

# Curriculum Vitae

Nicole Nesvadba

## Current address

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## Main research interests

- Formation and evolution of galaxies at redshifts  $z \sim 1-3$ : optically/UV selected galaxies, submillimeter and radio galaxies
- Feedback from star formation and active galactic nuclei
- Integral-field spectroscopy in the optical and near-infrared
- Radio millimeter and centimeter interferometry
- CO emission line dynamics & molecular gas properties of high-redshift galaxies
- Radio properties of AGN
- Internal dynamics and evolution of strongly lensed high-redshift galaxies

## Employment history & academic degrees

10/2013 – present	Chargée de Recherche 1 <sup>ère</sup> classe, CNRS, based at IAS Orsay
10/2009 - 09/2013	Chargée de Recherche 2 <sup>ème</sup> classe, CNRS, based at IAS Orsay
11/2008 – 09/2009	CNES postdoctoral fellow, based at the Institut d'Astrophysique Spatiale in Orsay (IAS)
11/2006 – 10/2008	Marie-Curie Fellow, GEPI, Observatoire de Paris/Meudon.
June 6 <sup>th</sup> , 2006	PhD thesis at the MPI für Extraterrestrische Physik and Ludwig-Maximilians-Universität München: <i>Integral-Field Spectroscopy of High-redshift galaxies: Implications for Early Galaxy Evolution</i> , thesis advisor: Prof. Dr. R. Genzel, Dr. M. D. Lehnert
01/2003-10/2006	Graduate student at the Max-Planck-Institut für Extraterrestrische Physik, Garching bei München, Germany
10/2001 – 12/2002	Cloud software development / inner detector track reconstruction software for the ATLAS detector within the LHC collaboration / CERN

05/2000-05/2001	Diploma student within the OPAL collaboration at CERN, Geneva, under the auspices of Prof. D. Schaile, Ludwig-Maximilians-Universität München, Germany, and the OPAL Higgs Working Group, CERN, Geneva, Switzerland
May 15th, 2001	Diploma thesis (a one-year full-time research project) at CERN, Geneva, and the Ludwig-Maximilians-Universität München: <i>Flavor-Independent Search for the Higgs-Boson in the hZ Channel at LEP</i> , supervision: Prof. Dr. D. Schaile, Prof. T. Junk, and the OPAL and LEP Higgs Working Groups

## Student and postdoc supervision since 2014

### Postdocs

2017 – present	<i>Gas and star-formation in Blue low-excitation emission-line radio galaxies.</i> Postdoc project with Dr. Reinier Janssen, IAS, Université Paris-Sud, Orsay.
2012 – 2014 :	<i>The hierarchy probe.</i> Scientific host of Marie-Curie fellowship of Dr. Daniel Dicken at IAS.

### Graduate students

I obtained my HDR (habilitation to supervise students) in December 2012, and have since then led two successful graduate students to obtaining their degree :

10/2013 – 10/2016	Thesis advisor of Raoul Canameras, IAS, Université Paris-Sud, Orsay
10/2010 – 04/2014	Thesis advisor of Cedric Collet, IAS, Université Paris-Sud, Orsay

Previous to that, I have co-supervised two further thesis projects :

11/2009 - 10/2012	Co-supervisor of C. Herrera (advisor: Dr. F. Boulanger) IAS, Université Paris-Sud Orsay
10/2007 - 09/2011	Co-supervisor of L. Le Tiran (advisor: Dr. M. D. Lehnert), GEPI, Observatoire de Paris

Since 2017, I am also part of the thesis supervisory panel of Henry Zovaro, Australian National University, Canberra, Australia.

### Undergraduate students

03/2013-07/2013	Raoul Canameras, IAS, Université Paris-Sud, Orsay
02/2012-03/2012	Stage (équivalent M2) de Caroline Heneka (Universität Heidelberg) dans le cadre de son séjour Erasmus à Paris
04/2011-06/2011	Marco Bocchio (NPAC), IAS, Université Paris-Sud Orsay
04/2010-07/2010	Cédric Collet, IAS, Université Paris-Sud

### Scholarships and funding proposals

2014 – 2017	Co-investigator of the project <i>The key role of black holes in galaxy evolution</i> , PI Prof. Dr. G. Bicknell, Australian National University, Canberra, Australian Research Council
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2011-13	Scientific coordinator of the Marie-Curie intra-European Fellowship of Dr. D. Dicken
2011-18	PI and Co-I of several funding proposals of CNES and CNRS/INSU (PNCG and PCMI)
2008-2009	CNES Postdoctoral Fellowship
2006-2008	Marie-Curie intra-European Fellowship

