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Chicago Office NEPA Tracking Number

U. S. DEPARTMENT OF ENERGY OFFICE OF SCIENCE -- CHICAGO OFFICE

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) ENVIRONMENTAL EVALUATION NOTIFICATION FORM

To be completed by "financial assistance award" organization receiving Federal funding. For assistance (including a point of contact), see "instructions for Preparing SC-CH F-560, Environmental Evaluation Notification Form".

Solicitation/Award No. (if applicable): DE-FOA-0000179

Organization Name: New Mexico State University

Title of Proposed Project/Research: Quark Gluon Structure of Hadrons in QCD

Total DOE Funding/Total Project Funding: \$455,000

- I. Project Description (use additional pages as necessary):
 - A. <u>Proposed Project/Action (delineate Federally funded/Non-Federally funded portions)</u> The purpose of this project is to perform fundamental research in the field of theoretical hadronic physics, using paper and pencil as well as computer simuations.

In particular, we plan to investigate the structure of hadrons and the vacuum, as well as the interplay between vacuum and hadron structure, both through theorectical modeling as well as first-principles numerical calculations. More specifically, the following areas will be covered: Generalized parton distributions (GPDs), aspects of quark angular momentum, transverse momentum dependent parton distributions (TMDs), hadron structure within lattice QCD, and the random vortex world-surface model of infrared strong interaction physics.

B. Would the project proceed without Federal funding?

Yes No □ ⊠

If "yes", describe the impact to the scope:

II. Description of Affected Environment:

Work will be completed indoors using computers, pencil, and paper. No changes will be made to Gardiner Hall nor any other building. The project will have no impact on historical resources.

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Yes

X

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No

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Ш. **Preliminary Questions:**

Is the DOE-funded work entirely a "paper study"? Α.

If "Yes", ensure that the description in Section I reflects this and go directly to Section V.

Β. Will the work to be performed take place entirely in existing buildings?

And NOT:

- 1. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health? П
- 2. Require the siting, construction or major expansion of waste treatment, storage, or disposal facilities?
- 3. Disturb hazardous substances, pollutants, or contaminants preexisting in the environment?
- 4. Adversely affect environmentally-sensitive resources identified in Section IV.A.?
- Be connected to another existing/proposed activity that could potentially create a 5. cumulatively significant impact?
- 6. Have an inherent possibility for high consequence impacts to human health or the environment (e.g., Biosafety Level 3-4 laboratories, activities involving high levels of radiation)?

If "Yes" to Question III.B. and ALL six subsequent questions, ensure the descriptions in Sections I and Il reflect this and go directly to Section V.

IV. **Potential Environmental Effects:**

Attach/insert an explanation for each "Yes" response.

A. Sensitive Resources: Will the proposed action result in changes and/or disturbances to any of the following resources?

			res	NO
	1.	Threatened/Endangered Species and/or Critical Habitats		
	2.	Other Protected Species (e.g., Burros, Migratory Birds)		
	3.	Sensitive Environments (e.g., Tundra/Coral Reefs/Rain Forests)		
	4.	Archaeological/Historic Resources		
	5.	Important Farmland		
	6.	Non-Attainment Areas for Ambient Air Quality Standards		
	7.	Class I Air Quality Control Region		
	8.	Special Sources of Groundwater (e.g. Sole Source Aquifer)		
	9.	Navigable Air Space		
	10.	Coastal Zones		
	11.	Areas with Special National Designation (e.g. National Forests, Parks, Trails)		
	12.	Floodplains and Wetlands		
В.	<u>Regu</u> activit	ated Substances/Activities: Will the proposed action involve any of the following regulate	ed items or	[
	•		Yes	No
	13.	Natural Resource Damage Assessments		
	14.	Exotic Organisms		
	15.	Noxious Weeds		
	16.	Clearing or Excavation (indicate if greater than one acre)		$\overline{\Box}$
	17.	Dredge or Fill (under Clean Water Act, Section 404, indicate if greater than ten	Π	Ē

- 16. Clearing or Excavation (indicate if greater than one acre)
- Dredge or Fill (under Clean Water Act, Section 404, indicate if greater than ten 17. acres)

