Michael J. Mumma

List of Publications by Year
in descending order

196	10,306	25034	42399
papers	citations	57 h-index	92 g-index

200	200	200	4488
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Probing the Atmospheric Cl Isotopic Ratio on Mars: Implications for Planetary Evolution and Atmospheric Chemistry. Geophysical Research Letters, 2021, 48, e2021GL092650.	4.0	7
2	Investigation of the Origins of Comets as Revealed through Infrared High-resolution Spectroscopy I. Molecular Abundances. Astronomical Journal, 2021, 162, 74.	4.7	10
3	The Extraordinary Passage of Comet C/2020 F3 NEOWISE: Evidence for Heterogeneous Chemical Inventory in Its Nucleus. Astronomical Journal, 2021, 162, 178.	4.7	5
4	A measurement of water vapour amid a largely quiescent environment on Europa. Nature Astronomy, 2020, 4, 266-272.	10.1	69
5	On the Origin and Evolution of the Material in 67P/Churyumov-Gerasimenko. Space Science Reviews, 2020, 216, 102.	8.1	42
6	Strong Variability of Martian Water Ice Clouds During Dust Storms Revealed From ExoMars Trace Gas Orbiter/NOMAD. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006250.	3.6	39
7	New Insights into the Chemical Composition of Five Oort Cloud Comets after Re-analysis of Their Infrared Spectra. Astronomical Journal, 2020, 159, 157.	4.7	10
8	Unusually high CO abundance of the first active interstellar comet. Nature Astronomy, 2020, 4, 861-866.	10.1	62
9	Observations of Jupiter Family Comet 252P/LINEAR During a Close Approach to Earth Reveal Large Abundances of Methanol and Ethane. Astronomical Journal, 2019, 158, 98.	4.7	7
10	Quantifying the Evolution of Molecular Production Rates of Comet 21P/Giacobiniâ€“Zinner with iSHELL/NASA-IRTF. Astronomical Journal, 2019, 158, 254.	4.7	18
11	Methane on Mars: New insights into the sensitivity of CH4 with the NOMAD/ExoMars spectrometer through its first in-flight calibration. Icarus, 2019, 321, 671-690.	2.5	32
12	ALMA Autocorrelation Spectroscopy of Comets: The HCN/H¹³CN Ratio in C/2012 S1 (ISON). Astrophysical Journal Letters, 2019, 870, L26.	8.3	14
13	Methane on Mars and Habitability: Challenges and Responses. Astrobiology, 2018, 18, 1221-1242.	3.0	50
14	The Volatile Composition of Comet C/2017 E4 (Lovejoy) before its Disruption, as Revealed by High-resolution Infrared Spectroscopy with iSHELL at the NASA/IRTF. Astronomical Journal, 2018, 156, 68.	4.7	24
15	Ground-based Detection of Deuterated Water in Comet C/2014 Q2 (Lovejoy) at IR Wavelengths. Astrophysical Journal Letters, 2017, 836, L25.	8.3	18
16	ALMA Mapping of Rapid Gas and Dust Variations in Comet C/2012 S1 (ISON):New Insights into the Origin of Cometary HNC. Astrophysical Journal, 2017, 838, 147.	4.5	18
17	Beyond 3 au from the Sun: The Hypervolatiles CH₄, C₂H₆, and CO in the Distant Comet C/2006 W3 (Christensen)^{âˆ—}. Astronomical Journal, 2017, 153, 241.	4.7	13
18	A deep search for the release of volcanic gases on Mars using ground-based high-resolution infrared and submillimeter spectroscopy: Sensitive upper limits for OCS and SO 2. Icarus, 2017, 296, 1-14.	2.5	11

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19	The Composition of Comet C/2012 K1 (PanSTARRS) and the Distribution of Primary Volatile Abundances Among Comets. Astronomical Journal, 2017, 153, 168.	4.7	11
20	Thermal Physics of the Inner Coma: ALMA Studies of the Methanol Distribution and Excitation in Comet C/2012 K1 (PanSTARRS). Astrophysical Journal, 2017, 837, 177.	4.5	13
21	ALMA detection and astrobiological potential of vinyl cyanide on Titan. Science Advances, 2017, 3, e1700022.	10.3	58
22	Mapping Vinyl Cyanide and Other Nitriles in Titanâ€™s Atmosphere Using ALMA. Astronomical Journal, 2017, 154, 206.	4.7	21
