UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2023

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ____________ to ____________

Commission File Number: 001-39426

ASTRA SPACE, INC.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**85-1270303**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
1900 Skyhawk Street Alameda, CA	**94501**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (866) 278-7217

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value $0.0001 per share	ASTR	The Nasdaq Capital Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 08, 2023 the registrant had 215,286,444 shares of Class A common stock, $0.0001 par value per share, outstanding and 55,539,188 shares of Class B common stock, $0.0001 par value per share, outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements (unaudited)

ASTRA SPACE, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)
(Unaudited)

	March 31, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 16,805	$ 33,644
Marketable securities	45,944	69,173
Trade accounts receivable	6,798	5,327
Inventories	6,925	6,588
Prepaid and other current assets	12,437	11,050
Total current assets	88,909	125,782
Non-current assets:		
Property, plant and equipment, net	26,432	24,271
Right-of-use asset	11,903	12,813
Intangible assets, net	9,565	10,132
Other non-current assets	1,872	1,701
Total assets	$ 138,681	$ 174,699
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,901	$ 1,799
Operating lease obligation, current portion	3,779	3,800
Contingent consideration	31,135	33,900
Accrued expenses and other current liabilities	42,761	42,043
Total current liabilities	84,576	81,542
Non-current liabilities:		
Operating lease obligation, net of current portion	8,254	9,051
Other non-current liabilities	2,596	1,796
Total liabilities	95,426	92,389
Commitments and Contingencies (Note 7)		
STOCKHOLDERS' EQUITY		
Founders convertible preferred stock, $0.0001 par value; 1,000,000 shares authorized; none issued and outstanding as of March 31, 2023 and December 31, 2022	—	—
Class A common stock, $0.0001 par value; 400,000,000 shares authorized; 215,286,444 and 213,697,468 shares issued and outstanding as of March 31, 2023 and December 31, 2022, respectively	22	22
Class B common stock, $0.0001 par value; 65,000,000 shares authorized; 55,539,188 shares issued and outstanding as of both March 31, 2023 and December 31, 2022, respectively	6	6
Additional paid in capital	1,907,982	1,902,213
Accumulated other comprehensive loss	(41)	(110)
Accumulated deficit	(1,864,714)	(1,819,821)
Total stockholders' equity	43,255	82,310
Total liabilities and stockholders' equity	$ 138,681	$ 174,699

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ASTRA SPACE, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended March 31,	
	2023	**2022**
Revenues		
Launch services	$ —	$ 3,911
Space products	—	—
Total revenues	—	3,911
Cost of revenues		
Launch services	—	11,014
Space products	—	—
Total cost of revenues	—	11,014
Gross loss	—	(7,103)
Operating expenses:		
Research and development	31,082	37,927
Sales and marketing	2,484	4,764
General and administrative	15,682	20,986
(Gain) Loss on change in fair value of contingent consideration	(2,765)	15,500
Total operating expenses	46,483	79,177
Operating loss	(46,483)	(86,280)
Interest income	1,330	174
Other income	260	393
Loss before taxes	(44,893)	(85,713)
Income tax provision	—	—
Net loss	$ (44,893)	$ (85,713)
Net loss per share:		
Weighted average number of shares of Class A common stock outstanding – basic and diluted	214,706,779	208,112,630
Net loss per share of Class A common stock – basic and diluted	$ (0.17)	$ (0.33)
Weighted average number of shares of Class B common stock outstanding – basic and diluted	55,539,188	55,539,188
Net loss per share of Class B common stock – basic and diluted	$ (0.17)	$ (0.33)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ASTRA SPACE, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2023	**2022**
Net loss	$ (44,893)	$ (85,713)
Other comprehensive loss:		
Unrealized gain (loss) on available-for-sale marketable securities	69	(155)
Total comprehensive loss	$ (44,824)	$ (85,868)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ASTRA SPACE, INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share data)
(Unaudited)

