



Gemini Proposal Modes

Or: How to Get the Data You Want When You Want it

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Reach out to the research staff:

<http://www.gemini.edu/about/contact-us/gemini-research-staff>

Helpdesk: <http://www.gemini.edu/observing/helpdesk>

Two Telescopes, One Observatory



Gemini North: 19°49.4'N / 155°28.1'W



Gemini South: 30°14.5'S / 70°44.8'W

Images: <https://www.gemini.edu/gallery>



Gemini Archive

<https://archive.gemini.edu/searchform>

Data proprietary period:

- Director's Discretionary and Fast Turnaround – 6 months
- all other - 12 months

Exceptions can be requested in the proposal.

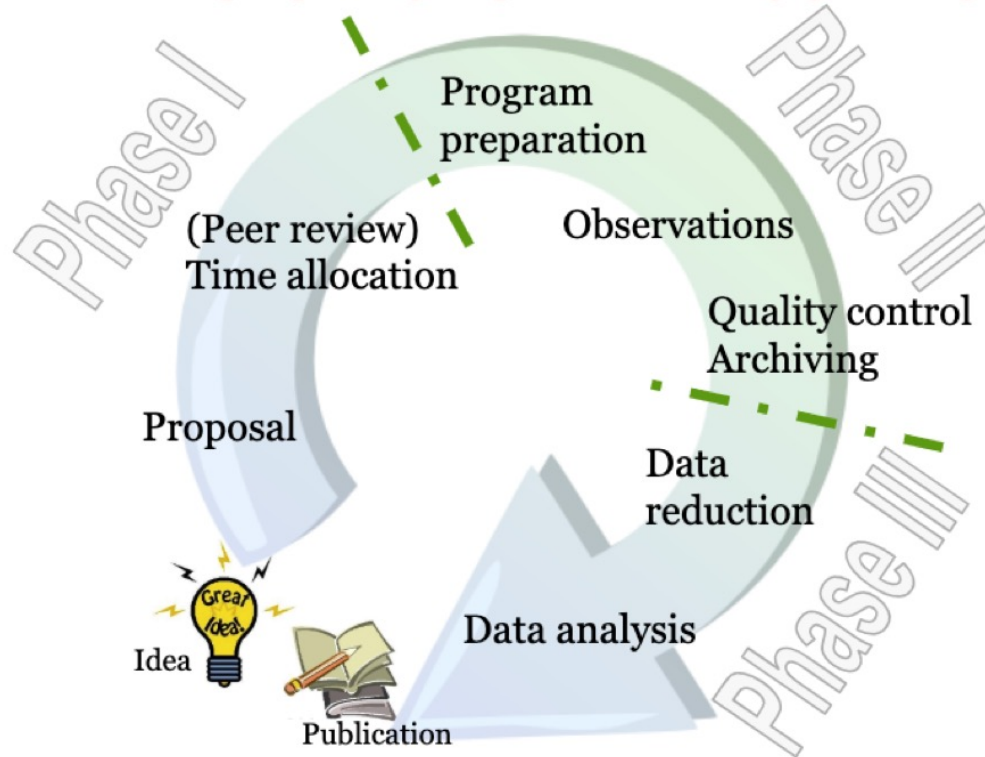
If your proposal duplicates existing data, you must justify the need for the new observations.



Submitting a Gemini Proposal: Phase I

see also: <https://www.gemini.edu/observing/start-here>

THE LIFE CYCLE OF GEMINI PROGRAMS





Summary of Observing Proposal Types

see also: <https://www.gemini.edu/observing/start-here#Class>

Type	Call Frequency	Principal Investigator Eligibility	~ Hours available in 6 month period, per telescope	Science Rank Band
Director's Discretionary	Always open	Any astronomer.	60	1 and 2
Fast Turnaround	Monthly	Argentina, Brazil, Canada, Korea, Univ. Hawaii (<i>Gemini North only</i>), US. Note – NOT Chile.	120	1 and 2
Standard Semester	Twice a year	Argentina, Brazil, Canada, Korea, Chile (<i>Gemini South only</i>), Univ. Hawaii (<i>Gemini North only</i>), US (with US Open Skies*).	700	1 and 2
			230	3
Large and Long	Once a year	Canada and US.	up to 200 hours	1 and 2
Poor Weather	Always open	Argentina, Brazil, Canada, Korea, Chile (<i>Gemini South only</i>), Univ. Hawaii (<i>Gemini North only</i>), US.	unlimited (usually execute 50 to 200 hours)	4

