

**United States District Court Northern District of California**

Rhawn Joseph, Ph.D. pro se  
San Jose, CA 95126

Case Number: CV 14-00385  
Honorable Ronald M. Whyte, U.S. District Judge

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Rhawn Joseph, Ph.D. }  
Petitioner, }  
v }  
National Aeronautics and }  
Space Administration }  
(NASA), Charles F. Bolden }  
Chief Administrator NASA, }  
Respondents, }  
\_\_\_\_\_ }

**In Re RHAWN JOSEPH’S PETITION  
FOR A WRIT OF MANDAMUS COMPELLING  
NASA TO PERFORM A DUTY TO THOROUGHLY  
SCIENTIFICALLY EXAMINE AND INVESTIGATE  
A PUTATIVE BIOLOGICAL ORGANISM ON MARS  
IDENTIFIED/DISCOVERED BY PETITIONER  
AND REFERRED TO BY NASA AS:  
“UNLIKE ANYTHING WE HAVE SEEN BEFORE.”**

Filed On: January 27, 2014

Charles Bolden, NASA  
NASA Headquarters  
Washington, DC 20546-0001

**In Re RHAWN JOSEPH’S PETITION FOR A WRIT OF MANDAMUS**

**I: RELIEF SOUGHT, ISSUES, FACTS, REASONS FOR WRIT**

1. Under authority of 28 U.S.C. 1331, 28 U.S.C. and FRCP Rule 21, petitioner Rhawn Joseph who is an astrobiologist and a resident of and whose place of business is in Santa Clara County, California, is petitioning the Federal Court for a writ of mandamus to compel and order the National Aeronautics and Space Administration (NASA) and its Chief Administrator Charles Bolden, to perform a public, scientific, and statutory duty which is to closely photograph and thoroughly scientifically examine and investigate a putative biological organism which was identified (and thus discovered) by Petitioner, and photographed on Mars by NASA’s Mars’ rover Opportunity in January 2014, and which NASA referred to in a press release as: “unlike anything we have seen before... We are totally confused.”

2. On or about January 17, 2014, NASA released and published low resolution, slightly out-of-focus photos taken of a bowl-shaped structure by the Mars’ rover Opportunity on Mars’ day Sol 3540, at a distance of 8 to 10 feet from the rover. The structure was sitting on a Martian outcrop. According to NASA the structure was not sitting on the same outcrop 12 Martian days earlier on Mars’ day Sol 3528

the last time the rover had taken pictures of that outcrop. However, that turned out to be untrue as NASA failed to examine photos taken on Sol 3528, whereas when examined by Petitioner the same structure in miniature was clearly visible upon magnification and appears to have just germinated from spores. In the press release and statements issued to the media, NASA and Mars' rover project scientists stated they had no idea what the structure depicted in Sol 3540 was or how it got there.

3. Petitioner immediately recognized that bowl-shaped structure, hereafter referred to as Sol 3540, as resembling a mushroom-like fungus, a composite organism consisting of colonies of lichen and cyanobacteria, and which on Earth is known as Apothecium.

4. Petitioner then magnified images of the same Martian outcrop, taken 12 Martian days earlier (Sol 3528) and detected the presence of an identical structure, in miniature, in the same exact location, and in the same exact spot where the larger structure was photographed on Sol 3540 (See Exhibits A and B). The structure, in miniature as depicted in Sol 3528, is obvious and resembles a fruiting body of a fungus which has just begun to germinate from spores (See Exhibit B). As stated in an initial 2 page report published at Cosmology.com, by Petitioner, the obvious conclusion is that the structure in Sol 3528 (Exhibit B) was alive and it grew into the structure depicted when NASA's rover team took photos 12 Martian days later (Exhibit A), i.e. Sol 3540.

5. Petitioner magnified images of specimen Sol 3540, taken on and after Mars' day Sol 3540, and detected the presence of structures within and upon the top of the bowl-shaped specimen which resemble "paraphyses" and miniature fruiting bodies (Exhibit A). Paraphyses are spore-producing tentacle-like growths typical of Apothecium. The Court, upon examining the pictorial evidence, is reminded that NASA refused to release high definition, high resolution photos, and published only very low resolution photos taken at a distance, and all of which appear to be slightly out-of-focus.

