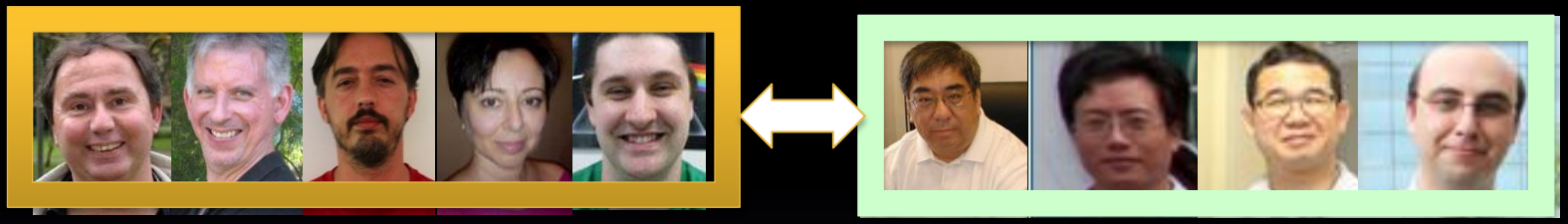
Australian Government
Department of Innovation
Industry, Science and Research

The new Hong-Kong/AAO/Strasbourg Hα PN database: HASH

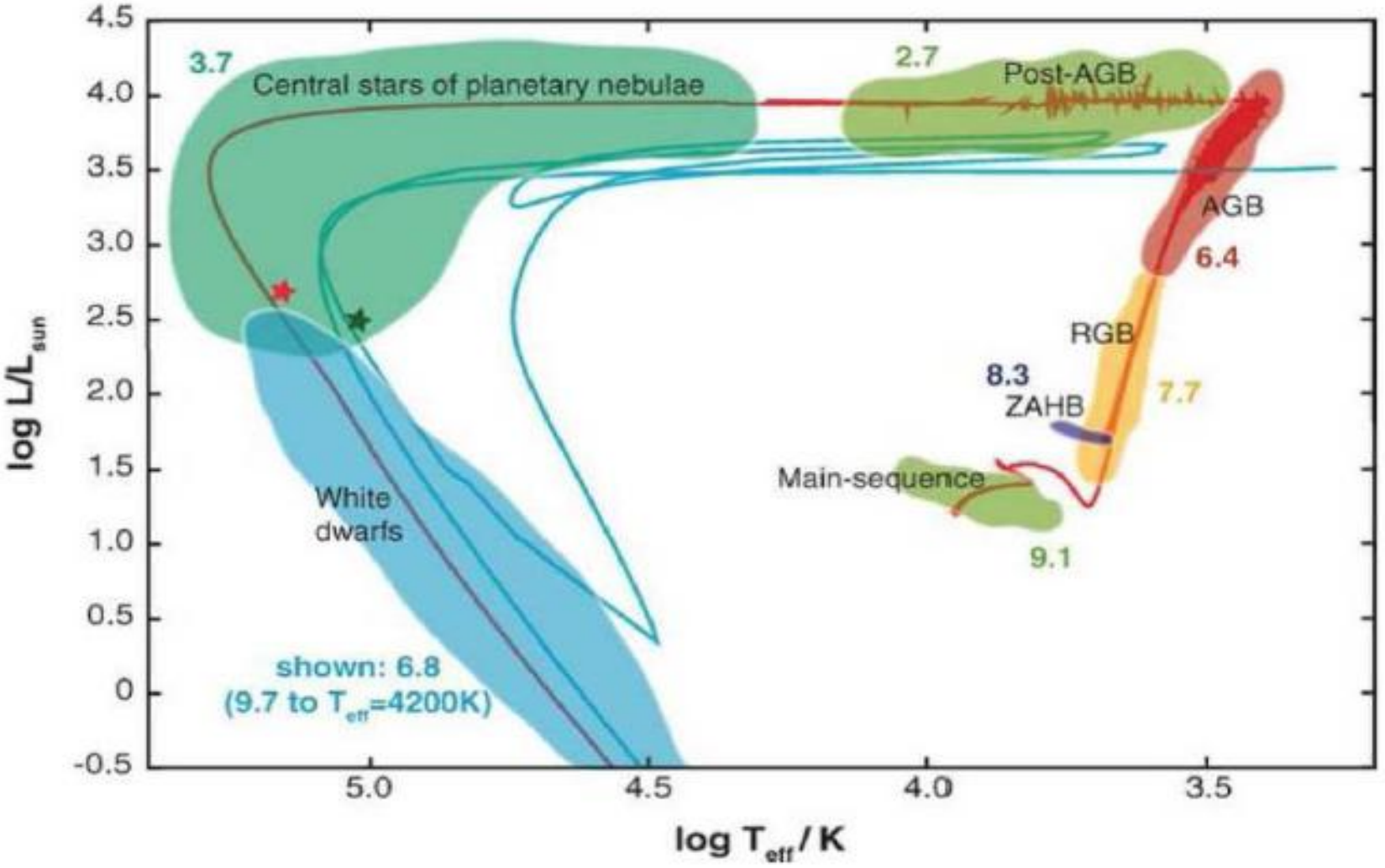
Quentin A Parker
Ivan Bojicic, David Frew (HKU)

The New HKU Late Stage Stellar evolution research group



- Over the last 10 years established arguably one of the strongest groups in PN research at Macquarie University
- We have now moved to HKU where an existing strong team was already present under Prof. Sun Kwok
- 2 PhD students currently recruited (offers made & accepted)
- One PhD scholarship still available….

EVOLUTION OF 2.0 Msun



On-going progress@HKU in PN research

* More DISCOVERIES – MASH, IPHAS, VPHAS+, DSH → 3500+ (– see poster by Draskovic for SMC and Kronberger and Acker for our Galaxy)
* Better PN DISTANCES – SB-r relationship Frew, Parker & Bojicic. 2015, MNRAS, (Frew this meeting) and see poster by Vickers for post-AGB stars
* Accurate FLUXES (e.g. via SHASSA – Frew, Bojicic & Parker, 2013) – homogeneous, reliable fluxes (Ha & [OIII]) for 1st time for large numbers of PN in our Galaxy and LMC
* Eliminating MIMICS: new methodologies and data → PN catalogues of high purity (e.g. Frew & Parker 2010, Sabin et al 2013) → feeds into everything!

We produced the 1st ever uniform catalogue of 1250 reliable PN fluxes, Frew, Bojicic & Parker, MNRAS, 2013

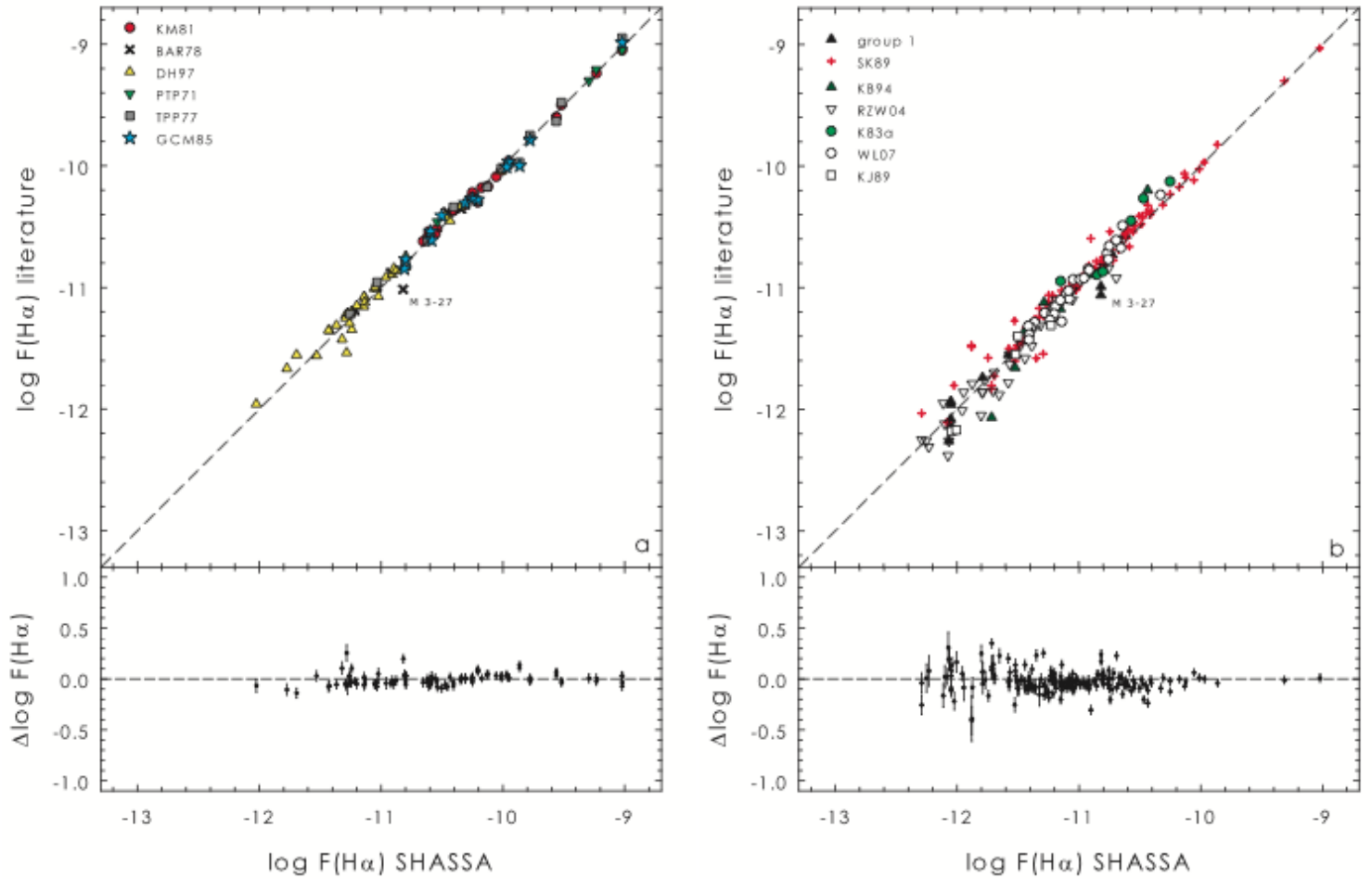
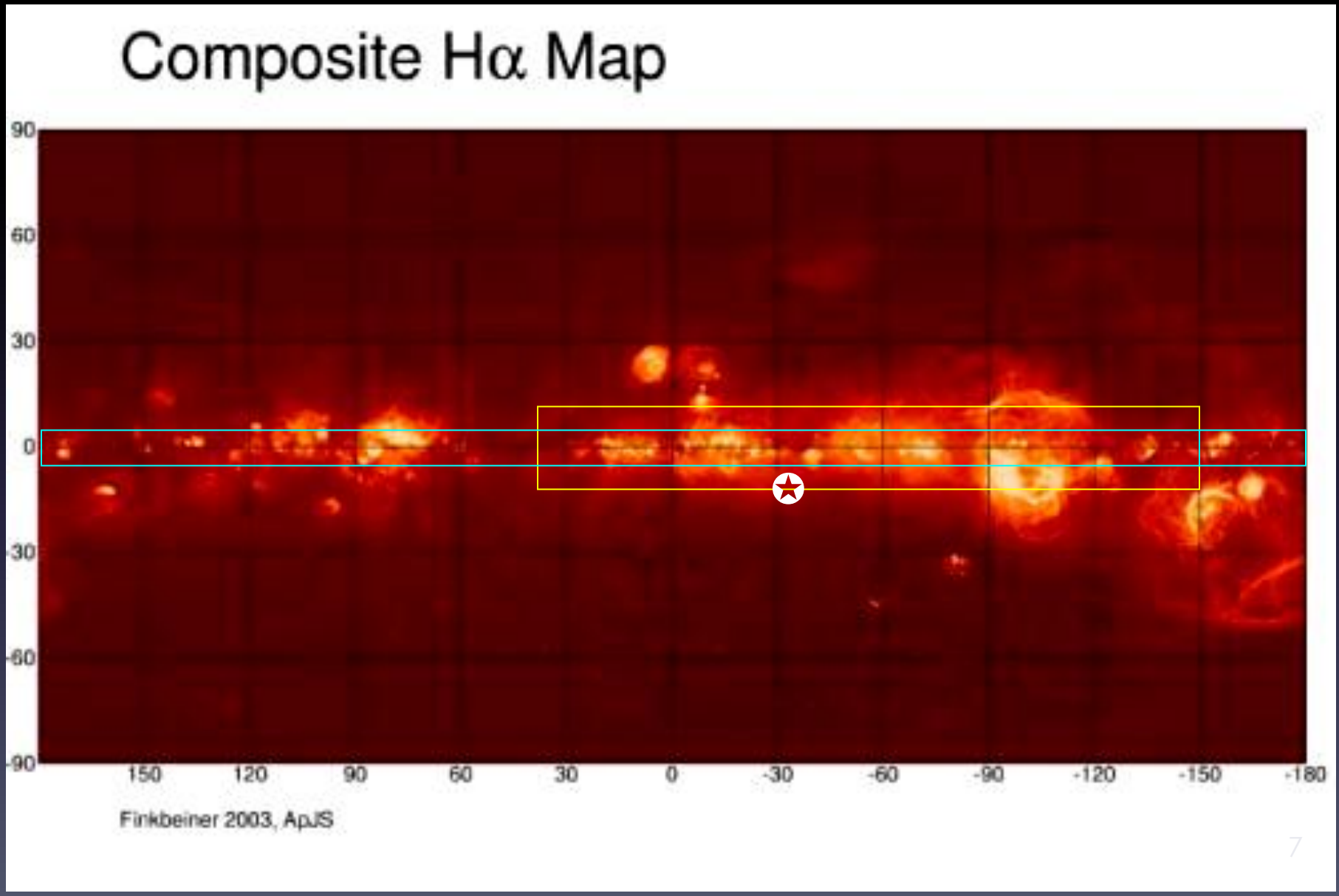
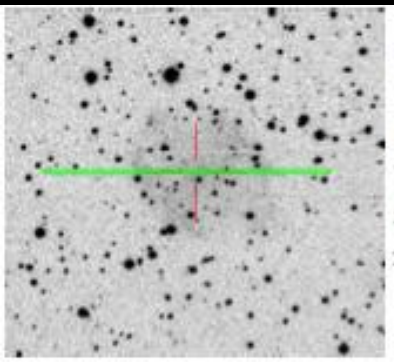
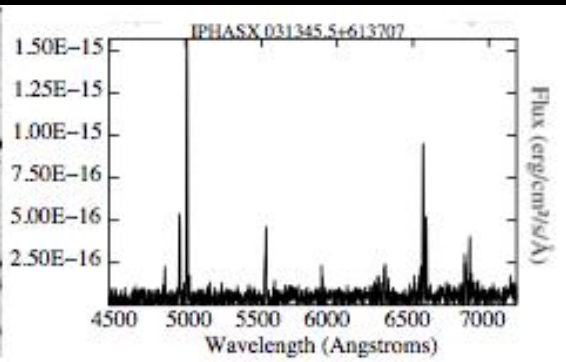


Figure 4. A comparison of our Hα fluxes determined from SHASSA with those from the literature. The left panel shows fluxes from sources deemed to have the highest level of precision and accuracy, as defined in the text. The agreement between our fluxes and those from the literature is excellent over more than three orders of magnitude. The right panel compares our Hα fluxes with the fluxes from sources with a somewhat lower accuracy, or reliable data-sets with less than three objects in common. A colour version of this figure is available in the online journal.

Survey discovery data



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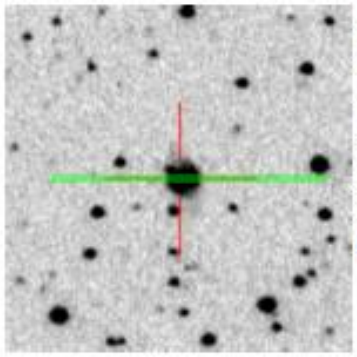
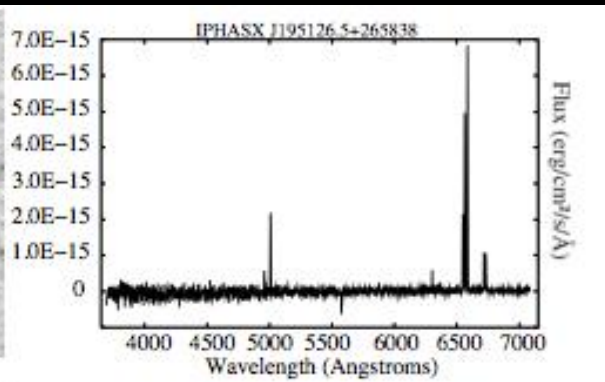
Wavelength (Angstroms)
Flux (erg/cm²/s/Å)

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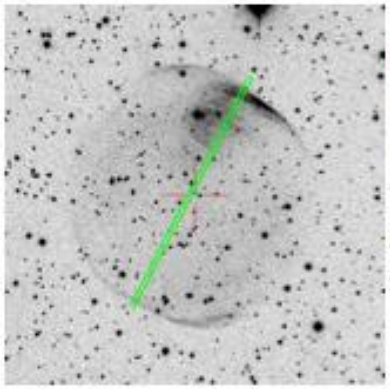
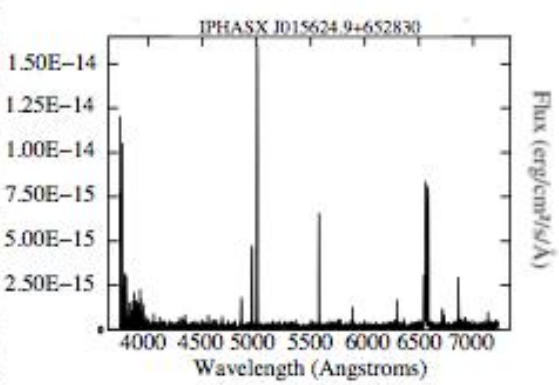
Wavelength (Angstroms)
Flux (erg/cm²/s/Å)

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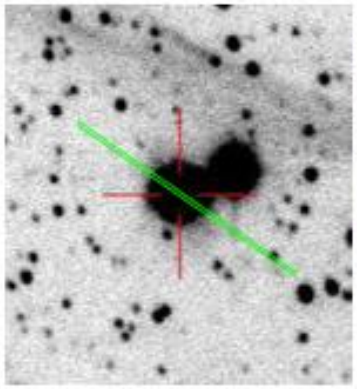
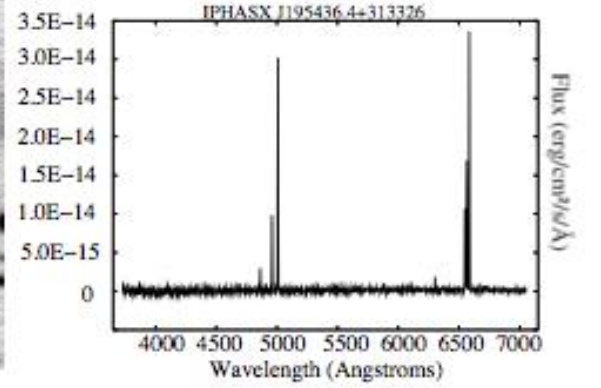
Wavelength (Angstroms)
Flux (erg/cm²/s/Å)

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2.0E−14
1.5E−14
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5.0E−15
0
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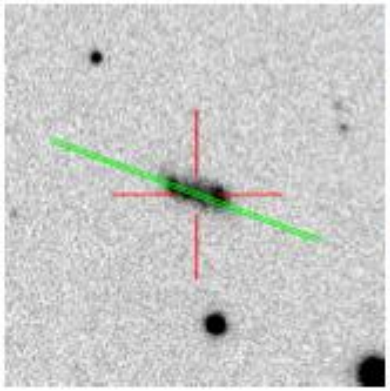
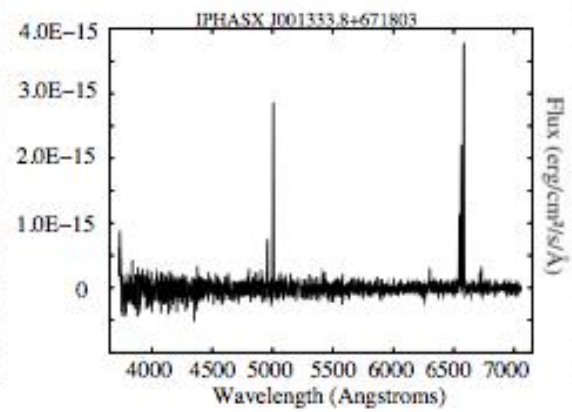
Wavelength (Angstroms)
Flux (erg/cm²/s/Å)

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1.0E−15
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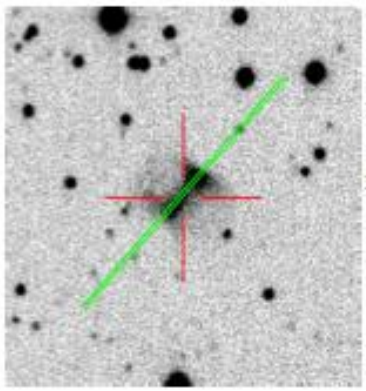
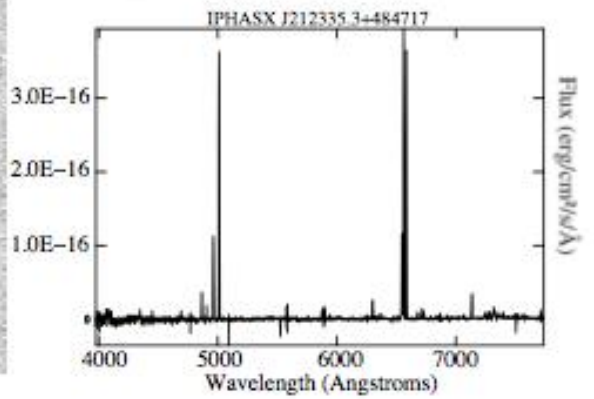
Wavelength (Angstroms)
Flux (erg/cm²/s/Å)

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2.0E−16
1.0E−16
4000 5000 6000 7000
Wavelength (Angstroms)
Flux (erg/cm²/s/Å)

On-going progress@HKU in PN research

- Thousands of Interesting non PN catalogued: Miscellaneous Emission Nebulae - rejected PN (MEN)
- PNLFS generated and studied (unprecedented samples now available for the Bulge , LMC (Reid & Parker) and local 2Kpc volume (Frew et al) over an 8-10mag range
- Multi-wavelength studies undertaken - optical, MIR, radio, X-ray → helps to eliminate mimics
- CSPN characteristics derived including [WR] types
- BINARITY investigated using local volume sample 1,2, 3 Kpc (most complete census available- Frew, PhD thesis 2008, Frew et al in prep)
- AGB Haloes uncovered and observed
- IFU studies (SHAPE morpho-kinematic analysis)

20th November 2015

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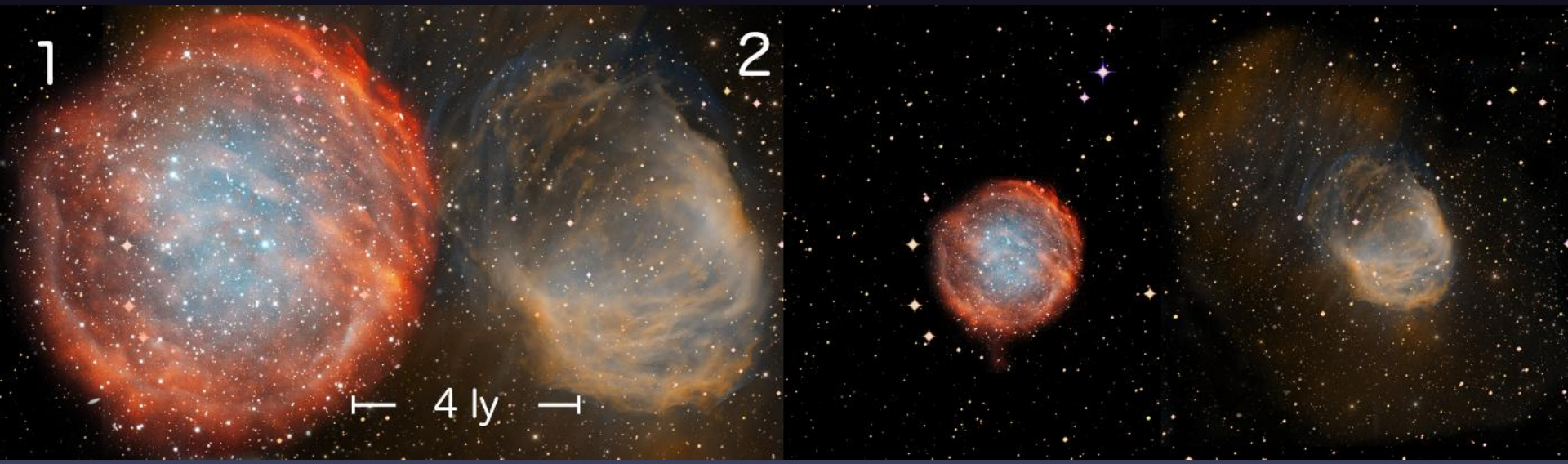
NEWS & PRESS

Ghostly and beautiful: "planetary nebulae" get more meaningful physical presence

Last Updated on Friday, 20 November 2015 09:24

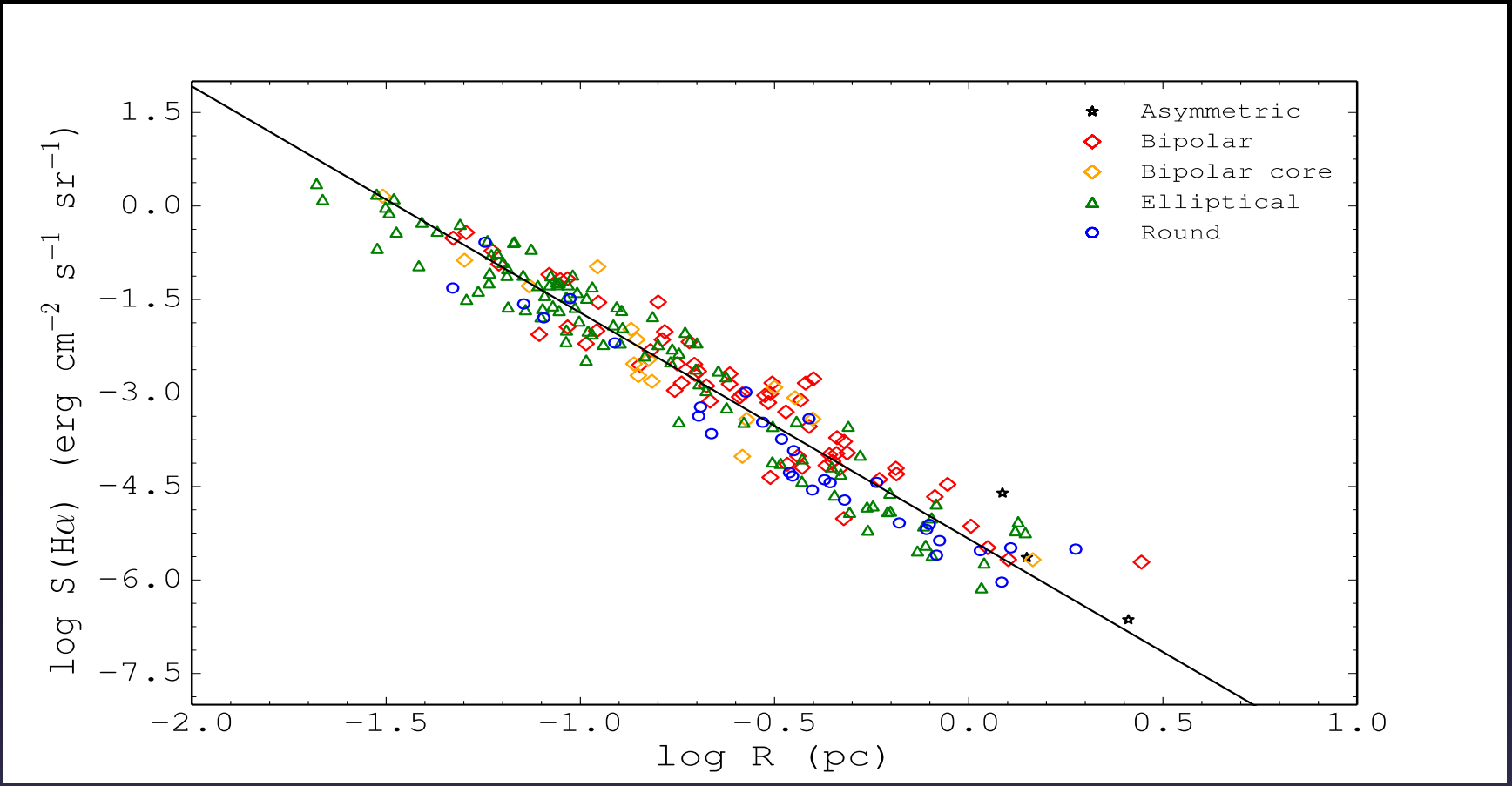
Published on Friday, 20 November 2015 09:30

A way of estimating more accurate distances to the thousands of so-called planetary nebulae dispersed across our Galaxy has been announced by a team of three astronomers based at the University of Hong Kong: Dr David Frew, Prof Quentin Parker and Dr Ivan Bojicic. The scientists publish their results in Monthly Notices of the Royal Astronomical Society.



