

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

## References

- [1] Abbott, R., T. D. Abbott, S. Abraham, F. Acernese, K. Ackley, C. Adams, R. X. Adhikari, V. B. Adya, C. Affeldt, M. Agathos, K. Agatsuma, N. Aggarwal, O. D. Aguiar, A. Aich, L. Aiello, A. Ain, P. Ajith, G. Allen, A. Allocca, P. A. Altin, A. Amato, S. Anand, A. Ananyeva, S. B. Anderson, W. G. Anderson, S. V. Angelova, S. Ansoldi, S. Antier, S. Appert, K. Arai, M. C. Araya, J. S. Areeda, M. Arène, N. Arnaud, S. M. Aronson, Y. Asali, S. Ascenzi, G. Ashton, M. Assiduo, S. M. Aston, P. Astone, F. Aubin, P. Aufmuth, K. AultONeal, C. Austin, V. Avendano, S. Babak, P. Bacon, F. Badaracco, M. K. M. Bader, S. Bae, A. M. Baer, J. Baird, F. Baldaccini, G. Ballardin, S. W. Ballmer, A. Bals, A. Balsamo, G. Baltus, S. Banagiri, D. Bankar, R. S. Bankar, J. C. Barayoga, C. Barbieri, B. C. Barish, D. Barker, K. Barkett, P. Barneo, F. Barone, B. Barr, L. Barsotti, M. Barsuglia, D. Barta, J. Bartlett, I. Bartos, R. Bassiri, A. Basti, M. Bawaj, J. C. Bayley, M. Bazzan, B. Bécsy, M. Bejger, I. Belahcene, A. S. Bell, D. Beniwal, M. G. Benjamin, J. D. Bentley, F. Bergamin, B. K. Berger, G. Bergmann, S. Bernuzzi, C. P. L. Berry, D. Bersanetti, A. Bertolini, J. Betzwieser, R. Bhandare, A. V. Bhandari, A. Bianchi, J. Bidler, E. Biggs, I. A. Bilenko, G. Billingsley, R. Birney, O. Birnholtz, S. Biscans, M. Bischi, S. Biscoveanu, A. Bisht, G. Bissenbayeva, M. Bitossi, M. A. Bizouard, J. K. Blackburn, J. Blackman, C. D. Blair, D. G. Blair, R. M. Blair, F. Bobba, N. Bode, M. Boer, Y. Boetzel, G. Bogaert, F. Bondu, E. Bonilla, R. Bonnand, P. Booker, B. A. Boom, R. Bork, V. Boschi, S. Bose, V. Bossilkov, J. Bosveld, Y. Bouffanais, A. Bozzi, C. Bradaschia, P. R. Brady, A. Bramley, M. Branchesi, J. E. Brau, M. Breschi, T. Briant, J. H. Briggs, F. Brighenti, A. Brillet, M. Brinkmann, P. Brockill, A. F. Brooks, J. Brooks, D. D. Brown, S. Brunett, G. Bruno, R. Bruntz, A. Buikema, T. Bulik, H. J. Bulten, A. Buonanno, D. Buskulic, R. L. Byer, M. Cabero, L. Cadonati, G. Cagnoli, C. Cahillane, J. C. Bustillo, J. D. Callaghan, T. A. Callister, E. Calloni, J. B. Camp, M. Canepa, G. C. Santoro, K. C. Cannon, H. Cao, J. Cao, G. Carapella, F. Carbognani, S. Caride, M. F. Carney, G. Carullo, T. L. Carver, J. C. Diaz, C. Casentini, J. Castañeda, S. Caudill, M. Cavaglià, F. Cavalier, R. Cavalieri, G. Celli, P. Cerdá-Durán, E. Cesarini, O. Chaibi, K. Chakravarti, C. Chan, M. Chan, S. Chao, P. Charlton, E. A. Chase, E. Chassande-Mottin, D. Chatterjee, M. Chaturvedi, H. Y. Chen, X. Chen, Y. Chen, H. P. Cheng, C. K. Cheong, H. Y. Chia, F. Chiadini, R. Chierici, A. Chincarini, A. Chiummo, G. Cho, H. S. Cho, M. Cho, N. Christensen, Q. Chu, S. Chua, K. W. Chung, S. Chung, G. Ciani, P. Ciecielag, M. Cieślar, A. A. Ciobanu, R. Ciolfi, F. Cipriano, A. Cirone, F. Clara, J. A. Clark, P. Clearwater, S. Clesse, F. Cleva, E. Coccia, P. F. Cohadon, D. Cohen, M. Colleoni, C. G. Collette, C. Collins, M. Colpi, M. Constancio, L. Conti, S. J. Cooper, P. Corban, T. R. Corbitt, I. Cordero-Carrión, S. Corezzi, K. R. Corley, N. Cornish, D. Corre, A. Corsi, S. Cortese, C. A. Costa, R. Cotesta, M. W. Coughlin, S. B. Coughlin, J. P. Coulon, S. T. Countryman, P. Couvares, P. B. Covas, D. M. Coward, M. J. Cowart, D. C. Coyne, R. Coyne, J. D. E. Creighton, T. D. Creighton, J. Cripe, M. Croquette, S. G. Crowder, J. R. Cudell, T. J. Cullen, A. Cumming, R. Cummings, L. Cunningham, E. Cuoco, M. Curylo, T. Dal Canton, G. Dálya, A. Dana, L. M. Daneshgaran-Bajastani, B. D'Angelo, S. L. Danilishin, S. D'Antonio, K. Danzmann, C. Darsow-Fromm, A. Dasgupta, L. E. H. Datrier, V. Dattilo, I. Dave, M. Davier, G. S. Davies, D. Davis, E. J. Daw, D. DeBra, M. Deenadayalan, J. Degallaix, M. De Laurentis, S. Deléglise, M. Delfavero,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

N. De Lillo, W. Del Pozzo, L. M. DeMarchi, V. D'Emilio, N. Demos, T. Dent, R. De Pietri, R. De Rosa, C. De Rossi, R. DeSalvo, O. de Varona, S. Dhurandhar, M. C. Díaz, M. Diaz-Ortiz, T. Dietrich, L. Di Fiore, C. Di Fronzo, C. Di Giorgio, F. Di Giovanni, M. Di Giovanni, T. Di Girolamo, A. Di Lieto, B. Ding, S. Di Pace, I. Di Palma, F. Di Renzo, A. K. Divakarla, A. Dmitriev, Z. Doctor, F. Donovan, K. L. Dooley, S. Doravari, I. Dorrington, T. P. Downes, M. Drago, J. C. Driggers, Z. Du, J. G. Ducoin, P. Dupej, O. Durante, D. D'Urso, S. E. Dwyer, P. J. Easter, G. Eddolls, B. Edelman, T. B. Edo, O. Edy, A. Effler, P. Ehrens, J. Eichholz, S. S. Eikenberry, M. Eisenmann, R. A. Eisenstein, A. Ejlli, L. Errico, R. C. Essick, H. Estelles, D. Estevez, Z. B. Etienne, T. Etzel, M. Evans, T. M. Evans, B. E. Ewing, V. Fafone, S. Fairhurst, X. Fan, S. Farinon, B. Farr, W. M. Farr, E. J. Fauchon-Jones, M. Favata, M. Fays, M. Fazio, J. Feicht, M. M. Fejer, F. Feng, E. Fenyvesi, D. L. Ferguson, A. Fernandez-Galiana, I. Ferrante, E. C. Ferreira, T. A. Ferreira, F. Fidecaro, I. Fiori, D. Fiorucci, M. Fishbach, R. P. Fisher, R. Fittipaldi, M. Fitz-Axen, V. Fiumara, R. Flaminio, E. Floden, E. Flynn, H. Fong, J. A. Font, P. W. F. Forsyth, J. D. Fournier, S. Frasca, F. Frasconi, Z. Frei, A. Freise, R. Frey, V. Frey, P. Fritschel, V. V. Frolov, G. Fronzè, P. Fulda, M. Fyffe, H. A. Gabbard, B. U. Gadre, S. M. Gaebel, J. R. Gair, S. Galaudage, D. Ganapathy, S. G. Gaonkar, C. García-Quirós, F. Garufi, B. Gateley, S. Gaudio, V. Gayathri, G. Gemme, E. Genin, A. Gennai, D. George, J. George, L. Gergely, S. Ghonge, A. Ghosh, A. Ghosh, S. Ghosh, B. Giacomazzo, J. A. Giaime, K. D. Giardina, D. R. Gibson, C. Gier, K. Gill, J. Glanzer, J. Griesmer, P. Godwin, E. Goetz, R. Goetz, N. Gohlke, B. Goncharov, G. González, A. Gopakumar, S. E. Gossan, M. Gosselin, R. Gouaty, B. Grace, A. Grado, M. Granata, A. Grant, S. Gras, P. Grassia, C. Gray, R. Gray, G. Greco, A. C. Green, R. Green, E. M. Gretarsson, H. L. Griggs, G. Grignani, A. Grimaldi, S. J. Grimm, H. Grote, S. Grunewald, P. Gruning, G. M. Guidi, A. R. Guimaraes, G. Guixé, H. K. Gulati, Y. Guo, A. Gupta, A. Gupta, P. Gupta, E. K. Gustafson, R. Gustafson, L. Haegel, O. Halim, E. D. Hall, E. Z. Hamilton, G. Hammond, M. Haney, M. M. Hanke, J. Hanks, C. Hanna, M. D. Hannam, O. A. Hannuksela, T. J. Hansen, J. Hanson, T. Harder, T. Hardwick, K. Haris, J. Harms, G. M. Harry, I. W. Harry, R. K. Hasskew, C. J. Haster, K. Haughian, F. J. Hayes, J. Healy, A. Heidmann, M. C. Heintze, J. Heinze, H. Heitmann, F. Hellman, P. Hello, G. Hemming, M. Hendry, I. S. Heng, E. Hennes, J. Hennig, M. Heurs, S. Hild, T. Hinderer, S. Y. Hoback, S. Hochheim, E. Hofgard, D. Hofman, A. M. Holgado, N. A. Holland, K. Holt, D. E. Holz, P. Hopkins, C. Horst, J. Hough, E. J. Howell, C. G. Hoy, Y. Huang, M. T. Hübner, E. A. Huerta, D. Huet, B. Hughey, V. Hui, S. Husa, S. H. Huttner, R. Huxford, T. Huynh-Dinh, B. Idzkowski, A. Iess, H. Inchauspe, C. Ingram, G. Intini, J. M. Isac, M. Isi, B. R. Iyer, T. Jacqmin, S. J. Jadhav, S. P. Jadhav, A. L. James, K. Jani, N. N. Jantthalur, P. Jaradowski, D. Jariwala, R. Jaume, A. C. Jenkins, J. Jiang, G. R. Johns, A. W. Jones, D. I. Jones, J. D. Jones, P. Jones, R. Jones, R. J. G. Jonker, L. Ju, J. Junker, C. V. Kalaghatgi, V. Kalogera, B. Kamai, S. Kandhasamy, G. Kang, J. B. Kanner, S. J. Kapadia, S. Karki, R. Kashyap, M. Kasprzack, W. Kastaun, S. Katsanevas, E. Katsavounidis, W. Katzman, S. Kaufer, K. Kawabe, F. Kéfélian, D. Keitel, A. Keivani, R. Kennedy, J. S. Key, S. Khadka, F. Y. Khalili, I. Khan, S. Khan, Z. A. Khan, E. A. Khazanov, N. Khetan, M. Khursheed, N. Kijbunchoo, C. Kim, G. J. Kim, J. C. Kim, K. Kim, W. Kim, W. S. Kim, Y. M. Kim, C. Kimball, P. J. King, M. Kinley-Hanlon, R. Kirchhoff, J. S. Kissel, L. Kleybolte, S. Klimenko, T. D. Knowles, E. Knyazev, P. Koch, S. M. Koehlenbeck,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

G. Koekoek, S. Koley, V. Kondrashov, A. Kontos, N. Koper, M. Korobko, W. Z. Koorth, M. Kovalam, D. B. Kozak, V. Kringle, N. V. Krishnendu, A. Królak, N. Krupinski, G. Kuehn, A. Kumar, P. Kumar, R. Kumar, R. Kumar, S. Kumar, L. Kuo, A. Kutynia, B. D. Lackey, D. Laghi, E. Lalande, T. L. Lam, A. Lamberts, M. Landry, B. B. Lane, R. N. Lang, J. Lange, B. Lantz, R. K. Lanza, I. La Rosa, A. Lartaux-Vollard, P. D. Lasky, M. Laxen, A. Lazzarini, C. Lazzaro, P. Leaci, S. Leavey, Y. K. Lecoeuche, C. H. Lee, H. M. Lee, H. W. Lee, J. Lee, K. Lee, J. Lehmann, N. Leroy, N. Letendre, Y. Levin, A. K. Y. Li, J. Li, K. li, T. G. F. Li, X. Li, F. Linde, S. D. Linker, J. N. Linley, T. B. Littenberg, J. Liu, X. Liu, M. Llorens-Monteagudo, R. K. L. Lo, A. Lockwood, L. T. London, A. Longo, M. Lorenzini, V. Loriette, M. Lormand, G. Losurdo, J. D. Lough, C. O. Lousto, G. Lovelace, H. Lück, D. Lumaca, A. P. Lundgren, Y. Ma, R. Macas, S. Macfoy, M. MacInnis, D. M. Macleod, I. A. O. MacMillan, A. Macquet, I. Magaña Hernandez, F. Magaña-Sandoval, R. M. Magee, E. Majorana, I. Maksimovic, A. Malik, N. Man, V. Mandic, V. Mangano, G. L. Mansell, M. Manske, M. Mantovani, M. Mapelli, F. Marchesoni, F. Marion, S. Márka, Z. Márka, C. Markakis, A. S. Markosyan, A. Markowitz, E. Maros, A. Marquina, S. Marsat, F. Martelli, I. W. Martin, R. M. Martin, V. Martinez, D. V. Martynov, H. Masalehdan, K. Mason, E. Massera, A. Masserot, T. J. Massinger, M. Masso-Reid, S. Mastrogiovanni, A. Matas, F. Matichard, N. Mavalvala, E. Maynard, J. J. McCann, R. McCarthy, D. E. McClelland, S. McCormick, L. McCuller, S. C. McGuire, C. McIsaac, J. McIver, D. J. McManus, T. McRae, S. T. McWilliams, D. Meacher, G. D. Meadors, M. Mehmet, A. K. Mehta, E. M. Villa, A. Melatos, G. Mendell, R. A. Mercer, L. Mereni, K. Merfeld, E. L. Merilh, J. D. Merritt, M. Merzougui, S. Meshkov, C. Messenger, C. Messick, R. Metzdorff, P. M. Meyers, F. Meylahn, A. Mhaske, A. Miani, H. Miao, I. Michaloliakos, C. Michel, H. Middleton, L. Milano, A. L. Miller, M. Millhouse, J. C. Mills, E. Milotti, M. C. Milovich-Goff, O. Minazzoli, Y. Minenkov, A. Mishkin, C. Mishra, T. Mistry, S. Mitra, V. P. Mitrofanov, G. Mitselmakher, R. Mittleman, G. Mo, K. Mogushi, S. R. P. Mohapatra, S. R. Mohite, M. Molina-Ruiz, M. Mondin, M. Montani, C. J. Moore, D. Moraru, F. Morawski, G. Moreno, S. Morisaki, B. Mours, C. M. Mow-Lowry, S. Mozzon, F. Muciaccia, A. Mukherjee, D. Mukherjee, S. Mukherjee, S. Mukherjee, N. Mukund, A. Mullavey, J. Munch, E. A. Muñiz, P. G. Murray, A. Nagar, I. Nardecchia, L. Naticchioni, R. K. Nayak, B. F. Neil, J. Neilson, G. Nelemans, T. J. N. Nelson, M. Nery, A. Neunzert, K. Y. Ng, S. Ng, C. Nguyen, P. Nguyen, D. Nichols, S. A. Nichols, S. Nissanke, F. Nocera, M. Noh, C. North, D. Nothard, L. K. Nuttall, J. Oberling, B. D. O'Brien, G. Oganesyan, G. H. Ogin, J. J. Oh, S. H. Oh, F. Ohme, H. Ohta, M. A. Okada, M. Oliver, C. Olivetto, P. Oppermann, R. J. Oram, B. O'Reilly, R. G. Ormiston, N. Ormsby, L. F. Ortega, R. O'Shaughnessy, S. Ossokine, C. Osthelder, D. J. Ottaway, H. Overmier, B. J. Owen, A. E. Pace, G. Pagano, M. A. Page, G. Pagliaroli, A. Pai, S. A. Pai, J. R. Palamos, O. Palashov, C. Palomba, H. Pan, P. K. Panda, P. T. H. Pang, C. Pankow, F. Pannarale, B. C. Pant, F. Paoletti, A. Paoli, A. Parida, W. Parker, D. Pascucci, A. Pasqualetti, R. Passaquieti, D. Passuello, M. Patel, B. Patricelli, E. Payne, B. L. Pearlstone, T. C. Pechsiri, A. J. Pedersen, M. Pedraza, A. Pele, S. Penn, A. Perego, C. J. Perez, C. Périgois, A. Perreca, S. Perriès, J. Petermann, H. P. Pfeiffer, M. Phelps, K. S. Phukon, O. J. Piccinni, M. Pichot, M. Piendibene, F. Piergiovanni, V. Pierro, G. Pillant, L. Pinard, I. M. Pinto, K. Piotrzkowski, M. Pirello, M. Pitkin, W. Plastino, R. Poggiani, D. Y. T. Pong, S. Ponrathnam, P. Popolizio, E. K. Porter, J. Powell, A. K.

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

Prajapati, K. Prasai, R. Prasanna, G. Pratten, T. Prestegard, M. Principe, G. A. Prodi, L. Prokhorov, M. Punturo, P. Puppo, M. Pürer, H. Qi, V. Quetschke, P. J. Quinonez, F. J. Raab, G. Raaijmakers, H. Radkins, N. Radulesco, P. Raffai, H. Rafferty, S. Raja, C. Rajan, B. Rajbhandari, M. Rakhmanov, K. E. Ramirez, A. Ramos-Buades, J. Rana, K. Rao, P. Rapagnani, V. Raymond, M. Razzano, J. Read, T. Regimbau, L. Rei, S. Reid, D. H. Reitze, P. Rettegno, F. Ricci, C. J. Richardson, J. W. Richardson, P. M. Ricker, G. Riemschneider, K. Riles, M. Rizzo, N. A. Robertson, F. Robinet, A. Rocchi, R. D. Rodriguez-Soto, L. Rolland, J. G. Rollins, V. J. Roma, M. Romanelli, R. Romano, C. L. Romel, I. M. Romero-Shaw, J. H. Romie, C. A. Rose, D. Rose, K. Rose, D. Rosińska, S. G. Rosofsky, M. P. Ross, S. Rowan, S. J. Rowlinson, P. K. Roy, S. Roy, S. Roy, P. Ruggi, G. Rutins, K. Ryan, S. Sachdev, T. Sadecki, M. Sakellariadou, O. S. Salafia, L. Salconi, M. Saleem, A. Samajdar, E. J. Sanchez, L. E. Sanchez, N. Sanchis-Gual, J. R. Sanders, K. A. Santiago, E. Santos, N. Sarin, B. Sassolas, B. S. Sathyaprakash, O. Sauter, R. L. Savage, V. Savant, D. Sawant, S. Sayah, D. Schaetzl, P. Schale, M. Scheel, J. Scheuer, P. Schmidt, R. Schnabel, R. M. S. Schofield, A. Schönbeck, E. Schreiber, B. W. Schulte, B. F. Schutz, O. Schwarm, E. Schwartz, J. Scott, S. M. Scott, E. Seidel, D. Sellers, A. S. Sengupta, N. Sennett, D. Sentenac, V. Sequino, A. Sergeev, Y. Setyawati, D. A. Shaddock, T. Shaffer, M. S. Shahriar, S. Sharifi, A. Sharma, P. Sharma, P. Shawhan, H. Shen, M. Shikauchi, R. Shink, D. H. Shoemaker, D. M. Shoemaker, K. Shukla, S. ShyamSundar, K. Siellez, M. Sieniawska, D. Sigg, L. P. Singer, D. Singh, N. Singh, A. Singha, A. Singhal, A. M. Sintes, V. Sipala, V. Skliris, B. J. J. Slagmolen, T. J. Slaven-Blair, J. Smetana, J. R. Smith, R. J. E. Smith, S. Somala, E. J. Son, S. Soni, B. Sorazu, V. Sordini, F. Sorrentino, T. Souradeep, E. Sowell, A. P. Spencer, M. Spera, A. K. Srivastava, V. Srivastava, K. Staats, C. Stachie, M. Standke, D. A. Steer, M. Steinke, J. Steinlechner, S. Steinlechner, D. Steinmeyer, D. Stocks, D. J. Stops, M. Stover, K. A. Strain, G. Stratta, A. Strunk, R. Sturani, A. L. Stuver, S. Sudhagar, V. Sudhir, T. Z. Summerscales, L. Sun, S. Sunil, A. Sur, J. Suresh, P. J. Sutton, B. L. Swinkels, M. J. Szczepańczyk, M. Tacca, S. C. Tait, C. Talbot, A. J. Tanasiaczuk, D. B. Tanner, D. Tao, M. Tápai, A. Tapia, E. N. Tapia San Martin, J. D. Tasson, R. Taylor, R. Tenorio, L. Terkowski, M. P. Thirugnanasambandam, M. Thomas, P. Thomas, J. E. Thompson, S. R. Thondapu, K. A. Thorne, E. Thrane, C. L. Tinsman, T. R. Saravanan, S. Tiwari, S. Tiwari, V. Tiwari, K. Toland, M. Tonelli, Z. Tornasi, A. Torres-Forné, C. I. Torrie, I. Tosta e Melo, D. Töyrä, F. Travasso, G. Traylor, M. C. Tringali, A. Tripathee, A. Trovato, R. J. Trudeau, K. W. Tsang, M. Tse, R. Tso, L. Tsukada, D. Tsuna, T. Tsutsui, M. Turconi, A. S. Ubhi, K. Ueno, D. Ugolini, C. S. Unnikrishnan, A. L. Urban, S. A. Usman, A. C. Utina, H. Vahlbruch, G. Vajente, G. Valdes, M. Valentini, N. van Bakel, M. van Beuzekom, J. F. J. van den Brand, C. Van Den Broeck, D. C. Vander-Hyde, L. van der Schaaf, J. V. Van Heijningen, A. A. van Veggel, M. Vardaro, V. Varma, S. Vass, M. Vasúth, A. Vecchio, G. Vedovato, J. Veitch, P. J. Veitch, K. Venkateswara, G. Venugopalan, D. Verkindt, D. Veske, F. Vetrano, A. Viceré, A. D. Viets, S. Vinciguerra, D. J. Vine, J. Y. Vinet, S. Vitale, F. H. Vivanco, T. Vo, H. Vocca, C. Vorvick, S. P. Vyatchanin, A. R. Wade, L. E. Wade, M. Wade, R. Walet, M. Walker, G. S. Wallace, L. Wallace, S. Walsh, J. Z. Wang, S. Wang, W. H. Wang, R. L. Ward, Z. A. Warden, J. Warner, M. Was, J. Watchi, B. Weaver, L. W. Wei, M. Weinert, A. J. Weinstein, R. Weiss, F. Wellmann, L. Wen, P. Weßels, J. W. Westhouse, K. Wette, J. T. Whelan, B. F. Whiting, C. Whittle, D. M. Wilken, D. Williams, A. R. Williamson,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- J. L. Willis, B. Willke, W. Winkler, C. C. Wipf, H. Wittel, G. Woan, J. Woehler, J. K. Wofford, I. C. F. Wong, J. L. Wright, D. S. Wu, D. M. Wysocki, L. Xiao, H. Yamamoto, L. Yang, Y. Yang, Z. Yang, M. J. Yap, M. Yazback, D. W. Yeeles, H. Yu, H. Yu, S. H. R. Yuen, A. K. Zadrożny, A. Zadrożny, M. Zanolin, T. Zelenova, J. P. Zendri, M. Zevin, J. Zhang, L. Zhang, T. Zhang, C. Zhao, G. Zhao, Y. Zheng, M. Zhou, Z. Zhou, X. J. Zhu, M. E. Zucker, J. Zweizig, LIGO Scientific Collaboration, and Virgo Collaboration (2021), Search for Gravitational Waves Associated with Gamma-Ray Bursts Detected by Fermi and Swift during the LIGO-Virgo Run O3a, *Astrophys. J.*, **915**(2), 86, [10.3847/1538-4357/abee15](https://doi.org/10.3847/1538-4357/abee15).
- [2] Abdalla, H., F. Aharonian, F. Ait Benkhali, E. O. Angüner, C. Arcaro, C. Armand, T. Armstrong, H. Ashkar, M. Backes, V. Baghmanyan, V. Barbosa Martins, A. Barnacka, M. Barnard, Y. Becherini, D. Berge, K. Bernlöhr, B. Bi, M. Böttcher, C. Boisson, J. Bolmont, M. de Bony de Lavergne, M. Breuhaus, R. Brose, F. Brun, P. Brun, M. Bryan, M. Büchele, T. Bulik, T. Bylund, F. Cangemi, S. Caroff, A. Carosi, S. Casanova, P. Chambéry, T. Chand, S. Chandra, A. Chen, G. Cotter, M. Curyło, J. Damascene Mbarubucyeye, I. D. Davids, J. Davies, C. Deil, J. Devin, L. Dirson, A. Djannati-Ataï, A. Dmytriiev, A. Donath, V. Doroshenko, L. Dreyer, C. Duffy, L. Du Plessis, J. Dyks, K. Egberts, F. Eichhorn, S. Einecke, G. Emery, J. P. Ernenwein, K. Feijen, S. Fegan, A. Fiasson, G. Fichet de Clairfontaine, G. Fontaine, S. Funk, M. Füßling, S. Gabici, Y. A. Gallant, S. Ghafourizade, G. Giavitto, L. Giunti, D. Glawion, J. F. Glicenstein, M. H. Grondin, J. Hahn, M. Haupt, S. Hattingh, G. Hermann, J. A. Hinton, W. Hofmann, C. Hoischen, T. L. Holch, M. Holler, M. Hörbe, D. Horns, Z. Huang, D. Huber, M. Jamrozy, D. Jankowsky, F. Jankowsky, A. Jardin-Blicq, V. Joshi, I. Jung-Richardt, E. Kasai, M. A. Kastendieck, K. Katarzyński, U. Katz, D. Khangulyan, B. Khélifi, S. Klepser, W. Klužniak, N. Komin, R. Konno, K. Kosack, D. Kostunin, M. Kreter, G. Kupec Mezek, A. Kundu, G. Lamanna, A. Lemière, M. Lemoine-Goumard, J. P. Lenain, S. Le Stum, F. Leuschner, C. Levy, T. Lohse, A. Luashvili, I. Lypova, J. Mackey, J. Majumdar, D. Malyshev, D. Malyshev, V. Marandon, P. Marchegiani, A. Marcowith, A. Mares, G. Martí-Devesa, R. Marx, G. Maurin, P. J. Meintjes, M. Meyer, A. Mitchell, R. Moderski, L. Mohrmann, A. Montanari, C. Moore, P. Morris, E. Moulin, J. Muller, T. Murrach, K. Nakashima, A. Nayerhoda, M. de Naurois, H. Ndiyavala, J. Niemiec, L. Oakes, P. O'Brien, H. Odaka, S. Ohm, L. Olivera-Nieto, E. de Ona Wilhelmi, M. Ostrowski, S. Panny, M. Panter, R. D. Parsons, G. Peron, B. Peyaud, Q. Piel, S. Pita, V. Poireau, A. Priyana Noel, D. A. Prokhorov, H. Prokop, G. Pühlhofer, M. Punch, A. Quirrenbach, S. Raab, R. Rauth, P. Reichherzer, A. Reimer, O. Reimer, Q. Remy, M. Renaud, B. Reville, F. Rieger, L. Rinchiuso, C. Romoli, G. Rowell, B. Rudak, H. Rueda Ricarte, E. Ruiz-Velasco, V. Sahakian, S. Sailer, H. Salzmann, D. A. Sanchez, A. Santangelo, M. Sasaki, J. Schäfer, F. Schüssler, H. M. Schutte, U. Schwanke, M. Seglar-Arroyo, M. Senniappan, A. S. Seyffert, N. Shafi, J. N. S. Shapori, K. Shiningayamwe, R. Simoni, A. Sinha, H. Sol, H. Spackman, A. Specovius, S. Spencer, M. Spir-Jacob, L. Stawarz, L. Sun, R. Steenkamp, C. Stegmann, S. Steinmassl, C. Steppa, T. Takahashi, T. Tanaka, T. Tavernier, A. M. Taylor, R. Terrier, J. H. E. Thiersen, C. Thorpe-Morgan, D. Tiziani, M. Tluczykont, L. Tomankova, C. Trichard, M. Tsirou, N. Tsuji, R. Tuff, Y. Uchiyama, D. J. van der Walt, C. van Eldik, C. van Rensburg, B. van Soelen, G. Vasileiadis, J. Veh,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- C. Venter, P. Vincent, J. Vink, H. J. Völk, Z. Wadiasingh, S. J. Wagner, J. Watson, F. Werner, R. White, A. Wiercholska, P. deWilt, Y. W. Wong, H. Yassin, A. Yusafzai, M. Zacharias, R. Zanin, D. Zargaryan, A. A. Zdziarski, A. Zech, S. J. Zhu, J. Zorn, S. Zouari, N. Źywucka, and H. E. S. S. Collaboration (2021), Searching for TeV Gamma-Ray Emission from SGR 1935+2154 during Its 2020 X-Ray and Radio Bursting Phase, *Astrophys. J.*, **919**(2), 106, [10.3847/1538-4357/ac0fe1](https://doi.org/10.3847/1538-4357/ac0fe1).
- [3] Abuelezz, O. A., A. M. Mahrous, P. J. Cilliers, R. Fleury, M. Youssef, M. Nedal, and A. M. Yassen (2021), Neural network prediction of the topside electron content over the Euro-African sector derived from Swarm-A measurements, *Adv. Space Res.*, **67**(4), 1191–1209, [10.1016/j.asr.2020.11.009](https://doi.org/10.1016/j.asr.2020.11.009).
- [4] Adhikari, L., G. P. Zank, L. L. Zhao, M. Nakanotani, and S. Tasnim (2021), Modeling proton and electron heating in the fast solar wind, *Astron. & Astrophys.*, **650**, A16, [10.1051/0004-6361/202039297](https://doi.org/10.1051/0004-6361/202039297).
- [5] Aguilar, M., L. A. Cavasonza, G. Ambrosi, L. Arruda, N. Attig, F. Barao, L. Barrin, A. Bartoloni, S. Başeğmez-du Pree, R. Battiston, M. Behlmann, B. Beranek, J. Berdugo, B. Bertucci, V. Bindi, K. Bollweg, B. Borgia, M. J. Boschini, M. Bourquin, E. F. Bueno, J. Burger, W. J. Burger, S. Burmeister, X. D. Cai, M. Capell, J. Casaus, G. Castellini, F. Cervelli, Y. H. Chang, G. M. Chen, G. R. Chen, H. S. Chen, Y. Chen, L. Cheng, H. Y. Chou, S. Chouridou, V. Choutko, C. H. Chung, C. Clark, G. Coignet, C. Consolandi, A. Contin, C. Corti, Z. Cui, K. Dadzie, A. Dass, C. Delgado, S. Della Torre, M. B. Demirköz, L. Derome, S. Di Falco, V. Di Felice, C. Díaz, F. Dimiccoli, P. von Doetinchem, F. Dong, F. Donnini, M. Duranti, A. Egorov, A. Eline, J. Feng, E. Fiandrini, P. Fisher, V. Formato, C. Freeman, C. Gámez, R. J. García-López, C. Gargiulo, H. Gast, M. Gervasi, F. Giovacchini, D. M. Gómez-Coral, J. Gong, C. Goy, V. Grabski, D. Grandi, M. Graziani, S. Haino, K. C. Han, R. K. Hashmani, Z. H. He, B. Heber, T. H. Hsieh, J. Y. Hu, M. Incagli, W. Y. Jang, Y. Jia, H. Jinchi, G. Karagöz, B. Khiali, G. N. Kim, T. Kirn, M. Konyushikhin, O. Kounina, A. Kounine, V. Koutsenko, D. Krasnopevtsev, A. Kuhlman, A. Kulemzin, G. La Vacca, E. Laudi, G. Laurenti, I. Lazzizzera, A. Lebedev, H. T. Lee, S. C. Lee, J. Q. Li, M. Li, Q. Li, S. Li, J. H. Li, Z. H. Li, J. Liang, C. Light, C. H. Lin, T. Lippert, J. H. Liu, Z. Liu, S. Q. Lu, Y. S. Lu, K. Luebelsmeyer, J. Z. Luo, X. Luo, F. Machate, C. Mañá, J. Marín, J. Marquardt, T. Martin, G. Martínez, N. Masi, D. Mauřin, T. Medvedeva, A. Menchaca-Rocha, Q. Meng, V. V. Mikhailov, M. Molero, P. Mott, L. Mussolin, J. Negrete, N. Nikonov, F. Nozzoli, A. Oliva, M. Orcinha, M. Palermo, F. Palmonari, M. Paniccia, A. Pashnin, M. Pauluzzi, S. Pensotti, H. D. Phan, V. Plyaskin, M. Pohl, S. Poluianov, X. Qin, Z. Y. Qu, L. Quadrani, P. G. Ranchoita, D. Rapin, A. R. Conde, E. Robyn, S. Rosier-Lees, A. Rozhkov, D. Rozza, R. Sagdeev, S. Schael, A. S. von Dratzig, G. Schwering, E. S. Seo, Z. Shakfa, B. S. Shan, T. Siedenburg, C. Solano, J. W. Song, X. J. Song, R. Sonnabend, L. Strigari, T. Su, Q. Sun, Z. T. Sun, M. Tacconi, X. W. Tang, Z. C. Tang, J. Tian, S. C. C. Ting, S. M. Ting, N. Tomassetti, J. Torsti, T. Urban, I. Usoskin, V. Vagelli, R. Vainio, M. Valencia-Otero, E. Valente, E. Valtonen, M. Vázquez Acosta, M. Vecchi, M. Velasco, J. P. Vialle, C. X. Wang, L. Wang, L. Q. Wang, N. H. Wang, Q. L. Wang, S. Wang, X. Wang, Y. Wang, Z. M. Wang, J. Wei, Z. L. Weng, H. Wu, R. Q. Xiong, W. Xu, Q. Yan, Y. Yang, I. I. Yashin, H. Yi, Y. M.

