

Massimiliano De Pasquale, PhD

Dipartimento of Scienze Matematiche, Fisiche Informatiche e Scienze della Terra
Universita' di Messina, Polo Papardo, Via F. S. D'Alcontres 31, 98166 Messina Italy
e-mail: masdepasquale@unime.it Tel.: +39 (0)90 6765462

Educazione ed Impieghi

2021 – presente: Ricercatore a Tempo Determinato di tipo B **su chiamata** dell'Università di Messina. FIS/05, 02/C1.

2016 – 2021: Assistant Professor all'Università di Istanbul (IU), Dipartimento di Astronomia e Scienze dello Spazio. Contratto rinnovato annualmente.

2015 – 2016: Research Associate – Swift UV/Optical Telescope (UVOT) Instrument Scientist at Mullard Space Science Laboratory, University College London (MSSL-UCL), UK.

2014 – 2015: Posizione post-doctoral (assegnista) per la missione Swift all'Istituto di Astrofisica Spaziale e Fisica Cosmica di Palermo.

2013 – 2014: Research Associate – Swift/UVOT Instrument Scientist at MSSL-UCL.

2011 – 2012: Post-Doctoral Research Scholar alla Università del Nevada, Las Vegas, USA.

2004 – 2011: Swift Post-Doctoral Research Fellow at MSSL-UCL.

2003 – 2004: Assegnista, Istituto di Astrofisica spaziale e Fisica Cosmica di Roma.

2003: Collaborazione professionale esterna con Istituto di Astrofisica Spaziale e Fisica Cosmica di Roma

2003: Attività di insegnamento - Coadiutore didattico corsi Fisica 1 e Fisica 2 presso il Dipartimento di Ingegneria dell'Università degli Studi "Tor Vergata" di Roma

1999 – 2002: Dottorato di ricerca (con borsa) Fisica conseguito presso l'Università di Roma "La Sapienza". Giudizio finale: "ottimo".

1993 – 1999: Laurea in Fisica 110/110 e lode presso l'Università di Messina.

Principali campi di lavoro

Sorgenti cosmiche Gamma-ray Bursts (GRBs): "central engine", Fisica dell'emissione delle prime fasi e specialmente delle fasi successive, struttura e geometria dei getti, connessione tra GRBs e supernovae, uso di queste sorgenti per studiare, dal punto di vista cosmologico, l'ambiente locale e le galassie ospiti dei GRBs, anche ad alto redshift.

Ricerca di controparti elettromagnetiche di sorgenti compatte di onde gravitazionali (GWs). Fondatore e capo del gruppo "Follow-up of GW Transients from Anatolia", con astronomi Turchi.

Capacità tecnico-scientifiche

Riduzione di dati e fotometria: BeppoSAX Medium Energy e Low Energy Concentrator Spectrometers (MECS, LECS), Swift X-ray Telescope (XRT) e UV/Optical Telescope.

Utente proficient degli Ftools software (inclusi specifici tools della missione Swift), compreso Xspec e QDP.

Compiti di osservazione in “real time” ed a successive riprese di GRBs e sorgenti compatte di GWs.

Proficiente in Fortran F77 e Basic. Conoscenza di lavoro di IDL e Python.

Risultati scientifici

Nel complesso, alla fine di settembre 2023 possiedo circa 130 pubblicazioni in cui sono primo autore o co-autore su riviste con referee, tra cui 6 su *Nature* e 2 su *Science*. H-Index di 43, circa 10400 citazioni complessive; fonti: *NASA Astrophysics Data System*. Secondo *Scopus*, sono citato circa 9200 volte ed ho un H-index di 40. Oltre 250 Gamma-ray Burst Coordinates Network Circulars dal 2004.

Membro del Team della missione Swift, consorzi ENGRAVE and STARGATE, ePESSTO+ (gruppo GRB), del Gruppo Italiano per osservazioni di burst nell’ottico (CIBO), collaborazione con il team della missione BeppoSAX, membro di gruppi di lavoro “SWG 2.6: Luminous Extragalactic Transients” e “MWG5.6: Targets of Opportunity” delle missioni ESA ATHENA, del Working Group 4 “Observatory Science” and 5 “Synergy with GWs” della enhanced X-ray Timing and Polarimetry missione e-XTp, “contributing scientist” e membro dei gruppi di lavoro “SWG2: Gravitational waves and multi-messenger Astrophysics” e “SWG1: Exploring the early Universe with GRBs per la missione THESEUS”. Membro della collaborazione GRAvitational Wave Inaf TeAm (GRAWITA).

Proposals approvati in qualita' di Principal Investigator (negli ultimi 7 anni)

Dal 2017 al 2020: T100 TÜBİTAK National Observatory, “Kilonovae as electromagnetic counterparts of gravitational wave detections”

James Clerk Maxwell Telescope (JCMT): “IR observations of the exceptional host of GRB 130907A as a way to shed light on the mechanism of GRB production”, 2017.

Swift/XRT “GRB 150818A as an intermediate event between the low-luminosity, shock break-out powered GRBs and ultra-relativistic, high luminosity GRBs.”, 2015

Swift/XRT: “GRB 150206A and the nature of central engine in GRBs.”, 2015.

