

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

LDEO Research Scientist Handbook

Draft Version 3.0

July 2017

**Office of the Director
Lamont-Doherty Earth Observatory
Columbia University**

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Draft Version 3.0, July 2017

General Description

The position of research scientist within Lamont-Doherty Earth Observatory results from the development of a number of long-term projects and large, stable research groups within the Observatory. In order to fulfill their scientific objectives, these projects and groups have a long term need for outstanding scientists, whose contributions are essential to the intellectual mission of the project, but whose roles do not necessarily fit the definition of a Lamont research professor. Research scientists hold a Ph.D. in science or an equivalent terminal earned degree. They engage in scientific discourse and activities to advance the intellectual goals of their project and contribute to the scholarly output of their group.

Research scientists are not guaranteed long-term salary support through LDEO's endowments. They are allowed, but not required, to serve as Principal Investigators (PIs) on grants and contracts. Each research scientist will have a specific, individual job description that defines the role and activities that they are expected to undertake within the project or group and they will typically report to a PI for the project or group. Research scientists, however, may also lead facility or research groups and raise external funding for the support of their group.

A research scientist will receive an annual performance review based on their job description, their contributions to the project or group, and their scientific output, with the relative importance of these criteria depending on their individual responsibilities. Depending on the research scientist's activities, the reviewer will be the PI of their project or group or the divisional Associate Director. It is expected that as research scientists gain experience and expertise, their responsibilities will grow. Research scientists will be promoted through the steps on the research scientist career track following the criteria and procedures in this handbook. The main step in this career progression is the Major Review (see page 18-21) for promotion to the LDEO Senior Staff. Building a record to demonstrate scientific expertise and leadership will be key for a successful promotion to the LDEO Senior Staff.

Titles

There are three ranks of research scientist positions at LDEO:

- Associate Research Scientist (ARS)
- Research Scientist (RS)
- Senior Research Scientist (SRS)

Membership on the Lamont Scientific Staff

Research Scientists and Senior Research Scientists are members of the LDEO Senior Staff, while Associate Research Scientists are members of the LDEO Junior Staff.

Appointment to the LDEO Senior Staff

For appointment to LDEO Senior Staff, a candidate must demonstrate scientific expertise and leadership. Examples of such expertise and leadership include but are not limited to: publications and/or technical reports; scientific expertise important to a LDEO project; technical innovation; leadership activity within the research group; leadership activity or service to the larger scientific community; senior managerial and/or intellectual leadership; membership on internal and/or external scientific committees and panels; serving as a PI or co-PI on funded grant proposals; advising students and junior staff; education and outreach activities; developing software, databases, and/or instructional materials for a broad audience; and/or any other relevant activity pertinent to the position.

Representation on the LDEO Executive Committee

A research scientist representative is appointed to the LDEO Executive Committee (ExCom) by the Director, LDEO. This appointment is for three years and is made after consulting with other research scientists. The responsibilities of the research scientist representative are the following:

- Provide a meeting report to other research scientists after every ExCom meeting.
- Solicit input from other research scientists
- Organize research scientist meetings no less than twice a year

- Act as the representative for research scientists and bring to ExCom issues that are relevant to research scientists

Terms of Appointment

Research scientist appointments are generally given out for a term of one year. In some cases the appointment may be for less than a year, depending on the needs of the project. Research scientist appointments carry an expectation of renewal contingent upon:

- i) Satisfactory performance at the annual merit review
- ii) Availability of funding for the position;
- iii) For individuals appointed on or after 1 September 2017, the successful completion of the Developmental and Major Reviews

Salary is guaranteed by LDEO for the term of the appointment. As with all scientific appointments LDEO undertakes to insure, to the extent feasible, the long-term stability of employment of research scientists, especially at senior levels. In the event that the appointment of a research scientist on the LDEO senior staff is not renewed, the Associate Director may request a review to be carried out by the Promotions & Careers subcommittee (P&C), which may recommend to ExCom a support plan that will allow the research scientist to continue in his/her position. Factors considered by P&C will include, but are not limited to, seniority, funding record, relevance of scientific research to LDEO, and the expected amount and duration of the financial support. The final decision is made by the Director, LDEO.

Research scientist appointments are renewable yearly, upon successful annual performance evaluation, contingent on continued funding of the project(s). Appointments and promotions at the senior staff level (RS and SRS) are voted upon by the LDEO Senior Staff and the LDEO Executive Committee, with the final decision being made by the Vice Provost for Faculty Affairs on behalf of the Provost of the University. Appointments for junior staff (ARS) are made at the divisional level.

Requirements for Appointment to the Research Scientist track:

Associate Research Scientist (ARS)

The following are the requirements for an ARS:

- Ph.D. in a scientific discipline relevant to the project. Post-doctoral experience is not required but may be a preference by the project supervisor, as needed.
- Demonstrated expertise important to an existing or nascent LDEO project.
- A record of publications in the scientific literature (including technical reports and proceedings volumes).
- Additional requirements may be included such as:
 - The ability to generate software, instructional materials, articles about science for a popular audience, websites, databases or similar products pertinent to the position
 - Demonstrated organizational, managerial, editorial or public outreach skills.

Research Scientist (RS)

The following are the requirements for a RS:

- Completed Ph.D. and six years experience beyond Ph.D. in a scientific discipline or equivalent terminal degree relevant to the project.
- Demonstrated expertise important to an existing or nascent LDEO project (position description should specify exact expertise required)
- A record of publications in the scientific literature (including technical reports and proceedings volumes).
- Any additional qualifications including:
 - ability to generate software, instructional materials, articles about science for a popular audience, websites, databases or similar products pertinent to the position.
 - demonstrated organizational, managerial, editorial or public outreach skills.