6. On or about January 17, 2014, Petitioner wrote up a preliminary report of these discoveries and Petitioner asks the court to read the report and examine all the pictorial evidence which is available at Cosmology.com. It is the Petitioner's impression that spores were exposed to moisture due to changing weathering conditions on Mars. Over the next 12 days these spores grew and developed into the structure depicted in Sol 3540 (See Exhibit A); photographed on the day the rover team again focused on that outcrop after a 12 day hiatus. The structure in miniature (Exhibit B) appears in the same exact location in the same exact spot as the larger structure photographed 12 Martian days later (Exhibit A). The evidence is consistent with biological activity and suggests that life on Mars may have been discovered. However, in the absence of moisture, biological specimens such as Apothecium will dry out,

turn brittle and break apart and this appears to be the condition of the structure as depicted in Sol 3540.

7. Petitioner made these discoveries whereas the rover team did not, simply because NASA's rover team inexplicably failed to perform the basic demands of science, which is "re-research," look again. Inexplicably, although NASA, its rover team, and the rover's project director (John Callas) and lead scientist (Steven Squyres), issued a press release proclaiming the structure was "unlike anything we have seen before" and that they were "completely confused," they not only failed but refused to take close-up pictures or microscopic images of the structure. All photos are from a distance, at the same angle, low resolution, and slightly out of focus. Likewise, although the rover Opportunity is equipped with a "microscopic imager" no microscopic investigation was undertaken and no microscopic pictures released. Any legitimate scientist would have taken hundreds of close-up and microscopic pictures from every angle. Inexplicably NASA and its rover team not only failed to take close up photos they refused even after John Callas, Steven Squyres, Charles Bolden and other NASA administrators at NASA headquarter were contacted by this Petitioner and supplied evidence that this was a biological organism which had germinated on that rock and grew into a larger organism after 12 Martian days had passed.

8. The refusal to take close up photos from various angles, the refusal to take microscopic images of the specimen, the refusal to release high resolution photos, is inexplicable, recklessly negligent, and bizarre. Any intelligent adult, adolescent, child, chimpanzee, monkey, dog, or rodent with even a modicum of curiosity, would approach, investigate and closely examine a bowl-shaped structure which appears just a few feet in front of them when 12 days earlier they hadn't noticed it. But not NASA and its rover team who have refused to take even a single close up photo.

9. Instead of investigating or taking close up and microscopic photos, NASA and its rover team dismissed the structure identified as Sol 3540, as a "rock" or a "meteor" which somehow just mysteriously appeared in front of the rover. NASA's explanation is bizarre, absurd, ignorant, and little more than magical thinking. A rock or a meteor does not grow in size. A rock is unable to move upon its own volition. A meteor would have shattered upon striking the Martian surface and at a minimum there would be evidence of impact and a debris field. There is no such evidence. Even if a bowl-shaped rock had somehow become dislodged from another location there would be some evidence on the ground of its acceleration and deceleration including displacement of other rocks and stones. There is none. Further, in the NASA press release it was admitted, without explanation, that the structure had "too much sulfur, magnesium and manganese" and thus could not be a meteor or a Martian rock. Yet, NASA insists the structure is a rock or a meteor, a explanation which is preposterous, absurd and ridiculous. The

description of this structure as a rock or meteor, coupled with the inexplicable failure to take close-up and microscopic photos and refusal to make high resolution photos available, raises the specter of a purposeful attempt to deceive the public and scientific community so that administrators at NASA can continue gutting planetary exploration programs and diverting funds to private corporate interests without opposition. The only other explanation is that NASA's rover team is outrageously negligent, obscenely incompetent, shockingly ignorant about basic biology, and prone to magical thinking.

10. NASA's refusal and the failure to conduct a thorough investigation, even before being contacted by this Petitioner, is inexplicable, a dereliction of duty, and completely contrary to NASA's mission as authorized by the U.S. Congress, and contrary to NASA's stated mission, and the mission of its billion dollar Mars' rovers whose explicit purpose is science, exploration, and scientific investigation. NASA has a duty and an obligation to the public, to the scientific community, and to this Petitioner to thoroughly investigate this structure identified as Sol 3540.

