NICMOS Acceptance Testing

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Summary

A detailed acceptance test for the NICMOS has been performed. A regression test shows that BOT is giving the correct answers. The new features (exposure expansion, pointing adjustments, and visualization) are all functioning properly, and BOT can handle error conditions gracefully and provides meaningful feedback to the users.

There is one outstanding issue for NICMOS. The mode NIC2-ACQ should not be supported by BOT; this is covered with a previously filed PR.

Two issues with the Aladin display have been found – a slight misalignment of the BOT overlay with the DSS image, and a broken link in the Aladin spreadsheet; both of these are known issues with PRs previously filed.

BOT can be released to the community for NICMOS once the NIC2-ACQ mode is made unsupported.

Introduction

For this test, the following target and exposure was used:

Target: G191-B2B – 05h 05m 30.62s, +52^{o} 49’ 51.95”

Exposure: NICMOS/NIC3, MULTI-ACCUM, F160W, NIC3, NSAMP=11,
SAMP-SEQ=SPARS128 (exposure time of 1152.005)

For comparison with the VTT/BOT, which does not support MULTI-ACCUM exposures, the equivalent ACCUM exposure was used; tests verified that ACCUM and MULTI-ACCUM yield the same results (when the ACCUM exposure time corresponds to the exposure time defined by NSAMP and SAMP-SEQ).

When appropriate, modifications to the exposure (e.g. POS TARG) are detailed below. Also, use of the NIC-CORON aperture causes a position shift, so testing was also performed using this aperture (regression only).

This target/exposure was used to perform the following:

Test	Definition
Regression	Comparison with old VTT/BOT
New features	Exposure expansion, pointing adjustment, visualization (actual duration

	is not supported for NICMOS)
Exception Handling	Unsupported exposure (network query and cancel operations were performed with the ACS/SBC, Bad Exposure with the ACS/HRC)

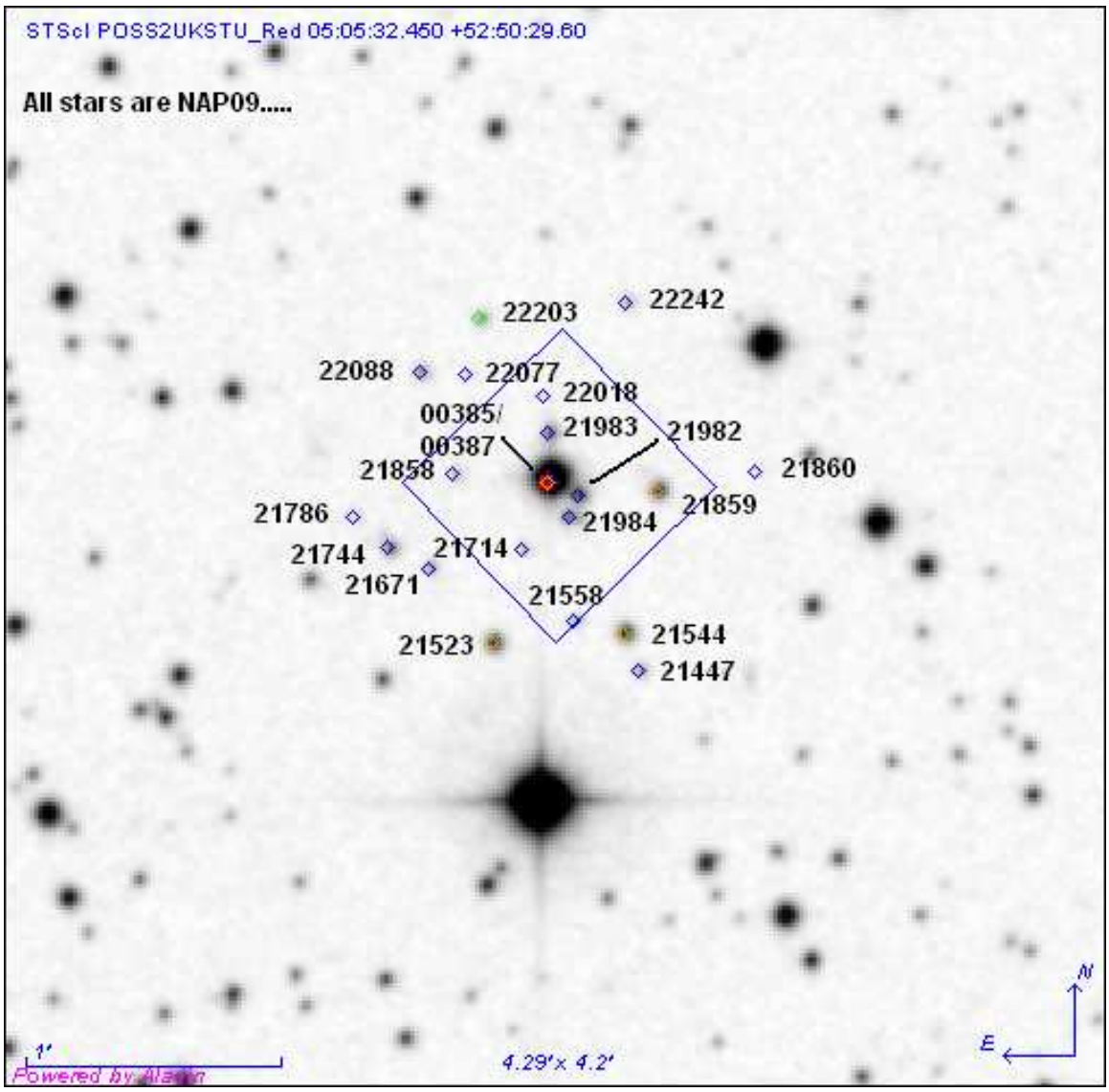
For certain tests, both the tabular and graphic output products are included for ease of comparison with future test results.