Senior Research Scientist (SRS)

The following are the requirements for a Senior Research Scientist:

- Completed Ph.D. and ten years experience beyond PhD in a scientific discipline or equivalent terminal degree relevant to the project.
- Demonstrated expertise important to an existing or nascent LDEO project (position description should specify exact expertise required)
- A record of publications in the scientific literature (including technical reports and proceedings volumes).
- Expected additional qualifications including:
 - ability to generate software, instructional materials, articles about science for a popular audience, websites, databases or similar products pertinent to the position.
 - demonstrated organizational, managerial, editorial or public outreach skills.

Search Process for Appointment to the Research Scientist Track

Search Process for Appointment to Associate Research Scientist (ARS)

The project supervisor provides the divisional Associate Director with confirmed documentation of one year of salary support for the ARS position. In addition, the project supervisor also provides a rationale for hiring an Associate Research Scientist as opposed to one of the other scientific tracks at LDEO. The Associate Director presents the case to P&C for review. After review, P&C makes a recommendation to the Director, LDEO on whether to approve the search. The Director, LDEO makes the final decision on the search request. If the search request is approved by the Director, LDEO, the project supervisor provides LDEO HR with a list of search committee members. The project supervisor acts as the chair of the search committee. Search committee members should hold one of the following ranks: Lamont associate research professor, Lamont research professor, Research Scientist, Senior Research Scientist, or DEES associate/ full professor. For all searches, candidates will be expected to provide the following:

1. Curriculum vitae (including list of publications)
2. Names of at least three referees familiar with the candidate's work, holding a position equal to or higher than ARS. At least one of these referees must be external

3. Documentation of any additional professional accomplishments relevant to the job description

After selecting the top candidate, the search committee chair presents the complete dossier (CV, reference letters, job description, any additional documentation) to the division Associate Director for approval. The Associate Director presents the case to P&C for review. P&C makes a recommendation to the Director, LDEO who makes the final decision.

Search Process for Appointment to Research Scientist (RS)

The project supervisor provides the divisional Associate Director with confirmed documentation of one year of salary support for the Research Scientist position. When the description and funding are approved, the project supervisor provides LDEO HR with a list of search committee members. The project supervisor acts as the chair of the search committee. Search committee members should hold one of the following ranks: Lamont associate research professor (senior), Lamont research professor, Research Scientist, Senior Research Scientist, or tenured DEES faculty. For all searches, candidates will be expected to provide the following:

1. Curriculum vitae (including list of publications)
2. Names of at least three referees familiar with the candidate's work, holding a position equal to or higher than RS. At least two of these referees must be external.
3. Documentation of any additional professional accomplishments relevant to the job description

After completing the selection process and short-listing the top candidate, the search committee chair presents the completed dossier (CV, reference letters, job description, any additional documentation) to the division Associate Director for approval. The Associate Director obtains at least two¹ external letters and presents the case to the divisional Senior Staff and calls a vote. When seeking external letters, individuals should be chosen who have no known conflict of interest in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that they bring special knowledge and insight to the

¹ (Note: the Provost's Office wants more external letters since this is a senior staff appointment. Suggest 3-5 external letters?)

evaluation. In such cases, all past and current professional relationships between the letter writer and the candidate must be documented in the file. The completed dossier along with the outcome of the divisional vote is forwarded to P&C for review. P&C makes a recommendation to the Director, LDEO. The Director, LDEO, consults with ExCom on whether the case should go forward to a Senior Staff meeting. If the ExCom recommendation is positive and endorsed by the Director, LDEO, a LDEO Senior Staff meeting is held where the Associate Director in the candidate's division and the P&C Chair present the case for appointment. A secret ballot vote is taken during the meeting, which is considered a straw poll expressing the sentiment of those in attendance. A mail ballot is taken following the meeting. Those eligible to vote are members of the LDEO Senior Staff at the same rank or higher than that for which the candidate is being reviewed. The vote carries if two thirds of those voting yes or no² on the mail ballot vote yes, and the affirmative votes constitute a majority of those eligible to vote. Following the Senior Staff vote, the Director, LDEO forwards the candidate's dossier, the vote of the LDEO Senior Staff, the ExCom recommendation, and his or her own recommendation to the Vice Provost for Faculty Affairs, who makes the final decision on the appointment on behalf of the Provost. If the entire process is successful, the appointment is generally made effective on 1 July of the next academic year. If the ExCom recommendation or the outcome of the mail ballot is negative, the appointment process is discontinued.

Search Process for Appointment to Senior Research Scientist (SRS)

The project supervisor provides the divisional Associate Director with confirmed documentation of one year of salary support for the Senior Research Scientist position. When the description and funding are approved, the project supervisor provides LDEO HR with a list of search committee members. The project supervisor acts as the chair of the search committee. Search committee members should hold one of the following ranks: full Lamont research professor, Senior Research Scientist, or tenured full professor from DEES or a related department. For all searches, candidates will be expected to provide the following:

1. Curriculum vitae (including list of publications)

² (The Provost's Office would like us to document reasons for "no" votes and abstentions)

2. Names of at least three referees familiar with the candidate's work, holding a position equivalent to Senior Research Scientist. At least one of these referees must be external.
3. Documentation of any additional professional accomplishments relevant to the job description

