



NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND 20755-6000

FOIA Case: 105997
6 September 2019

JOHN GREENEWALD
27305 W LIVE OAK RD
SUITE #1203
CASTAIC CA 91384

Dear Mr. Greenewald:

This responds to your Freedom of Information Act (FOIA) request of 21 December 2018 for Intellipedia entries for Moscovium, and/or Element 115, and/or Bob Lazar, which was received by this office on 26 December 2018. Your request has been assigned Case Number 105997. For purposes of this request and based on the information you provided, you are considered an "all other" requester. As such, you are allowed 2 hours of search time and the duplication of 100 pages at no cost. There are no assessable fees for this request. Your request has been processed under the provisions of the FOIA.

For your information, NSA provides a service of common concern for the Intelligence Community (IC) by serving as the executive agent for Intelink. As such, NSA provides technical services that enable users to access and share information with peers and stakeholders across the IC and DoD. Intellipedia pages are living documents that may be originated by any user organization, and any user organization may contribute to or edit pages after their origination. Intellipedia pages should not be considered the final, coordinated position of the IC on any particular subject. The views and opinions of authors do not necessarily state or reflect those of the U.S. Government.

We conducted a search across all three levels of Intellipedia and located documents that are responsive to your request. The documents are enclosed. Certain information, however, has been deleted from the documents.

This Agency is authorized by statute to protect certain information concerning its activities, in this case. Such information is exempt from disclosure pursuant to the third exemption of the FOIA, which provides for the withholding of information specifically protected from disclosure by statute. The specific statute applicable in this case is Section 6, Public Law 86-36 (50 U.S. Code 3605). We have determined that such information exists in this record, and we have excised it accordingly.

In addition, personal information regarding individuals has been deleted from the enclosure in accordance with 5 U.S.C. 552 (b)(6). This exemption protects from disclosure information that would constitute a clearly unwarranted invasion of

personal privacy. In balancing the public interest for the information you requested against the privacy interests involved, we have determined that the privacy interests sufficiently satisfy the requirements for the application of the (b)(6) exemption.

Since these deletions may be construed as a partial denial of your request, you are hereby advised of this Agency's appeal procedures. If you decide to appeal, you should do so in the manner outlined below.

- The appeal must be in sent via U.S. postal mail, fax, or electronic delivery (e-mail) and addressed to:

NSA FOIA/PA Appeal Authority (P132)
National Security Agency
9800 Savage Road STE 6932
Fort George G. Meade, MD 20755-6932

The facsimile number is (443)479-3612.

The appropriate email address to submit an appeal is FOIARSC@nsa.gov.

- It must be postmarked or delivered electronically no later than 90 calendar days from the date of this letter. Decisions appealed after 90 days will not be addressed.
- Please include the case number provided above.
- Please describe with sufficient detail why you believe the denial of requested information was unwarranted.
- NSA will endeavor to respond within 20 working days of receiving your appeal, absent any unusual circumstances.

For further assistance or to discuss your request, you may contact our FOIA Public Liaison at foialo@nsa.gov. You may also contact the Office of Government Information Services (OGIS) at the National Archives and Records Administration to inquire about the FOIA mediation services they offer. OGIS contact information is Office of Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, MD 20740-6001; e-mail: ogis@nara.gov; main: 202-741-5770; toll free: 1-877-684-6448; or fax: 202-741-5769.

Sincerely,




JOHN R. CHAPMAN
Chief, FOIA/PA Office
NSA Initial Denial Authority

Encls:
a/s

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and research of John Greenewald, Jr., creator of:

The Black Vault



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From: donotreply@nsa.gov
Sent: Friday, December 21, 2018 1:31 PM
To: FOIANET
Subject: Message from FOIA Request Form

Your Name: Mr. John R Greenewald
Email Address: john@greenewald.com
Company/Organization: The Black Vault
27305 W Live Oak Rd
Postal Address: Suite 1203
Castaic CA US 91384
Home Phone: 8004562228
Work Phone:

To whom it may concern,

This is a non-commercial request made under the provisions of the Freedom of Information Act 5 U.S.C. S 552. My FOIA requester status as a "representative of the news media" however due to your agency's denial of this status, I hereby submit this request as an "All other" requester.

I prefer electronic delivery of the requested material either via email to john@greenewald.com, FAX 1-818-659-7688 or via CD-ROM or DVD via postal mail. Please contact me should this FOIA request should incur a charge.