23	Unique Spectroscopy and Imaging of Mars with the James Webb Space Telescope. Publications of the Astronomical Society of the Pacific, 2016, 128, 018004.	3.1	5
24	A SOLAR-PUMPED FLUORESCENCE MODEL FOR LINE-BY-LINE EMISSION INTENSITIES IN THE Bâ€“X, Aâ€“X, AND Xâ€“X BAND SYSTEMS OF ¹²C¹⁴N. Astrophysical Journal, Supplement Series, 2016, 226, 3.	7.7	2
25	EN ROUTE TO DESTRUCTION: THE EVOLUTION IN COMPOSITION OF ICES IN COMET D/2012 S1 (ISON) BETWEEN 1.2 AND 0.34 AU FROM THE SUN AS REVEALED AT INFRARED WAVELENGTHS*. Astrophysical Journal, 2016, 820, 34.	4.5	41
26	DETAILED ANALYSIS OF NEAR-IR WATER (H₂O) EMISSION IN COMET C/2014 Q2 (LOVEJOY) WITH THE GIANO/TNG SPECTROGRAPH. Astrophysical Journal, 2016, 830, 157.	4.5	5
27	AN INFRARED SEARCH FOR HDO IN COMET D/2012 S1 (ISON) AND IMPLICATIONS FOR iSHELL. Astrophysical Journal, 2016, 816, 101.	4.5	3
28	Expected performances of the NOMAD/ExoMars instrument. Planetary and Space Science, 2016, 124, 94-104.	1.7	31
29	Optical and radiometric models of the NOMAD instrument part I: the UVIS channel. Optics Express, 2015, 23, 30028.	3.4	26
30	ETHYL CYANIDE ON TITAN: SPECTROSCOPIC DETECTION AND MAPPING USING ALMA. Astrophysical Journal Letters, 2015, 800, L14.	8.3	73
31	Strong water isotopic anomalies in the martian atmosphere: Probing current and ancient reservoirs. Science, 2015, 348, 218-221.	12.6	245
32	A search for SO2, H2S and SO above Tharsis and Syrtis volcanic districts on Mars using ground-based high-resolution submillimeter spectroscopy. Icarus, 2015, 253, 130-141.	2.5	30
33	THE EVOLUTION OF VOLATILE PRODUCTION IN COMET C/2009 P1 (GARRADD) DURING ITS 2011â€“2012 APPARITION. Astrophysical Journal, 2015, 807, 19.	4.5	6
34	The Composition of Comets. Space Science Reviews, 2015, 197, 9-46.	8.1	90
35	THE VOLATILE COMPOSITION OF COMET C/2003 K4 (LINEAR) AT NEAR-IR WAVELENGTHSâ€”COMPARISONS WITH RESULTS FROM THE NANÃ‡AY RADIO TELESCOPE AND FROM THEODIN,SPITZER, ANDSOHOSPACE OBSERVATORIES. Astrophysical Journal, 2015, 808, 1.	4.5	25
36	Science objectives and performances of NOMAD, a spectrometer suite for the ExoMars TGO mission. Planetary and Space Science, 2015, 119, 233-249.	1.7	77

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37	THE INNER COMA OF COMET C/2012 S1 (ISON) AT 0.53 AU AND 0.35 AU FROM THE SUN. Astrophysical Journal Letters, 2014, 796, L6.	8.3	17
38	THE UNEXPECTEDLY BRIGHT COMET C/2012 F6 (LEMMON) UNVEILED AT NEAR-INFRARED WAVELENGTHS. Astronomical Journal, 2014, 147, 15.	4.7	29
39	ALMA MEASUREMENTS OF THE HNC AND HC₃N DISTRIBUTIONS IN TITAN'S ATMOSPHERE. Astrophysical Journal Letters, 2014, 795, L30.	8.3	53
40	MAPPING THE RELEASE OF VOLATILES IN THE INNER COMAE OF COMETS C/2012 F6 (LEMMON) AND C/2012 S1 (ISON) USING THE ATACAMA LARGE MILLIMETER/SUBMILLIMETER ARRAY. Astrophysical Journal Letters, 2014, 792, L2.	8.3	64
41	C/2013 R1 (LOVEJOY) AT IR WAVELENGTHS AND THE VARIABILITY OF CO ABUNDANCES AMONG OORT CLOUD COMETS. Astrophysical Journal, 2014, 791, 122.	4.5	36
42	Pre- and post-perihelion observations of C/2009 P1 (Garradd): Evidence for an oxygen-rich heritage?. Icarus, 2014, 228, 167-180.	2.5	39
43	Solar fluorescence model of CH3D as applied to comet emission. Journal of Molecular Spectroscopy, 2013, 291, 118-124.	1.2	3
44	A sensitive search for organics (CH4, CH3OH, H2CO, C2H6, C2H2, C2H4), hydroperoxyl (HO2), nitrogen compounds (N2O, NH3, HCN) and chlorine species (HCl, CH3Cl) on Mars using ground-based high-resolution infrared spectroscopy. Icarus, 2013, 223, 11-27.	2.5	126
45	Evidence for two modes of water release in Comet 103P/Hartley 2: Distributions of column density, rotational temperature, and orthoâ€“para ratio. Icarus, 2013, 222, 740-751.	2.5	48