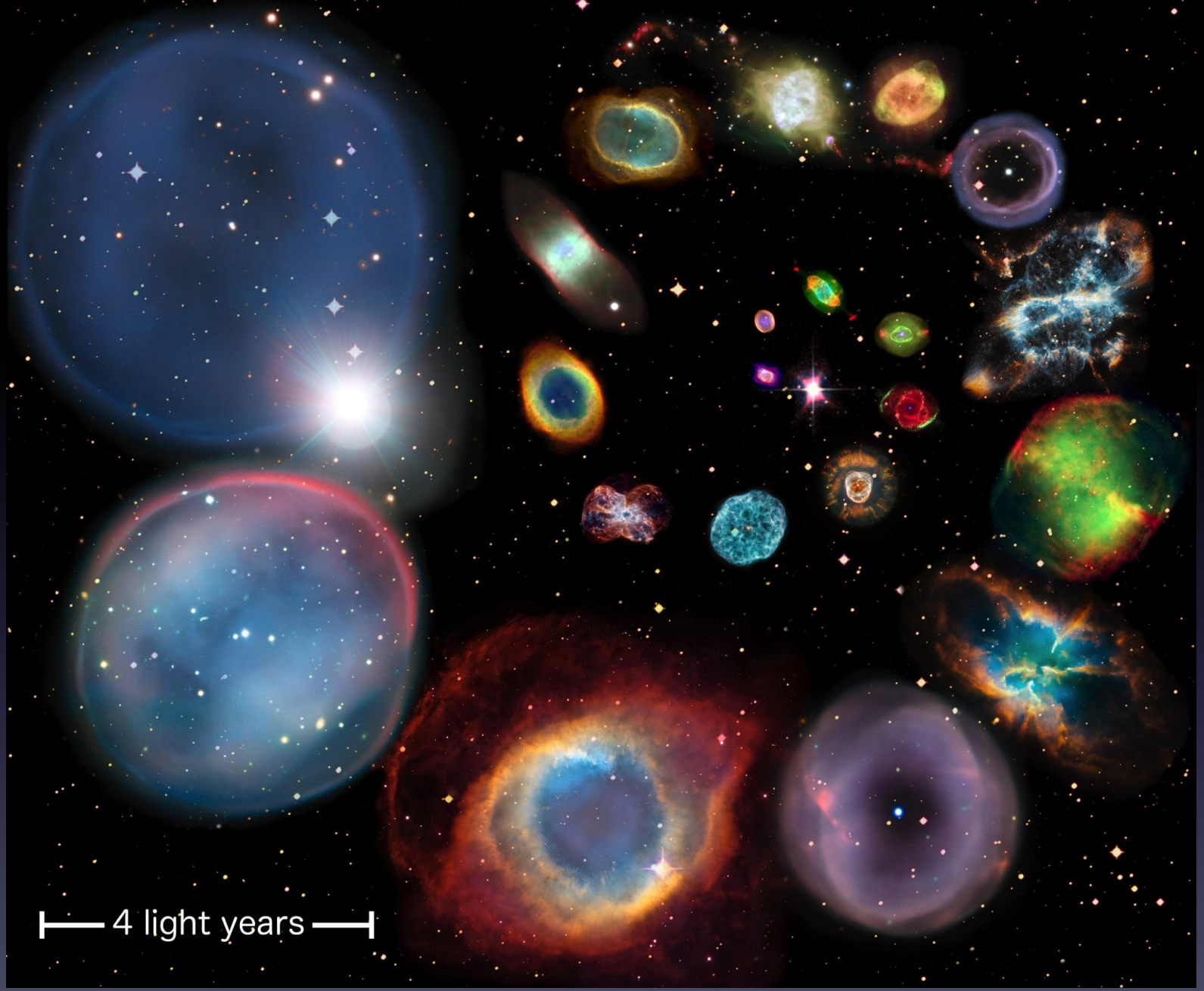
PuWe 1: T.A. Rector (University of Alaska) & H. Schweiker (WIYN & NOAO/AURA/NSF)
Abell 21: H. Schweiker/NOAO/AURA/NSF & T.A. Rector/Univ. of Alaska & NOAO/AURA/NSF

SB-r relation



The $S_{H\alpha}$–r relation for the PN calibrating with morphology indicated by different symbols. To get the distance to any PN, the de-reddened Hα surface brightness (y-axis) is determined, from which a value for the physical radius is calculated.

Distance then follows from simple trigonometry once an accurate angular PN measurement is obtained from high-resolution imagery now available.


4 light years

There have been a LOT of Galactic PNe discovered over the last 15 years, more than doubling the totals accrued by all telescopes over the previous 200+ years..

The scope of PNe studies for these ~3500 GPN must reflect this new landscape and include them…

Studies should ensure that representative samples from the current known Galactic PNe population are used/studied/re-observed and not just the usual "easy" PNe available in previous catalogues pre MASH-I & MASH-II,IPHAS and DSH

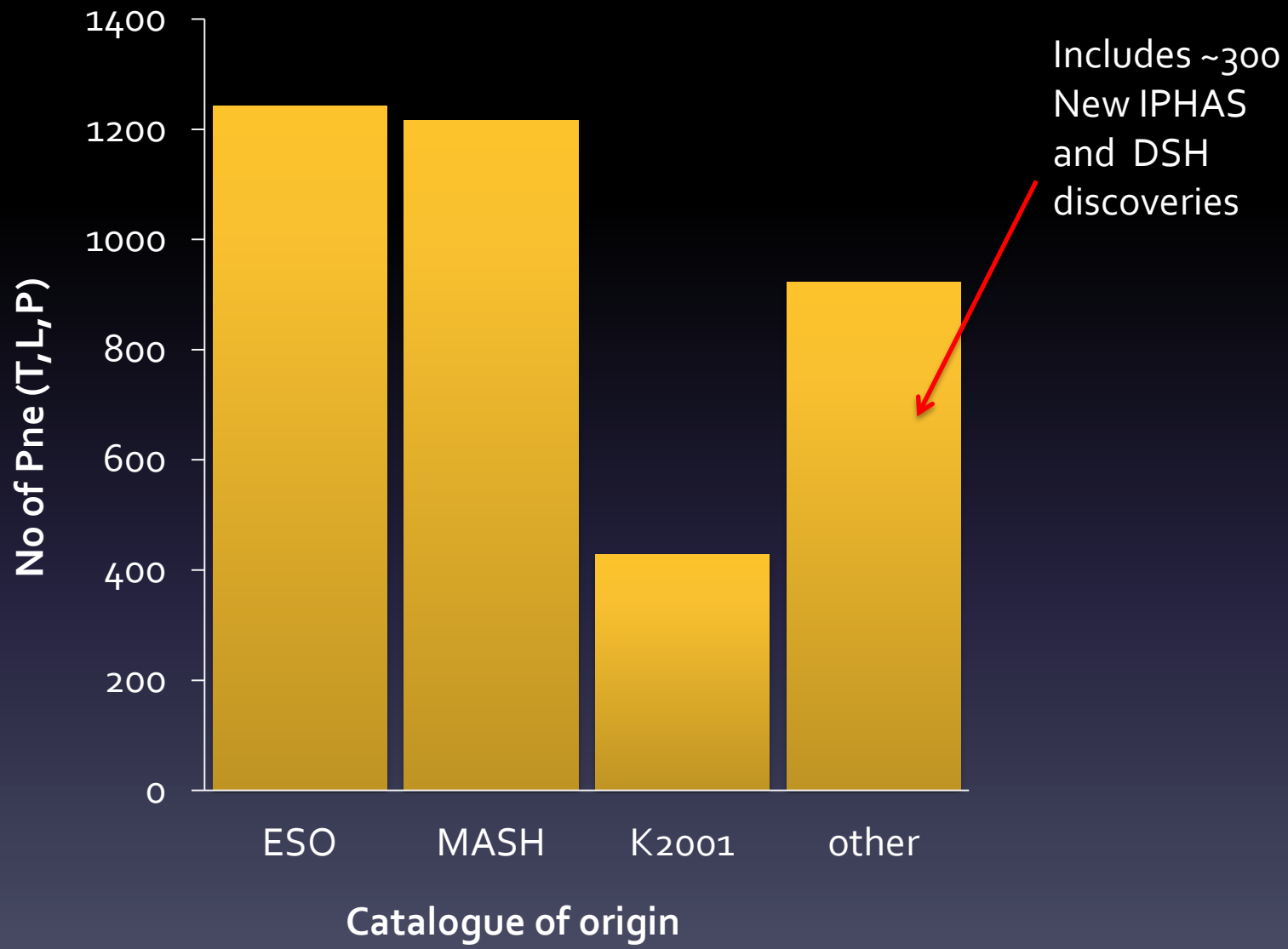
Motivation for a new integrated platform for PN research

- *Provide, for the first time, an accessible, reliable on-line 'one-stop' shop for essential, up-to date information for all known Galactic & MC PNe*
- Reliably remove the many PN mimics/false ID's that have biased previous compilations and subsequent studies
- Provide accurate, updated positions, sizes, morphologies, radial velocities, fluxes, multi-wavelength imagery and spectroscopy wherever possible
- Link to CDS/Vizier and hence provide archival history for each object
- Provide an SQL interface to sift, select, browse, collate, investigate, download and visualise the complete currently known Galactic PNe diaspora
- *And hence to provide the community with the most complete data with which to undertake new science!*
- *It is late but release is finally imminent*

MAIN database: Basic content

- Consolidated and federated Galactic PN database of ~3300 True, Likely and Possible (T,L,P) PNe – *neglected lists checked and ingested*
- Corrected/updated co-ordinates (and hence PN G ll.l,bb.b) for all T,L,P Galactic PNe provided
- Improved PN T,L,P identifications given
- Removal of contaminants
- Improved angular size estimates
- Assigned morphologies according to consistent MASH ERBIAS scheme
- WCS matched multi-wavelength images in more than 20 bands
- Significantly increased spectroscopic coverage for catalogue entries
  - E.g. ~1050 spectra from Acker (1985-1998) available on-line for 1st time

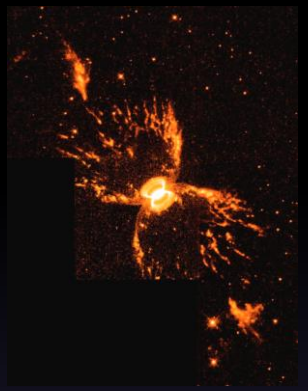
Breakdown of current numbers 9157 total entries in database
Now 3288 T,L,P PNe included (down from 3420 in 2013)



The problem of contaminants

* A major problem undermining the value of previous PN surveys (e.g. in GLIPMSE zone shown 45% of previously known pre MASH PN are contaminants – Cohen et al 2010).
* PN identification complicated by wide variety of morphologies, ionization characteristics and brightness distribution of the PN family
* Characteristics reflect stages of nebular evolution, progenitor mass and chemistry and the possible influence of common envelope binaries, magnetic fields or even sub-solar planets.

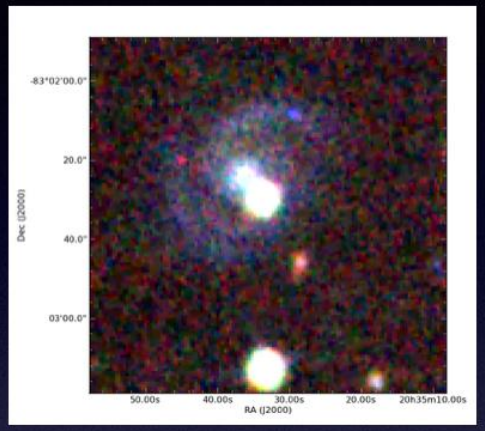
- Have tested a range of criteria to eliminate contaminants → done by assessing morphology, emission-line intensities and widths, ionization structure, systemic velocity, ionized mass and the properties of the central star (if possible)
- Only recent online availability of multi-wavelength imaging surveys and other data has enabled our new discrimination tools to be developed (Frew & Parker, 2010, Parker et al. 2013, Frew et al, in prep.)



Hen 2-104

M 2-9

Some current PN catalogue entries are obvious interlopers once you look at them with modern imaging…..ermm……. Galaxies anyone?



Basic data :

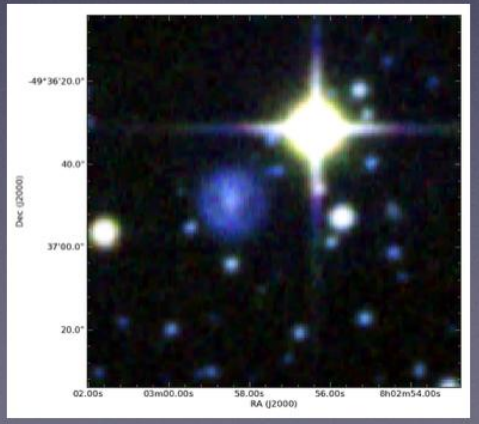
ESO 11-1 -- Possible Planetary Nebula

Other object types:	PN? () ,G (ESO)
ICRS coord. (ep=J2000) :	20 35 33.0 -83 02 34 (~) [~ ~ ~] D 1989ESOLV.C.....0L
FK5 coord. (ep=J2000 eq=2000) :	20 35 33.0 -83 02 34 (~) [~ ~ ~] D 1989ESOLV.C.....0L
FK4 coord. (ep=B1950 eq=1950) :	20 25 40.1 -83 12 46 (~) [~ ~ ~] D 1989ESOLV.C.....0L
Gal coord. (ep=J2000) :	310.1517 -29.9955 (~) [~ ~ ~] D 1989ESOLV.C.....0L
Radial velocity / Redshift / cz :	V(km/s) 5050 [~] / z(~) 0.016989 [~] / cz 5093.26 [~] (~) D ~
Morphological type:	1.0 D 1989ESOLV.C.....0L
Angular size (arcmin):	0.29 0.29 0 (~) (~) D 1989ESOLV.C.....0L
Fluxes (2) :	B 15.79 [~] C 1989ESOLV.C.....0L R 14.74 [~] C 1989ESOLV.C.....0L

Basic data :

ESO 209-7 -- Possible Planetary Nebula

Other object types:	PN? () ,G (ESO,LEDA)
ICRS coord. (ep=J2000) :	07 52 30.9 -52 17 50 (~) [~ ~ ~] D 2002LEDA.....0P
FK5 coord. (ep=J2000 eq=2000) :	07 52 30.9 -52 17 50 (~) [~ ~ ~] D 2002LEDA.....0P
FK4 coord. (ep=B1950 eq=1950) :	07 51 13.3 -52 10 00 (~) [~ ~ ~] D 2002LEDA.....0P
Gal coord. (ep=J2000) :	265.7436 -12.5582 (~) [~ ~ ~] D 2002LEDA.....0P
Morphological type:	7.0 D 1989ESOLV.C.....0L
Angular size (arcmin):	0.616 0.457 5 (~) (~) D ~
Fluxes (2) :	B 16.42 [~] C 1989ESOLV.C.....0L R 14.65 [~] C 1989ESOLV.C.....0L

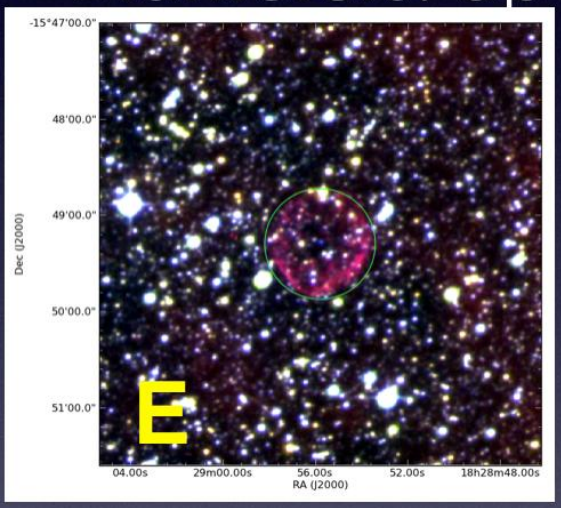


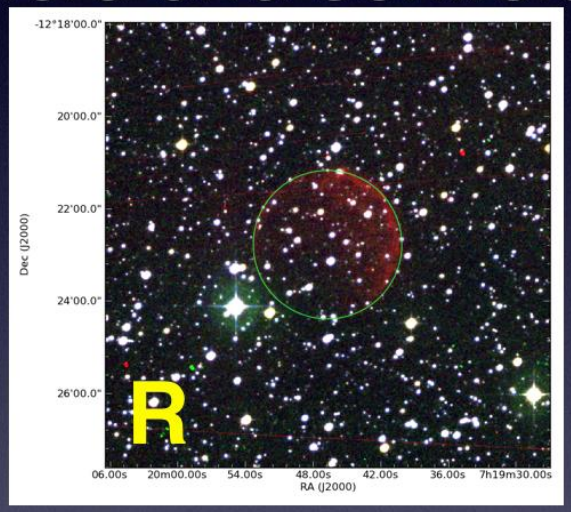
Basic data :

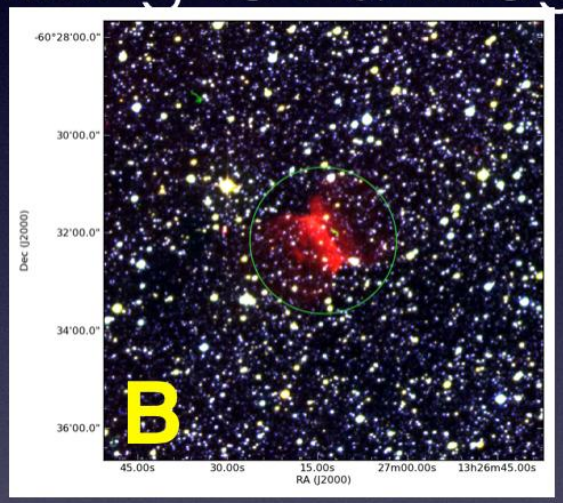
ESO 209-13 -- Possible Planetary Nebula

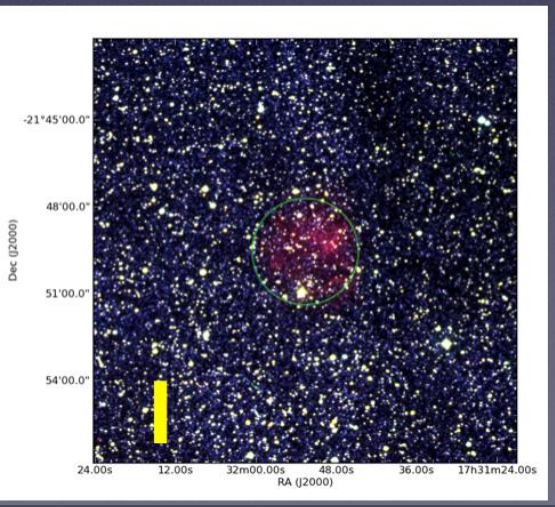
Other object types:	PN? () ,G (ESO,LEDA)
ICRS coord. (ep=J2000) :	08 02 57.4 -49 36 49 (~) [~ ~ ~] D 2002LEDA.....0P
FK5 coord. (ep=J2000 eq=2000) :	08 02 57.4 -49 36 49 (~) [~ ~ ~] D 2002LEDA.....0P
FK4 coord. (ep=B1950 eq=1950) :	08 01 31.1 -49 28 19 (~) [~ ~ ~] D 2002LEDA.....0P
Gal coord. (ep=J2000) :	264.1922 -09.8038 (~) [~ ~ ~] D 2002LEDA.....0P
Morphological type:	6.5 D 1989ESOLV.C.....0L
Angular size (arcmin):	0.478 0.371 173 (~) (~) D ~
Fluxes (2) :	B 16.52 [~] C 1989ESOLV.C.....0L R 15.30 [~] C 1989ESOLV.C.....0L

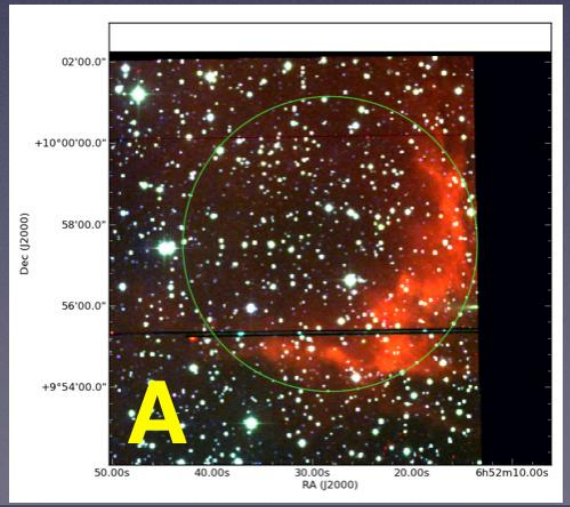
- **Morphologies**: ERBIAS scheme applied to all TLPs
- **Diameters**: aperture and centroid fitting to Hα images

