



# VENTURE INVESTMENTS IN SPACE MARKET

## Q3 2023 REPORT

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# OUR METHODOLOGY AND DATA SOURCES

Venture Investments in the Space Market reports on venture-type of investments at all stages and equity investments in space startup companies on a quarterly basis.

Our report dataset is sourced from databases such as PitchBook, Crunchbase, FactSet, NewSpace Hub, CB Insights and other sources.

The dataset only includes publicly reported deals, it does not include proprietary investment information.

## OUR DEFINITION

A company in the space market is a business entity that provides products or services, including, but not limited to:

- satellite manufacturers constructing space satellite platforms of all sizes for commercial, scientific and military purposes
- providers of payloads, satellite parts or spacecraft components
- launch vehicle manufacturers and launch service providers
- rocket engine manufacturers
- companies related to the satellite sector, including satellite operators and satellite service providers, companies with products and services based on GPS and GNSS systems, satellite connectivity and other satellite technologies to provide services
- companies involved in exploring and commercializing outer space, such as space tourism, space mining and setting up space colonies
- companies manufacturing satellite ground equipment such as antennas, VSAT (Very Small Aperture Terminal), SSPAs (Solid State Power Amplifiers) and BUCs (Block Up Converters), etc. intended primarily for the B2B market
- data analytics companies actively using satellite imagery and other earth observing methods to create products and services, remote sensing and geospatial analytic products and services.

# Q3 2023 VENTURE INVESTMENTS: THE KEY NUMBERS

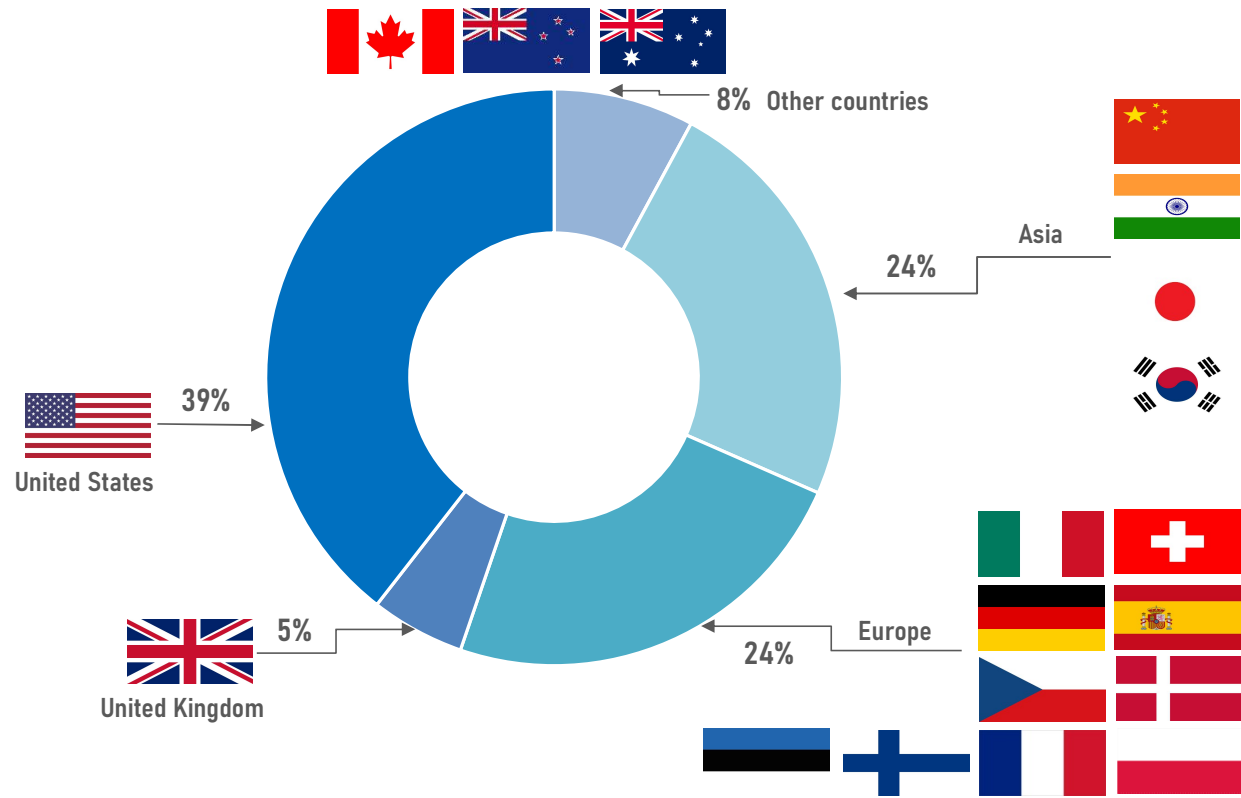
77 Rounds closed

\$1.3B Total funding

230+ Investors participated in the deals

48% funding contributed to space exploration  
 16% funding designed for constellations  
 10% funding of launch vehicle