46	Modeling of nitrogen compounds in cometary atmospheres: Fluorescence models of ammonia (NH3), hydrogen cyanide (HCN), hydrogen isocyanide (HNC) and cyanoacetylene (HC3N). Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 129, 158-168.	2.3	24
47	GROUND-BASED INFRARED DETECTIONS OF CO IN THE CENTAUR-COMET 29P/SCHWASSMANN-WACHMANN 1 AT 6.26 AU FROM THE SUN. Astrophysical Journal, 2013, 766, 100.	4.5	40
48	High-resolution infrared spectroscopic measurements of Comet 2P/Encke: Unusual organic composition and low rotational temperatures. Icarus, 2013, 223, 298-307.	2.5	26
49	HIGHLY DEPLETED ETHANE AND MILDLY DEPLETED METHANOL IN COMET 21P/GIACOBINI-ZINNER: APPLICATION OF A NEW EMPIRICAL Î½₂-BAND MODEL FOR CH₃OH NEAR 50 K. Astrophysical Journal, 2013, 763, 1.	4.5	56
50	A new model for theÎ½₁vibrational band of HCN in cometary comae, with application to three comets. Astronomy and Astrophysics, 2013, 551, A51.	5.1	21
51	A QUANTUM BAND MODEL OF THE Î½₃FUNDAMENTAL OF METHANOL (CH₃OH) AND ITS APPLICATION TO FLUORESCENCE SPECTRA OF COMETS. Astrophysical Journal, 2012, 747, 37.	4.5	51
52	FIRST DETECTION OF NEAR-INFRARED LINE EMISSION FROM ORGANICS IN YOUNG CIRCUMSTELLAR DISKS. Astrophysical Journal, 2012, 747, 92.	4.5	72
53	A multi-instrument study of Comet C/2009 P1 (Garradd) at 2.1AU (pre-perihelion) from the Sun. Icarus, 2012, 220, 291-295.	2.5	30
54	THE CHEMICAL COMPOSITION OF CO-RICH COMET C/2009 P1 (GARRADD) ATR_h= 2.4 and 2.0 AU BEFORE PERIHELION. Astrophysical Journal Letters, 2012, 748, L13.	8.3	50

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55	Understanding measured water rotational temperatures and column densities in the very innermost coma of Comet 73P/Schwassmannâ€“Wachmann 3 B. Icarus, 2012, 221, 174-185.	2.5	42
56	CHEMICAL COMPOSITION OF COMET C/2007 N3 (LULIN): ANOTHER â€˜â€˜ATYPICALâ€™â€™ COMET. Astrophysical Journal, 2012, 750, 102.	4.5	55
57	The formation heritage of Jupiter Family Comet 10P/Tempel 2 as revealed by infrared spectroscopy. Icarus, 2012, 218, 644-653.	2.5	19
58	Water in planetary and cometary atmospheres: H2O/HDO transmittance and fluorescence models. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 202-220.	2.3	78
59	FLUORESCENCE EXCITATION MODELS OF AMMONIA AND AMIDOGEN RADICAL (NH₂) IN COMETS: APPLICATION TO COMET C/2004 Q2 (MACHHOLZ). Astrophysical Journal, 2011, 727, 91.	4.5	38
60	Ethane in planetary and cometary atmospheres: Transmittance and fluorescence models of theÎ½₇band at 3.3Î¼m. Journal of Geophysical Research, 2011, 116, .	3.3	65
61	NON-DETECTION OFL-BAND LINE EMISSION FROM THE EXOPLANET HD189733b. Astrophysical Journal, 2011, 728, 18.	4.5	65
62	TEMPORAL AND SPATIAL ASPECTS OF GAS RELEASE DURING THE 2010 APPARITION OF COMET 103P/HARTLEY 2. Astrophysical Journal Letters, 2011, 734, L7.	8.3	67
63	A NEWLY DEVELOPED FLUORESCENCE MODEL FOR C₂H₆Î½₅AND APPLICATION TO COMETARY SPECTRA ACQUIRED WITH NIRSPEC AT KECK II. Astrophysical Journal, 2011, 729, 135.	4.5	17
64	The molecular composition of Comet C/2007 W1 (Boattini): Evidence of a peculiar outgassing and a rich chemistry. Icarus, 2011, 216, 227-240.	2.5	79
65	The Chemical Composition of Cometsâ€”Emerging Taxonomies and Natal Heritage. Annual Review of Astronomy and Astrophysics, 2011, 49, 471-524.	24.3	688
66	Measurement of the isotopic signatures of water on Mars; Implications for studying methane. Planetary and Space Science, 2011, 59, 163-168.	1.7	39
67	EPOXI: COMET 103P/HARTLEY 2 OBSERVATIONS FROM A WORLDWIDE CAMPAIGN. Astrophysical Journal Letters, 2011, 734, L1.	8.3	96