11. Bolden and 10 other NASA administrators at NASA headquarters as well as the rover project director John Callas, have been contacted in writing and supplied pictorial evidence, a link to the online report by this Petitioner, and they received specific demands outlining exactly what investigative actions must be taken. Emails were sent to: charles.bolden@nasa.gov, John.c.brasunas@nasa.gov, max.bernstein@nasa.gov, barry.geldzahler@nasa.gov, jonathan.rall@nasa.gov, jllcallas@pasadena.edu, leonard.dudzinski@nasa.gov, kelly.e.fast@nasa.gov, james.l.green@nasa.gov, jeffrey.n.grossman@nasa.gov, Michael.h.new@nasa.gov, heather.d.smith@nasa.gov. Petitioner has also contacted Steven Squyres, NASA Mars Exploration Rover Lead Scientist, 2 times by phone (607-255-3505) and several times by email (Squyre@astro.cornell.edu), all of which Squyres ignored. All those at NASA with the power or the authority to scientifically examine this structure by taking close-up and microscopic photos from various angles, have refused to do so despite the fact that the rover has the technological capabilities to easily perform these duties and despite the fact that NASA admits this structure is "unlike anything we have seen before...We are totally confused."

12. Petitioner has specifically requested and has demanded in writing the following of NASA, NASA's chief administrator Bolden, and NASA's rover team: **A)** take 100 high resolution close-up in-focus photos of the specimen identified in Sol 3540, at various angles, from all sides, and from above down into the "bowl" of the specimen, and under appropriate lighting conditions which minimize glare. **B)** Take a minimum of 24 microscopic in-focus images of the exterior, lip, walls, and interior of the specimen under appropriate lighting conditions. **C)** NASA, and the rover team must make public and

supply Petitioner with all high resolution photos and images of that specimen as demanded in A and B.

13. Compelling NASA to closely photograph and thoroughly examine the structure identified in Sol 3540, serves the public and national interests, the interests of science and thus the public good. The failure so far by NASA to perform this duty is inexplicable, and constitutes negligence, gross incompetence, and could be construed as misuse of public funds and a purposeful attempt to deceive the public about the discovery of life on Mars so that NASA administrators can continue with their plans to defund planetary exploration programs in favor of "privatization" and the enrichment of private profiteers. The fact is, its an outrage that Petitioner has to even petition the court to order NASA to perform what NASA should have done without being asked.

14. Petitioner has no other alternative avenues of relief available other than mandamus. Time is of the essence as the structure, if biological, may continue to deteriorate and break apart. This Court has jurisdiction and venue is proper since Petitioner works and resides in and as NASA's Ames Research Center is in Santa Clara County. Since NASA has refused to perform its duties, then by the authority of 28 U.S.C. 1331, 28 U.S.C. and FRCP Rule 21 Petitioner asks the Court to grant the mandamus petition and to compel NASA to perform its scientific duties and obligations as detailed in paragraph 12.

## **II: PETITIONER'S STANDING**

15. Petitioner, Rhawn Joseph, Ph.D., is a scientist and astrobiologist who has published major scientific discoveries in prestigious scientific journals beginning in the late 1970s, i.e. **A)** evidence of cellular re-growth and recovery of nerve cells and cellular functions in the primate brain (Joseph, R., & Casagrande, V. A. Proceedings of the Society for Neuroscience, 1978, 4, 1982, 2021; Casagrande, V. A. & Joseph, Anatomical Record, 1978, 190, 359; Joseph, R. & Casagrande, V. A. Behavioral Brain Research, 1980, 1, 150-178; Casagrande, V. A. & Joseph, R. Journal of Comparative Neurology, 1980, 194, 413-426); **B)** the hormonal basis of sex differences which Petitioner demonstrated existed in other animals and could be reversed thereby changing (sex differences) from males to female and vice versa (Joseph, R. Journal of Psychology, 1979, 101, 37-43; Joseph, R., & Gallagher, R. E. journal of Developmental Psychobiology, 1980, 13, 527-544; Joseph, R., Hess, S., & Birecree, E. Behavioral Biology, 1978, 24, 364-377); **C)** the effects of environmental influences on learning, memory, intelligence, sex differences, brain cell development, cellular growth, and the interactions and establishment of neural connections between brain cells resulting in the acquisition of new functions (Joseph, R. Journal of Psychology, 1979, 101, 37-43; Joseph, R., & Gallagher, R. E. journal of Developmental Psychobiology, 1980, 13, 527-544; Joseph, R., & Casagrande, V. A. Proceedings of the