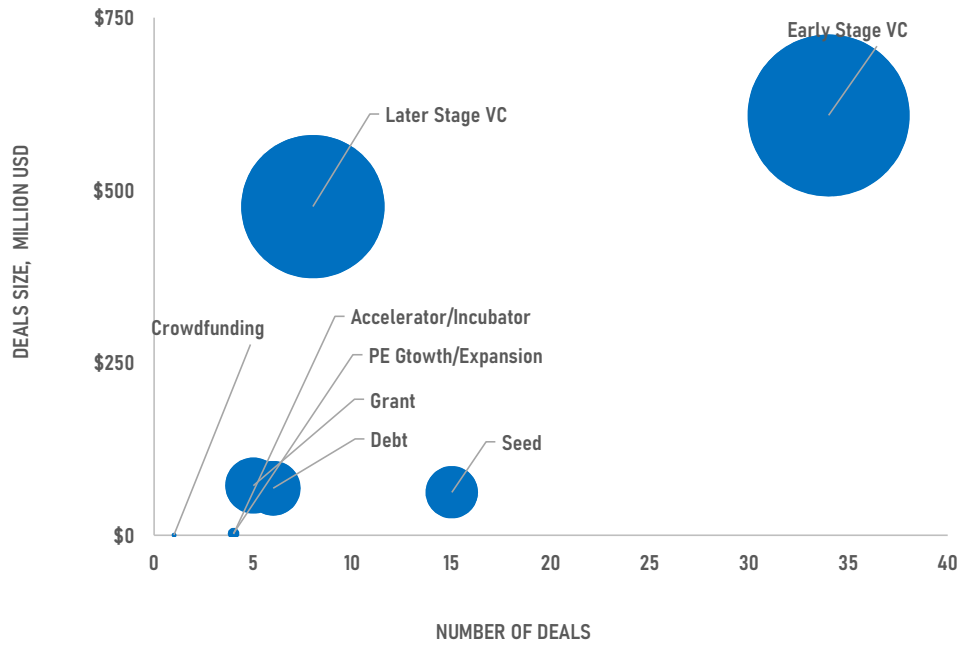
## INVESTED COMPANIES BY GEOGRAPHIC AREA