Regression Test

The test exposure was run through both the VTT/BOT and the new BOT/Aladin interface. The VTT/BOT used a search radius of 92.4", while the BOT/Aladin used 49.2"; the large search radius for the VTT/BOT was an error in the original tool. This resulted in 45 additional stars being found with the VTT/BOT, all of which were outside the new BOT search area. All objects found by the new BOT were found by the VTT/BOT, and the magnitudes and derived count rates were identical for the overlapping objects. The 21 objects detected (4 science, 1 safe, and 16 unknown) were:

GSC2 ID	RA	Dec	F	J	V	B-V	Type
NAP9000385	05 05 30.5968	+52 49 52.68	11.84	11.45	11.69	-0.62	unknown
NAP9000387	05 05 30.6069	+52 49 51.92	---	---	11.68	-0.25	**O5V**
NAP9021447	05 05 28.2105	+52 49 8.15	18.4	19.69	---	---	not a star
NAP9021523	05 05 32.0052	+52 49 14.15	16.3	17.85	17.02	0.72	G5V
NAP9021544	05 05 28.6232	+52 49 16.96	16.37	17.3	16.8	0.29	A5V
NAP9021558	05 05 29.9115	+52 49 19.67	18.87	20.18	---	---	not a star
NAP9021671	05 05 33.6567	+52 49 31.37	18.36	20.37	---	---	not a star
NAP9021714	05 05 31.2701	+52 49 36.12	19.03	20.35	---	---	not a star
NAP9021744	05 05 34.7154	+52 49 35.81	17.09	18.8	---	---	not a star
NAP9021786	05 05 35.5867	+52 49 43.14	19.47	20.76	---	---	not a star
NAP9021858	05 05 33.0508	+52 49 53.18	18.81	20.48	---	---	not a star
NAP9021859	05 05 27.8199	+52 49 50.20	16.37	17.42	16.85	0.37	F0V
NAP9021860	05 05 25.2752	+52 49 54.84	20.14	---	---	---	not a star
NAP9021982	05 05 29.8387	+52 49 48.73	16.82	---	---	---	not a star
NAP9021983	05 05 30.6445	+52 50 3.23	17.22	18.56	---	---	not a star
NAP9021984	05 05 30.0681	+52 49 43.51	17.57	---	---	---	not a star
NAP9022018	05 05 30.7848	+52 50 11.67	20.21	---	---	---	not a star
NAP9022077	05 05 32.7828	+52 50 16.40	19.79	22.33	---	---	not a star
NAP9022088	05 05 33.9734	+52 50 16.81	18.13	19.8	---	---	not a star
NAP9022203	05 05 32.4531	+52 50 29.57	18.29	19.61	18.9	0.55	F5V
NAP9022242	05 05 28.6863	+52 50 33.77	18.73	20.54	---	---	not a star

The field map, showing the objects found, is given below.

