

Portrait of the Solar System

Two possible themes:

1) The drama, historic significance, and scientific importance of the Voyager mission set in time against the troubles of the progressively enfeebled American space agency/program. (This may be too negative but ...) Might end up being somewhat of a political commentary, starting with a description of the portrait -- how (briefly) it was executed, the contents of each image, etc. -- and interspersing with the description of each (outer) planet a brief summary of Voyagers' findings there as well as a description of events occurring within the space program at the time of Voyager's arrival at that planet. As an example, in describing the Uranus 'Portrait' image and Voyager's Uranus results, we would mention the shuttle explosion and events leading up to and immediately following it.

might want to mention European, Japanese, Russian etc

Also possibly interwoven in this historic sequence would be a history of attempts to get the portrait taken, avoiding the use of individual names but underscoring again the recurring theme of the 'romantics versus the bureaucrats.' That is, the difficulty in convincing the Voyager project to take the portrait reflected the larger-scale difficulties in the space program: limited resources, the intransigence of those in power to do something that did not promise an immediate practical result, etc.

We would end, of course, on a hopeful note with a discussion of Venus' portrait (and Magellan results) and finally the Earth's portrait, perhaps counter-balanced against Voyager's first image of the Earth/Moon system.

2) As the last sequence of images ever taken by a Voyager s/c, the portrait gives us an opportunity to reflect on Voyager's epic journey and a decade of discovery. With this theme, the paper would be primarily a retrospective of Voyager's findings, with (perhaps) the 'romantics vs. bureaucrats' standoff thrown in for spice.

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Visuals (or, what do you do with a bunch of dots?)

For each planet, place the NA color image of the planet in its proper geometrical location as seen from Voyager 1, with graphics to illustrate the planet's orbit and surrounding stars. That is, do away with the trail of WA images entirely.

Strewn across this larger mosaic, and joined to each NA image by a line or other indicator, will be 'close-up' images of each planet. It would be nice to do 2 close-up images: one of the whole planet, and then one (perhaps as a cut-away in a corner) of much high resolution. As an example, we could show a full disk image of Jupiter, with a cut-away showing its red spot, or Io; and a full disk of Uranus, with a cut-away showing the surface of Miranda. One problem: could we get this all in one 8x10 image? Probably not.

Theme #1

I. Introduction: Set theme of paper

On February 14, 1990, Voyager 1's cameras captured one final, historic array of images of the planets, its final parting salute to its place of birth. (A few sentences describing its activities on 2/14/1990.)

This seemingly simple, innocent sequence of events capped a decade of discovery and change.....(contrast Voyager's success with NASA's problems.)

II. Juxtapositioning of Voyager findings with historic events

A. Give details of Portrait image of Jupiter

Jupiter: the first planet in the Grand Tour
History of Voyager from 1972, through
launches, and through Jupiter encounters
(1979/80)

Describe (briefly) Voyagers' Jupiter results
Space program events

B. On to Saturn

Description of Saturn protrait image
Voyagers' findings
Voyager 1 leaves SS; Voyager 2 on to Uranus
Space program events
Attempts to take Earth portrait meet with failure

C. On to Uranus

Description of Uranus protrait image
Voyagers' findings
Space program events
Attempts to take full portrait meet with failure

D. On to Neptune

Description of Neptune protrait image
Voyagers' findings
Space program events
Attempts to take full portrait finally succeed

III. Venus and Earth portraits

A. Magellan results

B. Portrait of home: First and last Voyager portraits
(C. Voyager is still making discoveries: detection of
plasma waves reflected off magnetosphere)