



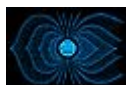
IMAGE LIST



1. Jupiter blurry



16. Title logo C



31. Neptune magnetosphere



46. Radio beam fading



2. Jupiter moons A



17. Title logo D



32. V'ger PRA receivers



47. Radio dish - Goldstone

NASA



3. Jupiter sketch



18. Title logo E



33. V'ger IR spectrometer



48. Radio dish - Madrid

NASA



4. Jupiter moons B



19. Title logo F

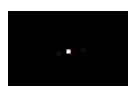


34. Earth gibbous



49. Radio dish - Canberra

NASA



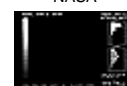
5. Jupiter moons C



20. Voyager construction A

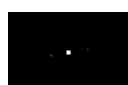


35. Jupiter

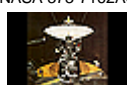


50. Histogram

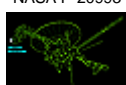
NASA



6. Jupiter moons D



21. Voyager construction B



36. V'ger UV spectrometer



51. Saturn b/w

NASA



7. Saturn blurry



22. Voyager construction C



37. Voyager/beam straight



52. Saturn filtered

NASA



8. Saturn sketch



23. V'ger spacecraft wire-frame



38. Radio beam



53. Saturn natural color

NASA



9. Orbits/orrery graphic



24. V'ger TV cameras



39. Earth small



54. Saturn false color

NASA



10. Uranus telescope view



25. Earth cutaway



40. V'ger photopolarimeter



55. Pioneer

NASA



11. Neptune telescope view



26. Earth magnetic field



41. V'ger RTG



56. Jupiter/Pioneer

NASA



12. Jupiter observatory view



27. V'ger magnetometer



42. V'ger dish antenna



57. Saturn/Pioneer

NASA



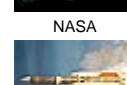
13. Saturn observatory view



28. Jupiter magnetosphere



43. V'ger star sensors



58. Voyager 1 launch (vertical)

NASA



14. Title logo A



29. Magnetosphere word



44. V'ger thrusters



59. Voyager 2 launch (vertical)

NASA



15. Title logo B



30. V'ger particle detectors



45. Voyager/beam off

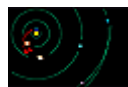


60. Outer planets orbits

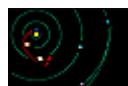
NASA



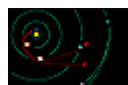
IMAGE LIST



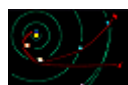
61. Jupiter slingshot



62. Saturn slingshot



63. Uranus slingshot



64. Neptune slingshot



NASA P-23358BC

65. JPL Voyager Control A



NASA P-23398AC

66. JPL Voyager Control B



NASA

67. JPL Voyager Control C



NASA

68. Saturn / moons Montage



NASA

69. Red Spot false color



NASA P-26241BC

70. Io surface



NASA P-20945

71. Jupiter ball far



NASA

72. PlanetDate Jupiter



NASA 260-507

73. Jupiter ball medium



NASA P-20946

74. Jupiter ball closer



NASA P-21714

75. Jupiter limb



NASA P-21732

76. Jupiter limb closer



NASA P-21742

77. Jupiter limb/ Red spot



NASA

78. Jupiter clouds/limb



NASA P-21193C

79. Jupiter clouds closer



NASA P-21160

80. Jupiter clouds closeup



NASA 260-576

81. Jupiter clouds 1 nat



NASA P-21753

82. Jupiter clouds 2 nat



NASA 260-580

83. Jupiter clouds 3 nat



NASA 260-577

84. Jupiter clouds 1 fc



NASA 260-578

85. Jupiter clouds 2 fc



NASA 260-579

86. Jupiter clouds 3 fc



NASA

87. Jupiter cloud bands



NASA P-21747

88. Jupiter cloud belts



NASA P-21194C

89. Jupiter clouds/brown spot



NASA P-21183C

90. Jupiter white spots



NASA P-21754C

91. Jupiter white spots closer



NASA P-21754C

92. Jupiter white spot closeup



NASA P-20945

93. Red Spot/ Jupiter



NASA P-21742C

94. Red Spot limb



NASA P-21182

95. Red Spot close



NASA

96. Red Spot closer



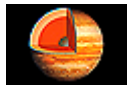
NASA 260-606

97. Red Spot closeup

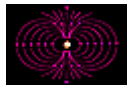


NASA P-21430

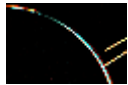
98. Red Spot extreme closeup



99. Jupiter cutaway



100. Jupiter magnetic field



NASA P-21779

101. Jupiter limb/rings closeup



NASA 260-608

102. Jupiter ring tip



NASA P-21774

103. Jupiter rings far



104. Europa/ Ganymede



NASA

105. Jupiter ball



106. Callisto/Io



NASA P-21764

107. Europa limb



NASA P-21208C

108. Europa ball



NASA P-21760

109. Europa pole



NASA

110. Europa chord



NASA P-21207C

111. Ganymede ball



NASA P-21751

112. Ganymede chord



NASA 260-671

113. Ganymede limb



NASA P-21761

114. Ganymede surface rings



NASA P-21762

115. Ganymede surface craters



NASA P-21769

116. Ganymede surface ridges



NASA P-21287

117. Callisto limb



NASA P-21284C

118. Callisto ball



NASA 260-450

119. Callisto limb closer



NASA P-21740C

120. Callisto chord



IMAGE LIST



NASA P-21083C

121. Jupiter/Io



NASA P-21082C

122. Jupiter Limb/Io/Europa



NASA

123. Io/Jupiter



NASA 260-464

124. Io ball



NASA P-21457

125. Io ball closer



NASA P-21226C

126. Io chord



NASA 260-451?

127. Io plumes



NASA 260-451?

