

National Aeronautics and Space Administration



Headquarters

Washington, DC 20546-0001

July 19, 2016

Office of Communications

Ronald D. Lee
Arnold & Porter, LLP
601 Massachusetts Ave. NW
Washington, DC 20001-3743
Ronald.Lee@aporter.com

FOIA: 16-HQ-F-00806

Dear Mr. Lee:

This is an acknowledgement to your Freedom of Information Act (FOIA) request dated July 11, 2016, and received July 12, 2016, at the NASA Headquarters FOIA Office. Your request was assigned FOIA Case Number 16-HQ-F-00806 and was for:

- a. All documents¹ related to Nathan Myhrvold, his research, and his inquiries to NASA's NEOWISE team and to other NASA officials. Subject matter of such documents may include:
 - i. Nathan Myhrvold's claims regarding Kirchhoff's law;
 - ii. Nathan Myhrvold's inquiries leading up to the attached paper Comparing NEO Search Telescopes; and
 - iii. Nathan Myhrvold's inquiries about NEOWISE.
- b. All documents referencing the following articles (as a courtesy, we have attached a compilation of these articles to this request):
 - i. Kenneth Chang, How Big Are Those Killer Asteroids? A Critic Says NASA Doesn't Know, New York Times (May 23, 2016), <http://www.nytimes.com/2016/05/24/science/asteroids-nathan-myhrvold-nasa.html>;

- ii. Eric Hand, Billionaire technologist accuses NASA asteroid mission of bad statistics, Science (May 23, 2016), <http://www.sciencemag.org/news/2016/05/billionaire-technologist-accuses-nasa-asteroid-mission-bad-statistics>;
- iii. Lee Billings, For Asteroid-Hunting Astronomers, Nathan Myhrvold Says the Sky Is Falling, Scientific American (May 27, 2016), <http://www.scientificamerican.com/article/for-asteroid-hunting-astronomers-nathan-myhrvold-says-the-sky-is-falling1/>;
- iv. Rachel Feltman, That study critiquing NASA's 'bad science' on asteroids is pretty bad science, Washington

¹ The term "documents" as used in this request refers to all responsive records in possession of the agency, including correspondence (both paper and electronic mail), memoranda, notes, work papers, research, and any other electronic or paper records containing responsive information.

Post (May 25, 2016), <https://www.washingtonpost.com/news/speaking-of-science/wp/2016/05/25/that-study-critiquing-nasas-bad-science-on-asteroids-is-pretty-bad-science/>; and

- v. Alan Boyle, Tech titan Nathan Myhrvold stirs up debate over search for killer asteroids, GeekWire (May 23, 2016), <http://www.geekwire.com/2016/nathan-myhrvold-stirs-debate-search-killer-asteroids/>.
- c. All documents discussing the accuracy of NEOWISE diameter estimates, including:
 - i. How the estimates were calculated;

- ii. How the estimates should be described;
 - iii. Different approaches to calculation; and
 - iv. Policies or decisions regarding the accuracy and how NEOWISE-related papers or presentations should refer to them.
- d. All documents regarding comments about or criticisms of NEOWISE data analysis by other researchers.
- e. All documents regarding policies or procedures regarding how to handle inquiries from external researchers about NEOWISE data or results.

These requests seek records stored in any form, whether recorded in writing, electronically, or by any other means.

We are unable to process your request at this time. It is unclear what specific NASA record(s) you are requesting, and from what particular office or location. In accordance with the NASA FOIA regulation 14 CFR § 1206.301(a), requesters must describe the records sought in sufficient detail to enable Agency personnel who are familiar with the subject area of the request to identify and locate the record with a reasonable amount of effort. To the extent possible, requesters should include specific information that may assist a FOIA office in identifying the requested records, such as the date, title or name, author, recipient, case number, file designation, or reference number. In general, requesters should include as much detail as possible about the specific records or the types of records sought.

