

**Physics 174**  
**Exploration of the Outer Solar System**

10 November, 2006

<b>Pioneer 10</b>	launch	3 Mar 1972
	Jupiter flyby	3 Dec 1973
	last contact	23 Jan 2003
<b>Pioneer 11</b>	launch	6 Apr 1973
	Jupiter flyby	4 Dec 1974
	Saturn flyby	1 Sep 1979
	last contact	30 Sep 1995
<b>Voyager 1</b>	launch	5 Sep 1977
	Jupiter flyby	5 Mar 1979
	Saturn flyby	12 Nov 1980
<b>Voyager 2</b>	launch	20 Aug 1977
	Jupiter flyby	9 Jul 1979
	Saturn flyby	25 Aug 1981
	Uranus flyby	24 Jan 1986
	Neptune flyby	25 Aug 1989
<b>Galileo</b>	launch	18 Oct 1989
	Venus flyby	10 Feb 1990
	Earth flyby	8 Dec 1990
	951 Gaspra flyby	29 Oct 1991
	Earth flyby	8 Dec 1992
	243 Ida flyby	28 Aug 1993
	probe into Jupiter	7 Dec 1995
	Jupiter orbit	7 Dec 1995
deorbit into Jupiter	21 Sep 2003	
<b>Cassini</b>	launch	15 Oct 1997
	Venus flyby	26 Apr 1998
	Venus flyby	24 Jun 1999
	Earth flyby	18 Aug 1999
	Jupiter flyby	30 Dec 2000
	Saturn orbit	1 Jul 2004
Huygens probe to Titan	14 Jan 2005	
<b>New Horizons</b>	launch	19 Jan 2006
	planned Jupiter flyby	Feb 2007
	planned Pluto flyby	Jul 2015