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В.	Regulated Substances/Activities:	Will the proposed	action involve	any of the	following re	egulated	Items or
	activities? (continued)			•		-	

			Yes	No
	18.	Noise (in excess of regulations)		
	19.	Asbestos Removal		
	20.	PCB's		
	21.	Import, Manufacture, or Processing of Toxic Substances		
	22 .	Chemical Storage/Use		
	23.	Pesticide Use		
	24.	Hazardous, Toxic, or Criteria Pollutant Air Emissions	Π	
	25.	Liquid Effluents		
	26.	Underground Injection		
	27.	Hazardous Waste		
	28.	Underground Storage Tanks		
	29.	Radioactive Mixed Waste		
	30.	Radioactive Waste		
	31.	Radiation Exposure		
	32.	Surface Water Protection		
	33.	Pollution Prevention Act		
	34.	Ozone Depleting Substances		
	35.	Off-Road Vehicles		
	36.	Biosafety Level 3-4 Laboratory		
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C.	Other I	Relevant Information: Will the proposed action involve the following?	Yes	No
	37.	Potential Violation of Environment, Safety, or Health Regulations/Permits		
	38.	Siting/Construction/Major Modification of Waste Recovery, or Waste Treatment,	H	H
	00.	Storage, or Disposal Facilities		
	39.	Disturbance of Pre-existing Contamination		
	40.	New or Modified Federal/State Permits	님	H
	40. 41	Public Controversy	H	H
	42.	Environmental Justice	H	님
			H	
		Action/Involvement of Another Federal Agency (e.g. license, funding, approval)	H	님
	44.	Action of a State Agency in a State with NEPA-type law. (Does the State		لاسا
	45	Environmental Quality Review Act apply?)		
		Public Utilities/Services	님	님
		Depletion of a Non-Renewable Resource	님	님
		Extraordinary Circumstances	님	님
		Connected Actions	님	님
		Exclusively Bench-top Research	님	
	50.	Only a Laboratory Setting		
Fina	incial As	sistance Award Organization Concurrence:		
<u></u>				
· A,	<u>Organiz</u>	zation Official (Name and Title): Neta Fernandez, Director of Grants and Contrac	ts	
	<u>.</u>	118 Stal Achaard	Datas Alta	
	Signatu	ne <u>cla</u>	Date: 4/5/	11
	e-mail:	ogc@nmsu.edu Phone: 575-646-159	0	
	-			
В.	Optiona	al Concurrence (Name and Title):		
	Signatu	re.	Date:	
	oignatu	re		
	e-mail:	Phone:		

V.

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Remainder to be completed by SC-CH

- VI. SC-CH Concurrence/Recommendation/Determination:
 - A. SC-CH Office of Acquisition and Assistance or Office of Safety, Technical & Infrastructure Services:

Project Director or Contract Specialist (Name and Title): <u>Ceclfic L. Thomas</u> Signature: <u>CMJ. Stan</u> Date:					
	Signature: Call. Sta	Date: <u> </u>			
B.	SC-CH NEPA Team Review:				
	Is the project/activity appropriate for a determination or a recommendation to the He Organization by the NEPA Compliance Officer (NCO) under Subpart D of the DOE				
•	Yes 🔀 No 🗆 🗛	9			
	Specific class(es) of action from Appendices A-D to Subpart D (10 CFR 1021):				
	Name and Title: OPRZEDELC				
	Signature: Q~ Opyelr				
C.	SC-CH Counsel (if necessary):	1			
	Name and Title:				
	Signature:	Date:			
D.	SC-CH NEPA Compliance Officer:				
	e preceding pages are a record of documentation required under DOE Final NEPA Re 21.400.	egulation, 10 CFR			
R.	Action may be categorically excluded from further NEPA review. I have determ action meets the requirements for Categorical Exclusion referenced above.	nined that the proposed			
	Action requires approval by Head of the Field Organization. Recommend preparation of an Environmental Assessment.				
	Action requires approval by Head of the Field Organization or a Secretarial Off preparation of an Environmental Impact Statement.	icer. Recommend			
Cor	mments/Limitations if necessary:				

Signature: Peter R. Siebach SC-CH NEPA Compliance Officer

Date: 4/7/11