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- Yu, Z. Q. Yu, M. Zannoni, C. Zhang, F. Zhang, F. Z. Zhang, J. H. Zhang, Z. Zhang, F. Zhao, C. Zheng, Z. M. Zheng, H. L. Zhuang, V. Zhukov, A. Zichichi, P. Zuccon, and AMS Collaboration (2021), Periodicities in the Daily Proton Fluxes from 2011 to 2019 Measured by the Alpha Magnetic Spectrometer on the International Space Station from 1 to 100 GV, *Phys. Rev. Lett.*, **127**(27), 271102, [10.1103/PhysRevLett.127.271102](https://doi.org/10.1103/PhysRevLett.127.271102).
- [6] Ahumada, T., L. P. Singer, S. Anand, M. W. Coughlin, M. M. Kasliwal, G. Ryan, I. Andreoni, S. B. Cenko, C. Fremling, H. Kumar, P. T. H. Pang, E. Burns, V. Cunningham, S. Dichiara, T. Dietrich, D. S. Svinkin, M. Almualla, A. J. Castro-Tirado, K. De, R. Dunwoody, P. Gatkine, E. Hammerstein, S. Iyyani, J. Mangan, D. Perley, S. Purkayastha, E. Bellm, V. Bhalerao, B. Bolin, M. Bulla, C. Cannella, P. Chandra, D. A. Duev, D. Frederiks, A. Gal-Yam, M. Graham, A. Y. Q. Ho, K. Hurley, V. Karambelkar, E. C. Kool, S. R. Kulkarni, A. Mahabal, F. Masci, S. McBreen, S. B. Pandey, S. Reusch, A. Ridnaia, P. Rosnet, B. Rusholme, A. S. Carracedo, R. Smith, M. Soumagnac, R. Stein, E. Troja, A. Tsvetkova, R. Walters, and A. F. Valeev (2021), Discovery and confirmation of the shortest gamma-ray burst from a collapsar, *Nature Astron.*, **5**, 917–927, [10.1038/s41550-021-01428-7](https://doi.org/10.1038/s41550-021-01428-7).
- [7] Ala-Lahti, M., A. P. Dimmock, T. I. Pulkkinen, S. W. Good, E. Yordanova, L. Turc, and E. K. J. Kilpua (2021), Transmission of an ICME Sheath Into the Earth's Magnetosheath and the Occurrence of Traveling Foreshocks, *J. Geophys. Res.*, **126**(12), e29896, [10.1029/2021JA029896](https://doi.org/10.1029/2021JA029896).
- [8] Albert, A., M. André, M. Anghinolfi, G. Anton, M. Ardid, J. J. Aubert, J. Aublin, B. Baret, S. Basa, B. Belhorma, V. Bertin, S. Biagi, M. Bissinger, J. Boumaaza, M. Boute, M. C. Bouwhuis, H. Brânzaş, R. Bruijn, J. Brunner, J. Bust, A. Capone, L. Caramete, J. Carr, S. Celli, M. Chabab, T. N. Chau, R. Cherkaoui El Moursli, T. Chiarusi, M. Circella, A. Coleiro, M. Colomer-Molla, R. Coniglione, P. Coyle, A. Creusot, A. F. Díaz, G. de Wasseige, A. Deschamps, C. Distefano, I. D. Palma, A. Domí, C. Donzaud, D. Dornic, D. Drouhin, T. Eberl, N. E. I. Khayati, A. Enzenhöfer, A. Ettahiri, P. Fermani, G. Ferrara, F. Filippini, L. A. Fusco, P. Gay, H. Glotin, R. Gozzini, K. Graf, C. Guidi, S. Hallmann, H. van Haren, A. J. Heijboer, Y. Hello, J. J. Hernández-Rey, J. Hößl, J. Hofestädt, F. Huang, G. Illuminati, C. W. James, M. de Jong, P. de Jong, M. Jongen, M. Kadler, O. Kalekin, U. Katz, N. R. Khan-Chowdhury, A. Kouchner, I. Kreykenbohm, V. Kulikovskiy, R. Lahmann, R. Le Breton, D. Lefèvre, E. Leonora, G. Levi, M. Lincetto, D. Lopez-Coto, S. Loucas, G. Maggi, J. Manczak, M. Marcellin, A. Margiotta, A. Marinelli, J. A. Martínez-Mora, S. Mazzou, K. Melis, P. Migliozi, M. Moser, A. Moussa, R. Muller, L. Nauta, S. Navas, E. Nezri, A. Nuñez-Castiñeyra, B. O’Fearraigh, M. Organokov, G. E. Pavaşlaş, C. Pellegrino, M. Perrin-Terrin, P. Piattelli, C. Poirè, V. Popa, T. Pradier, N. Randazzo, S. Reck, G. Riccobene, A. Sánchez-Losa, D. F. E. Samtleben, M. Sanguineti, P. Sapienza, J. Schnabel, F. Schüssler, M. Spurio, T. Stolarczyk, B. Strandberg, M. Taiuti, Y. Tayalati, T. Thakore, S. J. Tingay, A. Trovato, B. Vallage, V. Van Elewyck, F. Versari, S. Viola, D. Vivolo, J. Wilms, A. Zegarelli, J. D. Zornoza, and J. Zúñiga (2021), Constraining the contribution of Gamma-Ray Bursts to the high-energy diffuse neutrino flux with 10 yr of ANTARES data, *Mon. Not. Roy. Astron. Soc.*, **500**(4), 5614–5628, [10.1093/mnras/staa3503](https://doi.org/10.1093/mnras/staa3503).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [9] Alemano, F., Q. An, P. Azzarello, F. Carla Tiziana Barbato, P. Bernardini, X. Bi, M. Cai, E. Casilli, E. Catanzani, J. Chang, D. Chen, J. Chen, Z. Chen, M. Cui, T. Cui, Y. Cui, H. Dai, A. de Benedittis, I. de Mitri, F. de Palma, M. Deliyergiyev, M. di Santo, Q. Ding, T. Dong, Z. Dong, G. Donvito, D. Droz, J. Duan, K. Duan, D. D'Urso, R. Fan, Y. Fan, F. Fang, K. Fang, C. Feng, L. Feng, P. Fusco, M. Gao, F. Gargano, K. Gong, Y. Gong, D. Guo, J. Guo, S. Han, Y. Hu, G. Huang, X. Huang, Y. Huang, M. Ionica, W. Jiang, J. Kong, A. Kotenko, D. Kyratzis, S. Li, S. Lei, W. Li, W. Li, X. Li, X. Li, Y. Liang, C. Liu, H. Liu, J. Liu, S. Liu, Y. Liu, F. Loparco, C. Luo, M. Ma, P. Ma, T. Ma, X. Ma, G. Marsella, M. N. Mazziotta, D. Mo, X. Niu, X. Pan, A. Parenti, W. Peng, X. Peng, C. Perrina, R. Qiao, J. Rao, A. Ruina, M. Salinas, Z. Shangguan, W. Shen, Z. Shen, Z. Shen, L. Silveri, J. Song, M. Stolpovskiy, H. Su, M. Su, H. Sun, Z. Sun, A. Surdo, X. Teng, A. Tykhonov, J. Wang, L. Wang, S. Wang, S. Wang, X. Wang, Y. Wang, Y. Wang, Y. Wang, D. Wei, J. Wei, Y. Wei, D. Wu, J. Wu, L. Wu, S. S. Wu, X. Wu, Z. Xia, E. Xu, H. Xu, Z. Xu, Z. Xu, G. Xue, Z. Xu, H. Yang, P. Yang, Y. Yang, H. Jun Yao, Y. Yu, G. Yuan, Q. Yuan, C. Yue, J. Zang, S. Zhang, W. Zhang, Y. Zhang, Y. Zhang, Y. Zhang, Y. Zhang, Y. Zhang, Z. Zhang, Z. Zhang, C. Zhao, H. Zhao, X. Zhao, C. Zhou, Y. Zhu, W. Chen, L. Feng, X. Luo, C. Zhu, and Dampe Collaboration (2021), Observations of Forbush Decreases of Cosmic-Ray Electrons and Positrons with the Dark Matter Particle Explorer, *Astrophys. J. Lett.*, **920**(2), L43, [10.3847/2041-8213/ac2de6](https://doi.org/10.3847/2041-8213/ac2de6).
- [10] Alhassan, J. A., O. Okike, and A. E. Chukwude (2021), Testing the effect of solar wind parameters and geomagnetic storm indices on Galactic cosmic ray flux variation with automatically-selected Forbush decreases, *Res. Astron. Astrophys.*, **21**(9), 234, [10.1088/1674-4527/21/9/234](https://doi.org/10.1088/1674-4527/21/9/234).
- [11] Allen, R. C., G. C. Ho, L. K. Jian, S. K. Vines, S. D. Bale, A. W. Case, M. E. Hill, C. J. Joyce, J. C. Kasper, K. E. Korreck, D. M. Malaspina, D. J. McComas, R. McNutt, C. Möstl, D. Odstrcil, N. Raouafi, N. A. Schwadron, and M. L. Stevens (2021), A living catalog of stream interaction regions in the Parker Solar Probe era, *Astron. & Astrophys.*, **650**, A25, [10.1051/0004-6361/202039833](https://doi.org/10.1051/0004-6361/202039833).
- [12] Alterman, B. L., J. C. Kasper, R. J. Leamon, and S. W. McIntosh (2021), Solar Wind Helium Abundance heralds Solar Cycle Onset, *Solar Phys.*, **296**(4), 67, [10.1007/s11207-021-01801-9](https://doi.org/10.1007/s11207-021-01801-9).
- [13] Amati, L. (2021), To be short or long is not the question, *Nature Astron.*, **5**, 877–878, [10.1038/s41550-021-01401-4](https://doi.org/10.1038/s41550-021-01401-4).
- [14] Andreoni, I., M. W. Coughlin, E. C. Kool, M. M. Kasliwal, H. Kumar, V. Bhalerao, A. S. Carracedo, A. Y. Q. Ho, P. T. H. Pang, D. Saraogi, K. Sharma, V. Shenoy, E. Burns, T. Ahumada, S. Anand, L. P. Singer, D. A. Perley, K. De, U. C. Fremling, E. C. Bellm, M. Bulla, A. Crellin-Quick, T. Dietrich, A. Drake, D. A. Duev, A. Goobar, M. J. Graham, D. L. Kaplan, S. R. Kulkarni, R. R. Laher, A. A. Mahabal, D. L. Shupe, J. Sollerman, R. Walters, and Y. Yao (2021), Fast-transient Searches in Real Time with ZTFReST: Identification of Three Optically Discovered Gamma-Ray Burst Afterglows and New Constraints on the Kilonova Rate, *Astrophys. J.*, **918**(2), 63, [10.3847/1538-4357/ac0bc7](https://doi.org/10.3847/1538-4357/ac0bc7).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [15] Aran, A., D. Pacheco, M. Laurenza, N. Wijsen, D. Lario, S. Benella, I. G. Richardson, E. Samara, J. L. Freiherr von Forstner, B. Sanahuja, L. Rodriguez, L. Balmaceda, F. Espinosa Lara, R. Gómez-Herrero, K. Steinvall, A. Vecchio, V. Krupar, S. Poedts, R. C. Allen, G. B. Andrews, V. Angelini, L. Berger, D. Berghmans, S. Boden, S. I. Böttcher, F. Carcaboso, I. Cernuda, R. De Marco, S. Eldrum, V. Evans, A. Fedorov, J. Hayes, G. C. Ho, T. S. Horbury, N. P. Janitzek, Y. V. Khotyaintsev, A. Kollhoff, P. Kühl, S. R. Kulakarni, W. J. Lees, P. Louarn, J. Magdalenic, M. Maksimovic, O. Malandraki, A. Martínez, G. M. Mason, C. Martín, H. O'Brien, C. Owen, P. Parra, M. Prieto Mateo, A. Ravankhah, J. Rodriguez-Pacheco, O. Rodriguez Polo, S. Sánchez Prieto, C. E. Schlemm, H. Seifert, J. C. Terasa, K. Tyagi, C. Verbeeck, R. F. Wimmer-Schweingruber, Z. G. Xu, M. K. Yedla, and A. N. Zhukov (2021), Evidence for local particle acceleration in the first recurrent galactic cosmic ray depression observed by Solar Orbiter. The ion event on 19 June 2020, *Astron. & Astrophys.*, **656**, L10, [10.1051/0004-6361/202140966](https://doi.org/10.1051/0004-6361/202140966).
- [16] Badruddin, B., O. P. M. Aslam, M. Derouich, and S. Qutub (2021), Study of the development and mechanism of large amplitude decreases in cosmic ray intensity during geomagnetic disturbances in the magnetosphere, *Adv. Space Res.*, **68**(11), 4702–4712, [10.1016/j.asr.2021.08.019](https://doi.org/10.1016/j.asr.2021.08.019).
- [17] Bag, T., Z. Li, and D. Rout (2021), SABER Observation of Storm Time Hemispheric Asymmetry in Nitric Oxide Radiative Emission, *J. Geophys. Res.*, **126**(4), e28849, [10.1029/2020JA028849](https://doi.org/10.1029/2020JA028849).
- [18] Bailes, M., C. G. Bassa, G. Bernardi, S. Buchner, M. Burgay, M. Caleb, A. J. Cooper, G. Desvignes, P. J. Groot, I. Heywood, F. Jankowski, R. Karuppusamy, M. Kramer, M. Malenta, G. Naldi, M. Pilia, G. Pupillo, K. M. Rajwade, L. Spitler, M. Surnis, B. W. Stappers, A. Addis, S. Bloemen, M. C. Bezuidenhout, G. Bianchi, D. J. Champion, W. Chen, L. N. Driessens, M. Geyer, K. Gourdji, J. W. T. Hessels, V. I. Kondratiev, M. Klein-Wolt, E. Körding, R. Le Poole, K. Liu, M. E. Lower, A. G. Lyne, A. Magro, V. McBride, M. B. Mickaliger, V. Morello, A. Parthasarathy, K. Paterson, B. B. P. Perera, D. L. A. Pieterse, Z. Pleunis, A. Possenti, A. Rowlinson, M. Serylak, G. Setti, M. Tavani, R. A. M. J. Wijers, S. ter Veen, V. Venkatraman Krishnan, P. Vreeswijk, and P. A. Woudt (2021), Multifrequency observations of SGR J1935+2154, *Mon. Not. Roy. Astron. Soc.*, **503**(4), 5367–5384, [10.1093/mnras/stab749](https://doi.org/10.1093/mnras/stab749).
- [19] Bailey, R. L., M. A. Reiss, C. N. Arge, C. Möstl, C. J. Henney, M. J. Owens, U. V. Amerstorfer, T. Amerstorfer, A. J. Weiss, and J. Hinterreiter (2021), Using Gradient Boosting Regression to Improve Ambient Solar Wind Model Predictions, *Space Weather*, **19**(5), e02673, [10.1029/2020SW002673](https://doi.org/10.1029/2020SW002673).
- [20] Baraka, S. M., O. Le Contel, L. Ben-Jaffel, and W. B. Moore (2021), The Impact of Radial and Non-Radial IMF on the Earth's Magnetopause Size, Shape, and Dawn-Dusk Asymmetry From Global 3D Kinetic Simulations, *J. Geophys. Res.*, **126**(10), e29528, [10.1029/2021JA029528](https://doi.org/10.1029/2021JA029528).
- [21] Bashir, M. F., and R. Ilie (2021), The First Observation of N<sup>+</sup> Electromagnetic Ion Cyclotron Waves, *J. Geophys. Res.*, **126**(3), e28716, [10.1029/2020JA028716](https://doi.org/10.1029/2020JA028716).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [22] Bauer, M., T. Amerstorfer, J. Hinterreiter, A. J. Weiss, J. A. Davies, C. Möstl, U. V. Amerstorfer, M. A. Reiss, and R. A. Harrison (2021), Predicting CMEs Using ELEvoHI With STEREO-HI Beacon Data, *Space Weather*, **19**(12), e02873, [10.1029/2021SW002873](https://doi.org/10.1029/2021SW002873).
- [23] Baumgardner, J., S. Luettgen, C. Schmidt, M. Mayyasi, S. Smith, C. Martinis, J. Wroten, L. Moore, and M. Mendillo (2021), Long Term Observations and Physical Processes in the Moon's Extended Sodium Tail, *J. Geophys. Res.*, **126**(3), e06671, [10.1029/2020JE006671](https://doi.org/10.1029/2020JE006671).
- [24] Bazilevskaya, G. A., E. I. Daibog, Y. I. Logachev, N. A. Vlasova, E. A. Ginzburg, V. N. Ishkov, L. L. Lazutin, M. D. Nguyen, G. M. Surova, and O. S. Yakovchuk (2021), Characteristic Features of Solar Cosmic Rays in the 21st-24th Solar-Activity Cycles According to Data from Catalogs of Solar Proton Events, *Geomag. and Aeron.*, **61**(1), 6–13, [10.1134/S0016793221010023](https://doi.org/10.1134/S0016793221010023).
- [25] Bazilevskaya, G. A., Y. I. Logachev, E. I. Daibog, N. A. Vlasova, E. A. Ginzburg, V. N. Ishkov, L. L. Lazutin, M. D. Nguyen, G. M. Surova, and O. S. Yakovchuk (2021), Statistical Links between Solar Cosmic Rays, Type-II Radio Emission, and Coronal Mass Ejections, *Geomag. and Aeron.*, **61**(5), 773–779, [10.1134/S0016793221050030](https://doi.org/10.1134/S0016793221050030).
- [26] Becerra, R. L., F. De Colle, J. Cantó, S. Lizano, R. F. González, J. Granot, A. Klotz, A. M. Watson, N. Fraija, A. T. Araudo, E. Troja, J. L. Atteia, W. H. Lee, D. Turpin, J. S. Bloom, M. Boer, N. R. Butler, J. J. González, A. S. Kutyrev, J. X. Prochaska, E. Ramirez-Ruiz, M. G. Richer, and C. G. Román-Zúñiga (2021), Modeling the Prompt Optical Emission of GRB 180325A: The Evolution of a Spike from the Optical to Gamma Rays, *Astrophys. J.*, **908**(1), 39, [10.3847/1538-4357/abcd3a](https://doi.org/10.3847/1538-4357/abcd3a).
- [27] Behailu, G., M. Nigussie, G. D. Reeves, and S. Wing (2021), Driving Parameters for Multi-MeV Electrons Flux Variations in Outer Radiation Belt, *J. Geophys. Res.*, **126**(11), e29625, [10.1029/2021JA029625](https://doi.org/10.1029/2021JA029625).
- [28] Belov, A., A. Papaioannou, M. Abunina, M. Dumbovic, I. G. Richardson, B. Heber, P. Kuhl, K. Herbst, A. Anastasiadis, A. Vourlidas, E. Eroshenko, and A. Abunin (2021), On the Rigidity Spectrum of Cosmic-Ray Variations within Propagating Interplanetary Disturbances: Neutron Monitor and SOHO/EPHIN Observations at ∼1-10 GV, *Astrophys. J.*, **908**(1), 5, [10.3847/1538-4357/abd724](https://doi.org/10.3847/1538-4357/abd724).
- [29] Bernoux, G., A. Brunet, É. Buchlin, M. Janvier, and A. Sicard (2021), An operational approach to forecast the Earth's radiation belts dynamics, *J. Space Weather Space Clim.*, **11**, 60, [10.1051/swsc/2021045](https://doi.org/10.1051/swsc/2021045).
- [30] Bezděková, B., F. Němec, M. Parrot, O. Kruparova, and V. Krupar (2021), Using Principal Component Analysis to Characterize the Variability of VLF Wave Intensities Measured by a Low Altitude Spacecraft and Caused by Interplanetary Shocks, *J. Geophys. Res.*, **126**(5), e29158, [10.1029/2021JA029158](https://doi.org/10.1029/2021JA029158).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [31] Bhaskar, A., D. Sibeck, S. G. Kanekal, H. J. Singer, G. Reeves, D. M. Oliveira, S.-B. Kang, and C. Komar (2021), Radiation Belt Response to Fast Reverse Shock at Geosynchronous Orbit, *Astrophys. J.*, **910**(2), 154, [10.3847/1538-4357/abd702](https://doi.org/10.3847/1538-4357/abd702).
- [32] Bilenko, I. A. (2021), Variations in the Solar Magnetic Fields and their Influence on Coronal Mass Ejections and Type-II Radio Bursts, *Geomag. and Aeron.*, **61**(7), 1009–1021, [10.1134/S0016793221070045](https://doi.org/10.1134/S0016793221070045).
- [33] Biondo, R., A. Bemporad, A. Mignone, and F. Reale (2021), Reconstruction of the Parker spiral with the Reverse In situ data and MHD Approach - RIMAP, *J. Space Weather Space Clim.*, **11**, 7, [10.1051/swsc/2020072](https://doi.org/10.1051/swsc/2020072).
- [34] Birn, J., A. Runov, and Y. Khotyaintsev (2021), Magnetotail Processes, in *Magnetospheres in the Solar System*, vol. 2, edited by R. Maggiolo, N. André, H. Hasegawa, and D. T. Welling, p. 245, [10.1002/9781119815624.ch17](https://doi.org/10.1002/9781119815624.ch17).
- [35] Bloch, T., C. E. J. Watt, M. J. Owens, R. L. Thompson, and O. Agiwal (2021), Constraining the Location of the Outer Boundary of Earth's Outer Radiation Belt, *Earth and Space Sci.*, **8**(6), e01610, [10.1029/2020EA001610](https://doi.org/10.1029/2020EA001610).
- [36] Blum, L. W., A. Koval, I. G. Richardson, L. B. Wilson, D. Malaspina, A. Greeley, and A. N. Jaynes (2021), Prompt Response of the Dayside Magnetosphere to Discrete Structures Within the Sheath Region of a Coronal Mass Ejection, *Geophys. Res. Lett.*, **48**(11), e92700, [10.1029/2021GL092700](https://doi.org/10.1029/2021GL092700).
- [37] Blunier, S., B. Toledo, J. Rogan, and J. A. Valdivia (2021), A Nonlinear System Science Approach to Find the Robust Solar Wind Drivers of the Multivariate Magnetosphere, *Space Weather*, **19**(6), e02634, [10.1029/2020SW002634](https://doi.org/10.1029/2020SW002634).
- [38] Boe, B., B. Yamashiro, M. Druckmüller, and S. Habbal (2021), The Double-bubble Coronal Mass Ejection of the 2020 December 14 Total Solar Eclipse, *Astrophys. J. Lett.*, **914**(2), L39, [10.3847/2041-8213/ac05ca](https://doi.org/10.3847/2041-8213/ac05ca).
- [39] Bolaji, O. S., J. B. Fashae, S. J. Adebiyi, C. Owolabi, B. O. Adebesin, R. O. Kaka, J. Ibanga, M. Abass, O. O. Akinola, B. J. Adekoya, and W. Younas (2021), Storm Time Effects on Latitudinal Distribution of Ionospheric TEC in the American and Asian-Australian Sectors: August 25-26, 2018 Geomagnetic Storm, *J. Geophys. Res.*, **126**(8), e29068, [10.1029/2020JA029068](https://doi.org/10.1029/2020JA029068).
- [40] Borodkova, N. L., O. V. Sapunova, V. G. Eselevich, G. N. Zastenker, and Y. I. Yermolaev (2021), Analysis of the Behavior of the Solar Wind Ion Flux in the Region of the Interplanetary Shock Overshoot, *Geomag. and Aeron.*, **61**(5), 666–677, [10.1134/S0016793221050042](https://doi.org/10.1134/S0016793221050042).
- [41] Borovsky, J. E. (2021), Solar-Wind Structures that Are Not Destroyed by the Action of Solar-Wind Turbulence, *Front. Astron. Space Sci.*, **8**, 131, [10.3389/fspas.2021.721350](https://doi.org/10.3389/fspas.2021.721350).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [42] Borovsky, J. E. (2021), Exploring the Properties of the Electron Strahl at 1 AU as an Indicator of the Quality of the Magnetic Connection between the Earth and the Sun, *Front. Astron. Space Sci.*, **8**, 18, [10.3389/fspas.2021.646443](https://doi.org/10.3389/fspas.2021.646443).
- [43] Borovsky, J. E., and G. L. Delzanno (2021), Do Impulsive Solar-Energetic-Electron (SEE) Events Drive High-Voltage Charging Events on the Nightside of the Moon?, *Front. Astron. Space Sci.*, **8**, 90, [10.3389/fspas.2021.655333](https://doi.org/10.3389/fspas.2021.655333).
- [44] Boschini, M. J., S. Della Torre, M. Gervasi, D. Grandi, G. La Vacca, P. G. Rancoita, D. Rozza, and M. Tacconi (2021), A quantitative study on the effects of external geomagnetic fields by using the GeoMagSphere back-tracing code, *Adv. Space Res.*, **68**(7), 2904–2918, [10.1016/j.asr.2021.05.022](https://doi.org/10.1016/j.asr.2021.05.022).
- [45] Boudouridis, A., and E. Zesta (2021), Automated Technique for the Detection of Step-Like Solar Wind Dynamic Pressure Changes: Application to the Response of the Transpolar Potential to Solar Wind Dynamic Pressure Fronts, *J. Geophys. Res.*, **126**(8), e29198, [10.1029/2021JA029198](https://doi.org/10.1029/2021JA029198).
- [46] Boudouridis, A., H. K. Connor, D. Lummerzheim, A. J. Ridley, and E. Zesta (2021), Changes in the Magnetic Field Topology and the Dayside/Nightside Reconnection Rates in Response to a Solar Wind Dynamic Pressure Front: A Case Study, *J. Geophys. Res.*, **126**(7), e28768, [10.1029/2020JA028768](https://doi.org/10.1029/2020JA028768).
- [47] Boynton, R. J., S. N. Walker, H. Aryan, Y. Hobara, and M. A. Balikhin (2021), A Dynamical Model of Equatorial Magnetosonic Waves in the Inner Magnetosphere: A Machine Learning Approach, *J. Geophys. Res.*, **126**(6), e28439, [10.1029/2020JA028439](https://doi.org/10.1029/2020JA028439).
- [48] Brenner, A., T. I. Pulkkinen, Q. Al Shidi, and G. Toth (2021), Stormtime energetics: Energy transport across the magnetopause in a global MHD simulation, *Front. Astron. Space Sci.*, **8**, 180, [10.3389/fspas.2021.756732](https://doi.org/10.3389/fspas.2021.756732).
- [49] Briand, C., K. Doerksen, and F. Delefie (2021), Solar EUV-Enhancement and Thermo-spheric Disturbances, *Space Weather*, **19**(12), e02840, [10.1029/2021SW002840](https://doi.org/10.1029/2021SW002840).
- [50] Brooks, D. H., and S. L. Yardley (2021), Signature and escape of highly fractionated plasma in an active region, *Mon. Not. Roy. Astron. Soc.*, **508**(2), 1831–1841, [10.1093/mnras/stab2681](https://doi.org/10.1093/mnras/stab2681).
- [51] Brooks, D. H., and S. L. Yardley (2021), The source of the major solar energetic particle events from super active region 11944, *Sci. Adv.*, **7**(10), eabf0068, [10.1126/sciadv.abf0068](https://doi.org/10.1126/sciadv.abf0068).
- [52] Brown, W. J., C. D. Beggan, G. A. Cox, and S. Macmillan (2021), The BGS candidate models for IGRF-13 with a retrospective analysis of IGRF-12 secular variation forecasts, *Earth, Planets and Space*, **73**(1), 42, [10.1186/s40623-020-01301-3](https://doi.org/10.1186/s40623-020-01301-3).
- [53] Bruinsma, S., C. Boniface, E. K. Sutton, and M. Fedrizzi (2021), Thermosphere modeling capabilities assessment: geomagnetic storms, *J. Space Weather Space Clim.*, **11**, 12, [10.1051/swsc/2021002](https://doi.org/10.1051/swsc/2021002).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [54] Bryant, C. M., J. A. Osborne, and A. Shahmoradi (2021), How unbiased statistical methods lead to biased scientific discoveries: A case study of the Efron-Petrosian statistic applied to the luminosity-redshift evolution of gamma-ray bursts, *Mon. Not. Roy. Astron. Soc.*, **504**(3), 4192–4203, [10.1093/mnras/stab1098](https://doi.org/10.1093/mnras/stab1098).
- [55] Buckley, D. A. H., S. Bagnulo, R. J. Britto, J. Mao, D. A. Kann, J. Cooper, V. Lipunov, D. M. Hewitt, S. Razzaque, N. P. M. Kuin, I. M. Monageng, S. Covino, P. Jakobsson, A. J. van der Horst, K. Wiersema, M. Böttcher, S. Campana, V. D'Elia, E. S. Gorbovskoy, I. Gorbunov, D. N. Groenewald, D. H. Hartmann, V. G. Kornilov, C. G. Mundell, R. Podesta, J. K. Thomas, N. Tyurina, D. Vlasenko, B. van Soelen, and D. Xu (2021), Spectropolarimetry and photometry of the early afterglow of the gamma-ray burst GRB 191221B, *Mon. Not. Roy. Astron. Soc.*, **506**(3), 4621–4631, [10.1093/mnras/stab1791](https://doi.org/10.1093/mnras/stab1791).
- [56] Burkholder, B. L., K. Nykyri, and X. Ma (2021), Magnetospheric Multiscale Statistics of High Energy Electrons Trapped in Diamagnetic Cavities, *J. Geophys. Res.*, **126**(1), e28341, [10.1029/2020JA028341](https://doi.org/10.1029/2020JA028341).
- [57] Burns, E., D. Svinkin, K. Hurley, Z. Wadiasingh, M. Negro, G. Younes, R. Hamburg, A. Ridnaia, D. Cook, S. B. Cenko, R. Aloisi, G. Ashton, M. Baring, M. S. Briggs, N. Christensen, D. Frederiks, A. Goldstein, C. M. Hui, D. L. Kaplan, M. M. Kasliwal, D. Kocevski, O. J. Roberts, V. Savchenko, A. Tohuvavohu, P. Veres, and C. A. Wilson-Hodge (2021), Identification of a Local Sample of Gamma-Ray Bursts Consistent with a Magnetar Giant Flare Origin, *Astrophys. J. Lett.*, **907**(2), L28, [10.3847/2041-8213/abd8c8](https://doi.org/10.3847/2041-8213/abd8c8).
- [58] Burns, J. O., R. MacDowall, S. Bale, G. Hallinan, N. Bassett, and A. Hegedus (2021), Low Radio Frequency Observations from the Moon Enabled by NASA Landed Payload Missions, *Planet. Sci. J.*, **2**(2), 44, [10.3847/PSJ/abdfc3](https://doi.org/10.3847/PSJ/abdfc3).
- [59] Cai, L., A. Kullen, Y. Zhang, T. Karlsson, and A. Vaivads (2021), DMSP Observations of High Latitude Dayside Aurora (HiLDA), *J. Geophys. Res.*, **126**(4), e28808, [10.1029/2020JA028808](https://doi.org/10.1029/2020JA028808).
- [60] Carley, E. P., B. Cecconi, H. A. Reid, C. Briand, K. Sasikumar Raja, S. Masson, V. Dorovskyy, C. Tiburzi, N. Vilmer, P. Zucca, P. Zarka, M. Tagger, J.-M. Grießmeier, S. Corbel, G. Theureau, A. Loh, and J. N. Girard (2021), Observations of Shock Propagation through Turbulent Plasma in the Solar Corona, *Astrophys. J.*, **921**(1), 3, [10.3847/1538-4357/ac1acd](https://doi.org/10.3847/1538-4357/ac1acd).
- [61] Carter, J. A., A. A. Samsonov, S. E. Milan, G. Branduardi-Raymont, A. J. Ridley, L. J. Paxton, B. J. Anderson, C. L. Waters, and T. Edwards (2021), Field-Aligned Current During an Interval of By-Dominated Interplanetary-Field; Modeled-to-Observed Comparisons, *J. Geophys. Res.*, **126**(12), e29722, [10.1029/2021JA029722](https://doi.org/10.1029/2021JA029722).
- [62] Castillo, Y., M. A. Pais, J. Fernandes, P. Ribeiro, A. L. Morozova, and F. J. G. Pinheiro (2021), Relating 27-Day Averages of Solar, Interplanetary Medium Parameters, and Geomagnetic Activity Proxies in Solar Cycle 24, *Solar Phys.*, **296**(7), 115, [10.1007/s11207-021-01856-8](https://doi.org/10.1007/s11207-021-01856-8).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [63] Cattell, C., and T. Vo (2021), Modeling Interactions of Narrowband Large Amplitude Whistler-mode Waves with Electrons in the Solar Wind inside 0.3 au and at 1 au Using a Particle Tracing Code, *Astrophys. J. Lett.*, **914**(2), L33, [10.3847/2041-8213/ac08a1](https://doi.org/10.3847/2041-8213/ac08a1).
- [64] Chakraborty, S., D. Chakrabarty, G. D. Reeves, D. N. Baker, S. G. Claudepierre, A. W. Breneman, D. P. Hartley, and B. A. Larsen (2021), Van Allen Probe Observations of Disappearance, Recovery and Patchiness of Plasmaspheric Hiss Following Two Consecutive Interplanetary Shocks: First Results, *J. Geophys. Res.*, **126**(4), e28873, [10.1029/2020JA028873](https://doi.org/10.1029/2020JA028873).
- [65] Chartier, A. T., S. Datta-Barua, S. E. McDonald, G. S. Bust, J. Tate, L. P. Goncharenko, G. Romeo, and R. K. Schaefer (2021), Night-Time Ionospheric Localized Enhancements (NILE) Observed in North America Following Geomagnetic Disturbances, *J. Geophys. Res.*, **126**(9), e29324, [10.1029/2021JA029324](https://doi.org/10.1029/2021JA029324).
- [66] Chashei, I. V., T. O. Lebedeva, S. A. Tyul'bashev, and I. A. Subaev (2021), Geoeffective Disturbances in the Solar Wind near the Solar Activity Minimum according to the Data of a Two-year Series of Observations of Interplanetary Scintillations with the BSA LPI Radio Telescope, *Astron. Rep.*, **65**(11), 1150–1169, [10.1134/S1063772921110056](https://doi.org/10.1134/S1063772921110056).