68	SWIFT-UVOT GRISM SPECTROSCOPY OF COMETS: A FIRST APPLICATION TO C/2007 N3 (LULIN). Astronomical Journal, 2011, 141, 12.	4.7	18
69	A NIR spectrum of a hot Jupiter from the ground: Preliminary results. Proceedings of the International Astronomical Union, 2010, 6, 158-162.	0.0	0
70	The organic composition of Comet C/2000 WM1 (LINEAR) revealed through infrared spectroscopy. Icarus, 2010, 206, 764-777.	2.5	36
71	COMET C/2004 Q2 (MACHHOLZ): PARENT VOLATILES, A SEARCH FOR DEUTERATED METHANE, AND CONSTRAINT ON THE CH₄SPIN TEMPERATURE. Astrophysical Journal, 2009, 699, 1563-1572.	4.5	37
72	Water in the near-infrared spectrum of comet 8P/Tuttle. Monthly Notices of the Royal Astronomical Society, 2009, 398, 1593-1600.	4.4	23

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73	A multi-wavelength study of parent volatile abundances in Comet C/2006 M4 (SWAN). Icarus, 2009, 203, 589-598.	2.5	17
74	Strong Release of Methane on Mars in Northern Summer 2003. Science, 2009, 323, 1041-1045.	12.6	516
75	A SENSITIVE SEARCH FOR DEUTERATED WATER IN COMET 8P/TUTTLE. Astrophysical Journal, 2009, 690, L5-L9.	4.5	120
76	Temporal Evolution of DI Ejecta Based on NIRSPEC Observations at Keck 2: Parent Volatiles and Dust. Globular Clusters - Guides To Galaxies, 2009, , 251-263.	0.1	0
77	Identification of a new band system of isotopic CO2 near 3.3 Î¼m: Implications for remote sensing of biomarker gases on Mars. Icarus, 2008, 195, 34-44.	2.5	60
78	IRCS/Subaru observations of water in the inner coma of Comet 73P-B/Schwassmannâ€“Wachmann 3: Spatially resolved rotational temperatures and orthoâ€“para ratios. Icarus, 2008, 196, 241-248.	2.5	29
79	Reservoirs for Comets: Compositional Differences Based on Infrared Observations. Space Science Reviews, 2008, 138, 127-145.	8.1	60
80	Discovery of multiple bands of isotopic CO2 in the prime spectral regions used when searching for CH4 and HDO on Mars. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 883-894.	2.3	25
81	The organic composition of Comet C/2001 A2 (LINEAR). Icarus, 2008, 194, 347-356.	2.5	44
82	D/H ratio during the northern polar summer and what the Phoenix mission might measure. Journal of Geophysical Research, 2008, 113, .	3.3	15
83	Silicon immersion grating spectrograph design for the NASA Infrared Telescope Facility. Proceedings of SPIE, 2008, , .	0.8	27
84	Chemical diversity of organic volatiles among comets: An emerging taxonomy and implications for processes in the proto-planetary disk. Proceedings of the International Astronomical Union, 2008, 4, 309-310.	0.0	0
85	The Peculiar Volatile Composition of Comet 8P/Tuttle: A Contact Binary of Chemically Distinct Cometesimals?. Astrophysical Journal, 2008, 680, L61-L64.	4.5	48
86	Discovery of OH in Circumstellar Disks around Young Intermediate-Mass Stars. Astrophysical Journal, 2008, 681, L25-L28.	4.5	42
87	The Unusual Volatile Composition of the Halley-Type Comet 8P/Tuttle: Addressing the Existence of an Inner Oort Cloud. Astrophysical Journal, 2008, 683, L71-L74.	4.5	34
88	A Search for Variation in the H 2 O Ortho-Para Ratio and Rotational Temperature in the Inner Coma of Comet C/2004 Q2 (Machholz). Astrophysical Journal, 2007, 661, L97-L100.	4.5	67
89	Organic Volatiles in Comet 73P-B/Schwassmann-Wachmann 3 Observed during Its Outburst: A Clue to the Formation Region of the Jupiter-Family Comets. Astrophysical Journal, 2007, 668, L75-L78.	4.5	43
90	Depleted Carbon Monoxide in Fragment C of the Jupiter-Family Comet 73P/Schwassmann-Wachmann 3. Astrophysical Journal, 2007, 661, L101-L104.	4.5	40

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91	Temporal evolution of parent volatiles and dust in Comet 9P/Tempel 1 resulting from the Deep Impact experiment. Icarus, 2007, 187, 240-252.	2.5	30