128. Io plume closeup



NASA P-21334C

129. Io plume false color



NASA P-21295C

130. Io plume b/w



NASA 260-677

131. Io plume ball b/w



NASA P-21294C

132. Io plume limb b/w



NASA

133. Io surface 1 nat



NASA P-26270

134. Io surface 2 nat



NASA P-26269

135. Io surface 3 nat



NASA P-26276

136. Io surface 1 fc



NASA P-26271

137. Io surface 2 fc



NASA P-26274

138. Io surface 3 fc



NASA P-26265

139. Io surface 4 nat



NASA P-26268

140. Io surface 5 nat



NASA P-26272

141. Io surface 6 nat



NASA P-26275

142. Io surface 4 fc



NASA P-26273

143. Io surface 5 fc



NASA P-26241AC

144. Io surface 6 fc



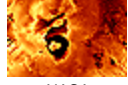
NASA P-21277

145. Io volcano



NASA

146. Io volcanoes



NASA

147. Io Loki



NASA 260-503

148. Amalthea far



NASA

149. Amalthea near



NASA

150. Amalthea closeup



NASA

151. Saturn far



NASA

152. PlanetDate Saturn



NASA P-22892

153. Saturn closer



NASA P-23077

154. Saturn full



NASA

155. Saturn rings orange



NASA P-23058

156. Saturn limb/rings



NASA

157. Saturn rings yellow



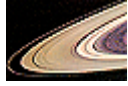
NASA

158. Saturn rings violet/orange



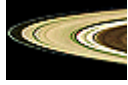
NASA P-23953

159. Saturn rings green/orange



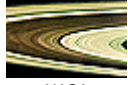
NASA P-23111

160. Saturn rings violet



NASA

161. Saturn rings tip green/brown



NASA

162. Saturn rings brown



NASA P-23207

163. Saturn rings brown



NASA P-23927

164. Saturn rings blue/yellow



NASA

165. Saturn rings pink



NASA P-23942

166. Saturn rings yellow/blue



NASA P-23178

167. Saturn rings/limb



NASA

168. Saturn limb



NASA

169. Saturn behind



NASA

170. Saturn co-orbital



NASA

171. Saturn kinky/clumpy ring



NASA

172. Saturn braided ring



NASA P-23053

173. Saturn spokes seq 1



NASA P-23053

174. Saturn spokes seq 2



NASA P-23053

175. Saturn spokes seq 3



NASA P-23053

176. Saturn spokes seq 4



NASA P-23053

177. Saturn spokes seq 5



NASA P-23053

178. Saturn spokes seq 6



NASA

179. Saturn magnetic field



NASA

180. Saturn cutaway



IMAGE LIST



NASA P-23214

181. Saturn limb/pole



NASA P-23907

182. Saturn limb/storm



NASA P-23914

183. Saturn limb false color



NASA P-23939

184. Saturn pole



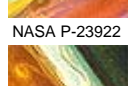
NASA P-23947

185. Saturn pole closer



NASA P-23922

186. Saturn pole false color



NASA P-23912

187. Saturn clouds A



NASA P-23919

188. Saturn clouds B



NASA P-23915

189. Saturn clouds C



NASA P-23100

190. Saturn clouds D



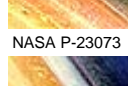
NASA P-23073

191. Saturn clouds E



NASA P-23062

192. Saturn clouds F



NASA P-23911

193. Saturn shep. satellites



NASA P-23929

194. Titan far



NASA P-24308

195. Titan surface art



NASA P-24067

196. Titan close



NASA P-23112

197. Mimas



NASA P-23265

198. Mimas w/ crater



NASA P-23936

199. Mimas/Death Star



NASA P-23269

200. Dione ball



NASA

201. Dione chord b/w



NASA P-23113

202. Dione chord



NASA P-23356

203. Rhea ball far



NASA P-23177

