

Refereed articles in 2015

- [1] J.-P. Bibring, Y. Langevin, J. Carter, P. Eng, B. Gondet, L. Jorda, S. Le Mouélic, S. Mottola, C. Pilorget, F. Poulet, and M. Vincendon. 67P/Churyumov-Gerasimenko surface properties as derived from CIVA panoramic images. *Science*, 349(2), jul 2015.
- [2] J. Cabrera, S. Csizmadia, G. Montagnier, M. Fridlund, M. Ammler-von Eiff, S. Chaintreuil, C. Damiani, M. Deleuil, S. Ferraz-Mello, A. Ferrigno, D. Gandolfi, T. Guillot, E. W. Guenther, A. Hatzes, G. Hebrard, P. Klagyivik, H. Parviainen, T. Pasternacki, M. Patzold, D. Sebastian, M. Tadeu dos Santos, G. Wuchterl, S. Aigrain, R. Alonso, J.-M. Almenara, J. D. Armstrong, M. Auvergne, A. Baglin, P. Barge, S. C. C. Barros, A. S. Bonomo, P. Borde, F. Bouchy, S. Carpano, C. Chaffey, H. J. Deeg, R. F. Díaz, R. Dvorak, A. Erikson, S. Grziwa, J. Korth, H. Lammer, C. Lindsay, T. Mazeh, C. Moutou, A. Ofir, M. Ollivier, E. Pallé, H. Rauer, D. Rouan, B. Samuel, A. Santerne, and J. Schneider. Transiting exoplanets from the CoRoT space mission. XXVII. CoRoT-28b, a planet orbiting an evolved star, and CoRoT-29b, a planet showing an asymmetric transit. *Astron. Astrophys.*, 579:A36, 2015.
- [3] F. Capaccioni, A. Coradini, G. Filacchione, S. Erard, G. Arnold, P. Drossart, M. C. De Sanctis, D. Bockelee-Morvan, M. T. Capria, F. Tosi, C. Leyrat, B. Schmitt, E. Quirico, P. Cerroni, V. Mennella, A. Raponi, M. Ciarniello, T. McCord, L. Moroz, E. Palomba, E. Ammannito, M. A. Barucci, G. Bellucci, J. Benkhoff, J. P. Bibring, A. Blanco, M. Blecka, R. Carlson, U. Carsenty, L. Colangeli, M. Combes, M. Combi, J. Crovisier, T. Encrenaz, C. Federico, U. Fink, S. Fonti, W. H. Ip, P. Irwin, R. Jaumann, E. Kuehrt, Y. Langevin, G. Magni, S. Mottola, V. Orofino, P. Palumbo, G. Piccioni, U. Schade, F. Taylor, D. Tiphene, G. P. Tozzi, P. Beck, N. Biver, L. Bonal, J.-P. Combe, D. Despan, E. Flamini, S. Fornasier, A. Frigeri, D. Grassi, M. Gudipati, A. Longobardo, K. Markus, F. Merlin, R. Orosei, G. Rinaldi, K. Stephan, M. Cartacci, A. Cicchetti, S. Giuppi, Y. Hello, F. Henry, S. Jacquino, R. Noschese, G. Peter, R. Poli, J. M. Reess, and A. Semery. The organic-rich surface of comet 67P/Churyumov-Gerasimenko as seen by VIRTIS/Rosetta. *Science*, 347(1):aaa0628, jan 2015.
- [4] J. Carter, D. Loizeau, N. Mangold, F. Poulet, and J.-P. Bibring. Widespread surface weathering on early Mars: A case for a warmer and wetter climate. *Icarus*, 248:373–382, mar 2015.
- [5] J. Carter, C. Viviano-Beck, D. Loizeau, J. Bishop, and L. Le Deit. Orbital detection and implications of akaganéite on Mars. *Icarus*, 253:296–310, June 2015.
- [6] S. Csizmadia, A. Hatzes, D. Gandolfi, M. Deleuil, F. Bouchy, M. Fridlund, L. Szabados, H. Parviainen, J. Cabrera, S. Aigrain, R. Alonso, J.-M. Almenara, A. Baglin, P. Borde, A. S. Bonomo, H. J. Deeg, R. F. Díaz, A. Erikson, S. Ferraz-Mello, M. Tadeu dos Santos, E. W. Guenther, T. Guillot, S. Grziwa, G. Hebrard, P. Klagyivik, M. Ollivier, M. Patzold, H. Rauer, D. Rouan, A. Santerne, J. Schneider, T. Mazeh, G. Wuchterl, S. Carpano,

and A. Ofir. Transiting exoplanets from the CoRoT space mission XXVIII. CoRoT-33b, an object in the brown dwarf desert with 2:3 commensurability with its host star. *Astron. Astrophys.*, 584:A13, dec 2015.

