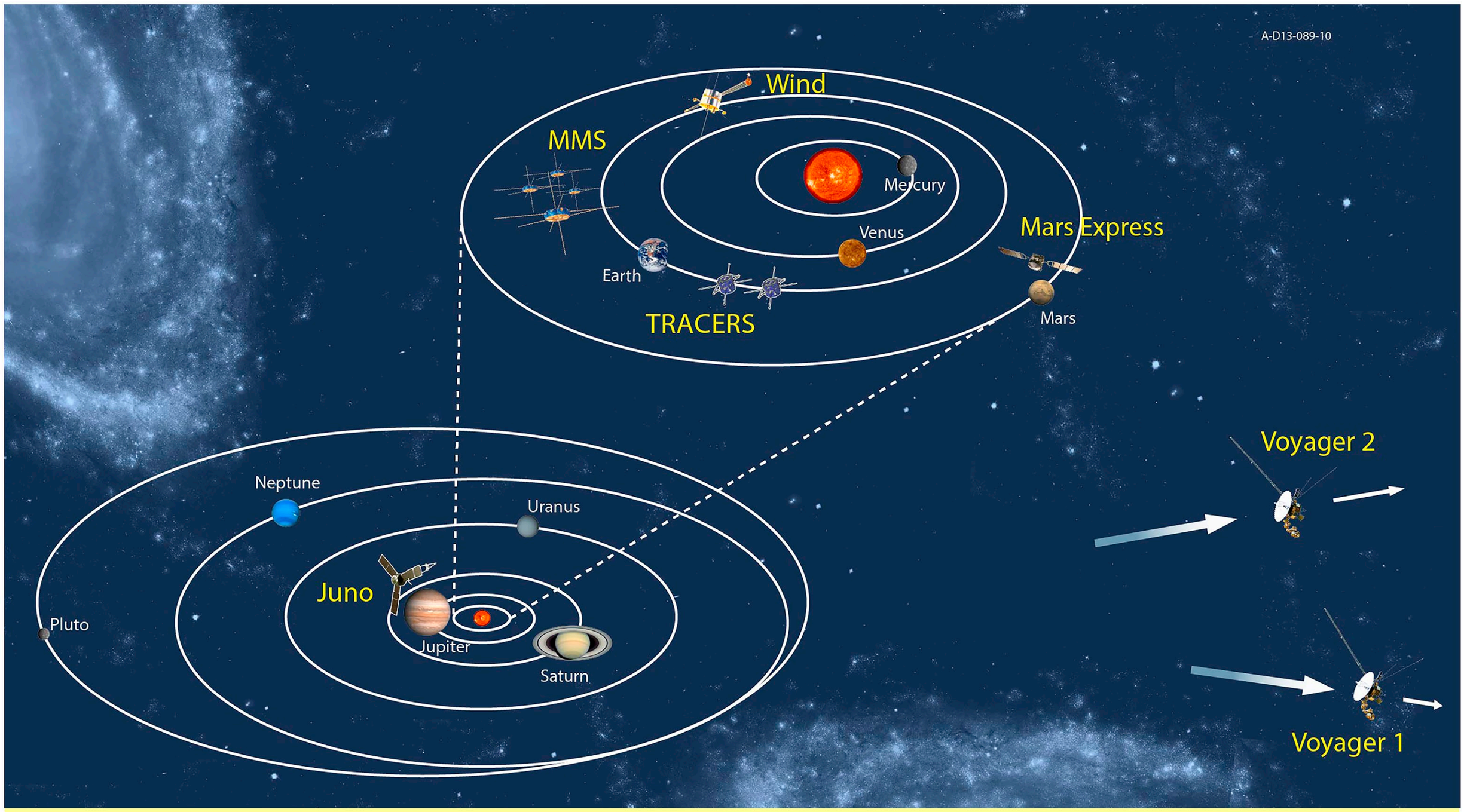
University of Iowa Instruments in space



Spaceflight instruments and rockets designed and built at the University of Iowa in the Department of Physics & Astronomy (1958-2026)

*** Spacecraft carrying currently operating U. of Iowa instruments**

Spacecraft		Launch Date (UT)
Explorer 1		1958 Feb. 1
Explorer 2	(launch failure)	1958 Mar. 5
Explorer 3		1958 Mar. 26
Explorer 4		1958 July 26
Explorer 5	(launch failure)	1958 Aug. 24
Pioneer 1		1958 Oct. 11
Pioneer 2		1958 Nov. 8
Pioneer 3		1958 Dec. 6
Pioneer 4		1959 Mar. 3
Explorer 7	(launch failure)	1959 Jul. 16
Explorer 7		1959 Oct. 13
S-46	(launch failure)	1960 Mar. 23
Injun 1		1961 June 29
Explorer 12		1961 Aug. 16
Ranger 1	(failed to reach orbit)	1961 Aug. 23
TRAAC		1961 Nov. 15
Ranger 2	(failed to reach orbit)	1961 Nov. 18
Injun 2	(launch failure)	1962 Jan. 24
Discoverer 38		1962 Feb. 27
Mariner 1	(launch failure)	1962 Jul. 22
Mariner 2		1962 Aug. 27
Explorer 14		1962 Oct. 2
Explorer 15		1962 Oct. 27
Injun 3		1962 Dec. 12
Relay 1		1962 Dec. 13
P-11		1964 Aug. 14
OGO 1		1964 Sept. 5
Mariner 3	(shroud failure)	1964 Nov. 5
Injun 4		1964 Nov. 21
Mariner 4		1964 Nov. 28
OGO 2		1965 Oct. 14
OGO 3		1966 June 7
Explorer 33 (IMP-D)		1966 July 1
Explorer 34 (IMP-4)		1967 May 24
Mariner 5		1967 June 14
Explorer 35 (IMP-E)		1967 July 19
OGO 4		1967 July 28
OGO 5		1968 Mar. 4