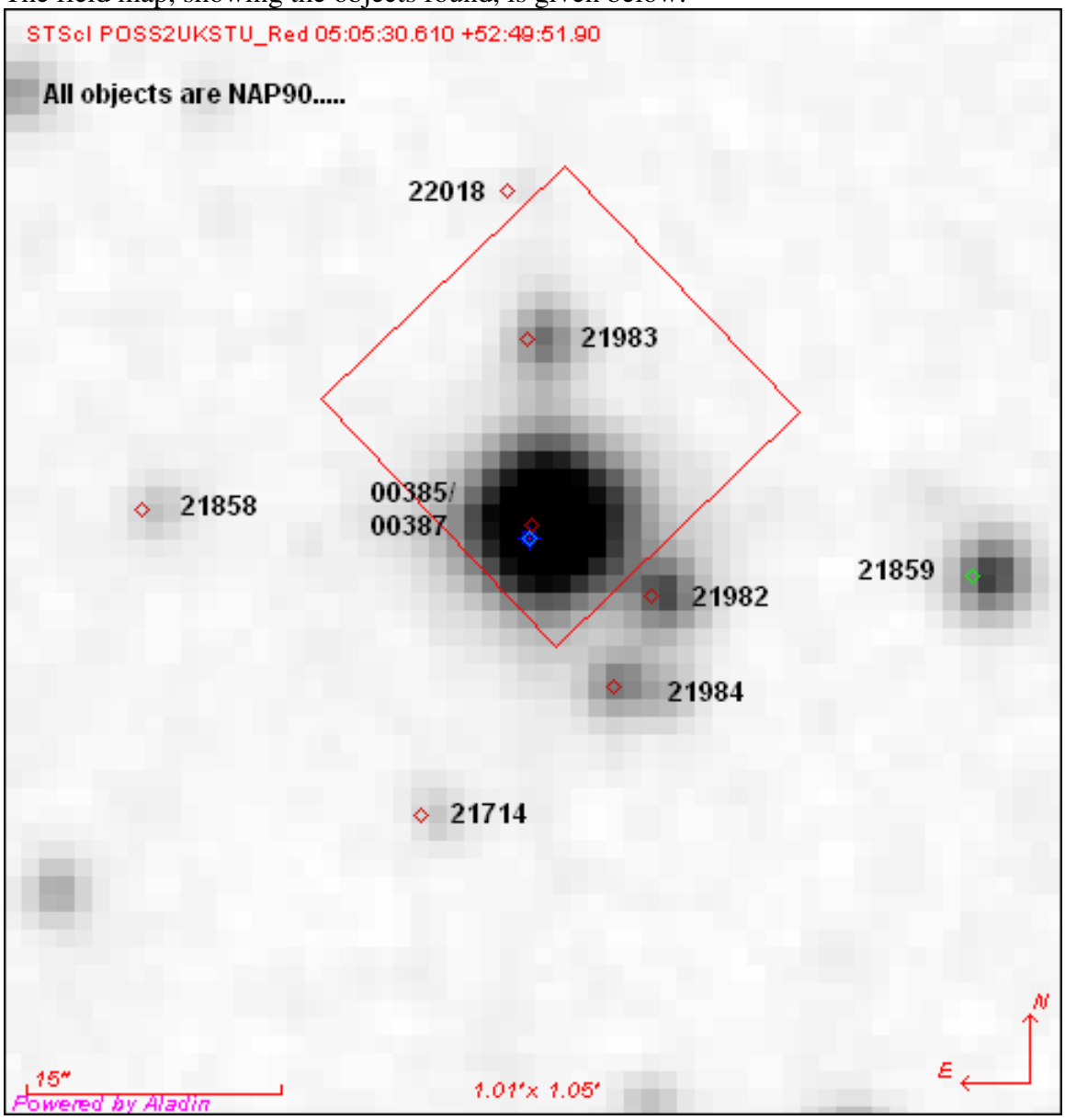


A test exposure, using NIC2 and the NIC2-CORON aperture, was run through the new BOT/Aladin interface; given the large search area of the VTT/BOT, all objects found by the new BOT were included in the VTT/BOT search. The search radius used was 31.20", with the smaller size reflecting the small field-of-view of the NIC2 camera; the fiducial point of the aperture was also off-center due to the use of the coronographic aperture, and the Aladin search radius was appropriately determined.

The 9 objects detected (1 science, 1 safe, and 7 unknown) were:

GSC2 ID	RA	Dec	F	J	V	B-V	Type
NAP9000385	05 05 30.5968	+52 49 52.68	11.84	11.45	11.69	-0.62	unknown
NAP9000387	05 05 30.6069	+52 49 51.92	---	---	11.68	-0.25	**O5V**
NAP9021714	05 05 31.2701	+52 49 36.12	19.03	20.35	---	---	not a star
NAP9021858	05 05 33.0508	+52 49 53.18	18.81	20.48	---	---	not a star
NAP9021859	05 05 27.8199	+52 49 50.20	16.37	17.42	16.85	0.37	F0V
NAP9021982	05 05 29.8387	+52 49 48.73	16.82	---	---	---	not a star
NAP9021983	05 05 30.6445	+52 50 3.23	17.22	18.56	---	---	not a star
NAP9021984	05 05 30.0681	+52 49 43.51	17.57	---	---	---	not a star
NAP9022018	05 05 30.7848	+52 50 11.67	20.21	---	---	---	not a star

The field map, showing the objects found, is given below.



Issue
There appears to be a slight misalignment between the BOT overlay and the DSS image, which is 0.2" in both RA and Dec. The RA offset is consistent (the BOT overlay is always east of the star), while the Dec offset is sometimes north and sometimes south. This discrepancy is small enough (0.2 pixels) to be of no concern, but is covered under APT-VTT PR 56217.

New Features

Exposure Expansion

For NICMOS, there are two ways for exposures to be expanded – number of iterations greater than 1, and the use of a pattern; it is also possible to combine these methods. The following cases were tested:

Number of iterations	Pattern	Number of sub-exposures	Original Exposure Time	Predicted Exposure Time	BOT Exposure Time
1	No	1	1152.005	1152.005	1152.005
3	No	3	1152.005	1152.005	1152.005
1	Yes	4x1	1152.005	1152.005	1152.005
2	Yes	2x(4x1)	1152.005	1152.005	1152.005

In each case, BOT created the correct number of sub-exposures, and maintained the given exposure time. As with the SBC, Aladin did display the BOT overlays, although there was only 1 image plane shown for the number of iterations case, unlike the Pattern case where each sub-exposure was its own plane. Since the number of iterations planes would all be, by definition, identical, showing only 1 plane is acceptable (as the actual duration capability is not supported, this is acceptable, unlike other instruments).

Pointing Adjustment

There are 3 different types of pointing adjustments valid for NICMOS – POS TARG, PATTERN, and use as a PARALLEL instrument.

POS TARG

For this test, the standard exposure was modified by adding a POS TARG of X=-20" and Y=-20". The direction of the POS TARG is important in this test, and in order to be able to simply predict the size of the POS TARG motion, the motion must be in the same direction as the "Search Radius Vector" which is defined as the point from the fiducial to the outermost corner of the Aperture. A selection in a different direction makes the calculation of the motion vector more complicated.