- [67] Cheng, Z. W., J. K. Shi, K. Torkar, G. P. Lu, M. W. Dunlop, C. M. Carr, H. Rème, I. Dandouras, and A. Fazakerley (2021), Impact of the Solar Wind Dynamic Pressure on the Field-Aligned Currents in the Magnetotail: Cluster Observation, *J. Geophys. Res.*, **126**(12), e29785, [10.1029/2021JA029785](https://doi.org/10.1029/2021JA029785).
- [68] Chernov, G., and V. Fomichev (2021), On the Issue of the Origin of Type II Solar Radio Bursts, *Astrophys. J.*, **922**(1), 82, [10.3847/1538-4357/ac1f32](https://doi.org/10.3847/1538-4357/ac1f32).
- [69] Chhabra, S. (2021), Radio Diagnostics of Particles and Plasma in the Solar Corona, Ph.D. thesis, New Jersey Institute of Technology.
- [70] Chhabra, S., D. E. Gary, G. Hallinan, M. M. Anderson, B. Chen, L. J. Greenhill, and D. C. Price (2021), Imaging Spectroscopy of CME-associated Solar Radio Bursts using OVRO-LWA, *Astrophys. J.*, **906**(2), 132, [10.3847/1538-4357/abc94b](https://doi.org/10.3847/1538-4357/abc94b).
- [71] Chhabra, S., J. A. Klimchuk, and D. E. Gary (2021), Signatures of Type III Solar Radio Bursts from Nanoflares: Modeling, *Astrophys. J.*, **922**(2), 128, [10.3847/1538-4357/ac2364](https://doi.org/10.3847/1538-4357/ac2364).
- [72] Chi, Y., C. Scott, C. Shen, L. Barnard, M. Owens, M. Xu, J. Zhang, S. Jones, Z. Zhong, B. Yu, M. Lang, Y. Wang, and M. Lockwood (2021), Modeling the Observed Distortion of Multiple (Ghost) CME Fronts in STEREO Heliospheric Imagers, *Astrophys. J. Lett.*, **917**(2), L16, [10.3847/2041-8213/ac1203](https://doi.org/10.3847/2041-8213/ac1203).
- [73] Choi, K.-E., D.-Y. Lee, H.-E. Wang, S. Lee, K.-C. Kim, and K. S. Park (2021), Characteristics of Suprathermal Electrons in Small-Scale Magnetic Flux Ropes and Their Implications on the Magnetic Connection to the Sun, *Solar Phys.*, **296**(10), 148, [10.1007/s11207-021-01888-0](https://doi.org/10.1007/s11207-021-01888-0).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [74] Chomiuk, L., B. D. Metzger, and K. J. Shen (2021), New Insights into Classical Novae, *Ann. Rev. Astron. Astrophys.*, **59**, [10.1146/annurev-astro-112420-114502](https://doi.org/10.1146/annurev-astro-112420-114502).
- [75] Chu, X., D. Ma, J. Bortnik, W. K. Tobiska, A. Cruz, S. D. Bouwer, H. Zhao, Q. Ma, K. Zhang, D. N. Baker, X. Li, H. Spence, and G. Reeves (2021), Relativistic Electron Model in the Outer Radiation Belt Using a Neural Network Approach, *Space Weather*, **19**(12), e02808, [10.1029/2021SW002808](https://doi.org/10.1029/2021SW002808).
- [76] Clarke, B. P., L. A. Hayes, P. T. Gallagher, S. A. Maloney, and E. P. Carley (2021), Quasi-periodic Particle Acceleration in a Solar Flare, *Astrophys. J.*, **910**(2), 123, [10.3847/1538-4357/abe463](https://doi.org/10.3847/1538-4357/abe463).
- [77] Claudepierre, S. G., X. Liu, L. Chen, and K. Takahashi (2021), Observational Evidence of the Excitation of Magnetosonic Waves by an He<sup>++</sup> Ion Ring Distribution, *J. Geophys. Res.*, **126**(8), e29532, [10.1029/2021JA029532](https://doi.org/10.1029/2021JA029532).
- [78] Cohen, C. M. S., E. R. Christian, A. C. Cummings, A. J. Davis, M. I. Desai, G. A. de Nolfo, J. Giacalone, M. E. Hill, C. J. Joyce, A. W. Labrador, R. A. Leske, W. H. Matthaeus, D. J. McComas, R. L. McNutt, R. A. Mewaldt, D. G. Mitchell, J. G. Mitchell, J. S. Rankin, E. C. Roelof, N. A. Schwadron, E. C. Stone, J. R. Szalay, M. E. Wiedenbeck, A. Vourlidas, S. D. Bale, M. Pulupa, and R. J. MacDowall (2021), PSP/IS $\odot$ IS observations of the 29 November 2020 solar energetic particle event, *Astron. & Astrophys.*, **656**, A29, [10.1051/0004-6361/202140967](https://doi.org/10.1051/0004-6361/202140967).
- [79] Cohen, I. J., D. L. Turner, A. T. Michael, K. A. Sorathia, and A. Y. Ukhorskiy (2021), Investigating the Link Between Outer Radiation Belt Losses and Energetic Electron Escape at the Magnetopause: A Case Study Using Multi-Mission Observations and Simulations, *J. Geophys. Res.*, **126**(6), e29261, [10.1029/2021JA029261](https://doi.org/10.1029/2021JA029261).
- [80] Consolini, G., P. De Michelis, I. Coco, T. Alberti, M. F. Marcucci, F. Giannattasio, and R. Tozzi (2021), Sign-Singularity Analysis of Field-Aligned Currents in the Ionosphere, *Atmosphere*, **12**(6), 708, [10.3390/atmos12060708](https://doi.org/10.3390/atmos12060708).
- [81] Consolini, G., R. Tozzi, P. De Michelis, I. Coco, F. Giannattasio, M. Pezzopane, M. F. Marcucci, and G. Balasis (2021), High-latitude polar pattern of ionospheric electron density: Scaling features and IMF dependence, *J. Atmos. Solar-Terr. Phys.*, **217**, 105531, [10.1016/j.jastp.2020.105531](https://doi.org/10.1016/j.jastp.2020.105531).
- [82] Coxon, J. C., R. C. Fear, J. A. Reidy, L. J. Fryer, and J. Plank (2021), Hot Plasma in the Magnetotail Lobes Shows Characteristics Consistent With Closed Field Lines Trapped in the Lobes, *J. Geophys. Res.*, **126**(9), e29516, [10.1029/2021JA029516](https://doi.org/10.1029/2021JA029516).
- [83] Cranmer, S. R., and A. J. Schiff (2021), Electron Heat Flux in the Solar Wind: Generalized Approaches to Fluid Transport With a Variety of Skewed Velocity Distributions, *J. Geophys. Res.*, **126**(10), e29666, [10.1029/2021JA029666](https://doi.org/10.1029/2021JA029666).
- [84] Cranmer, S. R., C. E. DeForest, and S. E. Gibson (2021), Inward-propagating Plasma Parcels in the Solar Corona: Models with Aerodynamic Drag, Ablation, and Snowplow Accretion, *Astrophys. J.*, **913**(1), 4, [10.3847/1538-4357/abf146](https://doi.org/10.3847/1538-4357/abf146).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [85] Şentürk, E., M. Arqim Adil, and M. Saqib (2021), Ionospheric total electron content response to annular solar eclipse on June 21, 2020, *Adv. Space Res.*, **67**(6), 1937–1947, [10.1016/j.asr.2020.12.024](https://doi.org/10.1016/j.asr.2020.12.024).
- [86] Dainotti, M. G., V. Petrosian, and L. Bowden (2021), Cosmological Evolution of the Formation Rate of Short Gamma-Ray Bursts with and without Extended Emission, *Astrophys. J. Lett.*, **914**(2), L40, [10.3847/2041-8213/abf5e4](https://doi.org/10.3847/2041-8213/abf5e4).
- [87] D'Amicis, R., D. Perrone, R. Bruno, and M. Velli (2021), On Alfvénic Slow Wind: A Journey From the Earth Back to the Sun, *J. Geophys. Res.*, **126**(4), e28996, [10.1029/2020JA028996](https://doi.org/10.1029/2020JA028996).
- [88] Davis, L. A., C. A. Cattell, I. Wilson, L. B., Z. A. Cohen, A. W. Breneman, and E. L. M. Hanson (2021), ARTEMIS Observations of Plasma Waves in Laminar and Perturbed Interplanetary Shocks, *Astrophys. J.*, **913**(2), 144, [10.3847/1538-4357/abf56a](https://doi.org/10.3847/1538-4357/abf56a).
- [89] Davoudifar, P., K. R. Tabari, et al. (2021), Development of a local empirical model of ionospheric total electron content (TEC) and its application for studying solar-ionospheric effects, *Sci. Rep.*, **11**(1), 15,070, [10.1038/s41598-021-93496-y](https://doi.org/10.1038/s41598-021-93496-y).
- [90] de Pablos, D., D. M. Long, C. J. Owen, G. Valori, G. Nicolaou, and L. K. Harra (2021), Matching Temporal Signatures of Solar Features to Their Corresponding Solar-Wind Outflows, *Solar Phys.*, **296**(4), 68, [10.1007/s11207-021-01813-5](https://doi.org/10.1007/s11207-021-01813-5).
- [91] Delaunay, J. J. (2021), Gamma-Ray Bursts in the Multi-Messenger Era, Ph.D. thesis, The Pennsylvania State University.
- [92] Demianski, M., E. Piedipalumbo, D. Sawant, and L. Amati (2021), Prospects of high redshift constraints on dark energy models with the  $E_{p,i}$  -  $E_{iso}$  correlation in long gamma ray bursts, *Mon. Not. Roy. Astron. Soc.*, **506**(1), 903–918, [10.1093/mnras/stab1669](https://doi.org/10.1093/mnras/stab1669).
- [93] Denissenya, M., B. Grossan, and E. V. Linder (2021), Distinguishing time clustering of astrophysical bursts, *Phys. Rev. D*, **104**(2), 023007, [10.1103/PhysRevD.104.023007](https://doi.org/10.1103/PhysRevD.104.023007).
- [94] Di Matteo, S., N. M. Viall, and L. Kepko (2021), Power Spectral Density Background Estimate and Signal Detection via the Multitaper Method, *J. Geophys. Res.*, **126**(2), e28748, [10.1029/2020JA028748](https://doi.org/10.1029/2020JA028748).
- [95] Díaz Peña, J., J. Semeter, Y. Nishimura, R. Varney, A. Reimer, M. Hairston, M. Zettergren, M. Hirsch, O. Verkhoglyadova, K. Hosokawa, and K. Shiokawa (2021), Auroral Heating of Plasma Patches Due to High-Latitude Reconnection, *J. Geophys. Res.*, **126**(12), e29657, [10.1029/2021JA029657](https://doi.org/10.1029/2021JA029657).
- [96] Dmitriev, A. V., B. Lalchand, and S. Ghosh (2021), Mechanisms and Evolution of Geoeffective Large-Scale Plasma Jets in the Magnetosheath, *Universe*, **7**(5), 152, [10.3390/universe7050152](https://doi.org/10.3390/universe7050152).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [97] Drake, J. F., C. Pfrommer, C. S. Reynolds, M. Ruszkowski, M. Swisdak, A. Einarsson, T. Thomas, A. B. Hassam, and G. T. Roberg-Clark (2021), Whistler-regulated Magnetohydrodynamics: Transport Equations for Electron Thermal Conduction in the High- $\beta$  Intracluster Medium of Galaxy Clusters, *Astrophys. J.*, **923**(2), 245, [10.3847/1538-4357/ac1ff1](https://doi.org/10.3847/1538-4357/ac1ff1).
- [98] Dresing, N., A. Warmuth, F. Effenberger, K. L. Klein, S. Musset, L. Glesener, and M. Brüdern (2021), Connecting solar flare hard X-ray spectra to in situ electron spectra. A comparison of RHESSI and STEREO/SEPT observations, *Astron. & Astrophys.*, **654**, A92, [10.1051/0004-6361/202141365](https://doi.org/10.1051/0004-6361/202141365).
- [99] El-Taher, A. M., and A. A. Thabet (2021), The interconnection and phase asynchrony between the geomagnetic indices' periodicities: A study based on the interplanetary magnetic field polarities 1967–2018 utilizing a cross wavelet analysis, *Adv. Space Res.*, **67**(10), 3213–3227, [10.1016/j.asr.2021.02.001](https://doi.org/10.1016/j.asr.2021.02.001).
- [100] Engebretson, M. J., L. Y. Ahmed, V. A. Pilipenko, E. S. Steinmetz, M. B. Moldwin, M. G. Connors, D. H. Boteler, J. M. Weygand, S. Coyle, S. Ohtani, J. Gjerloev, and C. T. Russell (2021), Superposed Epoch Analysis of Nighttime Magnetic Perturbation Events Observed in Arctic Canada, *J. Geophys. Res.*, **126**(9), e29465, [10.1029/2021JA029465](https://doi.org/10.1029/2021JA029465).
- [101] Engelbrecht, N. E., and K. D. Moloto (2021), An Ab Initio Approach to Antiproton Modulation in the Inner Heliosphere, *Astrophys. J.*, **908**(2), 167, [10.3847/1538-4357/abd3a5](https://doi.org/10.3847/1538-4357/abd3a5).
- [102] Erofeev, D. V. (2021), On the direction of the velocity and magnetic field fluctuations in undisturbed solar wind, *Open Astron.*, **30**(1), 184–190, [10.1515/astro-2021-0024](https://doi.org/10.1515/astro-2021-0024).
- [103] Evensberget, D., B. D. Carter, S. C. Marsden, L. Brookshaw, and C. P. Folsom (2021), The winds of young Solar-type stars in the Hyades, *Mon. Not. Roy. Astron. Soc.*, **506**(2), 2309–2335, [10.1093/mnras/stab1696](https://doi.org/10.1093/mnras/stab1696).
- [104] Farrell, W. M., P. E. Clark, M. R. Collier, B. Malphrus, D. C. Folta, M. Keidar, D. C. Bradley, R. J. MacDowall, and J. W. Keller (2021), Terminator Double Layer Explorer (TerDLE): Examining the Near-Moon Lunar Wake, *Planet. Sci. J.*, **2**(2), 61, [10.3847/PSJ/abe0ca](https://doi.org/10.3847/PSJ/abe0ca).
- [105] Farrugia, C. J., A. J. Rogers, R. B. Torbert, K. J. Genestreti, T. K. M. Nakamura, B. Lavraud, P. Montag, J. Egedal, D. Payne, A. Keesee, N. Ahmadi, R. Ergun, P. Reiff, M. Argall, H. Matsui, L. B. Wilson, N. Lugaz, J. L. Burch, C. T. Russell, S. A. Fuselier, and I. Dors (2021), An Encounter With the Ion and Electron Diffusion Regions at a Flapping and Twisted Tail Current Sheet, *J. Geophys. Res.*, **126**(3), e28903, [10.1029/2020JA028903](https://doi.org/10.1029/2020JA028903).
- [106] Fejer, B. G., L. A. Navarro, S. Sazykin, A. Newheart, M. A. Milla, and P. Condor (2021), Prompt Penetration and Substorm Effects Over Jicamarca During the September 2017 Geomagnetic Storm, *J. Geophys. Res.*, **126**(8), e29651, [10.1029/2021JA029651](https://doi.org/10.1029/2021JA029651).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [107] Feng, H., Q. Hu, and H. Song (2021), Editorial: The Magnetic Structures and Their Role in The Evolution of Coronal Mass Ejections, *Front. Phys.*, **9**, 775, [10.3389/fphy.2021.820476](https://doi.org/10.3389/fphy.2021.820476).
- [108] Feng, T., M. Liu, B. Xu, T. Xu, S. Gao, X. Wang, and C. Zhou (2021), Auroral Enhanced Plasma Lines by Suprathermal Electrons Observed by EISCAT, *J. Geophys. Res.*, **126**(3), e28495, [10.1029/2020JA028495](https://doi.org/10.1029/2020JA028495).
- [109] Feng, X., H. Wang, C. Xiang, X. Liu, M. Zhang, J. Zhao, and F. Shen (2021), Magnetohydrodynamic Modeling of the Solar Corona with an Effective Implicit Strategy, *Astrophys. J. Suppl.*, **257**(2), 34, [10.3847/1538-4365/ac1f8b](https://doi.org/10.3847/1538-4365/ac1f8b).
- [110] Fermi-LAT Collaboration, M. Ajello, W. B. Atwood, M. Axelsson, L. Baldini, G. Barbiellini, M. G. Baring, D. Bastieri, R. Bellazzini, A. Berretta, E. Bissaldi, R. D. Blandford, R. Bonino, J. Bregeon, P. Bruel, R. Buehler, E. Burns, S. Buson, R. A. Cameron, P. A. Caraveo, E. Cavazzuti, S. Chen, C. C. Cheung, G. Chiaro, S. Ciprini, D. Costantin, M. Crnogorcevic, S. Cutini, F. D'Ammando, P. de la Torre Luque, F. de Palma, S. W. Di gel, N. Di Lalla, L. Di Venere, F. F. Dirirsa, Y. Fukazawa, S. Funk, P. Fusco, F. Gargano, N. Giglietto, R. Gill, F. Giordano, M. Giroletti, J. Granot, D. Green, I. A. Grenier, S. Griffin, S. Guiriec, E. Hays, D. Horan, G. Jóhannesson, M. Kerr, M. Kovačević, M. Kuss, S. Larsson, L. Latronico, J. Li, F. Longo, F. Loparco, M. N. Lovellette, P. Lubrano, S. Maldera, A. Manfreda, G. Martí-Devesa, M. N. Mazziotta, J. E. McEnery, I. Mereu, P. F. Michelson, T. Mizuno, M. E. Monzani, A. Morselli, I. V. Moskalenko, M. Negro, N. Omodei, M. Orienti, E. Orlando, V. S. Paliya, D. Paneque, Z. Pei, M. Pesce-Rollins, F. Piron, H. Poon, T. A. Porter, G. Principe, J. L. Racusin, S. Rainò, R. Rando, B. Rani, S. Razzaque, A. Reimer, O. Reimer, P. M. S. Parkinson, J. D. Scargle, L. Scotton, D. Serini, C. Sgrò, E. J. Siskind, G. Spandre, P. Spinelli, H. Tajima, M. N. Takahashi, D. Tak, D. F. Torres, G. Tosti, E. Troja, Z. Wadiasingh, K. Wood, M. Yassine, A. Yusafzai, and G. Zaharijas (2021), High-energy emission from a magnetar giant flare in the Sculptor galaxy, *Nature Astron.*, **5**, 385–391, [10.1038/s41550-020-01287-8](https://doi.org/10.1038/s41550-020-01287-8).
- [111] Finelli, F., S. Perri, M. Sisti, and F. Califano (2021), Study of PVI-based diagnostics for 1D time-series in space plasma, *Astron. & Astrophys.*, **656**, A43, [10.1051/0004-6361/202141700](https://doi.org/10.1051/0004-6361/202141700).
- [112] Fleishman, G. D., L. Kleint, G. G. Motorina, G. M. Nita, and E. P. Kontar (2021), Energy Budget of Plasma Motions, Heating, and Electron Acceleration in a Three-loop Solar Flare, *Astrophys. J.*, **913**(2), 97, [10.3847/1538-4357/abf495](https://doi.org/10.3847/1538-4357/abf495).
- [113] Fok, M. C., S. B. Kang, C. P. Ferradas, N. Y. Buzulukova, A. Glocer, and C. M. Komar (2021), New Developments in the Comprehensive Inner Magnetosphere Ionosphere Model, *J. Geophys. Res.*, **126**(4), e28987, [10.1029/2020JA028987](https://doi.org/10.1029/2020JA028987).
- [114] Foldes, R., A. Del Corpo, E. Pietropaolo, and M. Vellante (2021), Assessing Machine Learning Techniques for Identifying Field Line Resonance Frequencies From Cross Phase Spectra, *J. Geophys. Res.*, **126**(5), e29008, [10.1029/2020JA029008](https://doi.org/10.1029/2020JA029008).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [115] Fraija, N., P. Veres, P. Beniamini, A. Galvan-Gomez, B. D. Metzger, R. Barniol Duran, and R. L. Becerra (2021), On the Origin of the Multi-GeV Photons from the Closest Burst with Intermediate Luminosity: GRB 190829A, *Astrophys. J.*, **918**(1), 12, [10.3847/1538-4357/ac0aed](https://doi.org/10.3847/1538-4357/ac0aed).
- [116] Fryer, L. J., R. C. Fear, J. C. Coxon, and I. L. Gingell (2021), Observations of Closed Magnetic Flux Embedded in the Lobes During Periods of Northward IMF, *J. Geophys. Res.*, **126**(6), e29281, [10.1029/2021JA029281](https://doi.org/10.1029/2021JA029281).
- [117] Fu, H., C. Yue, Q. Ma, N. Kang, J. Bortnik, Q.-g. Zong, and X.-z. Zhou (2021), Frequency-Dependent Responses of Plasmaspheric Hiss to the Impact of an Interplanetary Shock, *Geophys. Res. Lett.*, **48**(20), e94810, [10.1029/2021GL094810](https://doi.org/10.1029/2021GL094810).
- [118] Fu, H., C. Yue, Q.-G. Zong, X.-Z. Zhou, and S. Fu (2021), Statistical Characteristics of Substorms With Different Intensity, *J. Geophys. Res.*, **126**(8), e29318, [10.1029/2021JA029318](https://doi.org/10.1029/2021JA029318).
- [119] Ganushkina, N. Y., I. Dandouras, M. W. Liemohn, H. Rème, and J. Cao (2021), Turning Instrument Background Into Science Data for Structural Features of Radiation Belts, *J. Geophys. Res.*, **126**(12), e30014, [10.1029/2021JA030014](https://doi.org/10.1029/2021JA030014).
- [120] GCN Team (2021), A burst of activity nearby, *Nature Astron.*, **5**, 333–333, [10.1038/s41550-021-01359-3](https://doi.org/10.1038/s41550-021-01359-3).
- [121] Gedalin, M., C. T. Russell, and A. P. Dimmock (2021), Shock Mach Number Estimates Using Incomplete Measurements, *J. Geophys. Res.*, **126**(10), e29519, [10.1029/2021JA029519](https://doi.org/10.1029/2021JA029519).
- [122] Génot, V., E. Budnik, C. Jacquey, M. Bouchemit, B. Renard, N. Dufourg, N. André, B. Cecconi, F. Pitout, B. Lavraud, A. Fedorov, M. Ganfloff, I. Plotnikov, R. Modolo, N. Lormant, H. S. H. Mohand, C. Tao, B. Besson, D. Heulet, D. Boucon, J. Durand, N. Bourrel, Q. Brzustowski, N. Jourdane, R. Hitier, P. Garnier, B. Grison, N. Aunai, A. Jeandet, and F. Cabrolie (2021), Automated Multi-Dataset Analysis (AMDA): An on-line database and analysis tool for heliospheric and planetary plasma data, *Planet. Space Sci.*, **201**, 105214, [10.1016/j.pss.2021.105214](https://doi.org/10.1016/j.pss.2021.105214).
- [123] Gingell, I., S. J. Schwartz, H. Kucharek, C. J. Farrugia, and K. J. Trattner (2021), Observing the prevalence of thin current sheets downstream of Earth's bow shock, *Phys. Plasmas*, **28**(10), 102902, [10.1063/5.0062520](https://doi.org/10.1063/5.0062520).
- [124] Gohl, S., F. Némec, and M. Parrot (2021), Variations in Energetic Particle Fluxes around Significant Geomagnetic Storms Observed by the Low-Altitude DEMETER Spacecraft, *Universe*, **7**(8), 260, [10.3390/universe7080260](https://doi.org/10.3390/universe7080260).
- [125] Gomez, R. G., S. A. Fuselier, J. M. Sokół, J. L. Burch, D. M. Malaspina, K. J. Trattner, C. A. Gonzalez, J. Mukherjee, and R. J. Strangeway (2021), Multipoint Density Measurements of Geocoronal Pickup Ions, *Geophys. Res. Lett.*, **48**(13), e93695, [10.1029/2021GL093695](https://doi.org/10.1029/2021GL093695).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [126] Grauer, A. D., and P. A. Grauer (2021), Linking solar minimum, space weather, and night sky brightness, *Sci. Rep.*, **11**, 23893, [10.1038/s41598-021-02365-1](https://doi.org/10.1038/s41598-021-02365-1).
- [127] Grossan, B. (2021), Possible Periodic Windowed Behavior in SGR1935+2154 Bursts, *Publ. Astron. Soc. Pacific*, **133**(1025), 074202, [10.1088/1538-3873/ac07b1](https://doi.org/10.1088/1538-3873/ac07b1).
- [128] Guedes dos Santos, L. F. (2021), A Novel Machine Learning Methodology to Calibrate SDO/AIA and Unveil the Internal Magnetic Structure of ICMEs, Ph.D. thesis, The Catholic University of America.
- [129] Guineva, V., I. Despirak, R. Werner, R. Bojilova, and L. Raykova (2021), Mid-latitude effects of “expanded” geomagnetic substorms: a case study, in *European Physical Journal Web of Conferences, European Physical Journal Web of Conferences*, vol. 254, p. 01004, [10.1051/epjconf/202125401004](https://doi.org/10.1051/epjconf/202125401004).
- [130] Guo, F., J. Giacalone, and L. Zhao (2021), Shock Propagation and Associated Particle Acceleration in the Presence of Ambient Solar-Wind Turbulence, *Front. Astron. Space Sci.*, **8**, 27, [10.3389/fspas.2021.644354](https://doi.org/10.3389/fspas.2021.644354).
- [131] Gupta, R., S. B. Pandey, A. J. Castro-Tirado, A. Kumar, A. Aryan, and S. N. Tiwari (2021), Observational Properties of TeV Detected GRB 180720B, GRB 190114C and GRB 190829A, in *Revista Mexicana de Astronomia y Astrofisica Conference Series, Revista Mexicana de Astronomia y Astrofisica Conference Series*, vol. 53, pp. 113–123, [10.22201/ia.14052059p.2021.53.23](https://doi.org/10.22201/ia.14052059p.2021.53.23).
- [132] Hadid, L. Z., V. Génot, S. Aizawa, A. Milillo, J. Zender, G. Murakami, J. Benkhoff, I. Zouganelis, T. Alberti, N. André, Z. Bebesi, F. Califano, A. P. Dimmock, M. Dosa, C. P. Escoubet, L. Griton, G. C. Ho, T. S. Horbury, K. Iwai, M. Janvier, E. Kilpua, B. Lavraud, A. Madar, Y. Miyoshi, D. Müller, R. F. Pinto, A. P. Rouillard, J. M. Raines, N. Raouafi, F. Sahraoui, B. Sánchez-Cano, D. Shiota, R. Vainio, and A. Walsh (2021), BepiColombo’s cruise phase: unique opportunity for synergistic observations, *Front. Astron. Space Sci.*, **8**, 154, [10.3389/fspas.2021.718024](https://doi.org/10.3389/fspas.2021.718024).
- [133] Hajra, R. (2021), Weakest Solar Cycle of the Space Age: A Study on Solar Wind-Magnetosphere Energy Coupling and Geomagnetic Activity, *Solar Phys.*, **296**(2), 33, [10.1007/s11207-021-01774-9](https://doi.org/10.1007/s11207-021-01774-9).
- [134] Hajra, R. (2021), Seasonal dependence of the Earth’s radiation belt - new insights, *Ann. Geophys.*, **39**(1), 181–187, [10.5194/angeo-39-181-2021](https://doi.org/10.5194/angeo-39-181-2021).
- [135] Hajra, R. (2021), September 2017 Space-Weather Events: A Study on Magnetic Reconnection and Geoeffectiveness, *Solar Phys.*, **296**(3), 50, [10.1007/s11207-021-01803-7](https://doi.org/10.1007/s11207-021-01803-7).
- [136] Hajra, R., A. Marques de Souza Franco, E. Echer, and M. José Alves Bolzan (2021), Long Term Variations of the Geomagnetic Activity: A Comparison Between the Strong and Weak Solar Activity Cycles and Implications for the Space Climate, *J. Geophys. Res.*, **126**(4), e28695, [10.1029/2020JA028695](https://doi.org/10.1029/2020JA028695).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [137] Hammer, M. D., G. A. Cox, W. J. Brown, C. D. Beggan, and C. C. Finlay (2021), Geomagnetic Virtual Observatories: monitoring geomagnetic secular variation with the Swarm satellites, *Earth, Planets and Space*, **73**(1), 54, [10.1186/s40623-021-01357-9](https://doi.org/10.1186/s40623-021-01357-9).
- [138] Harada, Y., Y. Kasahara, M. N. Nishino, S. Kurita, Y. Saito, S. Yokota, A. Kumamoto, F. Takahashi, and H. Shimizu (2021), Global Maps of Solar Wind Electron Modification by Electrostatic Waves Above the Lunar Day Side: Kaguya Observations, *Geophys. Res. Lett.*, **48**(17), e95260, [10.1029/2021GL095260](https://doi.org/10.1029/2021GL095260).
- [139] Hart, S. T., M. A. Dayeh, D. B. Reisenfeld, P. H. Janzen, D. J. McComas, F. Allegrini, S. A. Fuselier, K. Ogasawara, J. R. Szalay, H. O. Funsten, and S. M. Petrinec (2021), Probing the Magnetosheath Boundaries Using Interstellar Boundary Explorer (IBEX) Orbital Encounters, *J. Geophys. Res.*, **126**(7), e29278, [10.1029/2021JA029278](https://doi.org/10.1029/2021JA029278).
- [140] Hegedus, A. M., W. B. Manchester, and J. C. Kasper (2021), Tracking the Source of Solar Type II Bursts through Comparisons of Simulations and Radio Data, *Astrophys. J.*, **922**(2), 203, [10.3847/1538-4357/ac2361](https://doi.org/10.3847/1538-4357/ac2361).
- [141] Hervig, M. E., J. M. C. Plane, D. E. Siskind, W. Feng, C. G. Bardeen, and S. M. Bailey (2021), New Global Meteoric Smoke Observations From SOFIE: Insight Regarding Chemical Composition, Meteoric Influx, and Hemispheric Asymmetry, *J. Geophys. Res.*, **126**(13), e35007, [10.1029/2021JD035007](https://doi.org/10.1029/2021JD035007).
- [142] Hinterreiter, J., T. Amerstorfer, M. Temmer, M. A. Reiss, A. J. Weiss, C. Möstl, L. A. Barnard, J. Pomoell, M. Bauer, and U. V. Amerstorfer (2021), Drag-Based CME Modeling With Heliospheric Images Incorporating Frontal Deformation: ELEvoHI 2.0, *Space Weather*, **19**(10), e02836, [10.1029/2021SW002836](https://doi.org/10.1029/2021SW002836).
- [143] Hinterreiter, J., T. Amerstorfer, M. A. Reiss, C. Möstl, M. Temmer, M. Bauer, U. V. Amerstorfer, R. L. Bailey, A. J. Weiss, J. A. Davies, L. A. Barnard, and M. J. Owens (2021), Why are ELEvoHI CME Arrival Predictions Different if Based on STEREO A or STEREO B Heliospheric Imager Observations?, *Space Weather*, **19**(3), e02674, [10.1029/2020SW002674](https://doi.org/10.1029/2020SW002674).
- [144] Holappa, L., J. P. Reistad, A. Ohma, C. Gabrielse, and D. Sur (2021), The Magnitude of IMF  $B_y$  Influences the Magnetotail Response to Solar Wind Forcing, *J. Geophys. Res.*, **126**(11), e29752, [10.1029/2021JA029752](https://doi.org/10.1029/2021JA029752).
- [145] Holappa, L., R. M. Robinson, A. Pulkkinen, T. Asikainen, and K. Mursula (2021), Explicit IMF  $B_y$  Dependence in Geomagnetic Activity: Quantifying Ionospheric Electrodynamics, *J. Geophys. Res.*, **126**(4), e29202, [10.1029/2021JA029202](https://doi.org/10.1029/2021JA029202).
- [146] Horvath, I., and B. C. Lovell (2021), Subauroral Flow Channel Structures and Auroral Undulations Triggered by Kelvin-Helmholtz Waves, *J. Geophys. Res.*, **126**(6), e29144, [10.1029/2021JA029144](https://doi.org/10.1029/2021JA029144).
- [147] Hosokawa, K., M. Nagata, K. Shiokawa, and Y. Otsuka (2021), What controls the luminosity of polar cap airglow patches?: Implication from airglow measurements in Eureka,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