I respectfully request a copy of the Intellipedia entry (from all three Wikis that make up the Intellipedia) for the following entry(s) (Or whatever similar topic may pertain if it is slightly worded differently):

Describe the records you seek, and provide any additional pertinent information (up to 5000 characters):

MOSCOVIUM

and/or

ELEMENT 115

and/or

BOB LAZAR

Please also include any Intellipedia entries that contain the above mentioned keywords/phrases. I agree to accept only those articles that come up as a result of using the Intellipedia search engine as responsive to this portion of my request.

Thank you so much for your time, and I am very much looking forward to your response.

Sincerely,

John Greenewald, Jr.
27305 W. Live Oak Rd.
Suite #1203
Castaic, Ca. 91384
FAX 1-818-659-7688

**Date Range of Requested
Documents**

(U) Ununpentium

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From Intellipedia

(U) **Ununpentium** is the temporary name of a synthetic superheavy element in the periodic table that has the temporary symbol **Uup** and has the atomic number 115. Multiple isotopes have been made by a fusion of calcium and americium (Uup-288 with the most neutrons). It can be referred to as *eka-bismuth*.

(U) Element 115 also falls in the center of the theoretical island of stability. Although no stable isotopes have yet been found, conventional models predict that if stable isotopes of element 115 can be produced, they will most likely need the "magic number" of 184 neutrons, which would be Uup-299. The currently fabricated isotopes only had at most 173 neutrons (Uup-288).

Contents

- 1 History
- 2 Chemical Properties
- 3 Isotopes
- 4 In Popular Culture
- 5 References
- 6 External Links
- 7 Element Series

History

(U) On 2 February 2004, synthesis of ununpentium and ununtrium were reported in Physical Review C by a team composed of Russian scientists at Dubna University's Joint Institute for Nuclear Research and American scientists at the Lawrence Livermore National Laboratory.^{[1][2]}

(U) The team reported that they bombarded americium (element 95) with calcium (element 20) to produce four atoms of ununpentium (element 115). These atoms, they report, alpha decayed to ununtrium (element 113) in approximately 100 milliseconds. The ununtrium produced then existed for 1.2 seconds before decaying into natural elements.

(U) The synthesizing of the element was also reported by scientists of Japan.

(U) In May 2006 in the Joint Institute for Nuclear Research the synthesis of this element was confirmed by another method (the chemical identifying on final products of decay of element).

(U) Ununpentium is a temporary IUPAC systematic element name. Element 115 is also sometimes called *eka-bismuth*.

Chemical Properties

(U) For now element 115 has only been manufactured in the amount of a few atoms, so the chemistry of element 115 has yet to be researched, but chemistry and physics can tell us a lot about what to expect. Although element 115 is in the same group as bismuth, its chemistry will probably be strongly altered by relativistic effects.^[3] One important predicted difference from bismuth is the presence of a stable oxidation state of +1, and a Uup⁺ ion with a chemistry similar to Tl⁺. There has been some experimental data for other superheavy elements, such as element 112, which seems to confirm relativistic effects for superheavy elements.

Isotopes

(U) Ununpentium has no stable isotopes. A standard atomic mass cannot be given.

Ununpentium		
General		
Name	Symbol	Series
ununpentium	Uup	
Group	Period	Block
Physical Properties		
Atomic Number	Atomic Mass	Atomic Radius
115	(299) g·mol ⁻¹	pm
Appearance		
Covalent Radius	Phase	Density
pm		g·cm ⁻³
Configuration		
Crystal Structure	Electron Configuration	Electrons per Shell
	[Rn] 5f14 6d10 7s2 7p3 (guess based on bismuth)	2, 8, 18, 32, 32, 18, 5
Other Information		
Oxidation States	Ionization Energy	CAS Registry Number
	(est.)	54085-64-2

Doc ID: 6670589	Nuclide Symbol	Z(p)	N(n)	Isotopic Mass (u) ^[4]	Half-Life ^[5]	Nuclear Spin ^[5]
		Excitation Energy				
	²⁸⁷ Uup	115	172	287.19119(85) ^[6]	32(+155-14) ms	
	²⁸⁸ Uup	115	173	288.19249(92) ^[6]	87(+105-30) ms	
	²⁸⁹ Uup	115	174	289.19272(110) ^[6]	10 s ^[6]	
	²⁹⁰ Uup	115	175	290.19414(106) ^[6]	10 s ^[6]	
	²⁹¹ Uup	115	176	291.19438(95) ^[6]	1 min ^[6]	

In Popular Culture

(U) Ununpentium has been theorized to be inside the island of stability. This probably explains why it was mentioned regularly in popular culture, especially in UFO conspiracy theories. The most popular account of element 115, from Bob Lazar, is considered pseudoscience.^[7] Although it is reasonable to suppose that element 115 will have unique properties, there is no openly available empirical evidence to back up Lazar's claims.