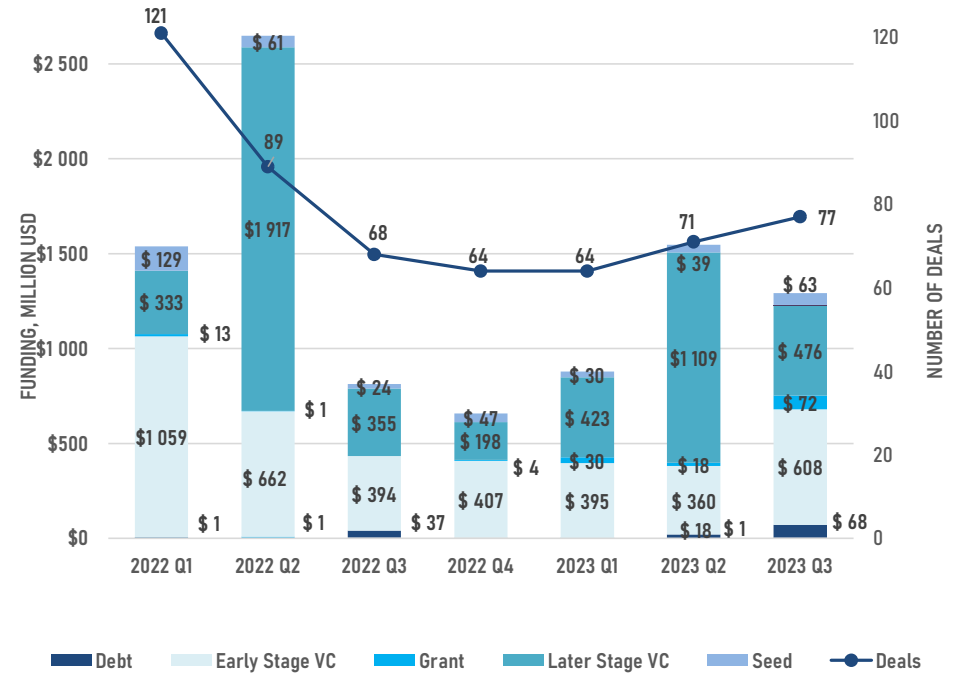
NUMBER OF DEALS BY LOCATION OF EACH COMPANY HEADQUARTERS

# Q3 2023 VENTURE DEALS BY STAGE

## DEAL TYPES

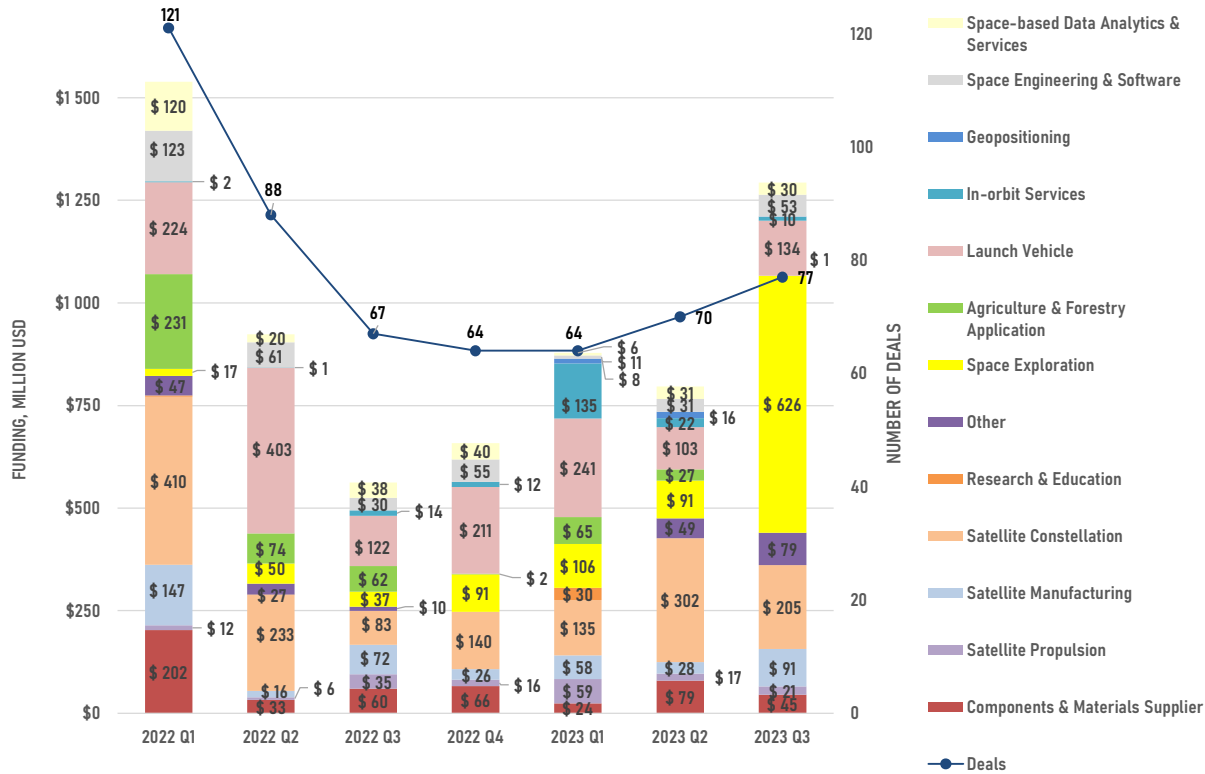


## DEALS BY STAGE

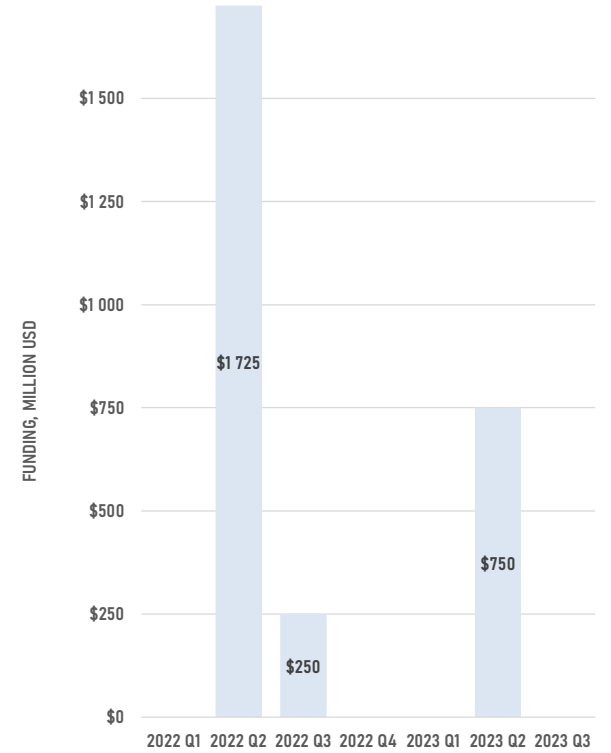


# Q3 2023 VENTURE DEALS BY INDUSTRY

## DEALS BY