XMM AO-14: "Into Unknown Territory: late XMM-Newton observations of GRB 130427A.", 2015

XMM AO-14: "Late X-ray observations to unveil the non-forward shock components in GRB afterglows", 2015-18

XMM AO-17: "Late X-ray observations to unveil non-Forward Shock components in GRB afterglow", 2018-21

Piu' importanti proposals approvati in qualita' di co-Investigator (negli ultimi 7 anni)

Approved proposals as Co-I: Rapid Eye Mount (REM) Telescope, “Prompt emission and early afterglows of gamma-ray bursts”, 100 hours. AOT 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48 (2017-2024).

Approved proposals as Co-I: Rapid Eye Mount (REM) Telescope, “REM contribution to the world-wide search for an electromagnetic counterpart of a gravitational wave trigger”, AOT 48 (2023-24).

Telescopio Nazionale Galileo (TNG), AOT-36, 37 (come DDT), 39, 40, 41, 43, 44, 45, 46, 47, 48, 49 (2017/18, 2018 (come DDT), 2019, 2019/20, 2020, 2021, 2021/22, 2022, 2022/23, 2023, 2023-2024, 2024) su osservazioni di afterglows di GRBs. AOT 47, 48, e 49 costruiscono un “long program proposal”. Partecipazione come membro di CIBO.

Proposal "Follow-up of electromagnetic counterparts of gravitational wave sources at TNG during O4.". Co-I as member of the GRAWITA collaboration. Long-term proposal, AOT47, 48 and 49. 17.5 ore allocate.

Atacama Large Millimiter Array (ALMA), Cycle 0 (2011-2012), “Probing Obscured Star Formation in GRB Host Galaxies.”

ALMA, Cycle 4, 5, 6, 7 (2016/2017, 2017/2018, 2018/2019, 2019/2021), “A precision test of Gamma-ray Burst Afterglow models”.

ALMA, Cycle 7 (2019/2021) “The properties of compact-object mergers detected by LIGO and VIRGO”, Co-I as member of ENGRAVE

ALMA, Cycle 9 (2022/23) “The properties of compact-object mergers detected by LIGO and VIRGO”. Co-I as member of ENGRAVE.

ALMA, Cycle 10 (2023/24). “The properties of compact-object mergers detected by LIGO and VIRGO”. Co-I as member of ENGRAVE.

Very Large Telescope (VLT), Periodi da 102 al 108 (2018-2025) con il goal di studiare le controparti elettromagnetiche di sorgenti di onde gravitazionali, come kilonovae e possibili afterglows. Partecipazione co-I come membro ENGRAVE. Il periodo di osservazione P108 e’ stato esteso fino al termine del run O4 (2025) dei telescopi per onde gravitazionali.

VLT Periodi da 103 a 105 (compresi; 2019-2020) “Hunting for the most exotic gamma-ray bursts: New insights into the transient Universe”. Partecipazione come membro STARGATE

VLT Periodi da 106 a 109 (2020-2022) e da 110 a 113 (2022-24). Long term proposals. Scopo: studiare gli afterglows e l’ambiente circumburst. Partecipazione come membro STARGATE

Hubble Space Telescope (HST) Cicli 26, 27, 28 (2018-2021). “Compact binary mergers: R-process kilonovae and ultra-relativistic jets” (18 orbits in Cycle 28). Co-I come membro collaborazione ENGRAVE.

HST Ciclo 29 (2021-22) “The afterglow and host of GRB 210905A at z=6.3”. Co-I come membro STARGATE.

HST Ciclo 29 e 30 (2021-23) “Identifying gamma-ray bursts at very high redshifts”. Co-I come membro STARGATE.

HST Ciclo 30 (2022-23): “Compact binary mergers: R-process kilonovae and ultra-relativistic jets”, co-I come membro ENGRAVE.

Large Binocular Telescope, co-I of the proposal “Exploring the transient Universe with gamma-ray burst afterglows”, 2017-18.

Large Binocular Telescope, “Probing the Epoch of Reionization with Gamma-Ray Burst”, 2016-17 e 2017-2018.

Large Binocular Telescope, “Exploring the late-time evolution of gamma-ray burst afterglows”, 2017/2018, 2018/19, 2019/21 (extended for COVID), 2021/2022, 2022/23, 2023/24. Co-I in qualita’ di membro di CIBO.

Large Binocular Telescope, Co-I del proposal "Spectroscopic and photometric ToO follow-up of gravitational wave events", 2022-2024, 64 hours, as member of the GRAWITA collaboration

Swift: « Key project: the detection and monitoring of electromagnetic counterparts of gravitational waves sources with Swift in O3» for Cycle 14 (budget: \$100.000).

James Webb Space Telescope (JWST), Proposal "Mapping emission and absorption line metallicities onto the same universal scale", 2022-23, 25 hours.

Ulteriori Responsabilità' ed attività professionali

Abilitazione da parte del Ministero dell'Educazione, Università e Ricerca per poter applicare per posizioni di professore associato in università italiane, valida dal 16/10/2017.