In accordance with the National Aeronautics and Space Administration's (NASA) FOIA regulation (14 CFR § 1206.301), a requester is required to describe the records sought so that a knowledgeable official can locate the records with a reasonable amount of effort. Descriptive information about a record may be divided into two broad categories:

- (i) Category I is file-related and includes information such as type of record, title, index citation, subject area, date the record was created, or its originator.
- (ii) Category II is event-related and includes the circumstances that resulted in the record being created or the date and circumstances surrounding the event the record covers.

Generally, a record is not reasonably described unless the description contains sufficient Category I information to permit Agency officials to conduct an organized, non-random search based on the existing filing arrangements and retrieval systems, or unless the

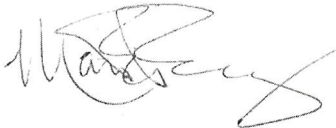
record(s) contain sufficient Category II information to permit inference of the Category I elements needed to conduct such a search. Without more specific information, regarding the types of documents you are requesting or the originator of those documents, we are unable to process your request.

Please be advised the FOIA is not intended to reduce government agencies to full-time investigators on behalf of requesters, or to allow requesters to conduct fishing expeditions through agency files. Courts have recognized that an agency's FOIA staff is neither required to have clairvoyant capabilities to discern the requester's needs, nor must they spend countless numbers of personnel hours in bureaucratic haystacks. Additionally, as a corollary to the "reasonably described" inquiry, courts have held that agencies are not required to conduct wide-ranging, "unreasonably burdensome" searches for records, (U.S. Department of Justice Guide to the Freedom of Information Act, 2013, pages 22-25). The onus is on the requester to identify the specific documents they are seeking.

In accordance with Department of Justice guidance, we will not proceed further with your request until we receive additional clarification from you. In accordance with 14 CFR § 1206.301(c), if we do not hear from you within 20 working days of the date of this letter, we will assume you are no longer interested in this matter and will close the file on your request.

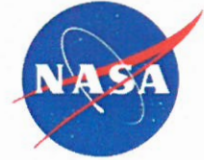
Please contact me at hq-foia@nasa.gov or 202-358-2339 if you require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Martha Terry", with a stylized flourish at the end.

Martha Terry
NASA FOIA Officer
Headquarters, Office of Communications

National Aeronautics and
Space Administration
Jet Propulsion Laboratory
NASA Management Office
FOIA Public Liaison Office
4800 Oak Grove Dr., M/S 180-200K
Pasadena, CA 91109-8001



Reply to Attn of: RA000/NMO

July 18, 2016

Arnold & Porter LLP
Attn: Mr. Ronald D. Lee
ronald.lee@aporter.com
601 Massachusetts Ave., NW
Washington, DC 20001-3743

Re: FOIA Request 16-JPL-F-00800

Dear Mr. Lee:

Thank you for your Freedom of Information Act (FOIA) dated July 11, 2016 and received at the NASA Jet Propulsion Laboratory FOIA Public Liaison Office on July 15, 2016. Your request was assigned Case File Number 16-JPL-F-00800. Your request was for:

- a. All documents¹ related to Nathan Myhrvold, his research, and his inquiries to NASA's NEOWISE team and to other NASA officials. Subject matter of such documents may include:
 - i. Nathan Myhrvold's claims regarding Kirchhoff's law;
 - ii. Nathan Myhrvold's inquiries leading up to the attached paper Comparing NEO Search Telescopes; and
 - iii. Nathan Myhrvold's inquiries about NEOWISE.
- b. All documents referencing the following articles (as a courtesy, we have attached a compilation of these articles to this request):
 - i. Kenneth Chang, How Big Are Those Killer Asteroids? A Critic Says NASA Doesn't Know, New York Times (May 23, 2016),
<http://www.nytimes.com/2016/05/24/science/asteroids-nathan-myhrvold-nasa.html>;
 - ii. Eric Hand, Billionaire technologist accuses NASA asteroid mission of bad statistics, Science (May 23, 2016),

¹ The term “documents” as used in this request refers to all responsive records in possession of the agency, including correspondence (both paper and electronic mail), memoranda, notes, work papers, research, and any other electronic or paper records containing responsive information.