After completing the selection process and short-listing the top candidate, the search committee chair presents the candidate's dossier (CV, reference letters, job description, any additional documentation) to the division Associate Director for approval. The Associate Director obtains at least two³ additional letters from sources external to the University who hold a position equivalent to SRS in their own institutions, and presents the case to the divisional Senior Staff at the SRS level and calls a vote. When seeking external letters, individuals should be chosen who have no known conflict of interest in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that they bring special knowledge and insight to the evaluation. In such cases, all past and current professional relationships between the letter writer and the candidate must be documented in the file. The completed dossier along with the outcome of the divisional vote is forwarded to P&C for review. P&C makes a recommendation to the Director, LDEO. The Director, LDEO, consults with ExCom on whether the case should go forward to a Senior Staff meeting. If the recommendation is positive, a Senior Staff meeting is held where the Associate Director in the candidate's division and the P&C Chair present the case for appointment. A secret ballot vote is taken during the meeting, which is considered a straw poll expressing the sentiment of those in attendance. A mail ballot is taken following the meeting. Eligible voters are members of the LDEO Senior Staff at the same rank or higher than that for which the candidate is being reviewed. The vote carries if two thirds of those voting yes or no on the mail ballot vote yes, and the affirmative votes constitute a majority of those eligible to vote. Following the Senior Staff vote, the Director, LDEO forwards the candidate's dossier, the vote of the LDEO Senior Staff, the ExCom recommendation, and his or her own recommendation to the Vice Provost for Faculty Affairs, who makes the final decision on the appointment on behalf of the Provost. If the entire process is successful, the appointment is generally made effective on 1 July of the next academic year. If the ExCom

³ (Note: the Provost's Office wants more external letters since this is a senior staff appointment. Suggest 3-5 external letters?)

recommendation or the outcome of the mail ballot is negative, the appointment process is discontinued.

Promotion and Review Procedures for the Research Scientist Track for Individuals Appointed Before 1 September 2017

Promotion to Associate Research Scientist (ARS)

The project supervisor confirms that the candidate meets the position requirements and that funding at a higher salary is available. The project supervisor also provides a rationale for hiring an Associate Research Scientist as opposed to one of the other scientific tracks at LDEO. The project supervisor also verifies that the candidate has satisfied Equal Opportunity/Affirmative Action (EO/AA) clearance requirements, failing which the promotion process is terminated and a search with EO/AA clearance must be conducted. If the candidate satisfies the EO/AA clearance requirements, the project supervisor compiles a dossier with the following:

- The position description
- Curriculum vitae with publications
- At least three letters of reference, of which at least one is external, from people familiar with the candidate's work
- Documentation of any additional professional accomplishments relevant to the job description.

The project supervisor presents the completed dossier to the division Associate Director for approval. The Associate Director presents the case to P&C for review. P&C makes a recommendation to the Director, LDEO who makes the final decision.

Promotion to Research Scientist (RS)

The candidate must be nominated by a member of the LDEO Senior Staff. The project supervisor confirms that the candidate meets the position requirements and that funding at a higher salary is available. The project supervisor compiles a dossier with the following:

- Nomination letter
- Position description
- Curriculum vitae with publications
- At least three letters of reference, of which at least one is external, from people familiar with the candidate's work
- Evidence of 12 months salary support at the RS level
- Documentation of any additional professional accomplishments relevant to the job description.

The project supervisor presents the candidate's dossier (CV, reference letters, job description, any additional documentation) to the division Associate Director for approval. The Associate Director obtains at least two⁴ external letters and presents the case to the divisional Senior Staff and calls a vote. When seeking external letters, individuals should be chosen who have no known conflict of interest in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that they bring special knowledge and insight to the evaluation. In such cases, all past and current professional relationships between the letter writer and the candidate must be documented in the file. The completed dossier along with the outcome of the divisional vote is forwarded to P&C for review. P&C makes a recommendation to the Director, LDEO. The Director, LDEO, consults with ExCom on whether the case should go forward to a Senior Staff meeting. If the recommendation is positive, a LDEO Senior Staff meeting will be held where the Associate Director in the candidate's division and the P&C Chair present the case for promotion. A secret ballot vote is taken during the meeting, which is considered a straw poll expressing the sentiment of those in attendance. A mail ballot is taken following the meeting. Eligible voters are members of the LDEO Senior Staff at the same rank or higher than that for which the candidate is being reviewed. The vote carries if two thirds of those voting yes or no on the mail ballot vote yes, and the affirmative votes constitute a majority of those eligible to vote. Following the Senior Staff vote, the Director, LDEO forwards the candidate's dossier, the vote of the LDEO Senior Staff, the ExCom recommendation, and his or her own recommendation to the Vice Provost for Faculty Affairs, who makes the final

⁴ *(Note: the Provost's Office wants more external letters since this is a senior staff appointment. Suggest 3-5 external letters?)*

decision on the appointment on behalf of the Provost. If the entire process is successful, the appointment is generally made effective on 1 July of the next academic year. If the ExCom recommendation or the outcome of the mail ballot is negative, the appointment process is discontinued.

It is expected that an ARS will be promoted to RS after six years in the ARS or equivalent position. Under exceptional and extenuating circumstances, an ARS can request an extension for up to 3 years to delay promotion to RS. This extension must be approved by P&C and ExCom, and endorsed by the Director, LDEO. If the ARS does not get promoted within this time, then she or he is given one terminal year after which she or he may move to another track (e.g., Senior Staff Associate) at LDEO.

Promotion to Senior Research Scientist (SRS)

The promotion from Research Scientist to Senior Research Scientist is an optional step, and can be initiated at any time as long as the candidate has served at least 3 years in the Research Scientist title. The candidate must be nominated by a member of the LDEO Senior Staff who is at a comparable position, i.e. Lamont research professor (full), Senior Research Scientist, or tenured full professor from DEES or a related department. The project supervisor confirms that the candidate meets the position requirements and that funding at a higher salary is available. The project supervisor compiles a dossier with the following:

- Nomination letter
- Position description
- Curriculum vitae with publications
- At least three letters of reference, of which at least one is external, from people familiar with the candidate's work
- Evidence of 12 months salary support at the SRS level
- Documentation of any additional professional accomplishments relevant to the job description.

