

Section A: Overview of the Research Project

1. Title of the research project: Accretion bursts in massive protostellar objects: An investigation using MeerKAT's MGPS legacy data
2. Broad area of research: Science
3. Academic level of research project: Doctoral
4. Abstract of research project
5. Primary supervisor's details:
 - Full name of primary supervisor: Prof James O. Chibueze
 - Primary supervisor's email address: James.Chibueze@nwu.ac.za
 - University where primary supervisor is employed: North-West University, Potchefstroom

Section B: Details of Research Project

1. *Scientific/Engineering merit: describe the objectives of the research project, placing them in the context of the current key questions and understanding of the field.*

A new paradigm in star formation – Accretion outbursts: The realization that protostars can be highly variable began with the recognition that the 6- magnitude brightening of FU Ori arose from a young star rather than a nova (Herbig 1966). Many low-mass protostellar outbursts have since been found (Hartmann & Kenyon 1996), and in young Class 0 & I (Safron et al. 2015; Yoo et al. 2017). Such luminosity outbursts offer strong evidence that the accretion rate is punctuated by short bursts of rapid, episodic accretion (Dunham et al. 2010). Outburst timescales span a broad range, some as short as ~10 to 100 yr (e.g., HOPS 383; Johnstone et al. 2018; Vittone & Errico 2005). A study of Orion suggests that episodic accretion accounts for $\geq 25\%$ of a star's mass (Fischer et al. 2019), highlighting its importance in star formation.

The recent discoveries of accretion outbursts in three high-mass protostars – NGC 6334 I-MM1 (Hunter et al. 2017, 2018) S 255 IR-NIRS3 (Caratti o Garatti et al. 2017) and G358.93-0.03 (Brogan et al. 2019) – have provided crucial evidence of episodic accretion in massive star formation motivating new hydrodynamic simulations of protostellar accretion (Meyer et al. 2019).

This project will focus on using MeerKAT Galactic Plane Survey (MGPS) in understanding accretion burst event in massive stars. One key objective of this project is to obtain baseline radio continuum data for all massive young stellar object and then use it to compare the changes observed in the case of a detected future accretion burst. We will conduct follow-up observations (or use archival data where available) using the follow telescopes: 26m HartRAO, ALMA, ATCA.

Bayesian model will be applied to constrain outburst frequency, while also applying models of excitation and radiative transfer calculations in predicting future new maser detection in an accretion burst event.

2. Feasibility: outline the methods that will be used to achieve the objectives. Provide details on the availability of required data / access to required equipment / availability of research facilities and other resources required. Include any relevant expected intermediate milestones and associated timeframes towards attaining the overall objectives of the project.

Method: The project will involve extracting images of the high-mass star forming region from the MeerKAT Galactic Plane Survey (MGPS), for regions with existing centimeter from other instruments like the JVLA, the possible evidence of flux variation will be investigated. For source showing evidence of variation in the fluxes for the centimeter continuum emission, other clues of accretion burst events or episodic accretion activities will be studies using the data from the Maser Monitoring Organization (M2O) which includes decades of maser monitoring data from HartRAO 26m telescope.

Data: All data required for this study (MeerKAT, VLASS, M2O single-dish data, Maser database) are all available.

Computing facilities: Centre for Space Research, NWU, owns and runs 3 computer clusters that will be used for the data processing and analysis.

Timeline: Year 1: Adaption to new environment, set-up of computing platform, and organization of different dataset, development of systematic workflow strategy, literature review and initial data calibration and imaging (to get acquainted with the process)

Year 2: Comparison of all available data and extraction of variable sources and follow up studies of such sources. Paper-writing on newly discovery accretion burst sources

Year 3: Bayesian modeling of the outburst frequency of accretion events, paper and thesis writing.

3. *Link the proposed project to one or more of the SARA0 research priority areas for 2022 (refer to Section 5 of the Application Guide), and explain in some detail how the proposed research will contribute to the priority area(s).*

The proposed project is a science with extensively use the MeerKAT Galactic Plane Legacy Survey data from SARA0. This is very relevant to the SARA0 research priorities, using MeerKAT legacy survey data for investigating the hottest topic in massive star formation studies.

4. *If relevant, describe any particular qualifications, academic abilities, skills and/or experience that a student should have in order to successfully deliver on the objectives of the research proposed.*

Qualifications: MSc in Astrophysics with some experience in radio astronomy and radio interferometry.

Skills: Python programming.

James O. Chibueze (Ph.D)

Centre for Space Research,
North West University, Potchefstroom
South Africa.

Email: james.chibueze@nwu.ac.za
Phone: +27 82 866 4116

Education

2009~2013 PhD (Science) Department of Physics & Astronomy, Graduate School of Science and Engineering, Kagoshima University (March, 2013)

“Panoramic Interstellar Gas & Dust Observational Study of Massive Star Formation Based on Accurately Estimated Distances”, Supervisors: Prof. Handa Toshihiro, Prof. Kamenno Seiji & Prof. Nakanishi Hiroyuki

2007~2008 MSc (Astrophysics) Department of Physics & Astronomy, University of Nigeria, Nsukka

2001~2005 BSc (Physics) First Class Honors, Department of Physics & Astronomy, University of Nigeria, Nsukka

2000 West African Senior School Certificate (WASSC & NECO)

1997 Junior Secondary School Certificate 1994 First School Leaving Certificate

Current Professional Positions

2022~present Professor, Centre for Space Research, North-West University, Potchefstroom

Previous Professional Positions

2019~2021 Associate Professor, Centre for Space Research, North-West University, Potchefstroom

2017~2018 Commissioning & Operations Scientist, South African Radio Astronomy Observatory (SARAO)/African VLBI Network (AVN)

[Support the commissioning of newly converted/built AVN telescopes, capacity development, and conduct scientific research with the AVN and other facilities]

2017~2018 Extraordinary Senior Lecturer, Physics Department, North West University, Potchefstroom

[Postgraduate student supervision – Jean-Marie Morgan (MSc), and promote astrophysical research activities]

2016 Visiting Research Fellow, East-Asian ALMA Regional Center, National Astronomical Observatory of Japan (NAOJ), July~September [Conduct synergetic research with ALMA and VLBI focused on understanding massive dense core evolution. Explore the earliest stages of high-mass star formation]

2016 Intern, National Radio Astronomy Observatory (NRAO), [Participate in the NRAO National and International Non- Traditional Exchange (NINE) program] March~April

2016 Visiting Scholar, Department of Physics & Astronomy, Faculty of Science, Kagoshima University, February [Conduct VLBI and mid-infrared study of M17 massive star-forming region]

