

Resume

Timothy J. Crawford

Engineering Development Technician IV

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Education

- California State University, Northridge
- Associate Degree From Glendale College

Job History at JPL

- Jet Propulsion Laboratory
 - Engineering Development Technician IV, Earth and Space Sciences Division (1988-present)
- International Telephone and Telegraph, JPL Affiliate (1978-1988)
 - Engineering Assistant (1985-1988)
 - Telemetry Operations, Computer Operations (1978-1985)
- Philco Ford, JPL Affiliate (1975-1978)
 - Computer Operations, Computer Output Delivery (1975-1978)

Worked on space flight, sub-orbital, ground based, remote sensing, Insitu, and laboratory instrumentation as well as operated inter-planetary, orbital, and suborbital ground support systems.

Built two different balloon instruments and deployed them seventeen times measuring OH and for validation for the Aura EOS MLS mission. Was a team member for Aura MLS design test and integration. Was a team member developing and deploying the CLARS FTS instrument To Mt. Wilson. Through this process, skills were acquired to design, build and utilize high resolution Fabry-Perot, Michelson and Fizeau interferometers, gas lasers, gas and diode laser systems, heterodyne receivers, custom mechanical, optical, and electronic subsystems as well as performing high level optical, mechanical, RF and electronic integration. Can work independently to design tests, solve problems, and implement solutions. Am also capable in working in a highly interactive team environment.

Selected Award

- NASA Group Achievement Award (2006) Molecular Spectroscopy team
- NASA Group Achievement Award (2005) Aura, Microwave Limb Sounder instrument team
- Goddard Space Flight Center Group Achievement Award (2005) Aura team
- NASA Group Achievement Award (2005) Aura project
- NASA Group Achievement Award (2004) Balloon observations of the stratosphere
- NASA Group Achievement Award (1984) IRAS, data systems development and operations team
- NASA Group Achievement Award (1981) Voyager, control center operations
- NASA Group Achievement Award (1981) Voyager, computer support services

Selected publications

Selected publications

A Multioctave 8 GHz-40 GHz Receiver for Radio Astronomy, Kooi, J; Soriano, M; Bowen, J; Abdulla, Z; Samoska, L; Fung, A; Manthena, R; Hoppe, D; Javadi, H; Crawford, T; Hayton, D; Malo-Gomez, I; Gallego-Puyol, J; Akgiray, A; Gabritchidze, B; Cleary, K; Jacobs, C; Lazio, J, IEEE Journal of Microwaves, Digital Object Identifier 10.1109/JMW.2023.3237693

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Line parameters including temperature dependences of air- and self-broadened line shapes of 12C16O2: 2.06- μm region, Benner, D. Chris; Devi, V. Malathy; Sung, Keeyoon; Brown, Linda R.; Miller, Charles E.; Payne, Vivienne H.; Drouin, Brian J.; Yu, Shanshan; Crawford, Timothy J.; Mantz, Arlan W.; Smith, Mary Ann H.; Gamache, Robert R., JOURNAL OF MOLECULAR SPECTROSCOPY, 2016, 10.1016/j.jms.2016.02.012.

Line parameters including temperature dependences of self- and air-broadened line shapes of 12C16O2: 1.6- μm region, Devi, V. Malathy; Benner, D. Chris; Sung, Keeyoon; Brown, Linda R.; Crawford, Timothy J.; Miller, Charles E.; Drouin, Brian J.; Payne, Vivienne H.; Yu, Shanshan; Smith, Mary Ann H.; Mantz, Arlan W.; Gamache, Robert R., JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, JUL 2016, 10.1016/j.jqsrt.2015.12.020", 18th Symposium on High-Resolution Molecular Spectroscopy (HighRus)

Self- and air-broadened line shapes in the 2v3 P and R branches of 12CH4, Devi, V. Malathy; Benner, D. Chris; Sung, Keeyoon; Crawford, Timothy J.; Yu, Shanshan; Brown, Linda R.; Smith, Mary Ann H.; Mantz, Arlan W.; Boudon, Vincent; Ismail, Syed, JOURNAL OF MOLECULAR SPECTROSCOPY, SEP 2015, 10.1016/j.jms.2015.05.003

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Cryogenic absorption cells operating inside a Bruker IFS-125HR: First results for ¹³CCH₄ at 7 μ m, Sung, K.; Mantz, A. W.; Smith, M. A. H.; Brown, L. R.; Crawford, T. J.; Devi, V. M.; Benner, D. C., JOURNAL OF MOLECULAR SPECTROSCOPY, AUG 2010, 10.1016/j.jms.2010.05.004

Near-infrared remote sensing of Los Angeles trace gas distributions from a mountaintop site, Fu, D.; Pongetti, T. J.; Blavier, J. -F. L.; Crawford, T. J.; Manatt, K. S.; Toon, G. C.; Wong, K. W.; Sander, S. P., ATMOSPHERIC MEASUREMENT TECHNIQUES, 2014, 10.5194/amt-7-713-

Absorption coefficient (ABSCO) tables for the Orbiting Carbon Observatories: Version 5.1, Payne, Vivienne H.; Drouin, Brian J.; Oyafuso, Fabiano; Kuai, Le; Fisher, Brendan M.; Sung, Keeyoon; Nemchick, Deacon; Crawford, Timothy J.; Smyth, Mike; Crisp, David; Adkins, Erin; Hodges, Joseph T.; Long, David A.; Mlawer, Eli J.; Merrelli, Aronne; Lunny, Elizabeth; O'Dell, Christopher W., JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, NOV 2020, 10.1016/j.jqsrt.2020.107217

Spectral line parameters including line shapes in the $2\nu_3$ Q branch of ¹²CH₄, Devi, V. Malathy; Benner, D. Chris; Sung, Keeyoon; Brown, Linda R.; Crawford, Timothy J.; Yu, Shanshan; Smith, Mary Ann H.; Mantz, Arlan W.; Boudon, Vincent; Ismail, Syed, JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, JUL 2016, 10.1016/j.jqsrt.2015.12.009", "18th Symposium on High-Resolution Molecular Spectroscopy (HighRus)

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Self- and air-broadened line shape parameters in the $\nu_2+\nu_3$ band of ¹²CH₄: 4500-4630 cm⁻¹, Devi, V. Malathy; Benner, D. Chris; Smith, Mary Ann H.; Mantz, Arlan W.; Sung, Keeyoon; Crawford, Timothy J.; Predoi-Cross, Adriana, JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, FEB 2015, 10.1016/j.jqsrt.2014.11.011

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G.; Prato, L.; Kane, S. R.; Tanner, A.; Crawford, T. J.; Latham, D.; Rougeot, R.; Geneser, C. S.; Catanzarite, J., PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF THE PACIFIC, OCT 2016, 10.1088/1538

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Line positions and strengths of 41 bands including 10 OCS isotopologues in the 3850-4200 cm^{-1} region", Toth, Robert A.; Sung, Keeyoon; Brown, Linda R.; Crawford, Timothy J., JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, JUN 2010, 10.1016/j.jqsrt.2009.10.014,

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H₂-pressure broadening and frequency shifts of methane in the v₂+v₃ band measured in the temperature range between 80 and 370 K, Sung, Keeyoon; Devi, V. Malathy; Benner, D. Chris; Drouin, Brian J.; Crawford, Timothy J.; Mantz, Arlan W.; Smith, Mary Ann H., JOURNAL OF QUANTITATIVE SPECTROSCOPY & RADIATIVE TRANSFER, NOV 2020,107264,10.1016/j.jqsrt.2020.107264

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