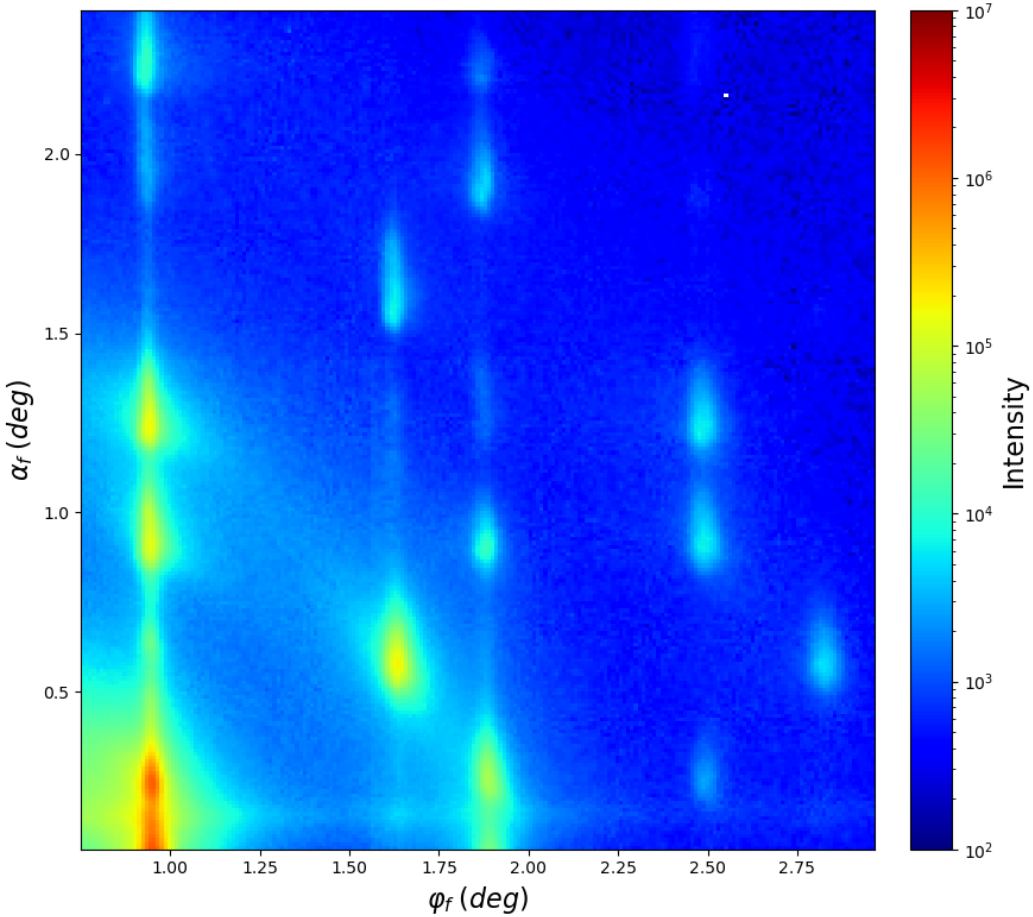
2.0
1.5
1.0
0.5
$\alpha_f\,(deg)$
1.00
1.25
1.50
1.75
2.00
2.25
2.50
2.75
$\varphi_f\,(deg)$
10^7
10^6
10^5
10^4
10^3
10^2
Intensity

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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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"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  -0.5,
"rotation_z":  0.0
}
```
