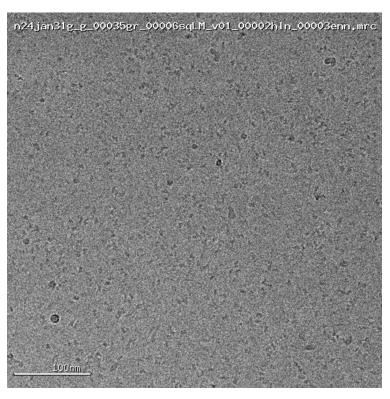
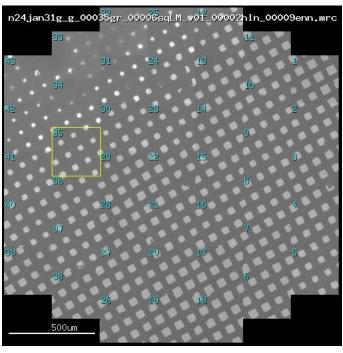
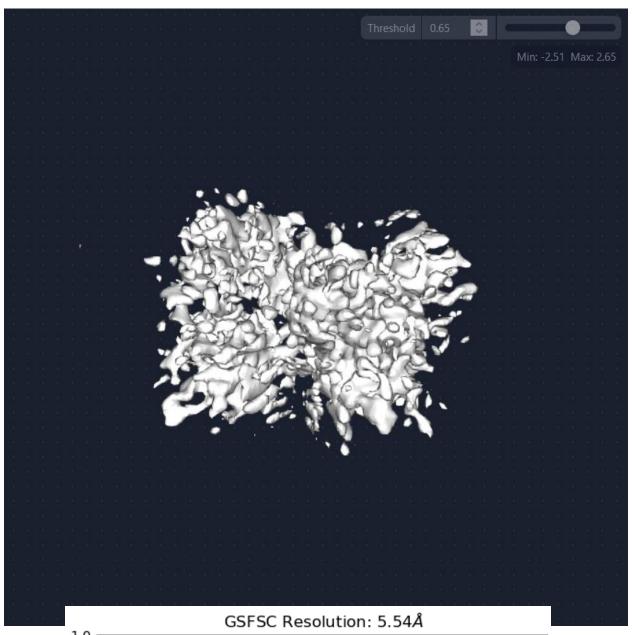
## **Bradley Guilliams NCCAT-GUP3-BG230630 RAP1 Proposal**

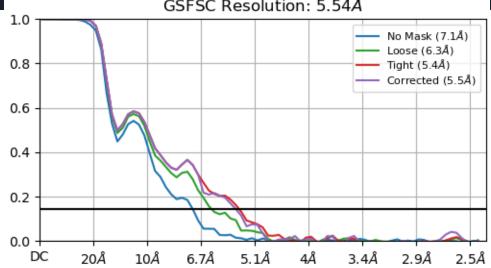
During the GUP3 screening session in October, we made samples using our protein GRLMR with the intention of adding two small molecules (NADPH and SeO<sub>3</sub>) which bind within the protein structure. From our screening session in October, we were able to produce several Kriosready grids and submit a RAP1 proposal. From the Krios data we were able to obtain a ~3.2 Å structure, and we are still working through some of the data to push the resolution further. In the screening session Jan 31-Feb 2, we screened 2 different samples (1 with NADPH and 1 with SeO<sub>3</sub>) and obtained several Krios-ready grids for each. This RAP1 proposal is to collect on these 2 different samples with the intention of seeing these small molecules bound within our protein structure. Here, I include some examples of small data collections which resulted in some nice 2-d classes and some reconstructions below 6 Å in only a few hours of processing. I also include example atlas and high-mag images of Krios ready grids for the 2 samples.