Canada in comparison with SuperDARN convection pattern, *Polar Science*, **28**, 100608, [10.1016/j.polar.2020.100608](https://doi.org/10.1016/j.polar.2020.100608).

- [148] Hubbert, M., Y. Qi, C. T. Russell, J. L. Burch, B. L. Giles, and T. E. Moore (2021), Electron Only Tail Current Sheets and Their Temporal Evolution, *Geophys. Res. Lett.*, **48**(5), e91364, [10.1029/2020GL091364](https://doi.org/10.1029/2020GL091364).
- [149] Hull, A. J., O. Agapitov, F. S. Mozer, J. P. McFadden, and V. Angelopoulos (2021), A Survey of Dense Low Energy Ions in Earth's Outer Magnetosphere: Relation to Solar Wind Dynamic Pressure, IMF, and Magnetospheric Activity, *J. Geophys. Res.*, **126**(9), e29208, [10.1029/2021JA029208](https://doi.org/10.1029/2021JA029208).
- [150] Imtiaz, N., O. Hammou Ali, and H. Rizvi (2021), Impact of the intense geomagnetic storm of August 2018 on the equatorial and low latitude ionosphere, *Astrophys. Space Sci.*, **366**(11), 106, [10.1007/s10509-021-04009-2](https://doi.org/10.1007/s10509-021-04009-2).
- [151] Innocenti, M. E., J. Amaya, J. Raeder, R. Dupuis, B. Ferdousi, and G. Lapenta (2021), Unsupervised classification of simulated magnetospheric regions, *Ann. Geophys.*, **39**(5), 861–881, [10.5194/angeo-39-861-2021](https://doi.org/10.5194/angeo-39-861-2021).
- [152] Israel, G. L., M. Burgay, N. Rea, P. Esposito, A. Possenti, S. Dall'Osso, L. Stella, M. Pilia, A. Tiengo, A. Ridnaia, A. Y. Lien, D. D. Frederiks, and F. Bernardini (2021), X-Ray and Radio Bursts from the Magnetar 1E 1547.0-5408, *Astrophys. J.*, **907**(1), 7, [10.3847/1538-4357/abca95](https://doi.org/10.3847/1538-4357/abca95).
- [153] Iwai, K., D. Shiota, M. Tokumaru, K. Fujiki, M. Den, and Y. Kubo (2021), Validation of coronal mass ejection arrival-time forecasts by magnetohydrodynamic simulations based on interplanetary scintillation observations, *Earth, Planets and Space*, **73**(1), 9, [10.1186/s40623-020-01345-5](https://doi.org/10.1186/s40623-020-01345-5).
- [154] Jebaraj, I. C., A. Kouloumvakos, J. Magdalenic, A. P. Rouillard, G. Mann, V. Krupar, and S. Poedts (2021), Generation of interplanetary type II radio emission, *Astron. & Astrophys.*, **654**, A64, [10.1051/0004-6361/202141695](https://doi.org/10.1051/0004-6361/202141695).
- [155] Jennrich, O., N. Luetzendorf, J. I. Thorpe, J. Slutsky, and C. Cutler (2021), Sensitivity limits of space-based interferometric gravitational wave observatories from the solar wind, *Phys. Rev. D*, **104**(6), 062003, [10.1103/PhysRevD.104.062003](https://doi.org/10.1103/PhysRevD.104.062003).
- [156] Johlander, A., M. Battarbee, A. Vaivads, L. Turc, Y. Pfau-Kempf, U. Ganse, M. Grandin, M. Dubart, Y. V. Khotyaintsev, D. Caprioli, C. Haggerty, S. J. Schwartz, B. L. Giles, and M. Palmroth (2021), Ion Acceleration Efficiency at the Earth's Bow Shock: Observations and Simulation Results, *Astrophys. J.*, **914**(2), 82, [10.3847/1538-4357/abfafc](https://doi.org/10.3847/1538-4357/abfafc).
- [157] Jordana-Mitjans, N., C. G. Mundell, R. J. Smith, C. Guidorzi, M. Marongiu, S. Kobayashi, A. Gomboc, M. Shrestha, and I. A. Steele (2021), Coherence scale of magnetic fields generated in early-time forward shocks of GRBs, *Mon. Not. Roy. Astron. Soc.*, **505**(2), 2662–2674, [10.1093/mnras/stab1003](https://doi.org/10.1093/mnras/stab1003).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [158] Joshua, B. W., J. O. Adeniyi, C. Amory-Mazaudier, and S. J. Adebiyi (2021), On the Pre-Magnetic Storm Signatures in NmF2 in Some Equatorial, Low- and Mid-Latitude Stations, *J. Geophys. Res.*, **126**(8), e29459, [10.1029/2021JA029459](https://doi.org/10.1029/2021JA029459).
- [159] Jun, C.-W., Y. Miyoshi, S. Kurita, C. Yue, J. Bortnik, L. Lyons, S. Nakamura, M. Shoji, S. Imajo, C. Kletzing, Y. Kasahara, Y. Kasaba, S. Matsuda, F. Tsuchiya, A. Kumamoto, A. Matsuoka, and I. Shinohara (2021), The Characteristics of EMIC Waves in the Magnetosphere Based on the Van Allen Probes and Arase Observations, *J. Geophys. Res.*, **126**(6), e29001, [10.1029/2020JA029001](https://doi.org/10.1029/2020JA029001).
- [160] Kahler, S. W., and D. Brown (2021), Variations of Peak He/H Ratios in Solar Energetic ( $E \gtrsim 4$  MeV) Particle Events and Comparisons with Solar Wind He/H Ratios, *Astrophys. J.*, **908**(2), 214, [10.3847/1538-4357/abd481](https://doi.org/10.3847/1538-4357/abd481).
- [161] Kajdič, P., S. Raptis, X. Blanco-Cano, and T. Karlsson (2021), Causes of Jets in the Quasi-Perpendicular Magnetosheath, *Geophys. Res. Lett.*, **48**(13), e93173, [10.1029/2021GL093173](https://doi.org/10.1029/2021GL093173).
- [162] Kalaivani, P. P., O. Prakash, A. Shanmugaraju, L. Feng, L. Lu, W. Gan, and G. Michalek (2021), Analysis of Type II and Type III Radio Bursts Associated with SEPs from Non-Interacting/Interacting Radio-Loud CMEs, *Astrophys.*, **64**(3), 327–344, [10.1007/s10511-021-09693-0](https://doi.org/10.1007/s10511-021-09693-0).
- [163] Kallaya, O., and T. Yeeram (2021), Characteristics of recurrent Forbush decreases in Galactic cosmic ray intensity during positive and negative solar magnetic polarities, *Astrophys. Space Sci.*, **366**(7), 61, [10.1007/s10509-021-03970-2](https://doi.org/10.1007/s10509-021-03970-2).
- [164] Kasper, J. C., K. G. Klein, E. Lichko, J. Huang, C. H. K. Chen, S. T. Badman, J. Bonnell, P. L. Whittlesey, R. Livi, D. Larson, M. Pulupa, A. Rahmati, D. Stansby, K. E. Korreck, M. Stevens, A. W. Case, S. D. Bale, M. Maksimovic, M. Moncuquet, K. Goetz, J. S. Halekas, D. Malaspina, N. E. Raouafi, A. Szabo, R. MacDowall, M. Velli, T. Dudok de Wit, and G. P. Zank (2021), Parker Solar Probe Enters the Magnetically Dominated Solar Corona, *Phys. Rev. Lett.*, **127**(25), 255101, [10.1103/PhysRevLett.127.255101](https://doi.org/10.1103/PhysRevLett.127.255101).
- [165] Katsavrias, C., S. Aminalragia-Giamini, C. Papadimitriou, I. Sandberg, P. Jiggens, I. A. Daglis, and H. Evans (2021), On the Interplanetary Parameter Schemes Which Drive the Variability of the Source/Seed Electron Population at GEO, *J. Geophys. Res.*, **126**(6), e28939, [10.1029/2020JA028939](https://doi.org/10.1029/2020JA028939).
- [166] Katsavrias, C., S. Raptis, I. A. Daglis, T. Karlsson, M. Georgiou, and G. Balasis (2021), On the Generation of Pi2 Pulsations due to Plasma Flow Patterns Around Magnetosheath Jets, *Geophys. Res. Lett.*, **48**(15), e93611, [10.1029/2021GL093611](https://doi.org/10.1029/2021GL093611).
- [167] Katushkina, O. A., A. Galli, V. V. Izmodenov, and D. B. Alexashov (2021), Analysis of the IBEX-Lo interstellar hydrogen fluxes collected in 2009-2018 as a tool for sensing of the solar radiation pressure and the hydrogen ionization rate, *Mon. Not. Roy. Astron. Soc.*, **501**(2), 1633–1643, [10.1093/mnras/staa3780](https://doi.org/10.1093/mnras/staa3780).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [168] Katushkina, O. A., I. I. Baliukin, V. V. Izmodenov, and D. B. Alexashov (2021), Imprints of the secondary interstellar hydrogen atoms at 1 AU, *Mon. Not. Roy. Astron. Soc.*, **504**(2), 2501–2508, [10.1093/mnras/stab944](https://doi.org/10.1093/mnras/stab944).
- [169] Katz, S., U. Goldvais, and C. Price (2021), The connection between space weather and Single Event Upsets in polar low earth orbit satellites, *Adv. Space Res.*, **67**(10), 3237–3249, [10.1016/j.asr.2021.02.007](https://doi.org/10.1016/j.asr.2021.02.007).
- [170] Kawai, K., K. Shiokawa, Y. Otsuka, S. Oyama, Y. Kasaba, Y. Kasahara, F. Tsuchiya, A. Kumamoto, S. Nakamura, A. Matsuoka, S. Imajo, Y. Kazama, S. Y. Wang, S. W. Y. Tam, T. F. Chang, B. J. Wang, K. Asamura, S. Kasahara, S. Yokota, K. Keika, T. Hori, Y. Miyoshi, C. Jun, M. Shoji, and I. Shinohara (2021), First Simultaneous Observation of a Night Time Medium-Scale Traveling Ionospheric Disturbance From the Ground and a Magnetospheric Satellite, *J. Geophys. Res.*, **126**(9), e29086, [10.1029/2020JA029086](https://doi.org/10.1029/2020JA029086).
- [171] Kay, C., and T. Nieves-Chinchilla (2021), Modeling Interplanetary Expansion and Deformation of CMEs With ANTEATR PARADE: Relative Contribution of Different Forces, *J. Geophys. Res.*, **126**(5), 2020JA028911, [10.1029/2020JA028911](https://doi.org/10.1029/2020JA028911).
- [172] Khabarova, O., O. Malandraki, H. Malova, R. Kislov, A. Greco, R. Bruno, O. Pezzi, S. Servidio, G. Li, W. Matthaeus, J. Le Roux, N. E. Engelbrecht, F. Pecora, L. Zelenyi, V. Obrikko, and V. Kuznetsov (2021), Current Sheets, Plasmoids and Flux Ropes in the Heliosphere. Part I. 2-D or not 2-D? General and Observational Aspects, *Space Sci. Rev.*, **217**(3), 38, [10.1007/s11214-021-00814-x](https://doi.org/10.1007/s11214-021-00814-x).
- [173] Khabarova, O., T. Sagitov, R. Kislov, and G. Li (2021), Automated Identification of Current Sheets—A New Tool to Study Turbulence and Intermittency in the Solar Wind, *J. Geophys. Res.*, **126**(8), e29099, [10.1029/2020JA029099](https://doi.org/10.1029/2020JA029099).
- [174] Kharayat, H., B. Joshi, and R. Chandra (2021), Radio-loud and radio-quiet CMEs: solar cycle dependency, influence on cosmic ray intensity, and geo-effectiveness, *Astrophys. Space Sci.*, **366**(2), 24, [10.1007/s10509-021-03930-w](https://doi.org/10.1007/s10509-021-03930-w).
- [175] Khokhlachev, A. A., M. O. Riazantseva, L. S. Rakhmanova, Y. I. Yermolaev, and I. G. Lodkina (2021), Variations of Protons and Doubly Ionized Helium Ions in the Solar Wind, *Cosmic Research*, **59**(6), 415–426, [10.1134/S0010952521060022](https://doi.org/10.1134/S0010952521060022).
- [176] Kieokaew, R., B. Lavraud, N. Fargette, A. Marchaudon, V. Génot, C. Jacquey, D. Gershman, B. Giles, R. Torbert, and J. Burch (2021), Statistical Relationship Between Interplanetary Magnetic Field Conditions and the Helicity Sign of Flux Transfer Event Flux Ropes, *Geophys. Res. Lett.*, **48**(6), e91257, [10.1029/2020GL091257](https://doi.org/10.1029/2020GL091257).
- [177] Kihara, W., K. Munakata, C. Kato, R. Kataoka, A. Kadokura, S. Miyake, M. Kozai, T. Kuwabara, M. Tokumaru, R. R. S. Mendonça, E. Echer, A. D. Lago, M. Rockenbach, N. J. Schuch, J. V. Bageston, C. R. Braga, H. K. Al Jassar, M. M. Sharma, M. L. Duldig, J. E. Humble, P. Evenson, I. Sabbah, and J. Kóta (2021), A Peculiar ICME Event in August 2018 Observed With the Global Muon Detector Network, *Space Weather*, **19**(3), e02531, [10.1029/2020SW002531](https://doi.org/10.1029/2020SW002531).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [178] Kilpua, E. K. J., S. W. Good, M. Ala-Lahti, A. Osmane, D. Fontaine, L. Hadid, M. Janvier, and E. Yordanova (2021), Statistical analysis of magnetic field fluctuations in CME-driven sheath regions, *Front. Astron. Space Sci.*, **7**, 109, [10.3389/fspas.2020.610278](https://doi.org/10.3389/fspas.2020.610278).
- [179] Kilpua, E. K. J., J. Pomoell, D. Price, R. Sarkar, and E. Asvestari (2021), Estimating the magnetic structure of an erupting CME flux rope from AR12158 using data-driven modelling, *Front. Astron. Space Sci.*, **8**, 35, [10.3389/fspas.2021.631582](https://doi.org/10.3389/fspas.2021.631582).
- [180] Kilpua, E. K. J., S. W. Good, N. Dresing, R. Vainio, E. E. Davies, R. J. Forsyth, J. Gieseler, B. Lavraud, E. Asvestari, D. E. Morosan, J. Pomoell, D. J. Price, D. Heyner, T. S. Horbury, V. Angelini, H. O'Brien, V. Evans, J. Rodriguez-Pacheco, R. Gómez Herrero, G. C. Ho, and R. Wimmer-Schweingruber (2021), Multi-spacecraft observations of the structure of the sheath of an interplanetary coronal mass ejection and related energetic ion enhancement, *Astron. & Astrophys.*, **656**, A8, [10.1051/0004-6361/202140838](https://doi.org/10.1051/0004-6361/202140838).
- [181] Kim, J.-H., Y.-S. Kwak, Y. Kim, S.-I. Moon, S.-H. Jeong, and J. Yun (2021), Potential of Regional Ionosphere Prediction Using a Long Short-Term Memory Deep-Learning Algorithm Specialized for Geomagnetic Storm Period, *Space Weather*, **19**(9), e02741, [10.1029/2021SW002741](https://doi.org/10.1029/2021SW002741).
- [182] Kirsten, F., M. P. Snelders, M. Jenkins, K. Nimmo, J. van den Eijnden, J. W. T. Hessels, M. P. Gawroński, and J. Yang (2021), Detection of two bright radio bursts from magnetar SGR 1935 + 2154, *Nature Astron.*, **5**, 414–422, [10.1038/s41550-020-01246-3](https://doi.org/10.1038/s41550-020-01246-3).
- [183] Kistler, M., J. Halekas, J. McFadden, and J. Z. D. Mieth (2021), Distribution and variability of plasma perturbations observed by ARTEMIS near the Moon in the terrestrial magnetotail, *Adv. Space Res.*, **68**(1), 259–274, [10.1016/j.asr.2021.03.004](https://doi.org/10.1016/j.asr.2021.03.004).
- [184] Kleimenova, N. G., L. I. Gromova, S. V. Gromov, and L. M. Malysheva (2021), High-Latitude Geomagnetic Disturbances and Field Aligned Currents in the Recovery Phase of the Large Magnetic Storm on June 21-26, 2015, *Geomag. and Aeron.*, **61**(4), 520–530, [10.1134/S0016793221040071](https://doi.org/10.1134/S0016793221040071).
- [185] Klein, K.-L. (2021), Radio astronomical tools for the study of solar energetic particles I. Correlations and diagnostics of impulsive acceleration and particle propagation, *Front. Astron. Space Sci.*, **7**, 105, [10.3389/fspas.2020.580436](https://doi.org/10.3389/fspas.2020.580436).
- [186] Knuth, T. J. (2021), Studying Particle Acceleration in Solar Flares via Subsecond X-Ray Spikes: Analysis and Instrumentation, Ph.D. thesis, University of Minnesota.
- [187] Koleva, K., M. Dechev, and P. Duchlev (2021), Relations among eruptive prominence properties, flare evolution and CME kinematics in large solar energetic particle events, *J. Atmos. Solar-Terr. Phys.*, **212**, 105464, [10.1016/j.jastp.2020.105464](https://doi.org/10.1016/j.jastp.2020.105464).
- [188] Kollhoff, A., A. Kouloumvakos, D. Lario, N. Dresing, R. Gómez-Herrero, L. Rodríguez-García, O. E. Malandraki, I. G. Richardson, A. Posner, K. L. Klein, D. Pacheco, A. Klassen, B. Heber, C. M. S. Cohen, T. Laitinen, I. Cernuda, S. Dalla, F. Espinosa Lara, R. Vainio, M. Köberle, R. Kühl, Z. G. Xu, L. Berger, S. Eldrum, M. Brüdern,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- M. Laurenza, E. J. Kilpuua, A. Aran, A. P. Rouillard, R. Bućík, N. Wijsen, J. Pomoell, R. F. Wimmer-Schweingruber, C. Martin, S. I. Böttcher, J. L. Freiherr von Forstner, J. C. Terasa, S. Boden, S. R. Kulkarni, A. Ravanbakhsh, M. Yedla, N. Janitzek, J. Rodríguez-Pacheco, M. Prieto Mateo, S. Sánchez Prieto, P. Parra Espada, O. Rodríguez Polo, A. Martínez Hellín, F. Carcaboso, G. M. Mason, G. C. Ho, R. C. Allen, G. Bruce Andrews, C. E. Schlemm, H. Seifert, K. Tyagi, W. J. Lees, J. Hayes, S. D. Bale, V. Krupar, T. S. Horbury, V. Angelini, V. Evans, H. O'Brien, M. Maksimovic, Y. V. Khotyaintsev, A. Vecchio, K. Steinvall, and E. Asvestari (2021), The first widespread solar energetic particle event observed by Solar Orbiter on 2020 November 29, *Astron. & Astrophys.*, **656**, A20, [10.1051/0004-6361/202140937](https://doi.org/10.1051/0004-6361/202140937).
- [189] Kooi, J. E., M. L. Ascione, L. V. Reyes-Rosa, S. K. Rier, and M. Ashas (2021), VLA Measurements of Faraday Rotation Through a Coronal Mass Ejection Using Multiple Lines of Sight, *Solar Phys.*, **296**(1), 11, [10.1007/s11207-020-01755-4](https://doi.org/10.1007/s11207-020-01755-4).
- [190] Kornbleuth, M., M. Opher, I. Baliukin, M. A. Dayeh, E. Zirnstein, M. Gkioulidou, K. Dialynas, A. Galli, J. D. Richardson, V. Izmodenov, G. P. Zank, and S. Fuselier (2021), Signature of a Heliotail Organized by the Solar Magnetic Field and the Role of Nonideal Processes in Modeled IBEX ENA Maps: A Comparison of the BU and Moscow MHD Models, *Astrophys. J.*, **921**(2), 164, [10.3847/1538-4357/ac1e2a](https://doi.org/10.3847/1538-4357/ac1e2a).
- [191] Kornbleuth, M., M. Opher, I. Baliukin, M. Gkioulidou, J. D. Richardson, G. P. Zank, A. T. Michael, G. Tóth, V. Tenishev, V. Izmodenov, D. Alexashov, S. Fuselier, J. F. Drake, and K. Dialynas (2021), The Development of a Split-tail Heliosphere and the Role of Non-ideal Processes: A Comparison of the BU and Moscow Models, *Astrophys. J.*, **923**(2), 179, [10.3847/1538-4357/ac2fa6](https://doi.org/10.3847/1538-4357/ac2fa6).
- [192] Kouloumvakos, A., A. Rouillard, A. Warmuth, J. Magdalenic, I. C. Jebaraj, G. Mann, R. Vainio, and C. Monstein (2021), Coronal Conditions for the Occurrence of Type II Radio Bursts, *Astrophys. J.*, **913**(2), 99, [10.3847/1538-4357/abf435](https://doi.org/10.3847/1538-4357/abf435).
- [193] Krishnakumar, M. A., P. K. Manoharan, B. C. Joshi, R. Girgaonkar, S. Desai, M. Bagchi, K. Nobleson, L. Dey, A. Susobhanan, S. C. Susarla, M. P. Surnis, Y. Maan, A. Gopakumar, A. Basu, N. D. Batra, A. Choudhary, K. De, Y. Gupta, A. K. Naidu, D. Pathak, J. Singha, and T. Prabu (2021), High precision measurements of interstellar dispersion measure with the upgraded GMRT, *Astron. & Astrophys.*, **651**, A5, [10.1051/0004-6361/202140340](https://doi.org/10.1051/0004-6361/202140340).
- [194] Kronberg, E. A., J. Gorman, K. Nykyri, A. G. Smirnov, J. W. Gjerloev, E. E. Grigorenko, L. V. Kozak, X. Ma, K. J. Trattner, and M. Friel (2021), Kelvin-Helmholtz Instability Associated with Reconnection and Ultra Low Frequency Waves at the Ground: A Case Study, *Front. Phys.*, **9**, 700, [10.3389/fphy.2021.738988](https://doi.org/10.3389/fphy.2021.738988).
- [195] Kronberg, E. A., T. Hannan, J. Huthmacher, M. Münzer, F. Peste, Z. Zhou, M. Berrendorf, E. Faerman, F. Gastaldello, S. Ghizzardi, P. Escoubet, S. Haaland, A. Smirnov, N. Sivadas, R. C. Allen, A. Tiengo, and R. Ilie (2021), Prediction of Soft Proton Intensities in the Near-Earth Space Using Machine Learning, *Astrophys. J.*, **921**(1), 76, [10.3847/1538-4357/ac1b30](https://doi.org/10.3847/1538-4357/ac1b30).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [196] Kumar, L., and V. Dubey (2021), On solar sources of geomagnetic storms of solar cycle 23 and their relation with CMEs, in *American Institute of Physics Conference Series*, *American Institute of Physics Conference Series*, vol. 2369, p. 020138, [10.1063/5.0061278](https://doi.org/10.1063/5.0061278).
- [197] Kumar, P., J. T. Karpen, S. K. Antiochos, P. F. Wyper, C. R. DeVore, and B. J. Lynch (2021), From Pseudostreamer Jets to Coronal Mass Ejections: Observations of the Breakout Continuum, *Astrophys. J.*, **907**(1), 41, [10.3847/1538-4357/abca8b](https://doi.org/10.3847/1538-4357/abca8b).
- [198] Kumar, S., Y. Miyoshi, V. K. Jordanova, M. Engel, K. Asamura, S. Yokota, S. Kasahara, Y. Kazama, S. Y. Wang, T. Mitani, K. Keika, T. Hori, C. Jun, and I. Shinohara (2021), Contribution of Electron Pressure to Ring Current and Ground Magnetic Depression Using RAM-SCB Simulations and Arase Observations During 7-8 November 2017 Magnetic Storm, *J. Geophys. Res.*, **126**(6), e29109, [10.1029/2021JA029109](https://doi.org/10.1029/2021JA029109).
- [199] Laker, R., T. S. Horbury, S. D. Bale, L. Matteini, T. Woolley, L. D. Woodham, J. E. Stawarz, E. E. Davies, J. P. Eastwood, M. J. Owens, H. O'Brien, V. Evans, V. Angelini, I. Richter, D. Heyner, C. J. Owen, P. Louarn, and A. Fedorov (2021), Multi-spacecraft study of the solar wind at solar minimum: Dependence on latitude and transient outflows, *Astron. & Astrophys.*, **652**, A105, [10.1051/0004-6361/202140679](https://doi.org/10.1051/0004-6361/202140679).
- [200] Lamarche, L. J., R. H. Varney, and A. S. Reimer (2021), Ion Heating in the Polar Cap Under Northwards IMF B<sub>z</sub>, *J. Geophys. Res.*, **126**(11), e29155, [10.1029/2021JA029155](https://doi.org/10.1029/2021JA029155).
- [201] LaMoury, A. T., H. Hietala, F. Plaschke, L. Vuorinen, and J. P. Eastwood (2021), Solar Wind Control of Magnetosheath Jet Formation and Propagation to the Magnetopause, *J. Geophys. Res.*, **126**(9), e29592, [10.1029/2021JA029592](https://doi.org/10.1029/2021JA029592).
- [202] Lario, D., I. G. Richardson, E. Palmerio, N. Lugaz, S. D. Bale, M. L. Stevens, C. M. S. Cohen, J. Giacalone, D. G. Mitchell, A. Szabo, T. Nieves-Chinchilla, L. B. Wilson, E. R. Christian, M. E. Hill, D. J. McComas, R. L. McNutt, N. A. Schwadron, and M. E. Wiedenbeck (2021), Comparative Analysis of the 2020 November 29 Solar Energetic Particle Event Observed by Parker Solar Probe, *Astrophys. J.*, **920**(2), 123, [10.3847/1538-4357/ac157f](https://doi.org/10.3847/1538-4357/ac157f).
- [203] Larrodera, C., L. Nikitina, and C. Cid (2021), Estimation of the Solar Wind Extreme Events, *Space Weather*, **19**(12), e02902, [10.1029/2021SW002902](https://doi.org/10.1029/2021SW002902).
- [204] Li, C., X. Feng, and F. Wei (2021), An Entropy-stable Ideal EC-GLM-MHD Model for the Simulation of the Three-dimensional Ambient Solar Wind, *Astrophys. J. Suppl.*, **257**(2), 24, [10.3847/1538-4365/ac16d5](https://doi.org/10.3847/1538-4365/ac16d5).
- [205] Li, C., X. Feng, H. Li, and F. Wei (2021), Modified Path-conservative HLLEM Scheme for Magnetohydrodynamic Solar Wind Simulations, *Astrophys. J. Suppl.*, **253**(1), 24, [10.3847/1538-4365/abd5ab](https://doi.org/10.3847/1538-4365/abd5ab).
- [206] Li, C. K., L. Lin, S. L. Xiong, M. Y. Ge, X. B. Li, T. P. Li, F. J. Lu, S. N. Zhang, Y. L. Tuo, Y. Nang, B. Zhang, S. Xiao, Y. Chen, L. M. Song, Y. P. Xu, C. Z. Liu, S. M. Jia, X. L. Cao, J. L. Qu, S. Zhang, Y. D. Gu, J. Y. Liao, X. F. Zhao, Y. Tan, J. Y. Nie, H. S.