	Three Months Ended March 31,2023									
	Class A Common Stock		Class B Common Stock		Founders Preferred Stock		Additional Paid in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2022	213,697,468	$ 22	55,539,188	$ 6	—	$ -	$ 1,902,213	$ (110)	$ (1,819,821)	$ 82,310
Stock-based compensation	—	—		—	—	—	5,328	—	—	5,328
Issuance of common stock under equity plans	1,588,976	—	—	—	—	—	441	—	—	441
Unrealized gain on available-for-sale marketable securities	—	—	—	—	—	—	—	69	—	69
Net loss	—	—	—	—	—	—	—	—	(44,893)	(44,893)
Balance as of March 31, 2023	215,286,444	$ 22	55,539,188	$ 6	—	$ —	$ 1,907,982	$ (41)	$ (1,864,714)	$ 43,255

	Three Months Ended March 31,2022									
	Class A Common Stock		Class B Common Stock		Founders Preferred Stock		Additional Paid in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2021	207,451,107	$ 22	55,539,188	$ 6	—	$ —	$ 1,844,875	$ —	$ (1,408,383)	$ 436,520
Stock-based compensation	—	—		—	—	—	17,041	—	—	17,041
Issuance of common stock under equity plans	1,159,383	—	—	—	—	—	793	—	—	793
Unrealized loss on available-for-sale marketable securities	—	—	—	—	—	—	—	(155)	—	(155)
Net loss	—	—	—	—	—	—	—	—	(85,713)	(85,713)
Balance as of March 31, 2022	208,610,490	$ 22	55,539,188	$ 6	—	$ —	$ 1,862,709	$ (155)	$ (1,494,096)	$ 368,486

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

ASTRA SPACE, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Three Months Ended March 31, 2023	Three Months Ended March 31, 2022
Cash flows from operating activities:		
Net loss	$ (44,893)	$ (85,713)
Adjustments to reconcile net loss to cash flows used in operating activities		
Stock-based compensation	5,328	17,041
Depreciation	778	1,960
Amortization of intangible assets	567	815
Inventory write-downs	—	5,500
Non-cash lease expense	910	352
Loss (Gain) on change in fair value of contingent consideration	(2,765)	15,500
Accretion (Amortization) of marketable securities purchased at a premium (discount)	(452)	67
Changes in operating assets and liabilities:		
Trade accounts receivable	(1,471)	1,383
Inventories	(337)	(6,526)
Prepaid and other current assets	(1,387)	1,005
Other non-current assets	(171)	97
Accounts payable	7,043	125
Lease liabilities	(818)	(306)
Accrued expenses and other current liabilities	868	(72)
Other non-current liabilities	801	498
Net cash used in operating activities	$ (35,999)	$ (48,274)
Cash flows from investing activities:		
Acquisition of trademark	—	(850)
Purchases of marketable securities	—	(93,891)
Proceeds from maturities of marketable securities	23,750	—
Purchases of property, plant and equipment	(5,031)	(20,942)
Net cash provided by (used in) investing activities	$ 18,719	$ (115,683)
Cash flows from financing activities:		
Proceeds from issuance of common stock under equity plans	434	79
Proceeds from Employee Stock Purchase Plans	7	392
Net cash provided by financing activities	$ 441	$ 471
Net decrease in cash and cash equivalents	$ (16,839)	$ (163,486)
Cash and cash equivalents at beginning of period	33,644	325,007
Cash and cash equivalents at end of period	$ 16,805	$ 161,521
Non-cash investing and financing activities:		
Assets acquired included in accounts payable, accrued expenses and other current liabilities	1,262	3,252

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements

ASTRA SPACE, INC.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1 — Description of Business, Basis of Presentation and Significant Accounting Policies

Description of Business

Astra Space, Inc. (the "Company") designs, tests, manufactures and operates the next generation of launch services and space products and services that it expects to enable a new generation of global communications, earth observation, precision weather monitoring, navigation, and surveillance capabilities. The Company's mission is to Improve Life on Earth from Space® through greater connectivity and more regular observation and to enable a wave of innovation in low Earth orbit by expanding its space platform offerings.

