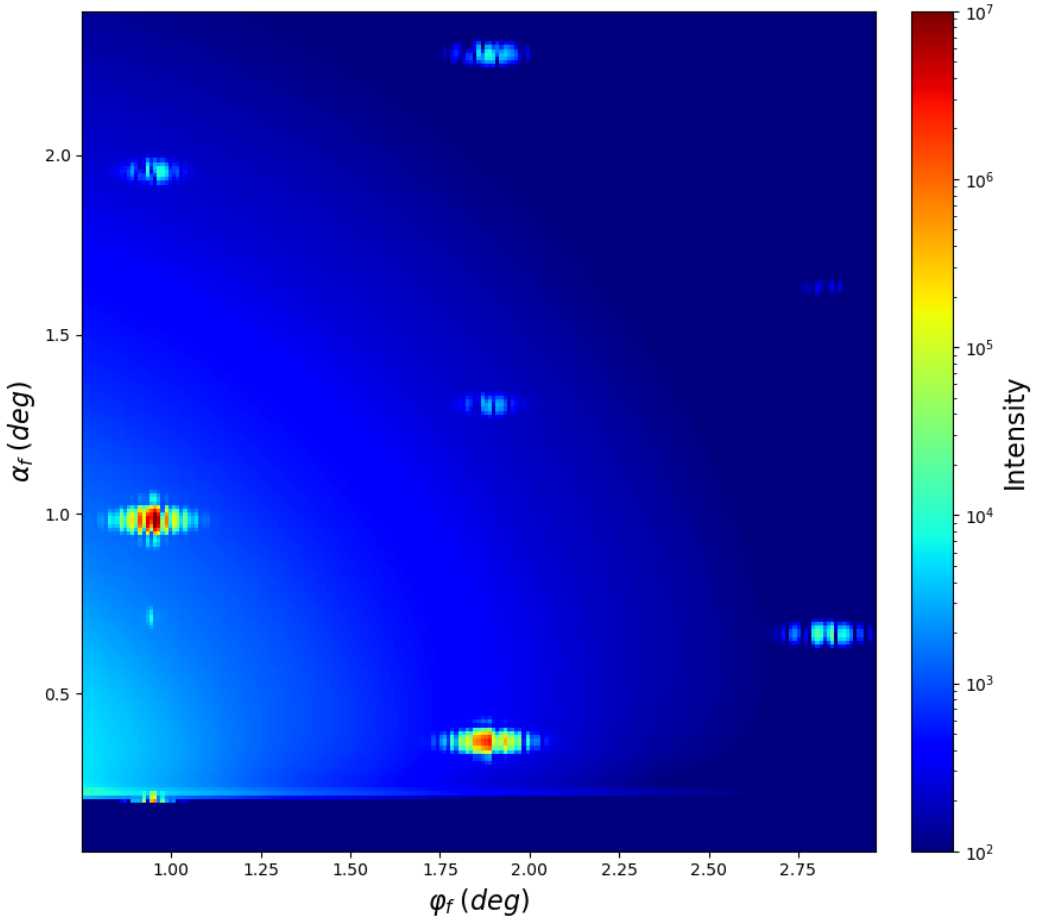
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  41.6,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

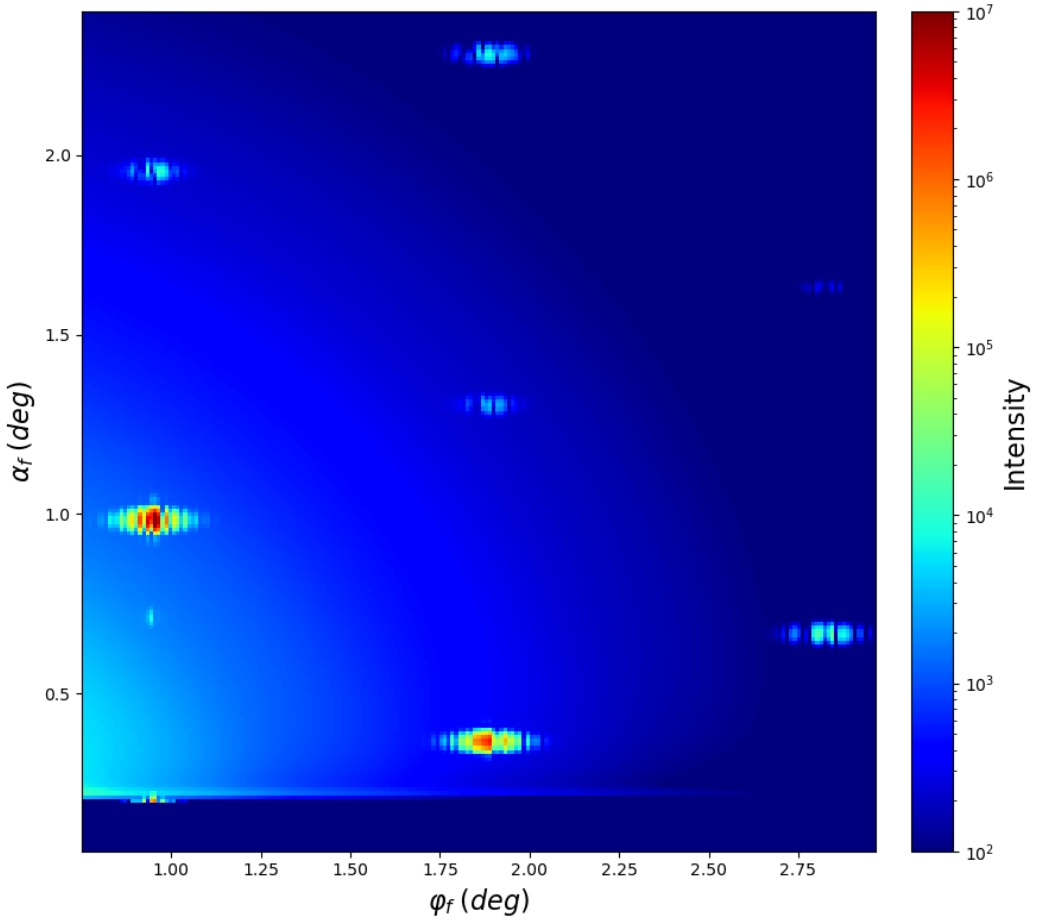
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  51.5,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

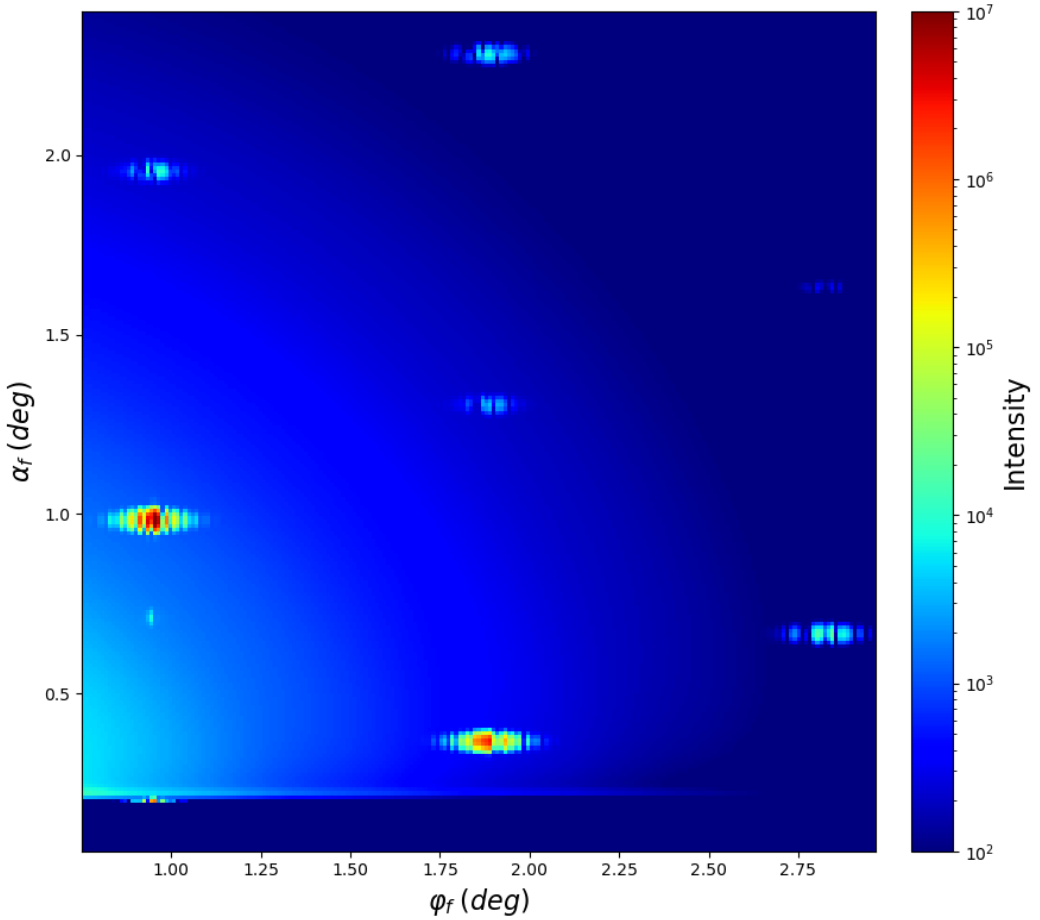