<http://www.sciencemag.org/news/2016/05/billionaire-technologist-accuses-nasa-asteroid-mission-bad-statistics>;

- iii. Lee Billings, For Asteroid-Hunting Astronomers, Nathan Myhrvold Says the Sky Is Falling, Scientific American (May 27, 2016),
<http://www.scientificamerican.com/article/for-asteroid-hunting-astronomers-nathan-myhrvold-says-the-sky-is-falling1/>;
 - iv. Rachel Feltman, That study critiquing NASA’s ‘bad science’ on asteroids is pretty bad science, Washington Post (May 25, 2016),
<https://www.washingtonpost.com/news/speaking-of-science/wp/2016/05/25/that-study-critiquing-nasas-bad-science-on-asteroids-is-pretty-bad-science/>; and
 - v. Alan Boyle, Tech titan Nathan Myhrvold stirs up debate over search for killer asteroids, GeekWire (May 23, 2016),
<http://www.geekwire.com/2016/nathan-myhrvold-stirs-debate-search-killer-asteroids/>.
- c. All documents discussing the accuracy of NEOWISE diameter estimates, including:
- i. How the estimates were calculated;
 - ii. How the estimates should be described;
 - iii. Different approaches to calculation; and
 - iv. Policies or decisions regarding the accuracy and how NEOWISE-related papers or presentations should refer to them.
- d. All documents regarding comments about or criticisms of NEOWISE data analysis by other researchers.

- e. All documents regarding policies or procedures regarding how to handle inquiries from external researchers about NEOWISE data or results.
- f. All documents related to papers or analyses regarding WISE/NEOWISE done by the NEOWISE team (*see, e.g.*, the following papers: Mainzer/TMC,² Mainzer/NEO,³ Masiero/MB⁴), including:
 - i. Model fitting and details thereof;
 - ii. Any documents including least squares fitting, chi-square fitting or other model fitting approaches;
 - iii. Any documents on least squares algorithms (which could also be called least squares minimization or optimization). For example, the Levenberg-Marquardt algorithm or variations thereof;
 - iv. Linear adjustment to the W3 band as described in Mainzer/TMC, Mainzer/NEO, Masiero/MB;

² Mainzer, A., Grav, T., Masiero, J., Bauer, J.M., Wright, E.L., Cutri, R.M., McMillan, R.S., Cohen, M., Ressler, M., Eisenhardt, P.R.M., 2011c. Thermal Model Calibration for Minor Planets Observed With Wide-Field Infrared Survey Explorer/Neowise. *Astrophys. J.* 736, 100. doi:10.1088/0004-637X/736/2/100 (hereinafter, “Mainzer/TMC”).

³ Mainzer, A., Grav, T., Bauer, J.M., Masiero, J.R., McMillan, R.S., Cutri, R.M., Walker, R., Wright, E.L., Eisenhardt, P.R.M., Tholen, D.J., Spahr, T., Jedicke, R., Denneau, L., DeBaun, E., Elsbury, D., Gautier, T., Gomillion, S., Hand, E., Mo, W., Watkins, J., Wilkins, A., Bryngelson, G.L., Del Pino Molina, A., Desai, S., Camus, M.G., Hidalgo, S.L., Konstantopoulos, I., Larsen, J.A., Maleszewski, C., Malkan, M.A., Mauduit, J.-C., Mullan, B.L., Olszewski, E.W., Pforr, J., Saro, A., Scotti, J. V., Wasserman, L.H., 2011b. Neowise Observations of Near-Earth Objects: Preliminary Results. *Astrophys. J.* 743, 156. doi:10.1088/0004-637X/743/2/156 (hereinafter, “Mainzer/NEO”).

⁴ Masiero, J.R., Mainzer, A., Grav, T., Bauer, J.M., Cutri, R.M., Dailey, J., Eisenhardt, P.R.M., McMillan, R.S., Spahr, T.B., Skrutskie, M.F., Tholen, D., Walker, R.G., Wright, E.L., DeBaun, E., Elsbury, D., Gautier IV, T., Gomillion, S., Wilkins, A., 2011. Main Belt Asteroids with WISE/NEOWISE. I. Preliminary Albedos and Diameters. *Astrophys. J.* 741, 68. doi:10.1088/0004-637X/741/2/68 (hereinafter, “Masiero/MB”).