Holicity Inc. ("Holicity") was originally incorporated in Delaware and was established as a special purpose acquisition company, which completed its initial public offering in August 2020. On June 30, 2021 (the "Closing Date"), Holicity consummated a business combination (the "Business Combination") pursuant to the Business Combination Agreement dated as of February 2, 2021 (the "BCA"), by and among Holicity, Holicity Merger Sub Inc., a wholly owned subsidiary of Holicity ("Merger Sub"), and Astra Space Operations, Inc. ("pre-combination Astra"). Immediately upon the consummation of the Business Combination, Merger Sub merged with and into pre-combination Astra with pre-combination Astra surviving the merger as a wholly owned subsidiary of Holicity. Holicity changed its name to "Astra Space, Inc." and pre-combination Astra changed its name to "Astra Space Operations, Inc."

Unless the context otherwise requires, "we", "us", "our", "Astra" and the "Company" refers to Astra Space, Inc., the combined company and its subsidiaries following the Business Combination and Astra Space Operations, Inc. prior to the Business Combination. See Note 3 — Acquisitions for further discussion of the Business Combination, included in the Notes to Consolidated Financial Statements in Astra's Annual Report on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission (the "SEC") on March 30, 2023 ("2022 Annual Report"). The Company's Class A common stock is listed on the Nasdaq under the symbol "ASTR".

Basis of Presentation and Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of Astra and its subsidiaries, and have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") as determined by the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") for financial reporting. The condensed consolidated financial statements included herein are unaudited, and reflect all adjustments which are, in the opinion of management, of a normal recurring nature and necessary for a fair statement of the results for the periods presented. The condensed consolidated balance sheet data as of December 31, 2022 were derived from Astra's audited consolidated financial statements included in its 2022 Annual Report. All intercompany transactions and balances have been eliminated in consolidation. The operating results for the three months ended March 31, 2023 are not necessarily indicative of the results that may be expected for the year ending December 31, 2023, or for any other future period.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation. The impact of these reclassifications was not material to the condensed financial statements for the periods presented.

Liquidity

The accompanying unaudited condensed consolidated interim financial statements have been prepared assuming the Company will continue as a going concern. The going concern basis of presentation assumes that the Company will continue in operation one year after the date these unaudited condensed consolidated interim financial statements are issued and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business.

Pursuant to the requirements of ASC Topic 205-40, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, management must evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year from the date these unaudited condensed consolidated interim financial statements are issued. This evaluation does not take into consideration the potential mitigating effect of management's plans that have not been fully implemented or are not within control of the Company as of the date the unaudited condensed consolidated interim financial statements are issued. When substantial doubt exists, management evaluates whether the mitigating effect of its plans sufficiently alleviates substantial doubt about the Company's ability to continue as a going concern. The mitigating effect of management's plans, however, is only considered if both (1) it is probable that the plans will be effectively implemented within one year after the date that the unaudited condensed consolidated interim financial statements are issued, and (2) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the unaudited condensed consolidated interim financial statements are issued.

The Company evaluated whether there are any conditions and events, considered in the aggregate, that raise substantial doubt about its ability to continue as a going concern over the next twelve months through May 2024. Since inception, the Company has incurred significant operating losses and has an accumulated deficit of approximately $1.9 billion. As of March 31, 2023, the Company's existing sources of liquidity included cash and cash equivalents of $16.8 million and marketable securities of $45.9 million. The Company believes that its current level of cash and cash equivalents and marketable securities are not sufficient to fund commercial scale production and sale of its services and products. These conditions raise substantial doubt regarding its ability to continue as a going concern for a period of at least one year from the date of issuance of these unaudited condensed consolidated financial statements.

On March 10, 2023, the Company became aware that Silicon Valley Bank ("SVB") was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. As of March 31, 2023, a portion of the Company's operating cash is held on deposit with SVB, now a division of First Citizens Bank, and represents approximately 14% of the Company's current cash, cash equivalents and marketable securities. The Company's cash equivalents and marketable securities are held in securities accounts with an affiliate of SVB. While the Company currently has access to the cash on deposit with SVB and such funds are sufficient to meet the Company's near-term payment obligations, there remains instability in the banking system that could have an effect on other banking institutions to which the Company has transferred funds. Refer to Item 1A. "Risk Factors" for information about the risks related to the liquidity of our deposits with SVB.

