EUROPA SINCE THE LAST OPAG

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• JPL Europa Orbiter study
• Joint NASA-ESA study
• Europa Focus Group workshop
• The Planetary Society public meeting
• Budget issues
EUROPA FOCUS GROUP

• NASA Astrobiology Institute activity
• Includes all aspects of Europa
• Open to the community
• Series of workshops (including a field conference on Arctic ice) since 2001
• Web site: http://astrobiology.asu.edu/focus/europa/intro.html
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Workshop 27-28 February 2006, NASA-AMES

• ~ 120 participants, including ~ 8 students (supported)

• Invited overviews
  o Overview: Pappalardo
  o Tectonics: McKinnon
  o Astrobiology: Baross
  o New Horizons: Spencer

• “Quickies”

• Break-outs
  o Science objectives, refined: Pappalardo
  o Lander concepts: Spilker
  o Astrobiology: McKay

• The Planetary Society (Sunday evening, 26 February)
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Astrobiology “break-out” session

• Search for signs of life
  o Inorganics (hard pars, magnetic chains, etc.)
  o Organic biomolecules
  o Younger is better (active), material from ocean

• Step 1: survey Europa from orbit
  o Thermal Emission Spectrometer
  o Ramen (with laser)
  o UV fluorescence (with laser)
  o Collect sputtered materials with analysis on orbiter

• Step 2: lander with 1m depth organic analysis
  o GCMS, in situ ms, Ramen, etc.
  o Bio-specific (microscope, etc.)