Referee for per *Astronomy & Astrophysics*, *The Astrophysical Journal*, *Proceedings of Science*. Membro dell'Editorial Board of *Galaxies* journal.

Reviewer per: NASA Post-doctoral Program, UK PPARC Particle Physics and Astronomy Research Council Panel (successivamente UK Space and Technology Facility Council), mid-Cycle HST proposals, East Asian Observatory per assegnare tempo macchina al JCMT, Swift Guest Investigator Program.

Membro dello Scientific Organizing Committee (SOC) per la "Gamma-ray Bursts: illuminating the extreme and distant Universe" Symposium at European Week of Astronomy and Space Science (EWASS) 2016, Athens.

Presidente del SOC Chair for the "GRBs, energetic SNe & compact object mergers: the extreme physics of stellar deaths from low to high redshift", Special Session at the EWASS 2019, Lyon.

Progetti, Grants e Awards

2019-2022 PI of the 3-year TÜBITAK Project 119F073 "Understanding the multi-messenger physics of neutron star mergers and gamma-ray bursts". Fondi per circa 430000 Lire Turche (approssimativamente 60000 euro all'epoca), per assunzione di personale e macchinario. "PI-ship" interrotta dal 2021 per fuoriuscita dalla Turchia, continua la consulenza "esterna".

2007-2012 Rolling Grant dal UK Particle Physics and Astronomy Research Council (fondi per 5 years di salario e ricerca).

2018 – 2022 Principal Investigator del Progetto "Study of GRB Physics with the ESA next flagship mission Athena" alla Istanbul University, in collaborazione con l'Università di Amsterdam, con incluse spese per viaggio e pubblicazione. Termina la "PI"-ship formale causa fuoriuscita dalla Turchia, continua la "direzione esterna". Relazione finale consegnata a gennaio 2022.

2021 - Fondi FFABR da parte dell'Università di Messina.

Divulgazione Scientifica (solo ultimi 10 anni)

MSSL Astronomy Blog - "The brightest explosion detected by Swift"; and "The exceptionally long follow-up of the X-ray afterglow of GRB 130427A: what it means for GRB Physics."

"Professor of Astronomy and Space Sciences Massimiliano De Pasquale and colleagues detected gravitational waves in gamma rays" (in Turkish); siti web della IU e della sua Facolta' of Scienze.

Esperienza di insegnamento, tutoring e mentoring (solo gli ultimi 13 anni)

Correlatore alle tesi di Dottorato di Ricerca in Astronomia di Mr. M. Diyaddin Ilhan, presso l'Università di Istanbul, Turchia. Titolo della Tesi: *Study of Gamma-ray Burst Afterglow Emission from Compact Object Mergers that Produce Gravitational Waves*. Difesa con successo ad agosto 2023.

2022 – 2023 - Corsi di Astronomia per studenti di laurea quinquennale ed "Introduzione All'Astrofisica" per studenti dei laurea triennale all'Universita' di Messina (totale: 144 ore / A.A.)

2021 – 2022 Corsi di Astronomia (Astronomia Nautica + Astronomia ed Astrofisica) per studenti di laurea quinquennale all'Universita' di Messina (totale: 96 h / A.A.).

2022 – Tutor della Sig.na Roberta Panto', studente laurea triennale in Fisica presso l'Università di Messina, per un corso di introduzione all'Astrofisica.

2018 – 2021 Insegnamento di Fisica I e II per studenti di laurea triennale presso il Dipartimento di Scienze Forestali e per studenti di laurea triennale al Dipartimento di Astronomia e Scienze Spaziali della Universita' di Istanbul (IU; 48 e 24 h / semestre rispettivamente).

2017 (A.A. 2016/17) – 2018 Insegnamento di Fisica I e II per studenti di laurea triennale al Dipartimento di Astronomia e Scienze Spaziali della IU (36 h / semestre).

2017 (A.A. 2016/17) – 2021 Corso sui GRBs (~12 h) per studenti di laurea e di dottorato al Dipartimento di Astronomia e Scienze Spaziali della IU.

2015. Serie di lezioni sull'Astronomia dei GRBs al Mullard Space Science Laboratory per post-doc auditorium.

2010. Serie di lezioni sull'Astronomia dei GRBs per studenti di Dottorato al Mullard Space Science Laboratory.

Talks and seminars given at conferences and research institutes (last 9 years only; 38 in total)

"Unraveling the energetics of a magnetar-powered burst: GRB 130831A", seminario all'istituto di Astrofisica Spaziale di Milano, 2015.

"GRB 130831A: Rise and demise of a magnetar at $z = 0.5$ ", talk at 14th M. Grossman Meeting, 2015.

"GRB 130831: Rise and fall of a magnetar at $z=0.5$ ", talk at "New Results in X-ray Astronomy" Workshop, 2015, Leicester, UK.

"Challenging the forward shock model with the 80 Ms follow up of the X-ray afterglow of GRB 130427A", talk all'European Week of Astronomy and Space Science, luglio 2016.

"Multi-wavelength observation of long GRBs and host galaxies", solicited talk at the 41st COSPAR Scientific Assembly, luglio-agosto 2016, Istanbul, Turkey (assemblea cancellata).