INDUSTRY (excluding SpaceX deals)



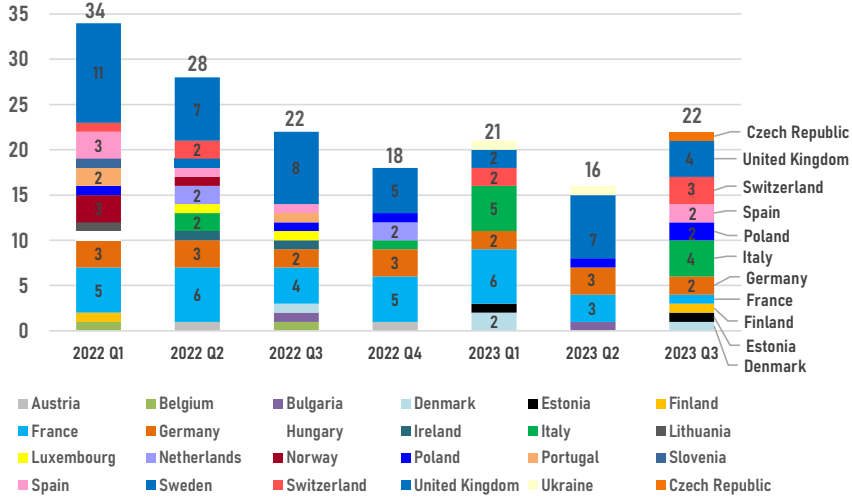
## SPACEX DEALS



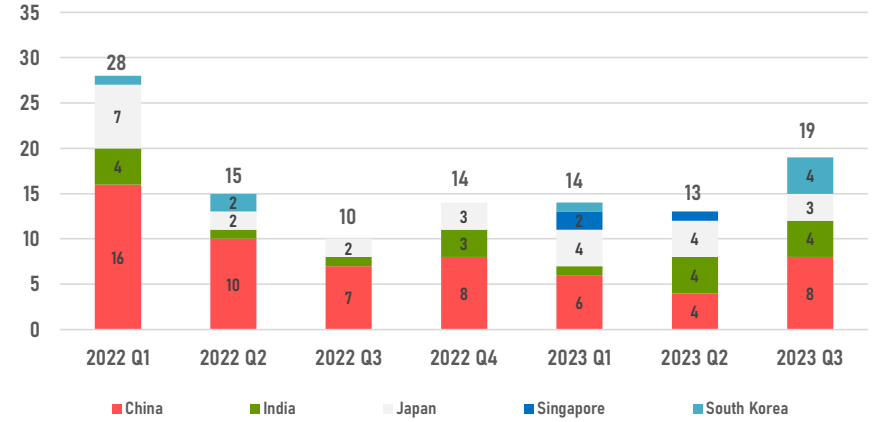
SpaceX raised \$750M in June 2023.  
 SpaceX has an agreement to sell up to \$750M in stock from insiders, according to a copy of the purchase offer that CNBC obtained.