## Observing and other practical skills and competences

PI or significant co-I of > 100 accepted observing proposals at the major telescopes of ESO-VLT and La Silla, CFHT, Gemini, Keck, ATCA, WHT, NOT, IRAM, ALMA, JVLA, SMA, GMRT, HST, JCMT, CSO, LBT, JWST ERS, Spitzer, Herschel, with > 1000 hrs of total observing time. > 50 nights of observing at the telescopes of ESO-VLT and La Silla, IRAM Granada, SMA, Keck, CTIO, NOT, JCMT, CSO.

Internationally recognized expert in imaging spectroscopy in the NIR and optical. Development of proprietary reduction software for data obtained in these wavelength regimes. Experienced user of millimeter and centimeter interferometers, longslit and multiplex spectroscopy, and narrow and broad-band imaging in the optical, near, mid and far-infrared. Competent user of windows, linux, fortran, C/C++, IDL, python, py/IRAF, and the major data reduction and analysis tools in these wavelength regimes.

## Past membership in TACs and scientific advisory boards

2012 – 2018	Member of the French Time Allocation Committee at the CFHT.
2012 – present	Member of the scientific advisory board to the head of astronomy at the CNRS (CSAA).
2013 – 2014	Member of the ESO observing program committee panel B (galaxy evolution)
2014 – 2015	Member of the Conseil de laboratoire at the IAS
2018 – present	Member of the Conseil scientifique de l'OSUPS.
2013 – 2014	Member of panel B of the Observing Program Committee (OPC) at ESO
2013 – 2017	Member of the conseil scientifique of the action spécifique ALMA de l'INSU

Occasional referee for the fellowship and funding programs of the Royal Astronomical Society, STFC, Agence Nationale de Recherche, amongst others. Occasional referee of A&A, ApJ, MNRAS, and Nature.

## Conferences and seminars in the past five years

### Conferences

The role feedback in galaxy evolution. From small-scale winds to large-scale outflows. 15<sup>th</sup> Potsdam Thinkshop. Potsdam, Germany, 3-7 September, 2018. Contributed talk.

Multiphase AGN Feeding and Feedback, Sesto/Italy, 9-13 July, 2018. Invited speaker.

AAS 231<sup>st</sup> meeting : SMA special session. Washington, USA, 8-12 January, 2018. Invited speaker.

From Black Holes to Galaxies, Canberra, 21-25 August, 2017. Invited review talk and discussion leader

Physics and demography of AGN and starburst winds (EWASS 2017 symposium). Prague, 26-30 June, 2017. Contributed talk.

Star-formation, metals, and feedback in galaxies (EWASS 2017 special session). Prague, 26-30 June, 2017. Contributed talk.

Galaxy evolution across cosmic time : 12-16 June, 2017, Paris, France. Contributed talk.

Gas, Dust and star formation, Conference international, Crete, Greece, 25-29 May 2015. Contributed talk.

Powerful AGN and their host galaxies. Port Douglas, Australia, 16-20 June, 2014. Invited talk.

## Seminar talks

Monash University Institute Seminar : "AGN feedback through winds and turbulence across cosmic time", 27. 9. 2017, Monash University, Melbourne, Australia

Mount Stromlo Observatory Seminar : Probing individual starburst regions in maximal starburst galaxies at  $z=2-3$  : Planck's Dusty GEMS. 21. 9. 2017, Mount Stromlo Observatory, Australian National University, Canberra, Australia

Joint ESO-ALMA colloquium : AGN feedback through winds and turbulence across cosmic time  
18. 2. 2016, ESO Chilean Headquarters, Santiago de Chile, Chile

JAO Extragalactic Meeting : Planck's Dusty GEMS: the brightest gravitationally lensed high-redshift galaxies in the Planck all-sky survey. 5. 2. 2016, ALMA Headquarters, Santiago de Chile

Mount Stromlo Observatory Seminar : « AGN feedback in high-redshift galaxies », 08. 2014, Mount Stromlo Observatory, Australian National University, Canberra, Australia

## Press releases and outreach

2018 : Joint press release by the CNRS, IRAM, Université Paris-Sud, and other institutes : *Les pouponnières d'étoiles interagissent avec leur environnement au cœur des galaxies massives*

2017 : Talk for the general public at the Volkssternwarte (public observatory) of the Physikalischer Verein, Frankfurt am Main (Germany) : *Wie kommt der Kohlenstoff in meinen kleinen Finger?*

2016 : Talk for the general public at the Zen dojo in Paris : *Vous avez dit « cosmique » ?*

2015 : Joint press release by CNRS, ESA, NASA, and other institutes. *Enigmatic high-redshift galaxies discovered by Planck and Herschel*

2009-2014 : Occasional scientific consultant and fact checker for the publisher « Schoeffler », Frankfurt am Main, Allemagne.