Society for Neuroscience, 1978, 4, 1982, 2021; Casagrande, V. A. & Joseph, Anatomical Record, 1978, 190, 359; Joseph, R. & Casagrande, V. A. Behavioral Brain Research, 1980, 1, 150-178; Casagrande, V. A. & Joseph, R. Journal of Comparative Neurology, 1980, 194, 413-426). All these findings were considered impossible at the time; but that is the nature of science: to make discoveries.

16. Petitioner has published several best selling scientific textbooks which received widespread praise in reviews published by a number of scientific periodicals. In 1997, Petitioner published his first book in astrobiology and issued a press release, which ABC National News featured, verbatim in a 10 minute feature on the possibility of life on other planets and the origin of life on Earth.

17. In 2000, Petitioner published a trade science book, titled “Astrobiology” and in so doing popularized the field of astrobiology as it was the first book of its kind. The following year and over the next several years NASA established its “astrobiology magazine” and two new scientific journals with the title “Astrobiology” appeared and which were edited by NASA scientists. After Petitioner’s “Astrobiology” book was published almost half a dozen other books with a similar title appeared. Thus, Petitioner led the way and others, including NASA, followed.

18. Petitioner in his Astrobiology book also developed, presented and detailed a completely original thesis on the role of viruses in the origin of life and the generation of the first DNA-based organisms, referring to these viruses as “mobile RNA-worlds.” Petitioner’s theory has been adopted by numerous scientists including those employed by NASA.

19. In 2010, Petitioner published the 1000 page scientific book, “The Human Mission to Mars” and whose authors included 24 NASA scientists and engineers, two NASA Senior Scientists Science Directorates as well as NASA astronauts including two who walked on the Moon. Petitioner also published “Marketing Mars” which laid out a fund raising program which could raise over 100 billion dollars to finance a human mission to Mars, and Petitioner’s proposals received national media attention including a feature story in NASA’s Astrobiology magazine.

20. From 2010 until 2012, petitioner lobbied the scientific community and the U.S. Congress to pass legislation which would provide a legal structure for raising over 100 billion dollars from the private sector to fund a human mission to Mars. Petitioner also published the books, “A One Way Mission to Mars” and “Colonizing Mars” and whose authors included numerous well respected scientists.

21. In 2011, Petitioner published a genetic analyses of DNA evolution, beginning with the first life forms to take up residence of Earth, and was able to trace the evolution of DNA to over 10 billion years into the past, 6 billion years before Earth was formed.

22. In 2012, Petitioner published evidence, based on computer analyses, of plasma-like structures in the thermosphere, over 200 miles above the planet.

23. Petitioner is a tax payer, his tax payer dollars helped fund the Mars rover program, and Petitioner is a scientist who has made major contributions to the field of astrobiology, the search for extraterrestrial life, the study of Mars and missions whose purpose is to search for extraterrestrial life.

24. On 1/17/14, Petitioner performed an analysis of a structure identified as Sol 3540, and which appears to be evidence of biological activity on Mars. Clearly, Plaintiff has a right and the standing to demand that NASA perform its duties and properly investigate the structure and putative biological organism which was first depicted in Sol 3528 in miniature and in Sol 3540 as a much larger structure.

### **III: WRIT OF MANDAMUS - COURT ORDERS**

25. Petitioner is asking for mandamus, which in this case is merely a remedial process, to compel NASA and NASA's Chief Administrator to perform a public, scientific, and statutory duty which ought to be performed and which has not been performed, i.e. to thoroughly scientifically examine and investigate a putative biological organism identified as Sol 3540, by immediately doing the following:

26. NASA and its rover team must take 100 high resolution close-up in-focus photos of the specimen identified in Sol 3540, at various angles, from all sides, and from above down into the "bowl" of the specimen, and under appropriate lighting conditions which minimize glare.