# Q3 2023 VENTURE DEALS BY GEOGRAPHIC AREA

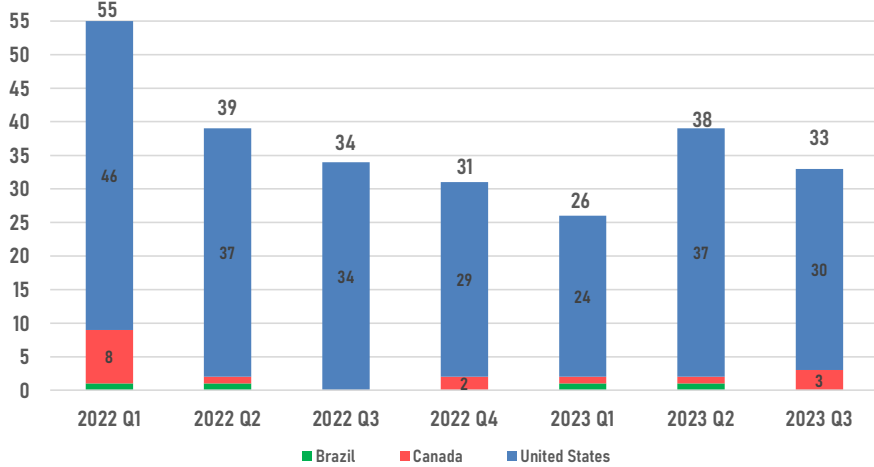
## NUMBER OF DEALS IN EUROPE AND UNITED KINGDOM



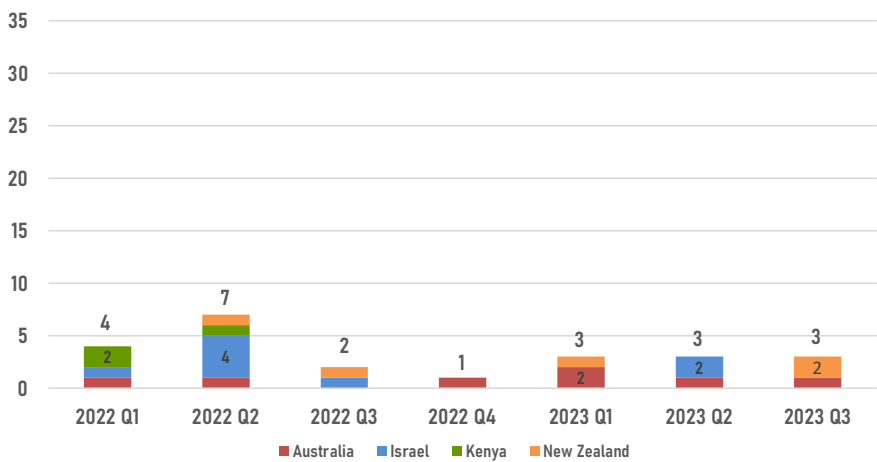
## NUMBER OF DEALS IN ASIA



## NUMBER OF DEALS IN NORTH AND SOUTH AMERICA



## NUMBER OF DEALS IN OTHER REGIONS



Note: Empty stacks of a bar chart applied for one deal announced

# Q3 2023 LARGEST VENTURE INVESTMENT DEALS



## SPACE EXPLORATION

<b>\$350M</b>	Raised in Q4 2022-Q3 2023	<b>\$505M</b>	Total Raised
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Investments will fuel continued growth for the company building world's first commercial space station. Axiom Station's first module is under construction and scheduled to launch to the ISS by 2026. Additional modules will follow to build out Axiom Station, which will be ready to separate from the ISS and operate independently by 2031 when NASA plans to retire the ISS.



## SPACE EXPLORATION

<b>\$290M</b>	Raised in Q3 2023	<b>\$1.7B</b>	Total Raised
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Growth capital accelerates Sierra Space's first mover advantage in the deploying the first business-ready commercial space station, continued growth of the national security business and scale of the space systems and components portfolio. Sierra Space prepares the transition of Dream Chaser spaceplane into orbital operations for NASA cargo resupply missions to the ISS following several years of development.



## COMPONENTS & MATERIALS SUPPLIER

<b>\$45M</b>	Raised in Q3 2023	<b>\$75M</b>	Total Raised
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This funding will support the development of Impulse's largest vehicle yet, called Helios. The Helios kick stage enables direct to GEO missions, thus bypassing the need for a Geostationary Transfer Orbit.



## SATELLITE CONSTELLATION

<b>\$70M</b>	Raised in Q3 2023	<b>\$160M</b>	Total Raised
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The funding round will enable ADASpace to expand its R&D capabilities as well as its manufacturing capacity. ADASpace specializes in the production of remote-sensing satellites that utilize AI technology to independently process and filter images. The AI system is capable of analyzing the quality of the images and deciding whether to transmit them or not.