The project supervisor presents the candidate's dossier (CV, reference letters, job description, any additional documentation) to the division Associate Director for approval. The Associate

Director obtains at least two additional letters from sources external to the University who hold a position equivalent to SRS or higher in their own institutions, and presents the case to the divisional Senior Staff at the SRS level and calls a vote. When seeking external letters, individuals should be chosen who have no known conflict of interest in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that they bring special knowledge and insight to the evaluation. In such cases, all past and current professional relationships between the letter writer and the candidate must be documented in the file. The completed dossier along with the outcome of the divisional vote is forwarded to P&C for review. P&C makes a recommendation to the Director, LDEO. The Director, LDEO, consults with ExCom on whether the case should go forward to a Senior Staff meeting. If the recommendation is positive, a Senior Staff meeting is held where the Associate Director in the candidate's division and the P&C Chair present the case for promotion. A secret ballot vote is taken during the meeting, which is considered a straw poll expressing the sentiment of those in attendance. A mail ballot is taken following the meeting. Eligible voters are members of the LDEO Senior Staff at the same rank or higher than that for which the candidate is being reviewed. The vote carries if two thirds of those voting yes or no on the mail ballot vote yes, and the affirmative votes constitute a majority of those eligible to vote.

If the promotion is unsuccessful, the candidate may remain at the RS level. He or she may be reconsidered for promotion to SRS in the future if there is evidence of substantial new accomplishments. To initiate reconsideration, the candidate and project supervisor must prepare a statement of new accomplishments and add it to the previously submitted dossier. These new accomplishments are reviewed by the Associate Director. If new accomplishments are seen to be substantial, the Associate Director, with the approval of the Director, LDEO initiates the process of nomination.

Promotion and Review Procedures for the Research Scientist Track for Individuals Appointed After 1 September 2017

Reviews for Associate Research Scientists (ARS)

Every Associate Research Scientist (ARS) is reviewed annually for performance as part of the Observatory's standard salary and merit review procedures. To monitor and provide feedback on their professional progress, ARSs are also evaluated for performance in formal reviews normally scheduled in their fourth and seventh years on the Junior Staff. The Director's Office is responsible for advising the appropriate divisional Associate Directors about those scientists who are eligible for review and promotion in a given academic year in August of that year. The Associate Director will then notify the eligible scientists in their division, advise them on the assembly of an appropriate dossier, and solicit internal materials as needed. As a matter of policy and tradition, the Director is responsible for soliciting letters from external referees and any other external materials as deemed necessary.

Developmental Review of Associate Research Scientists

The Developmental Review must be completed by the end of the fourth year of an appointment as an Associate Research Scientist. The Developmental Review is a thorough assessment of an Associate Research Scientist's potential for meeting, at the time of the Major Review, the criteria for promotion to the LDOE Senior Staff. The responsibility for organizing this review lies with the divisional Associate Director who may be assisted by the LDEO Director's Office. The goals of the Developmental Review are to:

- a) Determine whether the individual should be granted another term of three years as an Associate Research Scientist
- b) Provide the Associate Research Scientist with feedback about his or her professional progress in the research scientist track
- c) Open a channel of communication between the Director's Office and the Associate Research Scientist
- d) Identify individuals whose capabilities are better suited to a different track
- e) Identify exceptional individuals as candidates for early promotion.

The review is conducted by a committee composed of an advocate, two Associate Directors (including the Associate Director of the candidate's division), the LDEO Deputy Director, and the LDEO Director. The Associate Director who is not from the Associate Research Scientist's

division chairs the committee. In preparation for the Developmental Review, the Associate Research Scientist should assemble a dossier comprising relevant items selected from the list below, and any other items relevant to the candidate's particular circumstances:

- A curriculum vitae, including a complete list of publications;
- A list of proposals submitted, awarded, and declined;
- A statement of current and pending support;
- Reprints or preprints of up to four papers that describe work done as an Associate Research Scientist;
- A statement of past, present, and future research interests;
- A statement of any other contributions, past, present, and envisioned, such as:
 - development and implementation of important research and/or educational initiatives,
 - technical innovation in the pursuit of science, and
 - service to the Observatory and to the scientific community at large;
- Any other relevant information that the Associate Research Scientist would like to provide the committee.

While the candidate assembles their dossier, the Associate Director of the candidate's research division should solicit and provide to the Director's office at least two internal letters of support from members of the Senior Staff. If acceptable to the LDEO Director, other individuals who are very familiar with the candidate's work and have demonstrated close ties to LDEO may contribute letters. A letter of support from a senior staff member in another Earth Institute unit, or a tenured faculty member in a different Columbia University department, may on occasion be appropriate; the LDEO Director in consultation with the P&C Committee Chair decides acceptability of such an internal letter. The LDEO Director, Deputy Director, and Chair of the P&C Committee cannot contribute letters of support. The Associate Director of the candidate's division cannot normally contribute a letter of support, but in the event that the Associate Director is a close scientific collaborator of the candidate being reviewed and would like to contribute a letter of support, he or she must be recused from the Developmental Review process. In such a situation the LDEO Director appoints another individual who will perform the Developmental Review duties normally carried out by the divisional Associate Director.

The Associate Director, in consultation with the candidate, will provide to the Director a list of at least four names of potential external letter writers, and may also indicate if there are any other individuals who should not be contacted for letters. The candidate is offered the opportunity to suggest an advocate (from among the LDEO Senior Staff members or LDEO Special Research Scientists) and also to indicate people who would not be desired as an advocate. The LDEO Director makes the final decision on selecting the external letter writers and the advocate. After the candidate has submitted the dossier to the Director's Office, the Director's Office will seek two external letters of support. When seeking external letters, individuals should be chosen who have no known conflict of interest in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that they bring special knowledge and insight to the evaluation. In such cases, all past and current professional relationships between the letter writer and the candidate must be documented in the file.