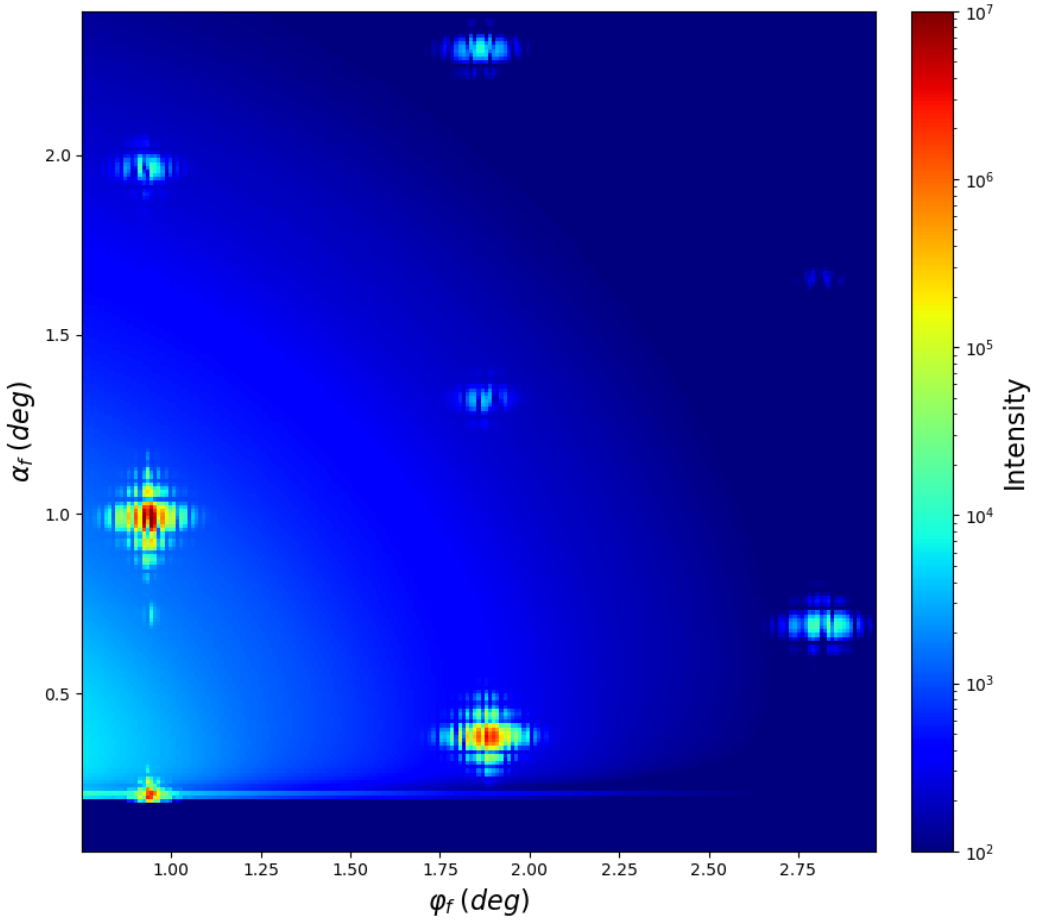
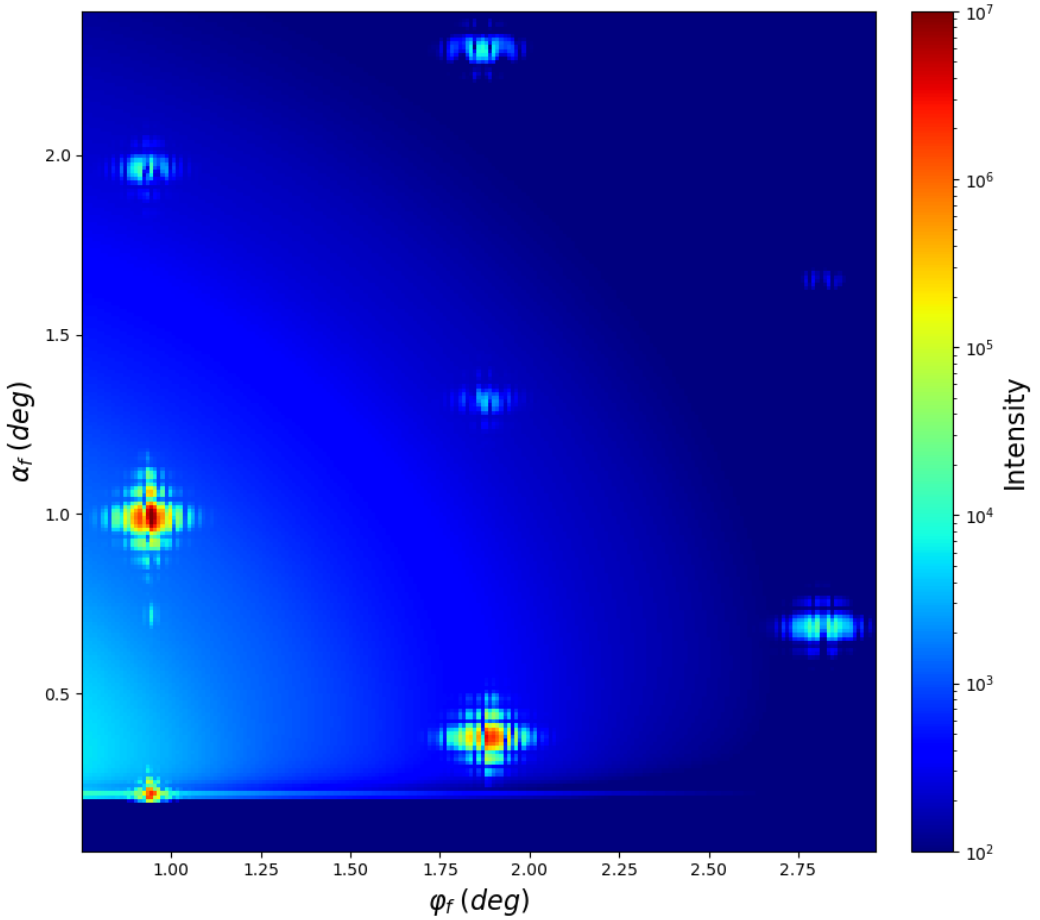




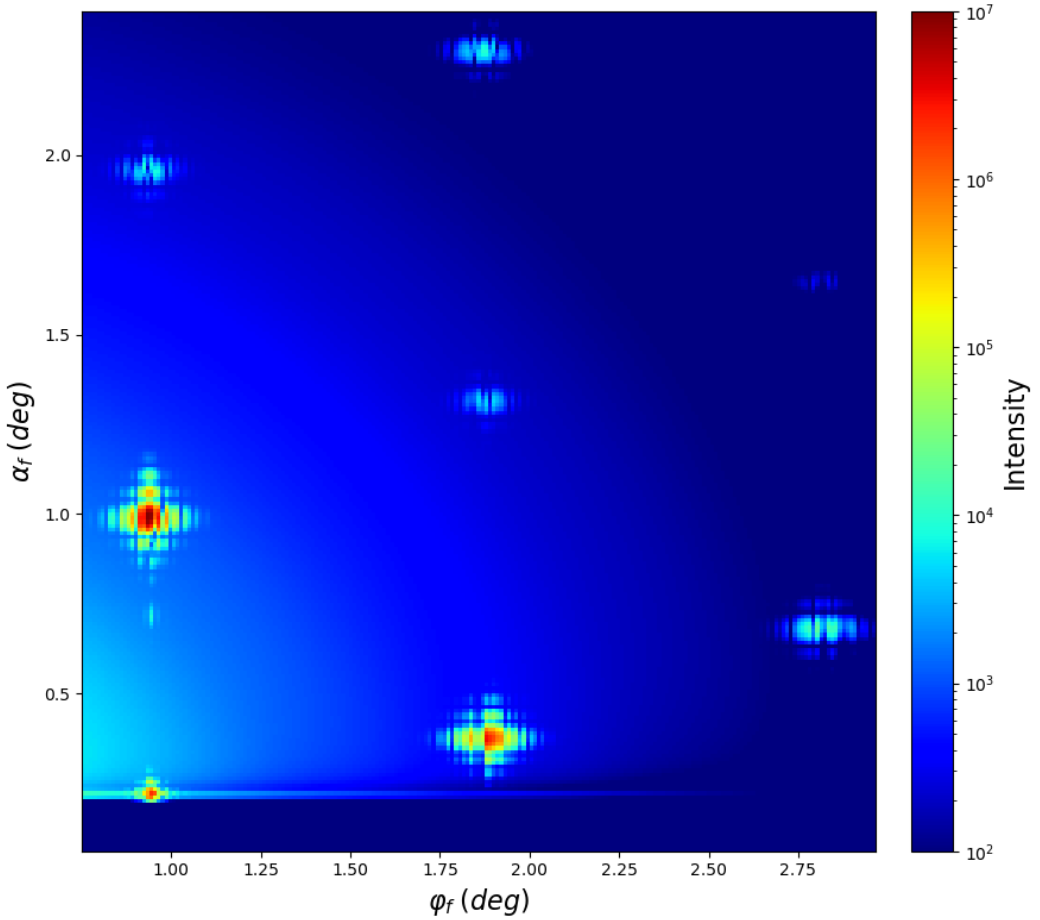
Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  -0.4,
"rotation_z":  0.0
}
```

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  -0.3,
"rotation_z":  0.0
}
```

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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,
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"meso_radius":  800,