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- Zhao, S. J. Zheng, Y. G. Zheng, Q. Luo, C. Cai, B. Li, W. C. Xue, Q. C. Bu, Z. Chang, G. Chen, L. Chen, T. X. Chen, Y. B. Chen, Y. P. Chen, W. Cui, W. W. Cui, J. K. Deng, Y. W. Dong, Y. Y. Du, M. X. Fu, G. H. Gao, H. Gao, M. Gao, Y. D. Gu, J. Guan, C. C. Guo, D. W. Han, Y. Huang, J. Huo, L. H. Jiang, W. C. Jiang, J. Jin, Y. J. Jin, L. D. Kong, G. Li, M. S. Li, W. Li, X. Li, X. F. Li, Y. G. Li, Z. W. Li, X. H. Liang, B. S. Liu, G. Q. Liu, H. W. Liu, X. J. Liu, Y. N. Liu, B. Lu, X. F. Lu, T. Luo, X. Ma, B. Meng, G. Ou, N. Sai, R. C. Shang, X. Y. Song, L. Sun, L. Tao, C. Wang, G. F. Wang, J. Wang, W. S. Wang, Y. S. Wang, X. Y. Wen, B. B. Wu, B. Y. Wu, M. Wu, G. C. Xiao, H. Xu, J. W. Yang, S. Yang, Y. J. Yang, Y.-J. Yang, Q. B. Yi, Q. Q. Yin, Y. You, A. M. Zhang, C. M. Zhang, F. Zhang, H. M. Zhang, J. Zhang, T. Zhang, W. Zhang, W. C. Zhang, W. Z. Zhang, Y. Zhang, Y. F. Zhang, Y. J. Zhang, Z. Zhang, Z. Zhang, Z. L. Zhang, D. K. Zhou, J. F. Zhou, Y. Zhu, Y. X. Zhu, and R. L. Zhuang (2021), HXMT identification of a non-thermal X-ray burst from SGR J1935+2154 and with FRB 200428, *Nature Astron.*, **5**, 378–384, [10.1038/s41550-021-01302-6](https://doi.org/10.1038/s41550-021-01302-6).
- [207] Li, D., M. Ge, M. Dominique, H. Zhao, G. Li, X. Li, S. Zhang, F. Lu, W. Gan, and Z. Ning (2021), Detection of Flare Multiperiodic Pulsations in Mid-ultraviolet Balmer Continuum, Ly $\alpha$ , Hard X-Ray, and Radio Emissions Simultaneously, *Astrophys. J.*, **921**(2), 179, [10.3847/1538-4357/ac1c05](https://doi.org/10.3847/1538-4357/ac1c05).
- [208] Li, G., X. Wu, F. Effenberger, L. Zhao, S. Lesage, N. Bian, and L. Wang (2021), Constraints on the Electron Acceleration Process in Solar Flare: A Case Study, *Geophys. Res. Lett.*, **48**(20), e95138, [10.1029/2021GL095138](https://doi.org/10.1029/2021GL095138).
- [209] Li, H., X. Feng, and F. Wei (2021), Is Solar Minimum 24/25 Another Unusual One?, *Astrophys. J. Lett.*, **917**(2), L26, [10.3847/2041-8213/ac13a6](https://doi.org/10.3847/2041-8213/ac13a6).
- [210] Li, H., X. Feng, and F. Wei (2021), Comparison of Synoptic Maps and PFSS Solutions for The Declining Phase of Solar Cycle 24, *J. Geophys. Res.*, **126**(3), e28870, [10.1029/2020JA028870](https://doi.org/10.1029/2020JA028870).
- [211] Li, H.-M., J.-H. Shue, S. Taguchi, M. Nosé, K. Hosokawa, J. M. Ruohoniemi, Y. Zhang, S. Wing, and M. Lester (2021), Dayside Cusp Aurorae and Ionospheric Convection Under Radial Interplanetary Magnetic Fields, *J. Geophys. Res.*, **126**(5), e27664, [10.1029/2019JA027664](https://doi.org/10.1029/2019JA027664).
- [212] Li, L., X.-Z. Zhou, Y. Omura, Q.-G. Zong, R. Rankin, X.-R. Chen, Y. Liu, C. Yue, and S.-Y. Fu (2021), Drift Resonance Between Particles and Compressional Toroidal ULF Waves in Dipole Magnetic Field, *J. Geophys. Res.*, **126**(10), e28842, [10.1029/2020JA028842](https://doi.org/10.1029/2020JA028842).
- [213] Li, Z., S. Elkington, M. Hudson, M. Patel, A. Boyd, and J. Wygant (2021), Modeling advective transport of radiation belt electrons, *J. Atmos. Solar-Terr. Phys.*, **214**, 105509, [10.1016/j.jastp.2020.105509](https://doi.org/10.1016/j.jastp.2020.105509).
- [214] Lin, D., K. Sorathia, W. Wang, V. Merkin, S. Bao, K. Pham, M. Wiltberger, X. Shi, F. Toffoletto, A. Michael, J. Lyon, J. Garretson, and B. Anderson (2021), The Role of Diffuse Electron Precipitation in the Formation of Subauroral Polarization Streams, *J. Geophys. Res.*, **126**(12), e29792, [10.1029/2021JA029792](https://doi.org/10.1029/2021JA029792).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [215] Linker, J. A., S. G. Heinemann, M. Temmer, M. J. Owens, R. M. Caplan, C. N. Arge, E. Asvestari, V. Delouille, C. Downs, S. J. Hofmeister, I. C. Jebaraj, M. S. Madjarska, R. F. Pinto, J. Pomoell, E. Samara, C. Scolini, and B. Vršnak (2021), Coronal Hole Detection and Open Magnetic Flux, *Astrophys. J.*, **918**(1), 21, [10.3847/1538-4357/ac090a](https://doi.org/10.3847/1538-4357/ac090a).
- [216] Liou, K., and C.-C. Wu (2021), Characteristics of the Heliospheric Current Sheets at the Sector Boundaries: Wind Observations from 1995-2020, *Astrophys. J.*, **920**(1), 39, [10.3847/1538-4357/ac1586](https://doi.org/10.3847/1538-4357/ac1586).
- [217] Liu, C., X. Feng, J. Guo, and H. Fu (2021), Bifurcated outflow jet in a solar wind reconnection exhaust, *Astrophys. Space Sci.*, **366**(1), 2, [10.1007/s10509-020-03910-6](https://doi.org/10.1007/s10509-020-03910-6).
- [218] Liu, D., Z. Rong, J. Gao, J. He, L. Klinger, M. W. Dunlop, L. Yan, K. Fan, and Y. Wei (2021), Statistical Properties of Solar Wind Upstream of Mars: MAVEN Observations, *Astrophys. J.*, **911**(2), 113, [10.3847/1538-4357/abed50](https://doi.org/10.3847/1538-4357/abed50).
- [219] Liu, G., and R. Marchand (2021), Kinetic Simulation of Segmented Plasma Flow Meter Response in the Ionospheric Plasma, *J. Geophys. Res.*, **126**(5), e29120, [10.1029/2021JA029120](https://doi.org/10.1029/2021JA029120).
- [220] Liu, J., W. Wang, L. Qian, W. Lotko, A. G. Burns, K. Pham, G. Lu, S. C. Solomon, L. Liu, W. Wan, B. J. Anderson, A. Coster, and F. Wilder (2021), Solar flare effects in the Earth's magnetosphere, *Nature Phys.*, **17**(7), 807–812, [10.1038/s41567-021-01203-5](https://doi.org/10.1038/s41567-021-01203-5).
- [221] Liu, J., L. R. Lyons, C.-P. Wang, Y. Ma, R. J. Strangeway, Y. Zhang, M. Kivelson, Y. Zou, and K. Khurana (2021), Embedded Regions 1 and 2 Field-Aligned Currents: Newly Recognized From Low-Altitude Spacecraft Observations, *J. Geophys. Res.*, **126**(6), e29207, [10.1029/2021JA029207](https://doi.org/10.1029/2021JA029207).
- [222] Liu, Q., Y. Zhao, and G. Zhao (2021), Statistical study of small-scale interplanetary magnetic flux ropes in the vicinity of the heliospheric current sheet, *Front. Phys.*, **9**, 637, [10.3389/fphy.2021.745152](https://doi.org/10.3389/fphy.2021.745152).
- [223] Liu, R., and Y. Wang (2021), Investigation on the spatiotemporal structures of supra-arcade spikes, *Astron. & Astrophys.*, **653**, A51, [10.1051/0004-6361/202140847](https://doi.org/10.1051/0004-6361/202140847).
- [224] Liu, T. Z., H. Zhang, C.-P. Wang, V. Angelopoulos, A. Vu, X. Wang, and Y. Lin (2021), Statistical Study of Foreshock Transients in the Midtail Foreshock, *J. Geophys. Res.*, **126**(5), e29156, [10.1029/2021JA029156](https://doi.org/10.1029/2021JA029156).
- [225] Lockwood, M., and K. A. McWilliams (2021), On Optimum Solar Wind-Magnetosphere Coupling Functions for Transpolar Voltage and Planetary Geomagnetic Activity, *J. Geophys. Res.*, **126**(12), e29946, [10.1029/2021JA029946](https://doi.org/10.1029/2021JA029946).
- [226] Lockwood, M., and K. A. McWilliams (2021), A Survey of 25 Years' Transpolar Voltage Data From the SuperDARN Radar Network and the Expanding-Contracting Polar Cap Model, *J. Geophys. Res.*, **126**(9), e29554, [10.1029/2021JA029554](https://doi.org/10.1029/2021JA029554).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [227] Lu, L.-F., W. Su, X. Zhang, Z.-G. He, H.-Z. Duan, Y.-Z. Jiang, and H.-C. Yeh (2021), Effects of the Space Plasma Density Oscillation on the Interspacecraft Laser Ranging for TianQin Gravitational Wave Observatory, *J. Geophys. Res.*, **126**(2), e28579, [10.1029/2020JA028579](https://doi.org/10.1029/2020JA028579).
- [228] Ma, X. H., Q. G. Zong, C. Yue, Y. X. Hao, and Y. Liu (2021), Energetic Electron Enhancement and Dropout Echoes Induced by Solar Wind Dynamic Pressure Decrease: The Effect of Phase Space Density Profile, *J. Geophys. Res.*, **126**(3), e28863, [10.1029/2020JA028863](https://doi.org/10.1029/2020JA028863).
- [229] Ma, Z., Y. Gong, S. Zhang, J. Xue, J. Luo, Q. Zhou, C. Huang, K. Huang, Y. Yu, and G. Li (2021), Study of a Quasi 27 Day Wave in the MLT Region During Recurrent Geomagnetic Storms in Autumn 2018, *J. Geophys. Res.*, **126**(4), e28865, [10.1029/2020JA028865](https://doi.org/10.1029/2020JA028865).
- [230] Madanian, H., M. I. Desai, S. J. Schwartz, I. Wilson, L. B., S. A. Fuselier, J. L. Burch, O. Le Contel, D. L. Turner, K. Ogasawara, A. L. Brosius, C. T. Russell, R. E. Ergun, N. Ahmadi, D. J. Gershman, and P. A. Lindqvist (2021), The Dynamics of a High Mach Number Quasi-perpendicular Shock: MMS Observations, *Astrophys. J.*, **908**(1), 40, [10.3847/1538-4357/abcb88](https://doi.org/10.3847/1538-4357/abcb88).
- [231] Mager, O. V. (2021), Alfvén Waves Generated Through the Drift-Bounce Resonant Instability in the Ring Current: A THEMIS Multi-Spacecraft Case Study, *J. Geophys. Res.*, **126**(11), e29241, [10.1029/2021JA029241](https://doi.org/10.1029/2021JA029241).
- [232] Maggiolo, R., and H. Gunell (2021), Does a Magnetosphere Protect the Ionosphere?, in *Magnetospheres in the Solar System*, vol. 2, edited by R. Maggiolo, N. André, H. Hasegawa, and D. T. Welling, p. 729, [10.1002/9781119815624.ch45](https://doi.org/10.1002/9781119815624.ch45).
- [233] Maghrabi, A., A. Aldosari, and M. Almutairi (2021), Correlation analyses between solar activity parameters and cosmic ray muons between 2002 and 2012 at high cutoff rigidity, *Adv. Space Res.*, **68**(7), 2941–2952, [10.1016/j.asr.2021.05.016](https://doi.org/10.1016/j.asr.2021.05.016).
- [234] Majumdar, S., S. P. Tadepalli, S. S. Maity, K. Deshpande, A. Kumari, R. Patel, and N. Gopalswamy (2021), Imaging and Spectral Observations of a Type-II Radio Burst Revealing the Section of the CME-Driven Shock That Accelerates Electrons, *Solar Phys.*, **296**(4), 62, [10.1007/s11207-021-01810-8](https://doi.org/10.1007/s11207-021-01810-8).
- [235] Maksimovic, M., J. Souček, T. Chust, Y. Khotyaintsev, M. Kretzschmar, X. Bonnin, A. Vecchio, O. Alexandrova, S. D. Bale, D. Bérard, J. Y. Brochot, N. J. T. Edberg, A. Eriksson, L. Z. Hadid, E. P. G. Johansson, T. Karlsson, B. Katra, V. Krasnoselskikh, V. Krupař, S. Lion, E. Lorfèvre, L. Matteini, Q. N. Nguyen, D. Píša, R. Piberne, D. Plettemeier, H. O. Rucker, O. Santolík, K. Steinvall, M. Steller, Š. Štverák, P. Trávníček, A. Vaivads, A. Zaslavsky, S. Chaintreuil, M. Dekkali, P. A. Astier, G. Barbary, K. Bouchedada, B. Cecconi, F. Chapron, C. Collin, D. Dias, L. Guéguen, L. Lamy, V. Leray, L. R. Malac-Allain, F. Pantellini, J. Parisot, P. Plasson, S. Thijs, I. Fratner, E. Bellouard, P. Danto, S. Julien, E. Guilhem, C. Fiachetti, J. Sanisidro, C. Laffaye, F. Gonzalez, B. Pontet, N. Quéruel, G. Jannet, P. Fergeau, T. Dudok de Wit, T. Vincent, C. Agrapart, J. Pragout, M. Bergerard-Timofeeva, G. T. Delory, P. Turin, A. Jeandet,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- P. Leroy, J. C. Pellion, V. Bouzid, W. Recart, I. Kolmašová, O. Krupařová, L. Uhlíř, R. Lán, J. Baše, M. André, L. Bylander, V. Cripps, C. Cully, S. E. Jansson, W. Puccio, J. Brínek, H. Ottacher, V. Angelini, M. Berthomier, V. Evans, K. Goetz, P. Hellinger, T. S. Horbury, K. Issautier, E. Kontar, O. Le Contel, P. Louarn, M. Martinović, D. Müller, H. O'Brien, C. J. Owen, A. Retino, J. Rodríguez-Pacheco, F. Sahraoui, L. Sanchez, A. P. Walsh, R. F. Wimmer-Schweingruber, and I. Zouganelis (2021), First observations and performance of the RPW instrument on board the Solar Orbiter mission, *Astron. & Astrophys.*, **656**, A41, [10.1051/0004-6361/202141271](https://doi.org/10.1051/0004-6361/202141271).
- [236] Malara, F., S. Perri, and G. Zimbardo (2021), Charged-particle chaotic dynamics in rotational discontinuities, *Phys. Rev. E*, **104**(2), 025208, [10.1103/PhysRevE.104.025208](https://doi.org/10.1103/PhysRevE.104.025208).
- [237] Man, H., M. Zhou, Z. Zhong, X. Deng, and H. Li (2021), Statistics of the Intense Current Structure in the Dayside Magnetopause Boundary Layer, *J. Geophys. Res.*, **126**(12), e29890, [10.1029/2021JA029890](https://doi.org/10.1029/2021JA029890).
- [238] Marchuk, A. V., C. W. Smith, A. S. Watson, M. R. Argall, C. J. Joyce, P. A. Isenberg, B. J. Vasquez, N. A. Schwadron, M. Bzowski, M. A. Kubiak, and N. Murphy (2021), Low-frequency Waves due to Newborn Interstellar Pickup He<sup>+</sup> Observed by the Ulysses Spacecraft, *Astrophys. J.*, **923**(2), 185, [10.3847/1538-4357/ac2eb3](https://doi.org/10.3847/1538-4357/ac2eb3).
- [239] Maruca, B. A., J. A. Agudelo Rueda, R. Bandyopadhyay, F. B. Bianco, A. Chasapis, R. Chhiber, H. DeWeese, W. H. Matthaeus, D. M. Miles, R. A. Qudsi, M. J. Richardson, S. Servidio, M. A. Shay, D. Sundkvist, D. Verscharen, S. K. Vines, J. H. Westlake, and R. T. Wicks (2021), MagneToRE: Mapping the 3-D Magnetic Structure of the Solar Wind Using a Large Constellation of Nanosatellites, *Front. Astron. Space Sci.*, **8**, 108, [10.3389/fspas.2021.665885](https://doi.org/10.3389/fspas.2021.665885).
- [240] Matsuo, T., M. Fan, X. Shi, C. Miller, J. M. Ruohoniemi, D. Paul, and T. C. M. Lee (2021), Multiresolution Modeling of High-Latitude Ionospheric Electric Field Variability and Impact on Joule Heating Using SuperDARN Data, *J. Geophys. Res.*, **126**(9), e29196, [10.1029/2021JA029196](https://doi.org/10.1029/2021JA029196).
- [241] Matteini, L., R. Laker, T. Horbury, L. Woodham, S. D. Bale, J. E. Stawarz, T. Woolley, K. Steinvall, G. H. Jones, S. R. Grant, Q. Afghan, M. Galand, H. O'Brien, V. Evans, V. Angelini, M. Maksimovic, T. Chust, Y. Khotyaintsev, V. Krasnoselskikh, M. Kretzschmar, E. Lorfèvre, D. Plettemeier, J. Souček, M. Steller, Š. Štverák, P. Trávníček, A. Vaivads, A. Vecchio, R. F. Wimmer-Schweingruber, G. C. Ho, R. Gómez-Herrero, J. Rodríguez-Pacheco, P. Louarn, A. Fedorov, C. J. Owen, R. Bruno, S. Livi, I. Zouganelis, and D. Müller (2021), Solar Orbiter's encounter with the tail of comet C/2019 Y4 (ATLAS): Magnetic field draping and cometary pick-up ion waves, *Astron. & Astrophys.*, **656**, A39, [10.1051/0004-6361/202141229](https://doi.org/10.1051/0004-6361/202141229).
- [242] Matzka, J., C. Stolle, Y. Yamazaki, O. Bronkalla, and A. Morschhauser (2021), The Geomagnetic Kp Index and Derived Indices of Geomagnetic Activity, *Space Weather*, **19**(5), e02641, [10.1029/2020SW002641](https://doi.org/10.1029/2020SW002641).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [243] McGranaghan, R. M., J. Ziegler, T. Bloch, S. Hatch, E. Camporeale, K. Lynch, M. Owens, J. Gjerloev, B. Zhang, and S. Skone (2021), Toward a Next Generation Particle Precipitation Model: Mesoscale Prediction Through Machine Learning (a Case Study and Framework for Progress), *Space Weather*, **19**(6), e02684, [10.1029/2020SW002684](https://doi.org/10.1029/2020SW002684).
- [244] Melkumyan, A. A., A. V. Belov, M. A. Abunina, A. A. Abunin, E. A. Eroshenko, V. G. Yanke, and V. A. Oleneva (2021), Solar wind temperature-velocity relationship over the last five solar cycles and Forbush decreases associated with different types of interplanetary disturbance, *Mon. Not. Roy. Astron. Soc.*, **500**(3), 2786–2797, [10.1093/mnras/staa3366](https://doi.org/10.1093/mnras/staa3366).
- [245] Meziane, K., A. Kashcheyev, P. T. Jayachandran, and A. M. Hamza (2021), A Bayesian Inference-Based Empirical Model for Scintillation Indices for High-Latitude, *Space Weather*, **19**(6), e02710, [10.1029/2020SW002710](https://doi.org/10.1029/2020SW002710).
- [246] Michael, A. T., K. A. Sorathia, V. G. Merkin, K. Nykyri, B. Burkholder, X. Ma, A. Y. Ukhorskiy, and J. Garretson (2021), Modeling Kelvin-Helmholtz Instability at the High-Latitude Boundary Layer in a Global Magnetosphere Simulation, *Geophys. Res. Lett.*, **48**(19), e94002, [10.1029/2021GL094002](https://doi.org/10.1029/2021GL094002).
- [247] Michnowski, S., A. Odzimek, N. G. Kleimenova, O. V. Kozyreva, M. Kubicki, Z. Klos, S. Israelsson, and N. N. Nikiforova (2021), Review of Relationships Between Solar Wind and Ground-Level Atmospheric Electricity: Case Studies from Hornsund, Spitsbergen, and Swider, Poland, *Surveys in Geophys.*, **42**(3), 757–801, [10.1007/s10712-021-09639-3](https://doi.org/10.1007/s10712-021-09639-3).
- [248] Miranda, R. A., J. A. Valdivia, A. C. L. Chian, and P. R. Muñoz (2021), Complexity of Magnetic-field Turbulence at Reconnection Exhausts in the Solar Wind at 1 au, *Astrophys. J.*, **923**(2), 132, [10.3847/1538-4357/ac2dfe](https://doi.org/10.3847/1538-4357/ac2dfe).
- [249] Mishra, W., K. Dave, N. Srivastava, and L. Teriaca (2021), Multipoint remote and in situ observations of interplanetary coronal mass ejection structures during 2011 and associated geomagnetic storms, *Mon. Not. Roy. Astron. Soc.*, **506**(1), 1186–1197, [10.1093/mnras/stab1721](https://doi.org/10.1093/mnras/stab1721).
- [250] Mishra, W., U. Doshi, and N. Srivastava (2021), Radial sizes and expansion behavior of ICMEs in solar cycles 23 and 24, *Front. Astron. Space Sci.*, **8**, 142, [10.3389/fspas.2021.713999](https://doi.org/10.3389/fspas.2021.713999).
- [251] Misra, K., L. Resmi, D. A. Kann, M. Marongiu, A. Moin, S. Klose, G. Bernardi, A. de Ugarte Postigo, V. K. Jaiswal, S. Schulze, D. A. Perley, A. Ghosh, Dimple, H. Kumar, R. Gupta, M. J. Michałowski, S. Martín, A. Cockeram, S. V. Cherukuri, V. Bhalerao, G. E. Anderson, S. B. Pandey, G. C. Anupama, C. C. Thöne, S. Barway, M. H. Wieringa, J. P. U. Fynbo, and N. Habeeb (2021), Low frequency view of GRB 190114C reveals time varying shock micro-physics, *Mon. Not. Roy. Astron. Soc.*, **504**(4), 5685–5701, [10.1093/mnras/stab1050](https://doi.org/10.1093/mnras/stab1050).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [252] Miyamoto, T., S.-i. Oyama, T. Raita, K. Hosokawa, Y. Miyoshi, Y. Ogawa, and S. Kurita (2021), Variations in Cosmic Noise Absorption in Association With Equatorward Development of the Pulsating Auroral Patch: A Case Study to Estimate the Energy Spectra of Auroral Precipitating Electrons, *J. Geophys. Res.*, **126**(9), e29309, [10.1029/2021JA029309](https://doi.org/10.1029/2021JA029309).
- [253] Miyashita, Y., T.-F. Chang, Y. Miyoshi, T. Hori, A. Kadokura, S. Kasahara, S.-Y. Wang, K. Keika, A. Matsuoka, Y. Tanaka, Y. Kasahara, M. Teramoto, C.-W. Jun, K. Asamura, Y. Kazama, S. W. Y. Tam, B.-J. Wang, S. Yokota, A. Kumamoto, F. Tsuchiya, M. Shoji, S. Kurita, S. Imajo, and I. Shinohara (2021), Magnetic Field and Energetic Particle Flux Oscillations and High-Frequency Waves Deep in the Inner Magnetosphere During Substorm Dipolarization: ERG Observations, *J. Geophys. Res.*, **126**(9), e29095, [10.1029/2020JA029095](https://doi.org/10.1029/2020JA029095).
- [254] Modzelewska, R., and A. Gil (2021), Recurrence of galactic cosmic-ray intensity and anisotropy in solar minima 23/24 and 24/25 observed by ACE/CRIS, STEREO, SOHO/EPHIN and neutron monitors. Fourier and wavelet analysis, *Astron. & Astrophys.*, **646**, A128, [10.1051/0004-6361/202039651](https://doi.org/10.1051/0004-6361/202039651).
- [255] Montagud-Camps, V., F. Němec, J. Šafránková, Z. Němeček, A. Verdini, R. Grappin, E. Papini, and L. Franci (2021), Flattening of the Density Spectrum in Compressible Hall-MHD Simulations, *Atmosphere*, **12**(9), 1162, [10.3390/atmos12091162](https://doi.org/10.3390/atmos12091162).
- [256] Moraitis, K., S. Patsourakos, and A. Nindos (2021), Relative field line helicity of a large eruptive solar active region, *Astron. & Astrophys.*, **649**, A107, [10.1051/0004-6361/202140384](https://doi.org/10.1051/0004-6361/202140384).
- [257] Moretto, T., M. Hesse, M. Kuznetsova, L. Rastätter, S. Vennerstrøm, and P. Tenfjord (2021), How does the magnetosphere go to sleep?, *Journal of Atmospheric and Solar-Terrestrial Physics*, **220**, 105626, [10.1016/j.jastp.2021.105626](https://doi.org/10.1016/j.jastp.2021.105626).
- [258] Moskaleva, A., M. Riazantseva, Y. Yermolaev, and I. Lodkina (2021), Variations of flow direction in solar wind streams of different types, *Solar-Terr. Phys.*, **7**(4), 10–17, [10.12737/stp-74202102](https://doi.org/10.12737/stp-74202102).
- [259] Motoba, T., Y. Ogawa, Y. Ebihara, A. Kadokura, A. J. Gerrard, and A. T. Weatherwax (2021), Daytime Pc5 Diffuse Auroral Pulsations and Their Association With Outer Magnetospheric ULF Waves, *J. Geophys. Res.*, **126**(8), e29218, [10.1029/2021JA029218](https://doi.org/10.1029/2021JA029218).
- [260] Mourenas, D., A. V. Artemyev, X. J. Zhang, V. Angelopoulos, E. Tsai, and C. Wilkins (2021), Electron Lifetimes and Diffusion Rates Inferred From ELFIN Measurements at Low Altitude: First Results, *J. Geophys. Res.*, **126**(11), e29757, [10.1029/2021JA029757](https://doi.org/10.1029/2021JA029757).
- [261] Mrak, S., J. Semeter, Y. Nishimura, and A. J. Coster (2021), Extreme Low-Latitude Total Electron Content Enhancement and Global Positioning System Scintillation at Dawn, *Space Weather*, **19**(9), e02740, [10.1029/2021SW002740](https://doi.org/10.1029/2021SW002740).
- [262] Muñoz, V., M. Domínguez, G. Nigro, M. Riquelme, and V. Carbone (2021), Fractality of an MHD shell model for turbulent plasma driven by solar wind data: A review, *J. Atmos. Solar-Terr. Phys.*, **214**, 105524, [10.1016/j.jastp.2020.105524](https://doi.org/10.1016/j.jastp.2020.105524).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [263] Musset, S., M. Maksimovic, E. Kontar, V. Krupar, N. Chrysaphi, X. Bonnin, A. Vecchio, B. Cecconi, A. Zaslavsky, K. Issautier, S. D. Bale, and M. Pulupa (2021), Simulations of radio-wave anisotropic scattering to interpret type III radio burst data from Solar Orbiter, Parker Solar Probe, STEREO, and Wind, *Astron. & Astrophys.*, **656**, A34, [10.1051/0004-6361/202140998](https://doi.org/10.1051/0004-6361/202140998).
- [264] Nagai, T., and I. Shinohara (2021), Dawn-Dusk Confinement of Magnetic Reconnection Site in the Near-Earth Magnetotail and Its Implication for Dipolarization and Substorm Current System, *J. Geophys. Res.*, **126**(11), e29691, [10.1029/2021JA029691](https://doi.org/10.1029/2021JA029691).
- [265] Nagatsuma, T., A. Nakamizo, Y. Kubota, M. Nakamura, K. Koga, Y. Miyoshi, and H. Matsumoto (2021), Development of space environment customized risk estimation for satellites (SECURES), *Earth, Planets and Space*, **73**(1), 26, [10.1186/s40623-021-01355-x](https://doi.org/10.1186/s40623-021-01355-x).
- [266] Nakagawa, T., F. Takahashi, Y. Saito, and H. Shimizu (2021), Polarization Reversal of Low-Frequency Magnetic Variation in the Lunar Wake, *J. Geophys. Res.*, **126**(8), e29299, [10.1029/2021JA029299](https://doi.org/10.1029/2021JA029299).
- [267] Nakamura, R., W. Baumjohann, T. K. M. Nakamura, E. V. Panov, D. Schmid, A. Varsani, S. Apatenkov, V. A. Sergeev, J. Birn, T. Nagai, C. Gabrielse, M. André, J. L. Burch, C. Carr, I. S. Dandouras, C. P. Escoubet, A. N. Fazakerley, B. L. Giles, O. Le Contel, C. T. Russell, and R. B. Torbert (2021), Thin Current Sheet Behind the Dipolarization Front, *J. Geophys. Res.*, **126**(10), e29518, [10.1029/2021JA029518](https://doi.org/10.1029/2021JA029518).
- [268] Nakamura, T. K. M. (2021), The Earths Low-Latitude Boundary Layer, in *Magnetospheres in the Solar System*, vol. 2, edited by R. Maggiolo, N. André, H. Hasegawa, and D. T. Welling, p. 177, [10.1002/9781119815624.ch12](https://doi.org/10.1002/9781119815624.ch12).
- [269] Namekawa, T., T. Mitani, K. Asamura, Y. Miyoshi, K. Hosokawa, Y. Ogawa, S. Saito, T. Hori, S. Sugo, O. Kawashima, S. Kasahara, R. Nomura, N. Yagi, M. Fukizawa, T. Sakanoi, Y. Saito, A. Matsuoka, I. Shinohara, Y. Fedorenko, A. Nikitenko, and C. Koehler (2021), Rocket Observation of Sub-Relativistic Electrons in the Quiet Dayside Auroral Ionosphere, *J. Geophys. Res.*, **126**(7), e28633, [10.1029/2020JA028633](https://doi.org/10.1029/2020JA028633).
- [270] Nampoothiri, G. G., R. S. Thampi, S. V. Thampi, T. K. Pant, and J. K. Abhishek (2021), Nature and Variability of the Electron Velocity Distribution Functions and the Nonequilibrium Boltzmann Entropy in the Solar Wind at the First Lagrangian (L1) Point During the Halo CME Event on 25 July 2004, *Solar Phys.*, **296**(11), 159, [10.1007/s11207-021-01900-7](https://doi.org/10.1007/s11207-021-01900-7).
- [271] Nava, L. (2021), Gamma-ray Bursts at the Highest Energies, *Universe*, **7**(12), 503, [10.3390/universe7120503](https://doi.org/10.3390/universe7120503).
- [272] Negrea, C., C. Munteanu, and M. M. Echim (2021), Global Ionospheric Response to a Periodic Sequence of HSS/CIR Events During the 2007-2008 Solar Minimum, *J. Geophys. Res.*, **126**(5), e29071, [10.1029/2020JA029071](https://doi.org/10.1029/2020JA029071).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [273] Nishimura, Y., F. B. Sadler, R. H. Varney, R. Gilles, S. R. Zhang, A. J. Coster, N. Nishitani, and A. Otto (2021), Cusp Dynamics and Polar Cap Patch Formation Associated With a Small IMF Southward Turning, *J. Geophys. Res.*, **126**(5), e29090, [10.1029/2020JA029090](https://doi.org/10.1029/2020JA029090).
- [274] Nitta, N. V., T. Mulligan, E. K. J. Kilpua, B. J. Lynch, M. Mierla, J. O’Kane, P. Pagano, E. Palmerio, J. Pomoell, I. G. Richardson, L. Rodriguez, A. P. Rouillard, S. Sinha, N. Srivastava, D.-C. Talpeanu, S. L. Yardley, and A. N. Zhukov (2021), Understanding the Origins of Problem Geomagnetic Storms Associated with “Stealth” Coronal Mass Ejections, *Space Sci. Rev.*, **217**(8), 82, [10.1007/s11214-021-00857-0](https://doi.org/10.1007/s11214-021-00857-0).
- [275] Norenius, L., M. Hamrin, O. Goncharov, H. Gunell, H. Opgenoorth, T. Pitkänen, S. Chong, N. Partamies, and L. Baddeley (2021), Ground-Based Magnetometer Response to Impacting Magnetosheath Jets, *J. Geophys. Res.*, **126**(8), e29115, [10.1029/2021JA029115](https://doi.org/10.1029/2021JA029115).
- [276] Nosé, M., A. Matsuoka, Y. Miyoshi, K. Asamura, T. Hori, M. Teramoto, I. Shinohara, and M. Hirahara (2021), Field-Aligned Low-Energy O<sup>+</sup> Flux Enhancements in the Inner Magnetosphere Observed by Arase, *J. Geophys. Res.*, **126**(8), e29168, [10.1029/2021JA029168](https://doi.org/10.1029/2021JA029168).
- [277] Nozzoli, F., and P. Richelli (2021), Moon Mapping Project Results on Solar Wind Ion Flux and Composition, *Universe*, **7**(5), 157, [10.3390/universe7050157](https://doi.org/10.3390/universe7050157).
- [278] Němec, F., and M. Kotková (2021), Evaluating the Accuracy of Magnetospheric Magnetic Field Models Using Cluster Spacecraft Magnetic Field Measurements, *Universe*, **7**(8), 282, [10.3390/universe7080282](https://doi.org/10.3390/universe7080282).
- [279] Němeček, Z., J. Šafránková, F. Němec, T. Ďurovcová, A. Pitňa, B. L. Altermann, Y. M. Voitenko, J. Pavlů, and M. L. Stevens (2021), Spectra of Temperature Fluctuations in the Solar Wind, *Atmosphere*, **12**(10), 1277, [10.3390/atmos12101277](https://doi.org/10.3390/atmos12101277).
- [280] Nykyri, K., J. Johnson, E. Kronberg, D. Turner, S. Wing, I. Cohen, K. Sorathia, X. Ma, B. Burkholder, G. Reeves, and J. Fennell (2021), Magnetospheric Multiscale Observations of the Source Region of Energetic Electron Microinjections Along the Dusk-side, High Latitude Magnetopause Boundary Layer, *Geophys. Res. Lett.*, **48**(9), e92466, [10.1029/2021GL092466](https://doi.org/10.1029/2021GL092466).
- [281] Ó Fionnagáin, D., R. D. Kavanagh, A. A. Vidotto, S. V. Jeffers, P. Petit, S. Marsden, J. Morin, and A. Golden (2022), Coronal Mass Ejections and Type II Radio Emission Variability during a Magnetic Cycle on the Solar-type Star  $\epsilon$  Eridani, *Astrophys. J.*, **924**(2), 115, [10.3847/1538-4357/ac35de](https://doi.org/10.3847/1538-4357/ac35de).
- [282] Ofman, L., L. B. Wilson, A. Koval, and A. Szabo (2021), Oblique High Mach Number Heliospheric Shocks: The Role of  $\alpha$  Particles, *J. Geophys. Res.*, **126**(5), e28962, [10.1029/2020JA028962](https://doi.org/10.1029/2020JA028962).
- [283] Ogunjo, S. T., A. B. Rabiu, I. A. Fuwape, and A. A. Obafaye (2021), Evolution of Dynamical Complexities in Geospace as Captured by Dst Over Four Solar Cycles 1964–2008., *J. Geophys. Res.*, **126**(4), e27873, [10.1029/2020JA027873](https://doi.org/10.1029/2020JA027873).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [284] Ohtani, S., J. W. Gjerloev, K. A. McWilliams, J. M. Ruohoniemi, and H. U. Frey (2021), Simultaneous Development of Multiple Auroral Substorms: Double Auroral Bulge Formation, *J. Geophys. Res.*, **126**(5), e28883, [10.1029/2020JA028883](https://doi.org/10.1029/2020JA028883).
- [285] Ojha, B., Y. Omura, S. Singh, and G. S. Lakhina (2021), Multipoint Analysis of Source Regions of EMIC Waves and Rapid Growth of Subpackets, *J. Geophys. Res.*, **126**(11), e29514, [10.1029/2021JA029514](https://doi.org/10.1029/2021JA029514).
- [286] Oka, M., T. Obara, N. V. Nitta, S. Yashiro, D. Shiota, and K. Ichimoto (2021), Unusual enhancement of 30 MeV proton flux in an ICME sheath region, *Earth, Planets and Space*, **73**(1), 31, [10.1186/s40623-021-01362-y](https://doi.org/10.1186/s40623-021-01362-y).
- [287] O’Kane, J., L. M. Green, E. E. Davies, C. Möstl, J. Hinterreiter, J. L. Freiherr von Forstner, A. J. Weiss, D. M. Long, and T. Amerstorfer (2021), Solar origins of a strong stealth CME detected by Solar Orbiter, *Astron. & Astrophys.*, **656**, L6, [10.1051/0004-6361/202140622](https://doi.org/10.1051/0004-6361/202140622).
- [288] Olifer, L., C. Feltman, R. Ghaffari, S. Henderson, D. Huyghebaert, J. Burchill, A. N. Jaynes, D. Knudsen, K. McWilliams, J. I. Moen, A. Spicher, and J. Wu (2021), Swarm Observations of Dawn/Dusk Asymmetries Between Pedersen Conductance in Upward and Downward Field-Aligned Current Regions, *Earth and Space Sci.*, **8**(7), e01167, [10.1029/2020EA001167](https://doi.org/10.1029/2020EA001167).
- [289] Oliveira, D. M., J. M. Weygand, E. Zesta, C. M. Ngwira, M. D. Hartinger, Z. Xu, B. L. Giles, D. J. Gershman, M. V. D. Silveira, and V. M. Souza (2021), Impact Angle Control of Local Intense dB/dt Variations During Shock-Induced Substorms, *Space Weather*, **19**(12), e02933, [10.1029/2021SW002933](https://doi.org/10.1029/2021SW002933).
- [290] Opher, M., J. F. Drake, G. Zank, E. Powell, W. Shelley, M. Kornbleuth, V. Florinski, V. Izmodenov, J. Giacalone, S. Fuselier, K. Dialynas, A. Loeb, and J. Richardson (2021), A Turbulent Heliosheath Driven by the Rayleigh-Taylor Instability, *Astrophys. J.*, **922**(2), 181, [10.3847/1538-4357/ac2d2e](https://doi.org/10.3847/1538-4357/ac2d2e).
- [291] Palmerio, E., E. K. J. Kilpua, O. Witasse, D. Barnes, B. Sánchez-Cano, A. J. Weiss, T. Nieves-Chinchilla, C. Möstl, L. K. Jian, M. Mierla, A. N. Zhukov, J. Guo, L. Rodriguez, P. J. Lowrance, A. Isavnin, L. Turc, Y. Futaana, and M. Holmström (2021), CME Magnetic Structure and IMF Preconditioning Affecting SEP Transport, *Space Weather*, **19**(4), e2020SW002654, [10.1029/2020SW002654](https://doi.org/10.1029/2020SW002654).
- [292] Pandya, M., and V. Bhaskara (2021), Quantitative Assessment of Protons During the Solar Proton Events of September 2017, *J. Geophys. Res.*, **126**(10), e29458, [10.1029/2021JA029458](https://doi.org/10.1029/2021JA029458).
- [293] Paouris, E., J. Čalogović, M. Dumbović, M. L. Mays, A. Vourlidas, A. Papaioannou, A. Anastasiadis, and G. Balasis (2021), Propagating Conditions and the Time of ICME Arrival: A Comparison of the Effective Acceleration Model with ENLIL and DBEM Models, *Solar Phys.*, **296**(1), 12, [10.1007/s11207-020-01747-4](https://doi.org/10.1007/s11207-020-01747-4).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [294] Papailiou, M., M. Abunina, H. Mavromichalaki, A. Belov, A. Abunin, E. Eroshenko, and V. Yanke (2021), Precursory Signs of Large Forbush Decreases, *Solar Phys.*, **296**(6), 100, [10.1007/s11207-021-01844-y](https://doi.org/10.1007/s11207-021-01844-y).
- [295] Parenti, S., I. Chifu, G. Del Zanna, J. Edmondson, A. Giunta, V. H. Hansteen, A. Higginson, J. M. Laming, S. T. Lepri, B. J. Lynch, Y. J. Rivera, R. von Steiger, T. Wiegelmann, R. F. Wimmer-Schweingruber, N. Zambrana Prado, and G. Pelouze (2021), Linking the Sun to the Heliosphere Using Composition Data and Modelling, *Space Sci. Rev.*, **217**(8), 78, [10.1007/s11214-021-00856-1](https://doi.org/10.1007/s11214-021-00856-1).
- [296] Park, J.-S., Q. Q. Shi, M. Nowada, J.-H. Shue, K.-H. Kim, D.-H. Lee, Q.-G. Zong, A. W. Degeling, A. M. Tian, T. Pitkänen, Y. Zhang, I. J. Rae, and M. R. Hairston (2021), Transpolar Arcs During a Prolonged Radial Interplanetary Magnetic Field Interval, *J. Geophys. Res.*, **126**(6), e29197, [10.1029/2021JA029197](https://doi.org/10.1029/2021JA029197).
- [297] Parkhomov, V., V. Eselevich, M. Eselevich, A. Dmitriev, A. Suvorova, S. Khomutov, B. Tsegmed, and R. Tero (2021), Magnetospheric response to the interaction with the sporadic solar wind diamagnetic structure, *Solar-Terr. Phys.*, **7**(3), 11–28, [10.12737/stp-73202102](https://doi.org/10.12737/stp-73202102).
- [298] Paschmann, G., B. U. Ö. Sonnerup, T. Phan, S. A. Fuselier, S. Haaland, R. E. Denton, J. L. Burch, K. J. Trattner, B. L. Giles, D. J. Gershman, I. J. Cohen, and C. T. Russell (2021), Anomalous Reconnection Layer at Earth's Dayside Magnetopause, *J. Geophys. Res.*, **126**(9), e29678, [10.1029/2021JA029678](https://doi.org/10.1029/2021JA029678).
- [299] Patel, B. D., B. Joshi, K.-S. Cho, and R.-S. Kim (2021), DH Type II Radio Bursts During Solar Cycles 23 and 24: Frequency-Dependent Classification and Their Flare-CME Associations, *Solar Phys.*, **296**(9), 142, [10.1007/s11207-021-01890-6](https://doi.org/10.1007/s11207-021-01890-6).
- [300] Paynter, J., R. Webster, and E. Thrane (2021), Evidence for an intermediate-mass black hole from a gravitationally lensed gamma-ray burst, *Nature Astron.*, **5**, 560–568, [10.1038/s41550-021-01307-1](https://doi.org/10.1038/s41550-021-01307-1).
- [301] Petersen, A. K., S. W. Kahler, C. J. Henney, and C. N. Arge (2021), Characterizing Magnetic Connectivity of Solar Flare Electron Sources to STEREO Spacecraft Using ADAPT-WSA Modeling, *Astrophys. J.*, **921**(1), 13, [10.3847/1538-4357/ac07a7](https://doi.org/10.3847/1538-4357/ac07a7).
- [302] Petrukovich, A. A., and O. M. Chugunova (2021), Detailed Structure of Very High- $\beta$  Earth Bow Shock, *J. Geophys. Res.*, **126**(8), e29004, [10.1029/2020JA029004](https://doi.org/10.1029/2020JA029004).
- [303] Picanço, G. A. S., C. M. Denardini, P. A. B. Nogueira, P. F. Barbosa-Neto, L. C. A. Resende, S. S. Chen, C. S. Carmo, J. Moro, E. Romero-Hernandez, and R. P. Silva (2021), Equatorial ionospheric response to storm-time electric fields during two intense geomagnetic storms over the Brazilian region using a Disturbance Ionosphere indeX, *J. Atmos. Solar-Terr. Phys.*, **223**, 105734, [10.1016/j.jastp.2021.105734](https://doi.org/10.1016/j.jastp.2021.105734).
- [304] Piersanti, M., M. Pezzopane, Z. Zhima, P. Diego, C. Xiong, R. Tozzi, A. Pignalberi, G. D'Angelo, R. Battiston, J. Huang, P. Picozza, Y. Rui, X. Shen, R. Sparvoli, P. Ubertini,