2014~2015 Project Assistant Professor, East-Asian ALMA Regional Center, National Astronomical Observatory of Japan (NAOJ Chile Observatory) [Serve as astronomer on duty for the operation of ALMA telescope at the OSF in San Pedro de Atacama, Chile, support East-Asian ALMA users, phase2 generations, contact scientist, data quality assurance, organizing ALMA town meetings, ALMA proposal review panel meetings (technical secretary)]

2013~2014 Project Research Fellow, East-Asian ALMA Regional Center, National Astronomical Observatory of Japan (NAOJ Chile Observatory) [Serve as astronomer on duty for the operation of ALMA telescope at the OSF in San Pedro de Atacama, Chile, support East-Asian ALMA users, phase2 generations, contact scientist, data quality assurance, organizing ALMA town meetings, ALMA proposal review panel meetings (technical secretary)]

2012 Graduate Intern, North American Atacama Large Millimeter Array (ALMA) Science Center (NAASC), National Radio Astronomy Observatory (NRAO) (Charlottesville, Virginia, USA), June

[Collaborate with Dr. Crystal L. Brogan, and Dr. Todd R. Hunter on sub- millimeter array (SMA) and ALMA study of NGC6334I(N) massive star-forming region]

2012~2013 Research Assistant, Department of Physics & Astronomy, Kagoshima University (Kagoshima, Japan)

[Assist Prof. Handa Toshihiro, Ass. Prof. Imai Hiroshi with their research projects, helping with reduction and analyses of the VLBI Exploration of Radio Astrometry (VERA) and single-dish mapping observation project data, preparation of large-scale research observation proposals, organizing research group science meetings.]

2009 ~2012 Teaching Assistant, Faculty of Science, Kagoshima University

[Assist Ass. Prof. Kamenno Seiji, Ass. Prof. Yokogawa in organizing and teaching the technical English class to undergraduate students of the Faculty of Science, to enable them to read and understand, and write scientific articles/papers. Science Partnership Program (SPP) teaching assistant involves helping high school student learn to conduct single-dish observation with the Iriki 20m radio telescope and also reduce the data to produce scientific results]

2010~2015 Lecturer II, Department of Physics & Astronomy, University of Nigeria Nsukka, Nigeria (Study Leave/Leave of Absence)

[Teach postgraduate (MSc and PhD) courses (Observational Astronomy, Methods of Theoretical Physics, Computational Analysis/Computer Methods in Physics). Also teach Fundamentals of Physics, Introduction to Astronomy, Quantum Mechanics to undergraduate students and coordinated their laboratory experimental work]

2012~2014 Regional Coordinator (Africa), Space Generation Advisory Council (SGAC)

[Coordinate space outreach activities in various African countries through their respective National Point of Contact. Set up innovation annual activity plan and execute them judiciously]

Telescope Proposal Review

2021 James Webb Space Telescope (JWST) Cycle 1 Proposal Review Committee

2020 MeerKAT Proposal Review Committee

2013~2015 ASTE Telescope Proposal Review Committee

2013~2014 Mopra Telescope Proposal Review Committee

2014 ALMA Proposal Review Technical Secretary

Successful Telescope Proposals

MeerKAT, Very Large Array (VLA), VLBI Exploration of Radio Astrometry (VERA), Japanese VLBI Network (JVN), Korean VLBI Network & VERA (KAVA = KVN+VERA), Nobeyama Radio Observatory (NRO) 45m radio telescope, Sub-millimeter Array (SMA), Atacama Large Millimeter/Submillimeter Array (ALMA), European VLBI Network (EVN)

Management/Committee Service

- NWU/FNAS POPIA Champion
- South African Radio Astronomy Observatory, SARAO, User Committee member
- African Astronomical Society, AfAS, Science Committee member

Profession Community Service/Journal Peer Review

- Astrophysical Journal
- Astrophysical Journal Letters
- Astronomical Journal
- Women of Color Codes, WoCCode, Python programming mentor, 2021
- Instructor, Development in Africa with Radio Astronomy (DARA) program (Observational training with Ghana 32-m telescope and data reduction training), 2017/2018
- Invited Lecturer, IAU International School for Young Astronomers (ISYA), 8–19 May 2017, Addis Ababa, Ethiopia.
- Instructor, West African Astronomy Summer School (organized the Ghana Space Science and Technology Institute, GSSTI, July 30 – August 5, 2017) o Guest Lecturer, Astronomy Summer School for West Africa (organized the National Space Research and Development Agency, Abuja Nigeria, October 21- 25, 2013)
- Visiting Instructor, ALMA data reduction workshop, NASSP, University of Cape Town (November, 2015)
- Organizer/host/instructor African Radio Interferometry Winter School, North-West University, Potchefstroom June 2019.

Professional Memberships

International Astronomical Union, IAU (Individual Member), South African Institute of Physics, SAIP (Full Member), American Astronomical Society, AAS (International Affiliate Member), Astronomical Society of Japan, ASJ (Member), Royal Astronomical

Society, RAS (Member), African Astronomical Society, AfAS (Member), Nigeria Institute of Physics, NIP (Member), Astronomical Society of Nigeria, ASN (Member)

Student Supervision & Mentoring

2019~present Ph.D supervisor Jean-Marie Morgan (North West University, Potchefstroom)
2020~present Ph.D supervisor Mavis Seidu (North West University, Potchefstroom)
2019~present Ph.D co-supervisor Martin Mutie (Technical University of Kenya)
2021~present Ph.D co-supervisor Langa Moses (Technical University of Kenya)
2020~present Main supervisor MSc Thabiso Mgwambane (North West University, Potchefstroom)
2020~present Main supervisor MSc Lebogang Mfulwane (North West University, Potchefstroom)
2021~present Main supervisor MSc Dakalo Phuravha (North West University, Potchefstroom)
2021~present Main supervisor MSc Andrea Nel (North West University, Potchefstroom)
2021~present Main supervisor MSc Job Vorster (North West University, Potchefstroom)
2021~present Main supervisor MSc Robin Wessels (North West University, Potchefstroom)
2020~present Co-supervisor MSc Keletso Dichaba (Botswana International University of Science and Technology)
2020~present Co-supervisor MSc Andrews Dzodzomenyo (North West University, Potchefstroom)
2017~2019 Co-supervisor of MSc Jean-Marie Morgan (North West University, Potchefstroom)
2016~present Co-supervisor of PhD Chukwuebuka Jude Ugwu (University of Nigeria)
2018~present Co-supervisor of PhD Ugochukwu Elejere (University of Nigeria)
2015~2016 Co-supervisor of MSc Christain Eze (University of Nigeria)
2010~2020 11 Bachelor project supervision

Awards & Grants

- NRF C2 rating (2021)
- Italy/South Africa Joint Research Programme (ISARP) Grant 2018 – 2020, funded by National Research Foundation (NRF) South Africa
- RadioNet/JIVE SKA-VLBI Grant for research visit to JIVE, Netherlands, May 2018.
- IAU Grant for participation in the IAU Symposium 336 – Astrophysical Masers: Unlocking the Mysteries of the Universe, 4 – 8 September 2017.
- 'Distinguish Friend of Kagoshima', awarded by the Kagoshima City Mayor (Hiroyuki Mori) 2013.
- Square Kilometer Array (SKA) South Africa special grant support to attend the IAUS 287, Cosmic Masers: “From OH to H0”, Stellenbosch, South Africa, 2012.
- PhD Scholarship from the Ministry of Education, Culture, Sports, Science, and Technology of Japan (MEXT) 2009 – 2013.
- Best graduating student award, Department of Physics & Astronomy, University of Nigeria, Nsukka. 2005/2006 session.