204. Rhea ball closer



NASA P-23208

205. Rhea closeup



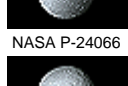
NASA P-24066

206. Tethys ball valley



NASA P-23948

207. Tethys ball crater



NASA P-24065

208. Tethys ball



NASA P-23955

209. Enceladus ball



NASA P-24308

210. Enceladus chord



NASA P-23961

211. Iapetus



NASA P-23924

212. Iapetus false color



NASA P-23936

213. Hyperion A



NASA P-23936

214. Hyperion B



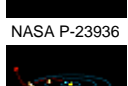
NASA P-23932

215. Hyperion C



NASA P-23936

216. Hyperion D



NASA P-23936

217. Voyager 1 trajectory



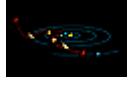
P-23254

218. Saturn parting/V'ger 1



NASA P-23936

219. Voyager 2 trajectory



NASA P-24638

220. Saturn parting/V'ger 2



NASA P-23330BC

221. JPL Control A



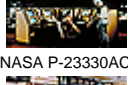
NASA P-23330AC

222. JPL Control B



NASA

223. JPL Control C



NASA P-29478

224. Uranus ball



NASA P-29520

225. PlanetDate Uranus



NASA P-29497

226. Uranus fc blue/orange



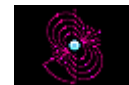
NASA P-29468

227. Uranus fc



NASA P-29468

228. Uranus orbit graphic



NASA P-29468

229. Uranus magnetic field



NASA P-29468

230. Uranus cutaway



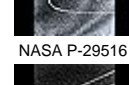
NASA

231. Uranus artwork (vertical)



NASA P-29516

232. Uranus rings far



NASA P-29481

233. Uranus rings closer



NASA P-29525

234. Uranus rings closeup



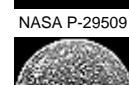
NASA P-29509

235. Titania ball



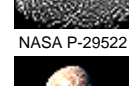
NASA P-29522

236. Titania chord



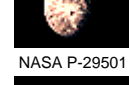
NASA P-29501

237. Oberon



NASA P-29502

238. Umbriel ball



NASA P-29521

239. Umbriel b/w



NASA P-29520

240. Ariel



IMAGE LIST



NASA P-29523

241. Ariel chord



NASA P-34728

256. Neptune streamers



NASA

271. Saturn w/ moons montage



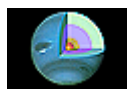
NASA P-24653

286. Voyager #1 large



NASA P-29524

242. Miranda

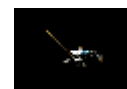


257. Neptune cutaway



NASA

272. Red Spot/ Dark Spot



NASA

287. Voyager #2 small



NASA P-29513

243. Miranda chord



258. Neptune magnetic field



NASA

273. Moon/Io



NASA

288. Voyager #3 large



NASA P-29515

244. Miranda chevron



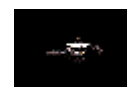
NASA P-34726

259. Neptune rings split



NASA

274. Saturn/ Uranus rings



NASA

289. Voyager #4 small



NASA P-29512

245. Miranda canyon



NASA P-32712

260. Neptune rings



275. Interstellar Mission goals



NASA

290. Voyager #5 large



NASA P-29514

246. Miranda pancake

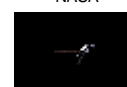


NASA P-34707

261. Neptune rings cu



276. Solar system family portrait



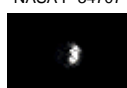
NASA

291. Voyager #6 small



NASA P-30230

247. Miranda ball



NASA P-34680

262. Nereid



277. Gold-plated record cover



NASA P-34611

248. Neptune



NASA P-34727

263. 1989-N1



NASA

278. Gold-plated record

When known, identifying NASA or JPL numbers are provided for Voyager images.



NASA P-34654

249. PlanetDate Neptune



NASA P-34654