"The 80 Ms X-ray light-curve of the exceptional GRB 130427A", seminar al Trieste Astrophysical Observatory, Trieste, Italy, settembre 2016.

“The 80 Ms X-ray light-curve of the extraordinary GRB 130427A”, seminar al Dipartimento di Astronomia e Scienze Spaziali della IU, settembre 2016.

“The 80 Ms Follow Up of the X-ray Afterglow of GRB 130427A: Consequences for the Proposed Models and the Forward Shock Scenario”, talk al Eighth Huntsville Gamma-Ray Burst Symposium, Huntsville, USA, ottobre 2016.

“A strong test for the forward shock model in GRBs: the 90 Ms follow up of the X-ray afterglow of GRB 130427A”, talk al “THE X-RAY UNIVERSE 2017”, Roma, giugno 2017

“The GRB130427A afterglow as a test for GRB models”, invited talk al Frascati Workshop 2017 – ‘Multifrequency behaviour of high-energy sources XII’, Palermo, Italy, June 2017 (su invito)

“GRB Afterglows – a review”, invited talk at Frascati Workshop 2019 - “Multifrequency behaviour of high-energy sources XIII”, held in Palermo, Italy, June 2019 (su invito; partecipazione non possibile).

“The z=6.3 GRB 210905A”, invited talk at Frascati Workshop 2023 - “Multifrequency behaviour of high-energy sources XIV”, held in Palermo, Italy, giugno 2023 (su invito).

Pubblicazioni con referee (solo gli ultimi 16 anni).

Holland S., Boyd P., Gorosabel J., ..., **De Pasquale M.**, et al. “Optical, Infrared, and Ultraviolet Observations of the X-Ray Flash XRF 050416A” 2007, AJ, 133, 122.

Schady P., Mason K.O., Page M., De Pasquale M., et al. “Dust and gas in the local environments of Gamma-ray Bursts” 2007, MNRAS 377, 273.

De Pasquale M., Oates S., Page M., et al. “Early afterglow detection in the Swift observations of GRB050801” 2007a, MNRAS 377, 1638.

Page K., Willingale R., Osborne J., ..., **De Pasquale M.**, et al. “GRB 061121: Broadband Spectral Evolution through the Prompt and Afterglow Phases of a Bright Burst” 2007, ApJ, 663, 1125.

De Pasquale M., Oates S., Beardmore A., et al. “Energy injection in GRB afterglows: the cases of Swift GRBs 050401, 050801 and 050802” 2007, “The multicolored landscape of compact objects and their explosive origins”, AIP Conference Proceedings, 924, 437.

Oates S.; Mundell C.; Piranomonte S., ..., **De Pasquale M.**, et al. “Understanding the Nature of Dark Bursts with the Afterglow of GRB 060108” 2007, “The multicolored landscape of compact objects and their explosive origins”, AIP Conference Proceedings, 924, 449.

Oates S., **De Pasquale M.**, Page M., et al. “The two component afterglow of Swift GRB050802” 2007, MNRAS 380, 270.

Schady P.; **De Pasquale M.**, Page M., et al. “Extreme properties of GRB061007: a highly energetic or a highly collimated burst?” 2007, MNRAS 380, 1041.

Poole T., Breeveld A., Page M., ..., **De Pasquale M.**, et al. “Photometric calibration of the Swift ultraviolet/optical telescope” 2008, MNRAS, 383, 627.

Starling R., O'Brien P., Willingale R., ... **De Pasquale M.**, et al. “Swift captures the spectrally evolving prompt emission of GRB070616” 2008, MNRAS, 384, 504.

Schady P., **De Pasquale M.**, Page M., et al. "Extreme Properties of GRB 061007: a highly energetic or a highly collimated burst?" 2008 "GAMMA-RAY BURSTS 2007" AIP Conference Proceedings, 1000, 200.

De Pasquale M., Oates S.; Page M., et al. "Challenging the current model for the GRB canonical afterglow lightcurve." 2008, "GAMMA-RAY BURSTS 2007" AIP Conference Proceedings, 1000, 463.

Schady P., Mason K. O., Page M., **De Pasquale, M.**, et al. "Gas-to-Dust Ratios in GRB Host Galaxies" 2008, "GAMMA-RAY BURSTS 2007" AIP Conference Proceedings, 1000, 505.

Soderberg A., Berger E., Page K., ..., **De Pasquale M.**, et al. "An extremely luminous X-ray outburst at the birth of a supernova" 2008, Nature, 453, 469.

Morgan A., Vanden Berk D., Roming P., ..., **De Pasquale M.**, et al. "Optimal Co-Addition of Imaging Data for Rapidly Fading Gamma-ray Burst Afterglows" 2008, ApJ, 683, 913.

Roming P., Koch T., Oates S., ... ; **De Pasquale M.**, et al. "The First Swift Ultraviolet/Optical Telescope GRB Afterglow Catalog" 2009, ApJ, 690, 163.

De Pasquale M., Evans P., Oates S., "Jet breaks at the end of the slow decline phase of Swift light curves" 2009, MNRAS, 392, 153.