Languages

English (fluently), Japanese (fluently), Spanish (beginners level)

Computer Programming Languages/Astronomical Data Reduction

Packages

Python (advance), C (intermediate), Matlab (advanced)

CASA (advanced), AIPS (advanced), MIRIAD (intermediate), DIFMAP (intermediate)

Personal Attributes/Special Skills

Efficient computing skills, good team-work ability, humble, critical/innovative thinking ability, and hardworking, good problem solving ability, motivational speeches.

Hobbies

Networking, mathematical work, reading, traveling and soccer.

Publications in Refereed Journals

[54] Knowles, K.; Cotton, W. D.; Rudnick, L.; Camilo, F.; Goedhart, S.; Deane, R.; Ramatsoku, M.; Bietenholz, M. F.; Brüggen, M.; Button, C.; Chen, H.; Chibueze, J. O.; Clarke, T. E.; de Gasperin, F.; Ianjamasimanana, R.; Józsa, G. I. G.; Hilton, M.;

Kesebonye, K. C.; et al., The MeerKAT Galaxy Cluster Legacy Survey. I. Survey Overview and Highlights, *A&A*, 2022, 657, 56

[53] Chibueze, James O.; Caleb, M.; Spitler, L.; Ashkar, H.; Schussler, F.; Stappers, B. W.; Venter, C.; Heywood, I.; Richards, A. M. S.; Williams, D. R. A.; Kramer, M.; Beswick, R.; Bezuidenhout, M. C.; Breton, R. P.; Driessen, L. N.; Jankowski, F.; Keane, E. F.; Malenta, M.; Mickaliger, M.; Morello, V.; Qiu, H.; Rajwade, K.; Sanidas, S.; Surnis, M.; Scragg, T. W.; Walker, C. R. H.; Wrigley, N.; H. E. S. S. Collaboration, A MeerKAT, e-MERLIN, H.E.S.S. and Swift search for persistent and transient emission associated with three localised FRBs, *MNRAS*, 2022

[52] de Gasperin, F.; Rudnick, L.; Finoguenov, A.; Wittor, D.; Akamatsu, H.; Bruggen, M.; Chibueze, J. O.; Clarke, T. E.; Cotton, W.; Cuciti, V.; Dominguez-Fernandez, P.; Knowles, K.; O'Sullivan, S. P.; Sebokolodi, L, MeerKAT view of the diffuse radio sources in Abell 3667 and their interactions with the thermal plasma, *A&A*, 2022.

[51] Morgan, J., van der Walt, D. J., Chibueze, J. O., and Zhang, Q., Orientation effect on the light-curve shape of periodic methanol maser sources, *MNRAS*, 2021, Volume 507, Issue 1, pp. 1138-1148

[50] Mutie, M. M., Chibueze, J. O., El Bouchefry, K., MacLeod, G. C., Morgan, J. and Baki, P., Massive protocluster of a periodic maser source G188.95+0.89, *MNRAS*, 2021, Volume 506, Issue 3, pp. 4175-4187

[49] James O. Chibueze, Haruka Sakemi, Takumi Ohmura, Mami Machida, Hiroki Akamatsu, Takuya Akahori, Hiroyuki Nakanishi, Viral Parekh, Ruby van Rooyen, and Tsutomu T. Takeuchi, Jets from MRC 0600-399 bent by magnetic fields in the cluster Abell 3376, *Nature*, 2021, 593, 47-50

[48] Strubbe, Linda; Okere, Bonaventure I.; Zhang, Jielai; Chibueze, James O.; Ikape, Margaret; Okouma, Patrice M.; Ibik, Adaeze; White, Heidi; Abotsi-Masters, Sarah; Man, Allison; Webb, Sara; PASEA Collaboration; Asabere, Bernard Duah; Bop, Cheikh Tidiane; Bop, Cheikh Tidiane; Esaenwi, Sudum; Mowla, Lamiya; Nguyen, Thai Duy Cuong; Odo, Finbarr; Odoh, Daniel Ofodum, Chukwujekwu Nworah; Onyeuwaoma, Nnaemeka; Cheek, Wesley; Deng, Meiling; Eze, Romanus; Kerzendorf, Wolfgang; Klutse, Nana Ama Browne; Lepo, Kelly; Pardi, Anabele-Linda; Rose, Alison;

Urama, Johnson, The Pan-African School for Emerging Astronomers, Nature Astronomy, 2021, [2021NatAs.tmp...27S](#)

[47] Chibueze, James O.; Macleod, Gordon C.; Vorster, Jakobus M.; Hirota, Tomoya; Brogan, Crystal L.; Hunter, Todd R.; Van Rooyen, Ruby, The Extraordinary Outburst in the Massive Protostellar System NGC6334I-MM1: Spatio-kinematics of Water Masers during a Contemporaneous Flare Event, ApJ, 2021, 908, 175

[46] MacLeod, G. C.; Chibueze, J. O.; Sanna, A.; Paulsen, J. D.; Houde, M.; van den Heever, S. P.; Goedhart, S., Systematic velocity drifts of methanol masers associated with G9.62+0.20E, MNRAS, 2021, Volume 500, Issue 3, pp.3425-3437

[45] Pérez-Torres, M.; Gómez, J. F.; Ortiz, J. L.; Leto, P.; Anglada, G.; Gómez, J. L.; Rodríguez, E.; Triguero, C.; Amado, P. J.; Alberdi, A.; Anglada-Escudé, G.; Osorio, M.; Umana, G.; Berdiñas, Z.; López-González, M. J.; Morales, N.; Rodríguez-López, C.; Chibueze, J., Monitoring the radio emission of Proxima Centauri, A&A, 2021, 645, A77, 13