In some cases, depending on the specific nature of the candidate's role and responsibilities, it may not be appropriate to solicit additional letters from external sources. In such a situation, prior to initiating Developmental Review proceedings, the candidate's supervisor and divisional Associate Director will make a case to the Director and ExCom. The Director calls for a formal vote on whether external letters should be solicited for the candidate. The result of this vote is recorded, and is included in the candidate's promotion file along with an explanation*. If ExCom votes to not seek external letters, the candidate will require three internal letters instead of two. Once the full dossier, including external letters, has been assembled, the Developmental Review Committee reviews these materials and interviews the Associate Research Scientist. At the interview, the Associate Research Scientist presents an overview of his or her past, present, and future work and answers questions from the committee. The committee then prepares a written report containing:

1. A statement of the outcome of the review, from among the following four possible outcomes:
 - (a) Performance is considered exceptional and the individual is granted another three-year appointment and is also offered the opportunity to be considered for early promotion to the

* *Note: the Provost's Office is requiring this step so that there is no perceived arbitrariness regarding the decision on whether to seek external letters for a candidate or not.*

LDEO Senior Staff. In the event that an early promotion opportunity is offered, the candidate may decide to stand for the Major Review in the sixth year.

- (b) Performance meets expectations and the individual is granted another term for three years. If performance meets most expectations but the committee believes that the individual would benefit from further guidance, additional review activities may be scheduled. In such a case the Associate Director of the individual's division will be responsible for overseeing the necessary review and guidance activities.
 - (c) Performance is satisfactory as per the candidate's job description, but the committee believes that the candidate will not meet the requirements for promotion to the LDEO Senior Staff, and suggests moving the candidate to another position at LDEO.
 - (d) Performance is considered unsatisfactory, and the individual is given a one-year terminal appointment on the RS track.
2. For each candidate, a clear and thorough description of their strengths and weaknesses.
 3. For each candidate who will remain at LDEO, an evaluation of his or her potential for meeting, at the time of the Major Review, each of the criteria for promotion to the LDEO Senior Staff.

The report will be drafted by the Developmental Review Committee chair and reviewed and approved by the other committee members, after which it is sent to P&C Committee for feedback and possible changes in recommendations. Once the P&C Committee has provided feedback, the report is then evaluated and approved by ExCom; ExCom may elect to edit the report further. The Developmental Review Committee, including the LDEO Director and Deputy Director, then discusses the final report with the Associate Research Scientist in person.

In the event that an annual performance review or the Developmental Review predict that an Associate Research Scientist will not meet criteria for promotion to the LDEO Senior Staff, a case can be made to move the candidate to another track, if agreeable to the candidate. The individual may have a specific set of skills and knowledge that are of value to their research group, and if a case can be made that losing the individual would be to the detriment of the group, the project supervisor and the Associate Director may make a request to the P&C

Committee to review the case. After the P&C Committee has reviewed the case, it makes a recommendation to the Director, LDEO who makes the final decision on the change of position.

Major Review of Associate Research Scientists

Candidates will be considered for promotion to the LDEO Senior Staff at the rank of Research Scientist at the beginning of the seventh year as a member of the Junior Staff, or upon the recommendation of the candidate's supervisor and the divisional Associate Director. Candidates may request earlier consideration from the LDEO Director, who will consider early action with advice from the divisional Associate Director, the Promotions & Careers (P&C) Committee and the LDEO Executive Committee (ExCom).

The project supervisor and the divisional Associate Director hold a discussion with the candidate and agreement is reached whether or not to proceed with the promotion process. The candidate can pursue one of the following three options: i) to proceed with the Major Review and promotion to LDEO Senior Staff; ii) to decline the promotion process and terminate the ARS appointment at the end of the seventh year; iii) to transfer to a different track within LDEO which is better suited to their responsibilities. In the event that the candidate chooses not to proceed with the promotion, the Director, LDEO and the P&C Committee must be notified right away for follow up action.

In recognition of the various roles and responsibilities of candidates on the RS track, there is no specific template governing the candidate's review dossier. However, in preparation for the Major Review, the candidate must assemble a dossier comprising relevant items selected from the list below, and any other items relevant to the candidate's particular circumstances:

- A curriculum vitae, including a complete list of publications;
- A list of proposals submitted, awarded, and declined;
- A statement of current and pending support;
- A copy of the job description on file;
- Reprints or preprints of up to four papers that describe work done as a member of the Lamont Junior Staff;

- An up-to-date citation report;
- A statement of past, present, and future, research and project interests and roles;
- A statement of any other contributions, past, present, and envisioned, such as:
 - development and implementation of important research and/or education initiatives,
 - technical innovation in the pursuit of science, and
 - service to the Observatory and to the scientific community at large
- Any other information that the candidate would like to share with the committee

The candidate's dossier should be completed and submitted to the LDEO directorate no later than the end of September of the candidate's review year. While the candidate assembles his or her dossier, the divisional Associate Director will seek five letters of support from members of the LDEO Senior Staff. If acceptable to the LDEO Director, other individuals who are very familiar with the candidate's work and have demonstrated close ties to LDEO may contribute letters. A letter of support from a senior staff member in another Earth Institute unit, or a tenured faculty member in a different Columbia University department, may on occasion be appropriate; the LDEO Director in consultation with the P&C Committee Chair decides the acceptability of such letters. The LDEO Director, Deputy Director, and Chair of the P&C Committee cannot contribute letters of support. The divisional Associate Director cannot normally contribute a letter of support, but in the event that the Associate Director is a close scientific collaborator of the candidate being reviewed and would like to contribute a letter of support, he or she must be recused from the Major Review process. In such a situation the LDEO Director appoints another individual who will perform the Major Review duties normally carried out by the divisional Associate Director. These letters of support must be delivered to the LDEO Director and the P&C Committee chair by the end of September in the candidate's review year.