- v. Changes to per-observation estimated errors due to onset of saturation as described in Mainzer/TMC, Mainzer/NEO, Masiero/MB, and other NEOWISE papers/analyses;
- vi. All documents about the use of diameter estimates from prior radar, stellar occultation or spacecraft flyby in Mainzer/TMC, Mainzer/NEO, Masiero/MB, and other NEOWISE papers/analyses;
- vii. Documents expressing or indicating the rules or procedures for eliminating data from analyses conducted by the NEOWISE team, including any analysis expressed in Mainzer/TMC, Mainzer/NEO, Masiero/MB;
- g. Any and all documents related to NEOWISE analysis of Ryan and Woodward 2010,⁵ or IRAS (Tedesco et al 2002)⁶ (*see, e.g.,* Mainzer/TMC and Mainzer et al 2011⁷).
- h. All correspondence about NEOWISE or any of the above topics to or from:
 - i. Edward Wright (UCLA);
 - ii. Tommy Grav (Planetary Sciences Institute);
 - iii. Timothy Spahr (originally at Minor Planet Center, more recently elsewhere).

⁵ Ryan, E.L., Woodward, C.E., 2010. Rectified asteroid albedos and diameters from IRAS and MSX. *Astron. J.* 140, 933. doi:10.1088/0004-6256/140/4/933

⁶ Tedesco, E.F., Noah, P. V., Noah, M., Price, S.D., 2002b. The Supplemental IRAS Minor Planet Survey. *Astron. J.* 123, 1056-1085. doi:10.1086/338320

⁷ Mainzer et al 2011 (*ApJ* 737, "Thermal model calibration with IRAS") = Mainzer, A., Grav, T., Masiero, J.R., Bauer, J.M., Wright, E.L., Cutri, R.M., Walker, R., McMillan, R.S., 2011d. Thermal Model Calibration for Minor Planets Observed with WISE/NEOWISE: Comparison with Infrared Astronomical Satellite. *Astrophys. J. Lett.* 737, L9. doi:10.1088/2041-8205/737/1/L9

These requests seek records stored in any form, whether recorded in writing, electronically, or by any other means.

Based on the information provided in your letter, we are unable to process your request at this time. The FOIA is a record retrieval statute, and based on the information provided in your request, it is unclear what specific records you are requesting. In accordance with the National Aeronautics and Space Administration's (NASA) FOIA regulations (14 CFR §1206.301), the requester must describe the records sought in sufficient detail to enable Agency personnel who

are familiar with the subject area of the request to identify and locate the records with a reasonable amount of effort. To the extent possible, the requester should include specific information that may assist a FOIA office in identifying the requested records, such as the date, title or name, author, recipient, subject matter of the record, case number, file designation, or reference number. In general, the requester should include as much detail as possible about the specific records or the types of records sought.

(i) Category I is file-related and includes information such as type of record, title, index citation, subject area, date the record was created, or its originator.

(ii) Category II is event-related and includes the circumstances that resulted in the record being created or the date and circumstances surrounding the event the record covers.

In accordance with 14 CFR § 1206.301, we will not proceed further with your request until we receive further clarification for specific records. A request for records about or relating to or regarding a subject or term or requesting any and all documents about or relating to or regarding a subject or term is not a proper request. For instance, NASA is not equipped or required to conduct a search for, “...*All documents related to Nathan Myhrvold, his research, and his inquires to NASA’s NEOWISE team and to NASA officials.*...” or “...*Nathan Myhrvold’s claims regarding Kirchhoff’s law;*...” or “...*Nathan Myhrvold’s inquiries about NEOWISE.*...” throughout all files (including contract files) that are associated with a host of procurement and technical-related topics and functions in the Agency that will produce a list of responsive records.