## SPACE-BASED DATA ANALYTICS & SERVICES

<b>\$44M</b>	Raised in Q3 2023	<b>\$126M</b>	Total Raised
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This new funding will enable the company to develop new integrated solutions, and deploy more satellite and airborne measurement capacity. GHGSat has satellite services agreements in place for hosted payloads on three new satellites scheduled to launch in 2023 and another four new satellites scheduled for launch in 2024 dedicated to monitoring carbon dioxide.



## SATELLITE CONSTELLATION

<b>\$58M</b>	Raised in Q3 2023	<b>\$363M</b>	Total Raised
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Hawkeye 360 receives funding to introduce a new satellite architecture and accelerate data science efforts, to develop new space systems and expand analytics that support high-value defense missions. The company is also investing further in AI, data fusion, and multi-intelligence orchestration to better extract value from the large amount of RF data with the goal is to simplify analysis for customers.



## SPACE ENGINEERING & SOFTWARE

<b>\$39M</b>	Raised in Q3 2023	<b>\$49M</b>	Total Raised
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The capital will further propel the company's efforts to establish a market-leading telemetry, tracking, command, and payload data transmission network for satellite operators.



## SATELLITE MANUFACTURING

<b>\$50M</b>	Raised in Q3 2023	<b>\$58M</b>	Total Raised
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The funding will be used to accelerate the company's growth internationally and expand its offering to encompass sophisticated satellites and constellations as well as satellite-based analytics and insight solutions. It will allow it to expand its current satellite offerings, which have been cubesats, to larger spacecraft as well as constellations. The company is also developing an satellite data analytics platform called DataCosmos.



## LAUNCH VEHICLE

<b>\$33M</b>	Raised in Q3 2023	<b>\$33M</b>	Total Raised
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The investment will facilitate RFA's upcoming integrated first stage test and complete the company's launch pad at SaxaVord Spaceport in Scotland, to eventually bring the RFA ONE microlauncher to the launchpad. The first flight is scheduled for Q2 2024.



## OTHER

<b>\$50M</b>	Raised in Q3 2023	<b>\$50M</b>	Total Raised
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Partager Aerospace embarks on a mission to pioneering the IP, manufacturing and licensing frontier in the space industry.

Excluding grants from NASA total of \$150M across 11 companies (5 are to support long-term exploration of the moon, the other 6 focused on other areas of space technology), announced as part of the space agency's Tipping Point program.



# Q3 2023 VENTURE INVESTMENTS LIST

Numbers in USD million

Company	Last Round Stage	Raised in Q3 2023	Total Raised
<b>Satellite Manufacturing</b>			
MinoSpace	Later Stage VC	NA	\$120M
NewOrbit	Early Stage VC	NA	<\$1M
Open Cosmos	Early Stage VC	\$50M	\$58M
Picosats	Early Stage VC	\$2M	\$2M
ReOrbit	Seed	\$7M	\$7M
SpinLaunch	Early Stage VC	\$29M	\$179M
Thorium Space Technology	Early Stage VC	<\$1M	\$2M
Tianfu High Definition Globe	Early Stage VC	\$1M	\$1M
Ubinexus	Early Stage VC	NA	NA
ZJUNI-SAT	Early Stage VC	NA	NA

## Satellite Propulsion

Benchmark Space Systems	Early Stage VC	\$18M	\$47M
T4i - Technology for Propulsion and Innovation	PE Growth/Expansion	\$3M	NA

## Components & Materials Supplier

Astrix Astronautics	Accelerator/Incubator	<\$1M	\$6M
Astrogate Labs	Early Stage VC	NA	\$4M
Canopy Aerospace	Grant	<\$1M	\$2M
	Seed	\$2M	\$4M
Hunan Lanyue Mechanotronics	Early Stage VC	\$14M	\$14M
Micro Drive Space	Early Stage VC	NA	\$2M
Space Composite Structures Denmark	Early Stage VC	NA	<\$1M
Swissto12	Debt	\$28M	\$48M

## In-orbit Services

Kall Morris	Early Stage VC	<\$1M	\$2M
Manastu Space	Early Stage VC	\$3M	\$3M
Psonic	Debt	\$4M	\$19M
SpaceBilt	Debt	<\$1M	<\$1M
Starfish Space	Accelerator/Incubator	\$2M	\$22M