92	Temporal evolution of parent volatiles and dust in Comet 9P/Tempel 1 resulting from the Deep Impact experiment. Icarus, 2007, 191, 481-493.	2.5	10
93	The organic composition of C/2001 A2 (LINEAR)II. Search for heterogeneity within a comet nucleus. Icarus, 2007, 188, 224-232.	2.5	38
94	Detection of Formaldehyde Emission in Comet C/2002 T7 (LINEAR) at Infrared Wavelengths: Lineâ€byâ€Line Validation of Modeled Fluorescent Intensities. Astrophysical Journal, 2006, 650, 470-483.	4.5	82
95	The Volatile Composition of the Split Ecliptic comet 73P/Schwassmann-Wachmann 3: A Comparison of Fragments C and B. Astrophysical Journal, 2006, 650, L87-L90.	4.5	54
96	A Comprehensive Study of Infrared OH Prompt Emission in Two Comets. I. Observations and Effectivegâ€Factors. Astrophysical Journal, 2006, 653, 774-787.	4.5	76
97	A high-resolution infrared spectral survey of Comet C/1999 H1 Lee. Icarus, 2006, 184, 255-276.	2.5	52
98	Comet Hale-Bopp (C/1995 O1): UVSTAR-FUV Spectroscopy from the Space Shuttle. Astrophysics and Space Science, 2006, 301, 135-143.	1.4	0
99	A Comprehensive Study of Infrared OH Prompt Emission in Two Comets. II. Implications for Unimolecular Dissociation of H2O. Astrophysical Journal, 2006, 653, 788-791.	4.5	27
100	Water Production Rates, Rotational Temperatures, and Spin Temperatures in Comets C/1999 H1 (Lee), C/1999 S4, and C/2001 A2. Astrophysical Journal, 2005, 621, 537-544.	4.5	98
101	Parent Volatiles in Comet 9P/Tempel 1: Before and After Impact. Science, 2005, 310, 270-274.	12.6	168
102	Deep Impact: Observations from a Worldwide Earth-Based Campaign. Science, 2005, 310, 265-269.	12.6	182
103	Water production and release in Comet 153P/Ikeyaâ€“Zhang (C/2002 C1): accurate rotational temperature retrievals from hot-band lines near 2.9-Î¼m. Icarus, 2004, 168, 186-200.	2.5	97
104	Infrared OH Prompt Emission as a Proxy of Water Production in Comets: Quantitative Analysis of the Multiplet Near 3046 cmâ^'1in Comets C/1999 H1 (Lee) and C/2001 A2 (LINEAR). Astrophysical Journal, 2004, 615, 1048-1053.	4.5	25
105	Methane in Oort cloud comets. Icarus, 2003, 165, 391-406.	2.5	135
106	Remote infrared observations of parent volatiles in comets: A window on the early solar system. Advances in Space Research, 2003, 31, 2563-2575.	2.6	134
107	Mapping of Ozone and Water in the Atmosphere of Mars near the 1997 Aphelion. Icarus, 2002, 158, 14-23.	2.5	62
108	Ethane Production and Release in Comet C/1995 O1 Haleâ€“Bopp. Icarus, 2001, 153, 162-179.	2.5	55

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109	Carbon Monoxide Production and Excitation in Comet C/1995 O1 (Hale-Bopp): Isolation of Native and Distributed CO Sources. Icarus, 2001, 153, 361-390.	2.5	151
110	Spectroscopy of Comet Hyakutake at 80â€“700 A: First Detection of Solar Wind Charge Transfer Emissions. Astrophysical Journal, 2001, 549, 629-634.	4.5	85
111	Organic Composition of C/1999 S4 (LINEAR): A Comet Formed Near Jupiter?. Science, 2001, 292, 1334-1339.	12.6	153
112	A Survey of Organic Volatile Species in Comet C/1999 H1 (Lee) Using NIRSPEC at the Keck Observatory. Astrophysical Journal, 2001, 546, 1183-1193.	4.5	104
113	Water Production and Release in Comet C/1995 O1 Haleâ€“Bopp. Icarus, 2000, 143, 324-337.	2.5	109
114	EUVE Search for X-rays from Comets Encke, Mueller (C/1993 A1), Borrelly, and Postperihelion Haleâ€“Bopp. Icarus, 2000, 146, 152-160.	2.5	30
115	Detection of CO and Ethane in Comet 21P/Giacobini-Zinner: Evidence for Variable Chemistry in the Outer Solar Nebula. Astrophysical Journal, 2000, 531, L155-L159.	4.5	68