- [7] M. C. De Sanctis, F. Capaccioni, M. Ciarniello, G. Filacchione, M. Formisano, S. Mottola, A. Raponi, F. Tosi, D. Bockelee-Morvan, S. Erard, C. Leyrat, B. Schmitt, E. Ammannito, G. Arnold, M. A. Barucci, M. Combi, M. T. Capria, P. Cerroni, W.-H. Ip, E. Kuehrt, T. B. McCord, E. Palomba, P. Beck, E. Quirico, VIRTIS Team, G. Piccioni, G. Bellucci, M. Fulchignoni, R. Jaumann, K. Stephan, A. Longobardo, V. Mennella, A. Migliorini, J. Benkhoff, J. P. Bibring, A. Blanco, M. Blecka, R. Carlson, U. Carsenty, L. Colangeli, M. Combes, J. Crovisier, P. Drossart, T. Encrenaz, C. Federico, U. Fink, S. Fonti, P. Irwin, Y. Langevin, G. Magni, L. Moroz, V. Orofino, U. Schade, F. Taylor, D. Tiphene, G. P. Tozzi, N. Biver, L. Bonal, J.-P. Combe, D. Despan, E. Flamini, S. Fornasier, A. Frigeri, D. Grassi, M. S. Gudipati, F. Mancarella, K. Markus, F. Merlin, R. Orosei, G. Rinaldi, M. Cartacci, A. Cicchetti, S. Giuppi, Y. Hello, F. Henry, S. Jacquiod, J. M. Rees, R. Noschese, R. Politi, and G. Peter. The diurnal cycle of water ice on comet 67P/Churyumov-Gerasimenko. *Nature*, 525:500–503, sep 2015.
- [8] P. Eccleston, B. Swinyard, M. Tessenyi, G. Tinetti, I. Waldmann, M. Ferlet, R. Irshad, T. Lim, K. Middleton, T. Bradshaw, M. Crook, T. Hunt, B. Winter, I. Bryson, N. Bezawada, W. Taylor, N. Bowles, E. Pascale, G. Morgante, E. Pace, A. Adriani, J.-M. Reess, M. Ollivier, R. Ottensamer, M. Rataj, G. R. Zapata, J.-R. Schrader, A. Selig, K. Isaak, M. Linder, and L. Puig. The EChO payload instrument - an overview. *Experimental Astronomy*, 40:427–447, December 2015.
- [9] J. Fernando, F. Schmidt, C. Pilorget, P. Pinet, X. Ceamanos, S. Douté, Y. Daydou, and F. Costard. Characterization and mapping of surface physical properties of Mars from CRISM multi-angular data: Application to Gusev Crater and Meridiani Planum. *Icarus*, 253:271–295, jun 2015.
- [10] J. Flahaut, J. Carter, F. Poulet, J.-P. Bibring, W. van Westrenen, G. R. Davies, and S. L. Murchie. Embedded clays and sulfates in Meridiani Planum, Mars. *Icarus*, 248:269–288, mar 2015.
- [11] J. R. Johnson, J. F. Bell, S. Bender, D. Blaney, E. Cloutis, L. DeFlores, B. Ehlmann, O. Gasnault, B. Gondet, K. Kinch, M. Lemmon, S. Le Mouélic, S. Maurice, M. Rice, and R. C. Wiens. ChemCam passive reflectance spectroscopy of surface materials at the Curiosity landing site, Mars. *Icarus*, 249:74–92, mar 2015.
- [12] S. Le Mouélic, O. Gasnault, K. E. Herkenhoff, N. T. Bridges, Y. Langevin, N. Mangold, S. Maurice, R. C. Wiens, P. Pinet, H. E. Newsom, R. G. Deen, J. F. Bell, J. R. Johnson, W. Rapin, B. Barraclough, D. L. Blaney, L. DeFlores, J. Maki, M. C. Malin, R. Perez, and M. Saccoccio. The ChemCam Remote Micro-Imager at Gale crater: Review of the first year of operations on Mars. *Icarus*, 249:93–107, mar 2015.