Please be advised that NASA has not yet implemented a records management application for automated capture and control of e-records; therefore, official files are primarily paper files and official records are filed in accordance with the NASA Records Retention Schedules, NRRS 144.1. The Agency is not equipped to conduct random text searches for the terms you have provided throughout all files (both electronic and paper) that will produce a list of responsive records. Without more specific information outlining the specific Agency records you are seeking (i.e., the date of the record, document name, reference number, author, etc.), we are unable to process your request. In accordance with the FOIA and Department of Justice guidance, please be advised that a requester may make one attempt to provide clarification to a request.

At this time, your request has been placed on hold for 20 work days from the date of this letter. Again, in accordance with 14 CFR § 1206.301, we will not proceed further with your request until we receive clarification as to what specific documents you are requesting. Please be advised the FOIA is not intended to reduce government agencies to full-time investigators on behalf of requesters, or to allow requesters to conduct fishing expeditions through agency files. Courts have recognized that an agency’s FOIA staff is neither required to have clairvoyant capabilities to discern the requester’s needs, nor must they spend countless numbers of personnel hours in bureaucratic haystacks. Additionally, as a corollary to the “reasonably described” inquiry, courts have held that agencies are not required to conduct wide-ranging, “unreasonably burdensome” searches for records, (U.S. Department of Justice Guide to the Freedom of Information Act, 2013, pages 22-25). Additionally, you must provide a specific date range for the documents you want us to conduct the search once you have specifically described the documents.

By providing “references” and/or “articles” and web links you may be implying that you expect NASA to assist in the research of your request or verify information you have provided. NASA

is not equipped or required to perform research on behalf of a requester or verify information in a request, reference, article or web link to determine what is being requested. Furthermore, clicking on provided web links is a security issue and ultimately a requester is required to articulate in the request the supporting information. In accordance with 14 CFR § 1206.301(e), NASA need not comply with a blanket or categorical request (such as “all matters relating to” a general subject) where it is not reasonably feasible to determine what record is sought. NASA is not equipped or required to perform records searches using random terms.

In accordance with 14 CFR § 1206.300 (a), 14 CFR § 1206.301 and 14 CFR §1206.302(c), if we do not hear from you within 20 working days from the date of this letter, we will consider that you are no longer interested in this request and we will close our file without further notification. You may submit a new request for the same information; however you will need to provide the clarifying information and fee agreement information as indicated above.

Please see our FOIA regulations at the following website for more information and specific information relating to describing records sought:

[http://www.ecfr.gov/cgi-bin/text-](http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=97fb51c6e62b667333b7f1645d203f11&rgn=div5&view=text&node=14:5.0.1.1.8&idno=14)

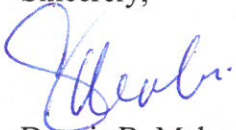
[idx?c=ecfr&sid=97fb51c6e62b667333b7f1645d203f11&rgn=div5&view=text&node=14:5.0.1.1.8&idno=14](http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=97fb51c6e62b667333b7f1645d203f11&rgn=div5&view=text&node=14:5.0.1.1.8&idno=14)

You have requested placement in the “all other requesters” category but have not provided sufficient information for us to make a determination. However, since we are not able to process your request at this time, your request for placement in a specific requester category is moot. We also acknowledge that you have stated a willingness to pay up to \$1,000 for search and duplication fees related to this request. In accordance with 14 CFR §1206.302 (e), please be advised that once you provide clarification regarding the specific records you are seeking, which enables us to begin processing your request, since you are only willing to pay a limited amount for processing your request and if you request more than one document, you must also state the order in which you would like your request for records to be processed.

Additionally, you have requested expedited processing of your request. Please be advised that since we are unable to process your request at this time, this is moot. Please see our NASA FOIA regulations at the above link for further information on expedited processing.

Questions regarding this action should be in writing to this center at the address shown on the letterhead. You may also e-mail correspondence to jpl-foia@nasa.gov or reach me by telephone at 818-393-6779 and fax at 818-393-3160. Also, you may contact Ms. Miriam Brown-Lam, Principal Agency FOIA Officer and Chief Public Liaison at 202-358-0718.

Sincerely,



Dennis B. Mahon
Freedom of Information Act
Public Liaison Officer