In order to proceed with the Company's business plan, the Company will need to raise substantial additional funds through the issuance of additional debt, equity or both. Until such time, if ever, the Company can generate revenue sufficient to achieve profitability, the Company expects to finance its operations through equity or debt financings, which may not be available to the Company on the timing needed or on terms that the Company deems to be favorable. To the extent that the Company raises additional capital through the sale of equity or convertible debt securities, the ownership interest of its stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of common stockholders. Debt financing and equity financing, if available, may involve agreements that include covenants limiting or restricting the Company's ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures or declaring dividends. If the Company is unable to obtain sufficient financial resources, its business, financial condition and results of operations will be materially and adversely affected. The Company may be required to delay, limit, reduce or terminate its product development activities or future commercialization efforts. There can be no assurance that the Company will be able to obtain the needed financing on acceptable terms or at all.

In an effort to alleviate these conditions, the Company continues to seek and evaluate opportunities to raise additional capital through the issuance of equity or debt securities. As an example, on August 2, 2022, the Company entered into a Common Stock Purchase Agreement ("Purchase Agreement") with B. Riley Principal Capital II LLC ("B. Riley"), which would allow the Company to sell newly issued shares of its Class A Common Stock to B. Riley in aggregate amount not to exceed $100.0 million or 19.99% of the aggregate outstanding Class A and Class B Common Stock of the Company as of August 2, 2022. However, actual sales of shares under the Purchase Agreement will depend on a variety of factors including, among other things, market conditions and the trading price of the Class A Common Stock, and the full amount of capital may not be fully realized. An amendment to the Purchase Agreement would be required to permit sales of Class A Common Stock at a price below the Threshold Price (as defined in the Purchase Agreement). As the Company seeks additional sources of financing, there can be no assurance that such financing would be available to the Company on favorable terms or at all. The Company's ability to obtain additional financing in the debt and equity capital markets is subject to several factors, including market and economic conditions, our performance and investor sentiment with respect to us and our industry. See *Note 8 – Stockholders' Equity* for additional information about this financing arrangement.

As a result of these uncertainties, and notwithstanding management's plans and efforts to date, there is substantial doubt about the Company's ability to continue as a going concern. If the Company is unable to raise substantial additional capital in the near term, the Company's operations and production plans will be scaled back or curtailed. If the funds raised are insufficient to provide a bridge to full commercial production at a profit, the Company's operations could be severely curtailed or cease entirely and the Company may not realize any significant value from its assets.

The Company has, however, prepared these unaudited condensed consolidated financial statements on a going concern basis, assuming that the Company's financial resources will be sufficient to meet our capital needs over the next twelve months. Accordingly, our financial statements do not include adjustments relating to the recoverability and realization of assets and classification of liabilities that might be necessary should we be unable to continue in operation.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents, marketable securities, and accounts receivable. The Company maintains cash and cash equivalent balances in bank accounts with multiple banking partners. All cash accounts are located in the United States ("U.S.") and insured by the FDIC up to $250,000. Marketable securities consist of highly liquid investments with financial institutions, which management believes to be of a high credit quality. Our accounts receivable are derived from revenue earned from customers or invoice billed to customer that represent unconditional right to consideration located within the U.S. We mitigate collection risks from our customers by performing regular credit evaluations of our customers' financial conditions. The Company believes there is no exposure to any significant credit risks related to its cash and cash equivalents or accounts receivable and has not experienced any losses in such accounts.

As of March 31, 2023, three customers accounted for 30.9%, 22.0% and 15.8% of the Company's outstanding trade accounts receivable, respectively. As of December 31, 2022, three customers accounted for 53.3%, 21.7% and 20.8% of the Company's outstanding trade accounts receivable, respectively. For the three months ended March 31, 2023, we had no revenues. For the three months ended March 31, 2022, one customer accounted for 90.9% of the Company's revenues.

Use of Estimates and Judgments

The preparation of the unaudited condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities in the unaudited condensed consolidated financial statements and accompanying notes. The Company bases these estimates on historical experience and on various other assumptions that it believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying amounts of assets and liabilities that are not readily apparent from other sources. Actual results could differ significantly from those estimates. Significant items subject to such estimates and assumptions include the valuation of goodwill and long-lived assets, inventory valuation and reserves, stock-based compensation, pre-combination Astra common stock, useful lives of intangible assets and property, plant and equipment, deferred tax assets, income tax uncertainties, contingent consideration, and other contingencies.