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  61.400000000000006,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

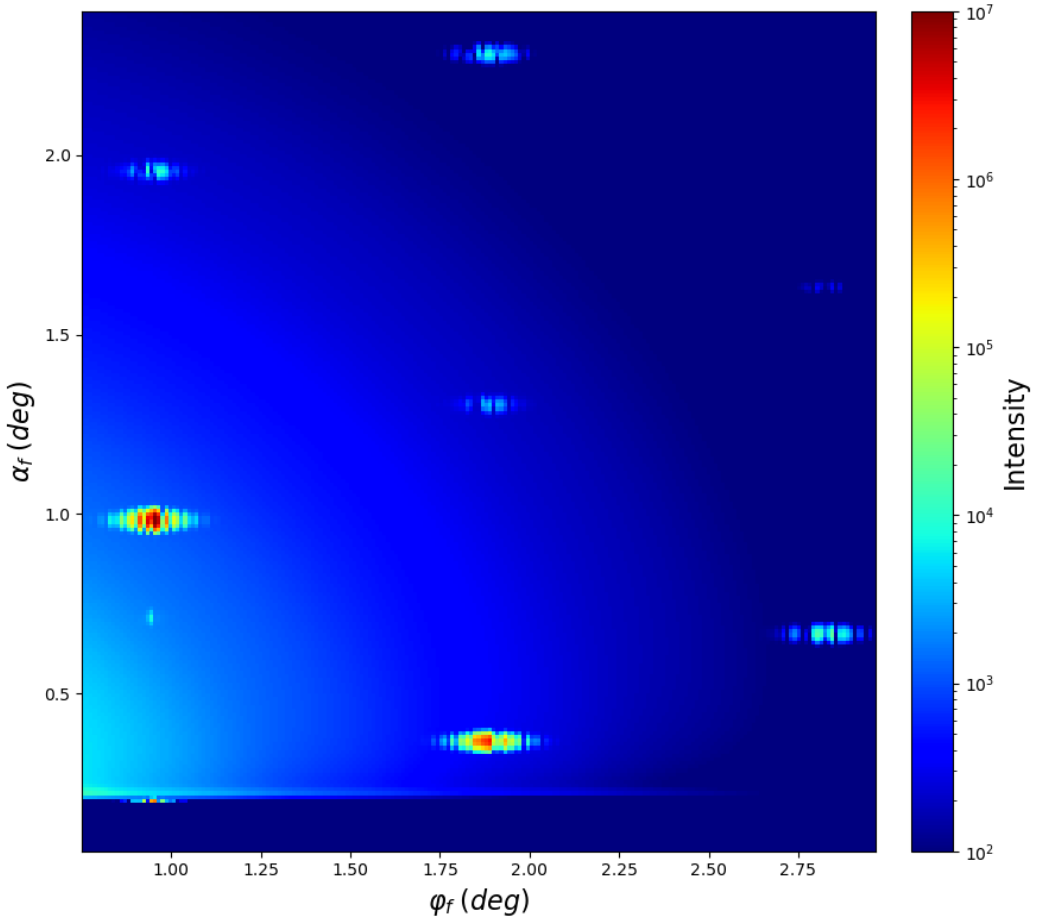
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  71.3,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

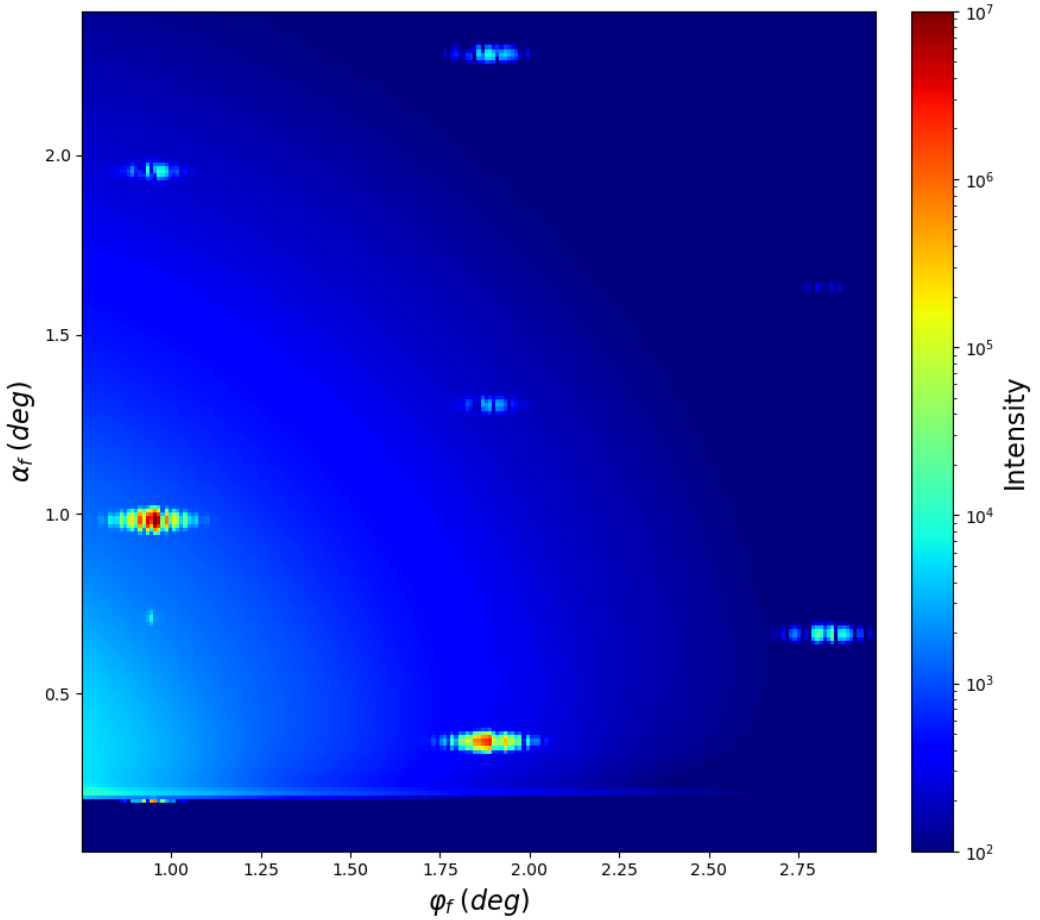
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  81.2,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  