Before the end of September in the review year, the supervisor and divisional Associate Director, in consultation with the candidate, will provide the names and contact information for up to five potential external letter writers. The Associate Director may also indicate if there are any other individuals who should not be requested to contribute letters. The LDEO Director will then solicit 3–5 letters from qualified external sources who have a full-time position at a rank equal to or above that of a Research Scientist or tenured Associate Professor at their own institution.

When seeking external letters, individuals should be chosen who have no known conflict of interest in the process. Individuals who have had close collaborations with the candidate may be chosen only if a case can be made that they bring special knowledge and insight to the evaluation. In such cases, all past and current professional relationships between the letter writer and the candidate must be documented in the file.

Depending on the roles performed by the candidate, it may or may not be appropriate for him or her to deliver a seminar or presentation to the Lamont community. At a minimum, the divisional Associate Director should convene a representative discussion and render a consensus recommendation on the need for a presentation. If recommended, the candidate will give a seminar or presentation on his or her activities, which shall be announced publicly to the Lamont community, and for which the LDEO Senior Staff will be notified in confidence that the presentation is part of the Major Review.

In some cases, depending on the nature of the candidate's research, it may not be appropriate to solicit additional letters from external sources. In such a situation, prior to initiating Major Review proceedings, the candidate's supervisor and divisional Associate Director will make a case to the Director and ExCom. The Director calls for a formal vote on whether external letters should be solicited for the candidate. The result of this vote is recorded, and is included in the candidate's promotion file along with an explanation*. In the event that ExCom votes to not seek external letters, the candidate will require seven internal letters instead of five.

Following the receipt of any letters and the presentation if applicable, the LDEO Senior Staff will be invited to review the complete dossier and comment in writing on the suitability of the candidate for promotion. These written comments will become part of the dossier. Additional comments will normally not be considered from those members of the senior staff who wrote letters of support, unless these additional comments provide supplemental information that was not included earlier. The P&C Committee will review the dossier, including all letters and

* *Note: Provost's Office is requiring this step so that there is no perceived arbitrariness regarding the decision on whether to seek external letters for a candidate or not.*

comments, and the Committee Chair will make a recommendation to the LDEO Director, who then presents the case to ExCom for a vote.

If the P&C Committee recommendation is negative, and the LDEO Director, in consultation with ExCom, endorses that recommendation, the promotion process is discontinued. At the time that the promotion process is discontinued, a decision must be made whether to grant the candidate a terminal one-year appointment, or to give the candidate a one-time option of applying for promotion two years later. If the decision is to consider the candidate for a delayed promotion, a clear rationale must be provided to the Provost's Office since such a delay would be granted only in the case of extenuating and exceptional circumstances.

If the P&C Committee recommendation is positive, and the LDEO Director, in consultation with ExCom, endorses that recommendation, a Senior Staff meeting will be held at which the Chair of the P&C Committee reads the P&C Committee report, and the divisional Associate Director presents the case for promotion. A vote by secret ballot is taken during the meeting; the vote is considered a straw poll expressing the sentiment of those in attendance. An electronic ballot is then taken following the meeting. Those eligible to vote are members of the LDEO Senior Staff at the same rank or higher than that for which the candidate is being reviewed. The vote to promote the candidate carries if two thirds of those voting yes, no, or abstain on the electronic ballot vote yes, and if the affirmative votes constitute a majority of those eligible to vote.

Following the Senior Staff vote, the Director forwards the candidate's dossier, the vote of the LDEO Senior Staff, the vote of ExCom on the appointment, the vote of ExCom and explanation on whether to seek external letters, and his or her own recommendation to the Vice Provost for Faculty Affairs, who makes the final decision on the appointment on behalf of the Provost of the University. If the entire process is successful, the appointment is generally made effective on 1 July of the next academic year.

Promotion to Senior Research Scientist

For promotion procedures to Senior Research Scientist, see pages 12-13.

Moving Between Lamont Research Professor and Research Scientist Positions:

A research scientist can be nominated for a Lamont research professor position. In order to be nominated the research scientist must pass the full review process for appointment to the appropriate position in the Lamont research professor track. If a research scientist moves to the Lamont research professor track and then comes under consideration for promotion within that track, the time spent as a research scientist shall not count towards the time limit for promotions within the Lamont research professor track.

A Lamont research professor may apply for a research scientist position. In order to be appointed as a research scientist, the Lamont research professor must meet the eligibility requirements for the research scientist position being considered. Details on moving between LRP and RS tracks are provided in the Appendix.

Professional Development (*This is under discussion and is not yet finalized***)**

Research scientists are encouraged to pursue professional development activities. This includes training courses, meetings, conferences, and/or independent education or research activities. A research scientist wishing to take professional development time must receive prior approval from his/her supervisor. In order to support the professional development of the research scientists the LDEO Directorate will provide financial support to carry out professional development activities, subject to the approval of the project supervisor and the division Associate Director. It is expected that Senior Staff members on the Research Scientist track, i.e. Research Scientists and Senior Research Scientists, will receive a professional development benefit up to \$2,000 per year. This benefit can be banked up to the amount that would be received in five years (e.g., \$10,000 for a \$2,000 annual benefit).