Significant Accounting Policies

There have been no changes to the Company's significant accounting policies described in the Company's 2022 Annual Report that have had a material impact on its unaudited condensed consolidated financial statements and related notes.

Recently Issued Accounting Standards Not Yet Adopted

In December 2022, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2022-06, Reference Rate Reform (Topic 848), Deferral of the Sunset Date of Topic 848 ("ASU 2022-06"). In March 2020, the FASB issued ASU No. 2020-04, Reference Rate Reform (Topic 848), Facilitation of the Effects of Reference Rate Reform on Financial Reporting ("ASU 2020-04"), which provided temporary relief when transitioning from the London Interbank Offered Rate ("LIBOR") to the Secured Overnight Financing Rate ("SOFR") or another applicable rate during the original transition period ending on December 31, 2022. In March 2021, the UK Financial Conduct Authority (the "FCA") announced that the intended cessation date of the overnight 1-, 3-, 6-, and 12-month tenors of U.S. dollar LIBOR would be June 30, 2023, which is beyond the current sunset date of Topic 848. In light of this development, the FASB issued this update to defer the sunset date of Topic 848 from December 31, 2022, to December 31, 2024, after which entities will no longer be permitted to apply the relief in Topic 848. The Company does not anticipate this new guidance to have a material impact on its financial position, results of operations, cash flows, or related disclosures.

Note 2 — Revenues

The work performed by the Company in fulfilling Launch Services and Space Products performance obligations is not expected to create an asset to the customer since the launch vehicle that is built to deliver the customer's payload into orbit will not be owned by the customer nor will the propulsion systems that are built to thrust the customers' satellite into orbit be controlled by the customer until they are delivered to the customer. The Company recognizes revenue at a point in time upon satisfaction of the performance obligations under its Launch Services and Space Products agreements. The following table presents revenue disaggregated by type of revenue for the periods presented:

	Three Months Ended March 31,	
	2023	**2022**
Launch services	$ —	$ 3,911
Space products	—	—
Total revenues	$ —	$ 3,911

Contracts with governmental entities involving research and development milestone activities do not represent contracts with customers under ASC 606 and as such, amounts received are recorded in other income in the unaudited condensed consolidated statements of operations. No such income was recorded for the three months ended March 31, 2023. The Company recorded $0.4 million in other income for the three months ended March 31, 2022.

Contract balances

Contract assets and liabilities represent the differences in the timing of revenue recognition from the receipt of cash from the Company’s customers and billings. Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing. Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. Contract assets become receivables once the Company's rights to consideration become unconditional. Such rights are considered unconditional if only the passage of time is required before payment of that consideration is due. The Company had no contract assets as of March 31, 2023 and December 31, 2022. The Company had contract liabilities of $30.0 million and $24.1 million as of March 31, 2023 and December 31, 2022, respectively. During the three months ended March 31, 2023, the Company recorded no revenue and $2.3 million of revenue during the three months ended March 31, 2022, that was included in the contract liabilities balance at the beginning of the periods.

Remaining performance obligations

Revenue allocated to remaining performance obligations represents the transaction price allocated to the performance obligations that are unsatisfied, or partially unsatisfied. It includes unearned revenue and amounts that will be invoiced and recognized as revenue in future periods and does not include contracts where the customer is not committed. Customers are not considered committed when they are able to terminate their contractual obligations to the Company without payment of a substantive penalty under the contract. The Company had unsatisfied performance obligations of $80.6 million as of March 31, 2023, $45.5 million of which is expected to be recognized during the remainder of fiscal year 2023, and $35.1 million between 2024 and 2028.

Note 3 — Supplemental Financial Information

Inventories

in thousands		March 31, 2023		December 31, 2022
Raw materials	$	3,631	$	5,068
Work in progress		3,294		1,520
Finished goods		—		—
Inventories	$	6,925	$	6,588

There were no inventory write-downs recorded during the three months ended March 31, 2023. There were $5.5 million of inventory write-downs recorded within cost of revenues during the three months ended March 31, 2022. The amounts as of December 31, 2022 have been revised to correct the classification of inventory between raw materials and work in progress.