"sigma_meso_height":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  -0.19999999999999996,
"rotation_z":  0.0
}
```


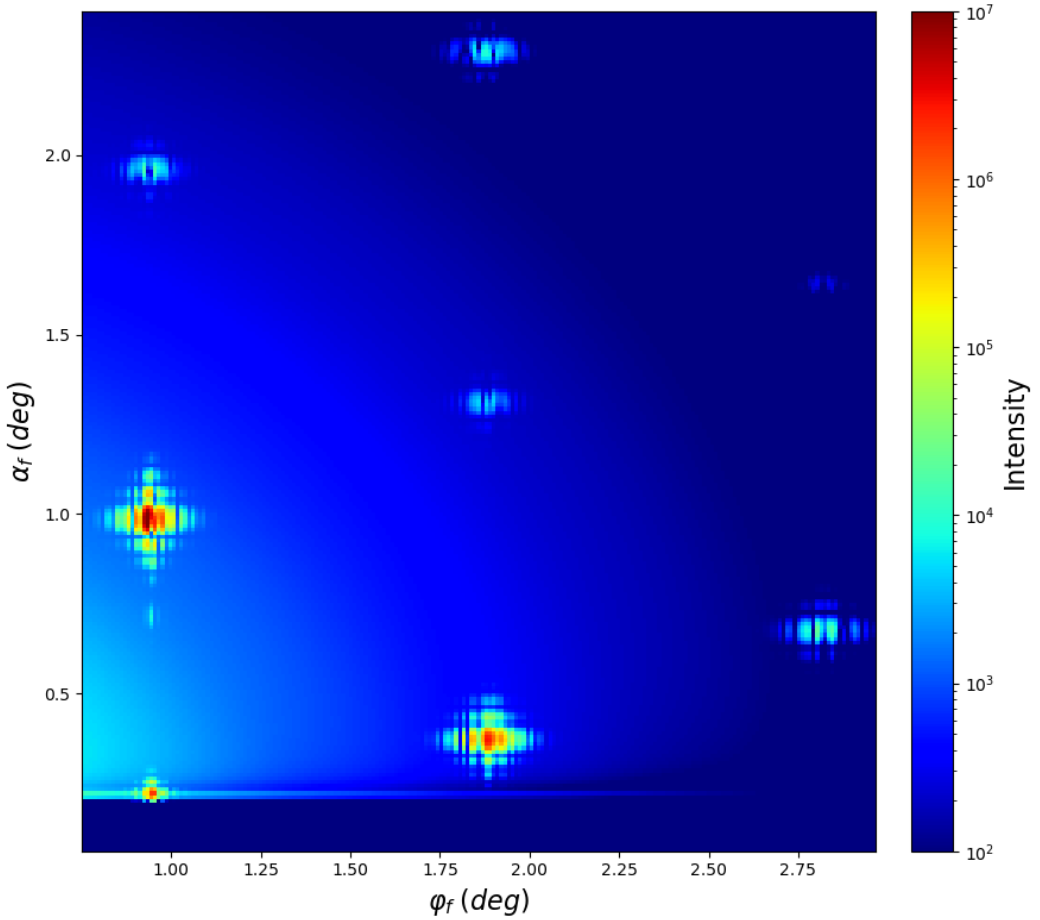

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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,
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"meso_radius":  800,
"sigma_meso_height":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  -0.09999999999999998,
