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AN ALGORITHM TO QUANTIFY THE PERFORMANCE OF THE JOVE PROGRAM

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## THE ALGORITHM

Just after he was appointed NASA Administrator earlier this year, Dan Goldin made it clear that each person and program at NASA would be evaluated using quantifiable criteria. He instructed each person to define the standards by which he/she and his/her programs will be graded. My assignment was to define criteria by which the JOVE program could be graded and to develop an algorithm that would quantify the evaluation.

The JOVE program is a JOint VEnture between small four-year colleges and NASA in which select faculty members work with scientists and engineers (mentors at the NASA centers and major universities.) NASA and the colleges share expenses of the program approximately equally.

Dr. N.F. Six, Director of the JOVE program, suggested that JOVE be evaluated in the areas of research, education, and outreach; areas specified in JOVE's charter. The author prepared a sample algorithm which was presented for discussion to the JOVE faculty at their summer retreat in Fredericksburg, Virginia July 22-25, 1992.

A small discussion group comprised of six JOVE faculty members suggested that, starting with the algorithm developed by the author, various evaluation scenarios be circulated among a committee made up of members from the oldest JOVE schools.

It was decided that the algorithm should address and/or include the following features:

1. Research should be the most important parameter as the JOVE initiative is aimed at improving NASA related research capabilities at the JOVE school.
2. A given JOVE institution should, within limits, be allowed to determine the relative importance of research, education, and outreach, subject to number one above.
3. Care should be taken to "normalize" or otherwise shape the algorithm so that a given term does not get too large if a JOVE school performs unusually well in any one area.

Once the algorithm is chosen, the report forms which are filled out annually by the JOVE schools will be modified so that the data required by the algorithm will be provided. The results of subsequent evaluations will be provided to each JOVE school so it can continually upgrade its performance.

It was the hope of the working group that, through closely monitored upgrading, the algorithm would become a reliable measure of how a given school (or the JOVE program as a whole) was really performing.

CORRELATING JUPITER'S AURORAL ACTIVITY AND  
ITS DECAMETRIC RADIO EMISSION

A proposal to the Hubble Space Institute from Hunter Waite, Southwest Research Institute, James Green, GSFC, and the author will be written to examine potential correlations between the Jovian auroral activity as recently discovered by the Hubble Space Telescope UV imaging experiment and Jupiter's decametric radio waves as recorded by two ground-based radio observatories; one at The University of Florida, the other in Japan.

The experiment will use the location of the Jovian auroral hot spots as shown by HST UV images to pinpoint the source of Jupiter's decametric radio waves. The ground-based radio observatories will run two spectrographs: one, sweeping at very high speed, will indicate how fast the radiating region is moving and the other, a slower instrument will generate the large spectral arcs that were discovered by the Voyager PRA experiment. Inspection of the large arcs will show how the location of the radio source is related to the auroral hot spot and Jupiter's magnetic field and will indicate whether Jupiter's moon IO or its torus plays a role in creating the radio waves.

The UF will upgrade its radiometers to present data in a format which will show the large spectral arcs that were discovered by the Voyager PRA experiment. Several new commercially available crossed log-periodic antennas will be installed and the radio spectrograph will be updated using a new acousto-optical Bragg cell.