Prepaid and other current assets

in thousands		March 31, 2023		December 31, 2022
Deposits	$	5,009	$	379
Prepaid license and other prepaid expenses		2,608		3,589
Employee Retention Credit - Payroll Tax		2,101		4,283
Other current assets		2,719		2,799
Prepaid and other current assets	$	12,437	$	11,050

Property, Plant and Equipment, net

Presented in the table below are the major classes of property, plant and equipment:

in thousands		March 31, 2023		December 31, 2022
Construction in progress	$	7,287	$	8,309
Computer and software		2,769		2,810
Leasehold improvements		11,645		10,390
Research equipment		8,932		9,042
Production equipment		17,022		14,100
Furniture and fixtures		500		565
Total property, plant and equipment		48,155		45,216
Less: accumulated depreciation		(21,723)		(20,945)
Property, plant and equipment, net	$	26,432	$	24,271

Depreciation expense amounted to $0.8 million and $2.0 million for the three months ended March 31, 2023 and 2022, respectively.

No impairment charges were recorded for the three months ended March 31, 2023 and 2022.

Accrued Expenses and Other Current Liabilities

in thousands	March 31, 2023	December 31, 2022
Employee compensation and benefits	$ 3,571	$ 5,861
Contract liabilities, current portion	29,334	24,137
Construction in progress related accruals	66	2,692
Accrued expenses	4,991	5,179
Accrued inventory purchases	3,886	—
Other (miscellaneous)	913	4,174
Accrued expenses and other current liabilities	$ 42,761	$ 42,043

Other Non-Current Liabilities

in thousands	March 31, 2023	December 31, 2022
Contract liabilities, net of current portion	$ 691	$ -
Other (miscellaneous)	1,905	1,796
Other non-current liabilities	$ 2,596	$ 1,796

Note 4 — Intangible Assets

in thousands	Carrying Amount	Accumulated Amortization	Net Book Value
March 31, 2023			
Definite-lived intangible assets			
Developed technology	$ 9,909	$ (3,299)	$ 6,610
Customer contracts and related relationship	2,383	(1,544)	839
Trade names	123	(113)	10
Intangible assets subject to amortization	12,415	(4,956)	7,459
Indefinite-lived intangible assets			
Trademarks	2,106	—	2,106
Total	$ 14,521	$ (4,956)	$ 9,565

There was no impairment charge for the three months ended March 31, 2023. The Company recorded a pre-tax impairment charge of $4.8 million during the third quarter of 2022. The historical costs of the Company's definite-lived intangible assets were adjusted by these impairment charges to derive the carrying amounts in the table above.

in thousands	Carrying Amount	Accumulated Amortization	Net Book Value
December 31, 2022			
Definite-lived intangible assets			
Developed technology	$ 9,909	$ (2,910)	$ 6,999
Customer contracts and related relationship	2,383	(1,376)	1,007
Trade names	123	(103)	20
Intangible assets subject to amortization	12,415	(4,389)	8,026
Indefinite-lived intangible assets			
Trademarks	2,106	—	2,106
Total	$ 14,521	$ (4,389)	$ 10,132

Based on the amount of intangible assets as of March 31, 2023, the expected amortization expense for each of the next five years and thereafter is as follows:

in thousands	Expected Amortization Expense
2023 (remainder)	$ 1,680
2024	1,891
2025	1,555
2026	1,555
2027	778
Total Intangible assets subject to amortization	$ 7,459

Note 5 — Income Taxes

The Company computes its provision for income taxes by applying the estimated annual effective tax rate to year-to-date income from recurring operations and adjust the provision for discrete tax items recorded in the period.

There has historically been no federal or state provision for income taxes because the Company has incurred operating losses and maintains a full valuation allowance against its net deferred tax assets. For the three months ended March 31, 2023 and 2022, the Company recognized no provision for income taxes consistent with the losses incurred and the valuation allowance against the deferred tax assets.

Utilization of net operating loss carryforwards, tax credits and other attributes may be subject to future annual limitations due to the ownership change limitations provided by Section 382 of the Internal Revenue Code and similar state provisions.