91.10000000000001,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  101.0,
"sigma_meso_radius":  20.0,
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"rotation_z":  0.0
}
```
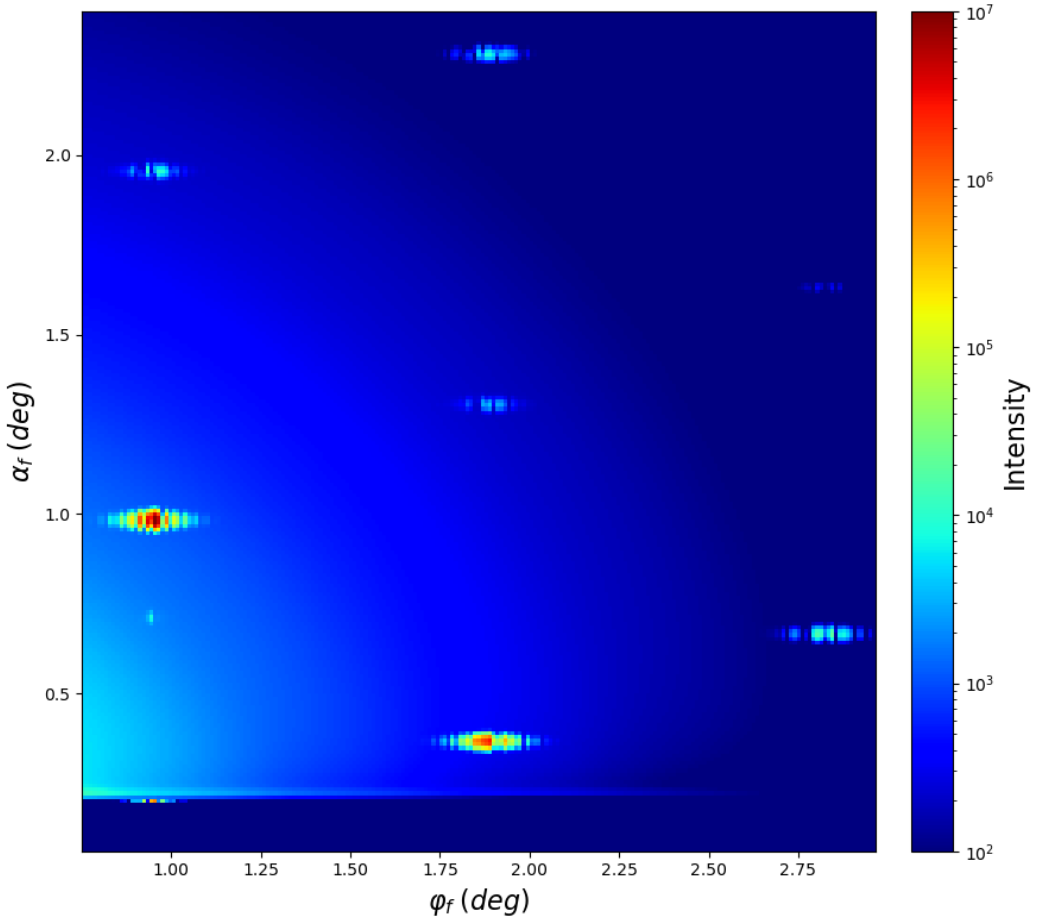
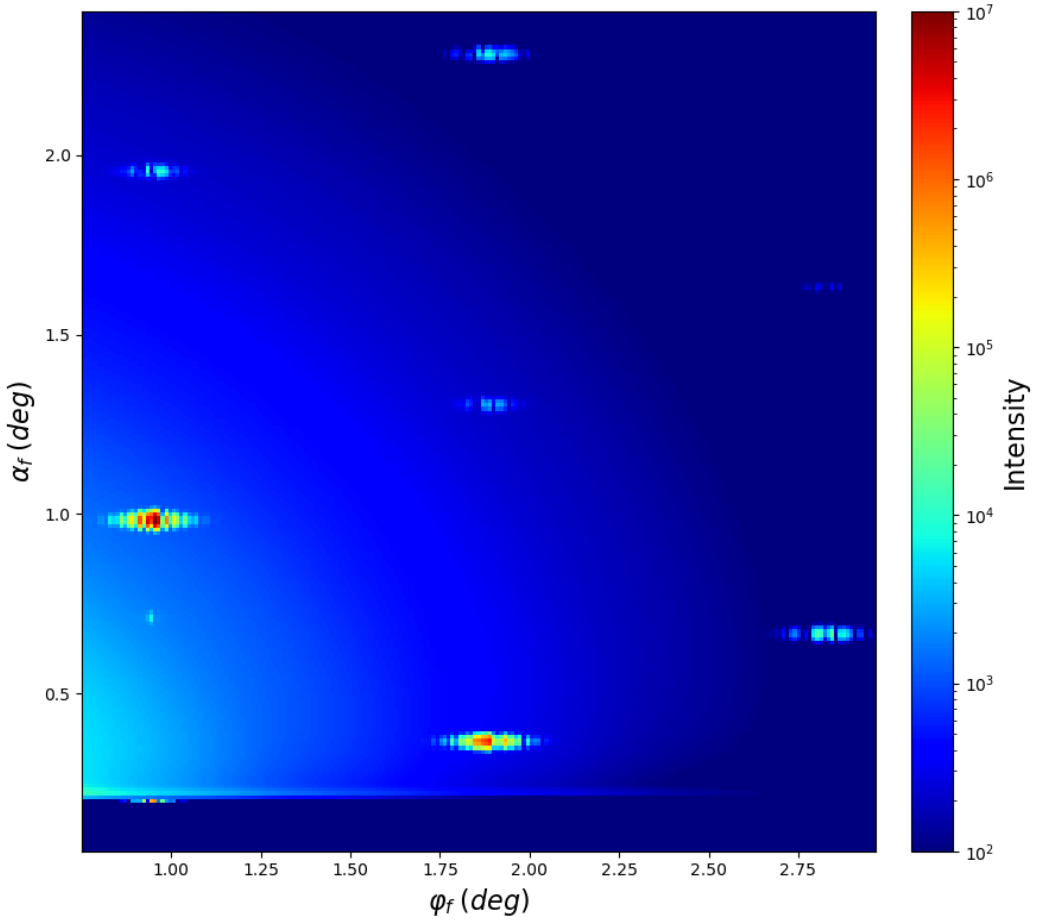




Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  110.9,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