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- Y. Yang, and S. Zoffoli (2021), Can an impulsive variation of the solar wind plasma pressure trigger a plasma bubble? A case study based on CSES, Swarm and THEMIS data, *Adv. Space Res.*, **67**(1), 35–45, [10.1016/j.asr.2020.07.046](https://doi.org/10.1016/j.asr.2020.07.046).
- [305] Pitkänen, T., A. Kullen, L. Cai, J.-S. Park, H. Vanhamäki, M. Hamrin, A. T. Aikio, G. S. Chong, A. De Spiegeleer, and Q. Shi (2021), Asymmetry in the Earth's magnetotail neutral sheet rotation due to IMF  $B_y$  sign?, *Geosci. Lett.*, **8**(1), 3, [10.1186/s40562-020-00171-7](https://doi.org/10.1186/s40562-020-00171-7).
- [306] Pitkänen, T., M. Hamrin, G. S. Chong, and A. Kullen (2021), Relevance of the North-South Electric Field Component in the Propagation of Fast Convective Earthward Flows in the Magnetotail: An Event Study, *J. Geophys. Res.*, **126**(7), e29233, [10.1029/2021JA029233](https://doi.org/10.1029/2021JA029233).
- [307] Pitňa, A., J. Šafránková, Z. Němeček, L. Franci, and G. Pi (2021), A Novel Method for Estimating the Intrinsic Magnetic Field Spectrum of Kinetic-Range Turbulence, *Atmosphere*, **12**(12), 1547, [10.3390/atmos12121547](https://doi.org/10.3390/atmos12121547).
- [308] Pitňa, A., J. Šafránková, Z. Němeček, T. Ďurovcová, and A. Kis (2021), Turbulence Upstream and Downstream of Interplanetary Shocks, *Front. Phys.*, **8**, 654, [10.3389/fphy.2020.626768](https://doi.org/10.3389/fphy.2020.626768).
- [309] Pohjolainen, S., and N. Talebpour Sheshvan (2021), Formation of Isolated Radio Type II Bursts at Low Frequencies, *Solar Phys.*, **296**(5), 81, [10.1007/s11207-021-01828-y](https://doi.org/10.1007/s11207-021-01828-y).
- [310] Posner, A., C. N. Arge, J. Staub, O. C. StCyr, D. Folta, S. K. Solanki, R. D. T. Strauss, F. Effenberger, A. Gandorfer, B. Heber, C. J. Henney, J. Hirzberger, S. I. Jones, P. Kühl, O. Malandraki, and V. J. Sterken (2021), A Multi-Purpose Heliophysics L4 Mission, *Space Weather*, **19**(9), e02777, [10.1029/2021SW002777](https://doi.org/10.1029/2021SW002777).
- [311] Ptitsyna, N. G., O. A. Danilova, and M. I. Tyasto (2021), Phenomena of Hysteresis in the Cutoff Rigidity of Cosmic Rays during the Superstorm of November 7-8, 2004, *Geomag. and Aeron.*, **61**(4), 483–491, [10.1134/S0016793221040137](https://doi.org/10.1134/S0016793221040137).
- [312] Qin, G., and S. S. Wu (2021), Magnetic Cloud and Sheath in the Ground-level Enhancement Event of 2000 July 14. II. Effects on the Forbush Decrease, *Astrophys. J.*, **908**(2), 236, [10.3847/1538-4357/abd77c](https://doi.org/10.3847/1538-4357/abd77c).
- [313] Qin, S.-M., L.-Y. Jiang, and X.-G. Wang (2021), GRB 130310A: very high peak energy and thermal emission, *Res. Astron. Astrophys.*, **21**(3), 072, [10.1088/1674-4527/21/3/72](https://doi.org/10.1088/1674-4527/21/3/72).
- [314] Qiu, H.-X., D.-S. Han, H.-T. Feng, R. Shi, S. Zhou, and Y. L. Zhang (2021), The Critical Factor in Controlling the Auroral Intensity in the Cusp Region as Revealed by a Statistical Study on Midday Gap and Non Gap Events, *Geophys. Res. Lett.*, **48**(8), e92414, [10.1029/2021GL092414](https://doi.org/10.1029/2021GL092414).
- [315] Qudsi, R. A. (2021), On the Interplay between Microkinetics and Turbulence in Space Plasmas, Ph.D. thesis, Physics and Astronomy, University of Delaware.

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [316] Ramstad, R., and S. Barabash (2021), Do Intrinsic Magnetic Fields Protect Planetary Atmospheres from Stellar Winds?, *Space Sci. Rev.*, **217**(2), 36, [10.1007/s11214-021-00791-1](https://doi.org/10.1007/s11214-021-00791-1).
- [317] Ravishankar, A., and G. Michalek (2021), Relationship between solar energetic particle intensities and coronal mass ejection kinematics using STEREO/SECCHI field of view, *Astron. & Astrophys.*, **646**, A142, [10.1051/0004-6361/202039537](https://doi.org/10.1051/0004-6361/202039537).
- [318] Reames, D. (2021), The Evolution of Research on Abundances of Solar Energetic Particles, *Universe*, **7**(8), 292, [10.3390/universe7080292](https://doi.org/10.3390/universe7080292).
- [319] Reames, D. V. (2021), Fifty Years of 3 He-rich Events, *Front. Astron. Space Sci.*, **8**, 164, [10.3389/fspas.2021.760261](https://doi.org/10.3389/fspas.2021.760261).
- [320] Reames, D. V. (2021), On the Correlation between Energy Spectra and Element Abundances in Solar Energetic Particles, *Solar Phys.*, **296**(1), 24, [10.1007/s11207-021-01762-z](https://doi.org/10.1007/s11207-021-01762-z).
- [321] Reames, D. V. (2021), *Solar Energetic Particles. A Modern Primer on Understanding Sources, Acceleration and Propagation*, vol. 978, [10.1007/978-3-030-66402-2](https://doi.org/10.1007/978-3-030-66402-2).
- [322] Reames, D. V. (2021), Sixty Years of Element Abundance Measurements in Solar Energetic Particles, *Space Sci. Rev.*, **217**(6), 72, [10.1007/s11214-021-00845-4](https://doi.org/10.1007/s11214-021-00845-4).
- [323] Reisenfeld, D. B., M. Bzowski, H. O. Funsten, J. Heerikhuisen, P. H. Janzen, M. A. Kubiak, D. J. McComas, N. A. Schwadron, J. M. Sokół, A. Zimorino, and E. J. Zirnstein (2021), A Three-dimensional Map of the Heliosphere from IBEX, *Astrophys. J. Suppl.*, **254**(2), 40, [10.3847/1538-4365/abf658](https://doi.org/10.3847/1538-4365/abf658).
- [324] Reiss, M. A., C. Möstl, R. L. Bailey, H. T. Rüdisser, U. V. Amerstorfer, T. Amerstorfer, A. J. Weiss, J. Hinterreiter, and A. Windisch (2021), Machine Learning for Predicting the  $B_z$  Magnetic Field Component From Upstream in Situ Observations of Solar Coronal Mass Ejections, *Space Weather*, **19**(12), e02859, [10.1029/2021SW002859](https://doi.org/10.1029/2021SW002859).
- [325] Rice, O. E. K., and A. R. Yeates (2021), Global Coronal Equilibria with Solar Wind Outflow, *Astrophys. J.*, **923**(1), 57, [10.3847/1538-4357/ac2c71](https://doi.org/10.3847/1538-4357/ac2c71).
- [326] Richardson, J. D., A. C. Cummings, L. F. Burlaga, J. Giacalone, M. Opher, and E. C. Stone (2021), Using Magnetic Flux Conservation to Determine Heliosheath Speeds, *Astrophys. J. Lett.*, **919**(2), L28, [10.3847/2041-8213/ac27b1](https://doi.org/10.3847/2041-8213/ac27b1).
- [327] Ridnaia, A., D. Svinkin, D. Frederiks, A. Bykov, S. Popov, R. Aptekar, S. Golenetskii, A. Lysenko, A. Tsvetkova, M. Ulanov, and T. L. Cline (2021), A peculiar hard X-ray counterpart of a Galactic fast radio burst, *Nature Astron.*, **5**, 372–377, [10.1038/s41550-020-01265-0](https://doi.org/10.1038/s41550-020-01265-0).
- [328] Ringuette, R., D. Koutroumpa, K. D. Kuntz, P. Kaaret, K. Jahoda, D. LaRocca, M. Kounkel, J. Richardson, A. Zajczyk, and J. Bluem (2021), HaloSat Observations of Heliospheric Solar Wind Charge Exchange, *Astrophys. J.*, **918**(2), 41, [10.3847/1538-4357/ac0e33](https://doi.org/10.3847/1538-4357/ac0e33).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [329] Rivera, Y. J., S. T. Lepri, J. C. Raymond, K. K. Reeves, M. L. Stevens, and L. Zhao (2021), Solar Origin of Bare Ion Anomalies in the Solar Wind and Interplanetary Coronal Mass Ejections, *Astrophys. J.*, **921**(1), 93, [10.3847/1538-4357/ac1676](https://doi.org/10.3847/1538-4357/ac1676).
- [330] Roberts, O. J., P. Veres, M. G. Baring, M. S. Briggs, C. Kouveliotou, E. Bissaldi, G. Younes, S. I. Chastain, J. J. DeLaunay, D. Huppenkothen, A. Tohuvavohu, P. N. Bhat, E. Göğüş, A. J. van der Horst, J. A. Kennea, D. Kocevski, J. D. Linford, S. Guiriec, R. Hamburg, C. A. Wilson-Hodge, and E. Burns (2021), Rapid spectral variability of a giant flare from a magnetar in NGC 253, *Nature*, **589**(7841), 207–210, [10.1038/s41586-020-03077-8](https://doi.org/10.1038/s41586-020-03077-8).
- [331] Roberts, O. W., R. Nakamura, V. N. Coffey, D. J. Gershman, M. Volwerk, A. Varsani, B. L. Giles, J. C. Dorelli, and C. Pollock (2021), A Study of the Solar Wind Ion and Electron Measurements From the Magnetospheric Multiscale Mission’s Fast Plasma Investigation, *J. Geophys. Res.*, **126**(10), e29784, [10.1029/2021JA029784](https://doi.org/10.1029/2021JA029784).
- [332] Rodríguez-García, L., R. Gómez-Herrero, I. Zouganelis, L. Balmaceda, T. Nieves-Chinchilla, N. Dresing, M. Dumbović, N. V. Nitta, F. Carcaboso, L. F. G. dos Santos, L. K. Jian, L. Mays, D. Williams, and J. Rodríguez-Pacheco (2021), The unusual widespread solar energetic particle event on 2013 August 19. Solar origin and particle longitudinal distribution, *Astron. & Astrophys.*, **653**, A137, [10.1051/0004-6361/202039960](https://doi.org/10.1051/0004-6361/202039960).
- [333] Ross, J. P. J., S. A. Glauert, R. B. Horne, C. E. J. Watt, and N. P. Meredith (2021), On the Variability of EMIC Waves and the Consequences for the Relativistic Electron Radiation Belt Population, *J. Geophys. Res.*, **126**(12), e29754, [10.1029/2021JA029754](https://doi.org/10.1029/2021JA029754).
- [334] Rouillard, A. P., N. Viall, V. Pierrard, C. Vocks, L. Matteini, O. Alexandrova, A. K. Higginson, B. Lavraud, M. Lavarra, Y. Wu, R. Pinto, A. Bemporad, and E. Sanchez-Diaz (2021), The Solar Wind, in *Solar Physics and Solar Wind*, vol. 1, edited by N. E. Raouafi and A. Vourlidas, p. 1, [10.1002/9781119815600.ch1](https://doi.org/10.1002/9781119815600.ch1).
- [335] Ruan, M., P. Zuo, Z. Zhou, Z. Shen, Y. Wang, X. Feng, C. Jiang, X. Xu, J. Wei, Y. Xiong, and L. Wang (2021), The Relationship between Solar Wind Dynamic Pressure Pulses and Solar Wind Turbulence, *Front. Phys.*, **9**, 630, [10.3389/fphy.2021.750410](https://doi.org/10.3389/fphy.2021.750410).
- [336] Rubtsov, A. V., O. S. Mikhailova, P. N. Mager, D. Y. Klimushkin, J. Ren, and Q.-G. Zong (2021), Multispacecraft Observation of the Presubstorm Long-Lasting Poloidal ULF Wave, *Geophys. Res. Lett.*, **48**(23), e96182, [10.1029/2021GL096182](https://doi.org/10.1029/2021GL096182).
- [337] Ruffini, R., R. Moradi, J. A. Rueda, L. Li, N. Sahakyan, Y. C. Chen, Y. Wang, Y. Aimuratov, L. Becerra, C. L. Bianco, C. Cherubini, S. Filippi, M. Karlica, G. J. Mathews, M. Muccino, G. B. Pisani, and S. S. Xue (2021), The morphology of the X-ray afterglows and of the jetted GeV emission in long GRBs, *Mon. Not. Roy. Astron. Soc.*, **504**(4), 5301–5326, [10.1093/mnras/stab724](https://doi.org/10.1093/mnras/stab724).
- [338] Sachdeva, N., G. Tóth, W. B. Manchester, B. van der Holst, Z. Huang, I. V. Sokolov, L. Zhao, Q. A. Shidi, Y. Chen, T. I. Gombosi, C. J. Henney, D. G. Lloveras, and A. M.