The Company files income tax returns in the U.S. federal jurisdiction and various states. The Company is not currently under examination by income tax authorities in federal, state or other jurisdictions. All tax returns will remain open for examination by the federal and state authorities for three and four years, respectively, from the date of utilization of any net operating loss or credits.

On August 16, 2022, the U.S. enacted the Inflation Reduction Act of 2022, which, among other things, implements a 15% minimum tax on book income of certain large corporations, a 1% excise tax on net stock repurchases and several tax incentives to promote clean energy. Based on our current analysis of the provisions, we do not believe this legislation will have a material impact on our consolidated financial statements. The Company will continue to monitor for additional guidance related to the Act.

Note 6 — Fair Value Measurements

The Company measures its financial assets and liabilities at fair value each reporting period using a fair value hierarchy that prioritizes the use of observable inputs and minimizes the use of unobservable inputs when measuring fair value. A financial instrument's classification within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Three levels of inputs may be used to measure fair value, as follows:

Level 1 Observable inputs, such as quoted prices in active markets for identical assets or liabilities;
Level 2 Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
Level 3 Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The Company uses the market approach to measure fair value for its financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.

The carrying amounts of Company's financial instruments, which include cash equivalents, accounts receivable, prepaid expenses, other current assets, accounts payable, accrued liabilities and certain other current liabilities approximate fair value because of their short-term maturities.

The following table presents information about the Company’s assets and liabilities that are measured at fair value on a recurring basis (in thousands):

	March 31, 2023			
Description	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market account	$ 2,015	$ —	$ —	$ 2,015
Marketable securities				
US Treasury securities	11,859	—	—	11,859
Corporate debt securities	—	6,962	—	6,962
Commercial paper	—	27,123	—	27,123
Total financial assets	$ 13,874	$ 34,085	$ —	$ 47,959
Liabilities:				
Contingent consideration	$ —	$ —	$ 31,135	$ 31,135
Total financial liabilities	$ —	$ —	$ 31,135	$ 31,135

	December 31, 2022			
Description	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Cash equivalents:				
Money market account	$ 21,909	$ —	$ —	$ 21,909
Marketable securities				
US Treasury securities	14,713	—	—	14,713
Corporate debt securities	—	16,915	—	16,915
Commercial paper	—	34,698	—	34,698
Asset backed securities	—	2,847	—	2,847
Total financial assets	$ 36,622	$ 54,460	$ —	$ 91,082
Liabilities:				
Contingent consideration	$ —	$ —	$ 33,900	$ 33,900
Total financial liabilities	$ —	$ —	$ 33,900	$ 33,900

The following table presents a summary of the changes in fair value of the Company's Level 3 financial instruments:

in thousands	**Contingent Consideration**
Fair value as of December 31, 2022	$ 33,900
Gain on change in fair value of contingent consideration	(2,765)
Fair value as of March 31, 2023	$ 31,135

The fair value of the contingent consideration related to the acquisition of Apollo Fusion, Inc. (“Apollo”) is classified as Level 3 financial instruments. To determine the fair value of the contingent consideration, the Company used a Monte Carlo simulation model. The Monte Carlo simulation considered assumptions including revenue volatilities, risk free rates, discount rates and additional revenue discount rate. Additionally, other key assumptions included forecasted revenues from new customers and probability of achieving it. The following table sets forth the range of inputs for the significant assumptions utilized to determine the fair value of contingent consideration as of March 31, 2023 and December 31, 2022:

	March 31, 2023	December 31, 2022
Risk-free interest rate	3.81 %	4.14 %
Expected revenue volatility	19.00 %	19.00 %
Revenue discount rate	10.00 %	10.00 %
Discount rate	8.00 %	7.50 %

The Company began investing in available-for-sale marketable securities in the first quarter of 2022. These marketable securities are classified as short term investments on the unaudited condensed consolidated balance sheets. The following is a summary of available-for-sale marketable securities as of March 31, 2023 and December 31, 2022 (in thousands):

	March 31, 2023		
Description	Amortized Cost	Gross Unrealized Loss	Fair Value
U.S. Treasury securities	$ 11,876	$ (17)	$ 11,859
Corporate debt securities	6,986	(24)	6,962
Commercial paper	27,123	—	27,123
Total available-for-sale marketable securities	$ 45,985	$ (41)	$ 45,944

	December 31, 2022		
Description	Amortized Cost	Gross Unrealized Loss	Fair Value
U.S. Treasury securities	$ 14,763	$ (50)	$ 14,713
Corporate debt securities	16,972	(57)	16,915
Commercial paper	34,698	—	34,698
Asset backed securities	2,850	(3)	2,847
Total available-for-sale marketable securities	$ 69,283	$ (110)	$ 69,173

The following table presents the breakdown of the available-for-sale marketable securities in an unrealized loss position as of March 31, 2023 (in thousands).