De Pasquale M., Evans P., Oates S., et al. "Jet breaks at the end of the plateau phase of Swift GRB lightcurves" 2009, "Probing Stellar Populations out to the distant Universe", AIP Conference Proceedings, 1111, 379.

Oates, S., Page M., Schady, P., **De Pasquale M.**, et al. "A statistical study of Gamma-ray Burst afterglow measured by the Swift Ultraviolet Optical Telescope" 2009, MNRAS, 395, 490.

Kuin N., Landsman W., Page M., ..., **De Pasquale M.**, et al. "GRB 081203A: Swift UVOT captures the earliest ultraviolet spectrum of a gamma-ray burst" 2009, MNRAS Letters, 395, 21.

Salvaterra R., Della Valle M., Campana, S., ..., **De Pasquale M.**, et al. "GRB 090423 reveals an exploding star at the epoch of re-ionization" 2009, Nature, 461, 1258.

Curran P., Evans P., **De Pasquale M.**, et al. "On the electron energy distribution index of Swift GRBs" 2010, ApJL, 716, 135.

De Pasquale M., Schady P., ..., Fermi GBM and LAT collaborations "Swift and Fermi observations of the early afterglow of the short Gamma-Ray Burst 090510" 2010, ApJ Letters, 709, 146.

Schady P., Page M., Oates S., ..., **De Pasquale M.**; et al. "Dust and Metal Column Densities in Gamma-ray Burst Host Galaxies" 2010, MNRAS, 401, 2773.

Starling R., Wiersema K., Levan A., ..., **De Pasquale M.**, et al. "Discovery of the nearby long, soft GRB 100316D with an associated supernova" 2011, MNRAS, 411, 2792.

Swenson C.; Maxham A.; Roming P., ..., **De Pasquale M.** "GRB 090926A and Bright Late-time Fermi Large Area Telescope Gamma-ray Burst Afterglows" 2010, ApJL 718, 14.

Breeveld A. A., Curran P.A., Hoversten E.A., ..., **De Pasquale, M.**, et al. "Further Calibration of the Swift ultraviolet/optical telescope" 2010, MNRAS, 406, 1687.

De Pasquale M., Oates S., Roming P., Page M., et al. on behalf of the Swift/UVOT team "Chromatic evolution in GRB afterglows" 2010, "The Shocking Universe", Italian Physical Society Conference Proceedings, 102, 141.

Oates S., Page M., Schady P., **De Pasquale M.**, et al. "A Statistical Comparison of the Optical/UV and X-ray Afterglows of Gamma-ray Bursts using the Swift Ultra-violet Optical and X-ray Telescopes" 2011, MNRAS, 412, 561.

Marshall F., Antonelli L.A., Burrows D., ..., **De Pasquale M.**, et al. "The Late Peaking Afterglow of GRB 100418A" 2011, ApJ, 727, 132.

Curran P., Starling R., van der Horst A., ..., **De Pasquale M.**, et al. "Testing the blast wave model with Swift GRBs" 2011, AdSR, 47, 1362.

Den Herder J., Piro L., Ohashi T., ..., **De Pasquale M.**, et al. "ORIGIN: metal creation and evolution from the cosmic dawn" 2012, Experimental Astronomy, Springer.

Racusin J., Oates S., Schady P., ..., **De Pasquale M.**, et al. "Fermi and Swift Gamma-ray Burst Afterglow Population Studies" 2011, ApJ, 738, 138.

De Pasquale M., Evans P., Oates, S., et al. "Can a double component outflow explain the X-ray and optical lightcurves of Swift Gamma-Ray Bursts?" 2011, AdSR, 48, 1411.

Thöne C., de Ugarte Postigo A., Fryer C., ..., **De Pasquale, M.**, et al. "The unusual gamma-ray burst GRB101225A from a helium star merger at redshift 0.33" 2011, Nature, 480, 72.

Schady P., Dwelly T., Page M., ..., **De Pasquale, M.**, et al. "The dust extinction curves of gamma-ray burst host galaxies" 2012, A&A, 537, 15.

Holland S., **De Pasquale M.**, et al. "GRB 081029: A Gamma-ray Burst with a Multi-component Afterglow" 2012, ApJ, 745, 41.

Brown P. J., Dawson K.S., **De Pasquale M.**, et al. "A Swift Look at SN 2011fe: The Earliest Ultraviolet Observations of a Type Ia Supernova" 2012, ApJ, 753, 22.

Zheng W.; Shen R. F., Sakamoto T., ..., **De Pasquale M.**, et al. "Panchromatic observations of the textbook GRB 110205A: constraining physical mechanisms of prompt emission and afterglow" 2012, ApJ, 751, 90.

Oates S., Bayless, A., Stritzinger, M., ..., **De Pasquale, M.**, et al. "Multiwavelength observations of the Type I Ib supernova 2009mg" 2012, MNRAS, 412, 561.

De Pasquale M., Kuin N., Oates S., et al. "GRB100814A as a member of the growing set of bursts with sudden optical rebrightening", Proceedings of "Fermi-Swift 2012 GRB conference" 2012, PoS 68.