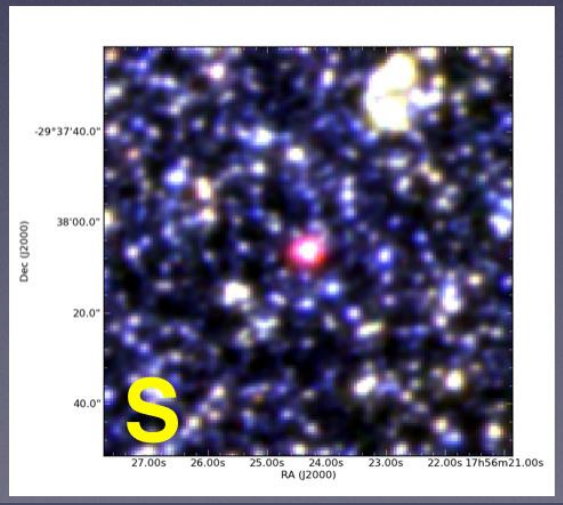






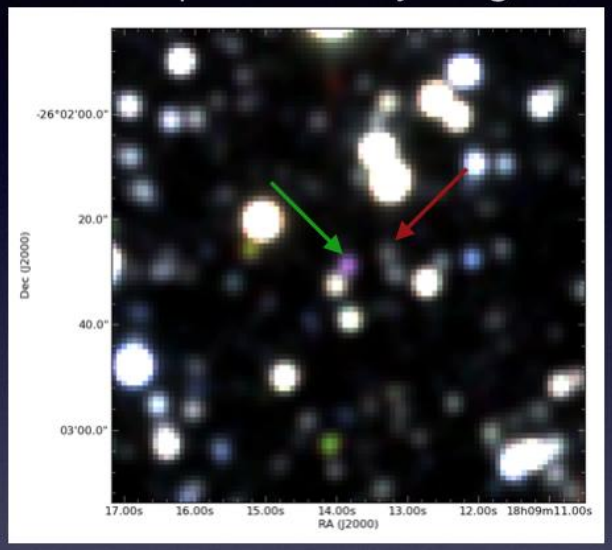


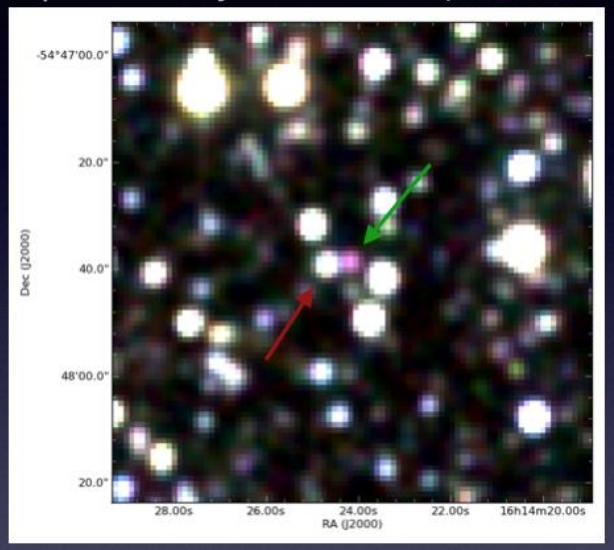


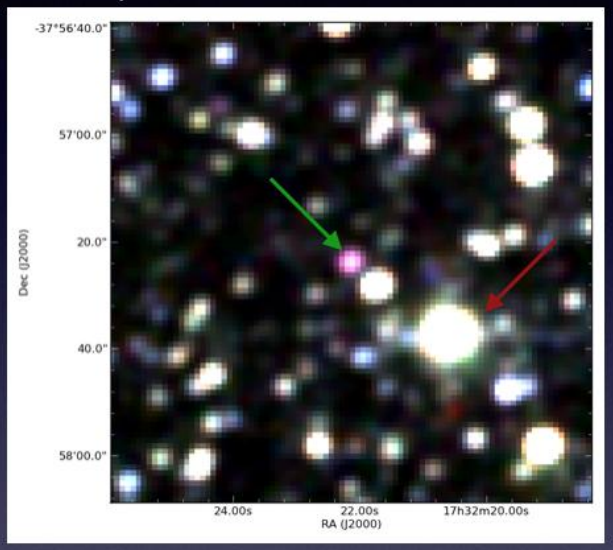


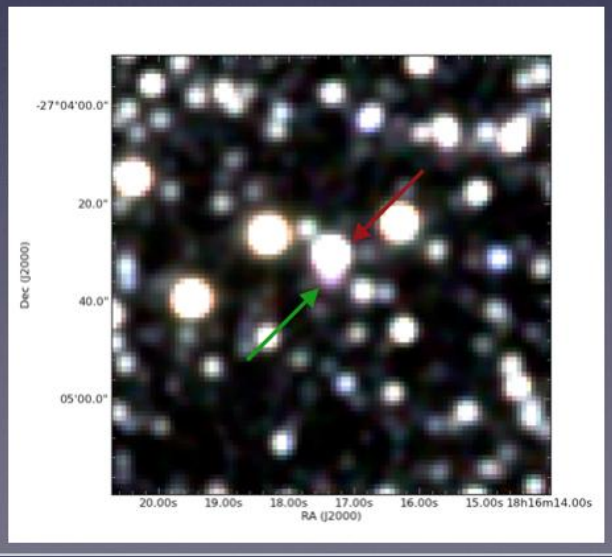
Assigning the correct photometry is important

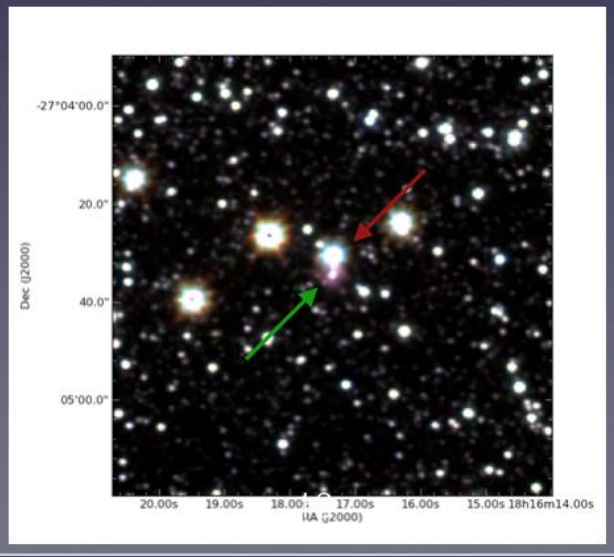
2MASS photometry of galactic planetary nebulae (*Larios+, 2005*)

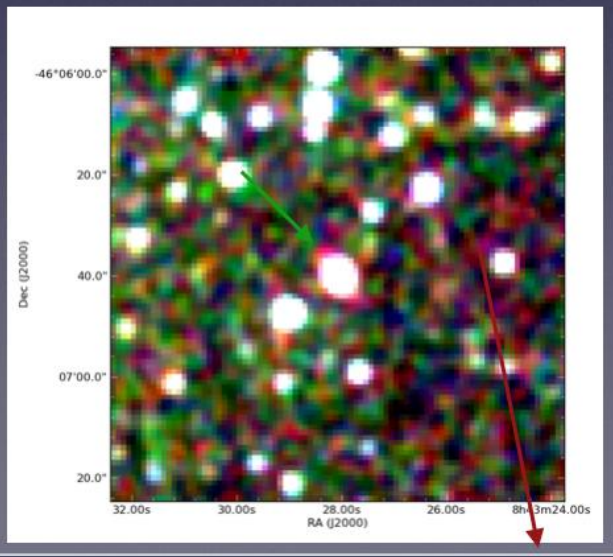












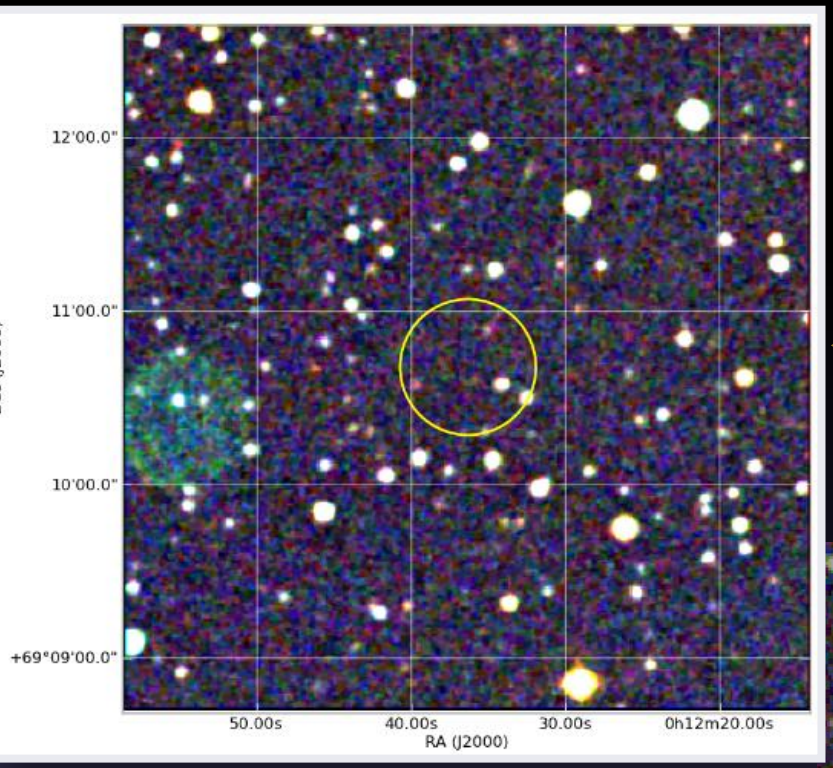
Making use of new surveys and data.

SHS on left VPHAS+ right Which has a ‘u’ band for CSPN ID

Updated & improved PN co-ordinates

- Despite recent papers on the provision of accurate PN co-ordinates (e.g. Kerber et al. 2003, Kimeswenger et al. 2001 and even MASH: Parker et al 2006 – mea culpa) it is surprising how poor some PN positions remain!
- Sometimes this is because only part of the PNe's extent is used to provide the position from broad band data whereas Hα images give a truer picture
- On-line surveys in various narrow and broad-bands with accurate astrometry now enables a more robust mechanism to check PNe positions
- All Galactic T,L,P PNe checked & positional offsets corrected where necessary.
- Accurate, homogeneously derived PNe positions part of the new database.
- Obtained by aperture and centroid fitting to Hα images at 80% contour

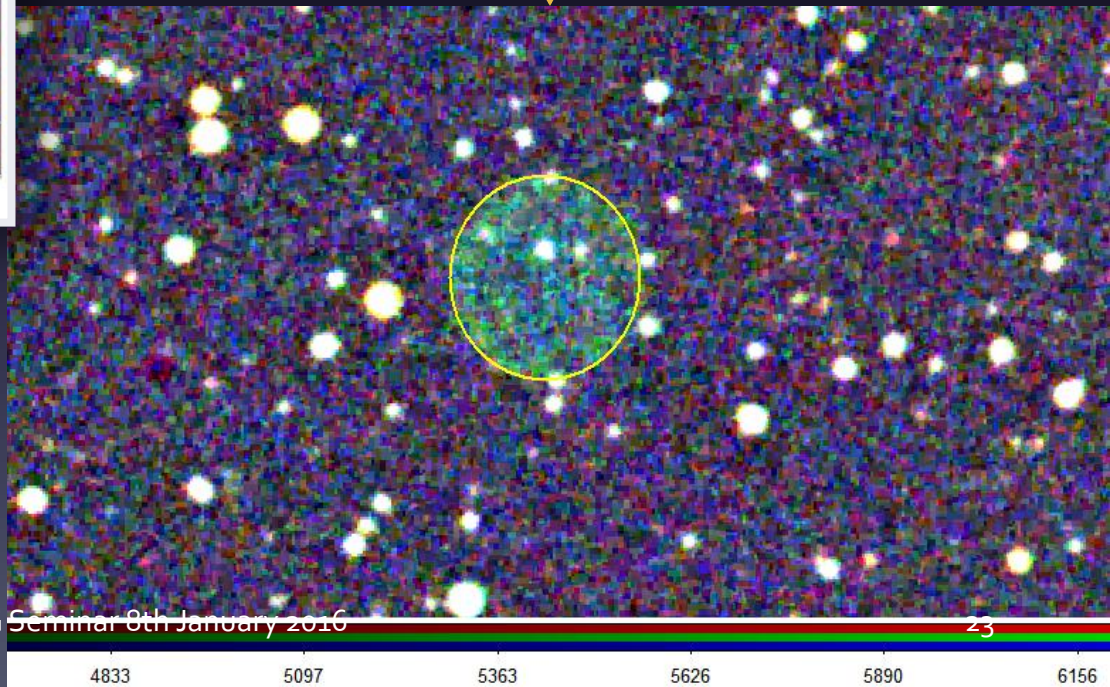
idPNMain	idtiff1	PNG_Tiff	NEW PNG	Offset (arcsecs)	offset / diameter	Catalogue	COORD Catalogue	PN status
4123	735	119.4+06.5	084.0+09.58	101.5923193	210.11%	KOHOUTEK 2001	ACKER_1992_main	y



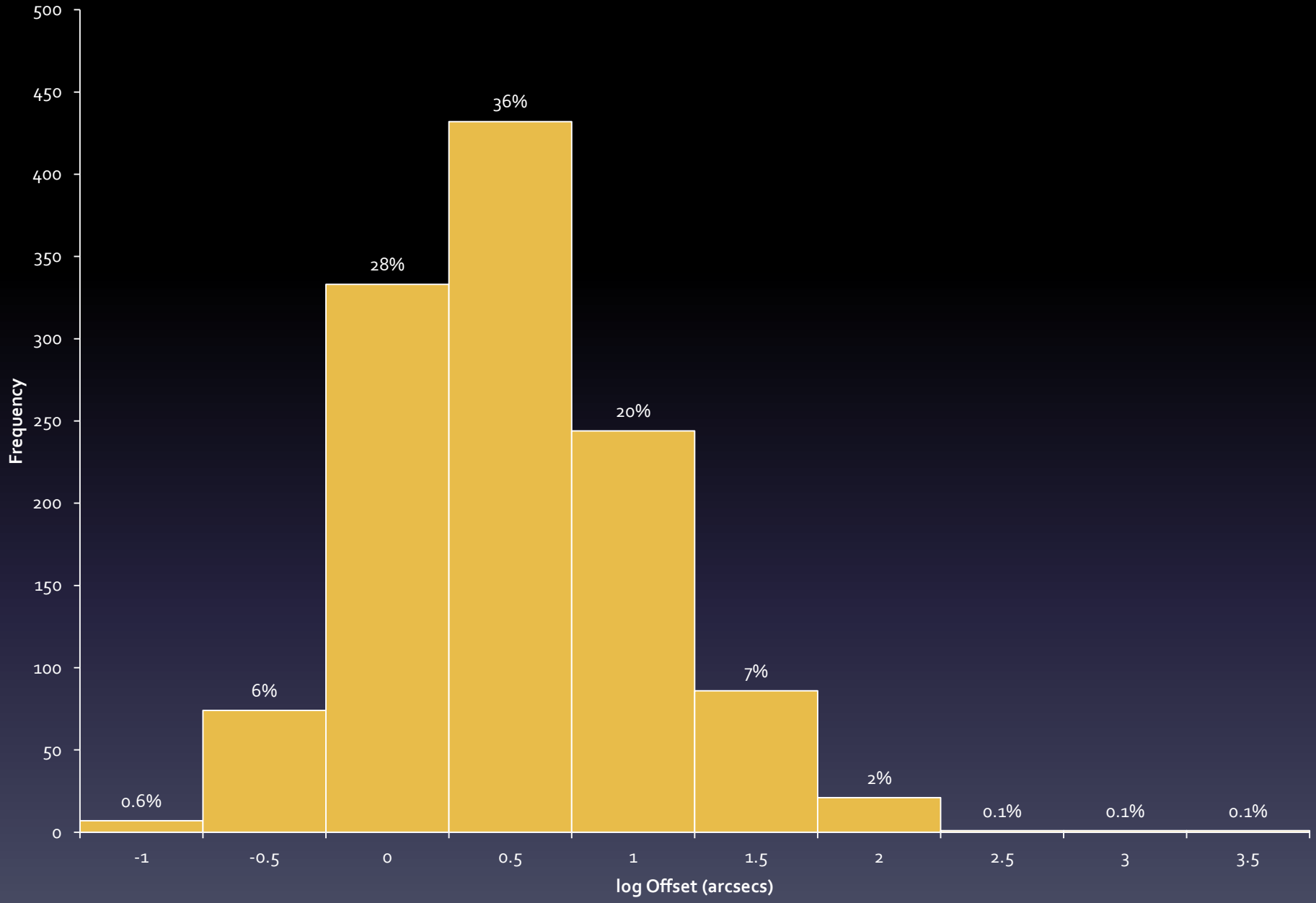
Serious offsets found and corrected

Before

After



Histogram of CDS/published versus new position offsets



MAIN database: CDS Structure

- A CDS/Vizier front end has been built for the new MASPN database
- Consolidated Galactic PN database of ~3300 T,L,P PNe
- ~9200 objects in total including LMC/SMC PNe, rejected PNe (objects identified at least once before in the literature as a PN/PN candidate), pre-PNe, Symbiotic stars, emission line stars of various kinds etc.

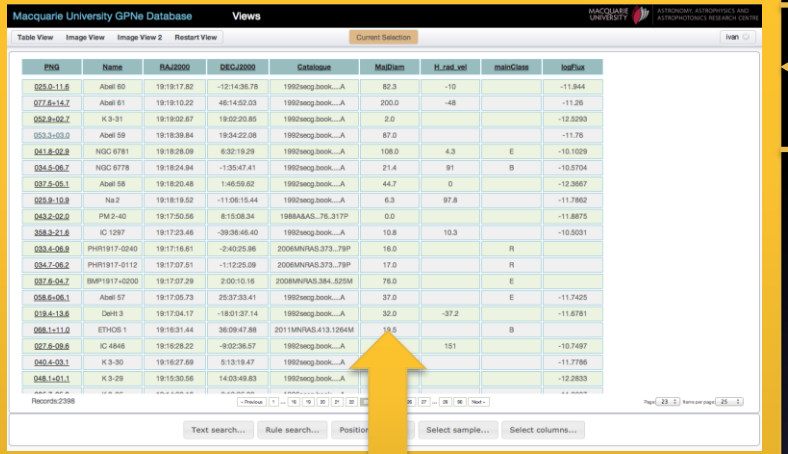
MAIN database: CDS Structure

Full	ID	Vim	quot	IRim	n	PNG	Name	RAJ2000 "h:m:s"	DEJ2000 "d:m:s"	Catalogue	Diam arcsec	ref Diam	Morph	logFHα arcsec	ref logFHα	Nsp
72	320				T	024.8-02.7	M 2-46	18:46:34.6	-8:28:02	1992secg.book.....A	4.4	1992secg.book.....A	B	-11.72	2013MNRAS.431....2F	1/1
73	330				T	026.3-02.2	Pe 1-16	18:47:32.3	-6:54:04	1992secg.book.....A	7.6	1992secg.book.....A	E	-11.49	2013MNRAS.431....2F	1/0
74	2473				T	030.5-00.2	PHR1847-0215	18:47:47.4	-2:15:30	2006MNRAS.373...79P	20	2006MNRAS.373...79P	Bs	-12.95	2013MNRAS.431....2F	2/0
75	319				T	024.3-03.3	Pe 1-17	18:47:48.8	-9:09:07	1992secg.book.....A	14.7	2003A&A...405..627T	B	-12.07	2013MNRAS.431....2F	1/1
76	2372				T	016.0-07.6	PHR1848-1829	18:48:11.1	-18:29:37	2006MNRAS.373...79P	22	2006MNRAS.373...79P	Ems	-12.29	2013MNRAS.431....2F	3/1
77	2425				T	024.4-03.5	PHR1848-0912	18:48:32.7	-9:12:02	2006MNRAS.373...79P	19	2006MNRAS.373...79P	Es	-12.48	2013MNRAS.431....2F	1/0
78	2460				L	028.5-01.4	PHR1848-0435	18:48:40.7	-4:35:58	2006MNRAS.373...79P	44	2006MNRAS.373...79P	Ba	-12.50	2013MNRAS.431....2F	1/0
79	2366				T	014.8-08.4	PHR1849-1952	18:49:24.2	-19:52:14	2006MNRAS.373...79P	19	2006MNRAS.373...79P	Es	-12.10	2013MNRAS.431....2F	3/1
81	2439				T	026.2-03.4	PHR1851-0732	18:51:31.3	-7:32:29	2006MNRAS.373...79P	45	2006MNRAS.373...79P	Eas	-11.44	2013MNRAS.431....2F	1/0
82	335				T	027.3-03.4	Abell 49	18:53:28.3	-6:28:47	1992secg.book.....A	54.1	2003A&A...405..627T	E	-11.72	2013MNRAS.431....2F	1/0
84	2400				T	020.4-07.0	MPA1854-1420	18:54:14.7	-14:20:19	2008MNRAS.384..525M	149	2008MNRAS.384..525M	Ims	-11.74	2013MNRAS.431....2F	0/0
85	318				T	024.2-05.2	M 4-11	18:54:17.8	-10:05:13	1992secg.book.....A	29.2	TiffDay	E	-11.23	2013MNRAS.431....2F	1/1

HASH user Interface: Technical stuff

- Data is stored in a MySQL database
- Front-end code is built using HTML, CSS, PHP and Javascript (JQuery) programing languages
- Fits cutouts and online images have been created using the Python programing language (using PyRAF, Matplotlib, APLpy and Astropy libraries)
- Access to main user interface is login-based (i.e. you'll need an account) but basic data/image/tables accessible through Vizier

User Interface: basic workflow



Text

e.g. "NGC 7027"

Rule

e.g. "majD < 25arcsec and logFHa < -12.5 "

and/or

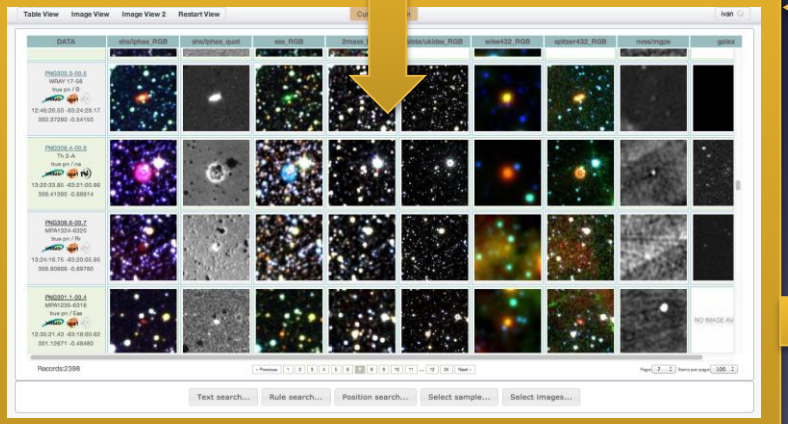
Position

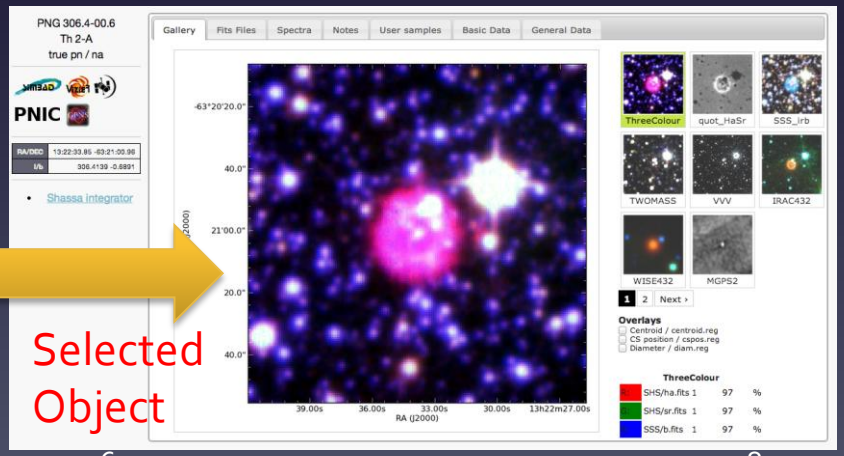
and/or

Predefined sample(s)

Can be combined e.g. *"True, and Bipolar PNe, located in the direction of GB with majD < 35rcsec and F(6cm) < 60mJy"*

e.g. PN status, Catalogue, Morph.,etc.





Selected Object

Statistical summary: (as of 01/12/15)

- Database now contains 9200 objects:
  - 3350 reduced spectra for 2300 unique objects (1900 T PNe) from Beaulieu et al. 1999, Hora et al. 1999, Boumis et al. 2003; 2006, Jacoby & Van de Steene 2004, Parker et al. 2006, Suarez et al. 2006, Sabin et al. 2014 and including 1050 spectra from Acker et al (previously unpublished)
  - ELCAT Emission line fluxes for ~750 True PNe from (Kaler et al. 1997) + ~400 True PNe from "post-ELCAT" publications (*work in progress*)
  - >400 000 pre-made fits cutouts and ~71 000 pre-made images from 20 major imaging surveys (SHS, IPHAS, UKIDSS, VVV, GLIMPSE, WISE, GALEX, NVSS …)
  - Consolidated and standardized datasets for angular dimensions, integrated Hα, Hβ, radio continuum and IR fluxes, radial velocities, etc. (*work in progress*)

HASH Database

MASPN Database4.0 / Views / Table View

qparker

Department of Physics
The University of Hong Kong

Table | Images | Grouped Images | Wall | Restart Samples | ? | Extras | ?

PNG	Name	RAJ2000	DECJ2000	DRAJ2000 ▲	DDECJ2000
116.0-04.8	IPHASX J000021.4+572207	00:00:21.4	57:22:07.14	0.08918	57.36865
118.7+08.2	Abell 86	00:01:31.0	70:42:29.92	0.37906	70.70831
119.4+06.5	Abell 1	00:12:55.0	69:10:23.99	3.22917	69.17333
120.0+09.8	NGC 40	00:13:01.0	72:31:19.09	3.25426	72.52197
119.2+04.6	Te 10	00:13:33.8	67:18:03.96	3.39100	67.30110
351.2-79.5	LDu 20	00:14:02.5	-33:45:19.12	3.51029	-33.75531
118.0-08.6	Vy 1-1	00:18:42.2	53:52:20.03	4.67570	53.87223
119.3+00.3	BV 5-1	00:19:58.7	62:59:01.68	4.99478	62.98380
119.6-06.1	Hu 1-1	00:28:15.6	55:57:54.72	7.06506	55.96520
120.4-01.3	Ou 2	00:30:56.8	61:24:33.98	7.73667	61.40944
120.2-05.3	Sh 2-176	00:31:48.6	57:22:58.37	7.95230	57.38288
108.4-76.1	BoBn 1	00:37:16.0	-13:42:58.46	9.31678	-13.71624
121.6+03.5	We 1-1	00:38:54.1	66:23:49.16	9.72523	66.39699
121.6+00.0	BV 5-2	00:40:20.9	62:51:28.80	10.08720	62.85800
122.1-04.9	Abell 2	00:45:34.7	57:57:34.88	11.39449	57.95969

Records:3288

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Page: 1 Items per page: 50

Text search... | Select sample... | Show columns... | ?