## Research & Education

Cosmic Shielding	Early Stage VC	NA	\$1M
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Company	Last Round Stage	Raised in Q3 2023	Total Raised
<b>Launch Vehicle</b>			
Blue Origin	Grant	\$35M	NA
HStar Space Transport	Early Stage VC	\$10M	10,50
Impulse Space	Early Stage VC	\$45M	75,00
Mjolnir Spaceworks	Seed	<\$1M	<\$1M
PLD Space	Later Stage VC	\$2M	77,02
Rocket Factory	Early Stage VC	\$33M	33,24
Sidereus Space Dynamics	Seed	\$5M	7,23
Space Pioneer	Later Stage VC	NA	43,94
Starfighters Space	Early Stage VC	\$2M	3,99

## Space Exploration

Above Space	Crowdfunding	<\$1M	2,74
Astrobotic	Grant	\$35M	NA
Axiom Space	Later Stage VC	\$300M	505,00
Sierra Space	Early Stage VC	\$290M	1732,74
Space Perspective	Early Stage VC	NA	64,00
YAOKI	Seed	<\$1M	<\$1M

## Space Engineering & Software

Antaris Space	Seed	\$4M	4,20
AVS	PE Growth/Expansion	NA	NA
FreeFall Aerospace	Debt	<\$1M	2,25
Galaxia Mission Systems	Grant	\$2M	NA
GTL	Early Stage VC	\$2M	2,34
Leaf Space	Early Stage VC	\$39M	48,49
Mission Control	Seed	\$3M	3,25
Space Dots	Accelerator/Incubator	NA	1,93
SpaceMap	Seed	\$1M	1,00
	Accelerator/Incubator	NA	1,00
Tilebox	Seed	\$2M	1,70

Company	Last Round Stage	Raised in Q3 2023	Total Raised
<b>Satellite Constellation</b>			
ADA Space	Later Stage VC	\$70M	\$161M
ConstellR	Seed	\$19M	\$34M
GHGSat	Later Stage VC	\$44M	\$126M
HawkEye 360	Later Stage VC	\$58M	\$363M
HED Robotics	Early Stage VC	\$12M	\$15M
PierSight	Seed	<\$1M	<\$1M
PlanetIQ	Debt	\$2M	\$38M
<b>Geopositioning</b>			
Onocoy	Grant	<\$1M	NA
<b>Other</b>			
Euroconsult	PE Growth/Expansion	NA	NA
GITAI	Early Stage VC	\$22M	\$57M
Kayhan Space	Seed	\$7M	\$12M
LeoLabs	Early Stage VC	NA	\$93M
Partager Aerospace	Early Stage VC	\$50M	\$50M

Company	Last Round Stage	Raised in Q3 2023	Total Raised
<b>Space-based Data Analytics &amp; Services</b>			
Arturo	Early Stage VC	\$14M	46,97
Data Sutram	Later Stage VC	\$3M	5,47
Divirod	Early Stage VC	\$4M	9,95
Oxford Earth Observation	PE Growth/Expansion	NA	NA
Satim	Seed	\$2M	3,16
Stellarvision	Seed	<\$1M	<\$1M
Teren	Seed	\$7M	7,12
<b>Agriculture &amp; Forestry Application</b>			
AgriCircle	Early Stage VC	NA	NA
CarbonCrop	Early Stage VC	NA	3,40
KappaZeta	Early Stage VC	<\$1M	<\$1M
Nkoloso.ai	Early Stage VC	NA	NA
Spacetrees	Early Stage VC	NA	NA

# Q3 2023 PRIVATE INVESTMENTS IN PUBLIC EQUITIES



## SPACE EXPLORATION

<b>\$32.5M</b>	Committed in Q3 2023	<b>~\$625M</b>	Total Raised
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Terran Orbital expects to use the net proceeds of the offering for general corporate purposes, including capital expenditures, working capital, research and development, and general and administrative expenses, and maintenance of the liquidity covenant in the Company's debt documents.



## SATELLITE MANUFACTURING

<b>\$20M</b>	Committed in Q3 2023	<b>~\$80M</b>	Total Raised
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Intuitive Machines intends to use the net proceeds for general corporate purposes and working capital needs as the Company ramps activity across key growth programs.











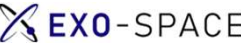








## IN-ORBIT SERVICES

<b>\$5M</b>	Committed in Q3 2023	<b>~\$290M</b>	Total Raised
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Proceeds from the offering will be used for general corporate purposes, which may include the development of the orbital transfer and satellite bus vehicles, research and development efforts relating to these vehicles, working capital, capital expenditures, repayment and refinancing of debt, research and development expenditures, acquisitions of additional companies or technologies and investments.