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"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  120.80000000000001,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```
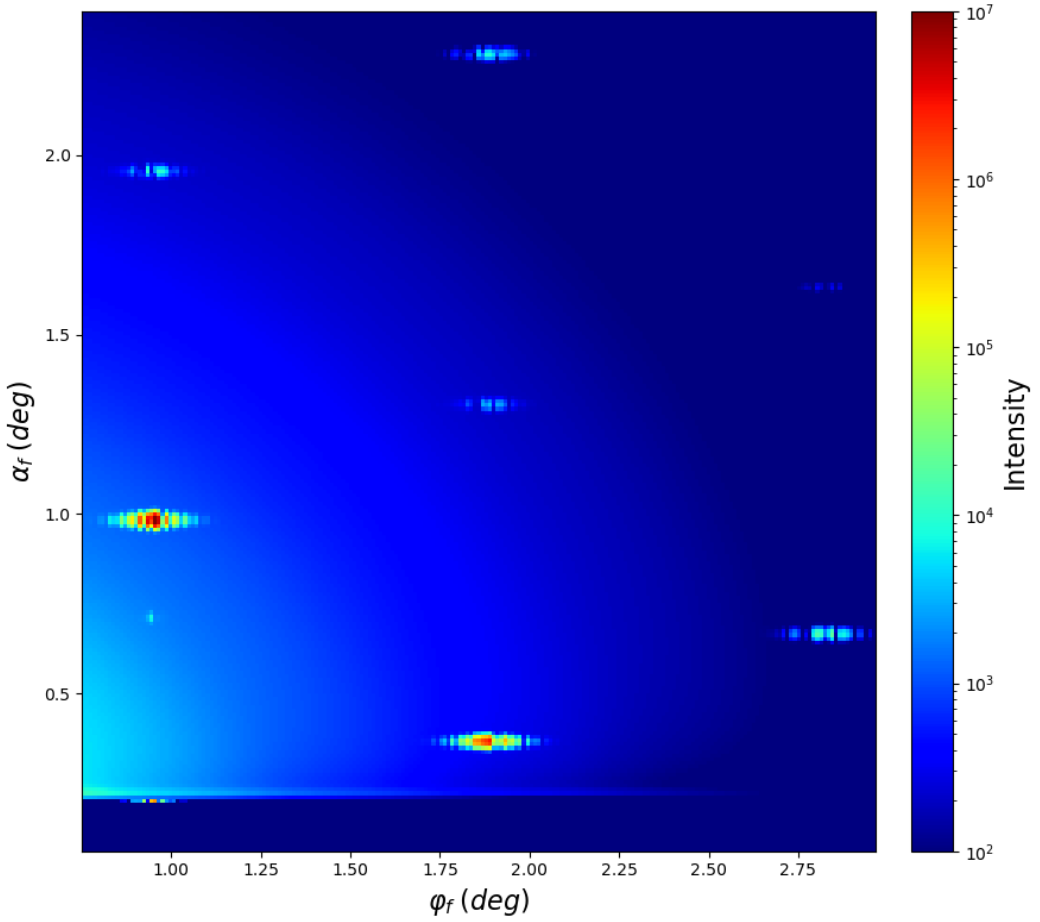
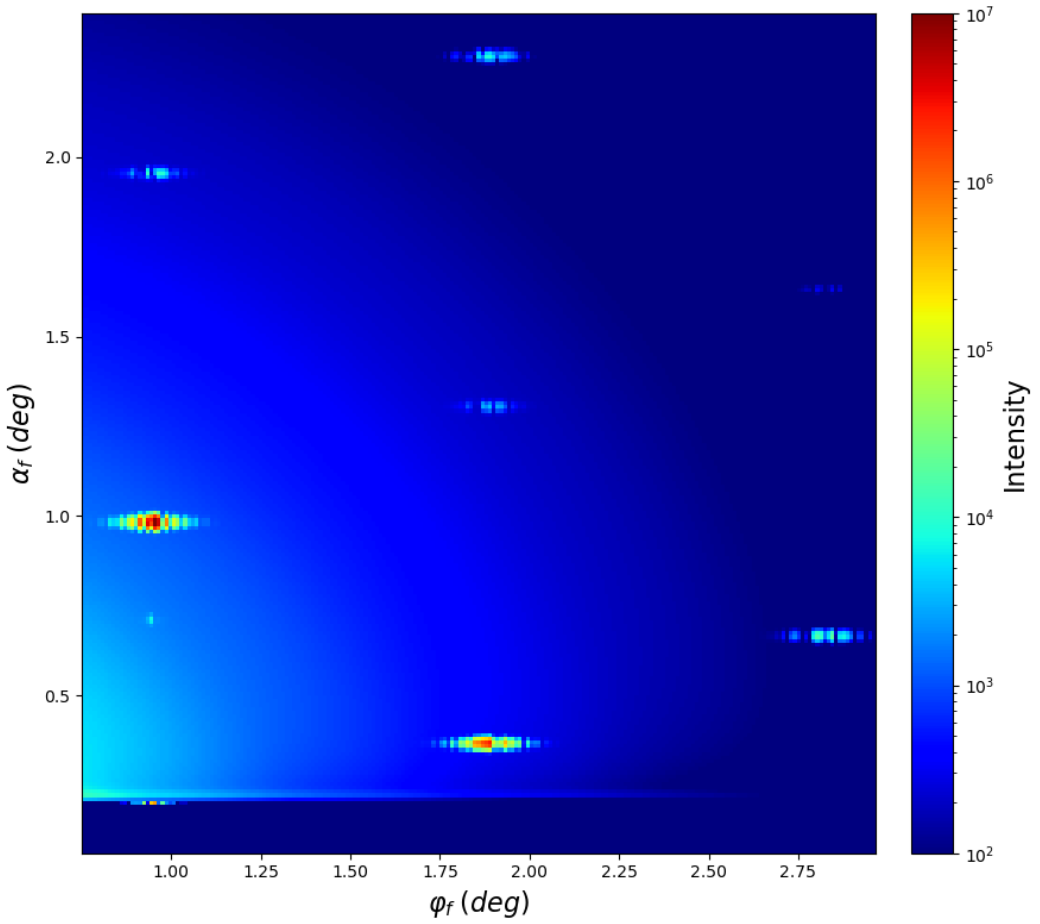




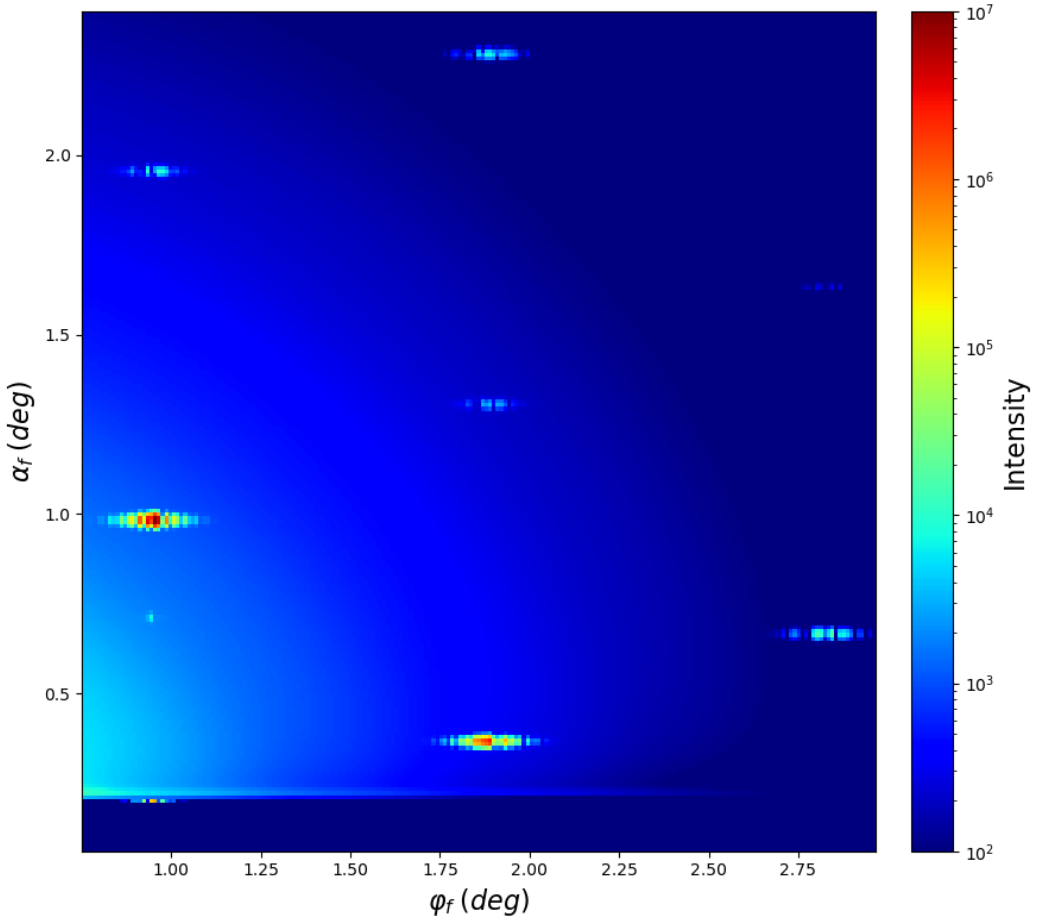