Detailed manual

qparker
Department of Physics
The University of Hong Kong

MASPN Database User Manual

Welcome to the MASPN Database. The MASPN Db is an online system providing access to the largest catalogue of Galactic Planetary Nebulae (GPNe) including comprehensive collection of observational and tabulated data. This page gives the explanation of how to select main views, select, create and manipulate samples and explore existing data.

Contents

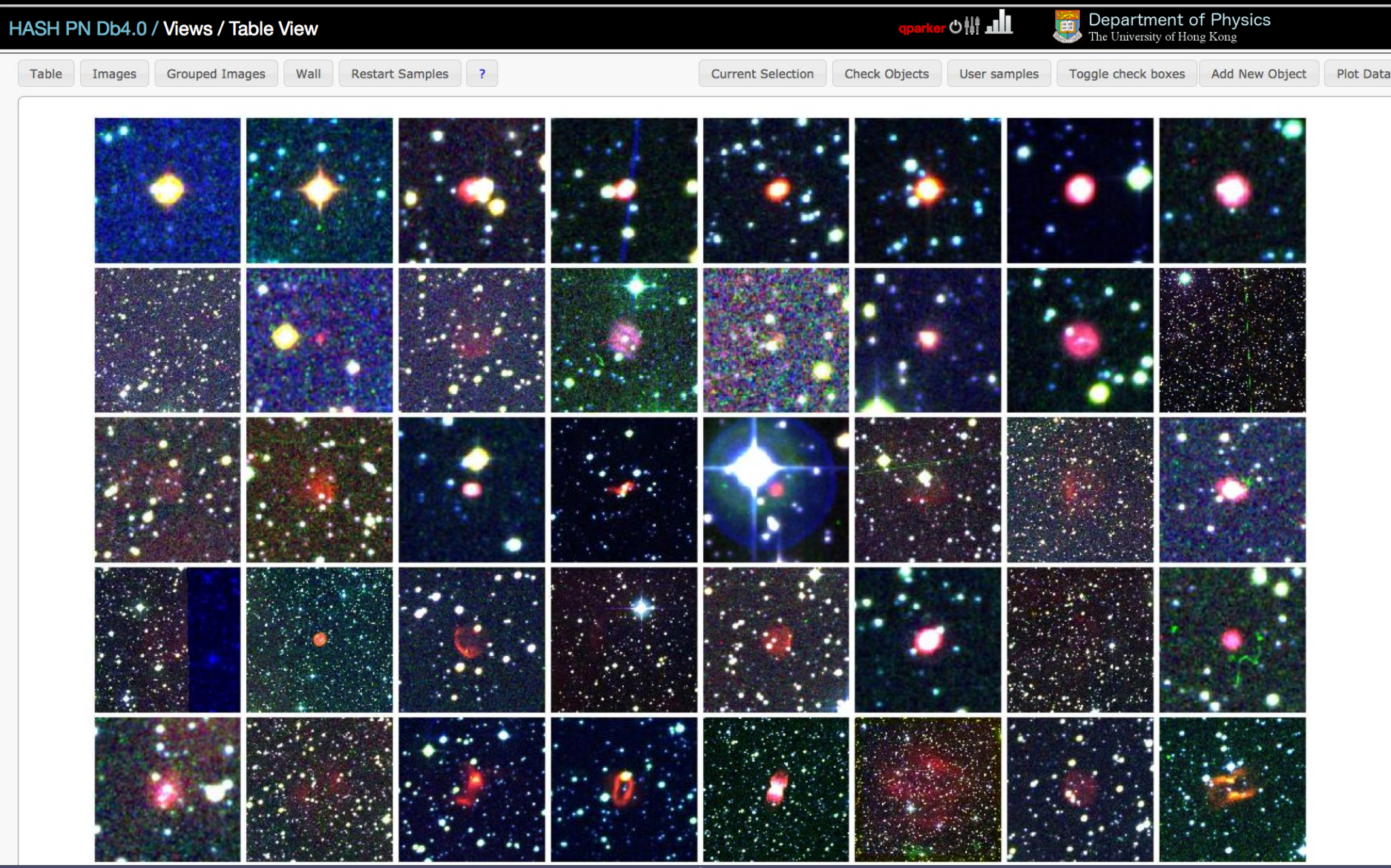
Edit

Introduction

The initial page after login wil be the "Views" page and with default "Table View" view (see Fig.1). From the "Views" page you can access all system features: select view, inspect object, manipulate current view, select sample, etc.

The selected view, together with the selected sample, is recorded to the db which means that every time you login to the db you will be presented with the last selection you have made.

‘WALL’ option to move objects around to gather PN into similar groups



IPHAS survey images ingested – VPHAS+ in train

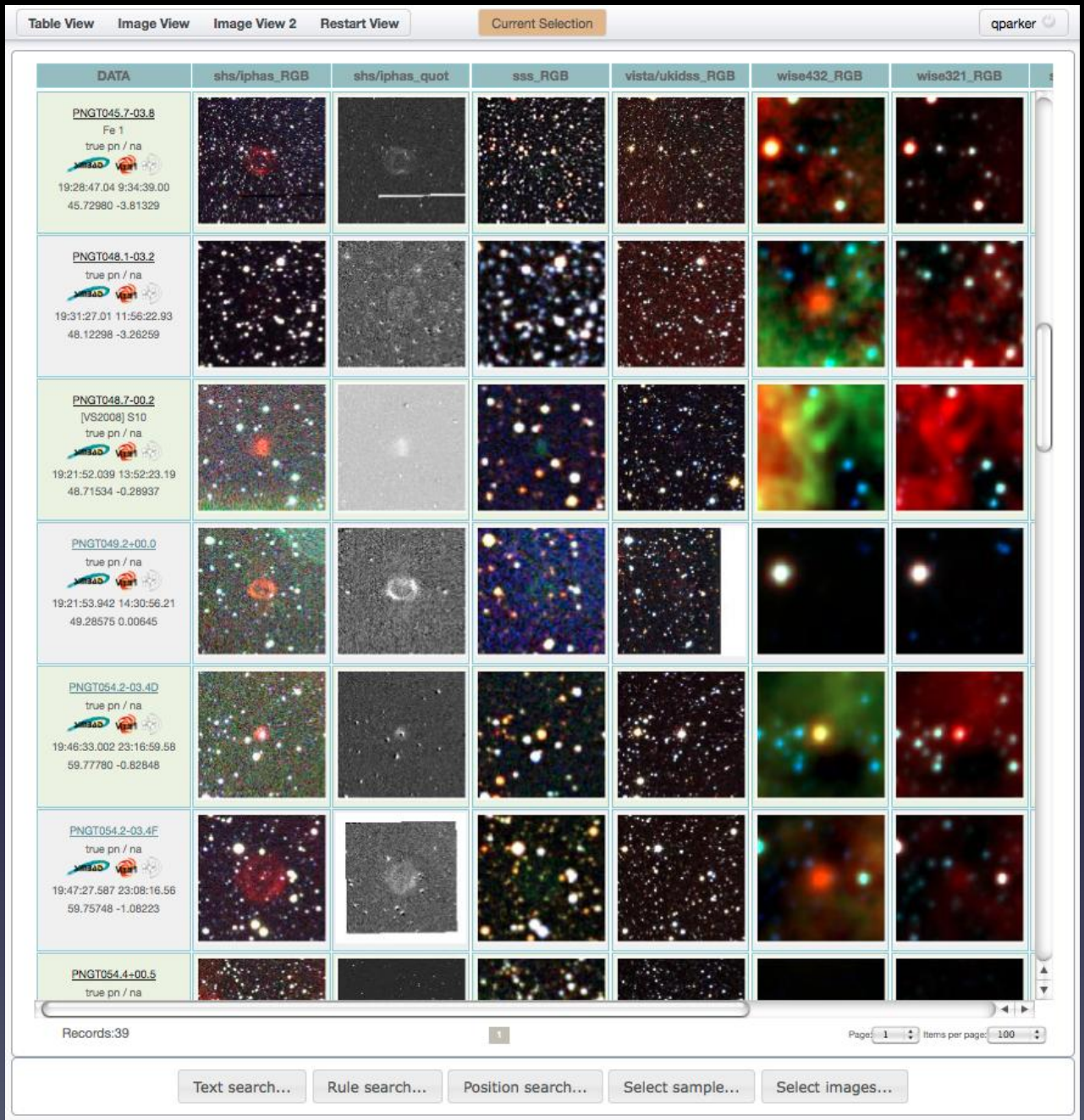
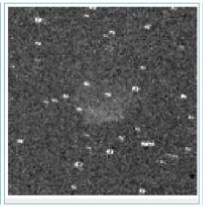
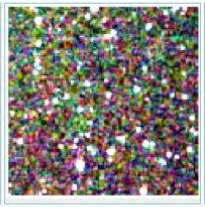
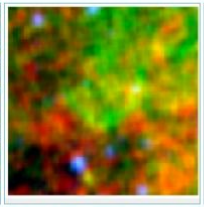
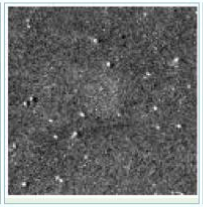
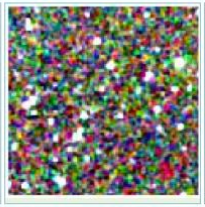
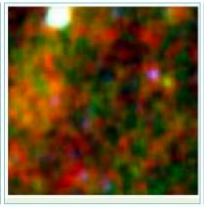
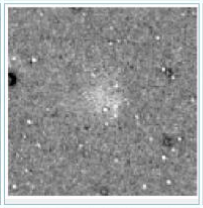
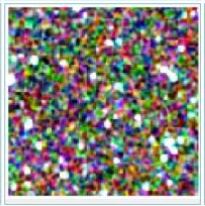
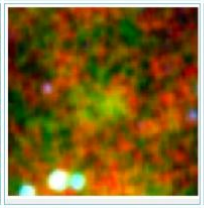
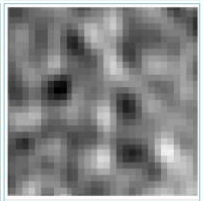
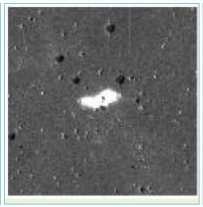
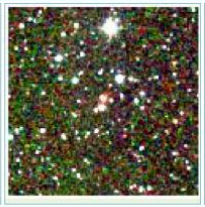
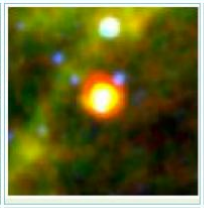
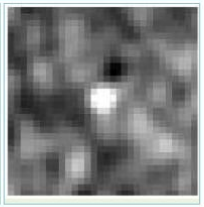


Table | Images | Grouped Images | Wall | Restart Samples | ? | Current Selection | Check Objects | User samples | Toggle check boxes | Add New Object | Plot Data | ?

DATA	SHS	quot_HaSr	SSS_irb	2MASS	WISE432	nvss
PNG212.2-04.7 **PHR J0633-0135** likely pn / Ea SIMBAD VizieR 06:33:09.6 -01:35:10.39 212.26045 -4.78977						
PNG223.6-06.8 **PHR J0646-1235** possible pn / E SIMBAD VizieR 06:46:25.4 -12:35:55.93 223.63380 -6.80350						
PNG219.1-03.9 **PHR J0648-0719** possible pn / E SIMBAD VizieR 06:48:43.1 -07:19:41.02 219.15535 -3.93576						
PNG212.6-00.0 **PHR J0650+0013** true pn / Bmps SIMBAD VizieR 06:50:40.5 00:13:40.08 212.64220 -0.06590						

Records:862

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Text search... | Select sample... | Show images... | ?

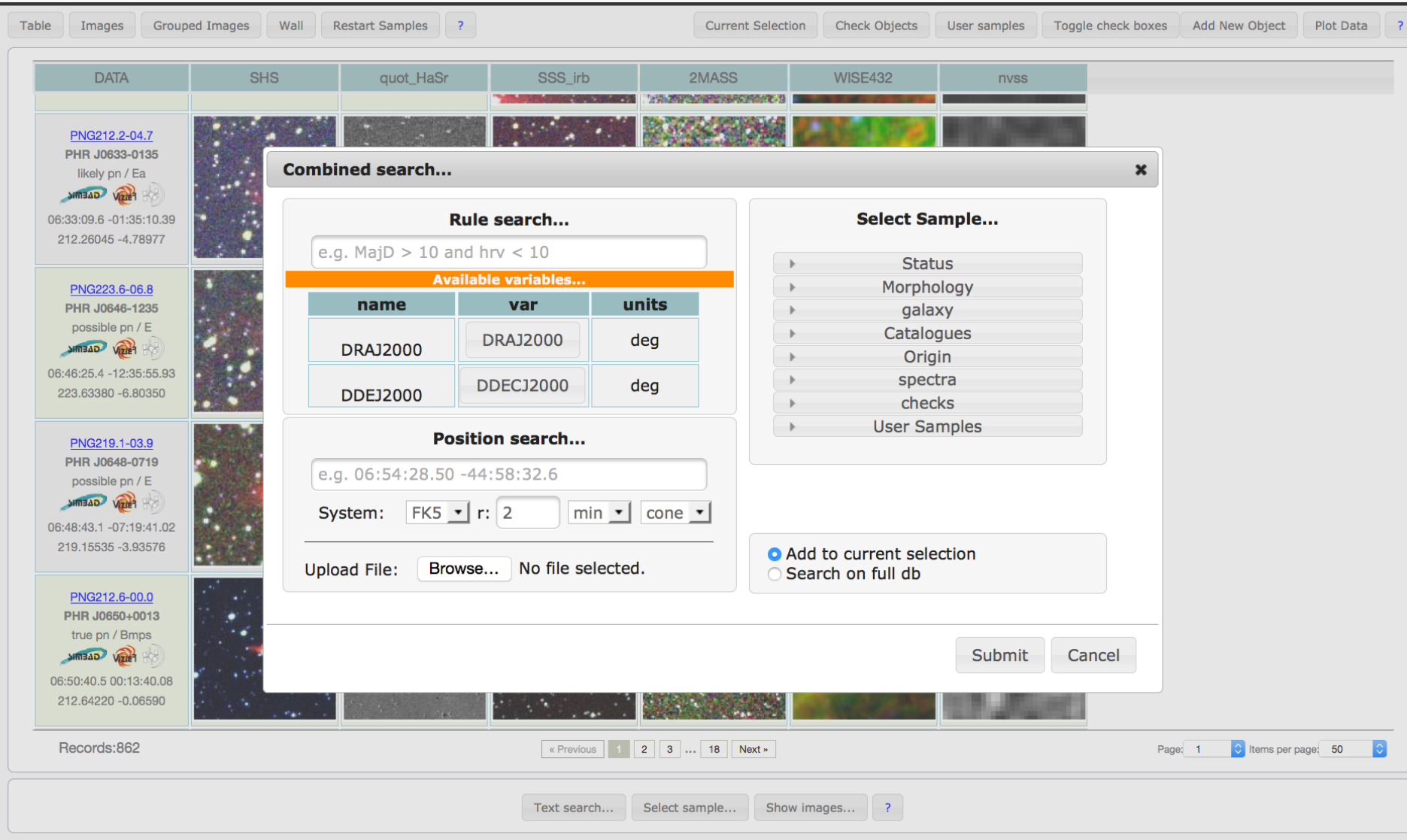
Table
Images
Grouped Images
Wall
Restart Samples
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Current Selection
Check Objects
User samples
Toggle check boxes
Add New Object
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DATA
SHS
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SSS_irb
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likely pn / Ea
06:33:09.6 -01:35:10.39
212.26045 -4.78977
PNG223.6-06.8
PHR J0646-1235
possible pn / E
06:46:25.4 -12:35:55.93
223.63380 -6.80350
PNG219.1-03.9
PHR J0648-0719
possible pn / E
06:48:43.1 -07:19:41.02
219.15535 -3.93576
PNG212.6-00.0
PHR J0650+0013
true pn / Bmps
06:50:40.5 00:13:40.08
212.64220 -0.06590
Combined search...
Rule search...
e.g. MajD > 10 and hrv < 10
Available variables...
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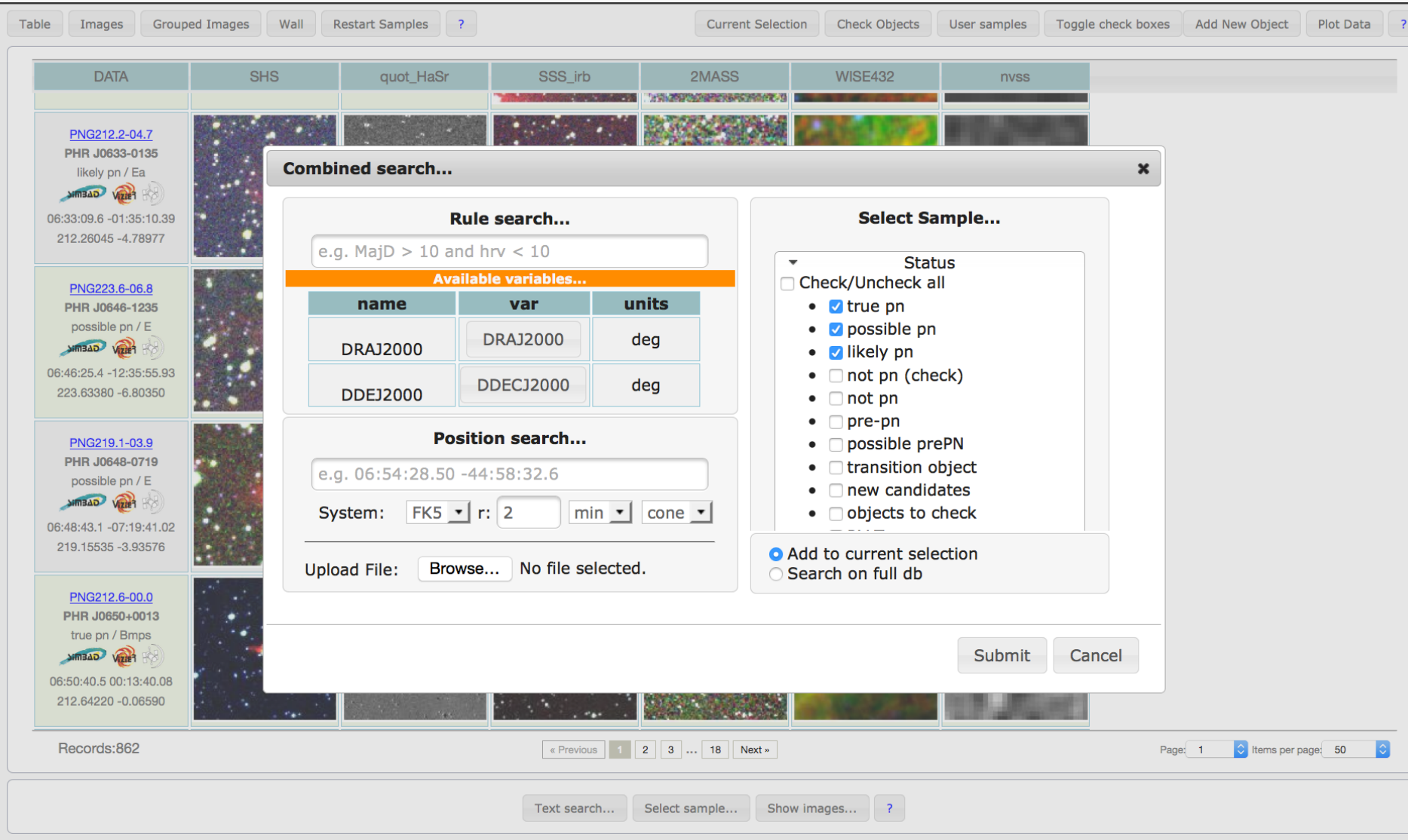
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Grouped Images
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Restart Samples
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Current Selection
Check Objects
User samples
Toggle check boxes
Add New Object
Plot Data
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SSS_irb
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PHR J0633-0135
likely pn / Ea
06:33:09.6 -01:35:10.39
212.26045 -4.78977
PNG223.6-06.8
PHR J0646-1235
possible pn / E
06:46:25.4 -12:35:55.93
223.63380 -6.80350
PNG219.1-03.9
PHR J0648-0719
possible pn / E
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219.15535 -3.93576
PNG212.6-00.0
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212.64220 -0.06590
Combined search...
Rule search...
e.g. MajD > 10 and hrv < 10
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DRAJ2000
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likely pn
not pn (check)
not pn
pre-pn
possible prePN
transition object
new candidates
objects to check
Add to current selection
Search on full db
Submit
Cancel
Records:862
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Items per page:
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Text search...
Select sample...
Show images...
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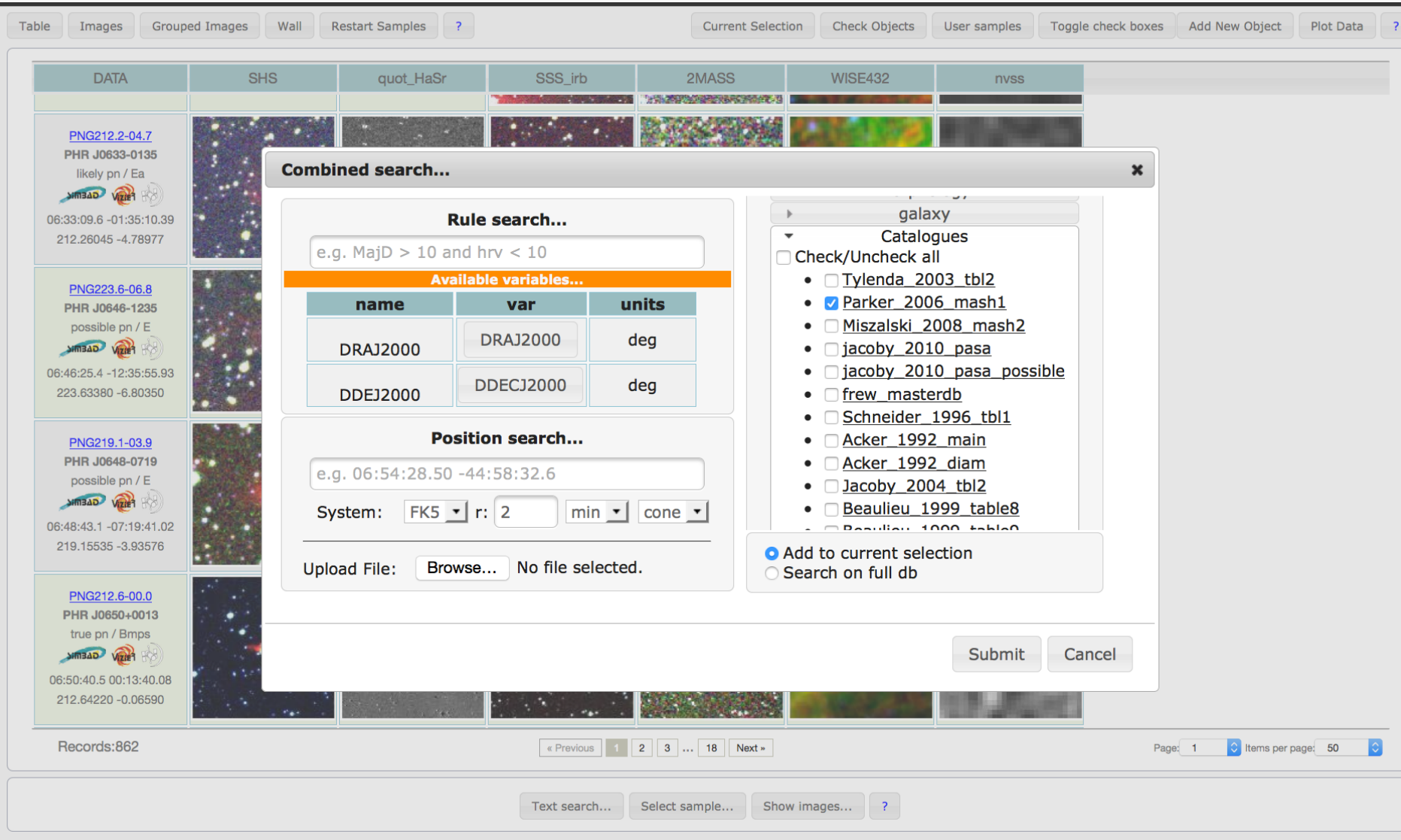
Table
Images
Grouped Images
Wall
Restart Samples
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Current Selection
Check Objects
User samples
Toggle check boxes
Add New Object
Plot Data
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DATA
SHS
quot_HaSr
SSS_irb
2MASS
WISE432
nvss
PNG212.2-04.7
PHR J0633-0135
likely pn / Ea
06:33:09.6 -01:35:10.39
212.26045 -4.78977
PNG223.6-06.8
PHR J0646-1235
possible pn / E
06:46:25.4 -12:35:55.93
223.63380 -6.80350
PNG219.1-03.9
PHR J0648-0719
possible pn / E
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PNG212.6-00.0
PHR J0650+0013
true pn / Bmps
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212.64220 -0.06590
Combined search...
Rule search...
e.g. MajD > 10 and hrv < 10
Available variables...
name
var
units
DRAJ2000
DRAJ2000
deg
DDEJ2000
DDECJ2000
deg
Position search...
e.g. 06:54:28.50 -44:58:32.6
System:
FK5
r:
2
min
cone
Upload File:
Browse...
No file selected.
galaxy
Catalogues
Check/Uncheck all
Tylenda_2003_tbl2
Parker_2006_mash1
Miszalski_2008_mash2
jacoby_2010_pasa
jacoby_2010_pasa_possible
frew_masterdb
Schneider_1996_tbl1
Acker_1992_main
Acker_1992_diam
Jacoby_2004_tbl2
Beaulieu_1999_table8
Add to current selection
Search on full db
Submit
Cancel
Records:862
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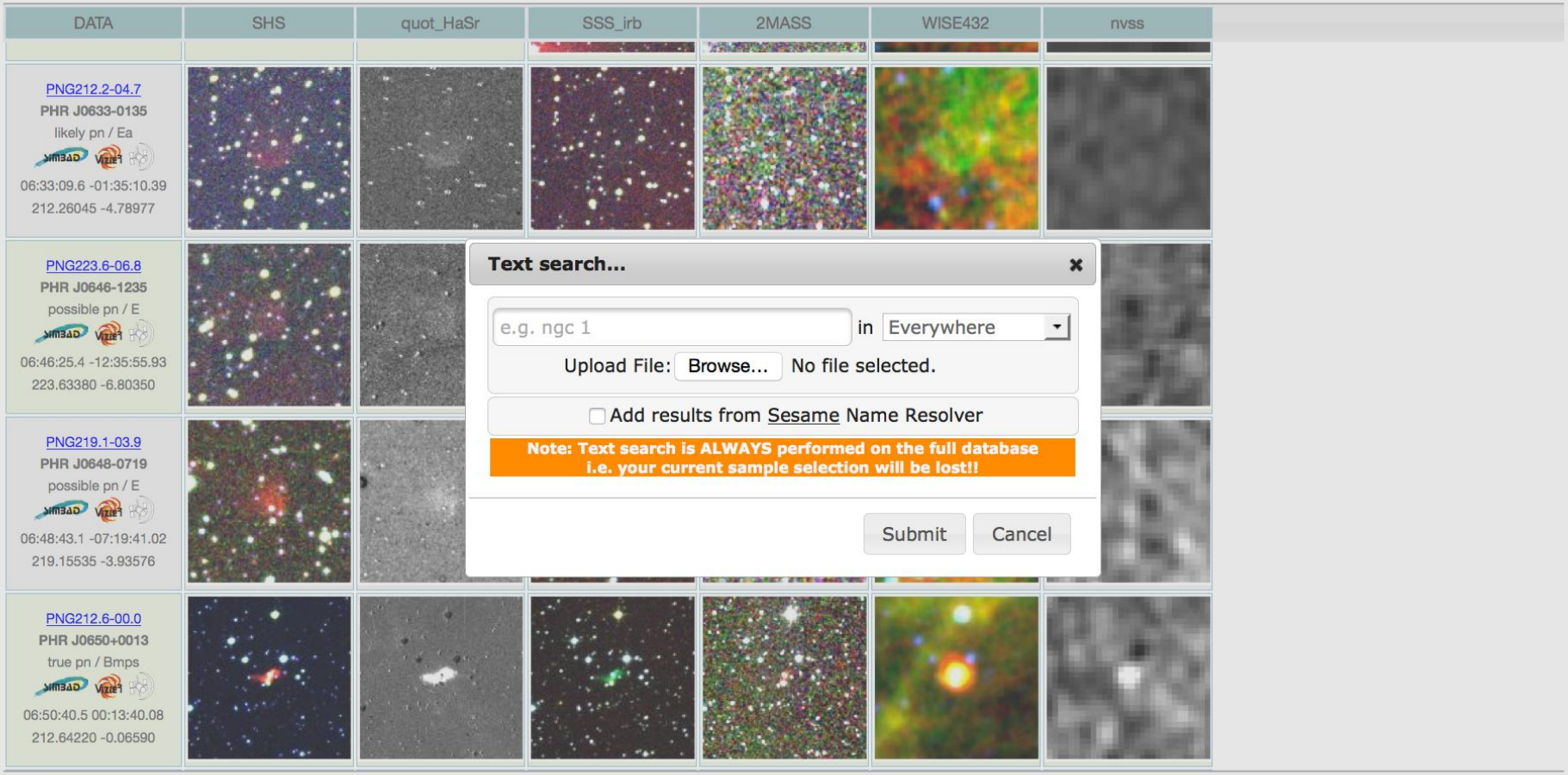
1
Items per page:
50
Text search...
Select sample...
Show images...
?