References

- Oganessian, Yuri. et al. "Experiments on the Synthesis of Element 115 in the Reaction ²⁴³Am(⁴⁸Ca,xn)^{291-x}115 (<http://link.aps.org/abstract/PRC/v69/e021601>)." *Physical Review C*. Volume 69 (2004), page 021601.
- Oganessian, Yuri. et al. "of Elements 115 and 113 in the Reaction ²⁴³Am + ⁴⁸Ca (<http://link.aps.org/abstract/PRC/v72/e034611>Synthesis)." *Physical Review C*. Volume 72 (2005) page 034611.
- Keller, O. L.; Nestor, C. W. Fricke, Burkhard. "Predicted Properties of the Superheavy Elements III: Element 115, Eka-bismuth (http://pubs3.acs.org/acs/journals/doi/lookup?in_doi=10.1021/j100612a015)." *Journal of Physical Chemistry*, Volume 78 (1974) pages 1945-1949.
- Audi, G.; Wapstra, A.H.; Thibault, C.; Blachot, J.; Bersillon, O. "Ame2003 Atomic Mass Evaluation (<http://www.nndc.bnl.gov/amdc/index.html>)." *Nuclear Physics*. A729 (2003).
- Audi; Bersillon; Blachot; Wapstra. "The Nubase2003 Evaluation of Nuclear and Decay Properties (http://amdc.in2p3.fr/web/nubase_en.html)." *Nuclear Physics*. A 729, pages 3-128 (2003); National Nuclear Data Center, Brookhaven National Laboratory. Information extracted from the NuDat 2.1 database (<http://www.nndc.bnl.gov/nudat2/>) Retrieved September 2005.; Lide, David R. (editor); Holden, Norman E. "Section 11, Table of the Isotopes." *CRC Handbook of Chemistry and Physics* 85th Edition. Boca Raton: CRC Press, 2005.
- Values are not purely derived from experimental data, but at least partly from systematic trends. Spins with weak assignment arguments are enclosed in parentheses.
- Morgan, David L. "Lazar Critique (<http://www.serve.com/mahood/lazar/critiq.htm>)," 26 August 1996 (revised October 2005).

External Links

- Apsidium. "Ununpentium (<http://www.apsidium.com/elements/115.htm>)."
- Glanz, James. "Uut and Uup Add Their Atomic Mass to Periodic Table (<http://www.radiochemistry.org/periodictable/elements/115.html>)." *New York Times*, 1 February 2004.
- Oganessian, Yuri. "Superheavy Elements: The Recent Discovery of Elements 113 and 115 Will Tell Us More About the Structure of the Nucleus and the Possible Existence of the *Island of Stability* (<http://physicsweb.org/articles/world/17/7/7>)." Physicsweb.org, July 2004.
- van der Krogt, Peter. "115 Ununpentium (<http://www.vanderkrogt.net/elements/elem/uup.html>)." *Elementymology & Elements Multidict*, 8 January 2006.
- WebElements.com. "Ununpentium (<http://www.webelements.com/webelements/elements/text/Uup/key.html>)."

Element Series

72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
104	105	106	107	108	109	110	111	112	113	114	115	116	117	118
Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Uub	Uut	Uuq	Uup	Uuh	Uus	Uuo

State at Standard Temperature and Pressure (0°C and 1 atm)

Gases

Liquids

Solids

Natural Occurrence			
Undiscovered	Synthetic	From Decay	Primordial

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Categories: Pages using duplicate arguments in template calls Transactinides Chemical Elements
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(b) (3) - P. L. 86-36

(U) Ununpentium



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Ununpentium is the temporary name of a synthetic superheavy element in the periodic table that has the temporary symbol **Uup** and has the atomic number 115. Multiple isotopes have been made by a fusion of calcium and americium (Uup-288 with the most neutrons). It can be referred to as **eka-bismuth**.


Element 115 also falls in the center of the theoretical island of stability. Although no stable isotopes have yet been found, conventional models predict that if stable isotopes of element 115 can be produced, they will most likely need the "magic number" of 184 neutrons, which would be Uup-299. The currently fabricated isotopes only had at most 173 neutrons (Uup-288).

