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Launch Systems Group  
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Bingham City, UT 84302  
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June 23, 2008  
E670-CY08-031

Kim Narmore  
National Aeronautics and Space Administration  
Bldg. 4200, AD33  
MSFC, AL 35812

This memo submits the attached; ATK-Thiokol Propulsion published Space Shuttle Reusable Solid Rocket Motor (RSRM) technical document(s) into the NASA-MSFC Scientific and Technical Document Availability Authorization (DAA) System for review and approval in accordance with NPG 2200.2.

<u>TITLE</u>	<u>AUTHOR(S)</u>	<u>CONTRACT NO.</u>	<u>CONF/FORUM</u>
Simulation, Kriging And Visualization of Circular-Spatial Data	W. Morphet	NAS8-97238	Dissertation Paper

Final disposition of this document is requested on an expedited basis, on or before 7/18/2008.

Please contact the undersigned at 544-6395 or by E-mail at [Richard.Roth@atk.com](mailto:Richard.Roth@atk.com) with questions/comments.

Sincerely,




Richard B. Roth

Atch: a/s

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JUN 23 2008

 National Aeronautics and Space Administration		<b>NASA Scientific and Technical Information (STI) Document Availability Authorization (DAA)</b> <i>(Instructions for completing this form are on page 4)</i>		<del>NEW DAA</del> <del>REVISION TO</del> <del>EXISTING DAA</del> (Attach Copy)	
<b>SECTION 1</b>					
<b>1a. DOCUMENT IDENTIFICATION</b>					
<b>TITLE</b> Sections of Chapter 2 of PhD dissertation "SIMULATION, KRIGING, AND VISUALIZATION OF CIRCULAR-SPATIAL DATA"  * Only the data for Figures 2-16 and 2-17			<b>AUTHOR(S)</b> William J. Morphet		
<b>POINT OF CONTACT (if different from author)</b>		<b>E-MAIL</b>	<b>ADDRESS</b>		
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William J. Morphet	LS3434	Bill.Morphet2@ATK.com	06/20/2008
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John M. Pea	john.m.pea@nasa.gov	7/25/08	
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National Aeronautics and  
Space Administration  
**George C. Marshall Space Flight Center**  
Marshall Space Flight Center, AL 35812



Reply to Attn: IS20

July 31, 2008

ATK  
Launch Systems Group  
P.O. Box 707  
Brigham City, UT 84302

Attn: Richard Roth

Dear Mr. Roth:

Re: E670-CY08-031

This is in response to your request of June 23, 2008 for review and approval of sections in chapter 2 of a dissertation entitled "Simulation, Kriging and Visualization of Circular-Spatial Data.

The technical presentation is publicly available as indicated on the attached NASA Form 1676.

Sincerely,

A handwritten signature in black ink, appearing to read "Kim Narmore".

Kim Narmore  
MSFC Document Availability (DAA) Representative

Enclosure

The following is email confirming approval of Technical Information Clearance.

**From:** MSFC-STI  
**Sent:** Friday, August 01, 2008 12:40 PM  
**To:** 'Bill.Morphet@ATK.com'  
**Cc:** 'Burnette, Sheila'; Pea, John M. (MSFC-MP02)  
**Subject:** Approved NF 1676

Mr. Morphet,

The dissertation entitled "Simulation, Kriging, and Visualization of Circular-Spatial Data" has been approved for release and distribution as indicated by the attached NF 1676. The original form will be returned to you for record retention.

As required by NASA policy, your document will be forwarded to the Center for AeroSpace Information (CASI) for inclusion in the NASA Aeronautics and Space Database (<http://www.sti.nasa.gov>).

Thank you,

Kim Narmore  
NASA/Marshall Space Flight Center  
Document Availability Authorization (DAA) Representative  
IS20, Bldg. 4200, Rm. 500  
MSFC, AL 35812  
(256) 544-4512

By 'The dissertation entitled "Simulation, Kriging, and Visualization of Circular-Spatial Data" ' Mr. Narmore is referring to Subsections 2.8.2 and 2.8.3 of Chapter 2, which was submitted for Technical Information Clearance.

The following authorization applies to Figure 2-19.



ATK THIOKOL

## Memorandum

Date May 18, 2005  
Subject Permission to Use Copyrighted Artwork  
To Bill Morphet

From Olga B. Siggins  
Organization Office of General Counsel  
MS UT03-EL2  
Telephone 801-251-2205

A handwritten signature in dark ink, appearing to read "Olga B. Siggins", written over the typed name in the "From" field.

This memo confirms that you have permission to use ATK Thiokol Inc.'s copyright protected artwork that shows the roll maneuver of the Space Shuttle system in connection with the paper you have authored for The Journal of Computational and Graphical Statistics.

## CURRICULUM VITAE

William James Morphet  
(June 2009)

## CAREER OBJECTIVE:

To develop technical expertise, involving creativity, leadership and proactive behavior. Special areas of interest: statistics - bringing out the message in the data in graphical display.

## EDUCATION:

PhD in Statistics, Utah State University, Logan, Utah. (2009) GPA: 4.0 (4.0=A).

Master of Science in Statistics, Utah State University. (12/14/2001) GPA: 4.0.

Bachelor of Science in Manufacturing Engineering, Brigham Young University, Provo, Utah. (4/21/78) GPA: 3.78 Magna Cum Laude.

## EXPERIENCE:

12/07+	ATK Launch Systems, Nozzle Structural Analysis (material properties and general statistical support)
5/97 – 12/07	ATK Launch Systems, Post Launch/Test Evaluation Engineering (anomaly review process)
12/92 - 5/97	ATK Launch Systems, Drafting (drafting, geometric dimensioning & tolerancing, and simulation of assembly tolerance stack up)
3/92 - 12/92	ATK Launch Systems, Computer Aided Engineering & Trending (math, statistics, and nondestructive engineering support)
5/81 - 3/92	ATK Launch Systems, Materials & Processes (numerical control programming, manufacturing drawings)
5/78 - 5/81	Lockheed Missiles & Space Co. (computer aided manufacturing applications)
66 - 72	United States Navy (nuclear reactor operator, electronics, health physics)



## PUBLISHED PAPERS/AWARDS:

2/08	Pinnacle National Honor Society for Adult and other nontraditional students
11/07	Gold Medal International Honour Society, nominated to Phi Kappa Phi
4/04	"Space Shuttle SRM <Solid Rocket Motor> Nozzle Erosion & Char Statistical Assessment," Joint Army Navy NASA Air Force (JANNAF) 23 <sup>rd</sup> Rocket Nozzle Technology Subcommittee, 2004, New Orleans, Louisiana.
12/01	"Relationship Between Nozzle Erosion and Vectoring for the Space Shuttle Reusable Solid Rocket Motor," 33 <sup>rd</sup> International Society for the Advancement of Material and Process Engineering (SAMPE) Technical Conference
5/01	Outstanding Student Graduate
4/01	Phi Kappa Phi
8/00	"Vectoring Effects on Nozzle Erosion," TWR-66980, ATK Space Launch Systems
8/93	Monetary award from NASA Inventions and Contributions Board for New Technology Evaluation-MFS 28886, "Flat Pattern Development for Aiming X-Ray Machine Which Is Equipped with a Laser Spotting Beam That Is Aligned with the X-Ray Beam Centerline"
7/92	"Effect of Surface Curvature on OSEE <Optically Stimulated Electron Emission>," TER-92033, ATK Space Launch Systems
81-Present	30+ employer recognitions including monetary awards
78	Tau Beta Pi
72	United States Navy, Honorable Discharge