Oates S., Page M., **De Pasquale M.** "An intrinsic correlation between GRB optical/UV afterglow brightness and decay rate", Proceedings of "Fermi-Swift 2012 GRB conference" 2012, PoS 60.

Oates, S., Page, M., **De Pasquale, M.** "A correlation between intrinsic brightness and average decay rate of Swift UVOT GRB optical/UV light curves" 2012, MNRAS Letters, 426, 86.

Swenson, C., Roming, P., **De Pasquale, M.**, et al. "GRB Flares: UV/Optical Flaring (Paper I)" 2013, ApJ, 774, 2.

De Pasquale M., Schulze S., Oates S., et al. "Physical properties of rapidly-decaying afterglows" 2013, Proc. of "Gamma-ray Bursts: 15 years of GRB afterglows", Spain. EAS Pub. Series, Vol 61, 217.

Stratta G.; Gendre B; Atteia J.L., ..., **De Pasquale M.**, et al. "The ultra-long GRB 111209A - II. Prompt to afterglow and afterglow properties" 2013, ApJ, 779, 66.

Page M.J., Kuin N.P.M.,, **De Pasquale M.**, et al. "The use and calibration of read-out streaks to increase the dynamic range of the Swift Ultraviolet/Optical Telescope" 2013, MNRAS, 436, 1684.

Maselli A., Melandri A., Nava L.,, **De Pasquale M.**, et al. "GRB130427A: a Nearby Ordinary Monster" 2014, Science, 343, 48.

de Ugarte Postigo A., Thoene C., Rowlinson A.,, **De Pasquale M.**, et al. "The host galaxy and environment of a neutron star merger" 2014, A&A, 563, 62.

M. De Pasquale, N. P. Kuin, S. Oates, et al. "The optical rebrightening of GRB100814A: an interplay of forward and reverse shocks?" 2015, MNRAS, 449, 1024.

Brown P., Kuin P., ... **De Pasquale M.**, et al. "Ultraviolet Observations of Super-Chandrasekhar Mass Type Ia Supernova Candidates with Swift UVOT" 2014, ApJ, 787, 29.

S. R. Oates, J. Racusin, **M. De Pasquale**, et al., "Exploring the behaviour of long gamma-ray bursts with intrinsic afterglow correlations" 2014, Proceedings of Science, Proceedings of Swift: 10 Years of Discovery (SWIFT 10), 94.

Symeonidis M., Oates S. R., **De Pasquale M.**, et al. "Herschel/PACS observations of the host galaxy of GRB 031203" 2014, MNRAS Letters, 443, 124.

P. Brown, M. T. Smitka, ..., **M. De Pasquale**, et al. Swift Ultraviolet Observations of Supernova 2014J in M82: Large Extinction from Interstellar Dust 2015, ApJ, 805, 74.

Kuin, N. P. M.; Landsman, W. ; Breeveld, A. A.; ...; **De Pasquale, M.** "Calibration of the Swift-UVOT ultraviolet and visible grisms" 2015, MNRAS, 449, 2514.

M. De Pasquale, S. R. Oates, J. L. Racusin, et al. "GRB 130831A: birth and death of a magnetar at z=0.5" 2015, Proceedings of Science, Proc. of "Swift: 10 Years of Discovery" (Swift 10), 071.

S. R. Oates, J. L. Racusin, **M. De Pasquale**, et al. "Exploring the canonical behaviour of long gamma-ray bursts using an intrinsic multi-wavelength afterglow correlation." 2015, MNRAS, 453, 4121.

M. De Pasquale, S. Oates; J. Racusin; et al. "The central engine of GRB 130831A and the energy breakdown of a relativistic explosion" 2016, MNRAS, 455, 1027.

J. L. Racusin, S. Oates, **M. De Pasquale**, D. Kocevski "A Correlation between the Intrinsic Brightness and Average Decay Rate of Gamma-Ray Burst X-Ray Afterglow Light Curves" 2016, ApJ, 826, 45.

M. De Pasquale, M. Page, D. Kann, et al. "The 80 Ms follow-up of the X-ray afterglow of GRB 130427A challenges the standard forward shock model" 2016, MNRAS 462, 1111.

D'Aì, A., Evans P. A., Burrows D. N., ..., **De Pasquale, M.**, et al. "Evidence for the magnetar nature of 1E 161348-5055 in RCW 103" 2016, MNRAS, 463, 2394.

De Pasquale M.; Page M.; Kann D. A.; et al. "Challenging the Forward Shock Model with the 80 Ms Follow up of the X-ray Afterglow of Gamma-Ray Burst 130427A" 2017, Proc. of "EWASS 2016", Galaxies, 5, 6.

Oates, S., Racusin, J., **De Pasquale M.**, Kocevski D., Page M., et al. "Exploring the Behaviour of Long Gamma-Ray Bursts with Intrinsic Afterglow Correlations: log L200s - α>200s" 2017, Proc. of "EWASS 2016", Galaxies, 5, 4.

