Score for

# Intellectual Merit Criterion

### **Overall Assessment of Intellectual Merit**

Excellent

### Explanation to Applicant

The applicant has excellent leadership, organizational, teamwork and research abilities.

The application has a very good discussion of presentations, patent and publications resulting from the applicant's research experience. Publishing is however a portion that needs to be improved for a successful academic career.

There is a clear discussion of the fit between the research project proposed and the school/group chosen for graduate school. The personal statement is well written and compelling. The research plan is well organized and credible.

## **Broader Impacts Criterion**

#### **Overall Assessment of Broader Impacts**

Excellent

### Explanation to Applicant

The past involvement of the applicant in integrating research and education and encouraging diversity is quite extensive and well discussed. If TA evaluations are available, they can be used to show not only the length of time while teaching but also the quality of teaching/TA-ing. Developing a teaching portfolio is also a good vacation exercise.

The impact on society of the proposed research activity is important and well discussed. There is no discussion of how the research conducted will be disseminated. Mentioning common journals and conferences will show that the candidate is familiar with the field.

# Score for Lubner, Sean

# Intellectual Merit Criterion

### **Overall Assessment of Intellectual Merit**

Excellent

### Explanation to Applicant

This applicant has strongly demonstrated the ability to plan and conduct research, both independently and as a member of a team. There is an in-depth research plan, as well as evidence of presentations which demonstrate the ability to interpret and communicate research findings to a broader audience. The applicant is well-qualified to conduct the proposed research. The applicant discusses how the selected graduate institution supports the proposed research. The application also details how the past and proposed research advance knowledge and understanding in the selected and related fields. This application could be strengthened by additional evidence of the ability to communicate research in the form of publications.

## **Broader Impacts Criterion**

#### **Overall Assessment of Broader Impacts**

Good

### Explanation to Applicant

There is some evidence in the form of presentations of the ability to communicate the findings and methods of research to larger audiences. Additional evidence in the form of publications would be desirable. This application outlines some plans to both broaden opportunities and integrate research and education related to the proposed research, although the application could be strengthened by more robust, in-depth plans in both of these areas. The application would also be strengthened by examples of prior contributions which have integrated research and education to broader audiences or broadened participation in science and research.

# Score for Lubner, Sean

# Intellectual Merit Criterion

### **Overall Assessment of Intellectual Merit**

Excellent

### Explanation to Applicant

The applicant shows great interest in and passion to thermal sciences, as demonstrated through past research experiences and the proposed research plan. The applicant has very strong academic record as demonstrated through the transcripts. The curriculum demonstrated through the transcript seems to be inline with the research experience and the proposed research plan. Some publications have strengthened the application. The number of patent applications he is listed on in impressive. Several honors or awards were identified in the application, which is quit impressive. Based on the personal statement, the applicant possesses strong communication skills. The references are very strong and corroborate most of the experiences and achievements presented by the applicant.

## **Broader Impacts Criterion**

#### **Overall Assessment of Broader Impacts**

Excellent

### Explanation to Applicant

The applicant presented a very nice array of personal, professional, and educational experiences in the statements and has a solid plan for future success and growth. The research findings are communicated in a very good context and to a large audience. There seem to be some discussion on prior accomplishments or future intentions in the integration of research and education. Based on the proposed research, there is strong potential for the research results to reach diverse audiences and benefit society at large. The applicant exudes great potential for leadership, but there is a good plan for community outreach.