"rotation_z":  0.0
}
```


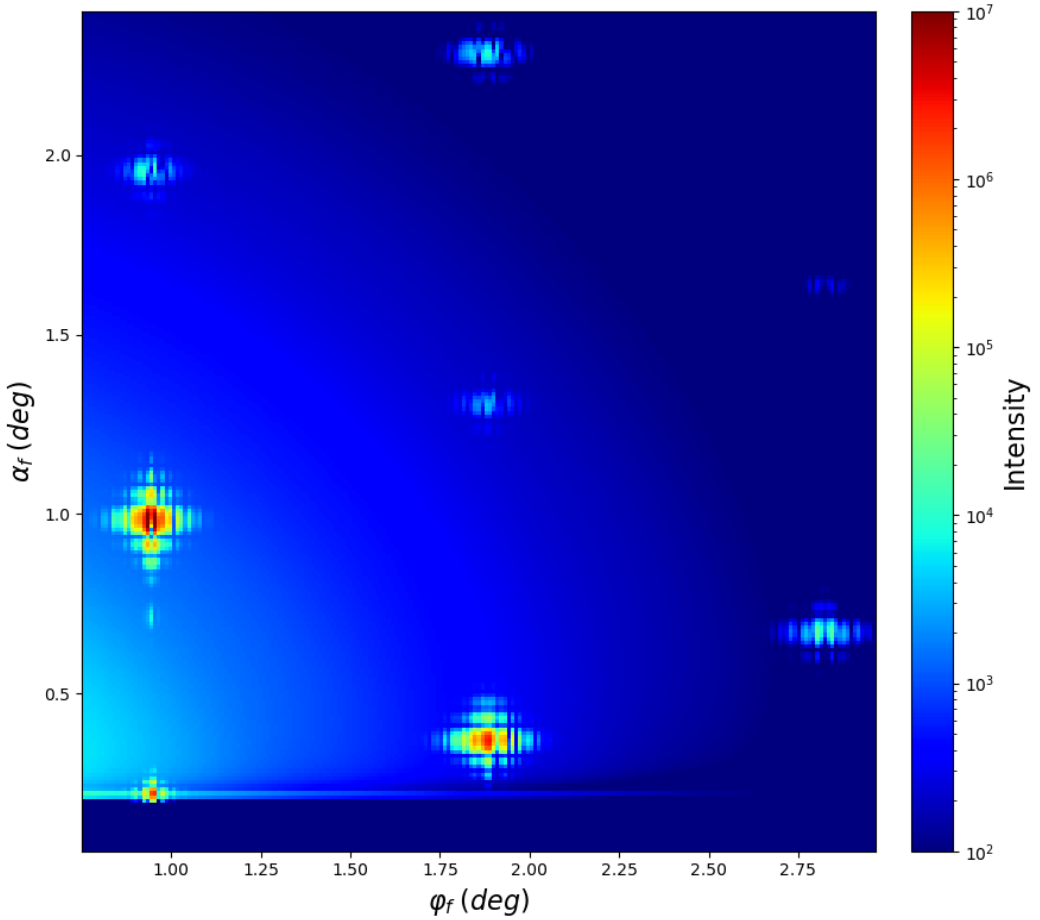

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"meso_factory_type":  "SingleMesoFactory",
"meso_builder_type":  "MesoCrystalBuilder",
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"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":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.0,
"rotation_z":  0.0