*US Open Skies: Applications from astronomers who work at non-U.S. institutions must indicate why the project cannot be done using other facilities available to the investigators.



Summary of Observing Proposal Types cont'd

To submit a proposal: <https://www.gemini.edu/observing/phase-i/pit>



Type	Call Frequency	Reviewed By	Typical Over-subscription	Science Rank Band
Director's Discretionary	Always open	Gemini Chief Scientist.	2	1 and 2
Fast Turnaround	Monthly	The other FT PIs or Co-Is for that cycle, including students.	2	1 and 2
Standard Semester	Twice a year	National Time Allocation Committees, then merging done by Gemini's International Time Allocation Committee.	2 to 5 (for worse to better conditions)	1, 2, 3
Large and Long	Once a year	Large and Long Program Time Allocation Committee.	5	1 and 2
Poor Weather	Always open	Heads of Science Operations at each site.	Not Applicable	4



Director's Discretionary Time



- Urgent, unique, high impact

nature > nature astronomy > letters > article

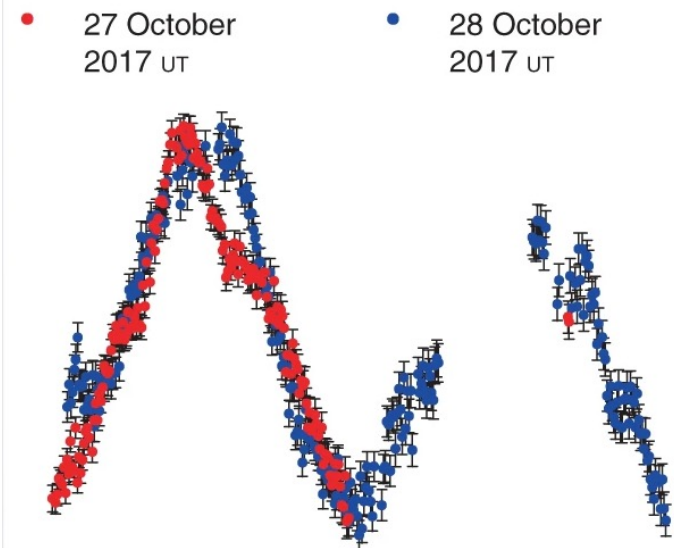
Letter | Published: 01 May 2018

Tumbling motion of 1I/'Oumuamua and its implications for the body's distant past

Michał Drahus , Piotr Guzik , Wacław Waniak, Barbara Handzlik, Sebastian Kurowski & Siyi Xu