[44] Venturi, Tiziana; Paragi, Zolt; Lindqvist, Michael; Bartkiewicz, Anna; Beswick, Rob; Bogdanović, Tamara; Brisken, Walter; Charlot, Patrick; Colomer, Francisco; Conway, John; Frey, Sándor; Guirado, José Carlos; Gurvits, Leonid; van Langevelde, Huib; Lobanov, Andrei; McKean, John; Morganti, Raffaella; Muxlow, Tom; Pérez-Torres, Miguel; Rygl, Kazi; Schulz, Robert; Szomoru, Arpad; de Vicente, Pablo; An, Tao; Anglada, Guillem; Argo, Megan; Azulay, Rebecca; van Bemmelen, Ilse; Bocanegra, Tatiana; Boccardi, Biagina; Castangia, Paola; Chibueze, James; Cimò, Giuseppe; Climent, Juan-Bautista; Deane, Roger; Deller, Adam; Dodson, Richard; Duev, Dmitry; Etoka, Sandra; Fenech, Danielle; Gabányi, Krisztina; Gabuzda, Denise; Garrett, Michael; Gawroński, Marcin; Ghirlanda, Giancarlo; Giroletti, Marcello; Goddi, Ciriaco; Gómez, Jose Luis; Gray, Malcolm; Greaves, Jane; Hessels, Jason; van der Horst, Alexander; Hunter, Todd; Laing, Robert; Vir Lal, Dharam; Lambert, Sébastien; Loinard, Laurent; Marcote, Benito; Merloni, Andrea; Molera Calvés, Guifré; Moscadelli, Luca; Muxlow, Tom; Olofsson, Hans; Petrov, Leonid; Pizzo, Roberto; Possenti, Andrea; Quiroga-Nuñez, Luis Henry; Reynolds, Cormac; Richards, Anita; Rioja, Maria; Sanna, Alberto; Savolainen, Tuomas; Sbarato, Tullia; Spingola, Cristiana; Surcis, Gabriele;

Trigilio, Corrado; Varenius, Eskil; Vlemmings, Wouter; van Velzen, Sjoert; van der Walt, Johan, VLBI20-30: a scientific roadmap for the next decade -- The future of the European VLBI Network, eprint arXiv:2007.02347, 2020-07-1
<https://ui.adsabs.harvard.edu/abs/2020arXiv200702347V>

[43] Chibueze, James O.; Urago, Riku; Omodaka, Toshihiro; Morikawa, Yuto; Fujimoto, Masayuki Y.; Nakagawa, Akiharu; Nagayama, Takahiro; Nagayama, Takumi; Hirano, Ken, Astrometry and infrared observations of the Mira variable stars AP Lyncis, V837 Herculis, and BX Camelopardalis: Implications for the period-luminosity relation of the Milky Way, PASJ, 2020, <https://ui.adsabs.harvard.edu/abs/2020PASJ..tmp..210C>

[42] Omodaka, Toshihiro; Nagayama, Takumi; Dobashi, Kazuhito; Chibueze, James O.; Yamabi, Akifumi; Shimajiri, Yoshito; Inoue, Shinnosuke; Hamada, Shota; Sunada, Kazuyoshi; Ueno, Yuji, Star formation rates in the L 1482 filament of the California molecular cloud, PASJ, 2020, <https://ui.adsabs.harvard.edu/abs/2020PASJ..tmp..208O>

[41] Kim, Jungha; Kim, Mi Kyoung; Hirota, Tomoya; Kim, Kee-Tae; Sugiyama, Koichiro; Honma, Mareki; Byun, Do-young; Oh, Chungsik; Motogi, Kazuhito; Kang, Jihyun; Kim, Jeongsook; Liu, Tie; Hu, Bo; Burns, Ross A.; Chibueze, James O.; Matsumoto, Naoko; Sunada, Kazuyoshi, Multiple Outflows in the High-mass Cluster-forming Region G25.82-0.17, ApJ, 2020, 896, 2, id.127, <https://ui.adsabs.harvard.edu/abs/2020ApJ...896..127K>

[40] Urago, Riku; Yamaguchi, Ryohei; Omodaka, Toshihiro; Nagayama, Takumi; Chibueze, James O.; Fujimoto, Masayuki Y.; Nagayama, Takahiro; Nakagawa, Akiharu; Ueno, Yuji; Kawabata, Miho; Nakaoka, Tatsuya; Takagi, Kengo; Yamanaka, Masayuki; Kawabata, Koji, Trigonometric parallax of O-rich Mira variable star OZ Gem (IRAS 07308+3037): A confirmation of the difference between the P-L relations of the Large Magellanic Cloud and the Milky Way, PASJ, 2020, <https://ui.adsabs.harvard.edu/abs/2020PASJ..tmp..188U>

[39] Chibueze, James O.; Nagayama, Takumi; Omodaka, Toshihiro; Nagano, Masayuki; Wada, Koji; Hirano, Ken, Astrometry of H₂O masers in the W 48 A (G35.20-01.74) H ii region with VERA: A compact disk outflow inside core H-2a, PASJ, 2020, <https://ui.adsabs.harvard.edu/abs/2020PASJ..tmp..170C>

[38] VERA Collaboration; Hirota, Tomoya; Nagayama, Takumi; Honma, Mareki; Adachi, Yuuki; Burns, Ross A.; Chibueze, James O.; Choi, Yoon Kyung; Hachisuka, Kazuya; Hada, Kazuhiro; Hagiwara, Yoshiaki; Hamada, Shota; Handa, Toshihiro; Hashimoto, Mao; Hirano, Ken; Hirata, Yushi; Ichikawa, Takanori; Imai, Hiroshi; Inenaga, Daichi; Ishikawa, Toshio; Jike, Takaaki; Kameya, Osamu; Kaseda, Daichi; Kim, Jeong Sook; Kim, Jungha; Kim, Mi Kyoung; Kobayashi, Hideyuki; Kono, Yusuke; Kurayama, Tomoharu; Matsuno, Masako; Morita, Atsushi; Motogi, Kazuhito; Murase, Takeru; Nakagawa, Akiharu; Nakanishi, Hiroyuki; Niinuma, Kotaro; Nishi, Junya; Oh, Chung Sik; Omodaka, Toshihiro; Oyadomari, Miyako; Oyama, Tomoaki; Sakai, Daisuke; Sakai, Nobuyuki; Sawada-Satoh, Satoko; Shibata, Katsunori M.; Shizugami, Makoto; Sudo, Jumpei; Sugiyama, Koichiro; Sunada, Kazuyoshi; Suzuki, Syunsaku; Takahashi, Ken; Tamura, Yoshiaki; Tazaki, Fumie; Ueno, Yuji; Uno, Yuri; Urago, Riku; Wada, Koji; Wu, Yuan Wei; Yamashita, Kazuyoshi; Yamashita, Yuto; Yamauchi, Aya; Yuda, Akito, The First VERA Astrometry Catalog, PASJ, 2020, <https://ui.adsabs.harvard.edu/abs/2020PASJ..tmp..168V>

