QIAN YANG

CONTACT INFORMATION

Harvard-Smithsonian Center for Astrophysics
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RESEARCH & EMPLOYMENT

Astrophysicist (Post-Doctoral Research Fellow)
Harvard-Smithsonian Center for Astrophysics *2021.08 - Present*
Postdoctoral Research Associate
Department of Astronomy, University of Illinois at Urbana-Champaign *2018.09 - 2021.08*
Visiting Research Scholar
Steward Observatory, University of Arizona *2015.09 - 2016.09*

EDUCATION

Ph.D, Astrophysics, Peking University *2012.09 - 2018.07*
B.S., Physics, Sichuan University *2008.09 - 2012.07*

RESEARCH INTERESTS

- Galaxies and their central supermassive black holes (SMBHs)
- Active Galactic Nuclei (AGN) and quasars
- Quasar variability in multiwavelength (optical, infrared, and X-rays)
- Changing-look AGN/quasars
- High redshift galaxies and quasars
- Quasar, galaxy, and star classification and photometric redshift estimation

TECHNICAL EXPERIENCE

Programming	IDL, Python, R
Software	IRAF, SQL, LaTeX, TOPCAT, CIAO, Xspec, HEASoft
Astronomical	Optical spectroscopy data reduction and spectral fitting
	X-ray data reduction and analysis
	Imaging reduction and photometry
	Photometric redshift estimation of quasars and galaxies

SPECTROSCOPIC SURVEY MEMBER

Sloan Digital Sky Survey-V (SDSS-V) *2021-present*
4-meter Multi-Object Spectroscopic Telescope (4-MOST) *2023-present*

PROFESSIONAL EXPERIENCE

Panelist for NASA Proposal Review *2023*
Panelist for Chandra Peer Review *2021*
Reviewer for Nature Astronomy, ApJL, ApJ, MNRAS *2019-present*
Reviewer for China Telescope Access Program *2019-2021*

SELECTED APPROVED PROPOSALS

Astrophysics Data Analysis

- **ADAP:** WISE Exploration of Mid-Infrared Variability in Galactic Nuclei
  Col-I, 20-ADAP20-0068, Funding $402,375

X-ray

- **Chandra:**, Chandra Cycle 25, *Tracking Transitions in Changing Look Quasars*
  Principal Investigator, 197 ks Chandra Cycle 25 + NRAO Very Large Array (VLA; radio) 12 hours, **Funding $134,000 (Budget PI)**
- **NuSTAR:** Systematically Constraining the AGN Coronal Properties with NuSTAR Using a Sample of Luminous, High-redshift Quasars
  Co-I, Large, 500 ks NuSTAR Cycle 9 + 142 ks XMM-Newton, Funding $130k
- **Swift/XRT:** Building with Swift/XRT a Sample of Luminous, High-redshift Quasars to Constrain the Properties of AGN Coronae
  Co-I, 18 ks
- **Chandra:** Changing-Look Quasars: How/Does Accretion Variability Scale?
  Co-I, 165 ks Chandra Cycle 24 + Gemini-N/GMOS 1 night + VLA 8 hours, Funding $91850
- **XMM-Newton:** Unusual Mid-Infrared Flared Objects: Turning-on Obscured AGNs?
  Principal Investigator, 206 ks, AO-18 ID. 84470

Infrared

- **JWST:** A JWST Study of the Link Between Supermassive Black Holes and Galaxies at Cosmic Noon
  Col-I, Cycle 1, ID. 2057

Optical

- **MMT/Binospec (6.5m):** Accretion Power and the Broad Line Region in Real-time: Finding Galaxies Turning Into Quasars
  Principal Investigator, 2.5 nights, 2023B
- **Gemini/GMOS (8m):** Velocity-resolved Echo Mapping with Gemini
  Co-I, Gemini Large and Long Program (LLP), 296.7 hours, 23B-26A
- **HET/LRS2 (10m):** Deciphering the Transitions of Changing-Look Quasars
  Co-I, 12 hours
- **MMT/Binospec (6.5m):** Accretion Power and the Broad Line Region in Real-time: Finding Galaxies Turning Into Quasars
  Principal Investigator, 2 nights, 2023A
- **MMT/Binospec (6.5m):** Accretion Power and the Broad Line Region in Real-time: Finding Galaxies Turning Into Quasars
  Principal Investigator, 1.5 nights, 2022B
- **MMT/Binospec (6.5m):** Accretion Power and the Broad Line Region: Spectroscopic Follow-up of Strongly Variable Quasars
  Principal Investigator, 2 nights, 2022A
- **MMT/Binospec (6.5m):** Galaxies Turning Into Quasars in Realtime
  Col-I, 3 nights, 2021B