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  130.70000000000002,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

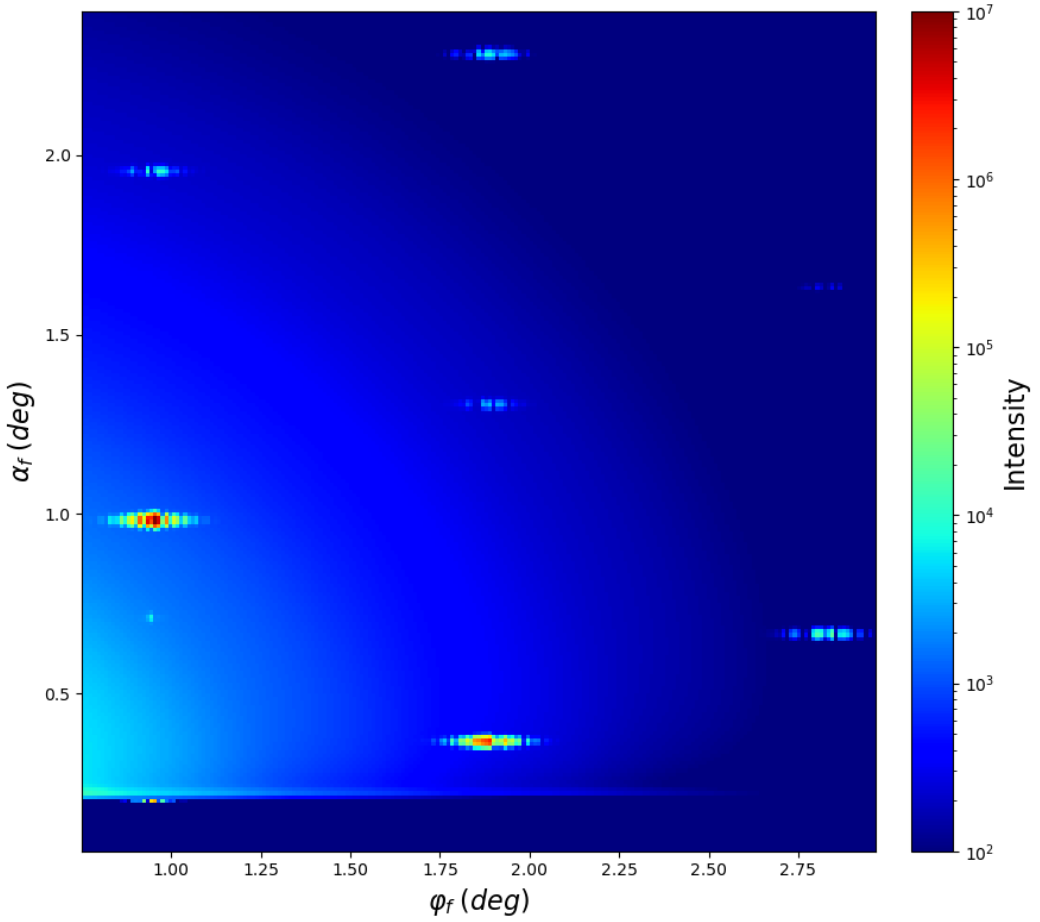
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  140.6,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

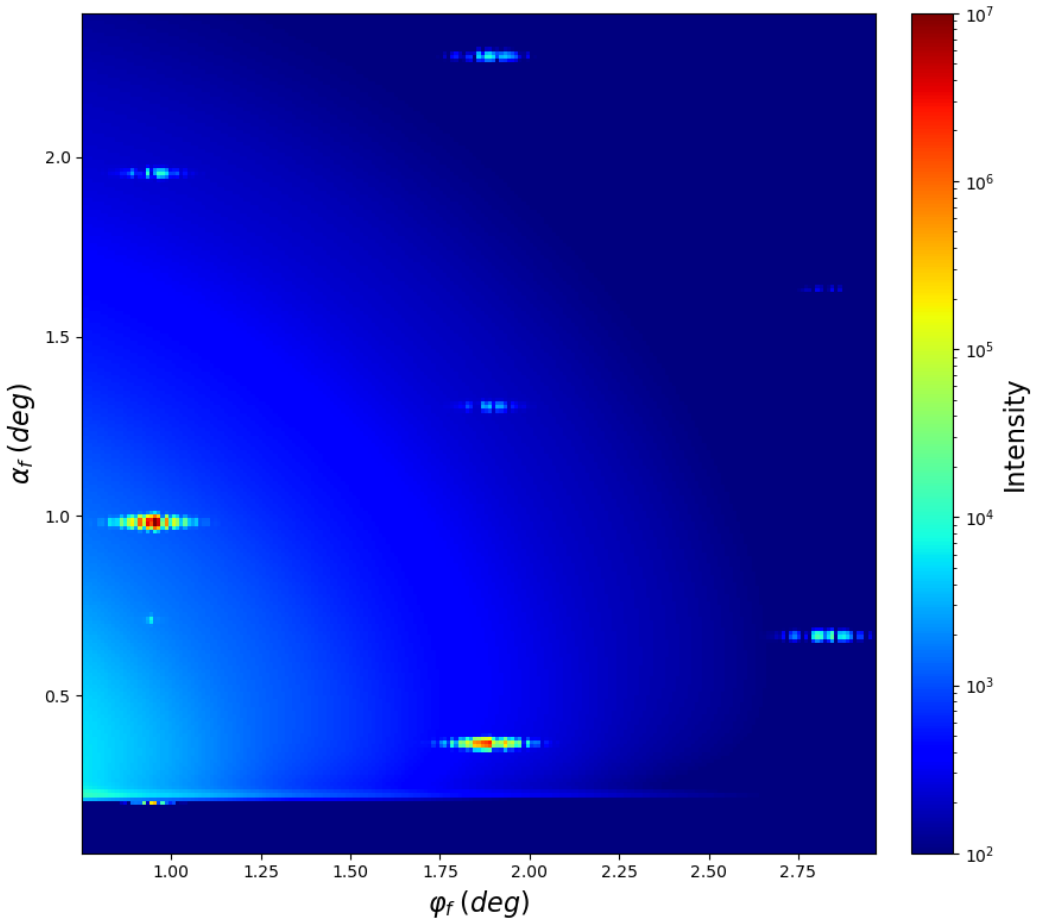
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  150.5,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

