Authorship of Papers

May 2011

The purpose of the Auger Project is to create new knowledge in Physics. This is accomplished by employing hardware techniques, analysis methods, software systems, physical theories, and phenomenological models. Each of those elements has parts that may be new or may have been known already. The specific combination of all of the parts is unique and is new.

We have joined together in a Collaboration to share what each of us knows with each other, in order to achieve our common goals. The outcome is a unique new scientific endeavor. The Collaboration is more than the sum of its parts.

Much of what each person brings to the Collaboration are things that they have learned, invented, or developed in the past. These include both technical skills and theoretical ideas. In addition, each of us learns new things while we work collaboratively. Such things always arise in part from the interactions we have with our collaborators. We share what we know and what we learn with our collaborators.

Therefore it is our practice to write papers presenting new knowledge in Physics with every collaborator included as a co-author. The rationale is that scientific results arising from analysis of Auger data could not have occurred without the contributions of everyone in the Collaboration. This practice is based on our experiences in earlier cosmic ray experiments and in high-energy physics experiments. It differs from the practice employed in astronomy.

We may permit some papers to be published that do not have the entire Collaboration as authors. These can be allowed if the specific topic is not about our primary physics work. That work includes identifying the sources and acceleration mechanism of cosmic rays, measuring the composition of cosmic rays, and studying characteristics of extensive air showers, especially aspects relating to high energy interactions.

There are two motivations for us to permit an author list that does not have the names of all collaborators. One is that we desire to find ways to highlight the contributions of individuals within the Collaboration to those outside of it, especially since the Collaboration is so large. The second reason is to share what we have learned about experimental techniques with members of the scientific community who are not part of our Collaboration.

The opportunity to publish papers without the full list of collaborators is limited. Members of the Collaboration do not have the same freedom to publish interpretations of Auger data as outsiders do. All members are expected to share fully their ideas and expertise with their collaborators in order to move our project forward. Ideas and expertise may be technical or theoretical, they may be newly developed or have been established before an individual joined the Collaboration. The data from the experiment represent the collective effort of all members. Interpretations of it must also stand as representations of the will and efforts of the Collaboration.

The difference between papers that require the full list of authors and those that do not is sometimes unclear. The distinguishing point is whether the paper uses Auger data to address the fundamental scientific mission of Auger. The decision to allow such papers is sometimes a

subjective one. We have adopted certain guidelines to help us decide which papers are allowed to be published with a short list of authors.

These are:

1. Papers that make no use of published or unpublished Auger data.

2. Conference papers. The presenter may use only his or her name as the author, or a small group of names including those who have specifically performed the work in the presentation. If it is allowed by the conference format, the phrase “for the Pierre Auger Collaboration” should be included.

3. Review papers. Individuals who are invited by conferences or journals to write papers reviewing the field, including Auger results. They need not add “for the Pierre Auger Collaboration” to their author line unless the paper is predominantly a review of Auger results.

4. Technical papers. Individuals or groups of people may write descriptions of specific hardware or software systems for journals like Nuclear Instruments and Methods. They must include all collaborators who have made serious contributions to such systems.

5. Theoretical or phenomenological papers that use Auger data to draw conclusions about scientific issues that are not deemed to be specifically or significantly among the main science target areas of Auger. These areas include cosmic ray sources, acceleration mechanisms, composition, or the characteristics of extensive air showers.

6. Papers using Auger data to describe a method or technique of analysis, but do not present conclusive or strong results on the main science target areas of Auger.

All papers using an incomplete author list should be shown to the Publications Committee (PC) before submission to a publisher. If the paper does not use any Auger data or results, then the PC will treat it as a “non Auger” paper. ~~and~~ **It will** inspect it only to ensure that it presents Auger accurately: **if so, the PC will directly give its approval to the author(s).** All other papers with incomplete author lists must be approved by the PC and undergo the usual steps to approval. In addition, **for these papers,** the PC will ask for assurance from Institutional representatives that the author list does not omit names of significant contributors to the work.