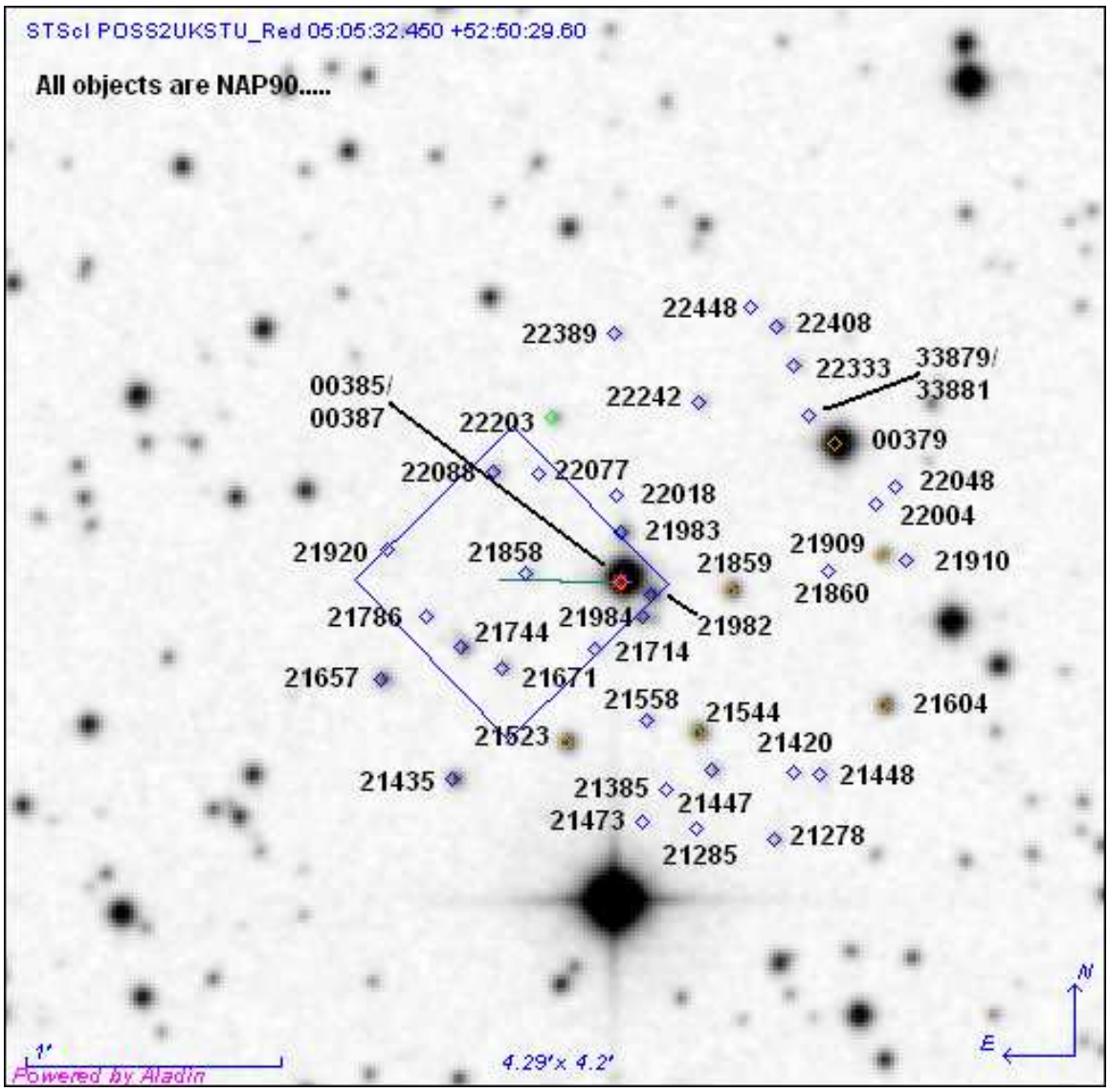
The test exposure was run through both the new BOT/Aladin interface; given the large VTT/BOT search radius, a comparison with between the two tools is not useful. The new

BOT increased the standard search radius of 49.2” by 23.08” to 72.28”, which resulted in a circle being analyzed to support any possible ORIENT value. Based on the size of the POS TARG, this increase in search radius was less than the predicted value (i.e. SQRT(20*20 + 20*20) = 28.28), which implies that the direction of the POS TARG was not properly aligned. A manual measurement of the search radius showed that the new BOT was indeed using the correct value.

The 42 objects detected (7 science, 1 safe, and 34 unknown) were:

GSC2 ID	RA	Dec	F	J	V	B-V	Type
NAP9000379	05 05 25.1517	+52 50 24.68	12.56	14.06	13.25	0.69	G5V
NAP9000385	05 05 30.5968	+52 49 52.68	11.84	11.45	11.69	-0.62	Unknown
NAP9000387	05 05 30.6069	+52 49 51.92	---	---	11.68	-0.25	**O5V**
NAP9021278	05 05 26.5783	+52 48 52.32	18.91	20.19	---	---	not a star
NAP9021285	05 05 28.5996	+52 48 54.64	20.26	---	---	---	not a star
NAP9021385	05 05 29.3488	+52 49 3.70	19.98	---	---	---	not a star
NAP9021420	05 05 26.1004	+52 49 7.91	19.76	20.86	---	---	not a star
NAP9021435	05 05 34.8698	+52 49 5.12	17.03	18.75	---	---	not a star
NAP9021447	05 05 28.2105	+52 49 8.15	18.4	19.69	---	---	not a star
NAP9021448	05 05 25.4187	+52 49 7.49	18.91	20.82	---	---	not a star
NAP9021473	05 05 29.9553	+52 48 56.09	19.97	---	---	---	not a star
NAP9021523	05 05 32.0052	+52 49 14.15	16.3	17.85	17.02	0.72	G5V
NAP9021544	05 05 28.6232	+52 49 16.96	16.37	17.3	16.8	0.29	A5V
NAP9021558	05 05 29.9115	+52 49 19.67	18.87	20.18	---	---	not a star
NAP9021604	05 05 23.8381	+52 49 23.98	16.4	17.5	16.9	0.41	F0V
NAP9021657	05 05 36.7715	+52 49 28.08	17.06	19.03	---	---	not a star
NAP9021671	05 05 33.6567	+52 49 31.37	18.36	20.37	---	---	not a star
NAP9021714	05 05 31.2701	+52 49 36.12	19.03	20.35	---	---	not a star
NAP9021744	05 05 34.7154	+52 49 35.81	17.09	18.8	---	---	not a star
NAP9021786	05 05 35.5867	+52 49 43.14	19.47	20.76	---	---	not a star
NAP9021858	05 05 33.0508	+52 49 53.18	18.81	20.48	---	---	not a star
NAP9021859	05 05 27.8199	+52 49 50.20	16.37	17.42	16.85	0.37	F0V
NAP9021860	05 05 25.2752	+52 49 54.84	20.14	---	---	---	not a star
NAP9021909	05 05 23.9571	+52 49 58.98	17.42	18.63	17.97	0.48	F5V
NAP9021910	05 05 23.3054	+52 49 57.76	19.25	20.85	---	---	not a star
NAP9021920	05 05 36.6385	+52 49 58.55	19.13	21.89	---	---	not a star
NAP9021982	05 05 29.8387	+52 49 48.73	16.82	---	---	---	not a star
NAP9021983	05 05 30.6445	+52 50 3.23	17.22	18.56	---	---	not a star
NAP9021984	05 05 30.0681	+52 49 43.51	17.57	---	---	---	not a star
NAP9022004	05 05 24.0734	+52 50 11.06	20.44	---	---	---	not a star
NAP9022018	05 05 30.7848	+52 50 11.67	20.21	---	---	---	not a star
NAP9022048	05 05 23.5777	+52 50 15.16	19.83	---	---	---	not a star
NAP9022077	05 05 32.7828	+52 50 16.40	19.79	22.33	---	---	not a star
NAP9022088	05 05 33.9734	+52 50 16.81	18.13	19.8	---	---	not a star
NAP9022203	05 05 32.4531	+52 50 29.57	18.29	19.61	18.9	0.55	F5V
NAP9022242	05 05 28.6863	+52 50 33.77	18.73	20.54	---	---	not a star
NAP9022333	05 05 26.2653	+52 50 42.93	18.79	20.47	---	---	not a star
NAP9022389	05 05 30.8746	+52 50 49.47	19.05	21.7	---	---	not a star
NAP9022408	05 05 26.7091	+52 50 51.82	18.39	19.94	---	---	not a star
NAP9022448	05 05 27.3770	+52 50 56.27	19.9	---	---	---	not a star
NAP9033879	05 05 25.8698	+52 50 31.17	---	20.7	---	---	not a star
NAP9033881	05 05 25.8671	+52 50 31.18	---	20.66	---	---	not a star