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- Vásquez (2021), Simulating Solar Maximum Conditions Using the Alfvén Wave Solar Atmosphere Model (AWSOM), *Astrophys. J.*, **923**(2), 176, [10.3847/1538-4357/ac307c](https://doi.org/10.3847/1538-4357/ac307c).
- [339] Sadovnichy, V. A., M. I. Panasyuk, S. I. Svertilov, V. M. Lipunov, V. V. Bogomolov, A. V. Bogomolov, E. S. Gorbovskoy, A. F. Iyudin, V. V. Kalegaev, V. G. Kornilov, I. H. Park, V. L. Petrov, N. N. Vedenkin, and I. V. Yashin (2021), Lomonosov GRB Catalogue: The First Experience of Prompt Emission Multi-Wavelength Observations, *Universe*, **7**(10), 375, [10.3390/universe7100375](https://doi.org/10.3390/universe7100375).
- [340] Salas-Matamoros, C., and J. Sanchez-Guevara (2021), A geometrical description for interplanetary propagation of Earth-directed CMEs based on radiative proxies, *Mon. Not. Roy. Astron. Soc.*, **504**(4), 5899–5906, [10.1093/mnras/stab1232](https://doi.org/10.1093/mnras/stab1232).
- [341] Samara, E., R. F. Pinto, J. Magdalenić, N. Wijsen, V. Jerčić, C. Scolini, I. C. Jebaraj, L. Rodriguez, and S. Poedts (2021), Implementing the MULTI-VP coronal model in EUHFORIA: Test case results and comparisons with the WSA coronal model, *Astron. & Astrophys.*, **648**, A35, [10.1051/0004-6361/202039325](https://doi.org/10.1051/0004-6361/202039325).
- [342] Samsonov, A. A., Y. V. Bogdanova, G. Branduardi-Raymont, L. Xu, J. Zhang, D. Sor-makov, O. A. Troshichev, and C. Forsyth (2021), Geosynchronous Magnetopause Cross-ings and Their Relationships With Magnetic Storms and Substorms, *Space Weather*, **19**(6), e02704, [10.1029/2020SW002704](https://doi.org/10.1029/2020SW002704).
- [343] Samsonov, S., and S. Parshina (2021), The features of the bio-efficiency of geomagnetic activity on the sub-auroral latitudes in the minimum of the 11-year solar cycle, in *IOP Conference Series: Earth and Environmental Science, IOP Conference Series: Earth and Environmental Science*, vol. 853, p. 012028, [10.1088/1755-1315/853/1/012028](https://doi.org/10.1088/1755-1315/853/1/012028).
- [344] Samwel, S. W., and R. Miteva (2021), Catalogue of in situ observed solar energetic electrons from ACE/EPAM instrument, *Mon. Not. Roy. Astron. Soc.*, **505**(4), 5212–5227, [10.1093/mnras/stab1564](https://doi.org/10.1093/mnras/stab1564).
- [345] Sandhu, J. K., I. J. Rae, F. A. Staples, D. P. Hartley, M. T. Walach, T. Elsden, and K. R. Murphy (2021), The Roles of the Magnetopause and Plasmapause in Storm-Time ULF Wave Power Enhancements, *J. Geophys. Res.*, **126**(7), e29337, [10.1029/2021JA029337](https://doi.org/10.1029/2021JA029337).
- [346] Saturnino, D., M. A. Pais, and J. Domingos (2021), The Signature of Geomagnetic Field External Drivers in Virtual Observatory 30-day Means Derived From Swarm Data, *J. Geophys. Res.*, **126**(10), e29579, [10.1029/2021JA029579](https://doi.org/10.1029/2021JA029579).
- [347] Schmid, D., Y. Narita, F. Plaschke, M. Volwerk, R. Nakamura, and W. Baumjohann (2021), Magnetosheath plasma flow model around Mercury, *Ann. Geophys.*, **39**(3), 563–570, [10.5194/angeo-39-563-2021](https://doi.org/10.5194/angeo-39-563-2021).
- [348] Schwartz, S. J., R. Ergun, H. Kucharek, L. Wilson, L.-J. Chen, K. Goodrich, D. Turner, I. Gingell, H. Madanian, D. Gershman, and R. Strangeway (2021), Evaluating the deHoffmann-Teller Cross-Shock Potential at Real Collisionless Shocks, *J. Geophys. Res.*, **126**(8), e29295, [10.1029/2021JA029295](https://doi.org/10.1029/2021JA029295).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [349] Schwartz, S. J., H. Kucharek, C. J. Farrugia, K. Trattner, I. Gingell, R. E. Ergun, R. Strangeway, and D. Gershman (2021), Energy Conversion Within Current Sheets in the Earth's Quasi Parallel Magnetosheath, *Geophys. Res. Lett.*, **48**(4), e91859, [10.1029/2020GL091859](https://doi.org/10.1029/2020GL091859).
- [350] Scolini, C., S. Dasso, L. Rodriguez, A. N. Zhukov, and S. Poedts (2021), Exploring the radial evolution of interplanetary coronal mass ejections using EUHFORIA, *Astron. & Astrophys.*, **649**, A69, [10.1051/0004-6361/202040226](https://doi.org/10.1051/0004-6361/202040226).
- [351] Seki, D., K. Otsuji, H. Isobe, G. Del Zanna, T. T. Ishii, T. Sakaue, K. Ichimoto, and K. Shibata (2021), Small-scale Turbulent Motion of the Plasma in a Solar Filament as the Precursor of Eruption, *Astrophys. J.*, **918**(1), 38, [10.3847/1538-4357/ac0d51](https://doi.org/10.3847/1538-4357/ac0d51).
- [352] Sergeev, V. A., W. Sun, J. Yang, and E. V. Panov (2021), Manifestations of Magnetotail Flow Channels in Energetic Particle Signatures at Low-Altitude Orbit, *Geophys. Res. Lett.*, **48**(15), e93543, [10.1029/2021GL093543](https://doi.org/10.1029/2021GL093543).
- [353] Sergeeva, M. A., O. A. Maltseva, R. Caraballo, J. A. Gonzalez-Esparza, and P. Corona-Romero (2021), Latitudinal Dependence of the Ionospheric Slab Thickness for Estimation of Ionospheric Response to Geomagnetic Storms, *Atmosphere*, **12**(2), 164, [10.3390/atmos12020164](https://doi.org/10.3390/atmos12020164).
- [354] Shah, A., Q. Ul Haque, S. Ur Rehman, and S. Mahmood (2021), Catalogue of events with cumulative fluxes below as well as comparable and exceeding those for RBSP discovered third radiation belt, *Astrophys. Space Sci.*, **366**(2), 22, [10.1007/s10509-021-03928-4](https://doi.org/10.1007/s10509-021-03928-4).
- [355] Shanmugaraju, A., P. Pappa Kalaivani, Y. J. Moon, and O. Prakash (2021), Occurrence Rate of Radio-Loud and Halo CMEs in Solar Cycle 25: Prediction Using their Correlation with the Sunspot Number, *Solar Phys.*, **296**(4), 75, [10.1007/s11207-021-01818-0](https://doi.org/10.1007/s11207-021-01818-0).
- [356] Shekhar, S., J. D. Perez, K. Davidson, and M. C. Fok (2021), Comparison of CIMI Simulations and TWINS Observations on June 28 and 29, 2013, *J. Geophys. Res.*, **126**(8), e28388, [10.1029/2020JA028388](https://doi.org/10.1029/2020JA028388).
- [357] Shen, C., Y. Chi, M. Xu, and Y. Wang (2021), Origination of Extremely Intense South Component of Magnetic Field ( $B_s$ ) in the ICME, *Front. Phys.*, **9**, 673, [10.3389/fphy.2021.762488](https://doi.org/10.3389/fphy.2021.762488).
- [358] Shinbori, A., Y. Otsuka, T. Tsugawa, M. Nishioka, A. Kumamoto, F. Tsuchiya, S. Matsuda, Y. Kasahara, and A. Matsuoka (2021), Relationship Between the Locations of the Midlatitude Trough and Plasmapause Using GNSS TEC and Arase Satellite Observation Data, *J. Geophys. Res.*, **126**(5), e28943, [10.1029/2020JA028943](https://doi.org/10.1029/2020JA028943).
- [359] Shlyk, N. S., A. V. Belov, M. A. Abunina, E. A. Eroshenko, A. A. Abunin, V. A. Oleneva, and V. G. Yanke (2021), Influence of Interacting Solar Wind Disturbances on the Variations in Galactic Cosmic Rays, *Geomag. and Aeron.*, **61**(6), 792–800, [10.1134/S0016793221060128](https://doi.org/10.1134/S0016793221060128).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [360] Sibeck, D. G., and K. R. Murphy (2021), Large-Scale Structure and Dynamics of the Magnetosphere, in *Magnetospheres in the Solar System*, vol. 2, edited by R. Maggiolo, N. André, H. Hasegawa, and D. T. Welling, p. 15, [10.1002/9781119815624.ch2](https://doi.org/10.1002/9781119815624.ch2).
- [361] Sibeck, D. G., M. R. Collier, and M. V. D. Silveira (2021), Neutral Densities in the Outer Exosphere Near the Subsolar Magnetopause, *Geophys. Res. Lett.*, **48**(23), e93383, [10.1029/2021GL093383](https://doi.org/10.1029/2021GL093383).
- [362] Sinha, S., Y. Chen, Y. Lin, and R. Pires de Lima (2021), PreMevE Update: Forecasting Ultra-Relativistic Electrons Inside Earth's Outer Radiation Belt, *Space Weather*, **19**(9), e02773, [10.1029/2021SW002773](https://doi.org/10.1029/2021SW002773).
- [363] Sitnov, M., G. Stephens, T. Motoba, and M. Swisdak (2021), Data Mining Reconstruction of Magnetotail Reconnection and Implications for Its First-Principle Modeling, *Front. Phys.*, **9**, 90, [10.3389/fphy.2021.644884](https://doi.org/10.3389/fphy.2021.644884).
- [364] Smith, A. W., C. Forsyth, I. J. Rae, T. M. Garton, T. Bloch, C. M. Jackman, and M. Bakrania (2021), Forecasting the Probability of Large Rates of Change of the Geomagnetic Field in the UK: Timescales, Horizons, and Thresholds, *Space Weather*, **19**(9), e02788, [10.1029/2021SW002788](https://doi.org/10.1029/2021SW002788).
- [365] Sokół, J. M., M. A. Dayeh, S. A. Fuselier, G. Nicolaou, D. J. McComas, and E. J. Zirnstein (2021), Breathing of the Heliosphere, *Astrophys. J.*, **922**(2), 250, [10.3847/1538-4357/ac21cd](https://doi.org/10.3847/1538-4357/ac21cd).
- [366] Song, X., X. Luo, M. S. Potgieter, X. Liu, and Z. Geng (2021), A Numerical Study of the Solar Modulation of Galactic Protons and Helium from 2006 to 2017, *Astrophys. J. Suppl.*, **257**(2), 48, [10.3847/1538-4365/ac281c](https://doi.org/10.3847/1538-4365/ac281c).
- [367] Sori, T., A. Shinburi, Y. Otsuka, T. Tsugawa, and M. Nishioka (2021), The Occurrence Feature of Plasma Bubbles in the Equatorial to Midlatitude Ionosphere During Geomagnetic Storms Using Long Term GNSS TEC Data, *J. Geophys. Res.*, **126**(5), e29010, [10.1029/2020JA029010](https://doi.org/10.1029/2020JA029010).
- [368] Sorriso-Valvo, L., E. Yordanova, A. P. Dimmock, and D. Telloni (2021), Turbulent Cascade and Energy Transfer Rate in a Solar Coronal Mass Ejection, *Astrophys. J. Lett.*, **919**(2), L30, [10.3847/2041-8213/ac26c5](https://doi.org/10.3847/2041-8213/ac26c5).
- [369] Soucek, J., D. Píša, I. Kolmasova, L. Uhlik, R. Lan, O. Santolík, V. Krupar, O. Kruparová, J. Baše, M. Maksimovic, S. D. Bale, T. Chust, Y. V. Khotyaintsev, V. Krasnoselskikh, M. Kretzschmar, E. Lorfèvre, D. Plettemeier, M. Steller, Š. Štverák, A. Vaivads, A. Vecchio, D. Bérard, and X. Bonnin (2021), Solar Orbiter Radio and Plasma Waves - Time Domain Sampler: In-flight performance and first results, *Astron. & Astrophys.*, **656**, A26, [10.1051/0004-6361/202140948](https://doi.org/10.1051/0004-6361/202140948).
- [370] Starkey, M. J., S. A. Fuselier, M. I. Desai, S. J. Schwartz, C. T. Russell, H. Wei, H. Madaian, J. Mukherjee, and I. Wilson, L. B. (2021), MMS Observations of Energized He<sup>+</sup> Pickup Ions at Quasiperpendicular Shocks, *Astrophys. J.*, **913**(2), 112, [10.3847/1538-4357/abf4d9](https://doi.org/10.3847/1538-4357/abf4d9).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [371] Stauning, P. (2021), The Polar Cap (PC) index combination, PCC: relations to solar wind properties and global magnetic disturbances, *J. Space Weather Space Clim.*, **11**, 19, [10.1051/swsc/2020074](https://doi.org/10.1051/swsc/2020074).
- [372] Stauning, P. (2021), Transpolar Convection and Magnetospheric Ring Current Relations: Real-Time Applications of the Polar Cap (PC) Indices, *Space Weather*, **19**(7), e02702, [10.1029/2020SW002702](https://doi.org/10.1029/2020SW002702).
- [373] Stepanov, N. A., V. A. Sergeev, D. A. Sormakov, V. A. Andreeva, S. V. Dubyagin, N. Ganushkina, V. Angelopoulos, and A. V. Runov (2021), Superthermal Proton and Electron Fluxes in the Plasma Sheet Transition Region and Their Dependence on Solar Wind Parameters, *J. Geophys. Res.*, **126**(4), e28580, [10.1029/2020JA028580](https://doi.org/10.1029/2020JA028580).
- [374] Stephens, G. K., and M. I. Sitnov (2021), Concurrent empirical magnetic reconstruction of storm and substorm spatial scales using data mining and virtual spacecraft, *Front. Phys.*, **9**, 210, [10.3389/fphy.2021.653111](https://doi.org/10.3389/fphy.2021.653111).
- [375] Su, W., Y. Wang, C. Zhou, L. Lu, Z.-B. Zhou, T. M. Li, T. Shi, X.-C. Hu, M.-Y. Zhou, M. Wang, H.-C. Yeh, H. Wang, and P. F. Chen (2021), Analyses of Laser Propagation Noises for TianQin Gravitational Wave Observatory Based on the Global Magnetosphere MHD Simulations, *Astrophys. J.*, **914**(2), 139, [10.3847/1538-4357/abfc49](https://doi.org/10.3847/1538-4357/abfc49).
- [376] Sugo, S., O. Kawashima, S. Kasahara, K. Asamura, R. Nomura, Y. Miyoshi, Y. Ogawa, K. Hosokawa, T. Mitani, T. Namekawa, T. Sakanoi, M. Fukizawa, N. Yagi, Y. Fedorenko, A. Nikitenko, S. Yokota, K. Keika, T. Hori, and C. Koehler (2021), Energy Resolved Detection of Precipitating Electrons of 30-100 keV by a Sounding Rocket Associated With Dayside Chorus Waves, *J. Geophys. Res.*, **126**(3), e28477, [10.1029/2020JA028477](https://doi.org/10.1029/2020JA028477).
- [377] Sun, W., R. M. Dewey, S. Aizawa, J. Huang, J. A. Slavin, S. Fu, Y. Wei, and C. F. Bowers (2022), Review of Mercury's dynamic magnetosphere: Post-MESSENGER era and comparative magnetospheres, *Sci. China Earth Sci.*, **65**(1), 25–74, [10.1007/s11430-021-9828-0](https://doi.org/10.1007/s11430-021-9828-0).
- [378] Sun, X., R. Lin, S. Liu, X. He, L. Shi, B. Luo, Q. Zhong, and J. Gong (2021), Modeling the Relationship of  $\geq 2$  MeV Electron Fluxes at Different Longitudes in Geostationary Orbit by the Machine Learning Method, *Remote Sensing*, **13**(17), 3347, [10.3390/rs13173347](https://doi.org/10.3390/rs13173347).
- [379] Sun, Y., Z. Xie, Y. Chen, X. Huang, and Q. Hu (2021), Solar Wind Speed Prediction With Two-Dimensional Attention Mechanism, *Space Weather*, **19**(7), e02707, [10.1029/2020SW002707](https://doi.org/10.1029/2020SW002707).
- [380] Svinkin, D., D. Frederiks, K. Hurley, R. Aptekar, S. Golenetskii, A. Lysenko, A. V. Ridnaia, A. Tsvetkova, M. Ulanov, T. L. Cline, I. Mitrofanov, D. Golovin, A. Kozyrev, M. Litvak, A. Sanin, A. Goldstein, M. S. Briggs, C. Wilson-Hodge, A. von Kienlin, X. L. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, P. Ubertini, A. Bazzano, J. C. Rodi, S. Barthelmy, J. Cummings, H. Krimm, D. M. Palmer, W. Boynton, C. W. Fellows, K. P. Harshman, H. Enos, and R. Starr (2021), A bright  $\gamma$ -ray flare interpreted as a giant magnetar flare in NGC 253, *Nature*, **589**(7841), 211–213, [10.1038/s41586-020-03076-9](https://doi.org/10.1038/s41586-020-03076-9).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [381] Takalo, J. (2021), Comparison of Geomagnetic Indices During Even and Odd Solar Cycles SC17 - SC24: Signatures of Gnevyshev Gap in Geomagnetic Activity, *Solar Phys.*, **296**(1), 19, [10.1007/s11207-021-01765-w](https://doi.org/10.1007/s11207-021-01765-w).
- [382] Talpeanu, D. C., S. Poedts, E. D'Huys, and M. Mierla (2022), Study of the propagation, in situ signatures, and geoeffectiveness of shear-induced coronal mass ejections in different solar winds, *Astron. & Astrophys.*, **658**, A56, [10.1051/0004-6361/202141977](https://doi.org/10.1051/0004-6361/202141977).
- [383] Tan, C.-M., K. L. Klein, Y.-H. Yan, S. Masuda, B.-L. Tan, J. Huang, and G.-W. Yuan (2021), Energy and spectral analysis of confined solar flares from radio and X-ray observations, *Res. Astro. and Astrophys.*, **21**(11), 274, [10.1088/1674-4527/21/11/274](https://doi.org/10.1088/1674-4527/21/11/274).
- [384] Tan, L. C., and O. E. Malandraki (2021), Ne/O and Fe/O Characteristics of Large Solar Energetic Particle Events during Solar Cycles 23 and 24, *Astrophys. J.*, **920**(2), 136, [10.3847/1538-4357/ac1587](https://doi.org/10.3847/1538-4357/ac1587).
- [385] Tang, B. B., W. Y. Li, C. Wang, Y. V. Khotyaintsev, D. B. Graham, Q. H. Zhang, T. R. Sun, H. Li, X. Y. Wang, K. J. Trattner, B. L. Giles, P. A. Lindqvist, R. E. Ergun, and J. L. Burch (2021), Secondary magnetic reconnection at Earth's flank magnetopause, *Front. Astron. Space Sci.*, **8**, 179, [10.3389/fspas.2021.740560](https://doi.org/10.3389/fspas.2021.740560).
- [386] Tao, J., L. Wang, G. Li, R. F. Wimmer-Schweingruber, C. Salem, L. K. Jian, and S. D. Bale (2021), Solar Wind 0.15–1.5 keV Electrons around Corotating Interaction Regions at 1 au, *Astrophys. J.*, **922**(2), 198, [10.3847/1538-4357/ac2505](https://doi.org/10.3847/1538-4357/ac2505).
- [387] Tavani, M., C. Casentini, A. Ursi, F. Verrecchia, A. Addis, L. A. Antonelli, A. Argan, G. Barbiellini, L. Baroncelli, G. Bernardi, G. Bianchi, A. Bulgarelli, P. Caraveo, M. Cardillo, P. W. Cattaneo, A. W. Chen, E. Costa, E. Del Monte, G. Di Cocco, G. Di Persio, I. Donnarumma, Y. Evangelista, M. Feroci, A. Ferrari, V. Fioretti, F. Fuschino, M. Galli, F. Gianotti, A. Giuliani, C. Labanti, F. Lazzarotto, P. Lipari, F. Longo, F. Lucarelli, A. Magro, M. Marisaldi, S. Mereghetti, E. Morelli, A. Morselli, G. Naldi, L. Pacchiani, N. Parmiggiani, F. Paoletti, A. Pellizzoni, M. Perri, F. Perotti, G. Piano, P. Picozza, M. Pilia, C. Pittori, S. Puccetti, G. Pupillo, M. Rapisarda, A. Rappoldi, A. Rubini, G. Setti, P. Soffitta, M. Trifoglio, A. Trois, S. Vercellone, V. Vittorini, P. Giommi, and F. D'Amico (2021), An X-ray burst from a magnetar enlightening the mechanism of fast radio bursts, *Nature Astron.*, **5**, 401–407, [10.1038/s41550-020-01276-x](https://doi.org/10.1038/s41550-020-01276-x).
- [388] Teh, W.-L. (2021), Effective Polytropic Index of Small-Scale and Force-Free Magnetic Flux Ropes in the Solar Wind, *J. Geophys. Res.*, **126**(10), e29944, [10.1029/2021JA029944](https://doi.org/10.1029/2021JA029944).
- [389] Telloni, D., R. D'Amicis, R. Bruno, D. Perrone, L. Sorriso-Valvo, A. N. Raghav, and K. Choraghe (2021), Alfvénicity-related Long Recovery Phases of Geomagnetic Storms: A Space Weather Perspective, *Astrophys. J.*, **916**(2), 64, [10.3847/1538-4357/ac071f](https://doi.org/10.3847/1538-4357/ac071f).
- [390] Telloni, D., C. Scolini, C. Möstl, G. P. Zank, L. L. Zhao, A. J. Weiss, M. A. Reiss, R. Laker, D. Perrone, Y. Khotyaintsev, K. Steinvall, L. Sorriso-Valvo, T. S. Horbury, R. F. Wimmer-Schweingruber, R. Bruno, R. D'Amicis, R. De Marco, V. K. Jagarlamudi, F. Carbone, R. Marino, M. Stangalini, M. Nakanotani, L. Adhikari, H. Liang, L. D. Woodham, E. E.