Terminations

Research scientist appointments are one-year appointments. Salary is guaranteed for the duration of the appointment. However, appointments may end as a result of any of the following actions: a decision not to reappoint, resignation, retirement, or dismissal.

Decision Not to Reappoint / Notice of Non-Renewal

Research scientists are entitled to a notice of non-renewal. In the event that the appointment will not be renewed, they must be informed at least three months in advance of the end of the stated term of appointment that the appointment will not be renewed. Notice of non-renewal must be given in writing and must be clear and unambiguous. It may not be contingent upon any subsequent decision (such as the outcome of a review). Termination procedures may be initiated at any time in accordance with university policy.

Resignation

A research scientist who wishes to resign is expected to give notice in writing as early as possible, but no less than three months before the resignation will be effective.

Retirement

Consistent with current law, officers of research cannot be mandatorily retired. A research scientist may voluntarily retire after reaching age 55 if they have 10 years of full-time service by writing, as appropriate, to his or her project supervisor or Associate Director. Retirement ordinarily occurs at the end of the officer's stated term of appointment. However, it may take effect at an earlier date as long as the officer provides three months' notice, in writing, of the decision to retire.

Dismissal

Dismissal for cause is permitted only when there is clear evidence of failure to perform professional responsibilities or personal misconduct, according to the procedures described below. They also may be dismissed for a violation of the "Rules of University Conduct" concerning demonstrations, rallies, and picketing, following a separate set of procedures. The

project supervisor and Associate Director are expected to attempt to resolve problems with the performance or behavior of a research scientist before initiating any action to suspend or dismiss. If the problem is not overcome the project supervisor and Associate Director consult with the Director, LDEO. The research scientist is then given an oral warning and then a letter that clearly describes the problems, details the actions s/he must take to remedy them, and warns that disciplinary action, up to and including dismissal, will be taken if they are not corrected within a specified period of time. All these steps must be approved by the Director, LDEO, who is responsible for informing the Office of the Provost of the case.

To ensure that research scientists are not subjected to arbitrary or discriminatory procedures, all terminations before the end of the stated term of appointment must be approved by the appropriate Associate Director, Director, LDEO, and the Provost. The Provost has delegated responsibility for reviewing requests to terminate for cause to the Senior Vice Provost for Academic Administration. A research scientist may appeal a decision of dismissal, following the grievance procedures of the University. Officers who elect that option may not be terminated until the investigation of their complaints is completed, and the Provost concludes that the decision to dismiss is justified. They normally continue to receive salary until the Provost reaches a decision.

Appendix: Moving Between LRP and RS Tracks

Individuals on the Research Scientist track may request to transfer to the Lamont Research Professor track and vice versa, if the individual, his/her Associate Director and supervisor believe that s/he is better suited for the other track. Such a transfer can only occur according to the guidelines laid out below⁵. Changing tracks in this manner is considered a lateral transfer and not a promotion. A lateral transfer occurs when a scientist at a particular rank on one track moves to a similar rank on another track. Based on CU defined ranks and tracks, and the subsequent conversion of the Doherty Research Scientist track to the Lamont Research Professor track, the following table indicates possible lateral transfers between the RS and LRP tracks:

Lamont Research Professor Track	Research Scientist Track
Lamont Asst. Research Professor ← →	Assoc. Research Scientist
Lamont Assoc (Junior) Res Prof ← →	Assoc. Research Scientist
Lamont Assoc (Senior) Res Prof ← →	Research Scientist
Lamont Research Professor (full) ← →	Senior Research Scientist

Procedures

1. From Research Scientist Track to LRP Track:

SRS to (Full) LRP

- The Associate Director initiates the process by seeking approval from the Director, LDEO and the candidate’s supervisor (if applicable). The Director consults with Finance/Admin (and any other relevant individuals) to ensure that funds are available to make such a transfer possible.

⁵ *As with all other appointments and promotions at LDEO, if a conflict of interest is identified during any stage of the procedures outlined in this document, the concerned individuals will need to recuse themselves.*

- Once the necessary approvals have been obtained the Associate Director brings the case to the Promotions & Careers Committee (P&C) for consideration. If necessary P&C may request additional information from the candidate and/or the Associate Director in order to arrive at a decision. P&C can do one of the following:
 - i. Recommend the transfer
 - ii. Recommend denial of transfer – such a decision does not adversely affect the candidate’s ability to make a lateral transfer at a later date
- If P&C recommends the transfer, the Associate Director prepares a dossier on the candidate – similar to the dossier for promotion to full LRP from Assoc Sr. LRP. The Director, LDEO obtains at least 10 external letters from people at the SRS level or higher at their institutions.
- The candidate gives a seminar. The senior staff is invited to comment and vote on the suitability of the transfer. If the senior staff vote is positive, the Director forms an ad hoc committee to review case, following the same guidelines as that of promotion to senior staff on the LRP track.
- If the ad hoc committee response is positive, the Director calls a vote at ExCom. The Director then sends the dossier to the Provost’s Office (along with the recommendation of the ad hoc committee, the ExCom vote, the senior staff vote, and the Director’s own endorsement) for approval.
- If the recommendation of the ad hoc committee is negative the candidate may remain on the RS track.