}
```


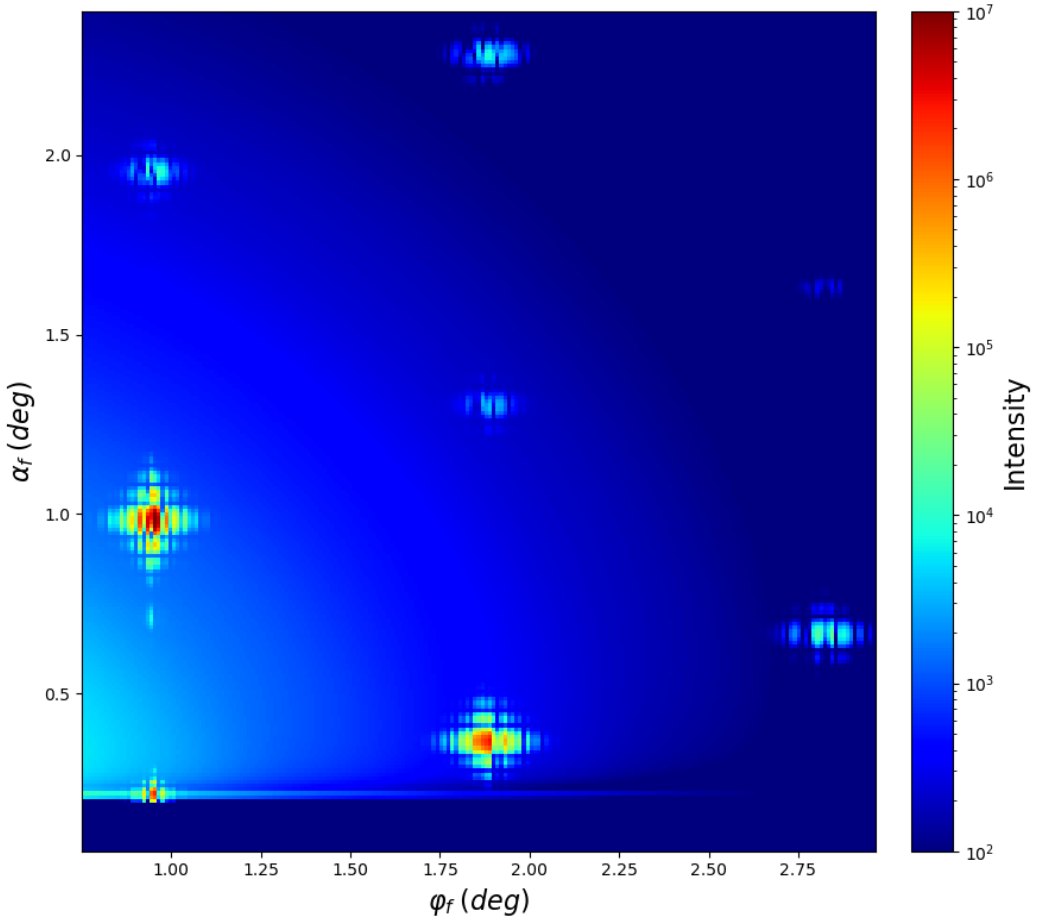

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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,
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"meso_radius":  800,
"sigma_meso_height":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.10000000000000009,
"rotation_z":  0.0
}
```
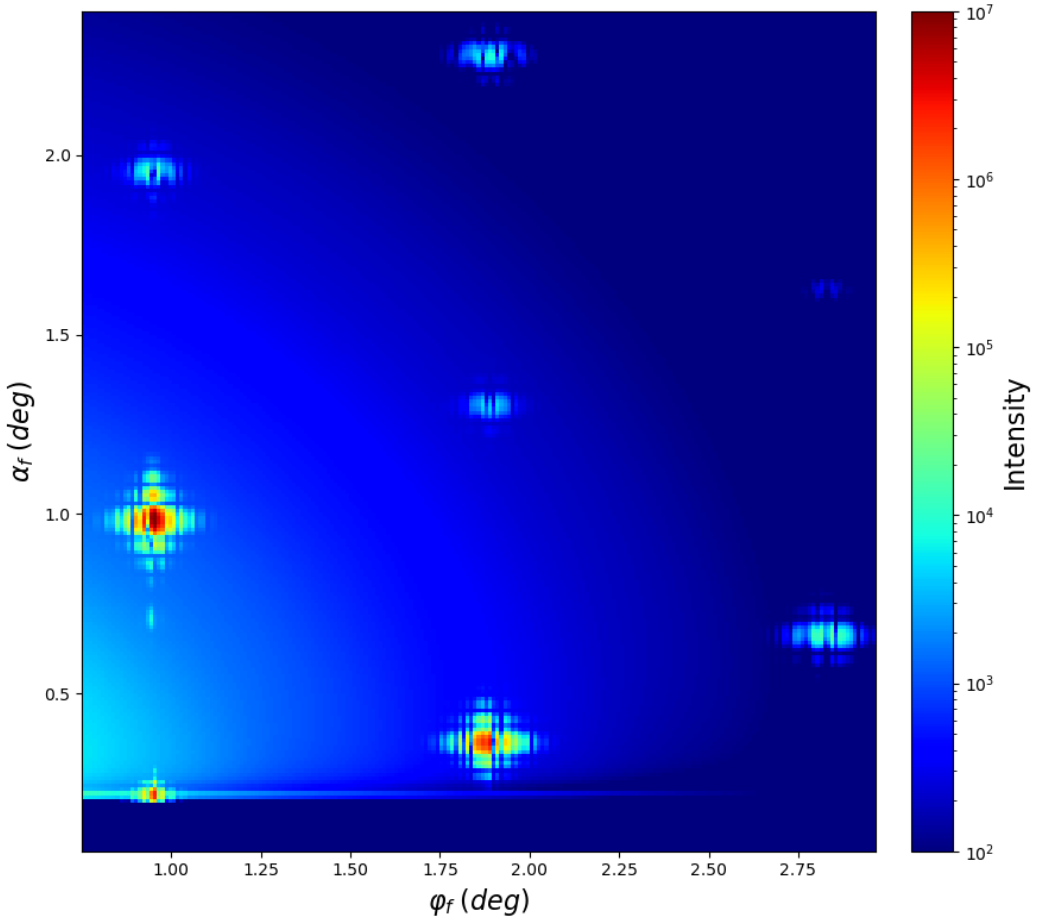
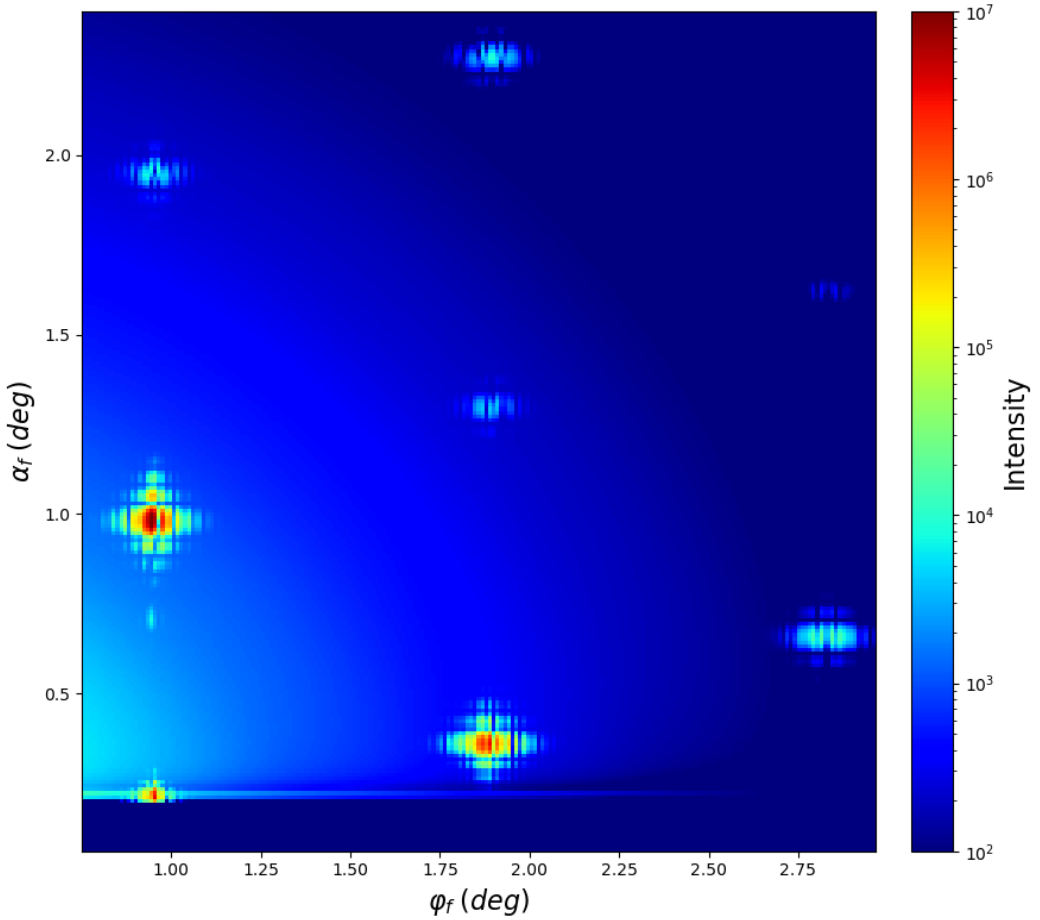