Roming P. W. A.; Koch T.S.; Oates S.R.; ... **De Pasquale, M.**, et al. "A Large Catalog of Homogeneous Ultra-Violet/Optical GRB Afterglows: Temporal and Spectral Evolution" 2017, ApJS, 228, 13.

S. Kim, S. Schulze, ... **M. De Pasquale**, et al. "ALMA and GMRT constraints on the off-axis gamma-ray burst 170817A from the binary neutron star merger GW170817" 2017, ApJ Letters, 850, 21

Abbott B.P., Abbott R., ..., **De Pasquale M.**, et al. "Multi-messenger Observations of a Binary Neutron Star Merger", 2017, ApJL, 848, 12

Evans P., Cenko S.B., Kennea J.A., ..., **De Pasquale M.**, et al. "Swift and NuSTAR observations of GW170817: Detection of a blue kilonova" 2017, Science, 358, 1565.

Schulze S.; Krühler T.; Leloudas G., ..., **De Pasquale M.**, et al. "Cosmic evolution and metal aversion in superluminous supernova host galaxies" 2018, MNRAS 473, 1258

M. De Pasquale, M. Page, D. Kann, et al. "GRB 130427A afterglow: a test for GRB models" 2018, Proceedings of Science, Volume 306, Proc. of "XII Multifrequency Behaviour of High Energy Cosmic Sources Workshop (MULTIF2017)".

Amati L., O'Brien P., Götz D., ..., **De Pasquale M.**, ..., et al. "The THESEUS space mission concept: science case, design and expected performances" 2018, AdSpR, 62, 191.

Stratta G., Ciolfi R., Amati L., ..., **De Pasquale M.**, et al. "THESEUS: a key space mission concept for Multi-Messenger Astrophysics" 2018, AdSpR, 62, 662.

D'Elia V., Campana S., D'Ai A., **De Pasquale M.**, Emery S., et al., "GRB 171205 / SN 2017iuk: a local low-luminosity gamma-ray burst" 2018, A&A, 619, 66.

De Ugarte Postigo A., Thoene C., Bolmer J., ..., **De Pasquale, M.**, et al. "X-Shooter and ALMA spectroscopy of GRB 161023A – A study of metals and molecules in the line of sight towards a luminous GRB" 2018, A&A 620, 119.

Resmi L., Schulze S., Ishwara-Chandra C.-H., ..., **De Pasquale M.**, et al. " Low frequency view of GW 170817/GRB 170817A with the Giant Metrewave Radio Telescope" 2018, ApJ 867, 57.

Oates S.R., Motta S., Beardmore A. P., ... **De Pasquale M.**, et al. "Swift UVOT observations of the 2015 outburst of V404 Cygni" 2019, MNRAS, 488, 4843.

In't Zand J. J. M., Bozzo E., Qu J.L., ... **De Pasquale M.**, et al. "Observatory science with eXTP", 2019, SCPMA 62, 29506

N. P. M. Kuin, K. Wu, S. Oates, ..., **M. De Pasquale, et al.** "Swift spectra of AT2018cow: A White Dwarf Tidal Disruption Event?" 2019, MNRAS, 487, 2505

M. De Pasquale "The host galaxies of short GRBs as probes of their progenitor properties" Galaxies Special Issue "Observations and Theory of Short GRBs at the Dawn of the Gravitational Wave Era" 2019, Galaxies (Special Issue), 7, 30

S. Emery, M. Page, A. Breeveld, ..., **M. De Pasquale**, et al. "The early optical afterglow and non-thermal components of GRB 060218" 2019, MNRAS 484, 5484.

Ashall C.; Mazzali P.A., Pian E., ... **De Pasquale M.**, et al. "GRB 161219B/SN2016jca: a powerful stellar collapse" 2019, MNRAS, 487, 5824

Page, M. J., Oates, S. R., **De Pasquale, M.**, et al. "A study of gamma-ray burst afterglows as they first come into view of the Swift Ultraviolet and Optical Telescope" 2019, MNRAS, 488, 2855.

Ilhan, M. D. & **De Pasquale, M.** "Two-component jet of GRB 170817 with BOXFIT at 80 Mpc" 2019, AIP Conference Proceedings, 2178, 030020

Heintz K.E., Bolmer J., Ledoux C., ..., **De Pasquale M.**, et al. "New constraints on the physical conditions of the H₂ – bearing GRB-host damped Lyman- α absorbers" 2019, A&A 629, 131.

Klingler N. J.; Kennea J. A., Evans P., **De Pasquale M.**, et al. "Swift-XRT Follow-up of Gravitational-wave Triggers in the Second Advanced LIGO/Virgo Observing Run" 2019, ApJS, 245, 15.

MAGIC collaboration, ..., **De Pasquale M.**, et al. "Observation of inverse Compton emission from a long γ -ray burst" 2019, Nature, 575, 459.

Melandri, A., Malesani D. B., Izzo L., ..., **De Pasquale M.**, et al. "GRB 171010A/SN 2017htp: a GRB-SN at z = 0.33" 2020, MNRAS 490, 5366.

de Ugarte Postigo, A.; Thöne C. C.; Martín S., ..., **De Pasquale M.**, et al. "GRB 190114C in the nuclear region of an interacting galaxy. A detailed host analysis using ALMA, the HST, and the VLT" 2020, A&A, 633, 68.

