

**ATTACHMENT**  
**RECRUITMENT ADVERTISEMENT/FLYER**

## **VISUAL RECOGNITION OF LIGHTED CHARACTER SIGNS IN AVIATION**

Sign up to participate in our study of airport signaling. The experiment is to view a lighted X sign from a 60 m distance and answer if you recognize the X sign lighted at different intensities.

### **What is required to participate?**

- You can be a NIST employee that has the permission of your management to participate.
- You can be a non-NIST employee that is either a Federal or a non-Federal participant.
- You are at least 18 years old.
- You have visual acuity of 20/20 or better. Glasses or contact lenses are acceptable. NIST researcher will test your vision.
- If your vision accuracy is found unacceptable for the purpose of this research experiment, we will excuse you from the study without any penalty.
- If you qualify for this research experiment, we will ask you to provide your age, gender, and race/ethnicity in a brief demographic survey and assign a participant number to you.
- These data will not be connected to your name in our records, but if you prefer not to provide your age, gender, and race/ethnicity, we will excuse you from the study without any penalty.

### **What will we be doing in the experiments?**

- This experiment will take about one hour. You are welcome to take short breaks between sessions or any time if necessary.
- You have no obligation after you volunteer. You can cancel participation or withdraw from experiment at any time for any reason.
- The experimental sessions will take place at the National Institute of Standards and Technology's Gaithersburg campus (Room C02E of Building 220).
- The experiment will be conducted in a long (30 m) dark room lab. An "X" sign formed by many lighted dots is operated at one end of the lab. It's intensity is varied to different levels.
- You will be seated at the viewing position in the lab, and dark-adapted for five minutes, during which, the operator will explain the procedures for experiment, and the operator will let you practice the experimental run a few times.
- The X sign is turned on at an intensity level and presented for several seconds. You will look at the sign and answer if you recognized character X or not. Depending on the light level, you may see "X" or see just a dim or bright dot. After you answer, the X sign is turned off for a few seconds and turned on for next intensity level.
- The step above is repeated for 10 different intensity levels of the X sign.
- The light source color and other conditions for the X sign are changed, and the above experiment is repeated.

### **How will your privacy be protected?**

- All the demographic and experimental data will be recorded by a pseudo-randomly assigned participant number.
- No key will be kept that will link your name, or any personally identifiable information to any vision testing results, experimental data or demographic information collected under the study.

### **How do you get involved?**

- The Principal Investigator is Dr. Yoshi Ohno. You can call him at 301-975-2321 or e-mail him at [ohno@nist.gov](mailto:ohno@nist.gov) to express your interest and learn more.

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We plan to recruit ~50 volunteers, NIST employees and non-NIST employees as well as pilots who are members of the Air Line Pilots Association.

This research is being conducted by the Sensor Science Division, Physical Measurement Laboratory.