116	The Champollion cometary molecular analysis experiment. Advances in Space Research, 1999, 23, 349-359.	2.6	8
117	Identification of two sources of carbon monoxide in comet Haleâ€“Bopp. Nature, 1999, 399, 662-665.	27.8	96
118	Infrared Spectroscopy of the Î½3 Band of Hydrogen Cyanide in Comet C/1995 O1 Haleâ€“Bopp. Icarus, 1999, 142, 498-508.	2.5	83
119	Carbonyl Sulfide in Comets C/1996 B2 (Hyakutake) and C/1995 O1 (Haleâ€“Bopp): Evidence for an Extended Source in Haleâ€“Bopp. Icarus, 1998, 135, 377-388.	2.5	111
120	Detection of Atomic Deuterium in the Upper Atmosphere of Mars. Science, 1998, 280, 1576-1580.	12.6	124
121	Detection of Soft X-rays and a Sensitive Search for Noble Gases in Comet Hale-Bopp (C/1995 O1). Science, 1997, 277, 1488-1491.	12.6	111
122	Soft X-Rays From Four Comets Observed With [ITAL]EUVE[/ITAL]. Astrophysical Journal, 1997, 491, L125-L128.	4.5	64
123	A Possible Source of the X-Rays from Comet Hyakutake. Icarus, 1997, 127, 246-250.	2.5	32
124	Detection of Abundant Ethane and Methane, Along with Carbon Monoxide and Water, in Comet C/1996 B2 Hyakutake: Evidence for Interstellar Origin. Science, 1996, 272, 1310-1314.	12.6	309
125	Discovery of X-ray and Extreme Ultraviolet Emission from Comet C/Hyakutake 1996 B2. Science, 1996, 274, 205-209.	12.6	405
126	Comet Shoemakerâ€“Levy 9 Dust. Icarus, 1996, 121, 291-304.	2.5	13

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127	Oxygen and Carbon Isotope Ratios in Martian Carbon Dioxide: Measurements and Implications for Atmospheric Evolution. Icarus, 1996, 124, 553-568.	2.5	35
128	Hyakutake's interstellar ices. Nature, 1996, 383, 581-582.	27.8	20
129	Monte Carlo Simulation of Cometary Atmospheres: Application to Comet P/Halley at the Time of the Giotto Spacecraft Encounter. I. Isotropic Model. Astrophysical Journal, 1996, 464, 442.	4.5	25
130	Monte Carlo Simulation of Cometary Atmospheres: Application to Comet P/Halley at the Time of the Giotto Spacecraft Encounter. II. Axisymmetric Model. Astrophysical Journal, 1996, 464, 457.	4.5	45
131	Systematic Observations of Methanol and Other Organics in Comet P/Swift-Tuttle: Discovery of New Spectral Structure at 3.42 Î¼m. Icarus, 1995, 116, 1-17.	2.5	32
132	Solar system exploration from the moon: Synoptic and comparative study of bodies in our planetary system. Advances in Space Research, 1994, 14, 143-158.	2.6	1
133	Infrared Observations of Methanol in Comet P/Swift-Tuttle. Icarus, 1993, 105, 548-556.	2.5	13
134	Intensities and broadening coefficients for the Q branch of the 4v2â†"v1 + v2 (471.511 cm-1) band of CO2. Journal of Quantitative Spectroscopy and Radiative Transfer, 1993, 50, 193-198.	2.3	4
135	Blocked impurity band detectors applied to tunable diode laser spectroscopy in the 8- to 28-Î¼m range. Applied Optics, 1993, 32, 2117.	2.1	16
136	The infrared (3.2-3.6 Âm) spectrum of comet P/Swift-Tuttle: detection of methanol and other organics. Monthly Notices of the Royal Astronomical Society, 1993, 265, 1022-1026.	4.4	17
137	SKIRT Space Shuttle glow experiment. Journal of Spacecraft and Rockets, 1992, 29, 102-107.	1.9	4
138	Infrared spectral measurement of space shuttle glow. Geophysical Research Letters, 1992, 19, 989-992.	4.0	30
139	An infrared search for formaldehyde in several comets. Icarus, 1992, 95, 329-332.	2.5	11
140	A sensitive upper limit to OCS in Comet Austin (1989c1) from a search for Î½3 emission at 4.85 Î¼m. Icarus, 1992, 97, 155-158.	2.5	14
141	A possible detection of infrared emission from carbon monoxide in Comet Austin (1989c 1). Icarus, 1992, 96, 151-160.	2.5	11
142	The effect of electron collisions on rotational populations of cometary water. Astrophysical Journal, 1992, 386, 720.	4.5	57
