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Physical Scientist (Research) 14

GS-1301-14 Research

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I. INTRODUCTION

This position is located in

This position serves as research leader 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. 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.

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 D, 8 pts.

Conducts a systematic research attack on a problem area of considerable scope and complexity. Provides technical leadership in formulating research attacks on problems which have been recognized as critical obstacles to progress or development in areas of exceptional interest. The problem area is approached by a series of complete but related studies. Sophisticated research techniques are applied to solve problems. Studies will result in a series of publications, providing important changes to existing products, processes, techniques or practices.

Factor 2 - Supervision Received Degree D, 8 pts.

Incumbent is assigned a broad problem area with freedom to identify, define and select specific problems, as well as their priority in terms of importance to the program and likelihood of success. Technical supervision is nominal and consultative in nature. Supervisor is kept informed through informal discussions of general plans and progress of work, and consulted when proposed changes involve considerable investment of resources, but incumbent has full control over equipment and personnel already allocated. Completed work is considered technically authoritative and reviewed only for accomplishment of objectives.

Factor 3 - Guidelines and Originality Degree D, 8 pts.

Incumbent applies new techniques and original methods of attack to the solution of important problems that present novel or unprecedented aspects, and for which there is a dearth of scientific literature. A high degree of insight and ingenuity is required to isolate and define critical features of problem, and to adapt, extend and synthesize existing theory, principles and techniques, or, at times, to formulate new theory or methodology.

Factor 4: Qualifications and Scientific Contributions Degree D, 16 pts.

Incumbent a) has authored one or more important papers which are beginning to have a major impact on the field or are becoming accepted as definitive; b) has contributed new inventions, designs or techniques regarded as important advances in the state of the art; c) is regularly sought out by peers who are recognized scientists in the field; and d) is invited to address national professional organizations. Other researchers take note of incumbent's published results in order to keep abreast of new developments.

Total Points: 8 + 8 + 8 +16 =40

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

IV. UNIQUE POSITION REQUIREMENTS

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