[37] Chen, Xi; Sobolev, Andrej M.; Breen, Shari L.; Shen, Zhi-Qiang; Ellingsen, Simon P.; MacLeod, Gordon C.; Li, Bin; Voronkov, Maxim A.; Kaczmarek, Jane F.; Zhang, Jiangshui; Ren, Zhi-Yuan; Wang, Jin; Linz, Hendrik; Hunter, Todd R.; Brogan, Crystal; Sugiyama, Koichiro; Burns, Ross A.; Menten, Karl; Sanna, Alberto; Stecklum, Bringfried; Hirota, Tomoya; Kim, Kee-Tae; Chibueze, James; Heever, SP van den, CH3OH Masers Associated With a Transient Phenomenon in a High-mass Young Stellar Object, ApJL, Volume 890, Issue 2, id.L22, <https://ui.adsabs.harvard.edu/abs/2020ApJ...890L..22C>

[36] Burns, R. A.; Sugiyama, K.; Hirota, T.; Kim, Kee-Tae; Sobolev, A. M.; Stecklum, B.; MacLeod, G. C.; Yonekura, Y.; Olech, M.; Orosz, G.; Ellingsen, S. P.; Hyland, L.; Caratti o Garatti, A.; Brogan, C.; Hunter, T. R.; Phillips, C.; van den Heever, S. P.; Eislöffel, J.; Linz, H.; Surcis, G.; Chibueze, J. O.; Baan, W.; Kramer, B., A heatwave of accretion energy traced by masers in the G358-MM1 high-mass protostar, Nature Astronomy, Volume 4, p. 506-510, <https://ui.adsabs.harvard.edu/abs/2020NatAs...4..506B>

[35] Burns, R. A.; Orosz, G.; Bayandina, O.; Surcis, G.; Olech, M.; MacLeod, G.; Volvach, A.; Rudnitskii, G.; Hirota, T.; Immer, K.; Blanchard, J.; Marcote, B.; van Langevelde, H. J.; Chibueze, J. O.; Sugiyama, K.; Kim, Kee-Tae; Val'ts, I.; Shakhvorostova, N.; Kramer, B.; Baan, W. A.; Brogan, C.; Hunter, T.; Kurtz, S.; Sobolev, A. M.; Brand, J.; Volvach, L., VLBI observations of the G25.65+1.05 water maser superbust, MNRAS, Volume 491, Issue 3, p.4069-4075, <https://ui.adsabs.harvard.edu/abs/2020MNRAS.491.4069B>

[34] MacLeod, G. C.; Sugiyama, K.; Hunter, T. R.; Quick, J.; Baan, W.; Breen, S. L.; Brogan, C. L.; Burns, R. A.; Caratti o Garatti, A.; Chen, X.; Chibueze, J. O.; Houde, M.; Kaczmarek, J. F.; Linz, H.; Rajabi, F.; Saito, Y.; Schmidl, S.; Sobolev, A. M.; Stecklum, B.; van den Heever, S. P.; Yonekura, Y., Detection of new methanol maser transitions associated with G358.93-0.03, MNRAS, 2019, Volume 489, Issue 3, p.3981-3989, <https://ui.adsabs.harvard.edu/abs/2019MNRAS.489.3981M>

[33] Burns, Ross A.;Handa, Toshihiro; Omodaka, Toshihiro; Sobolev, Andrej M.; Kirsanova, Maria S.; Nagayama, Takumi; Chibueze, James O.; Kohno, Mikito; Nakano, Makoto; Sunada, Kazuyoshi; Ladeyschikov, Dmitry A., NH₃ observations of the S235 star-forming region: Dense gas in inter-core bridges, PASJ, 2019, 71, 91

[32] Brogan, C. L.; Hunter, T. R.; Towner, A. P. M.; McGuire, B. A.; MacLeod, G. C.; Gurwell, M. A.;Cyganowski, C. J.; Brand, J.; Burns, R. A.; Caratti o Garatti, A.; Chen, X.; Chibueze, J. O.; Hirano, N.; Hirota, T.; Kim, K. -T.; Kramer, B. H.; Linz, H.; Menten, K. M.; Remijan, A.; Sanna, A.; Sobolev, A. M.; Sridharan, T. K.; Stecklum, B.; Sugiyama, K.; Surcis, G.; Van der Walt, J.; Volvach, A. E.; Volvach, L. N., Sub-arcsecond (Sub)millimeter Imaging of the Massive Protocluster G358.93-0.03: Discovery of 14 New Methanol Maser Lines Associated with a Hot Core, ApJL, 2019, 881, 39

[31] James O. Chibueze; Toshihiro Omodaka; Riku Urago; Takumi Nagayama; Jibrin A. Alhassan; Yoshiro Nishida; Ogochukwu U. Aralu; Ruby van Rooyen; Akiharu Nakagawa, Yuji Ueno, Annual Parallax and Galactic Orbit of Y Lib (IRAS 15090-0549) Mira Variable Star – GALORB Release, PASJ, 2019, 71, 92

[30] Brogan C. L; Hunter T. R; Cyganowski C. J; Chibueze J. O; Friesen R. K; Hirota T; MacLeod G. C; McGuire B. A., The Extraordinary Outburst in the Massive Protostellar System NGC6334I-MM1: Flaring of the Water Masers in a North-South Bipolar Outflow Driven by MM1B, ApJ, 2018, 866, 87

[29] Hunter T. R; Brogan C. L; Bartkiewics A; Chibueze J. O; Cyganowski C. J; Hirota T; MacLeod G. C; Sanna A, Torrelles J-M; Understanding Massive Star Formation through Maser Imaging, in An ngVLA Science Book, arXiv:1806.06981

[28] MacLeod G. C; Smits D. P; Goedhart S; Hunter T. R; Brogan C. L; Chibueze J. O; van der Heever S. P; Thesner C. J; Banda P. J; Paulsen J. D; A Masing Event in NGC6334I: Contemporaneous Flaring of Hydroxyl, Methanol and Water masers, 2018, MNRAS, 478, 1077

[27] Hunter, T. R.; Brogan, C. L.; MacLeod, G. C.; Cyganowski, C. J.; Chibueze, J. O.; Friesen, R.; Hirota, T.; Smits, D. P.; Chandler, C. J.; Indebetouw, R., The Extraordinary Outburst in the Massive Protostellar System NGC6334I-MM1: Emergence of Strong 6.7 GHz Methanol Masers, *ApJ*, 854, 170, 2018.