264. Triton far

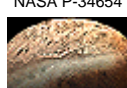


279. Credit title graphic



NASA P-32629

250. Neptune ball fc



NASA P-34764

265. Triton chord



280. Credit narrator



NASA P-34632

251. Neptune Dark Spot



NASA P-34692

266. Triton maria

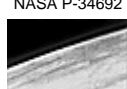


281. Credit script



NASA P-34672

252. Neptune Dark Spot cu



NASA P-34695

267. Triton atmosphere



282. Credit soundtrack



NASA P-34649

253. Dark Spot 2



NASA P-34719

268. Triton volcanoes

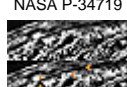


283. Credit artist



NASA P-34648

254. Dark Spot/ Scooter



NASA P-34940

269. Triton plume stereo



284. Credit NASA/JPL



NASA P-34709

255. Neptune cloud shadow



270. Jupiter w/ moons montage



285. Credit copyright

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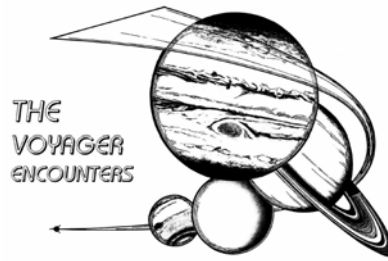


IMAGE LIST

MULTI-PANEL IMAGES

A | B | C



M1. Galileo pan



M2. Io surface

A | B | C | D | E | F | G | H | I | J | K | L



M3. Saturn pan

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THE VOYAGER ENCOUNTERS

time	visuals	audio	
0:00	House lights fade	<i>(Opening music: 31 sec.)</i>	1
0:31	[M1] Galileo pan	On a hillside overlooking Padua, Italy, in the year 1610, the Italian astronomer Galileo trained a small telescope on a bright, shining object in the evening sky.	2 3 4 5 6 7
0:45		For years, this planet -- Jupiter -- had tantalized his curiosity.	8 9
0:53	[1] Jupiter (blurry)	He had studied it through ever-improving instruments, yet always it remained a blurry mystery.	10 11 12 13
1:03		This night, he had his most powerful telescope yet -- just the tool he needed to give him a clearer view of that distant world.	14 15 16 17
1:13	[2] Jupiter moons A	As he peered through the eyepiece at the image of Jupiter, it resolved into the bright disk he had seen so many times. But -- he was astounded to see two tiny points of light on each side of the planet!	18 19 20 21 22 23
		<i>(music bridge: 5 sec.)</i>	24 25

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THE VOYAGER ENCOUNTERS

time	visuals	audio	
1:34	[3] Jupiter sketch	He hastily sketched the sight in his notebooks, preserving forever his amazing discovery.	1 2 3
		<i>(music bridge: 6 sec.)</i>	4 5
1:47	[4] Jupiter moons B	Over a series of nights, he watched these tiny companions move in an intricate dance near the planet, and concluded that they were a family of moons in orbit around Jupiter.	6
	[5] Jupiter moons C		7
	[6] Jupiter moons D		8 9
		<i>(music bridge: 10 sec.)</i>	10 11 12
2:09	[7] Saturn (blurry)	In time, Galileo focused on Saturn, and saw <i>something</i> on either side of <i>that</i> planet. Perhaps these companions were moons as well, but through his simple instrument, they looked more like "ears".	13 14
	[8] Saturn sketch		15 16 17
		<i>(music segue: 6 sec.)</i>	18 19
2:33	Planetarium orrery	In the 380 years since Galileo's observations, Jupiter has made 32 revolutions around the Sun, and we've come to see its companions as worlds in their own right.	20 21
	[9] Orbits/orrery graphic		22 23 24 25