## SAMPLE 1, NADPH + GRLMR

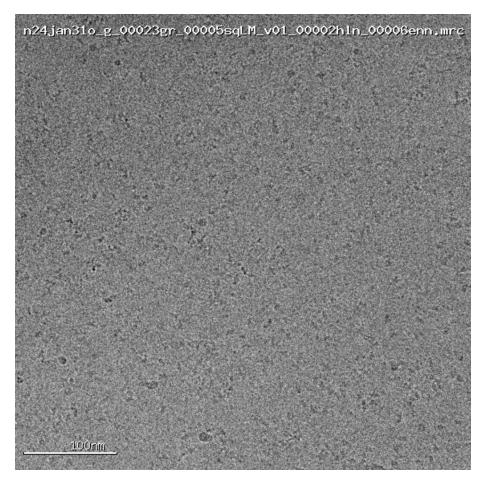


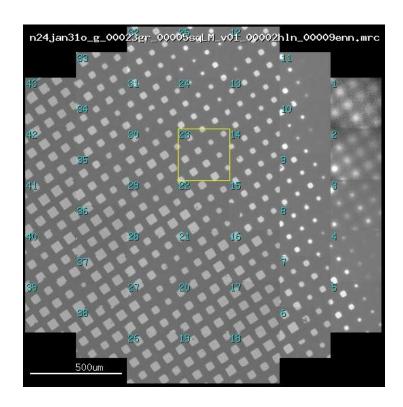


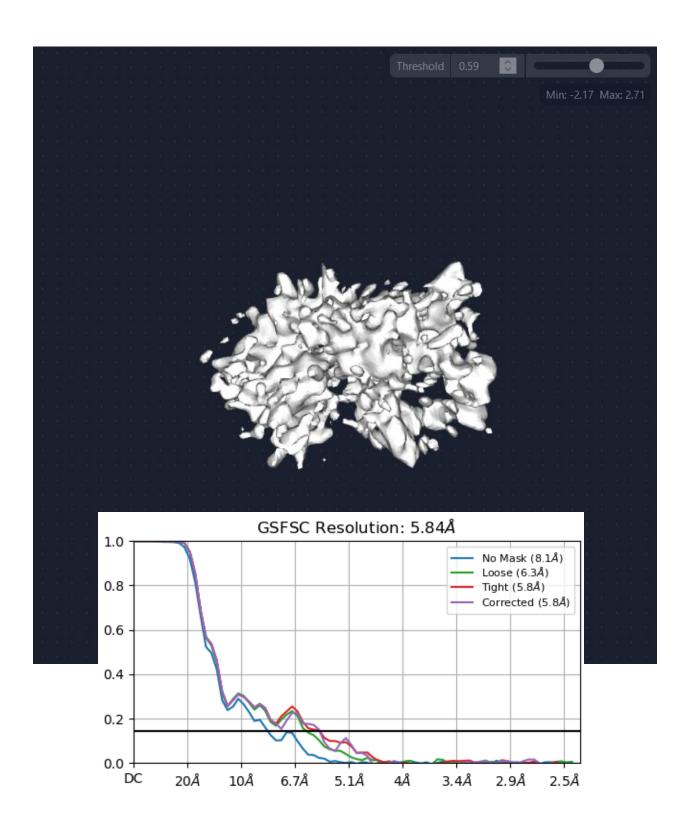




## SAMPLE 2







Representative classes from different stages, either following blob-picking or template picking.

Classes look similar for both samples.