143	Comet outbursts and polymers of HCN. Astrophysical Journal, 1992, 398, 293.	4.5	75
144	Anomalous gain in an isotopically mixed CO/sub 2/ laser and application to absolute wavelength calibration. IEEE Journal of Quantum Electronics, 1991, 27, 465-470.	1.9	3

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145	Descriptions of the neutral gas outflow in comets P/Halley and Wilson (1987 VII) from analyses of velocity-resolved H2O line profiles. Icarus, 1991, 91, 251-269.	2.5	5
146	Ground-based infrared measurements of the global distribution of ozone in the atmosphere of Mars. Icarus, 1991, 92, 252-262.	2.5	67
147	Absolute wind velocities in the lower thermosphere of Venus using infrared heterodyne spectroscopy. Icarus, 1991, 94, 45-63.	2.5	80
148	A tentative identification of methanol as the progenitor of the 3.52-Î¼m emission feature in several comets. Icarus, 1991, 93, 122-134.	2.5	61
149	Molecular hydrogen in the vicinity of NGC 7538 IRS 1 and IRS 2 - Temperature and ortho-to-para ratio. Astrophysical Journal, 1991, 370, 228.	4.5	9
150	Detection of the 3.4- and 2.8-Î¼m emission features in Comet Bradfield (1987s). Icarus, 1990, 83, 434-440.	2.5	3
151	Outbursts of H2O in Comet P/Halley. Icarus, 1990, 86, 129-151.	2.5	19
152	Infrared studies of hydrocarbons on Jupiter. Infrared Physics, 1989, 29, 199-204.	0.5	35
153	The heliocentric evolution of cometary infrared spectra: Results from an organic grain model. Icarus, 1989, 79, 362-381.	2.5	26
154	Probing solar system objects at infrared wavelengths. Infrared Physics, 1989, 29, 167-174.	0.5	7
155	New features in Saturn's atmosphere revealed by high-resolution thermal infrared images. Nature, 1989, 342, 777-780.	27.8	29
156	Airborne infrared spectroscopy of Comet Wilson (1986l) and comparisons with Comet Halley. Astrophysical Journal, 1989, 338, 1106.	4.5	50
157	Infrared fluorescence efficiencies for the nu1 and nu5 bands of formaldehyde in the solar radiation field. Astrophysical Journal, 1989, 341, 1045.	4.5	20
158	A search for p-mode oscillations of Jupiter - Serendipitous observations of nonacoustic thermal wave structure. Astrophysical Journal, 1989, 343, 456.	4.5	64
159	On the identification of formaldehyde in Halley's comet. Astrophysical Journal, 1989, 344, 940.	4.5	57
160	Variability of ethane on Jupiter. Icarus, 1987, 72, 394-410.	2.5	48
161	Laser heterodyne spectrometer for helioseismology. Applied Optics, 1986, 25, 58.	2.1	8
162	Detection of Water Vapor in Halley's Comet. Science, 1986, 232, 1523-1528.	12.6	145

#	Article	IF	Citations
163	Polar warming in the middle atmosphere of Mars. Icarus, 1986, 66, 366-379.	2.5	36
164	Post-perihelion observations of water in comet Halley. Nature, 1986, 324, 441-444.	27.8	57
165	Thermal bifurcation in the upper photosphere inferred from heterodyne spectroscopy of OH rotational lines. Solar Physics, 1984, 94, 57-74.	2.5	13
166	Infrared molecular emissions from comets. Astrophysical Journal, 1984, 276, 782.	4.5	75
167	Observations of the 10-Î¼m natural laser emission from the mesospheres of Mars and Venus. Icarus, 1983, 55, 347-355.	2.5	48
168	Modeling of the 10-Î¼m natural laser emission from the mesospheres of Mars and Venus. Icarus, 1983, 55, 356-368.	2.5	42
169	Infrared heterodyne spectroscopy of seven gases in the vicinity of chlorine monoxide lines. Applied Optics, 1983, 22, 1562.	2.1	2
170	Remote sensing by IR heterodyne spectroscopy. Applied Optics, 1983, 22, 2644.	2.1	70
171	Is There Any Chlorine Monoxide in the Stratosphere?. Science, 1983, 221, 268-271.	12.6	24