Tumbling motion
revealed by
DD time using
GMOS-North via
GN-2017B-DD-7

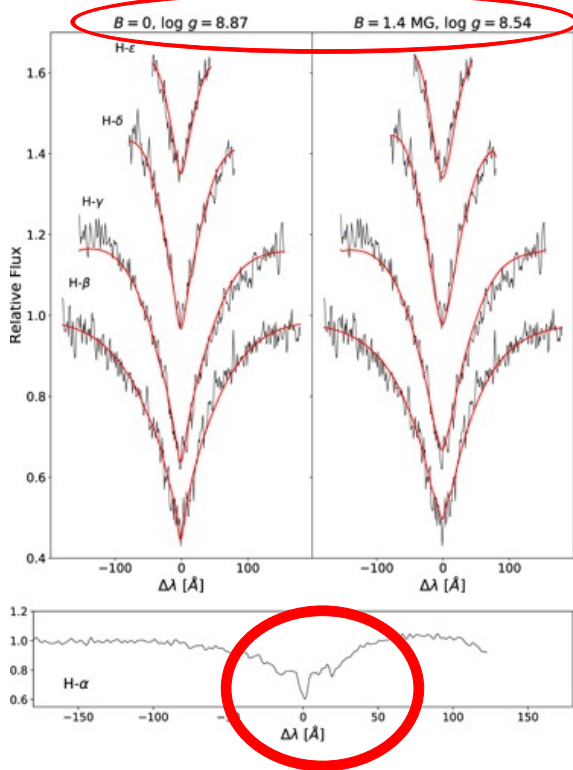
Image credit:
NASA/JPL-Caltech/
Richard Barkus





The Fast Turnaround Program

- Completion of dataset, small project or feasibility study



Intermediate-mass Stars Become Magnetic White Dwarfs

Ilaria Caiazzo^{8,1,2} , Jeremy Heyl² , Harvey Richer² , Jeffrey Cummings^{3,4} ,
Leesa Fleury² , James Hegarty² , Jason Kalirai⁵, Ronan Kerr⁶, Sarah Thiele²,
Pier-Emmanuel Tremblay⁷ [+ Show full author list](#)

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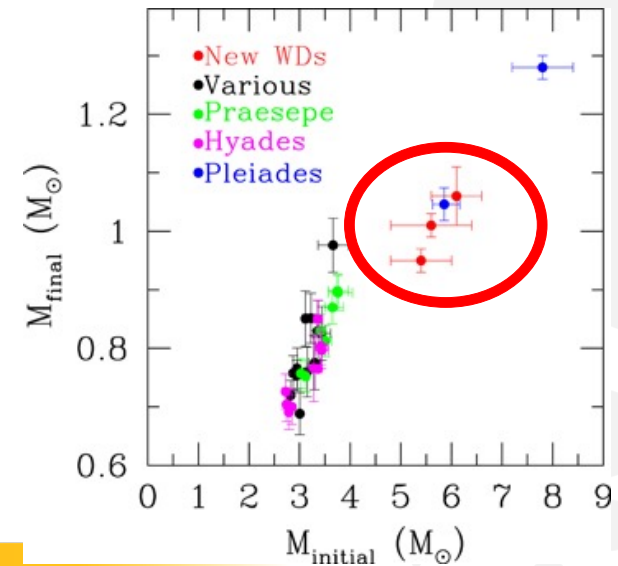
[The Astrophysical Journal Letters, Volume 901, Number 1](#)

Citation Ilaria Caiazzo et al 2020 ApJL 901 L14

White Dwarfs in clusters: **Zeeman splitting**
reveals magnetic field, reduces estimated gravity,
inferred mass reduced from
>Chandrasekhar limit to ~1 solar mass.

FT time using GMOS-North and GMOS-South
via GS-2019B-FT-104 (ASCC 47), GS-2018B-FT-
108 (M 47), and GN-2019A-FT-214 (M 39).

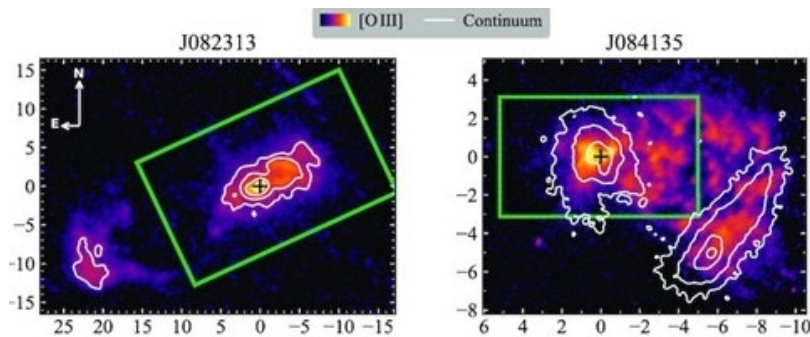
Part of a larger survey identifying massive white
dwarfs published in Richer et al. 2021 ApJ 912.