Table | Images | Grouped Images | Wall | Restart Samples | ? | Current Selection | Check Objects | User samples | Toggle check boxes | Add New Object | Plot Data | ?



Text search... | Select sample... | Show images... | ?

Selected object from Table

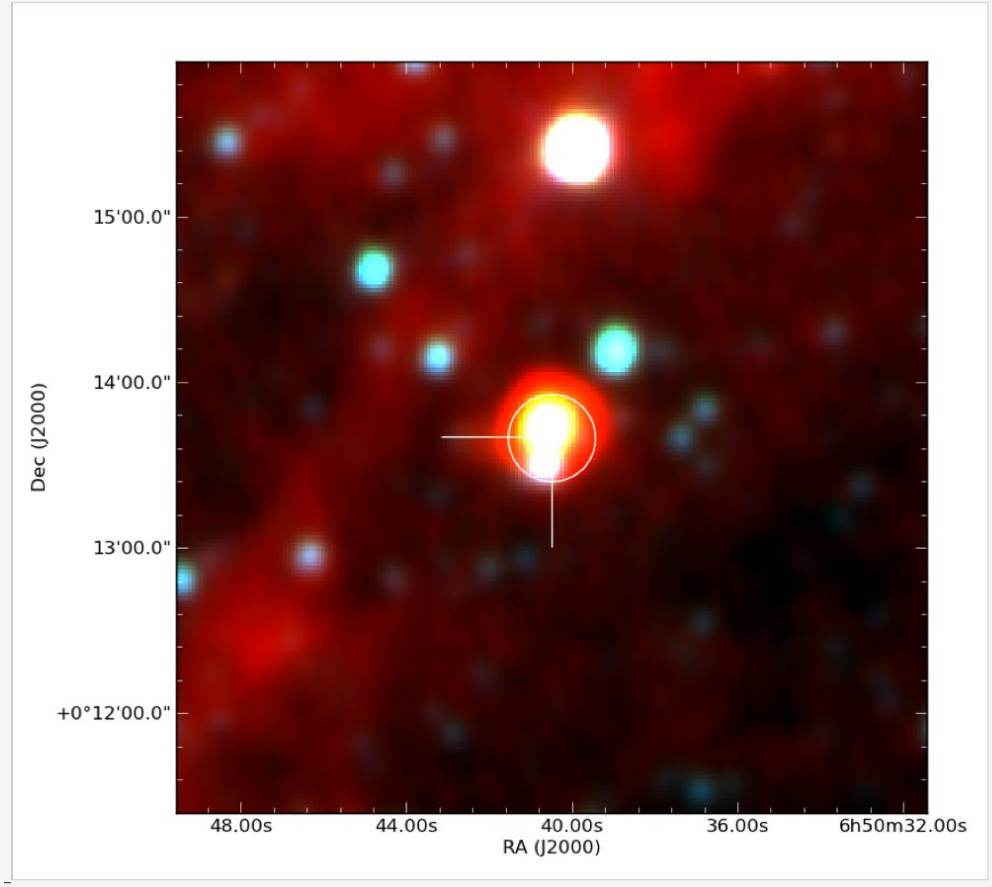
PHR J0650+0013

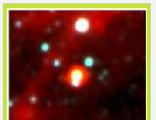
PNG	PNG 212.6-00.0
Status	true pn
Morph.	Bmps
Diam.	31.6 arcsec
Cat.	2006MNRAS.373....
dbID	2508

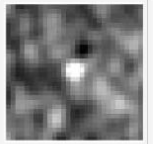
RA/DEC	06:50:40.50 00:13:40.08
α/δ	102.6687 0.2278
l/b	212.6422 -0.0659

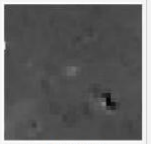
- SHASSA integrator
- VTSS integrator
- SHS integrator
- Select IPHAS imageset

Gallery | Fits Files | Spectra | Notes | Basic Data | General Data

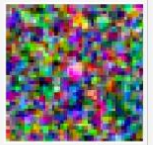


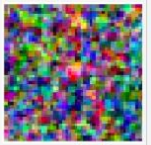

WISE321

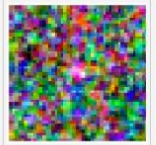

nvss


SHASSAcs


VTSSHaCC


msxACE


msxACD


msxADE

‹ Prev | 1 | 2

Overlays

- ☑ Centroid / centroid.reg
- ☐ CS position / cspos.reg
- ☑ Diameter / diam.reg

WISE321

R:	WISE/w3.fits 5	99	%
G:	WISE/w2.fits 5	99	%
B:	WISE/w1.fits 5	99	%

Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

PN G212.6-00.0

26-Nov-2015: Due to a better accuracy in the measurements of proper-motions, values are now stored in mas/yr (instead of arcsec before)

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : PN G212.6-00.0

C.D.S. - SIMBAD4 rel 1.3 - 2015.12.13CET14:35:36

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

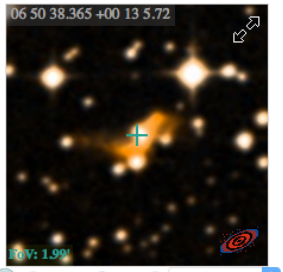
Basic data :

PN G212.6-00.0 -- Planetary Nebula

Other object types:	PN (PN,PHR),IR (AKARI,IRAS),Rad (NVSS)
ICRS coord. *(ep=J2000) :*	06 50 40.62 +00 13 43.9 (Infrared) [ ] D 2010A&A...514A...1I
FK5 coord. *(ep=J2000 eq=2000) :*	06 50 40.62 +00 13 43.9 [ ]
FK4 coord. *(ep=B1950 eq=1950) :*	06 48 06.59 +00 17 18.2 [ ]
Gal coord. *(ep=J2000) :*	212.6415 -00.0649 [ ]
Angular size (arcmin):	1.13 0.43 ~ (~) (Opt) D 2006MNRAS.373...79P

SIMBAD query around with radius 2 arcmin

Interactive AladinLite view



VizieR photometry viewer

Search within radius Max 3(arcsec

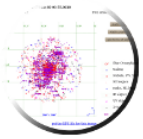
notes:

- PN image/spectrum originally published in MASH

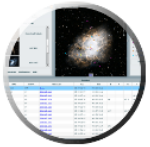
Identifiers (5) :

PN G212.6-00.0
AKARI-IRC-V1 J0650406+001343
IRAS 06480+0017
NVSS J065040+001341
PHR J0650+0013

Plots and Images


plot


CDS portal

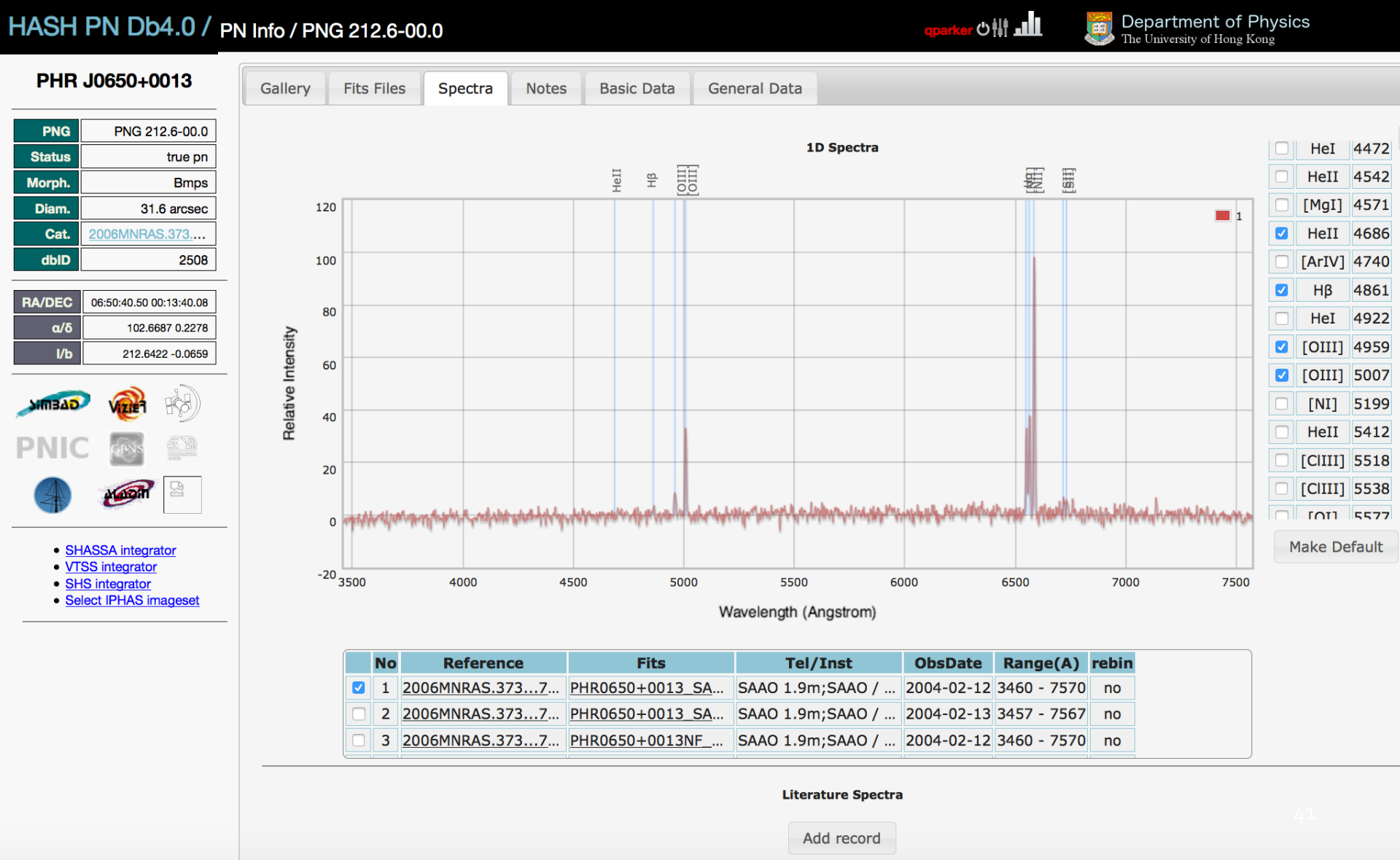

CDS Simplay
(requires flash)

Aladin applet

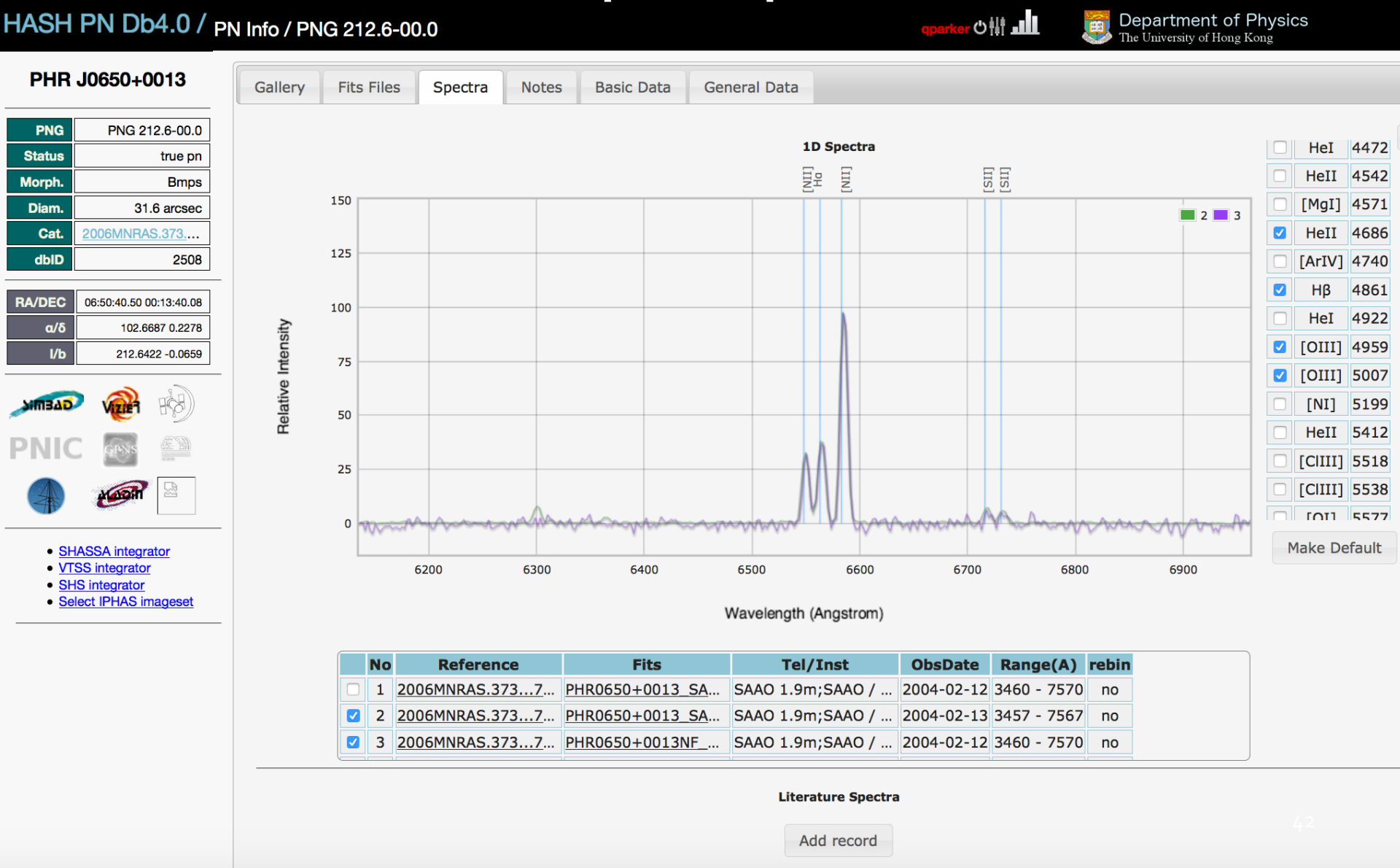
radius 10 arcmin

Can check SIMBAD entry via click on icon

Can click on spectra tab

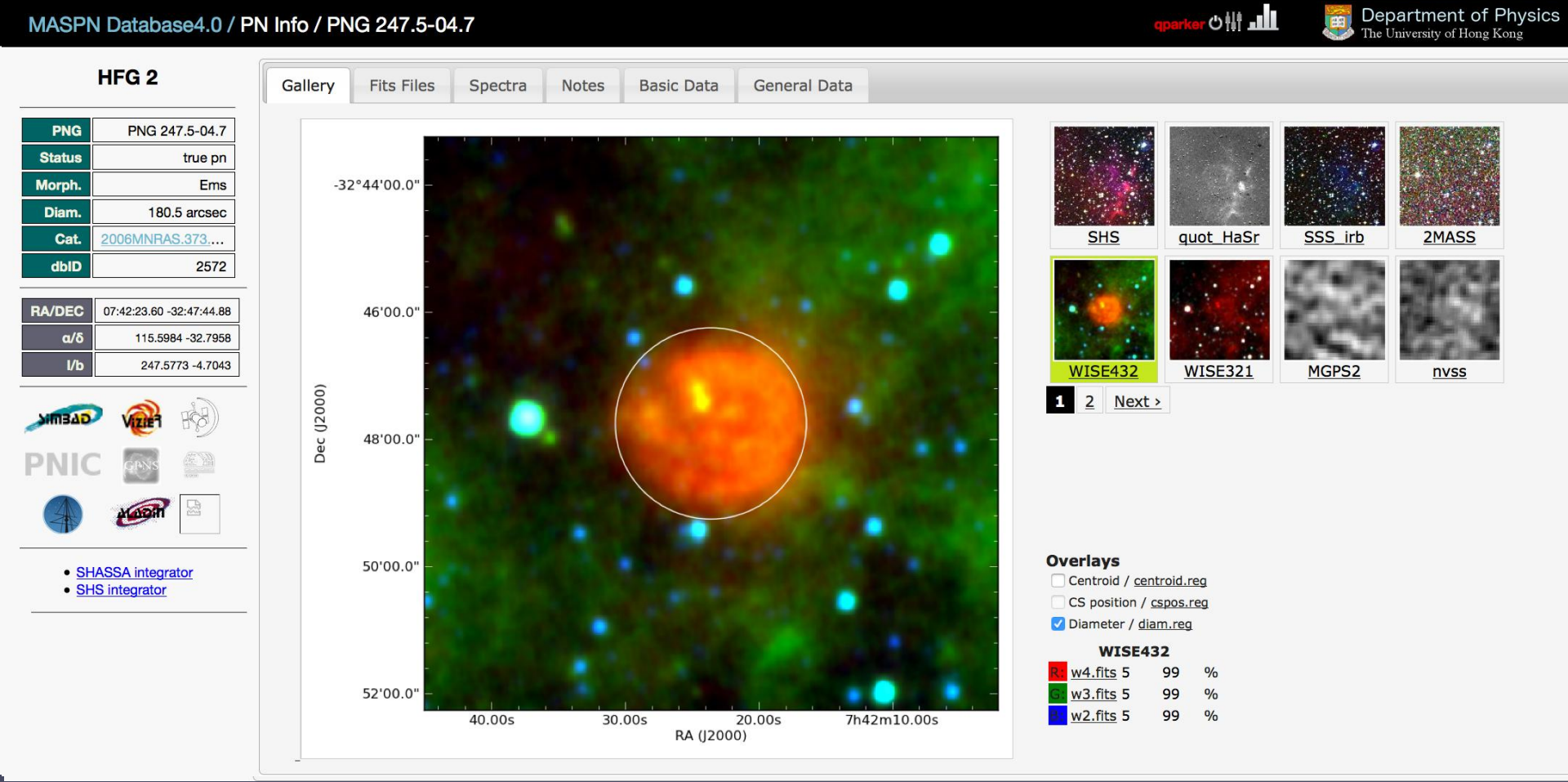


Can interactively zoom-in & overplot multiple spectra



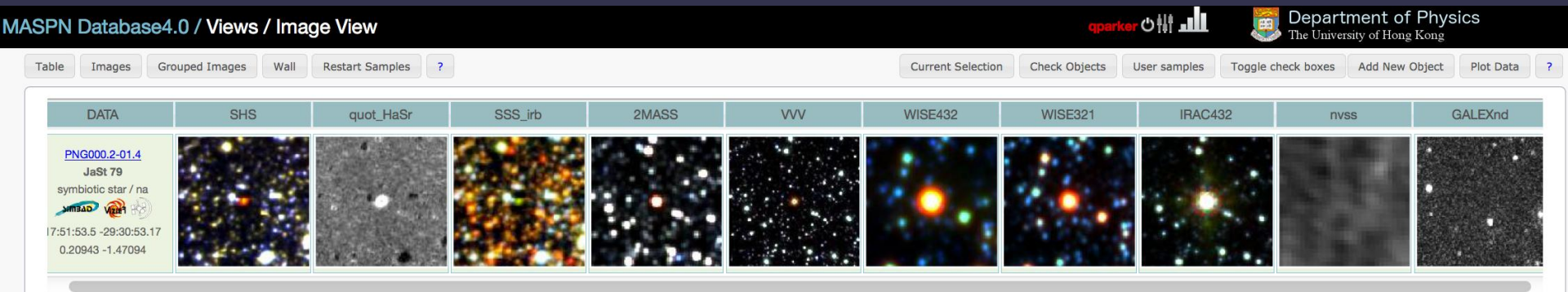
Detailed notes can be associated with each PN entry…

Can cycle through all available multi-wavelength images

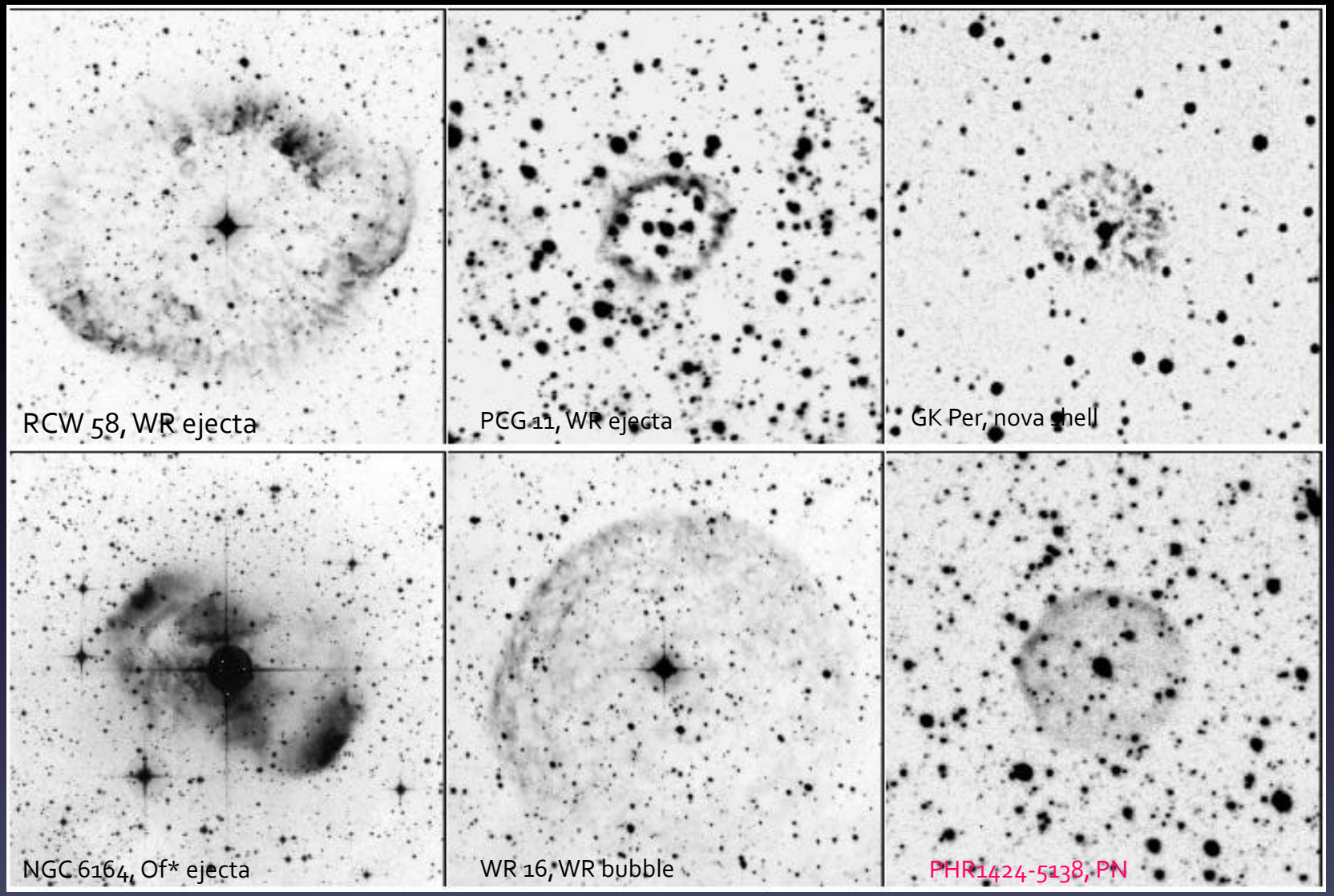


Purified/Improved PNe IDs

- Clear discrimination tools developed (e.g. Frew & Parker, 2010)
- Newly consolidated multi-wavelength imagery assists this process
- Extensive additional spectroscopy further aids ID and classification
- New T, L, P or 'NOT PN' (or other category) given to all entries based on best available photometric, imagery and spectroscopic evidence
- T: Has to have confirmatory spectroscopy as well as other evidence
- L: As above but no spectra
- P: some aspects of available data inconclusive for a likely PN ID



Multi-wavelength studies of PNe and their mimics –only object at BRHC is a true PN!



Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

PN G333.7+00.3

26-Nov-2015: Due to a better accuracy in the measurements of proper-motions, values are now stored in mas/yr (instead of arcsec before)

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : PN G333.7+00.3 — C.D.S. - SIMBAD4 rel 1.3 - 2015.12.14CET06:42:22

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

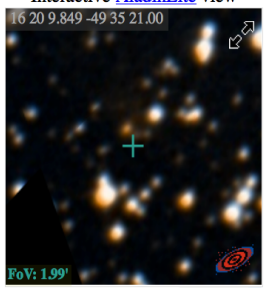
Basic data :

PN G333.7+00.3 -- Possible Planetary Nebula

Other object types:	PN? (),PN (PN,PHR)
ICRS coord. *(ep=J2000) :*	16 20 09.4 -49 36 09 (Infrared) [300 300 90] D 2003yCat.5114....0E
FK5 coord. *(ep=J2000 eq=2000) :*	16 20 09.4 -49 36 09 [300 300 90]
FK4 coord. *(ep=B1950 eq=1950) :*	16 16 24.9 -49 28 59 [300 300 90]
Gal coord. *(ep=J2000) :*	333.7263 +00.3677 [300 300 90]

SIMBAD query around with radius 2 arcmin

Interactive AladinLite view



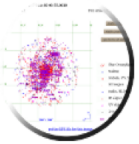
VizieR photometry viewer

Search within radius Max 30 arcsec

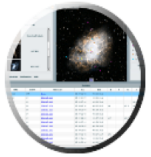
Identifiers (2) :

PN G333.7+00.3 — PHR J1620-4936

Plots and Images


plot


CDS portal


CDS Simplay *(requires flash)*

Aladin applet

radius 10 arcmin

References (4 between 1850 and 2016) sort references

All "known" PNe being checked against all current evidence – images *and* spectroscopy

and if necessary re-assigned….

Clearly 'NOT" a PN……

HASH PN Db4.0 / PN Info / PNG 333.7+00.3

qparker

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The University of Hong Kong

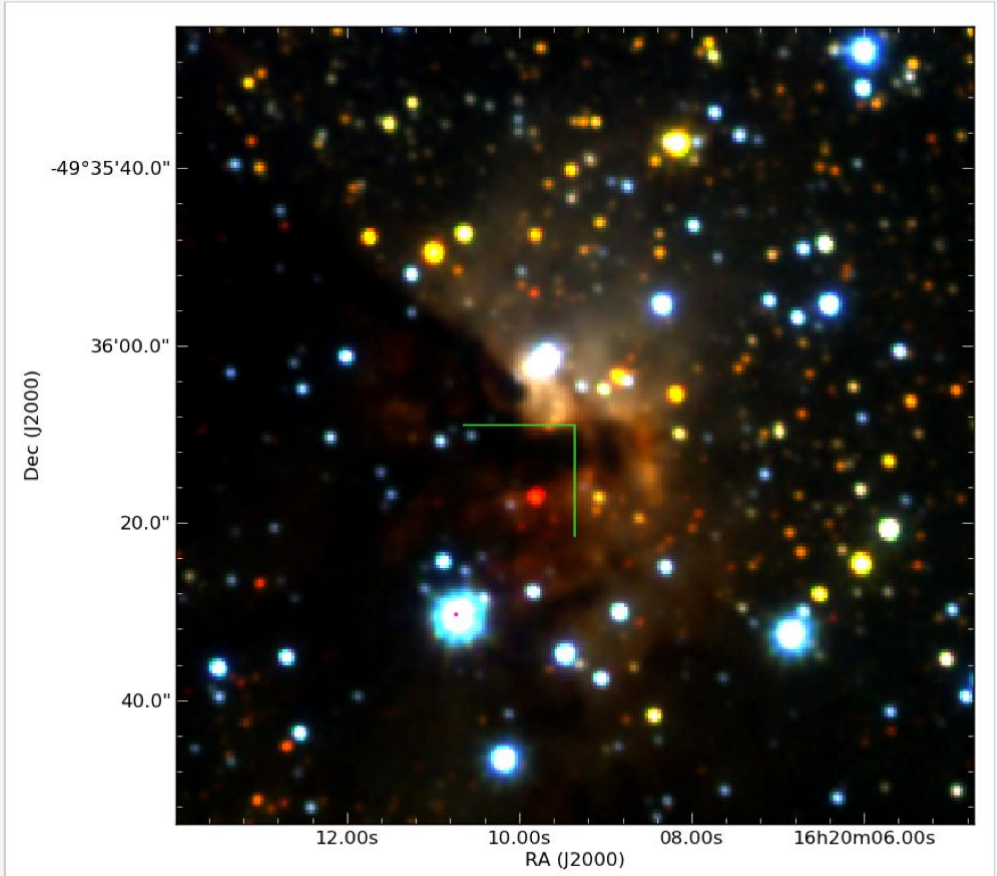
GRS 333.72 +00.36

PNG	PNG 333.7+00.3
Status	HII region
Morph.	na
Diam.	na
Cat.	2008MNRAS.386....
dbID	5011

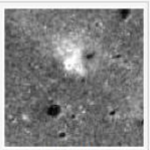
RA/DEC	16:20:09.40 -49:36:09.00
α/δ	245.039 -49.6025
l/b	333.7262 0.3678

- SHASSA integrator
- SHS integrator

Gallery | Fits Files | Spectra | Notes | Basic Data | General Data




SHS

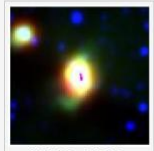

quot_HaSr

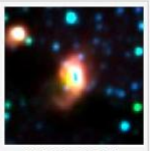

SSS_irb


2MASS


VVV


IRAC432


WISE432


WISE321

1 | 2 | Next ›

Overlays

- Centroid / centroid.reg
- CS position / cspos.reg
- Diameter / diam.reg

VVV

R:	Ks.fits 5	98	%
G:	H.fits 5	98	%
B:	J.fits 5	98	%

Another example of PN→ Not PN

Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

PN RPZM 44

26-Nov-2015: Due to a better accuracy in the measurements of proper-motions, values are now stored in mas/yr (instead of arcsec before)

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : PN RPZM 44

C.D.S. - SIMBAD4 rel 1.3 - 2015.12.14CET06:46:25

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

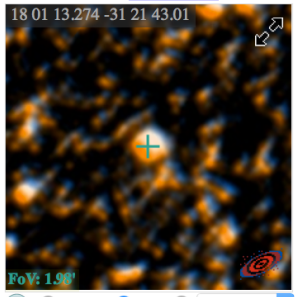
Basic data :

IRAS 17579-3121 -- Post-AGB Star (proto-PN)

Other object types:	IR (IRAS,AKARI,2MASS,MSX6C,WISE),* (GSC,UCAC2,UCAC4),PN (PN),pA* (Ref),Mas ([NHO98])
ICRS coord. *(ep=J2000) :*	18 01 13.365 -31 21 56.59 ( ) [16 16 90] B 2003yCat.1289....0Z
FK5 coord. *(ep=J2000 eq=2000) :*	18 01 13.365 -31 21 56.59 [16 16 90]
FK4 coord. *(ep=B1950 eq=1950) :*	17 57 58.90 -31 21 54.7 [256 256 90]
Gal coord. *(ep=J2000) :*	359.6131 -04.1383 [16 16 90]
Proper motions *mas/yr* :	-12.6 -2.4 [5.1 5.1 91] B 2003yCat.1289....0Z
Spectral type:	F4I C 2006A&A...458..173S
Fluxes (6) :	B 12.69 [0.01] D 2012yCat.1322....0Z
	V 11.40 [0.03] D 2012yCat.1322....0Z
	R 11.02 [0.03] D 2012yCat.1322....0Z
	J 8.396 [0.017] C 2003yCat.2246....0C
	H 7.890 [0.046] C 2003yCat.2246....0C
	K 7.585 [0.021] C 2003yCat.2246....0C

SIMBAD query around with radius 2 arcmin

Interactive AladinLite view



VizieR photometry viewer

Search within radius Max 30 arcsec

Identifiers (12) :

IRAS 17579-3121	GSC 07391-01012	PN PM 2-33	UCAC4 294-146154
AKARI-FIS-V1 J1801129-312206	2MASS J18011337-3121566	PN RPZM 44	WISE J180113.36-312156.4
AKARI-IRC-V1 J1801133-312156	MSX6C G359.6129-04.1379	UCAC2 18743905	[NHO98] 17579-3121

Not PN imagery or spectrum

HASH PN Db4.0 / PN Info / PNG 359.6-04.1

qparker

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The University of Hong Kong

PNG T359.6-04.1
PN PM 2-33
not pn (check) / na

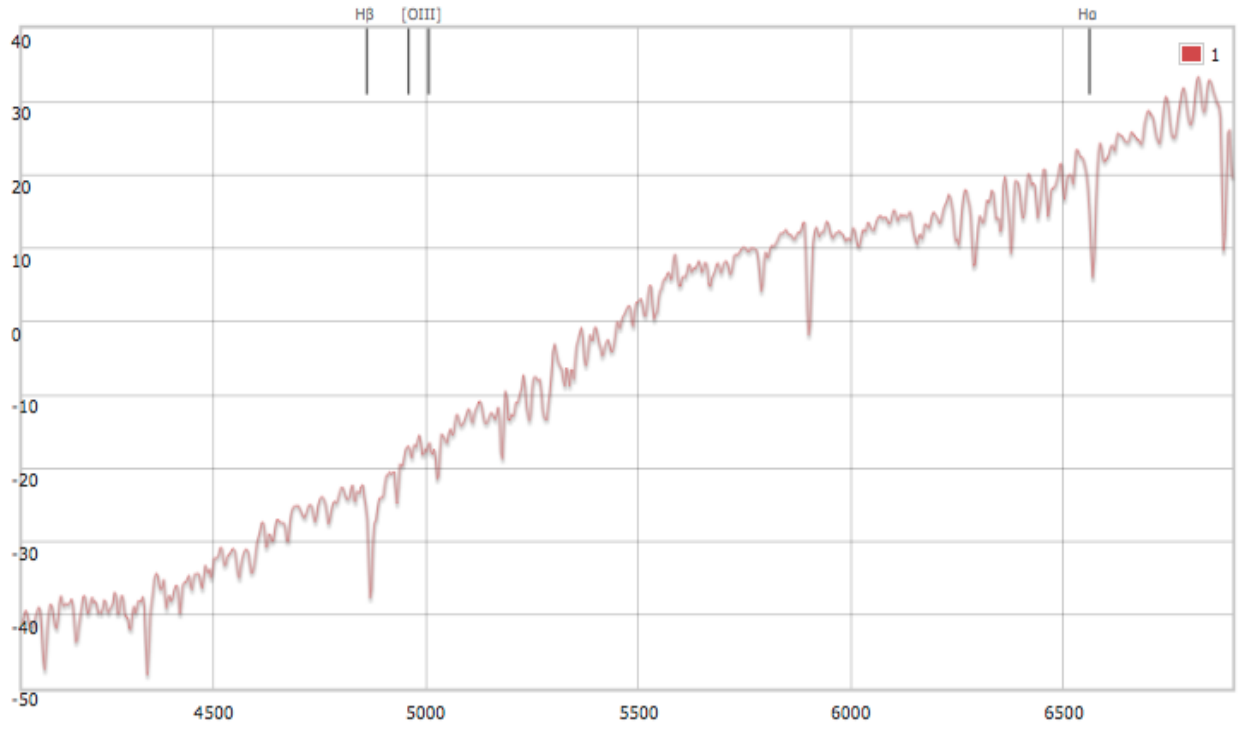
SIMBAD VizieR

PNIC

RA/DEC	18:01:13.44 -31:21:56.52
l/b	359.6133 -4.1385

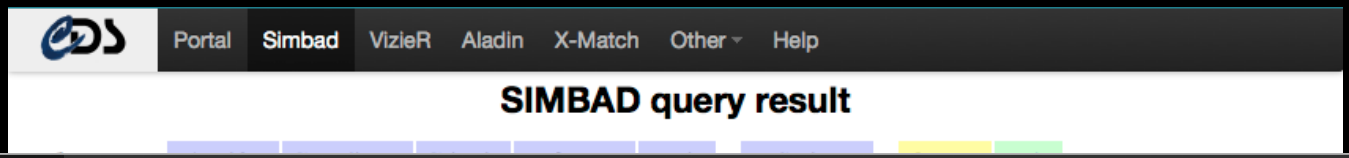
- Shs integrator

Gallery | Fits Files | Spectra | Notes | User samples | Basic Data | General Data



1 I17579-3121.dat 1.5m ESO La Silla / Boller & Chivens 0000-00-00

While some objects finally receive the true PN recognition they deserve ☺



Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

2mass J19010572+0825360

26-Nov-2015: Due to a better accuracy in the measurements of proper-motions, values are now stored in mas/yr (instead of arcsec before)

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : 2mass J19010572+0825360

C.D.S. - SIMBAD4 rel 1.3 - 2015.12.14CET07:40:20

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

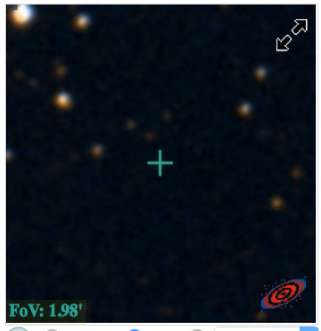
Basic data :

IRAS 18586+0821 -- Planetary Nebula

Other object types:	IR (AKARI,IRAS,2MASS,MSX6C,WISE),PN (Ref,PN,PK,VSP),Y*? ([MHL2007]),PN? ([VP95]),Rad ([UHP2009])
ICRS coord. *(ep=J2000) :*	19 01 05.724 +08 25 36.04 (Near-IR) [60 60 90] B 2003yCat.2246....0C
FK5 coord. *(ep=J2000 eq=2000) :*	19 01 05.724 +08 25 36.04 [60 60 90]
FK4 coord. *(ep=B1950 eq=1950) :*	18 58 41.46 +08 21 17.1 [60 60 90]
Gal coord. *(ep=J2000) :*	041.5293 +01.7039 [60 60 90]
Fluxes (3) :	J 15.077 [0.036] C 2003yCat.2246....0C
	H 13.854 [0.038] C 2003yCat.2246....0C
	K 12.763 [0.033] C 2003yCat.2246....0C

SIMBAD query around with radius 2 arcmin

Interactive AladinLite view



VizieR photometry viewer

Search within radius Max 30 arcsec

Compact Hα emitter resolved on UKIDSS with PN optical spectrum

HASH PN Db4.0 / PN Info / PNG 041.5+01.7

qparker

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The University of Hong Kong

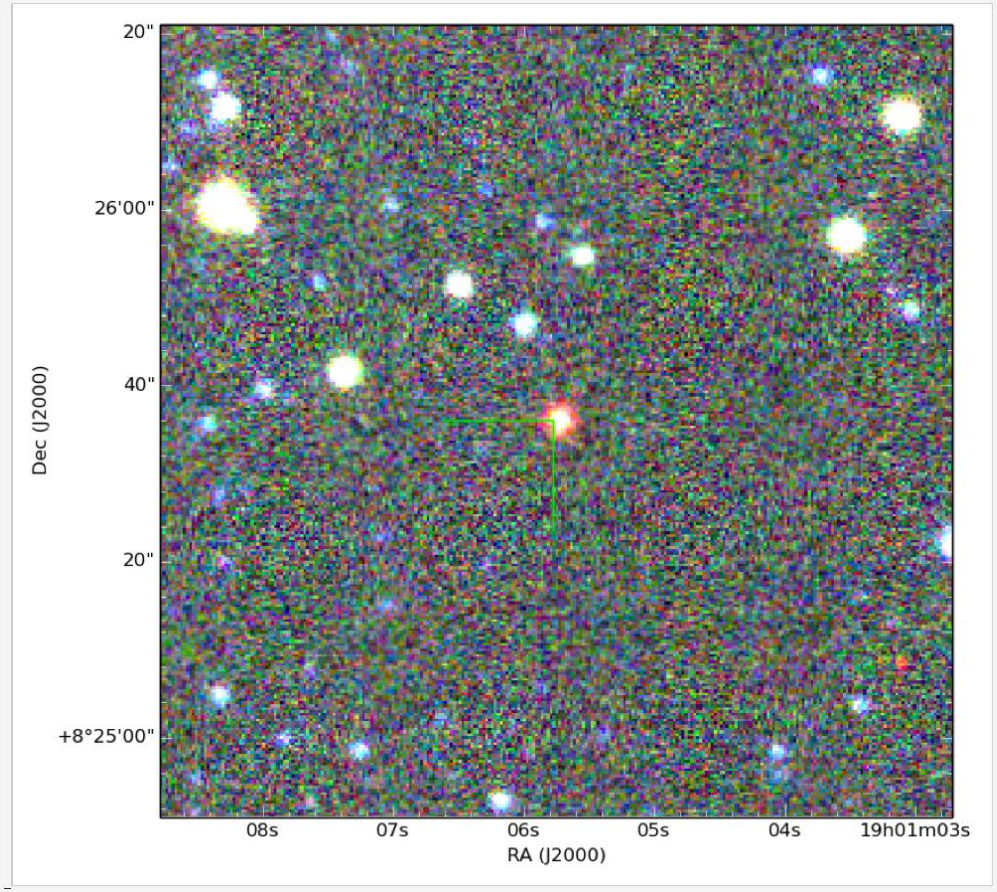
PM 1-273

PNG	PNG 041.5+01.7
Status	likely pn
Morph.	S
Diam.	na
Cat.	2001A&A...378..8...
dbID	404

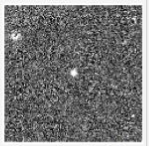
RA/DEC	19:01:05.80 08:25:36.01
α/δ	285.274 8.4267
l/b	41.5293 1.7038

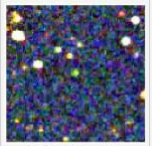
- SHASSA integrator
- VTSS integrator
- Select IPHAS imageset

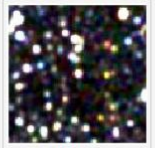
Gallery | Fits Files | Spectra | Notes | Basic Data | General Data



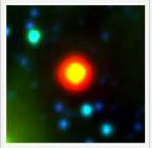

iphas3colour

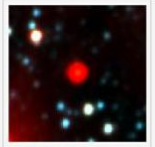

iquot_HaSr


SSS_irb2


2MASS


UKIDSS


WISE432


WISE321


nvss

1 2 Next ›

Overlays

- Centroid / centroid.reg
- CS position / cspos.reg
- Diameter / diam.reg

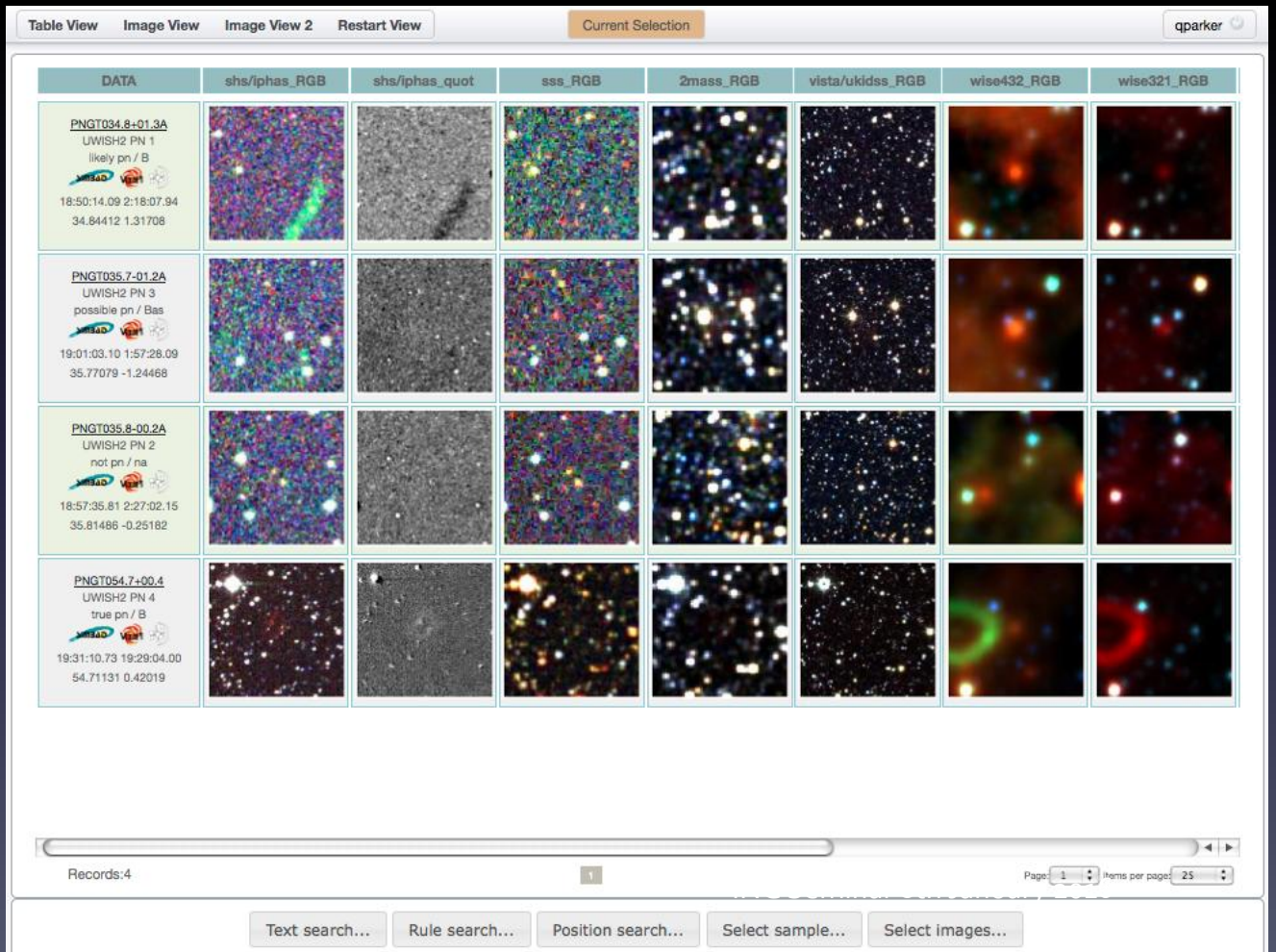
iphas3colour

R:	Ha.fits	5	97 %
G:	r.fits	5	97 %
B:	i.fits	5	97 %

PN claims…..tested

CDS entries simply reflect the latest refereed publications and claims on object status whether reliable or not!