The field map, showing the objects found, is given below.



Pattern

For this test, the standard exposure was modified by putting it in a PATTERN (a NIC-SPIRAL-DITHER with 4 points with a 10" spacing at an orientation of 225^{o}). The orientation of the pattern is important in this test, since in order to be able to simply predict the size of the PATTERN motion, the motion must be in the same direction as the "Search Radius Vector" which is defined as the point from the fiducial to the outermost corner of the Aperture. A selection in a different orientation makes the calculation of the motion vector more complicated.

The test exposure was run through both the new BOT/Aladin interface; given the large VTT/BOT search radius, a comparison with between the two tools is not useful. The new

BOT did 4 searches – one for the initial pointing (with the standard 49.2” search radius) and one for each of the three pattern points (with the search radii of 54.0, 57.37, and 57.87). As the motion of the pattern was not aligned with the "Search Radius Vector", and manual check of the radii was performed. The results show:

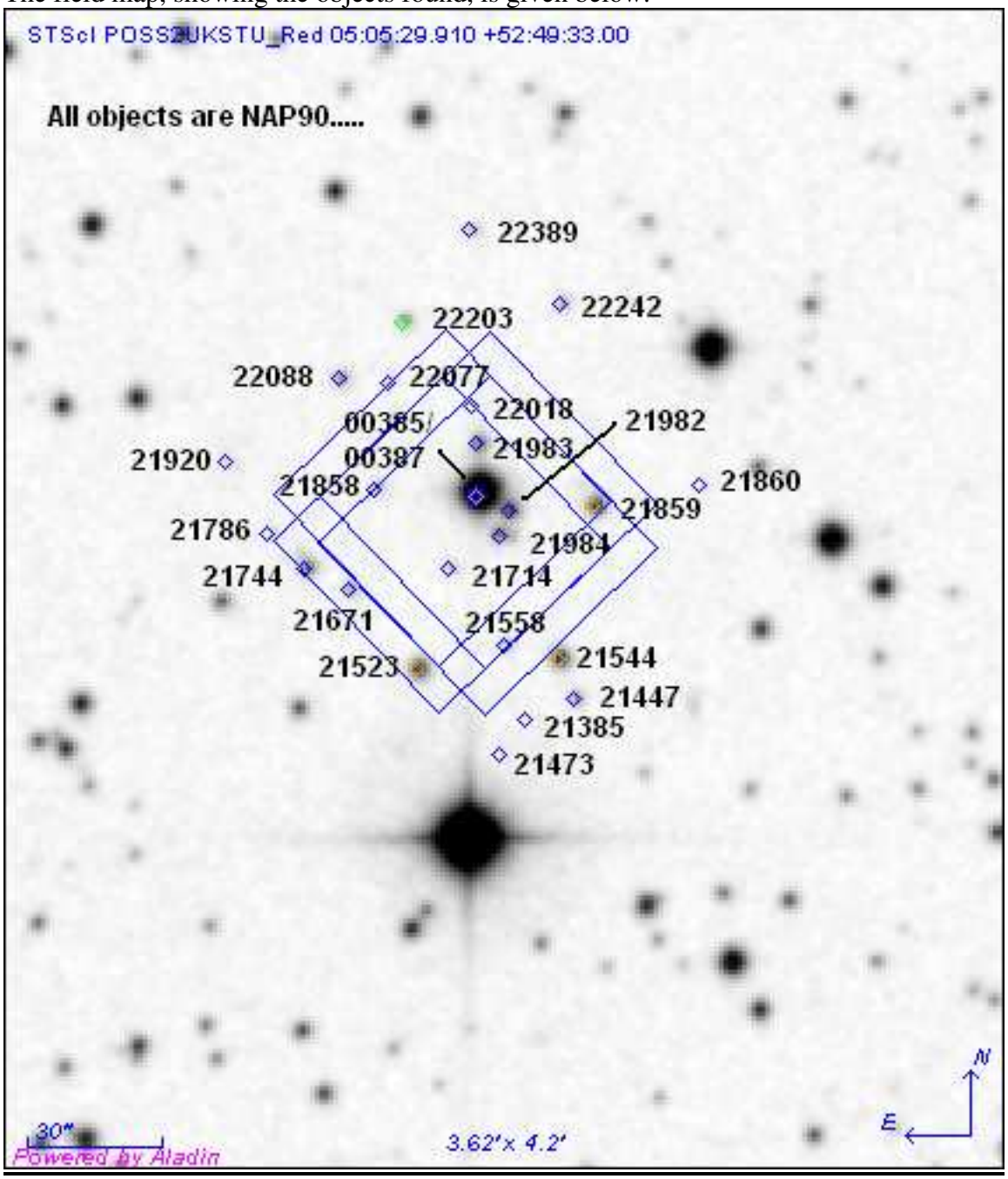
Pattern point	BOT radius	Measured radius
1	49.17	49.4
2	54.00	54.3
3	57.87	57.4
4	57.37	56.9