Page K.L.; Evans P.A.; Tohuvavohu A., ..., **De Pasquale M.** et al. "Swift-XRT follow-up of gravitational wave triggers during the third aLIGO/Virgo observing run" 2020, MNRAS, 499, 3459.

The Fermi team, ... **De Pasquale M.**, et al. "Fermi and Swift Observations of GRB 190114C: Tracing the Evolution of High-energy Emission from Prompt to Afterglow" 2020, ApJ, 890, 9.

Klingler N.J.; Lien A.; Oates S.R., ..., **De Pasquale M.**, et al., "Swift Multi-wavelength follow-up of LVC S200224ca and the implications for Binary Black Hole Mergers" 2021, ApJ, 907, 97.

ENGRAVE team "Observational constraints on the optical and near-infrared emission from the neutron star-black hole binary merger S190814bv" 2020, A&A, 643, 113.

J.-B. Vielfaure, S. D. Vergani, J. Japelj, ..., **M. De Pasquale**, et al. "Lyman continuum leakage in faint star-forming galaxies at redshift z = 3 - 3.5 probed by gamma-ray bursts" 2020, A&A, 614, 30.

Oates S.R., Marshall F.E., Breeveld A.A., ..., **De Pasquale M.**, et al. "Swift-UVOT follow-up of Gravitational Wave Alerts in the O3 era" 2021, MNRAS, 507, 1296

Tanvir N., Le Floc'h E., Christensen L., ..., **De Pasquale M.**, et al. "Exploration of the high-redshift universe enabled by THESEUS" 2021, Experimental Astronomy, 52, 219

Ciolfi, R., Stratta, G., Branchesi, M., ..., **De Pasquale, M.**, et al., "Multi-messenger astrophysics with THESEUS in the 2030", 2021, Experimental Astronomy, 52, 245

Gupta R., Oates S.R., Pandey S. B., ..., **De Pasquale M.**, et al. "GRB 140102A: insight into prompt spectral evolution and early optical afterglow emission" 2021, MNRAS 505, 4086

Melandri, A., Rizzo, L., Pian E., ..., **De Pasquale, M.**, et al. "The supernova of the MAGIC gamma-ray burst GRB 190114", 2022, A&A, 659, 39

Rossi A., Rothberg B., Palazzi E., ..., **De Pasquale M.**, et al "The peculiar short-duration GRB 200826A and its supernova", 2022, ApJ, 932, 1

Rossi A., Rothberg B., Palazzi E., ..., **De Pasquale M.**, et al., "A blast from the infant Universe: the very high-z GRB 210905A", 2022, A&A, 665, 125

Wang X.-G., Chen Y.-Z., Huang X.-L., ... **De Pasquale M.**, et al. "A study of afterglow electromagnetic cascade radiation", 2022, The Astrophysical Journal, 939, 39

Rastinejad J.C., Gompertz B.J., Levan,A.J, ..., **De Pasquale, M.**, et al. "A kilonova following a long-duration gamma-ray burst at 350 Mpc", 2022, Nature, 612, 223.

Ferro M., Bravo R., D'Avanzo P., ..., **De Pasquale M.**, et al. "A search for the afterglows, kilonovae, and host galaxies of two short GRBs: GRB 211106A and GRB 211227A", 2023, accepted for publication in Astronomy & Astrophysics.

Levan A.J.; Lamb G. P., Schneider B., ..., **De Pasquale M.**, et al. "The first James Webb Space Telescope of a GRB afterglow: no bright supernova in observations of the brightest GRB of all time, GRB 221009A", 2023, The Astrophysical Journal Letters, 946, 28.

Williams M.A., Kennea J.A, Dichiara S., ..., **De Pasquale M.**, et al. "GRB 221009A: Discovery of an exceptionally rare Nearby and Energetic Gamma-Ray Burst", 2023, The Astrophysical Journal Letters, 946, 24.

Saccardi A., Vergani S.D., De Cia A., ..., **De Pasquale M.**, et al. "Dissecting the interstellar medium of a z=6.3 galaxy. X-shooter spectroscopy and HST imaging of the afterglow and environment of the Swift GRB 210905A", 2023, Astronomy & Astrophysics, 671, 84.

de Wet S., Izzo L., Groot P. J., ..., **De Pasquale M.**, et al. "The ultra long GRB 220627A at z = 3.08", 2023, accepted for publication in Astronomy & Astrophysics.

Heintz K. E., De Cia A., Thoene C. C., ..., **De Pasquale M.**, et al. "The cosmic build-up of dust and metals. Accurate abundances from GRB-selected star-forming galaxies at $1.7 < z < 6.3$ ", 2023, accepted for publication in Astronomy & Astrophysics. ArXiv:2308.14812

Con referee, ma in lingua Turca soltanto:

M. Diyaddin İlhan, T. Güver, and **M. De Pasquale** "Determination of Gamma-ray Burst Afterglow Physical Parameters", 2023, Turkish Journal of Astronomy and Astrophysics, 4, 39.