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- Davies, H. Hietala, S. Perri, R. Gómez-Herrero, J. Rodríguez-Pacheco, E. Antonucci, M. Romoli, S. Fineschi, M. Maksimovic, J. Souček, T. Chust, M. Kretzschmar, A. Vecchio, D. Müller, I. Zouganelis, R. M. Winslow, S. Giordano, S. Mancuso, R. Susino, S. L. Ivanovski, M. Messerotti, H. O'Brien, V. Evans, and V. Angelini (2021), Study of two interacting interplanetary coronal mass ejections encountered by Solar Orbiter during its first perihelion passage. Observations and modeling, *Astron. & Astrophys.*, **656**, A5, [10.1051/0004-6361/202140648](https://doi.org/10.1051/0004-6361/202140648).
- [391] Temmer, M. (2021), Space weather: the solar perspective, *Living Rev. Solar Phys.*, **18**(1), 4, [10.1007/s41116-021-00030-3](https://doi.org/10.1007/s41116-021-00030-3).
- [392] Tokumaru, M., K. Fujiki, M. Kojima, and K. Iwai (2021), Global Distribution of the Solar Wind Speed Reconstructed from Improved Tomographic Analysis of Interplanetary Scintillation Observations between 1985 and 2019, *Astrophys. J.*, **922**(1), 73, [10.3847/1538-4357/ac1862](https://doi.org/10.3847/1538-4357/ac1862).
- [393] Toledo-Redondo, S., M. André, N. Aunai, C. R. Chappell, J. Dargent, S. A. Fuselier, A. Glocer, D. B. Graham, S. Haaland, M. Hesse, L. M. Kistler, B. Lavraud, W. Li, T. E. Moore, P. Tenfjord, and S. K. Vines (2021), Impacts of Ionospheric Ions on Magnetic Reconnection and Earth's Magnetosphere Dynamics, *Rev. Geophys.*, **59**(3), e00707, [10.1029/2020RG000707](https://doi.org/10.1029/2020RG000707).
- [394] Trattner, K. J., S. A. Fuselier, S. M. Petrinec, J. L. Burch, R. Ergun, and E. W. Grimes (2021), Long and Active Magnetopause Reconnection X Lines During Changing IMF Conditions, *J. Geophys. Res.*, **126**(4), e28926, [10.1029/2020JA028926](https://doi.org/10.1029/2020JA028926).
- [395] Trattner, K. J., S. M. Petrinec, and S. A. Fuselier (2021), The Location of Magnetic Reconnection at Earth's Magnetopause, *Space Sci. Rev.*, **217**(3), 41, [10.1007/s11214-021-00817-8](https://doi.org/10.1007/s11214-021-00817-8).
- [396] Troyer, R. N., A. N. Jaynes, S. L. Jones, D. J. Knudsen, and T. S. Trondsen (2021), The Diffuse Auroral Eraser, *J. Geophys. Res.*, **126**(3), e28805, [10.1029/2020JA028805](https://doi.org/10.1029/2020JA028805).
- [397] Tsvetkova, A., D. Frederiks, D. Svinkin, R. Aptekar, T. L. Cline, S. Golenetskii, K. Hurley, A. Lysenko, A. Ridnaia, and M. Ulanov (2021), The Konus-Wind Catalog of Gamma-Ray Bursts with Known Redshifts. II. Waiting-Mode Bursts Simultaneously Detected by Swift/BAT, *Astrophys. J.*, **908**(1), 83, [10.3847/1538-4357/abd569](https://doi.org/10.3847/1538-4357/abd569).
- [398] Tsyganenko, N. A., V. A. Andreeva, M. I. Sitnov, G. K. Stephens, J. W. Gjerloev, X. Chu, and O. A. Troshichev (2021), Reconstructing Substorms via Historical Data Mining: Is It Really Feasible?, *J. Geophys. Res.*, **126**(10), e29604, [10.1029/2021JA029604](https://doi.org/10.1029/2021JA029604).
- [399] Turner, D. L., I. J. Cohen, A. Michael, K. Sorathia, S. Merkin, B. H. Mauk, S. Ukhorskiy, K. R. Murphy, C. Gabrielse, A. J. Boyd, J. F. Fennell, J. B. Blake, S. G. Claudepierre, A. Y. Drozdov, A. N. Jaynes, J.-F. Ripoll, and G. D. Reeves (2021), Can Earth's Magnetotail Plasma Sheet Produce a Source of Relativistic Electrons for the Radiation Belts?, *Geophys. Res. Lett.*, **48**(21), e95495, [10.1029/2021GL095495](https://doi.org/10.1029/2021GL095495).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [400] Turner, D. L., I. Wilson, L. B., K. A. Goodrich, H. Madanian, S. J. Schwartz, T. Z. Liu, A. Johlander, D. Caprioli, I. J. Cohen, D. Gershman, H. Hietala, J. H. Westlake, B. Lavraud, O. Le Contel, and J. L. Burch (2021), Direct Multipoint Observations Capturing the Reformation of a Supercritical Fast Magnetosonic Shock, *Astrophys. J. Lett.*, **911**(2), L31, [10.3847/2041-8213/abec78](https://doi.org/10.3847/2041-8213/abec78).
- [401] Turner, H., M. J. Owens, M. S. Lang, and S. Gonzi (2021), The Influence of Spacecraft Latitudinal Offset on the Accuracy of Corotation Forecasts, *Space Weather*, **19**(8), e02802, [10.1029/2021SW002802](https://doi.org/10.1029/2021SW002802).
- [402] Umar, R., S. N. A. S. Zafar, N. H. Sabri, M. H. Jusoh, A. Yoshikawa, S. Abe, and T. Uozumi (2021), Earth's geomagnetic response to solar wind changes associated with solar events at low latitude regions at the TRE MAGDAS Station, in *IOP Conference Series: Earth and Environmental Science, IOP Conference Series: Earth and Environmental Science*, vol. 880, p. 012009, [10.1088/1755-1315/880/1/012009](https://doi.org/10.1088/1755-1315/880/1/012009).
- [403] Umuhire, A. C., N. Gopalswamy, J. Uwamahoro, S. Akiyama, S. Yashiro, and P. Mäkelä (2021), Properties of High-Frequency Type II Radio Bursts and Their Relation to the Associated Coronal Mass Ejections, *Solar Phys.*, **296**(1), 27, [10.1007/s11207-020-01743-8](https://doi.org/10.1007/s11207-020-01743-8).
- [404] Vasko, I. Y., K. Alimov, T. D. Phan, S. D. Bale, F. S. Mozer, and A. V. Artemyev (2021), Kinetic-scale Current Sheets in the Solar Wind at 1 au: Properties and the Necessary Condition for Reconnection, *Astrophys. J. Lett.*, **923**(1), L19, [10.3847/2041-8213/ac3f30](https://doi.org/10.3847/2041-8213/ac3f30).
- [405] Vazquez, T., S. Vuppala, I. Ayodeji, L. Song, N. Grimes, and T. Evans-Nguyen (2021), In Situ Mass Spectrometers for Applications in Space, *Mass Spectr. Rev.*, **40**(5), 670–691, [10.1002/mas.21648](https://doi.org/10.1002/mas.21648).
- [406] Čalogović, J., M. Dumbović, D. Sudar, B. Vršnak, K. Martinić, M. Temmer, and A. M. Veronig (2021), Probabilistic Drag-Based Ensemble Model (DBEM) Evaluation for Heliospheric Propagation of CMEs, *Solar Phys.*, **296**(7), 114, [10.1007/s11207-021-01859-5](https://doi.org/10.1007/s11207-021-01859-5).
- [407] Vecchio, A., M. Maksimovic, V. Krupar, X. Bonnin, A. Zaslavsky, P. L. Astier, M. Dekkali, B. Cecconi, S. D. Bale, T. Chust, E. Guilhem, Y. V. Khotyaintsev, V. Krasnoselskikh, M. Kretzschmar, E. Lorfèvre, D. Plettemeier, J. Souček, M. Steller, Š. Štverák, P. Trávníček, and A. Vaivads (2021), Solar Orbiter/RPW antenna calibration in the radio domain and its application to type III burst observations, *Astron. & Astrophys.*, **656**, A33, [10.1051/0004-6361/202140988](https://doi.org/10.1051/0004-6361/202140988).
- [408] Vencloviene, J., R. Radisauskas, A. Tamosiunas, D. Luksiene, L. Sileikiene, E. Milinaviciene, and D. Rastenyte (2021), Possible Associations between Space Weather and the Incidence of Stroke, *Atmosphere*, **12**(3), 334, [10.3390/atmos12030334](https://doi.org/10.3390/atmos12030334).
- [409] Verbanac, G., and M. Bandić (2021), Origin and Characteristics of the Southward Component of the Interplanetary Magnetic Field, *Solar Phys.*, **296**(12), 183, [10.1007/s11207-021-01930-1](https://doi.org/10.1007/s11207-021-01930-1).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [410] Verniero, J. L., G. G. Howes, D. E. Stewart, and K. G. Klein (2021), Determining Threshold Instrumental Resolutions for Resolving the Velocity Space Signature of Ion Landau Damping, *J. Geophys. Res.*, **126**(5), e28361, [10.1029/2020JA028361](https://doi.org/10.1029/2020JA028361).
- [411] Verscharen, D., R. T. Wicks, O. Alexandrova, R. Bruno, D. Burgess, C. H. K. Chen, R. D'Amicis, J. De Keyser, T. D. de Wit, L. Franci, J. He, P. Henri, S. Kasahara, Y. Khotyaintsev, K. G. Klein, B. Lavraud, B. A. Maruca, M. Maksimovic, F. Plaschke, S. Poedts, C. S. Reynolds, O. Roberts, F. Sahraoui, S. Saito, C. S. Salem, J. Saur, S. Servidio, J. E. Stawarz, Š. Štverák, and D. Told (2021), A Case for Electron-Astrophysics, *Exper. Astron.*, [10.1007/s10686-021-09761-5](https://doi.org/10.1007/s10686-021-09761-5).
- [412] Viall, N. M., C. E. DeForest, and L. Kepko (2021), Mesoscale Structure in the Solar Wind, *Front. Astron. Space Sci.*, **8**, 139, [10.3389/fspas.2021.735034](https://doi.org/10.3389/fspas.2021.735034).
- [413] Vidotto, A. A. (2021), The evolution of the solar wind, *Living Rev. Solar Phys.*, **18**(1), 3, [10.1007/s41116-021-00029-w](https://doi.org/10.1007/s41116-021-00029-w).
- [414] Vlasova, N. A., V. I. Tulupov, and V. V. Kalegaev (2021), Some Features of Solar Proton Events on March 7, 2011, and on February 20, 2014, *Cosmic Res.*, **59**(4), 250–258, [10.1134/S0010952521040067](https://doi.org/10.1134/S0010952521040067).
- [415] Volwerk, M., D. Mautner, C. S. Wedlund, C. Goetz, F. Plaschke, T. Karlsson, D. Schmid, D. Rojas-Castillo, O. W. Roberts, and A. Varsani (2021), Statistical study of linear magnetic hole structures near Earth, *Ann. Geophys.*, **39**(1), 239–253, [10.5194/angeo-39-239-2021](https://doi.org/10.5194/angeo-39-239-2021).
- [416] von Forstner, J. L. F., M. Dumbović, C. Möstl, J. Guo, A. Papaioannou, R. Elftmann, Z. Xu, J. Christoph Terasa, A. Kollhoff, R. F. Wimmer-Schweingruber, J. Rodríguez-Pacheco, A. J. Weiss, J. Hinterreiter, T. Amerstorfer, M. Bauer, A. V. Belov, M. A. Abunina, T. Horbury, E. E. Davies, H. O'Brien, R. C. Allen, G. Bruce Andrews, L. Berger, S. Boden, I. Cernuda Cangas, S. Eldrum, F. Espinosa Lara, R. Gómez Herrero, J. R. Hayes, G. C. Ho, S. R. Kulkarni, W. Jeffrey Lees, C. Martín, G. M. Mason, D. Pacheco, M. Prieto Mateo, A. Ravanbakhsh, O. Rodríguez Polo, S. Sánchez Prieto, C. E. Schlemm, H. Seifert, K. Tyagi, and M. Yedla (2021), Radial evolution of the April 2020 stealth coronal mass ejection between 0.8 and 1 AU. Comparison of Forbush decreases at Solar Orbiter and near the Earth, *Astron. & Astrophys.*, **656**, A1, [10.1051/0004-6361/202039848](https://doi.org/10.1051/0004-6361/202039848).
- [417] Vörös, Z., A. Varsani, E. Yordanova, Y. L. Sasunov, O. W. Roberts, Á. Kis, R. Nakamura, and Y. Narita (2021), Magnetic Reconnection Within the Boundary Layer of a Magnetic Cloud in the Solar Wind, *J. Geophys. Res.*, **126**(9), e29415, [10.1029/2021JA029415](https://doi.org/10.1029/2021JA029415).
- [418] Šafrankova, J., Z. Němeek, F. Němec, V. Montagud-Camps, D. Verscharen, A. Verdini, and T. Ďurovcová (2021), Anisotropy of Magnetic Field and Velocity Fluctuations in the Solar Wind, *Astrophys. J.*, **913**(2), 80, [10.3847/1538-4357/abf6c9](https://doi.org/10.3847/1538-4357/abf6c9).
- [419] Vuorinen, L., H. Hietala, F. Plaschke, and A. T. LaMoury (2021), Magnetic Field in Magnetosheath Jets: A Statistical Study of  $B_Z$  Near the Magnetopause, *J. Geophys. Res.*, **126**(9), e29188, [10.1029/2021JA029188](https://doi.org/10.1029/2021JA029188).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [420] Walach, M. T., A. Grocott, and S. E. Milan (2021), Average Ionospheric Electric Field Morphologies During Geomagnetic Storm Phases, *J. Geophys. Res.*, **126**(4), e28512, [10.1029/2020JA028512](https://doi.org/10.1029/2020JA028512).
- [421] Wan, Q., G. Ma, T. Maruyama, J. Li, X. Wang, and W. Lu (2021), Characteristics of Ionospheric Storm on October 13, 2016 at the Greenwich Meridian, *J. Geophys. Res.*, **126**(11), e28823, [10.1029/2020JA028823](https://doi.org/10.1029/2020JA028823).
- [422] Wang, C.-P., and X. Xing (2021), Solar Wind Entry Into Midtail Current Sheet via Low-Latitude Mantle Under Dominant IMF  $B_y$ : ARTEMIS Observation, *J. Geophys. Res.*, **126**(9), e29402, [10.1029/2021JA029402](https://doi.org/10.1029/2021JA029402).
- [423] Wang, H. Z., J. Zhang, Q. Q. Shi, Y. Saito, A. W. Degeling, I. J. Rae, Q. G. Zong, Y. Wei, J. Liu, R. L. Guo, Z. H. Yao, A. M. Tian, X. H. Fu, J. Z. Liu, Z. C. Ling, S. Y. Fu, W. J. Sun, S. C. Bai, J. Chen, S. T. Yao, H. Zhang, W. L. Liu, L. D. Xia, Y. Y. Feng, and Z. Y. Pu (2021), Earth Wind as a Possible Exogenous Source of Lunar Surface Hydration, *Astrophys. J. Lett.*, **907**(2), L32, [10.3847/2041-8213/abd559](https://doi.org/10.3847/2041-8213/abd559).
- [424] Wang, L., Q. Zong, Q. Shi, R. F. Wimmer-Schweingruber, and S. D. Bale (2021), Solar Energetic Electrons Entering the Earth's Cusp/Lobe, *Astrophys. J.*, **910**(1), 12, [10.3847/1538-4357/abdb2b](https://doi.org/10.3847/1538-4357/abdb2b).
- [425] Wang, R., I. Y. Vasko, F. S. Mozer, S. D. Bale, I. V. Kuzichev, A. V. Artemyev, K. Stein-vall, R. Ergun, B. Giles, Y. Khotyaintsev, P. A. Lindqvist, C. T. Russell, and R. Strangeway (2021), Electrostatic Solitary Waves in the Earth's Bow Shock: Nature, Properties, Lifetimes, and Origin, *J. Geophys. Res.*, **126**(7), e29357, [10.1029/2021JA029357](https://doi.org/10.1029/2021JA029357).
- [426] Wang, S., L.-J. Chen, J. Ng, N. Bessho, G. Le, S. F. Fung, D. J. Gershman, and B. L. Giles (2021), A statistical study of three-second foreshock ULF waves observed by the Magnetospheric Multiscale mission, *Phys. Plasmas*, **28**(8), 082901, [10.1063/5.0055972](https://doi.org/10.1063/5.0055972).
- [427] Wang, X. I., X. Zheng, S. Xiao, J. Yang, Z.-K. Liu, Y.-H. Yang, J.-H. Zou, B.-B. Zhang, M. Zeng, S.-L. Xiong, H. Feng, X.-Y. Song, J. Wen, D. Xu, G.-Y. Chen, Y. Ni, Z.-J. Zhang, Y.-X. Wu, C. Cai, J. Cang, Y.-W. Deng, H. Gao, D.-F. Kong, Y. Huang, C.-K. Li, H. Li, X.-B. Li, E.-W. Liang, L. Lin, Y. Liu, X. Long, D. Lu, Q. Luo, Y.-C. Ma, Y.-Z. Meng, W.-X. Peng, R. Qiao, L.-M. Song, Y. Tian, P.-Y. Wang, P. Wang, X.-G. Wang, S. Xu, D. Yang, Y.-H. Yin, W. Zeng, Z. Zeng, T.-J. Zhang, Y. Zhang, Z. Zhang, and Z. Zhang (2021), GRB 210121A: A Typical Fireball Burst Detected by Two Small Missions, *Astrophys. J.*, **922**(2), 237, [10.3847/1538-4357/ac29bd](https://doi.org/10.3847/1538-4357/ac29bd).
- [428] Wang, Y., X. Chen, P. Wang, C. Qiu, Y. Wang, and Y. Zhang (2021), Concept of the Solar Ring mission: Preliminary design and mission profile, *Sci. China E: Tech. Sci.*, **64**(1), 131–138, [10.1007/s11431-020-1612-y](https://doi.org/10.1007/s11431-020-1612-y).
- [429] Wang, Y., R. Bandyopadhyay, R. Chhiber, W. H. Matthaeus, A. Chasapis, Y. Yang, F. D. Wilder, D. J. Gershman, B. L. Giles, C. J. Pollock, J. Dorelli, C. T. Russell, R. J. Strangeway, R. T. Torbert, T. E. Moore, and J. L. Burch (2021), Statistical Survey

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

of Collisionless Dissipation in the Terrestrial Magnetosheath, *J. Geophys. Res.*, **126**(6), e29000, [10.1029/2020JA029000](https://doi.org/10.1029/2020JA029000).

- [430] Wang, Y., D. Lyu, B. Xiao, G. Qin, Y. Zhong, and L. Lian (2021), Statistical Survey of Reservoir Phenomenon in Energetic Proton Events Observed by Multiple Spacecraft, *Astrophys. J.*, **909**(2), 110, [10.3847/1538-4357/abda39](https://doi.org/10.3847/1538-4357/abda39).
- [431] Wang, Z., S. Zou, L. Liu, J. Ren, and E. Aa (2021), Hemispheric Asymmetries in the Mid-latitude Ionosphere During the September 7-8, 2017 Storm: Multi instrument Observations, *J. Geophys. Res.*, **126**(4), e28829, [10.1029/2020JA028829](https://doi.org/10.1029/2020JA028829).
- [432] Waters, J. E., C. M. Jackman, L. Lamy, B. Cecconi, D. K. Whiter, X. Bonnin, K. Issautier, and A. R. Fogg (2021), Empirical Selection of Auroral Kilometric Radiation During a Multipoint Remote Observation With Wind and Cassini, *J. Geophys. Res.*, **126**(10), e29425, [10.1029/2021JA029425](https://doi.org/10.1029/2021JA029425).
- [433] Webster, L., D. Vainchtein, and A. Artemyev (2021), Solar Wind Discontinuity Interaction with the Bow Shock: Current Density Growth and Dawn-Dusk Asymmetry, *Solar Phys.*, **296**(6), 87, [10.1007/s11207-021-01824-2](https://doi.org/10.1007/s11207-021-01824-2).
- [434] Weiss, A. J., C. Möstl, E. E. Davies, T. Amerstorfer, M. Bauer, J. Hinterreiter, M. A. Reiss, R. L. Bailey, T. S. Horbury, H. O'Brien, V. Evans, V. Angelini, D. Heyner, I. Richter, H. U. Auster, W. Magnes, D. Fischer, and W. Baumjohann (2021), Multi-point analysis of coronal mass ejection flux ropes using combined data from Solar Orbiter, BepiColombo, and Wind, *Astron. & Astrophys.*, **656**, A13, [10.1051/0004-6361/202140919](https://doi.org/10.1051/0004-6361/202140919).
- [435] Wexler, D. B., E. A. Jensen, and C. Heiles (2021), Middle Corona Magnetic Field Strength Determined by Spacecraft Radio Faraday Rotation, *Research Notes of the American Astronomical Society*, **5**(7), 165, [10.3847/2515-5172/ac1521](https://doi.org/10.3847/2515-5172/ac1521).
- [436] Whitaker, M. D. C., S. Butera, G. Lioliou, A. B. Krysa, and A. M. Barnett (2021), A prototype AlInP electron spectrometer, *Planet. Space Sci.*, **205**, 105284, [10.1016/j.pss.2021.105284](https://doi.org/10.1016/j.pss.2021.105284).
- [437] Wilson, I., Lynn B., A. L. Brosius, N. Gopalswamy, T. Nieves-Chinchilla, A. Szabo, K. Hurley, T. Phan, J. C. Kasper, N. Lugaz, I. G. Richardson, C. H. K. Chen, D. Verscharen, R. T. Wicks, and J. M. TenBarge (2021), A Quarter Century of Wind Spacecraft Discoveries, *Rev. Geophys.*, **59**(2), e2020RG000,714, [10.1029/2020RG000714](https://doi.org/10.1029/2020RG000714).
- [438] Wilson, L. B., L.-J. Chen, and V. Roytershteyn (2021), The discrepancy between simulation and observation of electric fields in collisionless shocks, *Front. Astron. Space Sci.*, **7**, 97, [10.3389/fspas.2020.592634](https://doi.org/10.3389/fspas.2020.592634).
- [439] Wintoft, P., and M. Wik (2021), Exploring three recurrent neural network architectures for geomagnetic predictions, *Front. Astron. Space Sci.*, **8**, 72, [10.3389/fspas.2021.664483](https://doi.org/10.3389/fspas.2021.664483).
- [440] Wu, C., A. J. Ridley, A. D. DeJong, and L. J. Paxton (2021), FTA: A Feature Tracking Empirical Model of Auroral Precipitation, *Space Weather*, **19**(5), e02629, [10.1029/2020SW002629](https://doi.org/10.1029/2020SW002629).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [441] Wu, C.-C., R. P. Lepping, and D. B. Berdichevsky (2021), Magnetic Field Intensity Modification to Force Free Model of Magnetic Clouds: Website of Wind Examples from Launch to July of 2015, *Front. Phys.*, **9**, 429, [10.3389/fphy.2021.712599](https://doi.org/10.3389/fphy.2021.712599).
- [442] Wu, H., C. Tu, X. Wang, and L. Yang (2021), Magnetic and Velocity Fluctuations in the Near-Sun Region from 0.1-0.3 au Observed by Parker Solar Probe, *Astrophys. J.*, **922**(2), 92, [10.3847/1538-4357/ac3331](https://doi.org/10.3847/1538-4357/ac3331).
- [443] Xia, F., Y. Su, W. Wang, L. Wang, A. Warmuth, W. Gan, and Y. Li (2021), Detection of Energy Cutoffs in Flare-accelerated Electrons, *Astrophys. J.*, **908**(1), 111, [10.3847/1538-4357/abce5c](https://doi.org/10.3847/1538-4357/abce5c).
- [444] Xiang, L., K. H. Lee, D. J. Wu, H. W. Yu, and L. C. Lee (2021), Linear and Nonlinear Effects of Proton Temperature Anisotropy on Proton-beam Instability in the Solar Wind, *Astrophys. J.*, **916**(1), 30, [10.3847/1538-4357/ac02bc](https://doi.org/10.3847/1538-4357/ac02bc).
- [445] Xiao, S., S. L. Xiong, S. N. Zhang, L. M. Song, F. J. Lu, Y. Huang, C. Cai, Q. B. Yi, X. Y. Song, W. Chen, M. Y. Ge, C. Z. Liu, X. B. Li, C. K. Li, and Y. Zhao (2021), Enhanced Localization of Transients Based on a Novel Cross-correlation Method, *Astrophys. J.*, **920**(1), 43, [10.3847/1538-4357/ac1420](https://doi.org/10.3847/1538-4357/ac1420).
- [446] Xie, H., N. Gopalswamy, and S. Akiyama (2021), The Structural Connection between Coronal Mass Ejection Flux Ropes near the Sun and at 1 au, *Astrophys. J.*, **922**(1), 64, [10.3847/1538-4357/ac23cc](https://doi.org/10.3847/1538-4357/ac23cc).
- [447] Xu, J., X. Xu, Y. Ye, Q. Chang, and Q. Xu (2021), The Nonrelaxation of Magnetic Field Lines in Solar Wind Magnetic Reconnection Exhausts, *Astrophys. J.*, **921**(2), 137, [10.3847/1538-4357/ac1f18](https://doi.org/10.3847/1538-4357/ac1f18).
- [448] Yagova, N., A. Kozlovsky, E. Fedorov, and O. Kozyreva (2021), Even moderate geomagnetic pulsations can cause fluctuations of foF2 frequency of the auroral ionosphere, *Ann. Geophys.*, **39**(3), 549–562, [10.5194/angeo-39-549-2021](https://doi.org/10.5194/angeo-39-549-2021).
- [449] Yahnin, A. G., T. A. Popova, A. G. Demekhov, A. A. Lubchich, A. Matsuoka, K. Asamura, Y. Miyoshi, S. Yokota, S. Kasahara, K. Keika, T. Hori, F. Tsuchiya, A. Kumamoto, Y. Kasahara, M. Shoji, Y. Kasaba, S. Nakamura, I. Shinohara, H. Kim, S. Noh, and T. Raita (2021), Evening Side EMIC Waves and Related Proton Precipitation Induced by a Substorm, *J. Geophys. Res.*, **126**(7), e29091, [10.1029/2020JA029091](https://doi.org/10.1029/2020JA029091).
- [450] Yang, L., H. Wang, X. Feng, M. Xiong, M. Zhang, B. Zhu, H. Li, Y. Zhou, F. Shen, X. Zhao, and X. Liu (2021), Numerical MHD Simulations of the 3D Morphology and Kinematics of the 2017 September 10 CME-driven Shock from the Sun to Earth, *Astrophys. J.*, **918**(1), 31, [10.3847/1538-4357/ac0ef7](https://doi.org/10.3847/1538-4357/ac0ef7).
- [451] Yang, Y.-H., B.-B. Zhang, L. Lin, B. Zhang, G.-Q. Zhang, Y.-S. Yang, Z.-L. Tu, J.-H. Zou, H.-Y. Ye, F.-Y. Wang, and Z.-G. Dai (2021), Bursts before Burst: A Comparative Study on FRB 200428-associated and FRB-absent X-Ray Bursts from SGR J1935+2154, *Astrophys. J. Lett.*, **906**(2), L12, [10.3847/2041-8213/abd02a](https://doi.org/10.3847/2041-8213/abd02a).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [452] Yogesh, D. Chakrabarty, and N. Srivastava (2021), Evidence for distinctive changes in the solar wind helium abundance in solar cycle 24, *Mon. Not. Roy. Astron. Soc.*, **503**(1), L17–L22, [10.1093/mnrasl/slab016](https://doi.org/10.1093/mnrasl/slab016).
- [453] Yokoyama, Y., S. Taguchi, and T. Iyemori (2021), Importance of the Northward IMF for the Quasistatic Mesoscale Field-Aligned Currents Embedded in the Diminished Region 1/2 Current System in the Dusk Sector, *J. Geophys. Res.*, **126**(8), e28774, [10.1029/2020JA028774](https://doi.org/10.1029/2020JA028774).
- [454] Yordanova, E., Z. Vörös, L. Sorriso-Valvo, A. P. Dimmock, and E. Kilpua (2021), A Possible Link between Turbulence and Plasma Heating, *Astrophys. J.*, **921**(1), 65, [10.3847/1538-4357/ac1942](https://doi.org/10.3847/1538-4357/ac1942).
- [455] Younes, G., M. G. Baring, C. Kouveliotou, Z. Arzoumanian, T. Enoto, J. Doty, K. C. Gendreau, E. Göğüş, S. Guillot, T. Güver, A. K. Harding, W. C. G. Ho, A. J. van der Horst, C. P. Hu, G. K. Jaisawal, Y. Kaneko, B. J. LaMarr, L. Lin, W. Majid, T. Okajima, J. Pope, P. S. Ray, O. J. Roberts, M. Saylor, J. F. Steiner, and Z. Wadiasingh (2021), Broadband X-ray burst spectroscopy of the fast-radio-burst-emitting Galactic magnetar, *Nature Astron.*, **5**, 408–413, [10.1038/s41550-020-01292-x](https://doi.org/10.1038/s41550-020-01292-x).
- [456] Zank, G. P., M. Nakanotani, L. L. Zhao, S. Du, L. Adhikari, H. Che, and J. A. le Roux (2021), Flux Ropes, Turbulence, and Collisionless Perpendicular Shock Waves: High Plasma Beta Case, *Astrophys. J.*, **913**(2), 127, [10.3847/1538-4357/abf7c8](https://doi.org/10.3847/1538-4357/abf7c8).
- [457] Zewdie, G. K., C. Valladares, M. B. Cohen, D. J. Lary, D. Ramani, and G. M. Tsidu (2021), Data-Driven Forecasting of Low-Latitude Ionospheric Total Electron Content Using the Random Forest and LSTM Machine Learning Methods, *Space Weather*, **19**(6), e02639, [10.1029/2020SW002639](https://doi.org/10.1029/2020SW002639).
- [458] Zhai, C., X. Shi, W. Wang, M. D. Hartinger, Y. Yao, W. Peng, D. Lin, J. M. Ruohoniemi, and J. B. H. Baker (2021), Characterization of High-m ULF Wave Signatures in GPS TEC Data, *Geophys. Res. Lett.*, **48**(14), e94282, [10.1029/2021GL094282](https://doi.org/10.1029/2021GL094282).
- [459] Zhang, G. Q., Z.-L. Tu, and F. Y. Wang (2021), Possible Periodic Activity in the Short Bursts of SGR 1806-20: Connection to Fast Radio Bursts, *Astrophys. J.*, **909**(1), 83, [10.3847/1538-4357/abdd27](https://doi.org/10.3847/1538-4357/abdd27).
- [460] Zhang, H., J. Zhong, T. Zhang, L. Liu, J. Cao, S. Fu, Y. Wei, and Y. Chen (2021), A Meandering Lunar Wake Produced by the Pickup of Reflected Solar-Wind Ions, *Geophys. Res. Lett.*, **48**(24), e96039, [10.1029/2021GL096039](https://doi.org/10.1029/2021GL096039).
- [461] Zhang, L.-L., J. Ren, X.-L. Huang, Y.-F. Liang, D.-B. Lin, and E.-W. Liang (2021), Nearby SN-associated GRB 190829A: Environment, Jet Structure, and VHE Gamma-Ray Afterglows, *Astrophys. J.*, **917**(2), 95, [10.3847/1538-4357/ac0c7f](https://doi.org/10.3847/1538-4357/ac0c7f).
- [462] Zhang, P., W. Wang, Y. Su, L. M. Song, C. K. Li, D. K. Zhou, S. N. Zhang, H. Tian, S. M. Liu, H. S. Zhao, and S. Zhang (2021), Non-thermal Electron Energization During the Impulsive Phase of an X9.3 Flare Revealed by Insight-HXMT, *Astrophys. J.*, **918**(2), 42, [10.3847/1538-4357/ac0cfb](https://doi.org/10.3847/1538-4357/ac0cfb).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [463] Zhang, X. J., D. Mourenas, X. C. Shen, M. Qin, A. V. Artemyev, Q. Ma, W. Li, M. K. Hudson, and V. Angelopoulos (2021), Dependence of Relativistic Electron Precipitation in the Ionosphere on EMIC Wave Minimum Resonant Energy at the Conjugate Equator, *J. Geophys. Res.*, **126**(5), e29193, [10.1029/2021JA029193](https://doi.org/10.1029/2021JA029193).
- [464] Zhang, Z., Z. Xiang, Y. Wang, B. Ni, and X. Li (2021), Electron Acceleration by Magnetosonic Waves in the Deep Inner Belt ( $L = 1.5\text{-}2$ ) Region During Geomagnetic Storm of August 2018, *J. Geophys. Res.*, **126**(12), e29797, [10.1029/2021JA029797](https://doi.org/10.1029/2021JA029797).
- [465] Zhao, G. Q., Y. Lin, X. Y. Wang, H. Q. Feng, D. J. Wu, H. B. Li, A. Zhao, and Q. Liu (2021), Magnetic Helicity Signature and Its Role in Regulating Magnetic Energy Spectra and Proton Temperatures in the Solar Wind, *Astrophys. J.*, **906**(2), 123, [10.3847/1538-4357/abca3b](https://doi.org/10.3847/1538-4357/abca3b).
- [466] Zhao, J., Q. Shi, A. Tian, X.-C. Shen, J. M. Weygand, H. Wang, S. Yao, X. Ma, A. W. Degeling, I. J. Rae, H. Zhang, X.-J. Zhang, S.-C. Bai, W. Shang, and J.-S. Park (2021), Vortex Generation and Auroral Response to a Solar Wind Dynamic Pressure Increase: Event Analyses, *J. Geophys. Res.*, **126**(3), e28753, [10.1029/2020JA028753](https://doi.org/10.1029/2020JA028753).
- [467] Zhao, S. Q., H. Zhang, T. Z. Liu, H. Yan, C. J. Xiao, M. Liu, Q. G. Zong, X. Wang, M. Shi, S. Teng, H. Wang, R. Rankin, C. Pollock, and G. Le (2021), Observations of an Electron-Cold Ion Component Reconnection at the Edge of an Ion-Scale Antiparallel Reconnection at the Dayside Magnetopause, *J. Geophys. Res.*, **126**(10), e29390, [10.1029/2021JA029390](https://doi.org/10.1029/2021JA029390).
- [468] Zhao, S. Q., C. J. Xiao, T. Z. Liu, H. Chen, H. Zhang, M. J. Shi, S. Teng, H. S. Zhang, X. G. Wang, Z. Y. Pu, and M. Z. Liu (2021), Observations of the Beam Driven Whistler Mode Waves in the Magnetic Reconnection Region at the Dayside Magnetopause, *J. Geophys. Res.*, **126**(2), e28525, [10.1029/2020JA028525](https://doi.org/10.1029/2020JA028525).
- [469] Zhao, X., G. Li, H. Xie, L. Hu, W. Sun, S. Yang, Y. Li, B. Ning, and H. Takahashi (2021), The Prediction of Day-to-Day Occurrence of Low Latitude Ionospheric Strong Scintillation Using Gradient Boosting Algorithm, *Space Weather*, **19**(12), e02884, [10.1029/2021SW002884](https://doi.org/10.1029/2021SW002884).
- [470] Zharkova, V., and Q. Xia (2021), Pitch-angle distribution of accelerated electrons in 3D current sheets with magnetic islands, *Astron. & Astrophys.*, **648**, A51, [10.1051/0004-6361/202039220](https://doi.org/10.1051/0004-6361/202039220).
- [471] Zheng, T.-C., L. Li, L. Zou, and X.-G. Wang (2021), X-ray flares raising upon magnetar plateau as an implication of a surrounding disk of newborn magnetized neutron star, *Res. Astron. Astrophys.*, **21**(12), 300, [10.1088/1674-4527/21/12/300](https://doi.org/10.1088/1674-4527/21/12/300).
- [472] Zhong, Z., C. Shen, D. Mao, Y. Chi, M. Xu, J. Liu, and Y. Wang (2021), Three-Dimensional Parameters of the Earth-Impacting CMEs Based on the GCS Model, *Universe*, **7**(10), 361, [10.3390/universe7100361](https://doi.org/10.3390/universe7100361).
- [473] Zhou, X., Y. Shen, J. Su, Z. Tang, C. Zhou, Y. Duan, and S. Tan (2021), CME-Driven and Flare-Ignited Fast Magnetosonic Waves Detected in a Solar Eruption, *Solar Phys.*, **296**(11), 169, [10.1007/s11207-021-01913-2](https://doi.org/10.1007/s11207-021-01913-2).

**List of Refereed Publications**  
**Wind Spacecraft: 2021**

- [474] Zhou, Y., and X. Feng (2021), Three-Dimensional Simulation Study of the Interactions of Three Successive CMEs during 4-5 November 1998, *Universe*, **7**(11), 431, [10.3390/universe7110431](https://doi.org/10.3390/universe7110431).
- [475] Zhu, Q., Y. Deng, A. Maute, L. M. Kilcommons, D. J. Knipp, and M. Hairston (2021), ASHLEY: A New Empirical Model for the High-Latitude Electron Precipitation and Electric Field, *Space Weather*, **19**(5), e02671, [10.1029/2020SW002671](https://doi.org/10.1029/2020SW002671).
- [476] Zhu, X., M. Wang, Q. Shi, H. Zhang, A. Tian, S. Yao, R. Guo, J. Liu, S. Bai, A. W. Degeling, S. Zhang, Z. Niu, J. Zhao, Y. Xiao, and W. Shang (2021), Motion of Classic and Spontaneous Hot Flow Anomalies Observed by Cluster, *J. Geophys. Res.*, **126**(11), e29418, [10.1029/2021JA029418](https://doi.org/10.1029/2021JA029418).
- [477] Zhu, Z., A. Simionescu, H. Akamatsu, X. Zhang, J. S. Kaastra, J. de Plaa, O. Urban, S. W. Allen, and N. Werner (2021), A shock near the virial radius of the Perseus Cluster, *Astron. & Astrophys.*, **652**, A147, [10.1051/0004-6361/202140673](https://doi.org/10.1051/0004-6361/202140673).
- [478] Zhuang, B., N. Lugaz, T. Gou, and L. Ding (2021), Successive Coronal Mass Ejections Associated with Weak Solar Energetic Particle Events, *Astrophys. J.*, **921**(1), 6, [10.3847/1538-4357/ac17e9](https://doi.org/10.3847/1538-4357/ac17e9).
- [479] Zirnstein, E. J., M. A. Dayeh, J. Heerikhuisen, D. J. McComas, and P. Swaczyna (2021), Heliosheath Proton Distribution in the Plasma Reference Frame, *Astrophys. J. Suppl.*, **252**(2), 26, [10.3847/1538-4365/abd092](https://doi.org/10.3847/1538-4365/abd092).
- [480] Zong, Q. G., C. Yue, and S. Y. Fu (2021), Shock Induced Strong Substorms and Super Substorms: Preconditions and Associated Oxygen Ion Dynamics, *Space Sci. Rev.*, **217**(2), 33, [10.1007/s11214-021-00806-x](https://doi.org/10.1007/s11214-021-00806-x).
- [481] Zou, L., E.-W. Liang, S.-Q. Zhong, X. Yang, T.-C. Zheng, J.-G. Cheng, C.-M. Deng, H.-J. Lü, and S.-Q. Wang (2021), Comparison of the characteristics of magnetars born in death of massive stars and merger of compact objects with swift gamma-ray burst data, *Mon. Not. Roy. Astron. Soc.*, **508**(2), 2505–2514, [10.1093/mnras/stab2766](https://doi.org/10.1093/mnras/stab2766).
- [482] Zou, S., J. Ren, Z. Wang, H. Sun, and Y. Chen (2021), Impact of Storm-Enhanced Density (SED) on Ion Upflow Fluxes During Geomagnetic Storm, *Front. Astron. Space Sci.*, **8**, 162, [10.3389/fspas.2021.746429](https://doi.org/10.3389/fspas.2021.746429).