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THE VOYAGER ENCOUNTERS

time	visuals	audio	
2:47		Saturn has gone around only 13 times, and now we know that its "ears" are really a dazzling set of rings.	1 2 3 4
3:00		Beyond these, other planets have been discovered -- worlds whose remote orbits carry them ever so slowly around the Sun. <i>(music segue: 5 sec.)</i>	5 6 7 8 9 10
3:13	[10] Uranus telescope view	Using a telescope many times more powerful than Galileo's, Sir William Herschel discovered Uranus in 1781. Since then, that distant world has orbited the Sun only two and a half times.	11 12 13 14 15 16
3:31	[11] Neptune telescope view	In 1846, faraway Neptune was discovered -- and it has yet to complete even <i>one</i> orbit around the Sun. <i>(music segue: 5 sec.)</i>	17 18 19 20 21 22 23 24 25

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THE VOYAGER ENCOUNTERS

time	visuals	audio	
3:46	[12] Jupiter observatory view	Throughout history, our knowledge of these four planets had been gathered from "ground-based" observations. What we've seen through our telescopes is tantalizing. These distant gas giant worlds, concealed by clouds, beckon to us -- encouraging us to undertake the adventure and experience the romance of planetary exploration.	1
	[13] Saturn observatory view		2
4:10		Yet, until we humans can ourselves explore these places, we must rely on robotic probes to do our observing for us.	3
4:23	Voyager	The Voyager mission continues in the grandest tradition of human endeavor -- an expedition to see "what's out there" -- explorations on a scale far more impressive than those of the legendary Marco Polo.	4
4:40		In a decade of exploration, on an journey fraught with dangers, Voyager successfully opened a new frontier -- the worlds of the outer solar system.	5
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THE VOYAGER ENCOUNTERS

time	visuals	audio	
	[14-19] Title logo sequence	<i>(Title music: 32 sec.)</i>	1
5:23	Voyager	This is Voyager -- a radio-controlled spacecraft, guided by onboard computers and Earth-bound programmers.	2 3 4 5 6
5:32	[20] Voyager construction A [21] Voyager construction B [22] Voyager construction C	It may look fragile and awkward, but it was designed to withstand severe gee-forces at liftoff, the cold vacuum of space, tremendously strong planetary magnetic fields, and bombardment by cosmic rays and micro-meteorites -- all while keeping its sensitive instruments safe for its primary mission: planetary exploration.	7 8 9 10 11 12 13 14 15
6:01	[23] V'ger spacecraft wire-frame	<i>(music bridge: 5 sec.)</i>	16 17
	[24] V'ger TV cameras	To explore a planet, the first and most important thing we can do is simply look at it. Voyager does the looking with a pair of special TV cameras. One uses a wide-angle lens; the other has a telephoto lens so powerful, it could read a newspaper from over a kilometer away!	18 19 20 21 22 23 24 25

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THE VOYAGER ENCOUNTERS

time	visuals	audio	
6:22		Of course, there is always more than meets the eye at any world we explore; a thorough investigation requires more than pictures to tell the full story.	1 2 3 4 5
6:33	[25] Earth cutaway	At the center of the Earth lies a core of molten iron. As the Earth rotates, the core moves in a slow, constant motion. Electrical currents are generated, creating a magnetic field.	6 7 8 9
	[26] Earth magnetic field		10
6:47	[27] V'ger magnetometer	Voyager's magnetometer can search out and measure the magnetic field of a planet, which gives us clues about what's at the interior, beneath the outer shell we see.	11 12 13 14 15
7:00	[29] Jupiter magnetosphere	Quite often, the magnetic field stretches out far into space above the surface of a planet, creating an unseen "zone of influence" called a MAGNETOSPHERE. If the field is strong, it sweeps up electrically-charged particles into a gaseous "soup" called a plasma. As Voyager flies through the magnetosphere, it is pelted from all sides, like a car in a sandstorm. Plasma wave and particle detectors "count" the number of hits the spacecraft takes.	16 17 18 19 20 21 22 23
	[29] Magnetosphere word		24
	[30] V'ger particle detectors		25