27. NASA and its rover team must take a minimum of 24 microscopic in-focus images of the exterior, lip, walls, and interior of the specimen under appropriate lighting conditions.

28. NASA and its rover team must immediately supply the Petitioner and make public all high resolution photos and images of that specimen as demanded in paragraphs 26 and 27.

29. NASA and its rover team must immediately supply the Petitioner and make public high resolution photos and all high resolution photos which have been taken and which shall be taken of the structure identified in Sol 3540.

30. NASA must give the petitioner **A)** the authority to act as an observer at the rover command facility to insure that the Court's orders are carried out in good faith, and **B)** the authority to appoint two NASA astrobiologists to the rover team.

31. If the organism is biological, NASA must publicly acknowledge that the discovery was made by the Petitioner and must ensure that Petitioner appears as first author on and has final editorial approval of the first 6 scientific articles published or submitted for publication by NASA employees which discuss and present this discovery.

Dated January 26, 2014

Respectfully submitted,

/s/Rhawn Joseph, Ph.D.

Rhawn Joseph, Ph.D.

VERIFICATION

I, Rhawn Joseph, Ph.D., am the Petitioner in the above-entitled action. I have read the foregoing petition and know its contents. The same is true of my own knowledge, including those matters that are alleged in the petition on information and belief, and as to those matters all of which I believe to be true.

/s/Rhawn Joseph, Ph.D.