2012 : CNRS press release and video clip: *La naissance turbulente des super-amas d'étoiles dans les galaxies en fusion*

2010 : CNRS / ESO press release : *Détection de la plus lointaine galaxie : la fin de l'âge sombre.*

## Publication record (as of February 2019)

87 refereed publications since 2004 with >6400 citations. 39 since 2014, 15 as first author (including 4 since 2014). H = 36. See the detailed list of my scientific output for a full listing of my refereed and unrefereed publications, seminar talks, contributions to conferences, and related information.

### Refereed publications in the last five years

- (1) Hamer, S. L., Edge, A. C., Swinbank, A. M., Oonk, J. B. R., Mittal, R., McNamara, B. R., Russell, H. R., Bremer, M. N., Combes, F., Fabian, A. C., Nesvadba, N. P. H., O'Dea, C. P., Baum, S. A., Salome;, P., Tremblay, G., Donahue, M., Ferland, G. J., and Sarazin, C. L. (2014), "Cold gas dynamics in Hydra-A: evidence for a rotating disc", *Monthly Notices of the Royal Astronomical Society*, 437, 862
- (2) Rhoads, James E., Malhotra, Sangeeta, Allam, Sahar, Carilli, Chris, Combes, Francoise, Finkelstein, Keely, Finkelstein, Steven, Frye, Brenda, Gerin, Maryvonne, Guillard, Pierre, Nesvadba, Nicole, Rigby, Jane, Spaans, Marco, and Strauss, Michael A. (2014), "Herschel Extreme Lensing Line Observations: Dynamics of Two Strongly Lensed Star-forming Galaxies near Redshift z = 2", *The Astrophysical Journal*, 787, 8
- (3) Shirazi, M., Vegetti, S., Nesvadba, N., Allam, S., Brinchmann, J., and Tucker, D. (2014), "The physical nature of the 8 o'clock arc based on near-IR IFU spectroscopy with SINFONI", *Monthly Notices of the Royal Astronomical Society*, 440, 2201
- (4) Drouart, G., De Breuck, C., Vernet, J., Seymour, N., Lehnert, M., Barthel, P., Bauer, F. E., Ibar, E., Galametz, A., Haas, M., Hatch, N., Mullaney, J. R., Nesvadba, N., Rocca-Volmerange, B., Rottgering, H. J. A., Stern, D., and Wylezalek, D. (2014), "Rapidly growing black holes and host galaxies in the distant Universe from the Herschel Radio Galaxy Evolution Project", *Astronomy and Astrophysics*, 566, A53
- (5) Dicken, D., Tadhunter, C., Morganti, R., Axon, D., Robinson, A., Magagnoli, M., Kharb, P., Ramos Almeida, C., Mingo, B., Hardcastle, M., Nesvadba, N. P. H., Singh, V., Kouwenhoven, M. B. N., Rose, M., Spoon, H., Inskip, K. J., and Holt, J. (2014), "Spitzer Mid-IR Spectroscopy of Powerful 2Jy and 3CRR Radio Galaxies. II. AGN Power Indicators and Unification", *The Astrophysical Journal*, 788, 98
- (6) Sun, Ai-Lei, Greene, Jenny E., Zakamska, Nadia L., and Nesvadba, Nicole P. H. (2014), "ALMA Observations of a Candidate Molecular Outflow in an Obscured Quasar", *The Astrophysical Journal*, 790, 160
- (7) Planck Collaboration, (2014), "Planck 2013 results. I. Overview of products and scientific results", *Astronomy and Astrophysics*, 571, A1
- (8) Planck Collaboration, (2014), "Planck 2013 results. XXIX. The Planck catalogue of Sunyaev-Zeldovich sources", *Astronomy and Astrophysics*, 571, A29
- (9) Tadhunter, C., Dicken, D., Morganti, R., Konyves, V., Ysard, N., Nesvadba, N., and Ramos Almeida, C. (2014), "The dust masses of powerful radio galaxies: clues to the triggering of their activity", *Monthly Notices of the Royal Astronomical Society*, 445, L51
- (10) Rowlands, K., Wild, V., Nesvadba, N., Sibthorpe, B., Mortier, A., Lehnert, M., and da Cunha, E. (2015), "The evolution of the cold interstellar medium in galaxies following a starburst", *Monthly Notices of the Royal Astronomical Society*, 448, 258
- (11) Collet, C., Nesvadba, N. P. H., De Breuck, C., Lehnert, M. D., Best, P., Bryant, J. J., Dicken, D., Johnston, H., Hunstead, R., and Wylezalek, D. (2015), "Defying jet-gas alignment in two radio galaxies at z ~ 2 with extended light profiles: Similarities to brightest cluster galaxies", *Astronomy and Astrophysics*, 579, A89