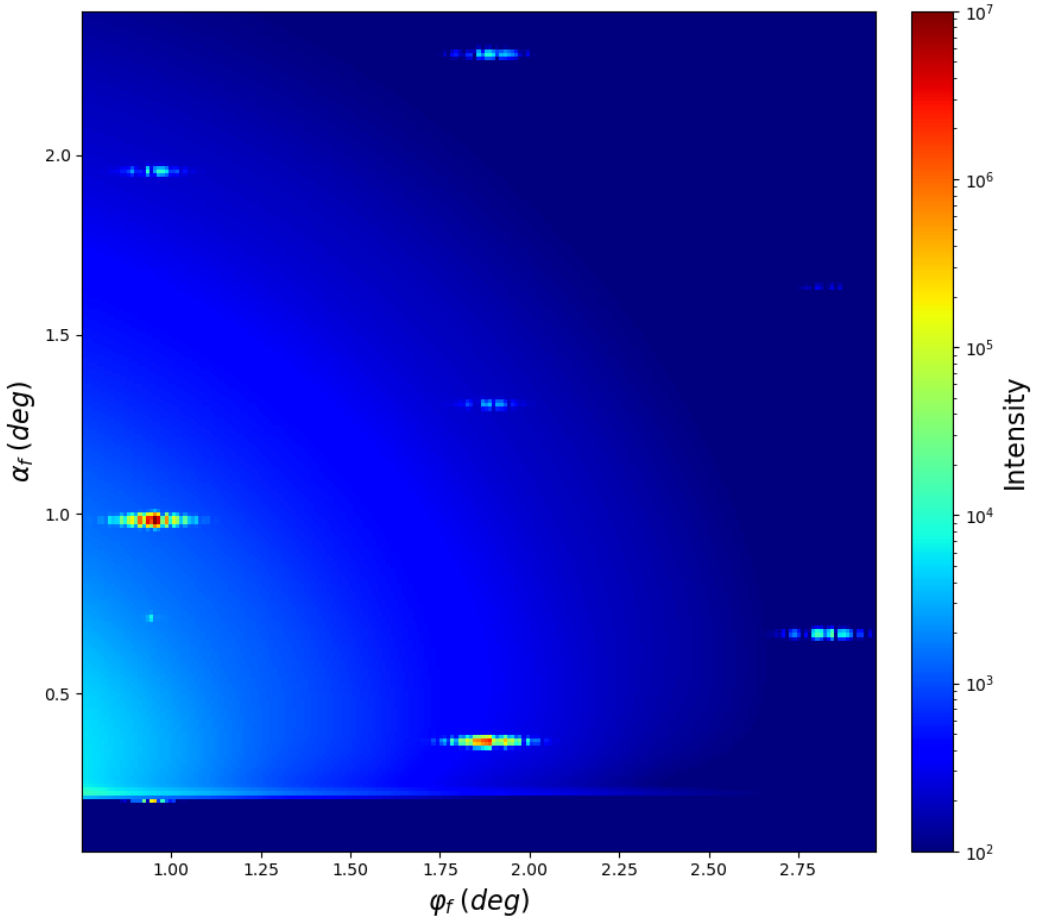
Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  160.4,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
"sigma_meso_height":  170.3,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
"meso_radius":  800,
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```


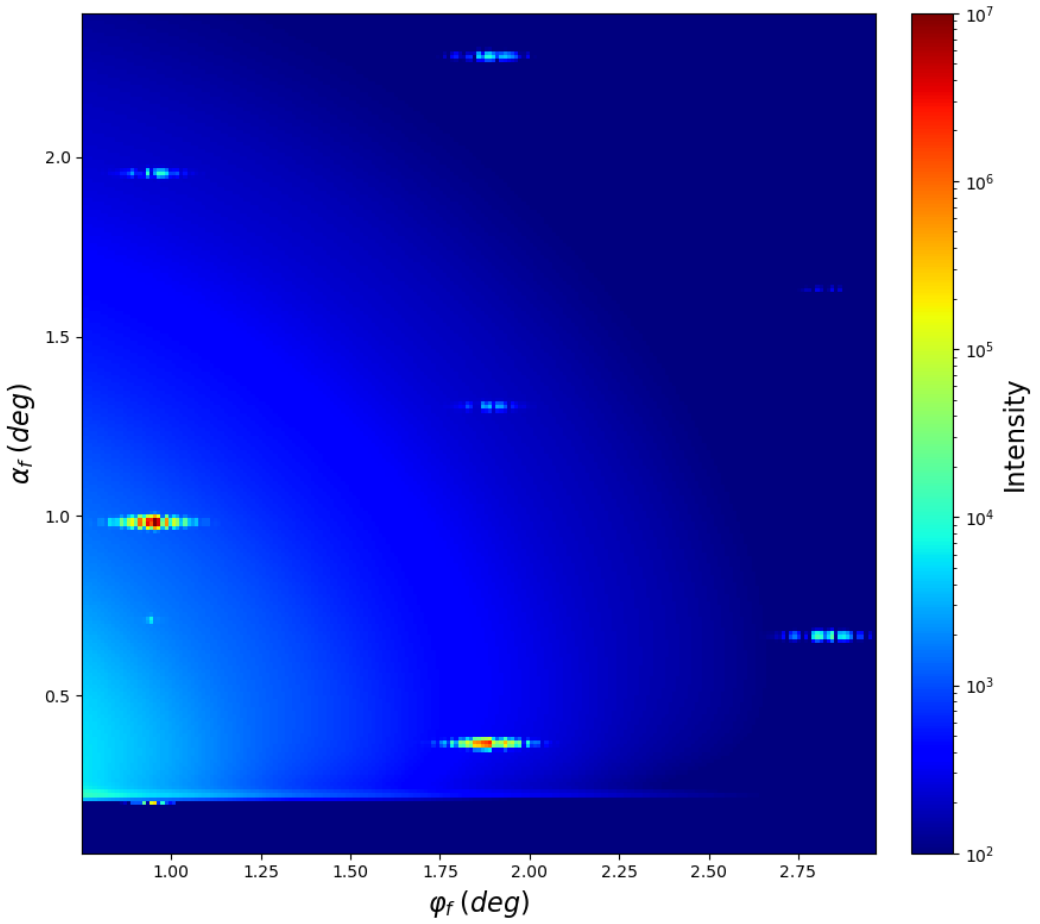

Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
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"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
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"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```
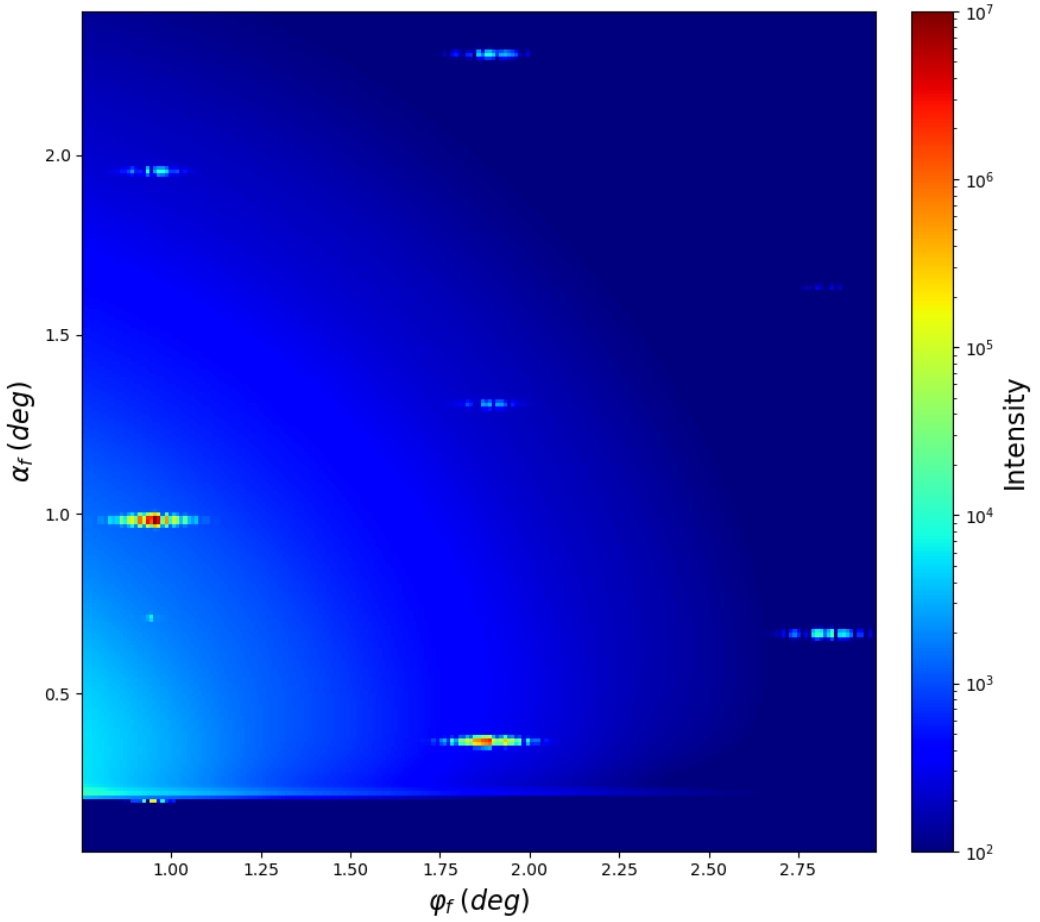
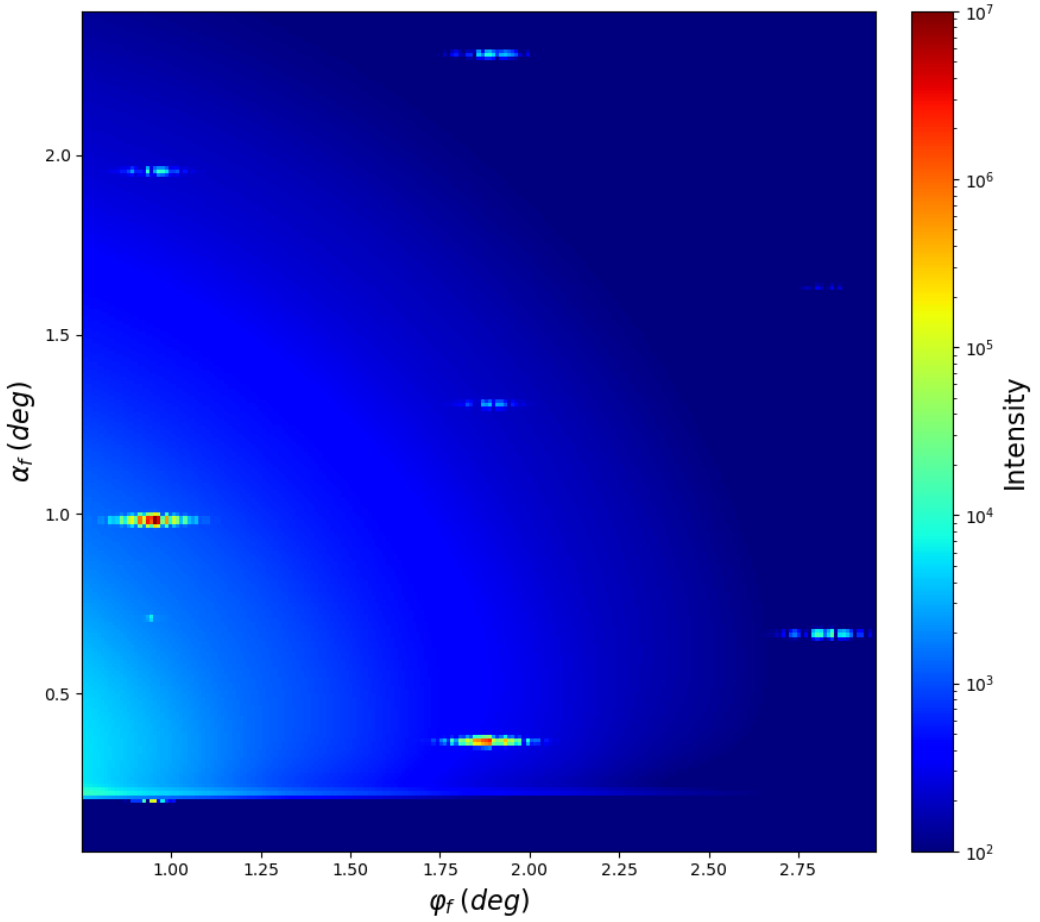




Single meso, sigma_meso_height


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  0,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
"lattice_length_a":  12.45,
"lattice_length_c":  31.0,
"nparticles":  10,
"nanoparticle_radius":  5.0,
"sigma_nanoparticle_radius":  0.3,
"meso_height":  200,
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"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```