The measured values were all within 0.5” of the BOT values, which is well within the measurement error.

The 25 objects detected (4 science, 1 safe, and 20 unknown) were:

GSC2 ID	RA	Dec	F	J	V	B-V	Type
NAP9000385	05 05 30.5968	+52 49 52.68	11.84	11.45	11.69	-0.62	Unknown
NAP9000387	05 05 30.6069	+52 49 51.92	---	---	11.68	-0.25	**O5V**
NAP9021385	05 05 29.3488	+52 49 3.70	19.98	---	---	---	not a star
NAP9021447	05 05 28.2105	+52 49 8.15	18.4	19.69	---	---	not a star
NAP9021473	05 05 29.9553	+52 48 56.09	19.97	---	---	---	not a star
NAP9021523	05 05 32.0052	+52 49 14.15	16.3	17.85	17.02	0.72	G5V
NAP9021544	05 05 28.6232	+52 49 16.96	16.37	17.3	16.8	0.29	A5V
NAP9021558	05 05 29.9115	+52 49 19.67	18.87	20.18	---	---	not a star
NAP9021671	05 05 33.6567	+52 49 31.37	18.36	20.37	---	---	not a star
NAP9021714	05 05 31.2701	+52 49 36.12	19.03	20.35	---	---	not a star
NAP9021744	05 05 34.7154	+52 49 35.81	17.09	18.8	---	---	not a star
NAP9021786	05 05 35.5867	+52 49 43.14	19.47	20.76	---	---	not a star
NAP9021858	05 05 33.0508	+52 49 53.18	18.81	20.48	---	---	not a star
NAP9021859	05 05 27.8199	+52 49 50.20	16.37	17.42	16.85	0.37	F0V
NAP9021860	05 05 25.2752	+52 49 54.84	20.14	---	---	---	not a star
NAP9021920	05 05 36.6385	+52 49 58.55	19.13	21.89	---	---	not a star
NAP9021982	05 05 29.8387	+52 49 48.73	16.82	---	---	---	not a star
NAP9021983	05 05 30.6445	+52 50 3.23	17.22	18.56	---	---	not a star
NAP9021984	05 05 30.0681	+52 49 43.51	17.57	---	---	---	not a star
NAP9022018	05 05 30.7848	+52 50 11.67	20.21	---	---	---	not a star
NAP9022077	05 05 32.7828	+52 50 16.40	19.79	22.33	---	---	not a star
NAP9022088	05 05 33.9734	+52 50 16.81	18.13	19.8	---	---	not a star
NAP9022203	05 05 32.4531	+52 50 29.57	18.29	19.61	18.9	0.55	F5V
NAP9022242	05 05 28.6863	+52 50 33.77	18.73	20.54	---	---	not a star
NAP9022389	05 05 30.8746	+52 50 49.47	19.05	21.7	---	---	not a star

The field map, showing the objects found, is given below.



Parallel

For this test, the standard exposure was modified making it be a coordinated parallel observation with a WPFC2 prime exposure. The test exposure was run through the new BOT/Aladin interface only; the old VTT/BOT did not take the position of the parallel aperture into account when performing its checking. The search radius used by BOT was 6.70'. The separation between the PC and NIC3 is 6.08', and after adding 0.82' for the