1824 ptcls	1717 ptcls 7.8 A 2 ess	1631 ptcb	1549 ptcfs 12.4 A 3 ess	1548 ptcls	1514 ptcls 3.2 A 3 ess	1505 ptcls 9.1 A 3 ess	1469 ptcls	1464 ptcis 6.1 A 3 ess	1453 ptcts 8/8 A 3 ess
1434 ptcls  6.1 A 3 ess	1402 ptcls 3.2 A 3 ess	1402 ptcls 5.9 A 3 ess	1401 ptcls 11.9 A 3 ess	1401 ptcis 10.3 A 3 ess	1400 ptcis 6.1 A 3 ess	1389 ptcis 11.2.A.J ess	1370 ptels	1362 ptcis	1358 ptcts
1354 ptcls.  4 8	1349 ptcis 7.8 A 3 ess	1337 ptcts 13.0 A 3 ess	1329 ptcls 8.5 A 2 ess	1328 ptcls 9.5 A.3 ess	1317 ptcls 12.3 A 3 ess	1316 ptcls 9.4 A 3 ess	1317 ptcls 69 A 3 ess	1799 ptcls 11.0 A 3 ess	1288 ptcls 1288 ptcls 9.6 A 3 ess
1288 ptcis	1244 ptcls	1240 ptcls	1240 ptcls	1239 ptcis	1213 ptcls	1211 ptcis	1207 ptcls	1191 ptcls	1180 ptcls 11.1 A 3 ess
9.4 A 3 ess	11.6 A 3 ess	9.5 A 3 ess	8.7 A 3 ess	11.4 A 3 ess	9.9 A 3 ess	12.2 A J ess	11.0 A 3 ess	12.1 A 3 ess	
1174 ptcls  4 08  9.5 A 2 ess	1173 ptcis	1172 ptols	1166 ptcls	1158 ptcis	1155 ptcis	1153 ptcis	1145 ptcis	1139 ptcls	1139 ptcls
	11.3 A 2 ess	9.5 A 2 ess	9.5 A 3 ess	7.1 A 3 ess	5.9 A 3 ess	116 A 3 ess	9.1 A 2 ess	11.4 A 3 ess	10.1 A 3 ess
1135 ptcis	1132 ptcls	1132 ptcis	1129 ptots	1123 pteis	1116 ptcis	1112 ptcls	1108 ptcls 6.0 A 3 ess	1104 ptcls	1104 ptcts
10.3 A 2 ess	6.8 A 2 ess	11.1 A 3 ess	10.2 A 3 ess	93 A 3 ess	8.5 A 3 ess	10.7 A 2 ess		8.4 A 3 ess	11.6 A 2 ess
1098 ptcls	1096 ptcls 10,6 A 3 ess	1096 ptcls 10,3 A 3 ess	1091 ptels 8.1 A 3 öss	1088 ptcls 9,6 A 3 ess	1086 ptcis 19.9 A 2 ess	1082 ptc/s 7.0 A 3 ess	1078 ptets 11.3 A 3 ess	1067 ptcts 6.1 A 3 ess	1065 ptcis 12,4 A Z ess
1061 ptcis	1059 ptcls	1059 ptcls	1054 ptcls	1045 ptcis	1044 ptels	1033 ptcls	1032 pteis	1023 ptcls	1023 ptcls
7,9 A 3 ess	10.5 A 2 ess	12.0 A 2 ess	6.7 A 3 css	8.6 A 3 css	7.2 A 3 ess	10.5 A J ess	11.2 A J ess	8.3 A 2 ess	7.3 A 3 ess
1022 ptcis	1020 ptcis	1008 ptcls	1000 ptels	993 ptcls	968 ptcls	960 ptcls	960 ptcls	956 ptcls	956 ptcls
	13.5 A 3 ess	6.0 A 3 ess.	11.4 A 3 ess	11.8 A 3 ess	6.4 A 3 ess	12.5 A 3 ess	6.2 A 3 ess	6.9 A 3 ess	10.6 A 2 ess
.948.ptcls	926 ptcls	915 ptcls	897 ptcls 6.2 A 2 ess	883 ptcls	873 ptcis	709 ptcls	767 ptcls	634 ptcls	57 ptcls
8.8.A.2.ess	7.1 A 2 ess	14.6 A 3 ess		10.4 A 2 ess	11.8 A 2 éss	12.3 A 2 ess	11.9 A 2 ess	10.5 A 2 ess	20,5 ∧ 3 exs