RS to Assoc (Sr) LRP

- The Associate Director initiates the process by seeking approval from the Director, LDEO and the candidate’s supervisor (if applicable). The Director consults with Finance/Admin (and any other relevant individuals) to ensure that funds are available to make such a transfer possible.
- Once the necessary approvals have been obtained the Associate Director brings the case to P&C for consideration. If necessary P&C may request additional information from the

candidate and/or the Associate Director in order to arrive at a decision. P&C can do one of the following:

- i. Recommend the transfer
 - ii. Recommend denial of transfer – such a decision does not adversely affect the candidate’s ability to make a lateral transfer at a later date
- If P&C recommends the transfer, the Associate Director prepares a dossier on the candidate – similar to the dossier for promotion to Assoc Sr. LRP from Assoc Jr. LRP. The Director obtains at least 10 external letters from people at the RS level or higher at their institutions.
 - The candidate gives a seminar and the senior staff are invited to comment and vote on the suitability of the transfer. If the senior staff vote is positive, the Director forms an ad hoc committee to review case, following the same guidelines as that of promotion to senior staff on the LRP track.
 - If the ad hoc committee response is positive, the Director calls a vote at ExCom. The Director then sends the dossier to the Provost’s Office (along with the recommendation of the ad hoc committee, the ExCom vote, the senior staff vote, and the Director’s own endorsement) for approval.
 - If the recommendation of the ad hoc committee is negative the candidate may remain on the RS track.

ARS to Assoc Jr LRP

- The Associate Director initiates the process by seeking approval from the Director, LDEO and the candidate’s supervisor (if applicable). The Director consults with Finance/Admin (and any other relevant individuals) to ensure that funds are available to make such a transfer possible.
- Once the necessary approvals have been obtained the candidate prepares a dossier – similar to the dossier for Critical Review at the Lamont Assist. Res. Prof stage. The Director obtains at least 5 external letters from individuals at or higher than a level equivalent to Assoc Jr in their institutions.

- The dossier is available for review and comment by all LDEO scientific staff at the Assoc Jr LRP (or equivalent) level and higher.
- The Associate Director presents the case to P&C. P&C reviews all the materials and makes a recommendation to the Director, LDEO including which year the candidate should be appointed to (i.e. Year 6 or Year 7). The Director, LDEO makes the final decision after consulting with ExCom.
- If the transfer is not successful the candidate may remain on the ARS track.

ARS to Asst LRP

- The Associate Director initiates the process by seeking approval from the Director, LDEO and the candidate's supervisor (if applicable). The Director consults with Finance/Admin (and any other relevant individuals) to ensure that funds are available to make such a transfer possible.
- Once the necessary approvals have been obtained the candidate prepares a dossier– similar to the dossier for Developmental Review at the Lamont Asst. Res Prof. stage.
- The Associate Director presents the case to P&C. P&C reviews all the materials and makes a recommendation to the Director, LDEO including the appropriate year at which the candidate should be appointed (i.e. on the five-year Lamont Asst. Res Prof timescale). The Director, LDEO makes the final decision after consulting with ExCom.
- If transfer not successful, the candidate may remain as an ARS.

2. From LRP Track to Research Scientist Track:

(Full) LRP to SRS

- The Associate Director initiates the process by seeking approval from the potential project supervisor who provides a confirmed documentation of a minimum of one year's salary support. If necessary, the Associate Director and the potential project supervisor may consult with the Director, LDEO.

- Once the necessary approvals have been obtained the Associate Director obtains at least 2 external letters and the project supervisor obtains at least 2 internal letters – all at the level of SRS or higher.
- The Associate Director then brings the case to P&C for consideration. The candidate prepares a dossier similar to that of promotion from RS to SRS. If necessary P&C may request additional information from the candidate and/or Associate Director in order to arrive at a decision. P&C can do one of the following:
 - i. Recommend the transfer to the Director, LDEO
 - ii. Recommend denial of transfer – such a decision does not adversely affect the candidate’s ability to make a lateral transfer at a later date
- The Director, LDEO makes the final decision after consulting with ExCom
- If the transfer is not successful, the candidate may remain as a LRP subject to the LRP evaluation criteria.

Assoc (Sr) LRP to RS

- The Associate Director initiates process by seeking approval from the potential project supervisor who provides a confirmed documentation of a minimum of one year’s salary support. If necessary, the Associate Director and the potential project supervisor may consult with the Director, LDEO.
- Once the necessary approvals have been obtained the Associate Director obtains at least 2 external letters and the project supervisor obtains at least 2 internal letters – all at the level of RS or higher.
- The Associate Director then brings the case to P&C for consideration. The candidate prepares a dossier similar to that of promotion from ARS to RS. If necessary P&C may request additional information from the candidate and/or Associate Director in order to arrive at a decision. P&C can do one of the following:
 - i. Recommend the transfer to the Director, LDEO

- ii. Recommend denial of transfer – such a decision does not adversely affect the candidate’s ability to make a lateral transfer at a later date
- Director, LDEO makes final decision after consulting with ExCom
- If the transfer is not successful, the candidate may remain as a LRP subject to the LRP evaluation criteria.

Assist./ Assoc Jr LRP to ARS

- The Associate Director initiates process by seeking approval from the potential project supervisor who provides a confirmed documentation of a minimum of one year’s salary support. If necessary, the Associate Director and the potential project supervisor may consult with the Director, LDEO.
- Once the necessary approvals have been obtained the Associate Director obtains at least 3 letters of reference, internal or external.
- The Associate Director then brings the case to P&C for consideration. The project supervisor prepares a dossier similar to that of promotion to ARS. If necessary P&C may request additional information from the candidate and/or Associate Director in order to arrive at a decision. P&C can do one of the following:
 - i. Recommend the transfer to the Director, LDEO
 - ii. Recommend denial of transfer – such a decision does not adversely affect the candidate’s ability to make a lateral transfer at a later date
- Director, LDEO makes final decision after consulting with ExCom
- If the transfer is not successful, the candidate may remain as a LRP subject to the LRP evaluation criteria.

Note: A lateral transfer may normally occur only once. However, under compelling circumstances, an individual could make a transfer more than once, subject to the approval of the LDEO Executive Committee, the Director, LDEO and the Provost’s Office.