(12) Planck Collaboration, (2015), "Planck 2013 results. XXXII. The updated Planck catalogue of Sunyaev-Zeldovich sources", *Astronomy and Astrophysics*, 581, A14

(13) Canameras, R., Nesvadba, N. P. H., Guery, D., McKenzie, T., Konig, S., Petitpas, G., Dole, H., Frye, B., Flores-Cacho, I., Montier, L., Negrello, M., Beelen, A., Boone, F., Dicken, D., Lagache, G., Le Floc'h, E., Altieri, B., Bethermin, M., Chary, R., de Zotti, G., Giard, M., Kneissl, R., Krips, M., Malhotra, S., Martinache, C., Omont, A., Pointecouteau, E., Puget, J.-L., Scott, D., Soucail, G., Valtchanov, I., Welikala, N., and Yan, L. (2015), "Planck's dusty GEMS: The brightest gravitationally lensed galaxies discovered with the Planck all-sky survey", *Astronomy and Astrophysics*, 581, A105

(14) Planck Collaboration, (2015), "Planck intermediate results. XXVII. High-redshift infrared galaxy overdensity candidates and lensed sources discovered by Planck and confirmed by Herschel-SPIRE", *Astronomy and Astrophysics*, 582, A30

(15) Emonts, B. H. C., De Breuck, C., Lehnert, M. D., Vernet, J., Gullberg, B., Villar-Martínez, M., Nesvadba, N., Drouart, G., Ivison, R., Seymour, N., Wylezalek, D., and Barthel, P. (2015), "The Dragonfly Galaxy. II. ALMA unveils a triple merger and gas exchange in a hyper-luminous radio galaxy at  $z = 2$ ", *Astronomy and Astrophysics*, 584, A99

(16) Flores-Cacho, I., Pierini, D., Soucail, G., Montier, L., Dole, H., Pointecouteau, E., Pellacani, R., Le Floc'h, E., Nesvadba, N., Lagache, G., Guery, D., and Canameras, R. (2016), "Multi-wavelength characterisation of  $z \sim 2$  clustered, dusty star-forming galaxies discovered by Planck", *Astronomy and Astrophysics*, 585, A54

(17) Welikala, N., Bethermin, M., Guery, D., Strandet, M., Aird, K. A., Aravena, M., Ashby, M. L. N., Bothwell, M., Beelen, A., Bleem, L. E., de Breuck, C., Brodwin, M., Carlstrom, J. E., Chapman, S. C., Crawford, T. M., Dole, H., Dore, O., Everett, W., Flores-Cacho, I., Gonzalez, A. H., Gonzalez-Nuevo, J., Greve, T. R., Gullberg, B., Hezaveh, Y. D., Holder, G. P., Holzapfel, W. L., Keisler, R., Lagache, G., Ma, J., Malkan, M., Marrone, D. P., Mocanu, L. M., Montier, L., Murphy, E. J., Nesvadba, N. P. H., Omont, A., Pointecouteau, E., Puget, J. L., Reichardt, C. L., Rotermund, K. M., Scott, D., Serra, P., Spilker, J. S., Stalder, B., Stark, A. A., Story, K., Vanderlinde, K., Vieira, J. D., and Weiszlig, A. (2016), "Probing star formation in the dense environments of  $z \sim 1$  lensing haloes aligned with dusty star-forming galaxies detected with the South Pole Telescope", *Monthly Notices of the Royal Astronomical Society*, 455, 1629