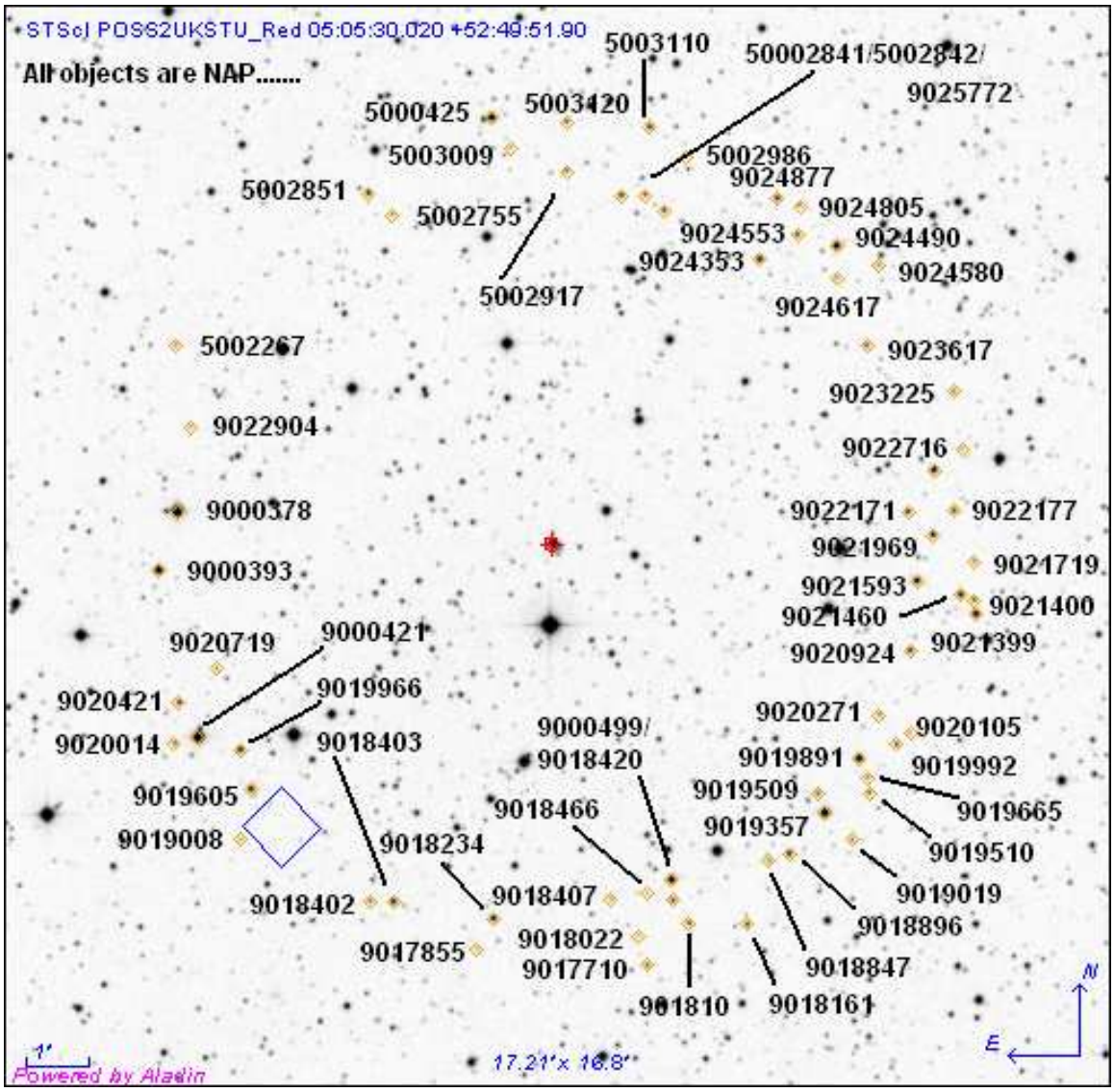
standard search radius, the approximate search radius BOT should have used is 6.96', very close to what was actually used. Given that the apertures are not aligned along the Search Radius Vector (described above), this small difference (especially given that BOT uses a larger radius) is not important.

A total of 423 stars were found in the new BOT, so the table below only lists the science concerns (65). The objects detected were:

GSC2 ID	RA	Dec	F	J	V	B-V	Type
NAP5000425	05 05 37.5881	+52 56 28.92	13.43	15.63	14.49	1.17	K4V
NAP5002267	05 06 9.7719	+52 52 51.83	17.43	18.94	18.13	0.69	G5V
NAP5002755	05 05 47.6932	+52 54 56.66	17.44	18.98	18.15	0.71	G5V
NAP5002841	05 05 24.1135	+52 55 18.22	15.69	16.88	16.23	0.48	F5V
NAP5002842	05 05 21.6568	+52 55 19.13	16.57	17.63	17.05	0.38	F0V
NAP5002851	05 05 50.1841	+52 55 16.55	15.43	16.7	16.01	0.53	F5V
NAP5002917	05 05 29.8108	+52 55 40.05	16.67	18.57	17.56	0.96	K0V
NAP5002986	05 05 17.5287	+52 55 55.81	18.11	19.41	18.71	0.54	F5V
NAP5003009	05 05 35.6662	+52 56 1.09	17.93	19.1	18.47	0.45	F5V
NAP5003110	05 05 21.2776	+52 56 22.34	15.58	16.66	16.07	0.4	F0V
NAP5003120	05 05 29.8684	+52 56 26.03	16.54	18.07	17.24	0.71	G5V
NAP9000378	05 06 9.3100	+52 50 17.54	---	---	11.85	0.14	A1V
NAP9000393	05 06 11.1036	+52 49 22.53	13.08	15.23	14.12	1.13	K0V
NAP9000421	05 06 6.6923	+52 46 48.24	11.25	13.39	12.28	1.13	K0V
NAP9000449	05 05 17.8344	+52 44 42.65	13.55	15.42	14.43	0.94	K0V
NAP9017710	05 05 20.2112	+52 43 22.47	16.57	17.94	17.2	0.6	F5V
NAP9017855	05 05 37.6971	+52 43 35.07	18.1	19.48	18.73	0.59	F5V
NAP9018022	05 05 21.1483	+52 43 49.93	18.25	19.75	18.94	0.67	G5V
NAP9018161	05 05 10.0022	+52 44 1.98	16.06	17.36	16.66	0.55	F5V
NAP9018170	05 05 15.9864	+52 44 2.27	16.2	17.47	16.78	0.53	F5V
NAP9018234	05 05 36.0913	+52 44 3.87	14.73	16.35	15.48	0.77	G5V
NAP9018402	05 05 48.7850	+52 44 17.86	16.91	18.8	17.8	0.95	K0V
NAP9018403	05 05 46.3937	+52 44 17.83	14.93	15.89	15.37	0.31	F0V
NAP9018407	05 05 24.0423	+52 44 23.62	17.59	18.95	18.21	0.59	F5V
NAP9018420	05 05 17.6758	+52 44 23.14	16.06	17.99	16.97	0.98	K0V
NAP9018466	05 05 20.3365	+52 44 29.46	18.43	19.96	19.13	0.69	G5V
NAP9018847	05 05 7.8912	+52 45 1.15	17.21	18.56	17.83	0.59	F5V
NAP9018896	05 05 5.8139	+52 45 8.48	15.15	16.69	15.86	0.72	G5V
NAP9019008	05 06 2.1740	+52 45 12.98	18.02	19.73	18.81	0.82	K0V