- [13] A. Leger, D. Defrère, F. Malbet, L. Labadie, and O. Absil. Impact of η_{Earth} on the Capabilities of Affordable Space Missions to Detect Biosignatures on Extrasolar Planets. *Astrophys. J.*, 808:194, 2015.
- [14] D. Loizeau, N. Mangold, F. Poulet, J.-P. Bibring, J. L. Bishop, J. Michalski, and C. Quantin. History of the clay-rich unit at Mawrth Vallis, Mars: High-resolution mapping of a candidate landing site. *Journal of Geophysical Research (Planets)*, 120:1820–1846, nov 2015.
- [15] J. C. Morales, J.-P. Beaulieu, V. Coudé du Foresto, M. Ollivier, I. O. Castello, R. Clédassou, J. Jaubert, P. Van-Troostenberghe, R. Varley, I. P. Waldmann, E. Pascale, and M. Tessenyi. Scheduling the EChO survey with known exoplanets. *Experimental Astronomy*, 40:655–670, December 2015.
- [16] S. Mottola, G. Arnold, H.-G. Grothues, R. Jaumann, H. Michaelis, G. Neukum, J.-P. Bibring, S. E. Schröder, M. Hamm, K. A. Otto, I. Pelivan, G. Proffe, F. Scholten, D. Tirsch, M. Kreslavsky, E. Remeteau, F. Souvanavong, and B. Dolives. The structure of the regolith on 67P/Churyumov-Gerasimenko from ROLIS descent imaging. *Science*, 349(2), jul 2015.
- [17] A. Ody, F. Poulet, C. Quantin, J.-P. Bibring, J. L. Bishop, and M. D. Dyar. Candidates source regions of martian meteorites as identified by omega/mex. *Icarus*, 258:366–383, sep 2015.
- [18] E. Pascale, I. P. Waldmann, C. J. MacTavish, A. Papageorgiou, A. Amaral-Rogers, R. Varley, V. Coudé du Foresto, M. J. Griffin, M. Ollivier, S. Sarkar, L. Spencer, B. M. Swinyard, M. Tessenyi, and G. Tinetti. EChOSim: The Exoplanet Characterisation Observatory software simulator. *Experimental Astronomy*, 40:601–619, December 2015.
- [19] C. Pilorget, J. Fernando, B. L. Ehlmann, and S. Douté. Photometry of particulate mixtures: What controls the phase curve? *Icarus*, 250:188–203, apr 2015.
- [20] F. Poulet, J. Rodriguez-Ferreira, A. Arondel, K. Dassas, P. Eng, P. Lami, Y. Langevin, Y. Longval, P. Pradel, and M. Dami. The pre-flight calibration setup of the instrument SIMBIO-SYS onboard the mission BepiColombo. *Planetary Space Science*, 117:82–95, nov 2015.
- [21] F. Poulet, O. Ruesch, Y. Langevin, and H. Hiesinger. Modal mineralogy of the surface of Vesta: Evidence for ubiquitous olivine and identification of meteorite analogue. *Icarus*, 253:364–377, jun 2015.
- [22] L. Puig, K. Isaak, M. Linder, I. Escudero, P.-E. Crouzet, R. Walker, M. Ehle, J. Hübner, R. Timm, B. de Vogeleeer, P. Drossart, P. Hartogh, C. Lovis, G. Micela, M. Ollivier, I. Ribas, I. Snellen, B. Swinyard, G. Tinetti, and P. Eccleston. The phase 0/A study of the ESA M3 mission candidate EChO. *Experimental Astronomy*, 40:393–425, December 2015.
- [23] J. Raack, D. Reiss, T. Appéré, M. Vincendon, O. Ruesch, and H. Hiesinger. Present-day seasonal gully activity in a south polar pit (Sisyphi Cavi) on Mars. *Icarus*, 251:226–243, may 2015.

- [24] R. Schulz, M. Hilchenbach, Y. Langevin, J. Kissel, J. Silén, C. Briois, C. Enggrand, K. Hornung, D. Baklouti, A. Bardyn, H. Cottin, H. Fischer, N. Fray, M. Godard, H. Lehto, L. Le Roy, S. Merouane, F.-R. Orthous-Daunay, J. Paquette, J. Ryno, S. Siljeström, O. Stenzel, L. Thirkell, K. Varmuza, and B. Zaprudin. Comet 67P/Churyumov-Gerasimenko sheds dust coat accumulated over the past four years. *Nature*, 518:216–218, feb 2015.
- [25] G. Tinetti, P. Drossart, P. Eccleston, P. Hartogh, K. Isaak, M. Linder, C. Lovis, G. Micela, M. Ollivier, L. Puig, and et al. The EChO science case. *Experimental Astronomy*, 40:329–391, December 2015.
- [26] R. Varley, I. Waldmann, E. Pascale, M. Tessenyi, M. Hollis, J. C. Morales, G. Tinetti, B. Swinyard, P. Deroo, M. Ollivier, and G. Micela. Generation of an optimal target list for the exoplanet characterisation observatory (EChO). *Experimental Astronomy*, 40:621–638, December 2015.
- [27] M. Vincendon. Identification of Mars gully activity types associated with ice composition. *Journal of Geophysical Research (Planets)*, 120:1859–1879, nov 2015.
- [28] M. Vincendon, J. Audouard, F. Altieri, and A. Ody. Mars Express measurements of surface albedo changes over 2004-2010. *Icarus*, 251:145–163, may 2015.
- [29] C. R. Webster, P. R. Mahaffy, S. K. Atreya, G. J. Flesch, M. A. Mischna, P.-Y. Meslin, K. A. Farley, P. G. Conrad, L. E. Christensen, A. A. Pavlov, and et al. Mars methane detection and variability at Gale crater. *Science*, 347:415–417, jan 2015.