(18) Gullberg, Bitten, De Breuck, Carlos, Lehnert, Matthew D., Vernet, Joel, Bacon, Roland, Drouart, Guillaume, Emonts, Bjorn, Galametz, Audrey, Ivison, Rob, Nesvadba, Nicole P. H., Richard, Johan, Seymour, Nick, Stern, Daniel, and Wylezalek, Dominika (2016), "The mysterious morphology of MRC0943-242 as revealed by ALMA and MUSE", *Astronomy and Astrophysics*, 586, A124

(19) Collet, C., Nesvadba, N. P. H., De Breuck, C., Lehnert, M. D., Best, P., Bryant, J. J., Hunstead, R., Dicken, D., and Johnston, H. (2016), "Kinematic signatures of AGN feedback in moderately powerful radio galaxies at  $z \sim 2$  observed with SINFONI", *Astronomy and Astrophysics*, 586, A152

(20) Zakamska, Nadia L., Lampayan, Kelly, Petric, Andreea, Dicken, Daniel, Greene, Jenny E., Heckman, Timothy M., Hickox, Ryan C., Ho, Luis C., Krolik, Julian H., Nesvadba, Nicole P. H., Strauss, Michael A., Geach, James E., Oguri, Masamune, and Strateva, Iskra V. (2016), "Star formation in quasar hosts and the origin of radio emission in radio-quiet quasars", *Monthly Notices of the Royal Astronomical Society*, 455, 4191

(21) Dahle, H., Aghanim, N., Guennou, L., Hudelot, P., Kneissl, R., Pointecouteau, E., Beelen, A., Bayliss, M., Douspis, M., Nesvadba, N., Hempel, A., Gronke, M., Burenin, R., Dole, H., Harrison, D., Mazzotta, P., and Sunyaev, R. (2016), "Discovery of an exceptionally bright giant arc at  $z = 2.369$ , gravitationally lensed by the Planck cluster PSZ1 G311.65-18.48", *Astronomy and Astrophysics*, 590, L4

(22) Gullberg, Bitten, Lehnert, Matthew D., De Breuck, Carlos, Branchu, Steve, Dannerbauer, Helmut, Drouart, Guillaume, Emonts, Bjorn, Guillard, Pierre, Hatch, Nina, Nesvadba, Nicole P. H., Omont, Alain,

Seymour, Nick, and Vernet, Joëlle (2016), "ALMA finds dew drops in the dusty spider's web", *Astronomy and Astrophysics*, 591, A73

(23) Nesvadba, N., Kneissl, R., Canameras, R., Boone, F., Falgarone, E., Frye, B., Gerin, M., Koenig, S., Lagache, G., Le Floc'h, E., Malhotra, S., and Scott, D. (2016), "Planck's Dusty GEMS. II. Extended [CII] emission and absorption in the Garnet at  $z = 3.4$  seen with ALMA", *Astronomy and Astrophysics*, 593, L2

(24) Planck Collaboration, (2016), "Planck intermediate results. XXXIX. The Planck list of high-redshift source candidates", *Astronomy and Astrophysics*, 596, A100

(25) Malhotra, Sangeeta, Rhoads, James E., Finkelstein, K., Yang, Huan, Carilli, Chris, Combes, Francoise, Dassas, Karine, Finkelstein, Steven, Frye, Brenda, Gerin, Maryvonne, Guillard, Pierre, Nesvadba, Nicole, Rigby, Jane, Shin, Min-Su, Spaans, Marco, Strauss, Michael A., and Papovich, Casey (2017), "Herschel Extreme Lensing Line Observations: [CII] Variations in Galaxies at Redshifts  $z=1-3$ ", *The Astrophysical Journal*, 835, 110

(26) Nesvadba, N. P. H., De Breuck, C., Lehnert, M. D., Best, P. N., and Collet, C. (2017), "The SINFONI survey of powerful radio galaxies at  $z \gtrsim 2$ : Jet-driven AGN feedback during the Quasar Era", *Astronomy and Astrophysics*, 599, A123

(27) Nesvadba, N. P. H., Drouart, G., De Breuck, C., Best, P., Seymour, N., and Vernet, J. (2017), "Gas kinematics in powerful radio galaxies at  $z \sim 2$ : Energy supply from star formation, AGN, and radio jets", *Astronomy and Astrophysics*, 600, A121

(28) Canameras, R., Nesvadba, N. P. H., Kneissl, R., Limousin, M., Gavazzi, R., Scott, D., Dole, H., Frye, B., Koenig, S., Le Floc'h, E., and Oteo, I. (2017), "Planck's dusty GEMS. III. A massive lensing galaxy with a bottom-heavy stellar initial mass function at  $z = 1.5$ ", *Astronomy and Astrophysics*, 600, L3