Standard Semester Programs

- Projects that are not urgent and require the larger amount of time, RA range, or instrumentation selection available in a regular Call



HST images with GMOS IFU FoV as green rectangles.

The emission-line profiles were best fit with one or two narrow components attributed to ambient gas, plus a broader one attributed to nuclear outflow; the ionized gas emission extends to 26 kpc but the outflows show smaller extents of 8 kpc.

NOTE: multiple semesters, both sites, and the use of archival data.

Gauging the effect of supermassive black holes feedback on quasar host galaxies

B Dall'Agnol de Oliveira ✉, T Storchi-Bergmann, S B Kraemer, M Villar Martín, A Schnorr-Müller, H R Schmitt, D Ruschel-Dutra, D M Crenshaw, T C Fischer

Monthly Notices of the Royal Astronomical Society, Volume 504, Issue 3, July 2021, Pages 3890–3908, <https://doi-org.ezproxy.gemini.edu/10.1093/mnras/stab1067>

Published: 21 April 2021

Article history ▼

Name	Observation ID	Grating	Filter	Exptime	Spec. res.	FWHM _{PSF}	F_{SDSS}/F_{GMOS}
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
J082313	GN-2018B-Q-207	R400_G5305	GG455_G0305	6 × 1040	1.00	0.68	0.42
J084135	GS-2018B-Q-110	B600_G5323	open	8 × 1115	0.636	0.65	0.76
J085829	GN-2010B-C-10 ^{a,c}	R400_G5305	i_G0302	2 × 1800	1.06	0.59	1.14
J094521	GS-2010A-Q-8 ^{b,c}	B1200_G5321	open	4 × 1300	0.339	0.75	0.89
J123006	GN-2019A-Q-228	R400_G5305	GG455_G0305	3 × 1150	1.05	0.54	0.16
J135251	GN-2019A-Q-228	R400_G5305	open	6 × 900	1.00	0.55	0.61
J155019	GN-2018A-Q-206	R400_G5305	open	4 × 1200	1.03	0.55	0.73
J120041	GN-2019A-Q-228	B600_G5307	open	3 × 1250	0.738	0.72	0.50

Notes. Data from Gemini Archive, with published results in ^aLiu et al. (2013a), and ^bHarrison et al. (2014).

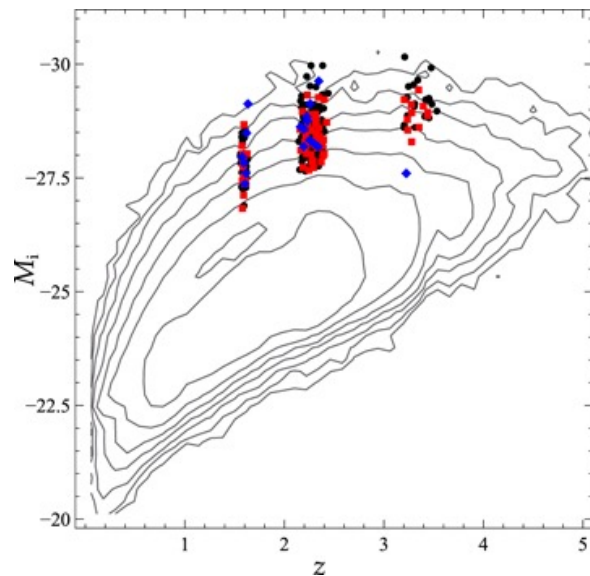
^cObserved in two-slit mode (IFU-2), while the remaining galaxies used one-slit mode (IFU-R).



Large and Long Program



• For projects requiring a lot of time, and/or observations spread over multiple semesters



Distribution of SDSS quasars from DR14 (contours) and the 272 objects in the GNIRS-DQS sample (symbols) in the luminosity–redshift plane.