## Q3 2023 LANDMARK M&A DEALS

TARGET COMPANY	VERTICAL	ACQUIRER	ANNOUNCE-MENT DATE	DEAL SIZE	DEAL STRUCTURE	POSSIBLE CONTRIBUTION
Debris Mitigation Business of ALE Co., Ltd.	In-orbit Services	BULL Co., Ltd., a newly formed corporation	5 July 2023	NA	Not disclosed	BULL recognizes the value in the technological and commercial capabilities that ALE has accumulated, and anticipates sustainable business growth through their maximum utilization.
 Ecometrica	Agriculture & Forestry Application	 EcoOnline	5 July 2023	NA	Not disclosed	Together, EcoOnline and Ecometrica will deliver a broad Environmental, Social and Governance (ESG) solution with strong capabilities in Carbon Accounting, ESG Framework reporting, Climate Risk, Environmental Compliance and more, enabling companies to systematically work to reduce their environmental footprint and comply with existing and future regulations.
 ECLIPTIC	Components & Materials Supplier	 ARQUIMEA	19 July 2023	NA	Prior to its acquisition, ARQUIMEA was a 20% shareholder of Ecliptic.	This acquisition consolidates ARQUIMEA's access to the US market and reinforces the company's position as a leading supplier in the European space sector with the capacity to respond to the growing global demand for satellites, space systems and components.
 OHB	Satellite Manufacturing	Orchid Lux HoldCo S.à r.l., a holding company controlled by affiliates of  KKR <small>Kohberg Kravis Roberts</small>	7 August 2023	\$375M	A voluntary public takeover offer to buy 30% of stocks and agreement on a 10% capital increase. Separately, KKR will invest 30M EUR in Rocket Factory Augsburg.	KKR will give OHB the chance to focus on its operational business, OHB CEO Marco Fuchs told Reuters, adding that being a listed company slowed down decision-making. OHB's delisting plans gives more flexibility to capitalise on a boom in the commercial satellite market.
 ECHOSTAR	Satellite Constellation	 dish	8 August 2023	\$4140M	All-stock merger at a fixed exchange ratio.	"DISH's substantial past investments in spectrum and its wireless buildout, combined with EchoStar's recent launch of JUPITER 3, are expected to significantly reduce near-term CAPEX requirements. The transaction is expected to generate significant cost and revenue synergies", said Charles Ergen, Chairman of the Board of both DISH Network and EchoStar.
 Ball Aerospace & Technologies Corp.	Other	 BAE SYSTEMS	17 August 2023	\$5150M	Proceeds in cash.	"Ball Aerospace's world-class products, capabilities and deep customer relationships would enhance our existing portfolio in areas including space, C4ISR and missile systems," said Tom Arseneault, President and CEO of BAE Systems, Inc.
 EXO-SPACE	Space Engineering & Software	 SIDUS SPACE	22 August 2023	NA	Combination of cash, stock options, and performance bonus incentives.	Exo-Space occupies a unique niche in the realm of U.S. owned Edge AI computing, concentrating on both software and hardware solutions for space assets that utilize faster processing speeds. Exo-Space's current operations complement Sidus' established U.S. DoD/Intelligence relationships.

TARGET COMPANY	VERTICAL	ACQUIRER	ANNOUNCE-MENT DATE	DEAL SIZE	DEAL STRUCTURE	POSSIBLE CONTRIBUTION
Digital Payload Division of 	Components & Materials Supplier		31 August 2023	\$40M	MDA is funding the acquisition from cash on hand and existing credit facility. MDA also committed to inventory pre-purchase valued at \$20M.	The transaction will help further strengthen MDA's global leadership position in the growing market for digital satellite communications solutions. The acquisition accelerates MDA's market expansion in the UK and adds strategic in-country capability to produce satellite payloads.
Sciurus	Space Engineering & Software		5 September 2023	NA	Not disclosed	SCIURUS brings to the table a wealth of technical expertise and a proven track record in developing groundbreaking software for constellations prototypes, in the national industry of Spain.
EO Products and Services of 	Space-based Data Analytics & Services		28 September 2023	NA	Not disclosed	Innova is known for having followed, since its inception, every phase of the First and Second Generation COSMO-SkyMed project and this acquisition allows ARESYS to inherit excellent expertise and broaden its market to include support for the COSMO RADAR mission, mission Italian leader on a global level.