Rhawn Joseph, Ph.D

January 26, 2014

**Exhibit A - Specimen Sol 3540**

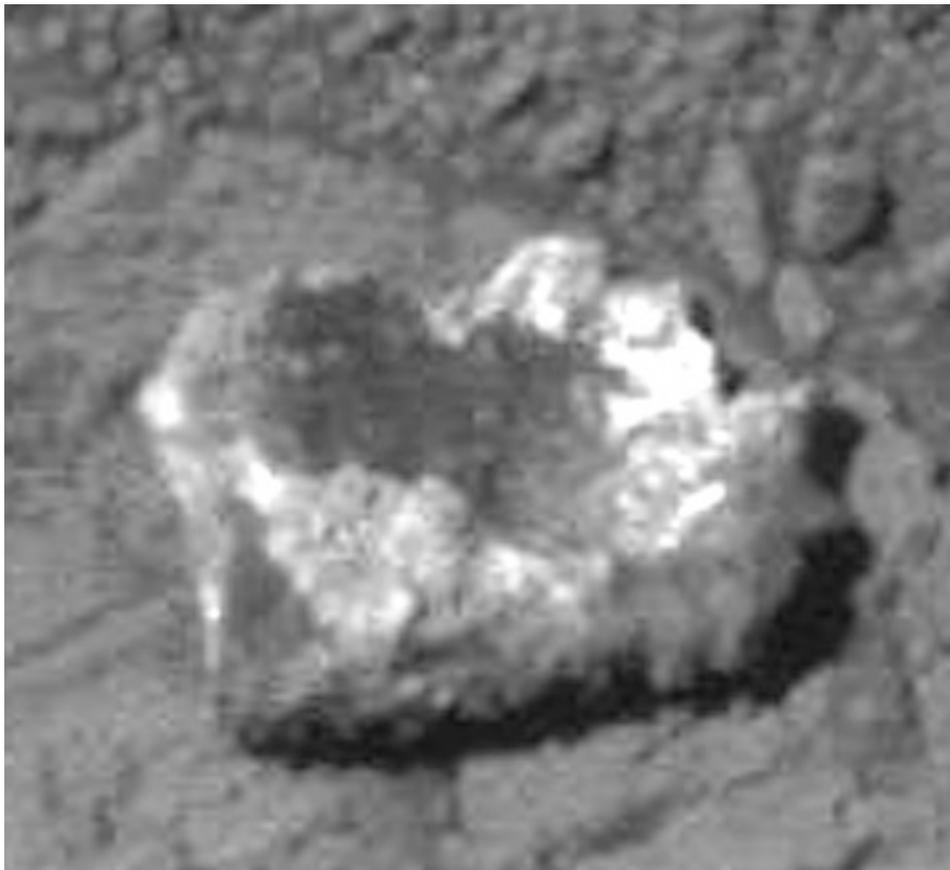
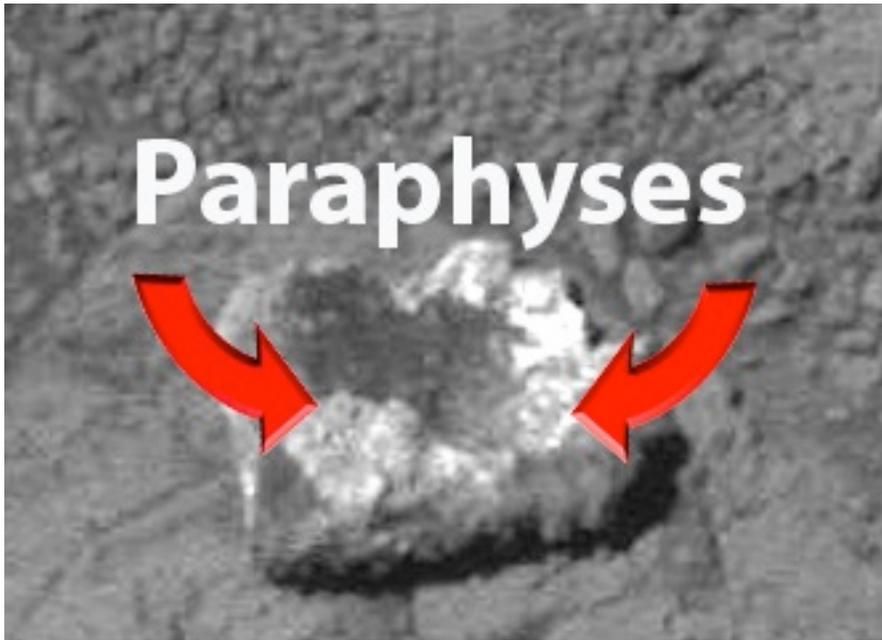
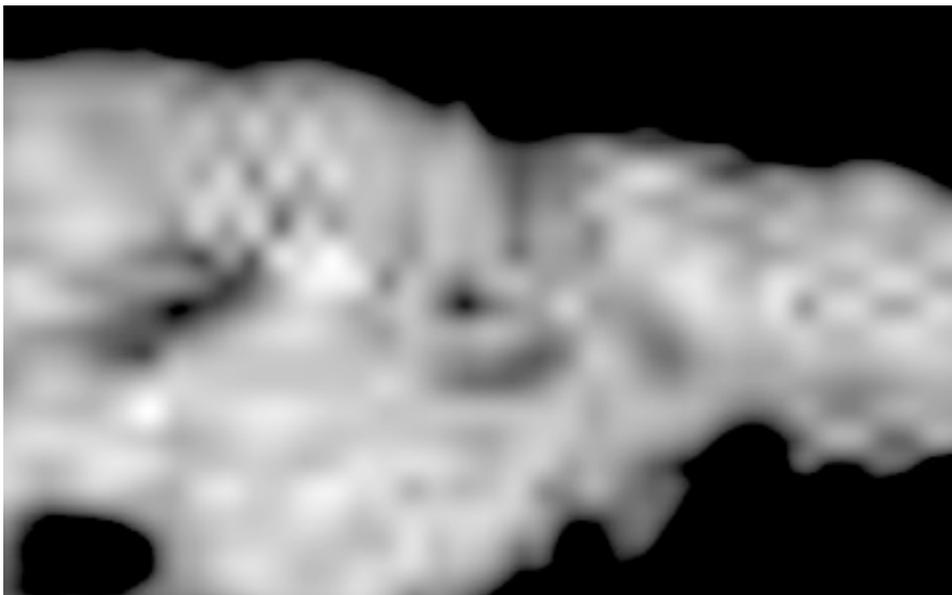
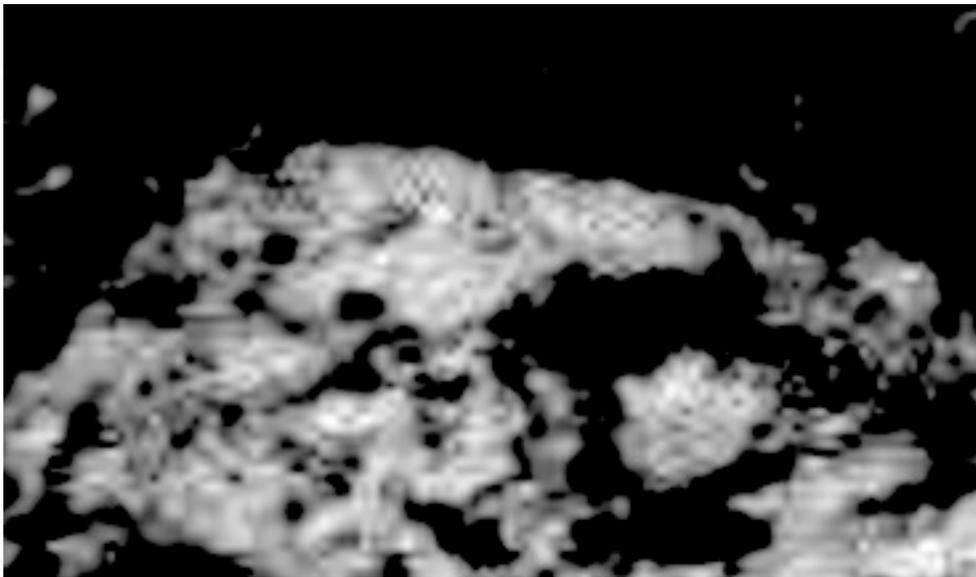
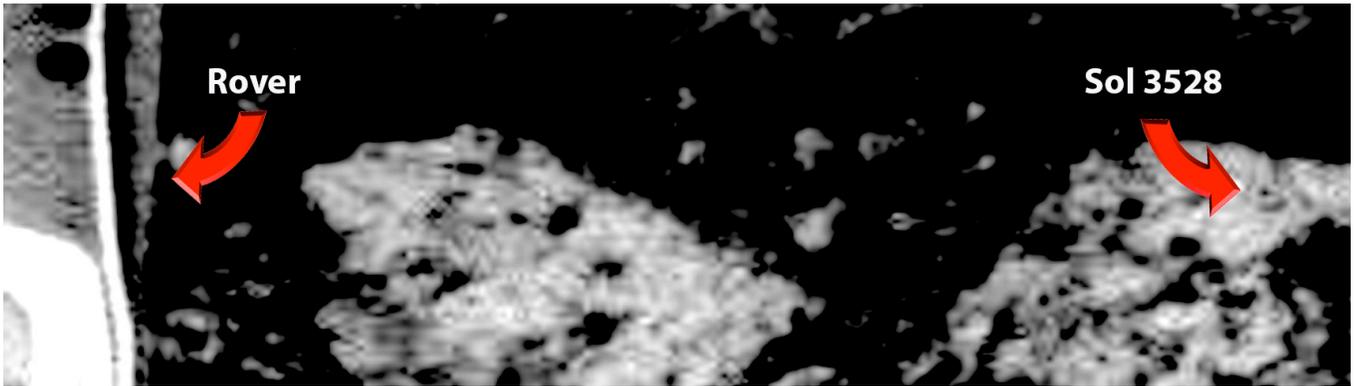


Exhibit B - Sol 3528 Germinating



## **Certificate of Service**

I, the undersigned, am over the age of eighteen years and not a party to this case. I HEREBY CERTIFY that on this January 27, 2014, a true and correct copy of Rhawn Joseph's Petition for a Writ of Mandamus, was placed in an envelope and in the U.S. mail (USPS) and mailed, postage prepaid, Priority Mail, to:

NASA Headquarters  
Charles F. Bolden, Chief Administrator, NASA  
Washington, DC 20546-0001

NASA Office of the General Counsel  
ATT: Michael Wholley  
Washington, DC 20546-0001  
Tel: 202-358-2440