U.S. DEPARTMENT of COMMERCE Office of the Secretary



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# Physical Scientist (Research) 15

Office of Human Resources Management

# GS-1301-15

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## I. INTRODUCTION

This position is located in

This position serves as leader of an area of research for critical problems of physical science phenomena.

### **II. MAJOR DUTIES AND RESPONSIBILITIES**

Incumbent leads investigations of long range problems, recommends solutions, and writes scientific papers for publication; and may lead a team. The focus may be oceanographic, geodetic, meteorological, or other, requiring use of a variety of physical science theories and techniques, to assess the dynamic interaction of the phenomena studied. The following are examples of the work performed:

Oceanographic investigations centering on fluxes of energy, momentum and materials through the air-sea interface, the transport and composition (thermal and chemical) of ocean and coastal water masses and the structure and dynamical processes on the sea-floor.

Oceanography, marine meteorology and related disciplines to improve understanding of environmental processes in coastal and open-ocean systems.

Dynamics of geophysical fluids in the atmosphere, hydrosphere, and cryosphere, over a wide range of time and space scales. Potential applications include deterministic atmospheric forecasting, life cycle of hurricanes, and clear air turbulence.

Atmospheric and environmental problems caused by changes in atmospheric composition associated with natural and manufactured emissions.

Global and climate change, acid deposition, atmospheric chemistry, and meteorological and biological problems involving interaction between lower atmosphere and underlying surface, primarily vegetation.

Chemical and physical processes in the earth's atmosphere to advance the capability of monitoring, predicting, and controlling the atmosphere.

Understanding and prediction of coastal and estuarine processes and interdependencies with the atmosphere, land, and sediments.

#### **III. FACTOR LEVELS**

Factor 1 - Research Situation/Assignment Degree E, 10 pts.

Incumbent is personally responsible for formulating and guiding a research attack on problems which have been recognized as critical obstacles to progress or development in the science, or where solutions to problems represent a major advance in meteorological science; and may serve as team leader. There is a reasonable expectation that the research, although difficult, will produce useable outcomes.

Factor 2 - Supervision Received Degree E, 10 pts.

Technical supervision received is nominal and consultative in nature. Incumbent works under broad administrative supervision, with direction limited to allocation and staffing levels. Working within broad agency policies and guidelines, the incumbent is expected to identify the most fruitful and urgent areas of research. Incumbent takes complete responsibility for formulation of hypotheses and development of a plan of attack. Research findings are subject to higher-level management decisions concerning their use.

Factor 3 - Guidelines and Originality: Degree E, 10 pts.

Incumbent creatively extends, adds new dimensions to, or supplants existing theory or methodology, and/or applies a high degree of imagination and creativity in solution of problems of marked importance, for which there is an almost complete absence of applicable guidelines, literature, and methodology.

Factor 4 - Qualifications and Scientific Contributions Degree E, 10 pts.

Incumbent has achieved outstanding attainment in the field of physical science and has authored a number of important papers, some of which have had major impact on physical science.

Incumbent is regularly sought out by peers who are specialists and recognized scientists in the physical sciences. Incumbent is invited to address national professional organizations. Other researchers take note of incumbent's published results/papers in order to keep abreast of new developments in the field.

Total Points: 10 + 10 + 10 + 20 = 50

This position is exempt from coverage under the Fair Labor Standards Act.

#### **IV. UNIQUE POSITION REQUIREMENTS**

(Last Updated: Research November 4, 1994)

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