172	Measurements of stratospheric ethane in the Jovian South Polar Region from infrared heterodyne spectroscopy of the nu9 band near 12 microns. Astrophysical Journal, 1983, 265, 564.	4.5	26
173	Diode laser heterodyne observations of silicon monoxide in sunspots - A test of three sunspot models. Astrophysical Journal, 1983, 269, 309.	4.5	8
174	Infrared Heterodyne Spectroscopy. Optical Engineering, 1982, 21, 313.	1.0	17
175	<title>Tunable Diode Laser Heterodyne Spectrometer For Remote Observations Near 8 Âµm</title>. Proceedings of SPIE, 1982, , .	0.8	1
176	Tunable diode-laser heterodyne spectrometer for remote observations near 8 Î¼m. Applied Optics, 1982, 21, 253.	2.1	26
177	Evidence for high-altitude haze thickening on the dark side of Venus from 10-micron heterodyne spectroscopy of CO2. Icarus, 1982, 49, 35-48.	2.5	5
178	Discovery of Natural Gain Amplification in the 10-Micrometer Carbon Dioxide Laser Bands on Mars: A Natural Laser. Science, 1981, 212, 45-49.	12.6	58
179	Stratospheric ozone measurement with an infrared Heterodyne spectrometer. Geophysical Research Letters, 1978, 5, 317-320.	4.0	29
180	Precision measurements of NH_3 spectral lines near 11 Î¼m using the infrared heterodyne technique. Optics Letters, 1977, 1, 81.	3.3	47

#	Article	IF	Citations
181	NH3 spectral line measurements on Earth and Jupiter using a 10 Î¼m superheterodyne receiver. Infrared Physics, 1977, 17, 431-439.	0.5	53
182	Sensitivity limits of an infrared heterodyne spectrometer for astrophysical applications. Applied Optics, 1976, 15, 427.	2.1	55
183	Upconversion spectrometry for astrophysical applications. Infrared Physics, 1976, 16, 55-59.	0.5	1
184	Sensitivity of an astronomical infrared heterodyne spectrometer. Infrared Physics, 1976, 16, 61-64.	0.5	13
185	Heterodyne spectroscopy of astronomical and laboratory sources at 8.5 Î¼m using diode laser local oscillators. Space Science Reviews, 1975, 17, 661-667.	8.1	12
186	Conclusions from the discussions on observational results of heterodyne spectroscopy in astronomy. Space Science Reviews, 1975, 17, 669-670.	8.1	0
187	Infrared heterodyne spectroscopy of astronomical and laboratory sources at 8.5 Âµm. Nature, 1975, 253, 514-516.	27.8	47
188	Angular distributions, kinetic energy distributions, and excitation functions of fast metastable oxygen fragments following electron impact on CO2. Journal of Chemical Physics, 1975, 62, 3442.	3.0	32
189	Fast metastable fragments produced by dissociative excitation of carbonyl sulfide. Journal of Chemical Physics, 1975, 63, 3210-3215.	3.0	10
190	Nonthermal rotational distribution of CO(AÂ¹Î) fragments produced by dissociative excitation of CO₂by electron impact. Journal of Geophysical Research, 1975, 80, 161-167.	3.3	21
191	Reduced absorption of the nonthermal CO(AÂ¹Î-XÂ¹Î£⁺) fourth-positive group by thermal CO and implications for the Mars upper atmosphere. Journal of Geophysical Research, 1975, 80, 168-172.	3.3	24
192	Effect of electron beam pulse width on timeâ€ofâ€flight spectra. Review of Scientific Instruments, 1974, 45, 296-297.	1.3	8
193	Angular distributions and polarization fractions of helium resonance radiation (nP1â^'1S1) in the extreme ultraviolet. Physical Review A, 1974, 9, 203-208.	2.5	24
194	Linear Momentum Transfer Effects in Molecular Dissociation Produced by Electron Impact. Journal of Chemical Physics, 1972, 57, 1891-1895.	3.0	23
195	Dissociative Excitation of Vacuum Ultraviolet Emission Features by Electron Impact on Molecular Gases. I. H2and O2. Journal of Chemical Physics, 1971, 55, 1661-1669.	3.0	111
196	Excitation of the CO Fourth Positive Band System by Electron Impact on Carbon Monoxide and Carbon Dioxide. Journal of Chemical Physics, 1971, 54, 2627-2634.	3.0	115