GSC2 ID	RA	Dec	F	J	V	B-V	Type
NAP9019019	05 04 59.3626	+52 45 21.98	17.05	18.33	17.64	0.53	F5V
NAP9019357	05 05 2.1962	+52 45 47.10	12.58	15.33	14.01	1.55	M2V
NAP9019509	05 05 2.9588	+52 46 4.73	16.47	17.08	16.76	0.07	A1V
NAP9019510	05 04 57.6772	+52 46 6.19	16.69	17.98	17.28	0.54	F5V
NAP9019605	05 06 1.2134	+52 46 0.27	14.79	16.19	15.43	0.62	F5V
NAP9019665	05 04 57.8832	+52 46 19.96	17.35	18.63	17.94	0.53	F5V
NAP9019891	05 04 58.7682	+52 46 37.94	13.6	14.79	14.15	0.47	F5V
NAP9019966	05 06 2.3949	+52 46 36.61	14.88	15.94	15.37	0.39	F0V
NAP9019992	05 04 54.9343	+52 46 51.30	16.34	17.51	16.88	0.46	F5V
NAP9020014	05 06 9.1390	+52 46 41.42	16.54	18.48	17.46	0.98	K0V
NAP9020105	05 04 53.6004	+52 47 2.07	18.1	19.59	18.79	0.67	G5V
NAP9020271	05 04 56.7470	+52 47 18.85	17.25	18.3	17.73	0.37	F0V
NAP9020421	05 06 8.7504	+52 47 19.58	15.59	16.37	15.95	0.19	A5V
NAP9020719	05 06 4.9794	+52 47 51.79	17.64	18.74	18.15	0.4	F0V
NAP9020924	05 04 53.6687	+52 48 18.86	15.5	16.36	15.89	0.25	A5V
NAP9021399	05 04 46.9531	+52 48 53.85	14.16	15.36	14.71	0.48	F5V
NAP9021400	05 04 47.1825	+52 49 6.85	16.43	16.91	16.67	-0.01	B5V
NAP9021460	05 04 48.5559	+52 49 11.58	14.83	16.11	15.41	0.53	F5V
NAP9021593	05 04 53.0853	+52 49 24.02	14.12	15.63	14.81	0.7	G5V
NAP9021719	05 04 47.2215	+52 49 42.38	17.25	18.87	18	0.76	G5V
NAP9021969	05 04 51.4827	+52 50 7.05	14.82	16.01	15.37	0.47	F5V
NAP9022171	05 04 54.1038	+52 50 27.92	15.64	16.79	16.16	0.45	F5V
NAP9022177	05 04 49.3534	+52 50 29.59	15.69	16.41	16.03	0.15	A5V
NAP9022556	05 04 51.4935	+52 51 7.57	14.08	15.9	14.93	0.91	K0V
NAP9022716	05 04 48.5900	+52 51 27.14	17.91	19.19	18.5	0.53	F5V
NAP9022904	05 06 8.1050	+52 51 35.96	17.87	19.21	18.48	0.57	F5V
NAP9023225	05 04 49.5186	+52 52 20.47	17.03	18.11	17.53	0.39	F0V
NAP9023617	05 04 58.5883	+52 53 2.23	16.31	17.52	16.86	0.49	F5V
NAP9024167	05 05 1.8030	+52 54 4.49	17.42	18.45	17.89	0.36	F0V
NAP9024353	05 05 9.7422	+52 54 20.81	14.71	15.96	15.28	0.52	F5V
NAP9024490	05 05 1.8569	+52 54 34.58	13.71	14.9	14.26	0.47	F5V
NAP9024553	05 05 5.8922	+52 54 44.29	16.01	17.61	16.75	0.76	G5V
NAP9024580	05 04 57.4928	+52 54 16.91	17.39	18.48	17.89	0.4	F0V
NAP9024772	05 05 19.6825	+52 55 4.97	16	17.41	16.65	0.62	F5V
NAP9024805	05 05 5.7201	+52 55 11.42	17.2	18.65	17.86	0.65	G2V
NAP9024877	05 05 8.0121	+52 55 17.86	15.35	16.52	15.89	0.46	F5V

The field map, showing the objects found, is given below.



Actual Duration

This capability is not supported for NICMOS observations.

Visualization

- There are many aspects to this test, all of which have already been verified by the previous SBC and HRC testing.

Issue

Aladin spreadsheet name link to an external html page with more details fails for the GSC2; this is covered with APT-VTT PR 56234.

Existing Proposals

I ran BOT on eight cycle 15 operational proposals. All ran successfully, and in a reasonable amount of time. No issues were found in the testing.

Exception Handling

There are four types of exception handling to be tested; Network Query Error and Cancel Ongoing Operations have been verified in the SBC testing, and Bad Exposures has been verified in the HRC testing.

Unsupported Exposures

There are no unsupported apertures or optional parameters that could impact BOT processing. However, use of the grisms (NIC3) and the polarizers (NIC1 and NIC2) are (correctly) not supported by BOT.

Issue

NIC2-ACQ exposures should not be supported by BOT; this is covered under BOT-OPR 56661, and *should be corrected prior to the release of the tool for NICMOS usage.*