- **Xinglong Telescope (2.16m)**: Searching for Changing-look Quasars
  Co-I, BFOSC, 23 nights, 2018-2019
- **Lijiang Telescope (2.4m)**: Searching for Changing-look Quasars: Turning-off Quasars
  Co-I, YFOSC, 8 nights, 2017-2018
- **Xinglong Telescope (2.16m)**: Searching for Changing-look Quasars: Turning-on Quasars
  Co-I, BFOSC, 21 nights, 2017-2018
- **Hale (5.1m)**: Complete the uniform z∼5.5 quasar sample: spectroscopy in the northern galactic cap
  Co-I, DBSP, 2 nights, 2017A
- **Hale (5.1m)**: The first z∼5.5 quasar survey based on PS1-ALLWISE colors: the southern galactic cap spectroscopy
  Co-I, DBSP, 2 nights, 2016B
- **Hale (5.1m)**: Study black hole masses of luminous z∼5 quasars
  Co-I, Triplespec, 5 nights, 2016A
- **Hale (5.1m)**: Study the black hole masses of luminous z∼5 quasars
  Co-I, Triplespec, 4 nights, 2015B
- **MMT (6.5m)**: Finding quasars in the post-reionization epoch
  Co-I, Red channel, 2 nights, 2015A

SELECTED OBSERVING EXPERIENCE

Imaging

- Lead an observation program using DECam to monitor several LSST Deep Drill Fields to bridge the Pan-STARRS/DES and LSST light curves (4 semesters)
- Large Binocular Telescope (LBT) 2*8.4m/LBC, LBT Observatory (0.5 nights)
- Mayall 4m/MOSAIC-3, National Optical Astronomy Observatory (17 nights)
- Bok 2.3m/90Prime, Steward Observatory (19 nights)

Spectroscopy

- Magellan Baade 6.5m/FIRE, Las Campanas Observatory (3 nights)
- MMT 6.5m/Red Channel, MMT Observatory (6 nights)
- P200 Hale 5m/Triplespec, Palomar Observatory (7 nights)
- Lijiang 2.4m/YFOSC, Yunnan Astronomical Observatory (>20 nights)
- Xinglong 2.16m/BFOSC, NAOC Xinglong Observatory (>30 nights)

SELECTED HONORS AND AWARDS

- 2021 IOP Publising China Top Cited Paper Award
- 2015-2016 China Scholarships Council Fellowship
- 2008-2011 Excellent Student, Sichuan University

RESEARCH PRESS

'Echo Mapping' in Faraway Galaxies Could Measure Vast Cosmic Distances
NASA Jet Propulsion Laboratory (JPL)
New Discoveries Double the Number of Changing-look AGNs
The Kavli Institute for Astronomy and Astrophysics at Peking University (KIAA-PKU)

TEACHING EXPERIENCE AND OUTREACH

Sensing the Dynamic Universe Project: sonifying time domain astronomy for the blind *2021-present*

Teaching Assistant in Fundamental Astronomy, Peking University *2014*
Sidewalk astronomy (organizer), Sichuan University *2009 - 2010*

SELECTED TALKS AND CONFERENCE ORGANIZATION

- Talk, *Changing-Look Quasars: Zooming in on X-ray/Optical Variability, Zooming out to the Big Picture.* 2023 SDSS-V Collaboration Meeting, New York, NY, USA, July 31, 2023
- Talk, *Changing-Look Quasars: How/Does Accretion Variability Scale?* HEAD 20 Meeting, Waikōloa, Hawaii, USA, March 27, 2023
- Talk, *Chasing Quasar Accretion State Changes with Chandra.* AAS 241 Winter Meeting, Seattle, Washington, USA, Jan 10, 2023
- Talk, *Chasing Quasar Accretion State Changes with Chandra.* CfA High Energy Seminar, Harvard–Smithsonian Center for Astrophysics, USA, Nov 30, 2022
- Talk, *A Southern Photometric Quasar Catalog from the Dark Energy Survey Data Release 2.* CfA Seminar, Harvard–Smithsonian Center for Astrophysics, USA, Nov 1st, 2022
- Invited talk, *A Southern Photometric Quasar Catalog from the Dark Energy Survey Data Release 2.* Yunnan Observatory (zoom), Oct 24, 2022
- Invited talk, *Changing Look AGN.* Institute of High Energy Physics, Chinese Academy of Sciences (zoom), June 28, 2022
- Talk, *Using DES/LSST to Search for Extreme Variables.* Survey Science Meeting, NCSA, UIUC, USA, March 28, 2019
- Talk, *Spectral Variability of a Sample of Extreme Variability Quasars and Implications for the MgII Broad-line Region.* DES Collaboration Wide Review, UIUC, USA, March 11, 2019
- Poster, *Discovery of 21 New Changing-look AGNs: Study on Evolution of AGNs and AGN Host Galaxies*, the 231st AAS Meeting, Washington, DC, USA, January 2018
- Talk, *Photo-z and Candidate Selection of Quasars Based on Imaging Data*, DESI Collaboration meeting, Berkeley, USA, June 2017
- Workshop organization, East-Asia AGN Workshop, Changchun, China, July 2015