Spacecraft		Launch Date (UT)
Injun 5		1968 Aug. 8
Explorer 41 (IMP-5)		1969 June 21
Explorer 43 (IMP- 6)		1971 Mar. 13
Explorer 45 (SSS)		1971 Nov. 16
UK 4 (Ariel-4)		1971 Dec. 11
Pioneer 10		1972 Mar. 2
Explorer 47 (IMP-7)		1972 Sept. 23
Pioneer 11		1973 Apr. 6
Explorer 50 (IMP-8)		1973 Oct. 26
Hawkeye 1		1974 June 3
Helios 1		1974 Dec. 10
Helios 2		1976 Jan. 15
Voyager 2 *		1977 Aug. 20
Voyager 1 *		1977 Sept. 5
International Sun-Earth Explorer 1		1977 Oct. 22
International Sun-Earth Explorer 2		1977 Oct. 22
International Sun-Earth Explorer 3		1978 Aug. 12
Firewheel	(launch failure)	1980 May 25
Dynamic Explorer 1		1981 Aug. 3
Plasma Diagnostics Package	(shuttle Columbia)	1982 Mar. 22
AMPTE / IRM		1984 Aug. 16
Plasma Diagnostics Package	(shuttle Challenger)	1985 Jul. 29
Galileo		1989 Oct. 18
CRRES		1990 July 25
Geotail		1992 July 24
Wind *		1994 Nov. 1
Polar		1996 Feb. 24
Cluster I (4 spacecraft)	(launch failure)	1996 June 4
Cassini		1997 Oct. 15
Cluster / Salsa (FM6)		2000 July 16
Cluster / Samba (FM7)		2000 July 16
Cluster / Tango (FM8)		2000 Aug. 9
Cluster / Rumba (FM5)		2000 Aug. 9
Mars Express *		2003 June 2
Juno *		2011 Aug. 5
Van Allen Probe A		2012 Aug. 30
Van Allen Probe B		2012 Aug. 30
Magnetospheric Multiscale Mission / 1 *		2015 Mar. 12

Spacecraft	Launch Date (UT)
Magnetospheric Multiscale Mission / 2 *	2015 Mar. 12
Magnetospheric Multiscale Mission / 3 *	2015 Mar. 12
Magnetospheric Multiscale Mission / 4 *	2015 Mar. 12
HERCI CubeSat (Fox-1D satellite)	2018 Jan. 12
HaloSat Cube Satellite	2018 May 21
TRACERS 1 *	2025 July 23
TRACERS 2 *	2025 July 23

Experiments on Rockets	Launch Date
Rockoons (109 launches) payloads and casings	1951-1957
Javelin 8:45 experiment	1967 Sept. 21
Javelin 8:46 experiment	1968 May 25
Spear 1 pressure gauge	1987 Dec. 13
Spear 3 pressure gauge	1993 Mar. 15
Rocket Auroral Correlator Experiment	2002 Feb. 6
High Bandwidth Auroral Rocket	2003 Jan. 28
Correlations of High Frequencies & Auroral Roar Mission	2007 Feb. 28
Twin Rockets to Investigate Cusp Electrodynamics Mission 1/A	2007 Dec. 10
Twin Rockets to Investigate Cusp Electrodynamics Mission 1/B	2007 Dec. 10
Auroral Current and Electrodynamic Structure (ACES) Rocket 1/A	2009 Jan. 29
Auroral Current and Electrodynamic Structure (ACES) Rocket 1/B	2009 Jan. 29
Black Brant IX Sounding Rocket/CyXESS Mission	2009 Nov. 13
Correlations of High Frequencies & Auroral Roar Mission	2010 Feb. 17
Off-Plane Grating Rocket for Extended Source Spectroscopy 1	2015 May 2
Twin Rockets to Investigate Cusp Electrodynamics Mission 2/A	2018 Dec. 8
Twin Rockets to Investigate Cusp Electrodynamics Mission 2/B	2018 Dec. 8
Cusp Alfven & Plasma Electrodynamics Rocket 2	2019 Jan. 4
Investigation of Cusp Irregularities 5 (ICI-5) Mission	2019 Nov. 26
VLF Trans-Ionospheric Propagation Exp. Rocket (VIPER) search coils	2021 May 26
Loss through Auroral Microburst Pulsations (LAMP) instrument	2022 Mar. 5
Auroral Current & Electrodynamic Structure (ACES) Rocket 2/A	2022 Nov. 20
Auroral Current & Electrodynamic Structure (ACES) Rocket 2/B	2022 Nov. 20
Investigation of Cusp Irregularities 5b (ICI-5b) Pathfinder	2026 Mar. 11
Systematic Study of Lower Thermosphere Energetics by a Rocket/Cousin	2026 Nov. 11
OCHRE (Observing Cusp High-Altitude Reconnection & Electrodynamics)	**TBD**