

## AMATEUR ASTRONOMERS and HUBBLE SPACE TELESCOPE

The Hubble Space Telescope Amateur Astronomers Working Group is pleased to announce a program for amateur astronomers to apply for observing time on the Hubble Space Telescope (HST), the most advanced telescope ever built. A limited amount of time is being reserved especially for amateur astronomers on HST by NASA and the Space Telescope Science Institute. Your response could open a new era in amateur astronomy.

The program is open to readers of **SCIENTIFIC AMERICAN** who are U.S. citizens, who are not professional astronomers and who have specific projects of scientific or educational value requiring the use of the unique capabilities of HST. With its high sensitivity, extended wavelength range and high resolution, Space Telescope offers many exciting opportunities for astronomical study. Observing time on Space Telescope is so highly sought after that its uses are limited to studies impossible from the ground.

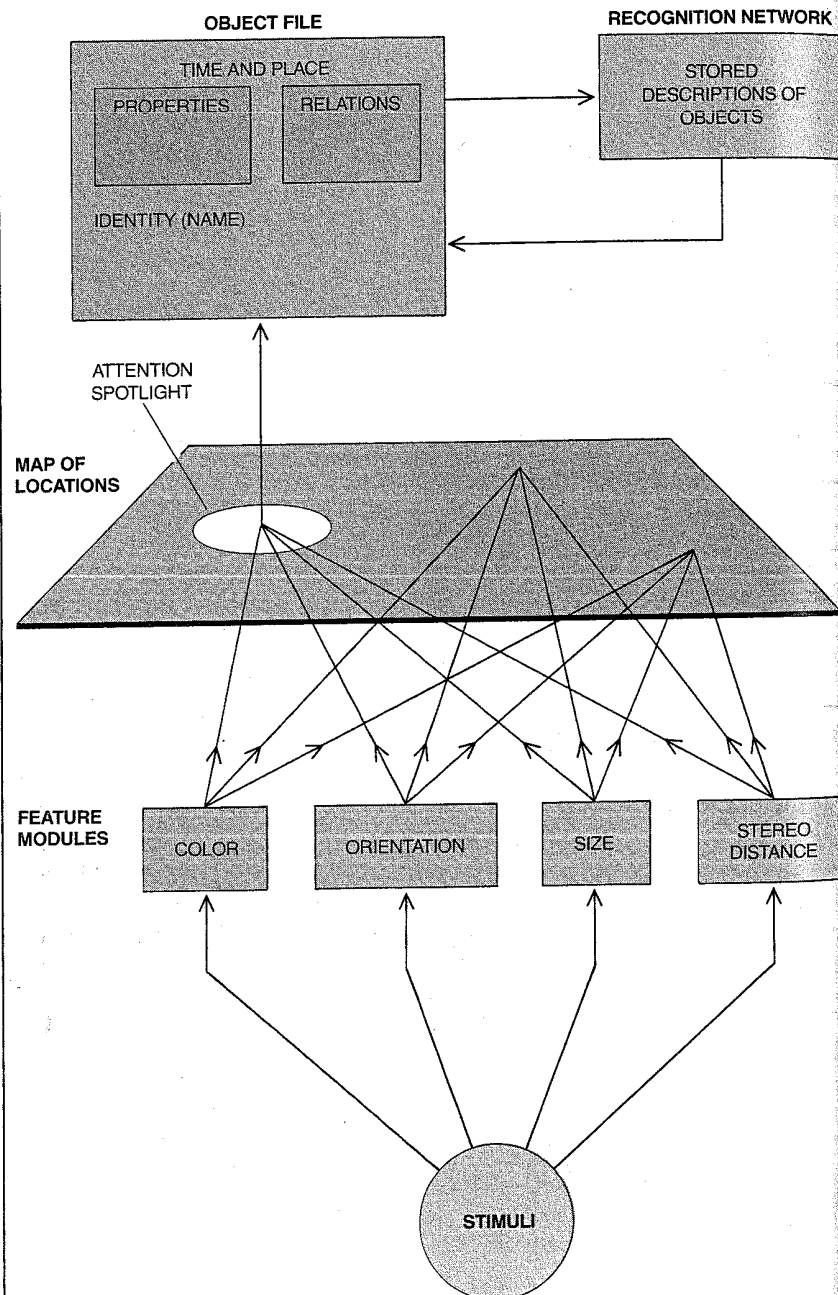
Readers interested in receiving instructions for making preliminary proposals should send \$1 (to cover the cost of materials, postage, and handling) to:

HST Amateur Astronomers  
Working Group  
c/o AAVSO  
25 Birch Street  
Cambridge, MA 02138

The deadline for completed applications is March 31, 1987. Please make checks payable to the AAVSO.

letter on a subsequent appearance; the effect is known as priming. The question that interested us was whether priming would occur only in particular circumstances. We argued that if the final letter is the same as the priming letter and appears in the same frame as the priming letter, the two should be seen as belonging to the

same object; in this case we could think of the perceptual task as simply re-viewing the original object in its shifted position. If, on the other hand, a new letter appears in the same frame, the object file should have to be updated, perhaps increasing the time it takes for subjects to become aware of the letter and name it.



**HYPOTHETICAL MODEL** of the early stages in visual perception emerges from the author's experiments. The model proposes that early vision encodes some simple and useful properties of a scene in a number of feature maps, which may preserve the spatial relations of the visual world but do not themselves make spatial information available to subsequent processing stages. Instead focused attention (employing a master map of locations) selects and integrates the features present at particular locations. At later stages the integrated information serves to create and update files on perceptual objects. In turn the file contents are compared with descriptions stored in a recognition network. The network incorporates the attributes, behavior, names and significance of familiar objects.

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