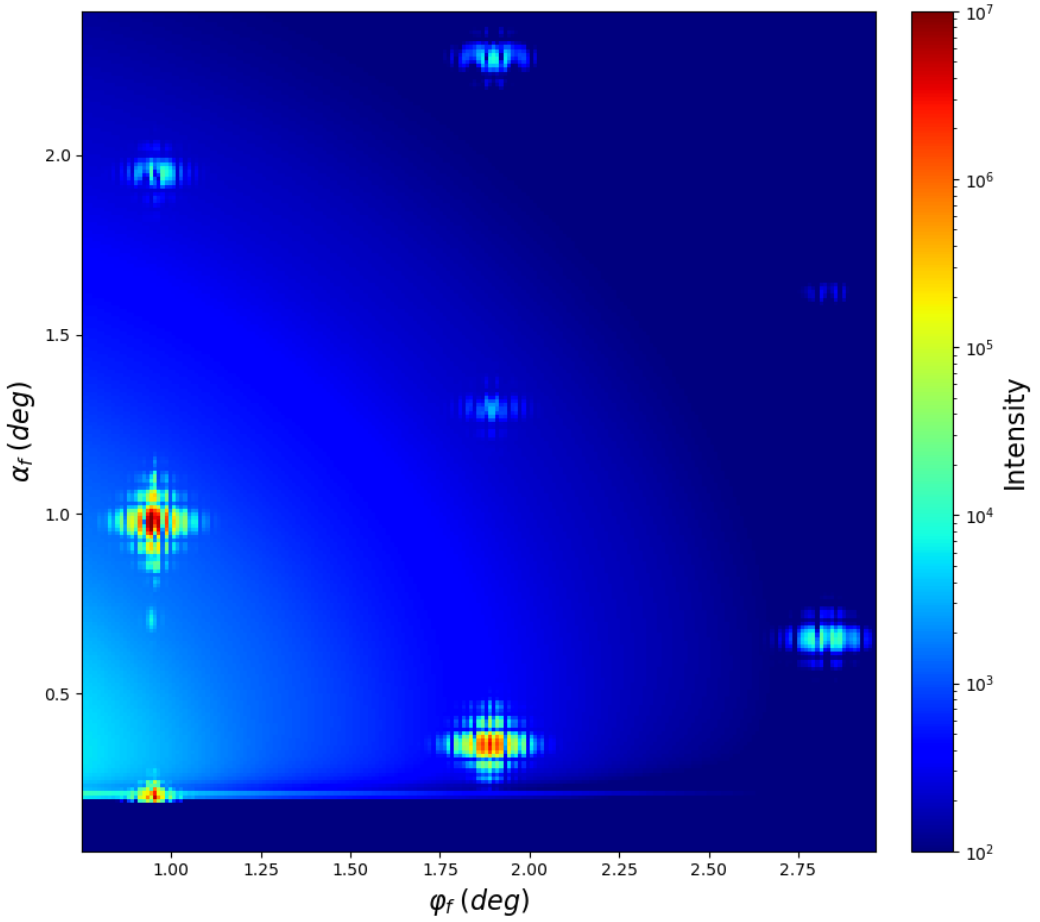
Single meso, rotation_x


```
{
"sample_builder_type": "SampleBuilderVer1",
"roughness": 6.0,
"surface_filling_ratio": 0.25,
"average_layer_thickness": 600,
"meso_elevation": 10,
"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": 20.0,
"sigma_meso_radius": 20.0,
"sigma_lattice_length_a": 0.5,
"rotation_x": 0.20000000000000007,
"rotation_z": 0.0
}
```

Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.30000000000000004,
"rotation_z":  0.0
}
```

Single meso, rotation_x


```
{
"sample_builder_type": "SampleBuilderVer1",
"roughness": 6.0,
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"average_layer_thickness": 600,
"meso_elevation": 10,
"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": 20.0,
"sigma_meso_radius": 20.0,
"sigma_lattice_length_a": 0.5,
"rotation_x": 0.4,
"rotation_z": 0.0
}
```
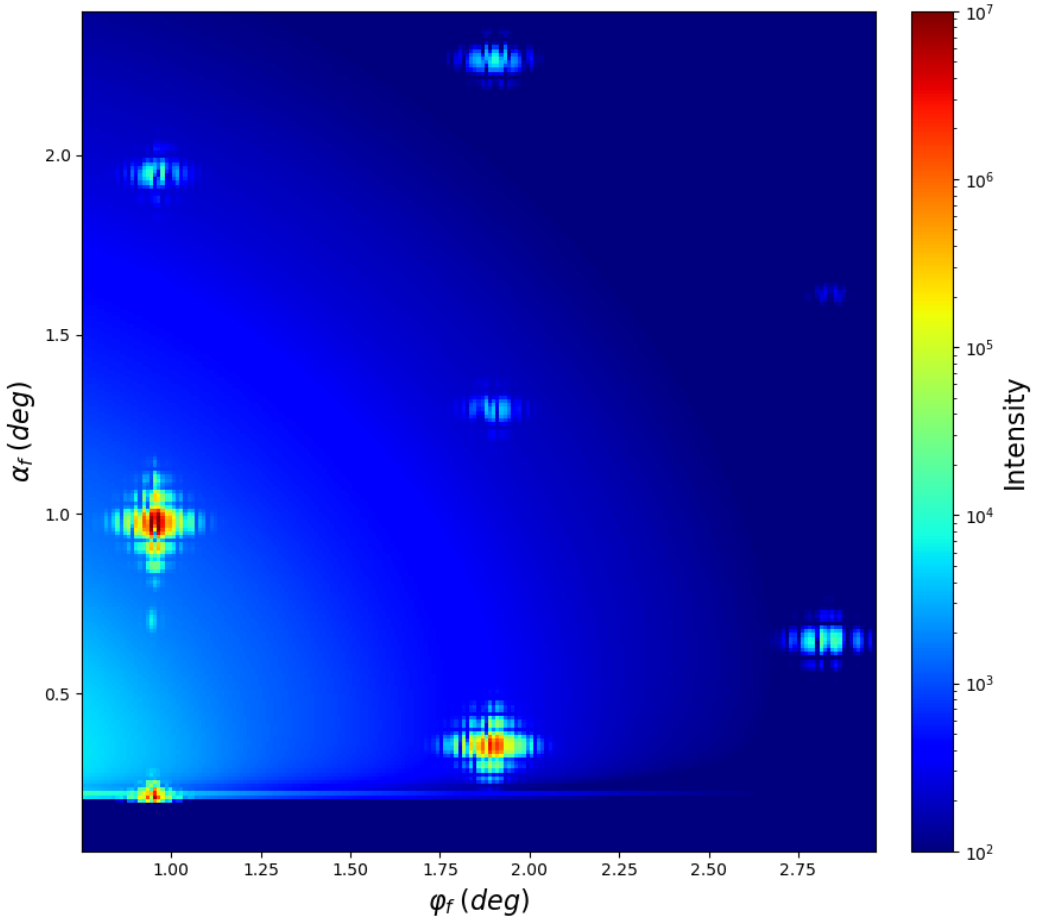
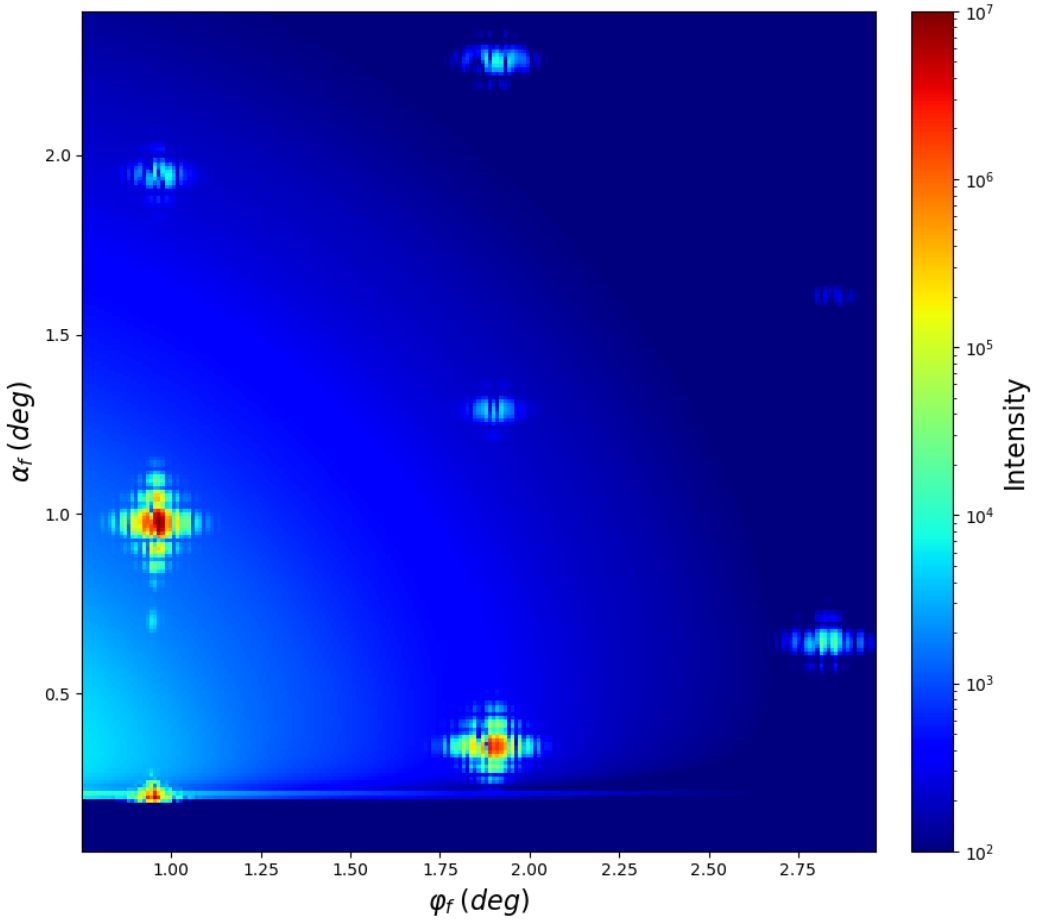




Single meso, rotation_x


```
{
"sample_builder_type":  "SampleBuilderVer1",
"roughness":  6.0,
"surface_filling_ratio":  0.25,
"average_layer_thickness":  600,
"meso_elevation":  10,
"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":  20.0,
"sigma_meso_radius":  20.0,
"sigma_lattice_length_a":  0.5,
"rotation_x":  0.5,
"rotation_z":  0.0
}
```