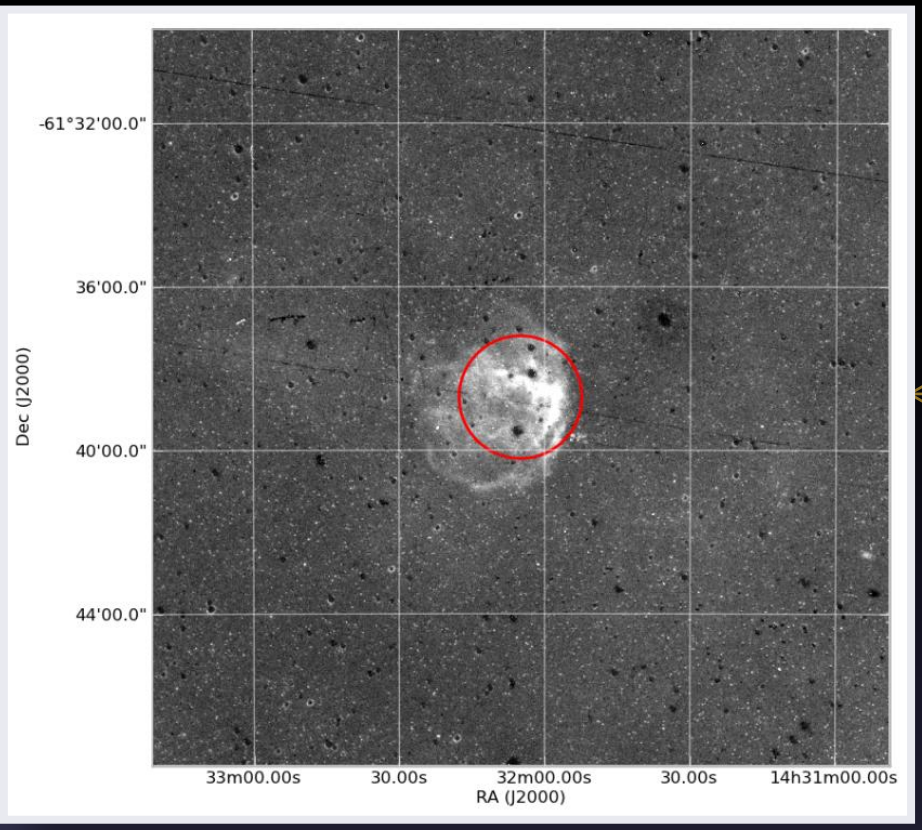
Name	RA (J2000)	DEC (J2000)	D_{in} ["]	D_{out} ["]
UWISH2 PN 1	18:50:14.1	+02:18:08	3.3	7.5
UWISH2 PN 2	18:57:35.8	+02:27:02	6.0	14-21
UWISH2 PN 3	19:01:03.1	+01:57:28	10.0	15-25
UWISH2 PN 4	19:31:10.7	+19:29:06	5-11	15-23



"we have found four new PN, three of which are shown in Fig. 6. These objects were selected based on the appearance of their H2 line emission." (Froebrich et al. MNRAS, 2011)

- We classify these four objects as T, L, P and 'Not PN' based on our rules and visualisation

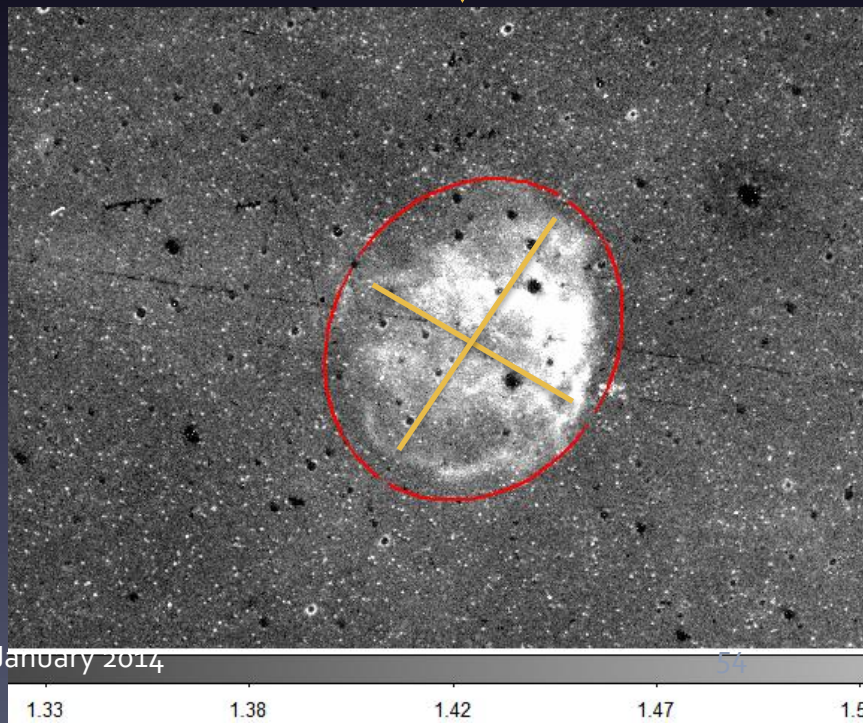
idPNMain	idtiff1	PNG_Tiff	NEW PNG	Offset (arcsecs)	offset / diameter	Catalogue	COORD Catalogue	PN status
2829	1026	314.5-01.0	314.5-01.0	39.62265383	126.95%	MASH I	MASH I	y



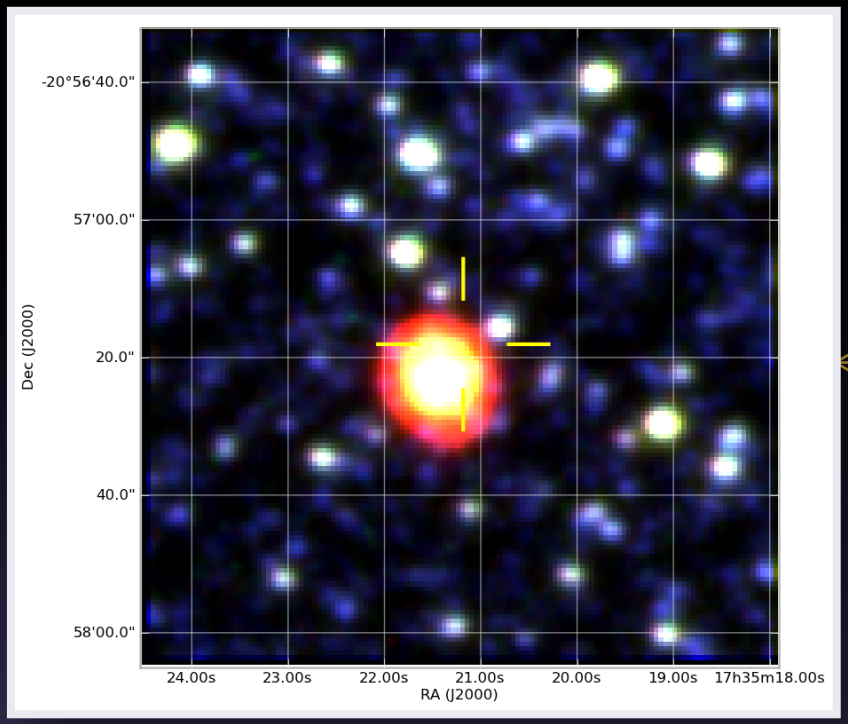
Smaller positional corrections also applied as full PN extent and form now evident

Before

After



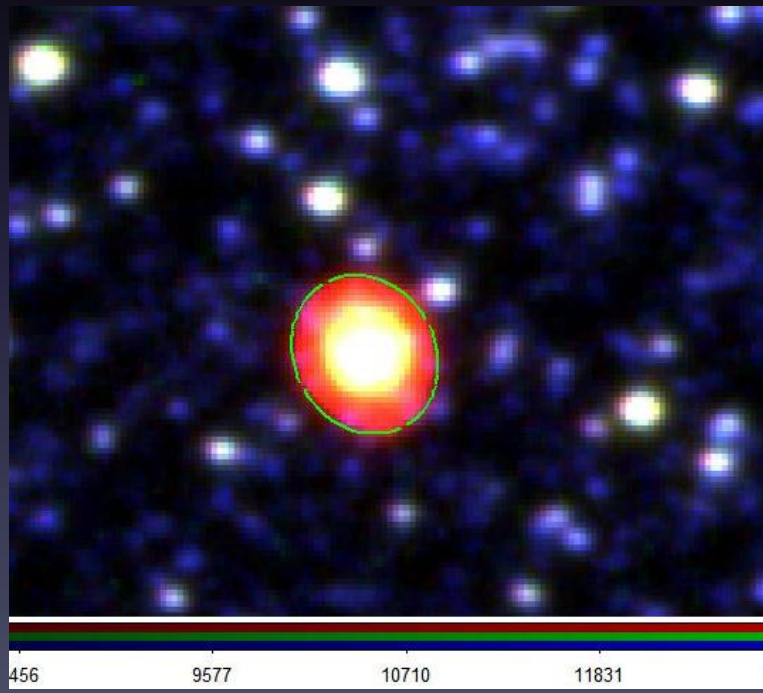
idPNMain	idtiff1	PNG_Tiff	NEW PNG	Offset (arcsecs)	offset / diameter	Catalogue	COORD Catalogue	PN status
4106	267	005.5+06.1	005.5+06.1	6.32670155	32.58%	ACKER 1992	ACKER_1992_main	y



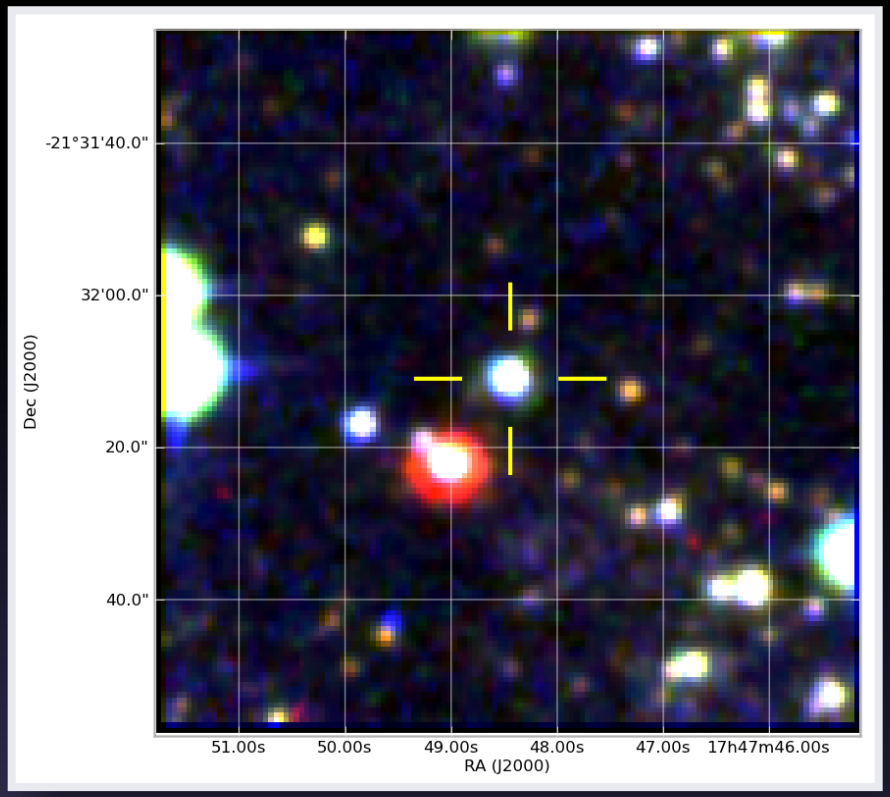
Smaller corrections also applied

After

Before



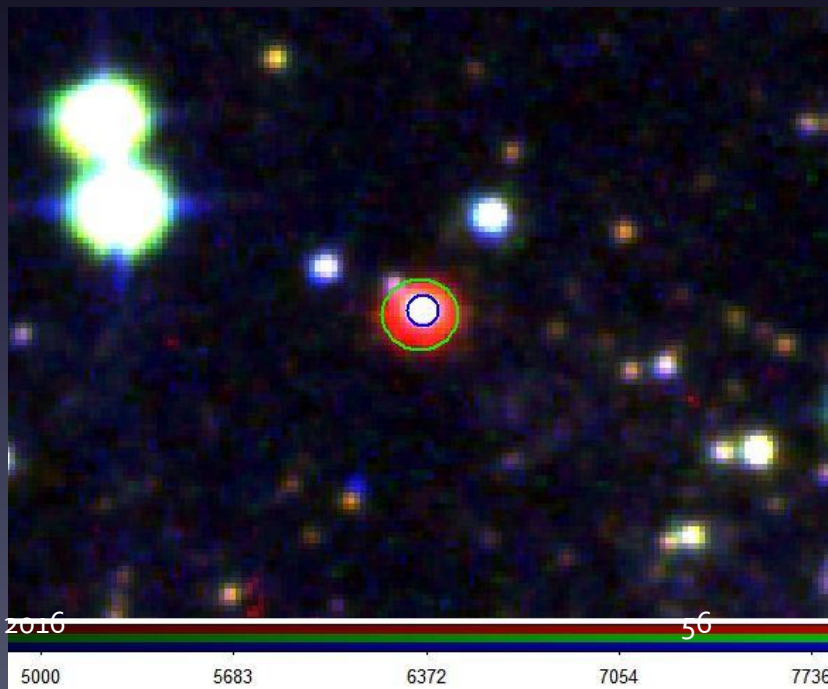
idPNMain	idtiff1	PNG_Tiff	NEW PNG	Offset (arcsecs)	offset / diameter	Catalogue	COORD Catalogue	PN status
185	296	006.5+03.4	006.5+03.4	14.336716	150.65%	KOHOUTEK 2001	KERBER_2003	y



Even some well known PNe have poor catalogued co-ordinates in SIMBAD (PBOZ 29)

Before

After



Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

PN PBOZ 29

26-Nov-2015: Due to a better accuracy in the measurements of proper-motions, values are now stored in mas/yr (instead of arcsec before)

---

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : PN PBOZ 29

C.D.S. - SIMBAD4 rel 1.3 - 2015.12.14CET15:01:59

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

---

Basic data :

PN PBOZ 29 -- Planetary Nebula

Other object types:

ICRS coord. *(ep=J2000) :* 17 47 48.47 -21 32 11.1 (Infrared)

FK5 coord. *(ep=J2000 eq=2000)* 17 47 48.47 -21 32 11.1 [60 60 90]

FK4 coord. *(ep=B1950 eq=1950)* 17 44 48.37 -21 31 11.3 [60 60 90]

Gal coord. *(ep=J2000) :*

Fluxes (5) :

B 17.300 [~] E 2003yCat.2246....0C

R 17.400 [~] E 2003yCat.2246....0C

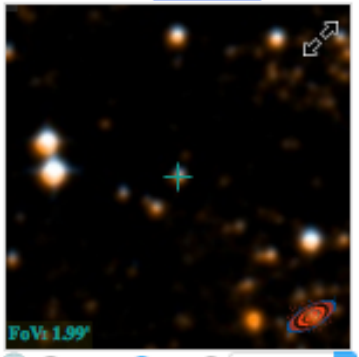
J 14.192 [0.042] C 2003yCat.2246....0C

H 13.609 [0.060] C 2003yCat.2246....0C

K 13.450 [0.050] C 2003yCat.2246....0C

SIMBAD query around with radius 2 arcmin

Interactive AladinLite view



VizieR photometry viewer

Search within radius Max 30 arcsec

Tidying up confusion in the CDS (for PN)

Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

coord 18 07 41.54 -17 51 28.8 (FK5, 2000, 2000), radius: 2 arcmin

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : coord 18 07 41.54 -17 51 28.8 (FK5, 2000, 2000), radius: 2 arcmin

C.D.S. - SIMBAD4 rel 1.3

Number of rows : 5 Plot

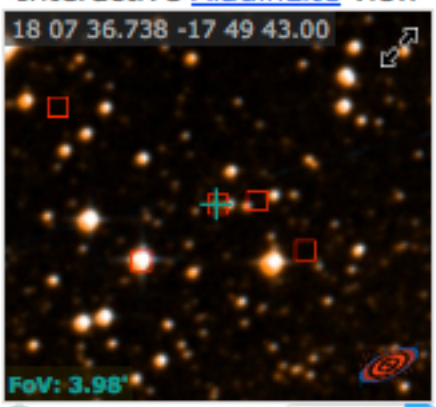
N	Identifier	dist(asec)	Otype	ICRS (J2000) RA	ICRS (J2000) DEC	Sp type	#ref 1850 - 2016	#notes
1	MSX6C G012.1177+01.1966	0.61	PN	18 07 41.5	-17 51 29	~	1	0
2	GPSR 012.118+1.197	23.49	PN?	18 07 39.9	-17 51 26	~	2	0
3	TYC 6255-2606-1	52.91	*	18 07 44.497	-17 52 00.70	~	0	0
4	PMN J1807-1751	56.47	Rad	18 07 38	-17 51.9	~	1	0
5	IRAS 18048-1751	104.83	*	18 07 47.76	-17 50 33.1	~	0	0

plot this list of objects ◉ Equat. ○ Gal ○ SGal ○ Ecl

Store this result in the CDS portal

AladinLite

Interactive AladinLite view



To bookmark this query, right click on this link: simbad:coo=18 07 41.54 -17 51 28.8,rad=2 arcmin and select 'bookmark this link' or equivalent in the popup menu

Are there two different PN?

Portal Simbad VizieR Aladin X-Match Other Help

SIMBAD query result

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | Output options | Help

Object query : MSX6C G012.1177+01.1966

C.D.S. - SIMBAD4 rel 1.211 - 2013.10.29CET17:32:37

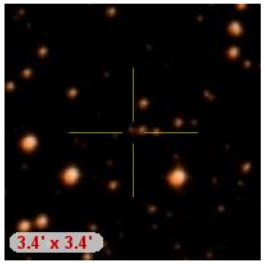
Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

Basic data :

MSX6C G012.1177+01.1966 -- Planetary Nebula

query around with radius 2 arcmin

Other object types:	PN () ,Rad ([UHP2009]) ,IR (MSX6C)
ICRS coord. (ep=J2000) :	18 07 41.5 -17 51 29 (Radio) [2000 2000 90] D 2009A&A...501..539U
FK5 coord. (ep=J2000 eq=2000) :	18 07 41.5 -17 51 29 (Radio) [2000 2000 0] D 2009A&A...501..539U
FK4 coord. (ep=B1950 eq=1950) :	18 04 46.2 -17 51 56 (Radio) [2000 2000 0] D 2009A&A...501..539U
Gal coord. (ep=J2000) :	012.1174 +01.1966 (Radio) [2000 2000 0] D 2009A&A...501..539U



Identifiers (2) :

[UHP2009] VLA G012.1175+01.1965 MSX6C G012.1177+01.1966

Portal Simbad VizieR Aladin X-Match Other Help

SIMBAD query result

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | Output options | Help

Object query : GPSR 012.118+1.197

C.D.S. - SIMBAD4 rel 1.211 - 2013.10.29CET17:34:05

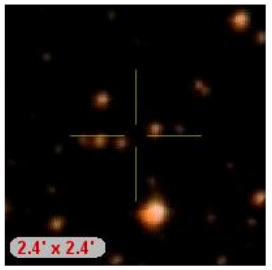
Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

Basic data :

GPSR 012.118+1.197 -- Possible Planetary Nebula

query around with radius 2 arcmin

Other object types:	PN? () ,Rad (GPSR) ,IR (IRAS)
ICRS coord. (ep=J2000) :	18 07 39.9 -17 51 26 (Middle-IR) [29000 7000 89] E 1988NASAR1190....1B
FK5 coord. (ep=J2000 eq=2000) :	18 07 39.9 -17 51 26 (Middle-IR) [29000 7000 89] E 1988NASAR1190....1B
FK4 coord. (ep=B1950 eq=1950) :	18 04 44.6 -17 51 53 (Middle-IR) [29000 7000 89] E 1988NASAR1190....1B
Gal coord. (ep=J2000) :	012.1151 +01.2025 (Middle-IR) [29000 7000 89] E 1988NASAR1190....1B



Identifiers (2) :

IRAS 18047-1751 GPSR 012.118+1.197

Clarified ID & position – a single object!

HASH PN Db4.0 / PN Info / PNG 012.1+01.1

qparker

Department of Physics
The University of Hong Kong

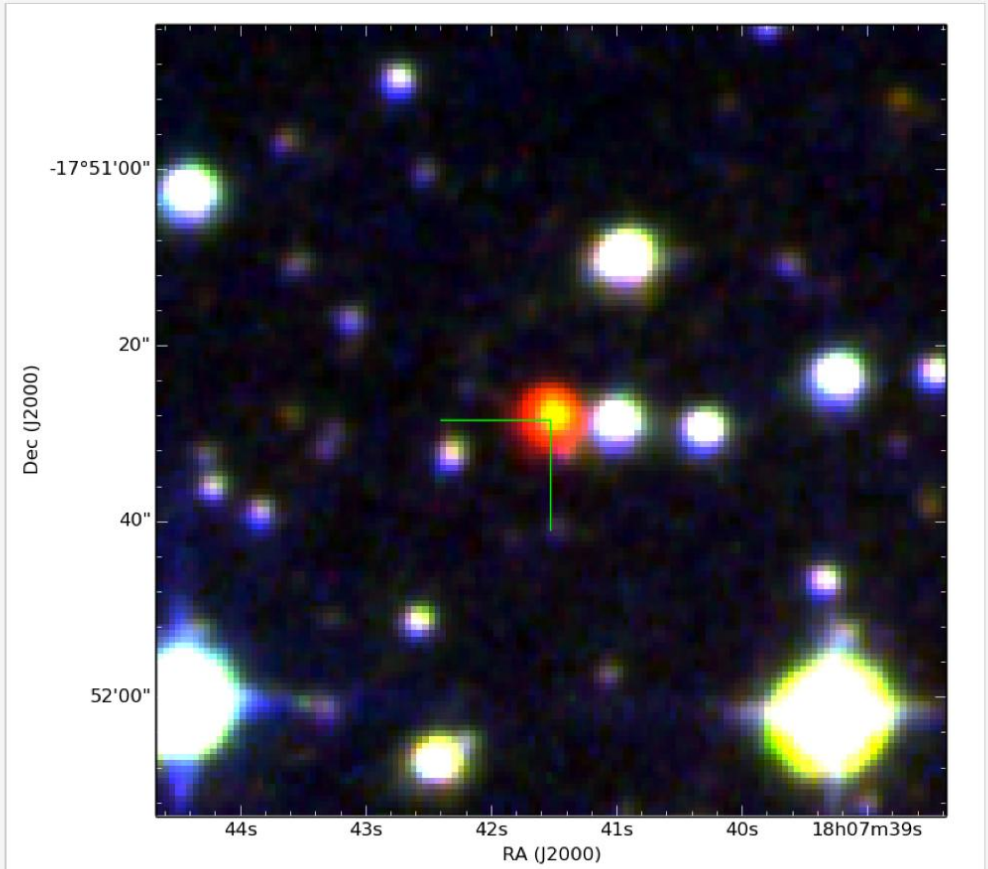
[UHP2009] VLA G012.1175+01.1965

PNG	PNG 012.1+01.1
Status	true pn
Morph.	E
Diam.	na
Cat.	2009A&A...501..5...
dbID	15366

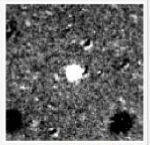
RA/DEC	18:07:41.50 -17:51:28.51
α/δ	271.923 -17.8579
l/b	12.1176 1.1966

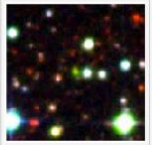
- SHASSA integrator
- SHS integrator

Gallery | Fits Files | Spectra | Notes | Basic Data | General Data



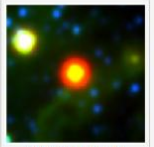

SHS

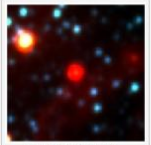

quot_HaSr

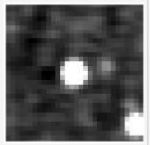

SSS_irb


2MASS


UKIDSS


WISE432


WISE321


nvss

1 2 Next ›

Overlays

- Centroid / centroid.reg
- CS position / cspos.reg
- Diameter / diam.reg

SHS

R:	ha.fits 3	97	%
G:	sr.fits 3	97	%
B:	b.fits 3	97	%

Propagation of errors through the system for putative PN

- Many people take CDS entries and ID's at face value.
- This is o.k. mostly and for many types of sources and object catalogues but currently caveat emptor for PN
- Some objects have gone from a "possible" PN ID in many a previous reference only to get included in a catalogue of PN positions which CDS then latches onto…. so the object then becomes a "True" PN….

PN as emulsion flaws…22 references in Simbad!

Portal | Simbad | VizieR | Aladin | X-Match | Other | Help

PN K 1-15

26-Nov-2015: Due to a better accuracy in the measurements of proper-motions, values are now stored in mas/yr (instead of arcsec before)

other query modes : Identifier query | Coordinate query | Criteria query | Reference query | Basic query | Script submission | TAP | Output options | Help

Query : PN K 1-15

C.D.S. - SIMBAD4 rel 1.3 - 2015.12.14CET07:48:22

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

Basic data :

PN K 1-15 -- Planetary Nebula

Other object types:	PN (PN,PK),IR (2MASS,WISE),* (GSC2)
ICRS coord. *(ep=J2000) :*	17 44 56.58 +27 20 07.0 (Infrared) [100 90 0] B 2003yCat.2246....0C
FK5 coord. *(ep=J2000 eq=2000) :*	17 44 56.58 +27 20 07.0 [100 90 0]
FK4 coord. *(ep=B1950 eq=1950) :*	17 42 57.44 +27 21 18.9 [219 141 90]
Gal coord. *(ep=J2000) :*	051.9140 +25.8214 [100 90 0]
Proper motions *mas/yr* :	-46 -36 [4 2 90] D 2003AJ....125..984M
Fluxes (6) :	B 19.27 [0.42] E 2001yCat.1271....0S
	V 18.17 [0.46] E 2008AJ....136..735L
	R 17.6 [~] E 2003AJ....125..984M
	J 16.106 [0.086] C 2003yCat.2246....0C
	H 15.503 [0.108] D 2003yCat.2246....0C
	K 15.469 [0.169] D 2003yCat.2246....0C

SIMBAD query around with radius 2 arcmin

Interactive AladinLite view

VizieR photometry viewer

Search within radius Max 30 arcsec

Identifiers (7) :

PN G051.9+25.8	2MASS J17445657+2720070	PN ARO 98	WISE J174456.58+272006.9
GSC2 N10123312524	PK 051+25 1	PN K 1-15	

No. 15. (+30°, 17h46m). On the red print (Fig. 9): faint almost circular disc 43″ of uniform density with the sugges ion of a ring. On the blue print: nebula is in-visible.[t] The star in the centre of the nebula (m_R = 19·2m, m_B = 19·7m) could be a planetary nucleus.