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- 2 Chemical Properties
- 3 Isotopes
- 4 In Popular Culture
- 5 References
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History

On 2 February 2004, synthesis of ununpentium and ununtrium were reported in Physical Review C by a team composed of Russian scientists at Dubna University's Joint Institute for Nuclear Research and American scientists at the Lawrence Livermore National Laboratory.^{[1][2]}

Ununpentium		
		
General		
Name	Symbol	Series
ununpentium	Uup	
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115	(299) g·mol ⁻¹	pm
Appearance		
Covalent Radius	Phase	Density
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Configuration		
Crystal Structure	Electron Configuration	Electrons per Shell
	[Rn] 5f14 6d10 7s2 7p3 (guess based on bismuth)	2, 8, 18, 32, 32, 18, 5
Other Information		
Oxidation States	Ionization Energy	CAS Registry Number

Doc ID: 6679581

The team reported that they bombarded americium (element 95) with calcium (element 20) to produce four atoms of ununpentium (element 115). These atoms, they report, alpha decayed to ununtrium (element 113) in approximately 100 milliseconds. The ununtrium produced then existed for 1.2 seconds before decaying into natural elements.

	(est.)	54085-64-2
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Ununpentium has no stable isotopes. A standard atomic mass cannot be given.

Nuclide Symbol	Z(p)	N(n)	Isotopic Mass (u) ^[4]	Half-Life ^[5]	Nuclear Spin ^[5]
²⁸⁷ Uup	115	172	287.19119(85) ^[6]	32(+155-14) ms	
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²⁹¹ Uup	115	176	291.19438(95) ^[6]	1 min ^[6]	

In Popular Culture

Ununpentium has been theorized to be inside the island of stability. This probably explains why it was mentioned regularly in popular culture, especially in UFO conspiracy theories. The most popular account of element 115, from Bob Lazar, is considered pseudoscience.^[7] Although it is reasonable to suppose that element 115 will have unique properties, there is no openly available empirical evidence to back up Lazar's claims.

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- Oganessian, Yuri. et al. "Experiments on the Synthesis of Element 115 in the Reaction $^{243}\text{Am}(^{48}\text{Ca},\text{xn})^{291-x}\text{115}$ (<http://link.aps.org/abstract/PRC/v69/e021601>)." *Physical Review C*, Volume 69 (2004), page 021601.
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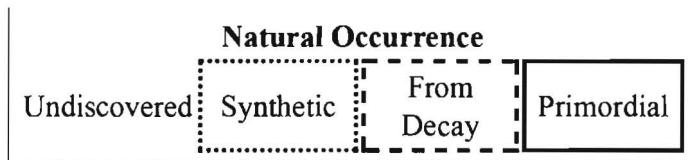
- Apsidium. "Ununpentium (<http://www.apsidium.com/elements/115.htm>)."
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Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Uut	Fl	Uup	Lv	Uus	Uuo

State at Standard Temperature and Pressure (0°C and 1 atm)		
Gases	Liquids	Solids

Doc ID: 6679581



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(U) Ununpentium

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- Values are not purely derived from experimental data, but at least partly from systematic trends. Spins with weak assignment arguments are enclosed in parentheses.
- Morgan, David L. "Lazar Critique (<http://www.serve.com/mahood/lazar/critiq.htm>)," 26 August 1996 (revised October 2005).

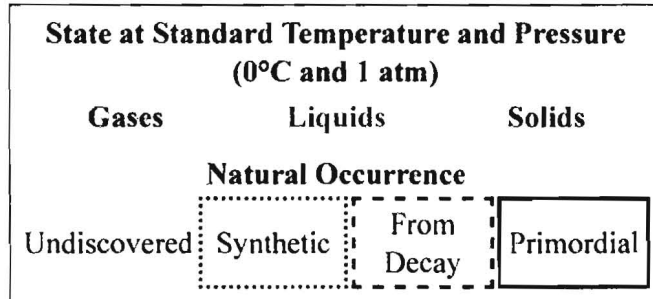
External Links

- Apsidium. "Ununpentium (<http://www.apsidium.com/elements/115.htm>)."
- Glanz, James. "Uut and Uup Add Their Atomic Mass to Periodic Table (<http://www.radiochemistry.org/periodictable/elements/115.html>)." *New York Times*. 1 February 2004.
- Oganessian, Yuri. "Superheavy Elements: The Recent Discovery of Elements 113 and 115 Will Tell Us More About the Structure of the Nucleus and the Possible Existence of the *Island of Stability* (<http://physicsweb.org/articles/world/17/7/7>)." Physicsweb.org, July 2004.
- van der Krogt, Peter. "115 Ununpentium (<http://www.vanderkrogt.net/elements/element/uup.html>)." *Elementymology & Elements Multidict*, 8 January 2006.
- WebElements.com. "Ununpentium (<http://www.webelements.com/webelements/elements/text/Uup/key.html>)."

Element Series

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Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Uub	Uut	Uuq	Uup	Uuh	Uus	Uuo



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