(29) MacKenzie, Todd P., Scott, Douglas, Bianconi, Matteo, Clements, David L., Dole, Hervé A., Flores-Cacho, Ines, Guery, David, Kneissl, Ruediger, Lagache, Guilaine, Marleau, Francine R., Montier, Ludovic, Nesvadba, Nicole P. H., Pointecouteau, Etienne, and Soucail, Genevieve (2017), "SCUBA-2 follow-up of Herschel-SPIRE observed Planck overdensities", *Monthly Notices of the Royal Astronomical Society*, 468, 4006

(30) Canameras, R., Nesvadba, N., Kneissl, R., Frye, B., Gavazzi, R., Koenig, S., Le Floc'h, E., Limousin, M., Oteo, I., and Scott, D. (2017), "Planck's dusty GEMS. IV. Star formation and feedback in a maximum starburst at  $z = 3$  seen at 60-pc resolution", *Astronomy and Astrophysics*, 604, A117

(31) Bicknell, Geoffrey V., Mukherjee, Dipanjan, Wagner, Alexander Y., Sutherland, Ralph S., and Nesvadba, Nicole P. H. (2018), "Relativistic jet feedback - II. Relationship to gigahertz peak spectrum and compact steep spectrum radio galaxies", *Monthly Notices of the Royal Astronomical Society*, 475, 3493

(32) Mukherjee, Dipanjan, Wagner, Alexander Y., Bicknell, Geoffrey V., Morganti, Raffaella, Oosterloo, Tom, Nesvadba, Nicole, and Sutherland, Ralph S. (2018), "The jet-ISM interactions in IC 5063", *Monthly Notices of the Royal Astronomical Society*, 476, 80

(33) Lelli, Federico, De Breuck, Carlos, Falkendal, Theresa, Frernali, Filippo, Man, Allison W. S., Nesvadba, Nicole P. H., and Lehnert, Matthew D. (2018), "Neutral versus ionized gas kinematics at  $z \sim 2.6$ : the AGN-host starburst galaxy PKS 0529-549", *Monthly Notices of the Royal Astronomical Society*, 479, 5440

(34) Kneissl, Rudiger, Polletta, Maria del Carmen, Martinache, Clement, Hill, Ryley, Clarenc, Benjamin, Dole, Hervé A., Nesvadba, Nicole P. H., Scott, Douglas, Bethermin, Matthieu, Frye, Brenda, Giard, Martin, Lagache, Guilaine, and Montier, Ludovic (2018), "Using ALMA to resolve the nature of the early star-forming large-scale structure PLCK G073.4-57.5", *A&A submitted, arXiv e-prints, arXiv:1804.06581*

- (35) Canameras, R., Nesvadba, N. P. H., Limousin, M., Dole, H., Kneissl, R., Koenig, S., Le Floc'h, E., Petitpas, G., and Scott, D. (2018), "Planck's dusty GEMS. V. Molecular wind and clump stability in a strongly lensed star-forming galaxy at  $z = 2.2$ ", *Astronomy and Astrophysics*, 620, A60
- (36) Canameras, R., Yang, C., Nesvadba, N. P. H., Beelen, A., Kneissl, R., Koenig, S., Le Floc'h, E., Limousin, M., Malhotra, S., Omont, A., and Scott, D. (2018), "Planck's dusty GEMS. VI. Multi-J CO excitation and interstellar medium conditions in dusty starburst galaxies at  $z = 2\text{-}4$ ", *Astronomy and Astrophysics*, 620, A61
- (37) Nesvadba, N., Canameras, R., Kneissl, R., Koenig, S., Yang, C., Le Floc'h, E., Omont, A., and Scott, D. (2018), "Planck's Dusty GEMS. VII. Atomic carbon and molecular gas in dusty starburst galaxies at  $z=2$  to 4", arXiv e-prints, A&A accepted, arXiv/1812.04653
- (38) Zovaro, Henry R. M., Sharp, Robert, Nesvadba, Nicole P. H., Bicknell, Geoffrey V., Mukherjee, Dipanjan, Wagner, Alexander Y., Groves, Brent, and Krishna, Shreyam (2018), "Jets blowing bubbles in the young radio galaxy 4C 31.04", *MNRAS* accepted, arXiv e-prints, arXiv:1811.08971