Placing High-redshift Quasars in Perspective: A Catalog of Spectroscopic Properties from the Gemini Near Infrared Spectrograph–Distant Quasar Survey

Brandon M. Matthews¹ , Ohad Shemmer¹ , Cooper Dix¹ , Michael S. Brotherton² , Adam D. Myers², I. Andruchow^{3,4}, W. N. Brandt^{5,6,7} , Gabriel A. Ferrero^{3,4} , S. C. Gallagher⁸ , Richard Green⁹ + [Show full author list](#)

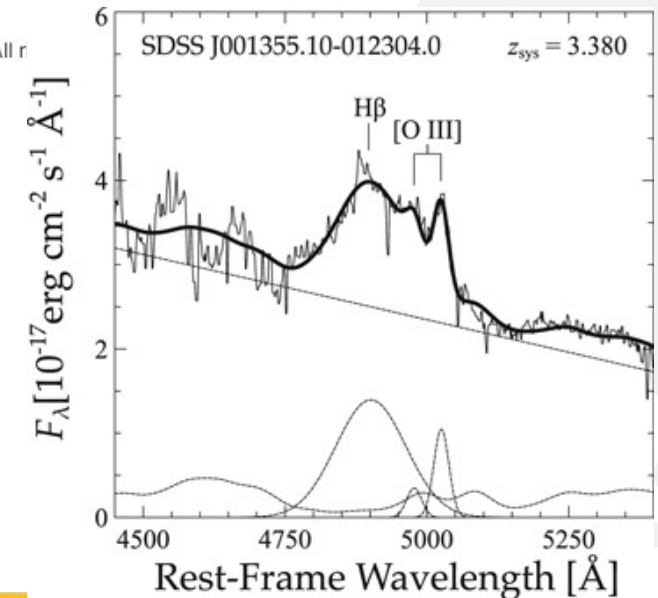
Published 2021 January 20 • © 2021. The American Astronomical Society. All rights reserved.

[The Astrophysical Journal Supplement Series, Volume 252, Number 2](#)

Citation Brandon M. Matthews et al 2021 *ApJS* 252 15

GN-LP-16, PI Shemmer,
largest amount of executed time to date,
386 hours between semesters 17B and 20B,
producing spectra for 226 sources,
publicly available at

<http://physics.uwyo.edu/agn/GNIRS-DQS/spectra.html>





Also

- **Observing time on the Subaru Telescope** is available via the Gemini-Subaru time exchange program, see <https://www.gemini.edu/observing/phase-i>
- **Proposal Tips**
 - **Use the Target-of-Opportunity (ToO) target category** even for non-transients where you do not yet know the target coordinates (e.g. survey searches, data in reduction)
 - **Use the poorest weather conditions you can** while still getting the science you need (within a reasonable exposure time):
 - IQ70 (seeing better than 0.8") conditions are oversubscribed by a factor of about 5
 - IQ85 (seeing better than 1.2") is oversubscribed by a factor of about 2

Signal to noise estimates for different conditions can be generated using the instrument integration time calculators (ITCs) available on the instrument web pages, or Gemini's phase-ii, see <https://www.gemini.edu/observing/phase-ii/ot/ot-description/detailed-element-editor#ITC>

Summary of Gemini's Observing Modes

Type	Call Frequency	Application	https://www.gemini.edu/observing/phase-i/
Director's Discretionary	Always open	Urgent, unique, high impact	DDT
Fast Turnaround	Monthly	Completion of dataset, small project or feasibility study	FT
Standard Semester	Twice a year (March 1, Sept. 1)	Offers wide range of RA, observing time and instrument capabilities	standard-semester-program
Large and Long	Once a year (December)	For projects requiring a lot of time, and/or observations spread over multiple semesters	LLP
Poor Weather	Always open	For science that can be done in very poor but still usable conditions	PW