[26] Umemoto, Tomofumi; Minamidani, Tetsuhiro; Kuno, Nario; Fujita, Shinji; Matsuo, Mitsuhiro; Nishimura, Atsushi; Torii, Kazufumi; Tosaki, Tomoka; Kohno, Mikito; Kuriki, Mika; Tsuda, Yuya; Hirota, Akihiko; Ohashi, Satoshi; Yamagishi, Mitsuyoshi; Handa, Toshihiro; Nakanishi, Hiroyuki; Omodaka, Toshihiro; Koide, Nagito; Matsumoto, Naoko; Onishi, Toshikazu; Tokuda, Kazuki; Seta, Masumichi; Kobayashi, Yukinori; Tachihara, Kengo; Sano, Hidetoshi; Hattori, Yusuke; Onodera, Sachiko; Oasa, Yumiko; Kamegai, Kazuhisa; Tsuboi, Masato; Sofue, Yoshiaki; Higuchi, Aya E.; Chibueze, James O.; Mizuno, Norikazu; Honma, Mareki; Muller, Erik; Inoue, Tsuyoshi; Morokuma-Matsui, Kana; Shinnaga, Hiroko; Ozawa, Takeaki; Takahashi, Ryo; Yoshiike, Satoshi; Costes, Jean; Kuwahara, Sho; FOREST Unbiased Galactic plane Imaging survey with the Nobeyama 45-m telescope (FUGIN) I: Project Overview and Initial Results, *PASJ*, 69, 78, 2017

[25] Chibueze, James O.; Hamabata, Hideo; Nagayama, Takumi; Omodaka, Toshihiro; Handa, Toshihiro; Sunada, Kazuyoshi; Nakano, Makoto; Ueno, Yuji; Sharpless-76E: astrometry and outflows in a protostellar cluster, *MNRAS*, 466, 4530C, 2017

[24] Chibueze, James O.; Csengeri, Timea; Tatematsu, Ken'ichi; Hasegawa, Tetsuo; Iguchi, Satoru; Alhassan, Jibrin A.; Higuchi, Aya E.; Bontemps, Syvain; Menten, Karl M.; Class II 6.7 GHz Methanol Maser Association with Young Massive Cores Revealed by ALMA, *ApJ*, 836, 59, 2017

[23] Ogbodo, Chikaedu; Burns Ross; Handa, Toshihiro; Nagayama, Takumi; Chibueze, James O.; Omodaka, Toshihiro; Nakagawa, Akiharu; Honma, Mareki; Ubachukwu Augustine A.; Eze, Romanus; Bowshocks in a newly discovered maser source in IRAS 20231+3440, *MNRAS*, in press, 2017

[22] Hunter Todd R.; Brogan Crystal L.; MacLeod, Gordon; Cyganowski, C. J.; Chandler, C. J.; Chibueze, James O.; Friesen, R.; Indebetouw, R.; Thesner, C.; Young, K. H.; An Extraordinary Outburst in the Massive Protostellar System NGC6334I-MM1: Quadrupling of Millimeter Continuum, *ApJL*, 837, 29, 2017

[21] Nakano, Makoto; Soejima, Takashi; Chibueze, James O.; Nagayama, Takumi; Handa, Toshihiro; Omodaka, Toshihiro; Sunada, Kazuyoshi; Shizugami, Makoto;

Kamezaki, Tatsuya; Burns, Ross A.; Interaction between the HII region and AFGL 333-Ridge: Implications for the star formation scenario, PASJ, 69, 16, 2017

[20] Nguyen-Luong, Quang; Nguyen, Hans V. V.; Motte, Frédérique; Schneider, Nicola; Fujii, Michiko; Louvet, Fabien; Hill, Tracey; Sanhueza, Patricio; Chibueze, James O.; Didelon, Pierre; The scaling relations and star formation laws of ministarburst complexes, ApJ, 836, 23, 2016

[19] Kamezaki, Tatsuya; Nakagawa, Akiharu; Omodaka, Toshihiro; Inoue, Kan-ichiro; Chibueze, James O.; Nagayama, Takumi; Ueno, Yuji; Matsunaga, Noriyuki; Annual parallax and a dimming event of a Mira variable star, FV Bootis, PASJ, 68, 75, 2016

[18] Chibueze, James O.; Kamezaki, Tatsuya; Omodaka, Toshihiro; Handa, Toshihiro; Nagayama, Takumi; Baba, Tatsuya; Sunada, Kazuyoshi; Shizugami, Makoto; Burns, Ross A.; Honma, Mareki; Ubachukwu Augustine A.; Chukwude Augustine E.; Alhassan Jibrin A.; Astrometry and expanding bubble of a deeply embedded young stellar object in M17, MNRAS, 460, 1839C, 2016

[17] Yun, Youngjoo; Cho, Se-Hyung; Imai, Hiroshi; Kim, Jaeheon; Asaki, Yoshiharu; Chibueze, James O.; Choi, Yoon Kyung; Dodson, Richard; Kim, Dong-Jin; Kusuno, Kozue; et al, SiO Masers around WX Psc Mapped with the KVN and VERA Array (KaVA), ApJ, 822, 3

[16] Chibueze, James O.; Miyahara, Takeshi; Omodaka, Toshihiro; Ohta, Takashi; Fujii, Takahiro; Masuo, Tanaka; Motohara, Kentaro; Makoto Miyoshi.; Near-Infrared Observations of SiO Maser-emitting Asymptotic Giant Branch (AGB) Stars, ApJ, 817, 115, 2016

[15] Higuchi, Aya E.; Hasegawa, Tetsuo; Saigo, Kazuya; Sanhueza, Patricio; Chibueze, James O.; Sgr B2(N): A Bipolar Outflow and Rotating Hot Core Revealed by ALMA, ApJ, 815, 106, 2015

[14] ALMA Partnership; Fomalont E. B; Vlahakis C.; ... Chibueze, James O.; ... The 2014 ALMA Long Baseline Campaign: An Overview, ApJ Letter, 808, 1, 2015

[13] Higuchi, Aya E.; Saigo, Kazuya; Chibueze, James O.; Sanhueza, Patricio; Takakuwa, Shigehisa; Garay, Guido, IRAS 16547-4247: A New Candidate of a Protocluster Unveiled with ALMA, ApJ Letter, 798, 33, 2015

[12] Nagayama, Takumi; Omodaka, Toshihiro; Handa, Toshihiro; Burns, Ross A.; Chibueze, James O.; Kobayashi, Hideyuki; Sato, Katsuhisa; Ueno, Yuji; Shizugami, Makoto, Astrometry of Galactic star-forming region IRAS 20126+4104 with VERA, PASJ, 150, 2015