BAC Vol. 14 (1963), No. 2

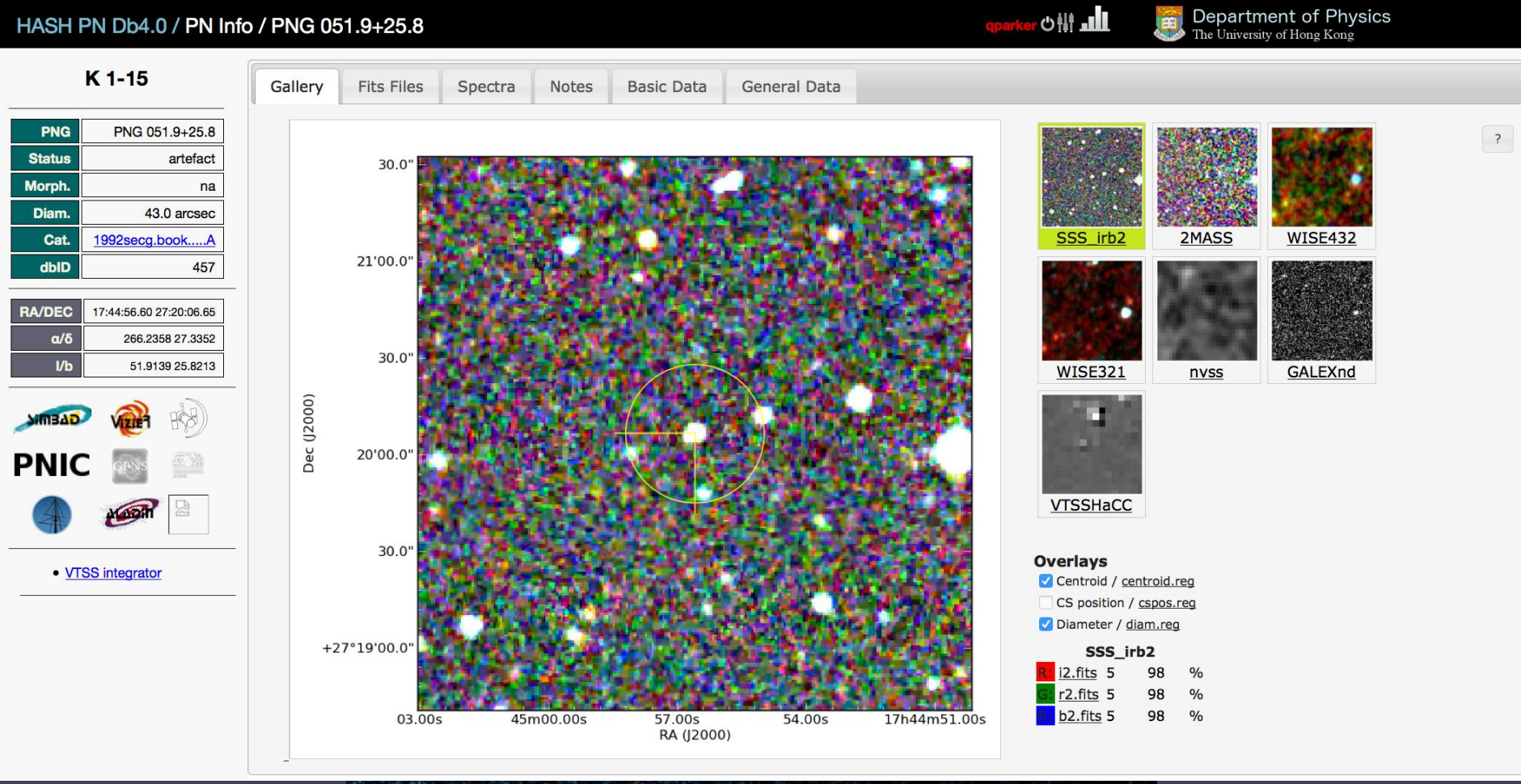
SHORT COMMUNICATIONS

NEW PLANETARY NEBULAE

L. Kohoutek, Astronomical Institute of the Czechoslovak Academy of Sciences, Prague

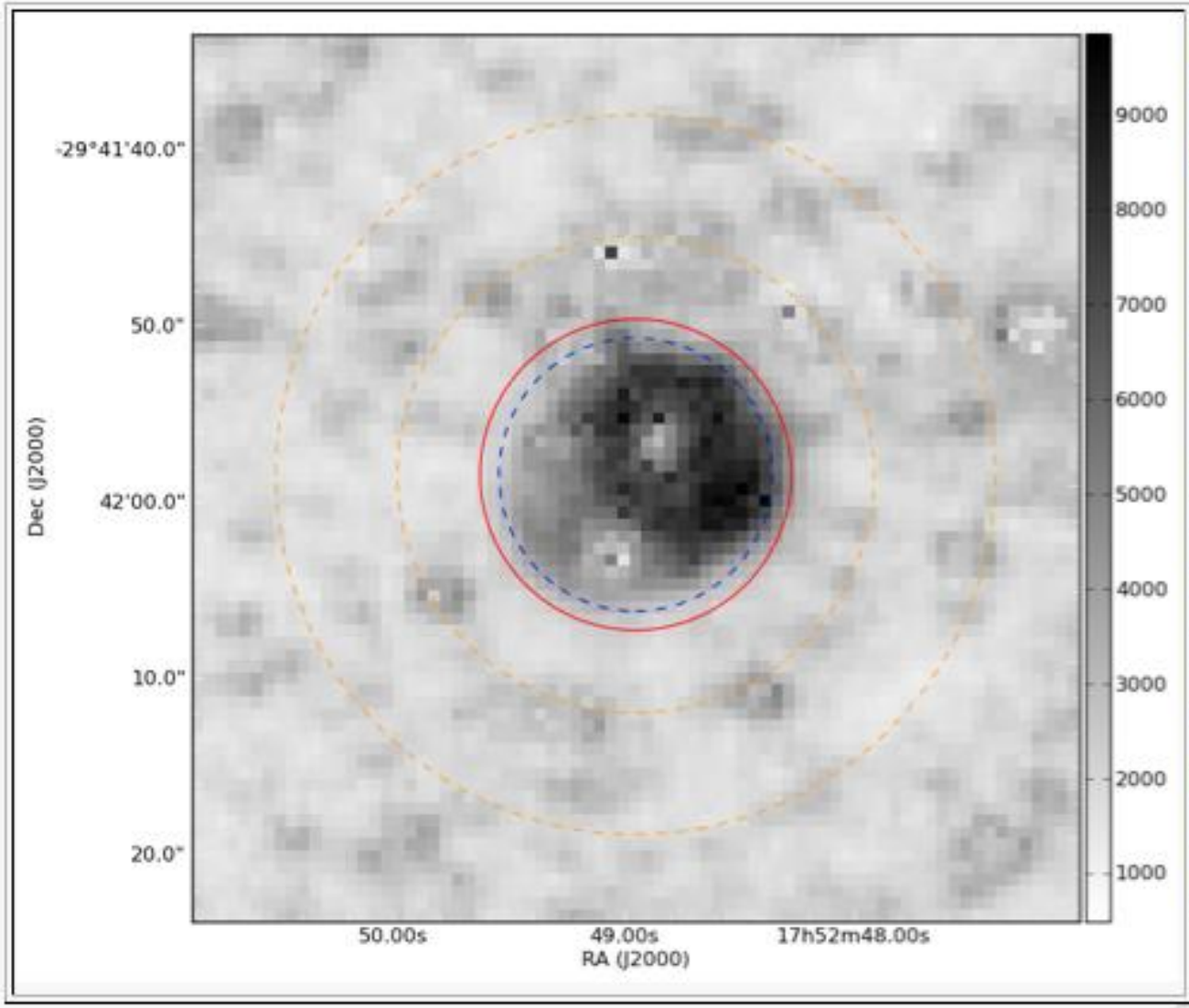
Received November 13, 1962

Clearly not a PN - or anything else for that matter



K 1-15 G051.9+25.8 17:44:57.1 +27:20:07, R:G:B=log(Ha+[NII]), both, log[OIII]
"The IAC morphological catalog of northern galactic planetary nebulae"
A. Manchado, M.A. Guerrero, L. Stanghellini, M. Serra-Ricart, 1996, ed. IAC

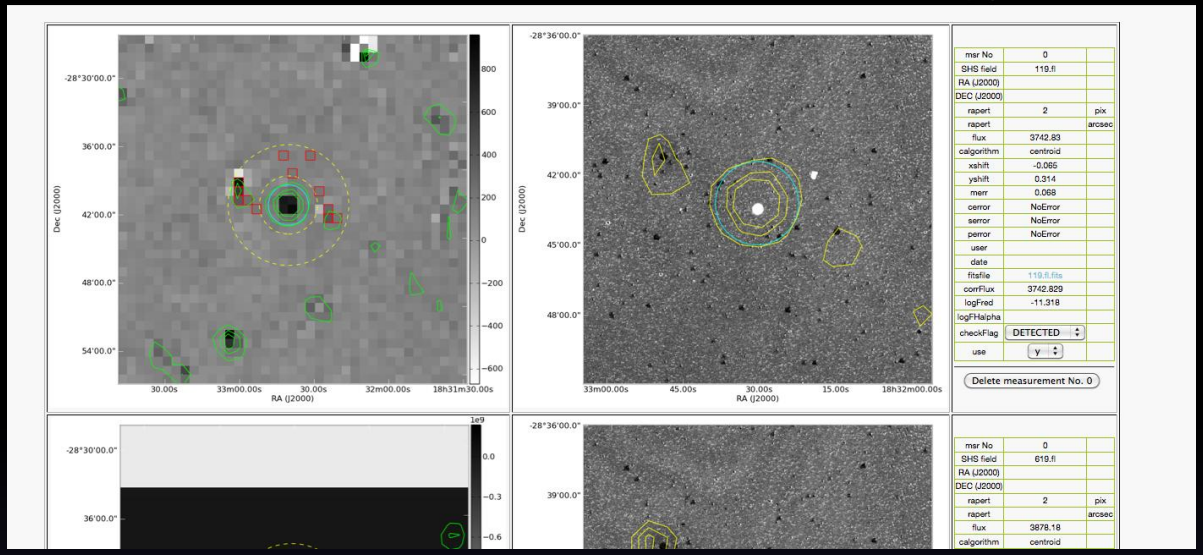
Image flux integrator built-in



msr No	1	
SHS field	710	
RA (J2000)	268.20379	
DEC (J2000)	-29.69973	
rapert	13	pix
rapert	9	arcsec
flux	1899340	
calgorithm	none	
xshift	0	
yshift	0	
merr	0.006	
cerror	NoError	
serror	NoError	
perror	NoError	
user	ivan	
date	2013-03-13 12:25:54	
fitsfile	subtr.fits	
CF	13.4	
fieldrank	1	
corrFlux	141742	
NIItoHalpha		
logFred	-12.4435	
logFHalpha		
checkFlag	NOTCHECK	
use	y	

Delete measurement No. 1

Add Measurement

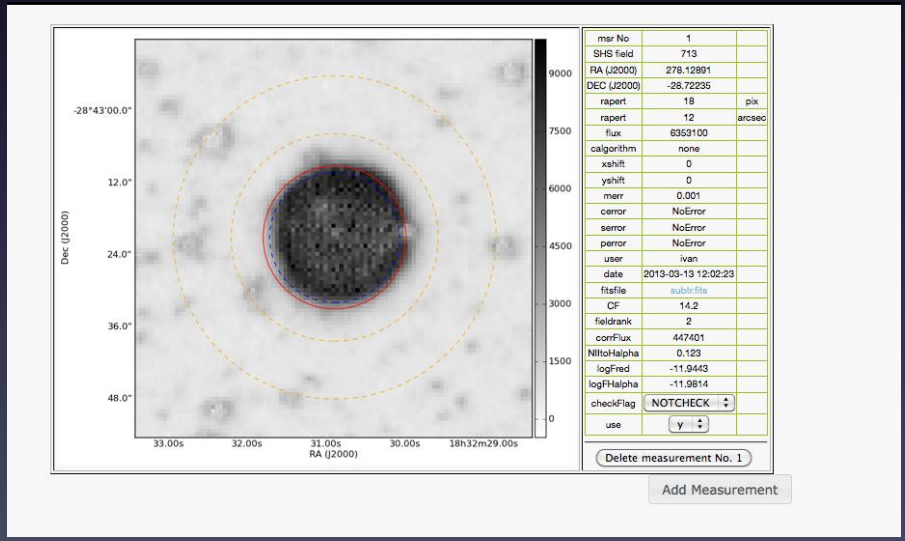


PN Hf 2-2 (SHASSA)

PN Hf 2-2 (SHS)

Online "Integrator":

- semi-automated photometry pipeline for extended objects
- "drives" an IRAF's photometry pipeline (scripted in PYRAF) and displays results in online form
- allows quick examination and modification of used photometry parameters (aperture/annulus size and position)
- online interface enables remote examination of used parameters and results
- For now it's "custom made" for SHASSA, SHS and IRAC (still in testing)



Bulge PN previously determined fluxes for calibration (on-line integrator)

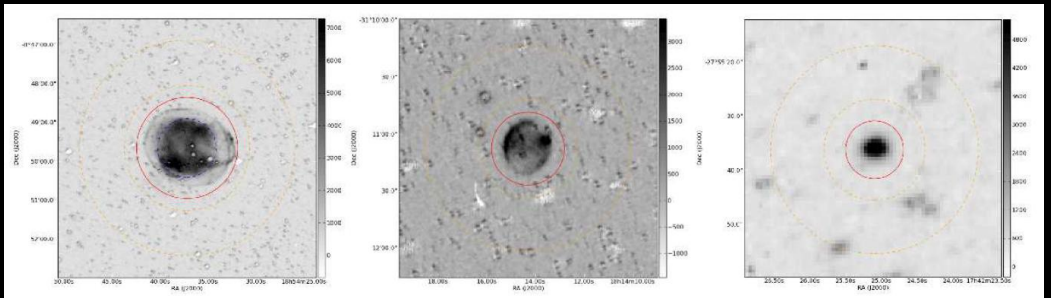
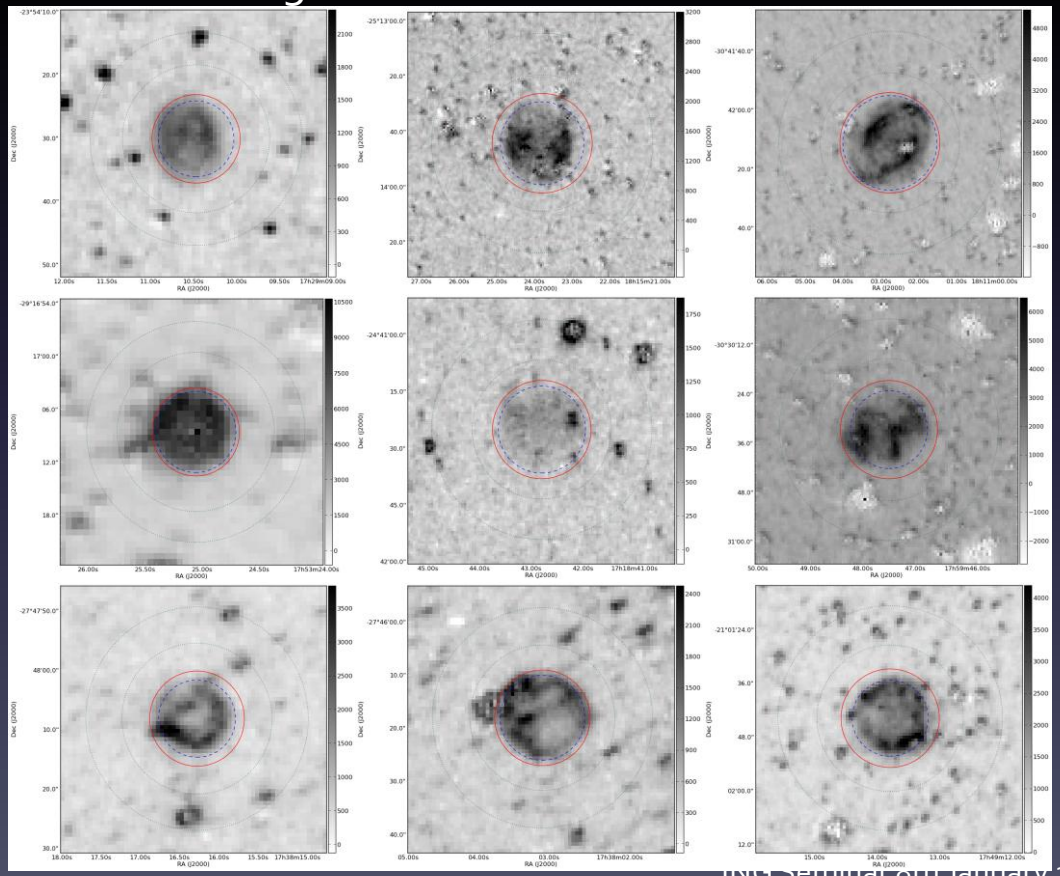


Figure 9. SHS continuum-subtracted images showing the photometric apertures (red circles) and background sky annuli (yellow circles) for three PNe: IC 1295 (left), SB 4 (middle) and the compact object JaSt 36 (right). The images are 400″, 135″, and 50″ on a side, respectively, and have NE at top left. A colour version of this figure is available in the online journal.

Bulge PN with new our fluxes



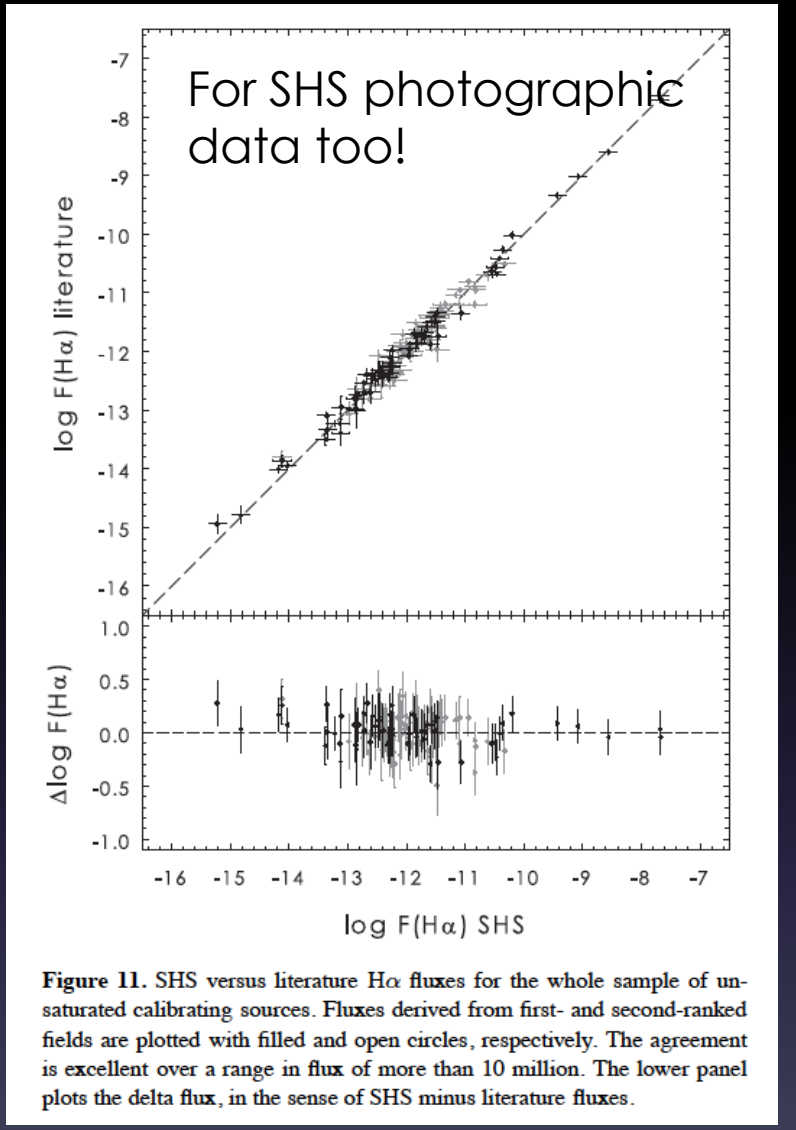


Figure 11. SHS versus literature Hα fluxes for the whole sample of unsaturated calibrating sources. Fluxes derived from first- and second-ranked fields are plotted with filled and open circles, respectively. The agreement is excellent over a range in flux of more than 10 million. The lower panel plots the delta flux, in the sense of SHS minus literature fluxes.

We are able to derive accurate F_{halpha} for >200 Galactic PNe for which no previous estimate of F_{halpha} is available (Bojicic et al. in preparation).


THANK YOU……
and this is a not a PN….
MASPN Database V1.0
goes live in January 2014.

Select a collection... All MAST Observations About Collections...

and enter target: Enter object name or RA and Dec Search

Show Examples..., Random Search

Upload Target List | My Download Basket: 0 files | User Manual/Help | Leave Feedback | About This Site

Home Page

MAST: Barbara A. Mikulski Archive for Space Telescopes

The MAST Portal lets you search multiple collections of astronomical datasets all in one place. Use this tool to find astronomical data, publications, and images.

Quick Start:

1. Select a collection and enter a new search target OR upload an existing list of targets.
2. Use the filters and analysis tools to find the exact data you're looking for.
3. Add files to the download basket to control your download options.

See the User's Guide for more detailed documentation and video tutorials.

Currently available data collections:

- MAST Observations: Millions of observations from Hubble, Kepler, GALEX, IUE, FUSE, and more.
- Virtual Observatory: Search thousands of astronomical data archives from around the world for images, spectra, and catalogs.
- Hubble Source Catalog: A master catalog with a hundred million measurements of objects in Hubble images.

Featured tutorial: Conducting a search

qparker
Department of Physics
The University of Hong Kong

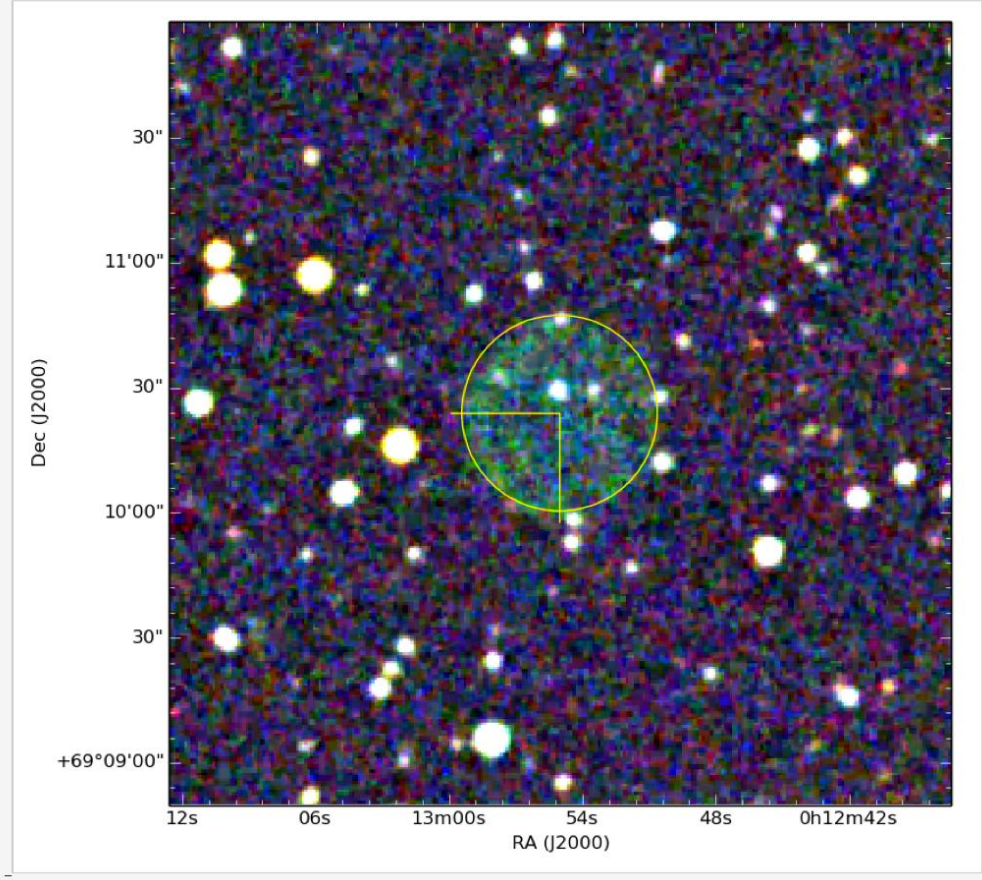
Abell 1

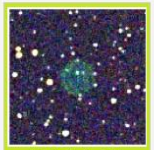
PNG	PNG 119.4+06.5
Status	true pn
Morph.	Rs
Diam.	47.0 arcsec
Cat.	1992secg.book.....A
dbID	4123

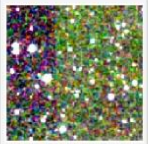
RA/DEC	00:12:55.00 69:10:23.99
α/δ	3.2292 69.1733
l/b	119.4995 6.5587

SIMBAD VizieR PNIC GPNS Aladin

Gallery | Fits Files | Spectra | Notes | Basic Data | General Data




SSS_irb2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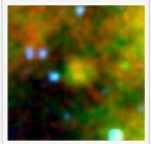
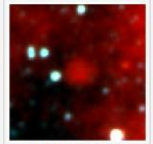
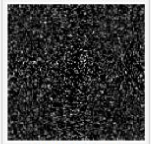

WISE432


WISE321


nvss


GALEXnd


iras432

Overlays

- [x] Centroid / centroid.reg
- [ ] CS position / cspos.reg
- [x] Diameter / diam.reg

SSS_irb2

R:	i2.fits	5	98	%
G:	r2.fits	5	98	%
B:	b2.fits	5	98	%