Science and Engineering Visualization Challenge
Entry Form

Entries must be postmarked no later than May 31, 2003
Entries will not be returned

Title of Work: Evolution of the Kamoamoa Flow Field, Kilauea Volcano, Hawaii

Entry Category: Photographs ☐ Illustrations ☐ Active and/or Multimedia ☑

Name(s): Vincent J. Realmuto (Please print) — Role/title: animator/investigator

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Use another sheet for additional team members.

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I (we) warrant that this entry is original and has been independently developed by me and/or members of my team and does not violate the copyright or other personal or proprietary right of another person or team of people. Further, I (we) attest that I (we) will be able to grant to *Science* and *Science* Online non-exclusive publication and web rights if our entry places first, second or third in any category or honorable mention.

SEE ATTACHED

Contact person is responsible for distributing information received from the competition and/or sponsors to all other members of the team.

Descriptive Summary of Submission (100 words): Describe the final product and the basic approach used to create the final product. Also include a succinct description of the resources utilized and a rationale of why the visualization will be an aid to science or engineering and how the concepts are better communicated to the end user.

This animation depicts the evolution of the Kamoamoa Flow Field between September 3 - 17, 1995. The data were acquired by an airborne multispectral scanner on 10 of the 14 days in the observation period. The active lava flows are depicted as false color-composites of infrared data; regions of high temperature appear in bright yellow and orange and regions of low temperature appear in dark orange and brown. Shape-morphing techniques were used to construct a continuous sequence of flow positions for the observation period. The sequence of frames was overlaid on a DEM to show the influence of topography on flow velocity and cooling.