[11] Chibueze, James O.; Omodaka, Toshihiro; Handa, Toshihiro; Imai, Hiroshi; Kurayama, Tomoharu; Nagayama, Takumi; Sunada, Kazuyoshi; Nakano, Makoto; Hirota, Tomoya; Honma, Mareki, SAstrometry and Spatio-kinematics of H₂O Masers in the Massive Star-forming Region NGC 6334I(North) with VERA, ApJ, 784, 114, 2014

[10] Chibueze, James O.; Sakanoue, Hirofumi; Nagayama, Takumi; Omodaka, Toshihiro; Handa, Toshihiro; Kamezaki, Tatsuya; Burns, Ross A.; Kobayashi, Hideyuki; Nakanishi, Hiroyuki; Honma, Mareki; Trigonometric parallax of IRAS 22555+6213 with VERA: Three-dimensional view of sources along the same line of sight, PASJ, 66, 104, 2014

[9] Matsumoto, Naoko; Hirota, Tomoya; Sugiyama, Koichiro; Kim, Kee-Tae; Kim, Mikyoung; Byun, Do-Young; Jung, Taehyun; Chibueze, James O.; Honma, Mareki; Kameya, Osamu; et al., The First Very Long Baseline Interferometry Image of a 44 GHz Methanol Maser with the KVN and VERA Array (KaVA), ApJ Letter, 789, 1, 2014

[8] Higuchi, Aya E.; Chibueze, James O.; Habe, Asao; Takahira, Ken; Takano, Shuro, ALMA View of G0.253+0.016: Can Cloud-Cloud Collision form the Cloud?, AJ, 147, 141, 2014

[7] Burns, Ross A.; Yamaguchi, Yoshiyuki; Handa, Toshihiro; Omodaka, Toshihiro; Nagayama, Takumi; Nakagawa, Akiharu; Hayashi, Masahiko; Kamezaki, Tatsuya; Chibueze, James O.; Shizugami, Makoto; Nakano, Makoto, VLBI observations of H₂O maser annual parallax and proper motion in IRAS 20143+3634: Reflection on the Galactic constants, PASJ, 66, 102, 2014

[6] Chibueze, James O.; Imura, Kenji; Omodaka, Toshihiro; Handa, Toshihiro; Nagayama, Takumi; Fujisawa, Kenta; Sunada, Kazuyoshi; Nakano, Makoto; Kamezaki, Tatsuya; Yamaguchi, Yoshiyuki; Sekido, Mamoru, Star Formation in the Molecular Cloud Associated with the Monkey Head Nebula: Sequential or Spontaneous?, ApJ, 762, 17, 2013

[5] James O. Chibueze, Hiroshi Imai, Daniel Tafoya, Toshihiro Omodaka, Osamu Kameya, Tomoya Hirota, Sze- Ning Chong, and Jose M. Torrelles, A Highly Collimated Water Maser Bipolar Outflow in the Cepheus A HW3d Massive Young Stellar Object, ApJ, 748, 146 (11 pages), 2012 April 1

[4] Kamezaki, Tatsuya; Imura, Kenji; Omodaka, Toshihiro; Handa, Toshihiro; Tsuboi, Yohko; Nagayama, Takumi; Hirota, Tomoya; Sunada, Kazuyoshi; Kobayashi, Hideyuki; Chibueze, James O.; Kawai, Eiji; Nakano, Makoto, Annual Parallax Determination toward a New X-Ray-emitting Class 0 Candidate with the Water Maser in the NGC 2264 Star- forming Region, ApJS, 211, 18, 2014

[3] James O. Chibueze, Crystal Brogan, Todd Hunter, and Claudia J. Cyganowski, sub-millimeter Observation of the SM2 Core of NGC 6334I(N), ApJ, (in prep.), 2018

[2] Selina N. Chong, Sun Kwok, Hiroshi Imai, Daniel Tafoya, and James O. Chibueze, Multipolar Planetary Nebulae: Not as Geometrically Diversified as Thought, ApJ, 760, 115 (10 pages), December, 2012

[1] James O. Chibueze (*translated into Japanese by Hirota Tomoya of the NAOJ*), Astronomy in Japan – A Success Embedded in Culture, The Astronomical Herald, 105, 5 (4 pages), May, 2012

Publications in Non-Refereed Journals

[1] James O. Chibueze, Bonaventure I. Okere, Pius N. Okeke, Investigation of Radio Quietness of the Proposed Site for the Nigerian 25m Radio Telescope, Nigerian Journal of Space Research, 7, 1 – 12, 31 March, 2010

In Proceedings of conferences, workshops, symposia

- Hunter, Todd; Bartkiewicz, Anna; Briske, Walter; Brogan, Crystal L.; Burns, Ross; Chibueze, James O.; Cyganowski, Claudia J.; Hirota, Tomoya; MacLeod, Gordon; Sanna, Alberto; Torrelles, Jose-Maria, Understanding Accretion Outbursts in Massive Protostars through Maser Imaging, Astro2020: Decadal Survey on Astronomy and Astrophysics, science white papers, no. 13; Bulletin of the American Astronomical Society, Vol. 51, Issue 3, id. 13 (2019), 2019-05-1, <https://ui.adsabs.harvard.edu/abs/2019BAAS...51c..13H>

- Hunter, Todd R.; Brogan, Crystal; Cyganowski, Claudia J.; Chibueze, James; Friesen, Rachel; MacLeod, Gordon; McGuire, Brett; van den Heever, Fanie, Exciting phenomena powered by the ongoing accretion outburst in the massive protostar NGC6334I-MM1B, American Astronomical Society, AAS Meeting #233, id.354.13, 2019-01-1, <https://ui.adsabs.harvard.edu/abs/2019AAS...23335413H>
- Burns, R. A.; Bayandina, O.; Orosz, G.; Olech, M.; Immer, K.; Blanchard, J.; Marcote, B.; Van Langevelde, H.; Hirota, T.; Kim, K. T.; Val'tts, I.; Shakhvorostova, N.; Rudnitskii, G.; Volvach, A.; Volvach, L.; MacLeod, G.; Chibueze, J. O.; Surcis, G.; Kramer, B.; Baan, W.; Brogan, C. L.; Hunter, T.; Kurtz, S., Multi-epoch VLBI of a double maser super burst, 14th European VLBI Network Symposium & Users Meeting. 8-11 October. Granada, Spain. Online at <https://pos.sissa.it/cgi-bin/reader/conf.cgi?confid=344>, id.75, 2018-11-1, <https://ui.adsabs.harvard.edu/abs/2018evn..confE..75B>
- Chibueze, J. O.; Hirota, T.; Hunter, T.; MacLeod, G.; Brogan, C. L.; van Rooyen, R., NGC6334I - Tracing the Gas Motion During A Contemporaneous Maser Flare Event, 14th European VLBI Network Symposium & Users Meeting. 8-11 October. Granada, Spain. Online at <https://pos.sissa.it/cgi-bin/reader/conf.cgi?confid=344>, id.38, 2018-11-1, <https://ui.adsabs.harvard.edu/abs/2018evn..confE..38C>
- Scragg, T. W.; Stappers, B. W.; Breton, R. P.; Smith, J. N.; Adomako, D.; Asabere, B. Duah; Chibueze, J. O.; Cloete, K., Pulsar Observations at the Ghana Radio Astronomy Observatory, Pulsar Astrophysics the Next Fifty Years, Proceedings of the International Astronomical Union, IAU Symposium, Volume 337, pp. 410-411 2018-08-1, <https://ui.adsabs.harvard.edu/abs/2018IAUS..337..410S>
- James O. Chibueze, Timea Csengeri, Ken'ichi Tatematsu, Tetsuo Hasegawa, Satoru Iguchi, Jibrin A. Alhassan, Aya E. Higuchi, Sylvain Bontemps and Karl M. Menten, Class II 6.7 GHz Methanol Maser Association with Young Massive Cores Revealed by ALMA, Astrophysical Masers:Unlocking the Mysteries of the Universe Proceedings IAU Symposium No. 336, 2017, A. Tarchi, M.J. Reid & P. Castangia, eds.
- D. J. van der Walt¹, J-M. Morgan¹, J. O. Chibueze^{2,1,3} and Q. Zhang, Sub-mm observations of periodic methanol masers, Astrophysical Masers:Unlocking the Mysteries of the Universe Proceedings IAU Symposium No. 336, 2017, A. Tarchi, M.J. Reid & P. Castangia, eds.
- Crystal L. Brogan, Todd R. Hunter, Gordon MacLeod, James O. Chibueze and Claudia J. Cyganowski, The extraordinary outburst in NGC6334I-MM1: dimming of the hypercompact HII region and destruction of water masers, Astrophysical

Masers:Unlocking the Mysteries of the Universe Proceedings IAU Symposium No. 336, 2017, A. Tarchi, M.J. Reid & P. Castangia, eds.

- Todd R. Hunter, Crystal L. Brogan, James O. Chibueze, Claudia J. Cyganowski, Tomoya Hirota and Gordon C. MacLeod, The extraordinary outburst in NGC6334I-MM1: the rise of dust and emergence of 6.7 GHz methanol masers, Astrophysical Masers:Unlocking the Mysteries of the Universe Proceedings IAU Symposium No. 336, 2017, A. Tarchi, M.J. Reid & P. Castangia, eds.
 - Kee-Tae Kim, Tomoya Hirota, Koichiro Sugiyama, Jungha Kim, Do-Young Byun, James Chibueze, Kazuya Hachisuka, Bo Hu, Eodam Hwang, Ji-Hyun Kang, Jeong-Sook Kim, Mikyoung Kim, Tie Liu, Naoko Matsumoto, Kazuhito Motogi, Chung Sik Oh, Kazuyoshi Sunada, YuanweiWu and KaVA star formation group, Understanding high-mass star formation through KaVA observations of water and methanol masers, Astrophysical Masers:Unlocking the Mysteries of the Universe Proceedings IAU Symposium No. 336, 2017, A. Tarchi, M.J. Reid & P. Castangia, eds.
 - James O. Chibueze; Sakanoue, Hirofumi; Nagayama, Takumi; Omodaka, Toshihiro; Handa, Toshihiro; Kamezaki, Tatsuya; Burns, Ross A.; Astrometry of IRAS 22555+6213 with VERA: 3-dimensional view of sources along the same line of sight, Asian Pacific Regional IAU Meeting, Korea (proceedings PKAS, 2015, 30, 119)
 - Linda Strubbe, Bonaventure Okere, James O. Chibueze, et al. 'An Inquiry-based Astronomy Summer School in West Africa', Astronomy Across Africa: A New Dawn II session, American Astronomical Society, AAS, Meeting (Seattle, WA), 3-8 January, 2015.
 - James O. Chibueze, Kenji Imura, Toshihiro Omodaka, Toshihiro Handa, Takumi Nagayama, Kenta Fujisawa, Kazuyoshi Sunada, Makoto Nakano, Tatsuya Kamezaki, Yshiyuki Yamaguchi, 'Star Formation in the Molecular Cloud Associated with the Monkey Head Nebula: Sequential or Spontaneous?', Molecular Gas, Dust, and Star Formation in Galaxies, International Astronomical Union General Assembly, IAU Symposium 292 (Beijing, China), 20-24 August, 2012.
 - James O. Chibueze, 'Astronomy Development in Africa Driven by Collaborative Projects', IAU Strategic Plan and the Global Office of Astronomy for Development, International Astronomical Union General Assembly, IAU Special Session 11 (Beijing, China), 27-28 August, 2012
- 1
- Tatsuya Kamezaki, Kenji Imura, Takumi Nagayama, Toshihiro Omodaka , Toshihiro Handa, Yoshiyuki Yamaguchi, James O. Chibueze, Kazuyoshi Sunada and

Makoto Nakano, VLBI Observations and NH₃ Mapping of the Star-forming Region NGC2264,
Molecular Gas, Dust, and Star Formation in Galaxies Proceedings IAU
Symposium No. 292, 2012

- James O. Chibueze, Hiroshi Imai, Daniel Tafoya, Toshihiro Omodaka, Osamu Kameya, Tomoya Hirota, Sze-Ning Chong, and Jose M. Torrelles, 'A Highly Collimated Water Maser Bipolar Outflow in the Cepheus A HW3d Massive Young Stellar Object', Cosmic Masers: From OH to H₀, Proceedings of the International Astronomical Union, IAU Symposium 287 (Stellenbosch, South Africa), pp. 141-145, Cambridge University Press, 2012
- James O. Chibueze, 'A Highly Collimated Water Maser Bipolar Outflow in the Cepheus A HW3d Massive Young Stellar Object', East-Asian Collaboration of SKA Workshop, KASI, Korea. November 30 – December 2, 2011.
- James O. Chibueze, 'Massive Star Formation Activities in Cepheus A', Star formation workshop, NAOJ Mitaka, Tokyo, November, 2010. Others recent conferences/workshops NRO-ALMA Science/Development Workshop @ Nobeyama Radio Observatory (20-21 July, 2016) ALMA Workshop, ASIAA Taipei, Taiwan (September, 2013) Astronomical Society of Nigeria Annual Conference (21-22 October, 2013)

Referees

On request