	March 31, 2023	
	Fair Value	Gross Unrealized Loss
U.S. Treasury securities		
Less than 12 months	$ 11,859	$ (17)
Total	$ 11,859	$ (17)
Corporate debt securities		
Less than 12 months	$ 6,962	$ (24)
Total	$ 6,962	$ (24)
Commercial paper		
Less than 12 months	$ 27,123	$ —
Total	$ 27,123	$ —

	December 31, 2022	
	Fair Value	Gross Unrealized Loss
U.S. Treasury securities		
Less than 12 months	$ 14,713	$ (50)
Total	$ 14,713	$ (50)
Corporate debt securities		
Less than 12 months	$ 16,915	$ (57)
Total	$ 16,915	$ (57)
Commercial paper		
Less than 12 months	$ 34,698	$ —
Total	$ 34,698	$ —
Asset backed securities		
Less than 12 months	$ 2,847	$ (3)
Total	$ 2,847	$ (3)

The Company does not believe these available-for-sale marketable securities to be other-than-temporarily impaired as of March 31, 2023. There was an unrealized gain of $0.1 million on available-for-sale marketable securities during the three months ended March 31, 2023.

	March 31, 2023	
in thousands	Amortized Cost	Fair Value
Due in 1 year or less	$ 45,985	$ 45,944

	December 31, 2022	
in thousands	Amortized Cost	Fair Value
Due in 1 year or less	$ 69,283	$ 69,173

Note 7 — Commitments and Contingencies

Legal Proceedings

The Company is party to ordinary and routine litigation incidental to its business. On a case-by-case basis, the Company engages inside and outside counsel to assess the probability of potential liability resulting from such litigation. After making such assessments, the Company makes an accrual for the estimated loss only when the loss is probable, and an amount can be reasonably estimated. The Company and or its current or former directors and officers are currently parties to the following litigation matters:

On February 9, 2022, a putative class action was filed in the United States District Court for the Eastern District of New York styled Artery v. Astra Space, Inc. et al., Case No. 1:22-cv-00737 (E.D.N.Y.) (the “Artery Action”). On March 23, 2022, a second putative class action was filed in the United States District Court for the Eastern District of New York styled Riley v. Astra Space, Inc., et al., Case No. 1:22-cv-01591 (E.D.N.Y.) (the “Riley Action”). On November 14, 2022, the Artery Action and the Riley Action were consolidated into a single action (the “Securities Action”), restyled In re Astra Space Inc. f/k/a Holicity Inc. Securities Litigation, and Lead Plaintiffs were appointed. On December 14, 2022, the Securities Action was transferred to the United States District Court for the Northern District of California under Case No. 3:22-cv-08875. On December 28, 2022, Lead Plaintiffs filed their amended complaint. The amended complaint alleges that the Company and several of its current and former officers and directors violated provisions of the Securities Exchange Act of 1934 with respect to certain statements concerning the Company’s projected launch cadence and payload capacity goals. The amended complaint seeks unspecified damages on behalf of a purported class of purchasers of the Company’s securities between February 2, 2021 and December 29, 2021. Defendants moved to dismiss on December 28, 2022. Briefing on that motion is expected to be complete in June 2023. The Company believes that the Securities Action is without merit and intends to defend it vigorously. Due to the early stage of the cases, neither the likelihood that a loss, if any, will be realized, nor an estimate of the possible loss or range of loss, if any, can be determined.

On April 27, 2022, a stockholder derivative suit was filed in the United States District Court for the Eastern District of New York styled Gonzalez v. Kemp, et al., Case No. 22-cv-02401 (E.D.N.Y.) (the "Gonzalez Action"). On January 25, 2023, the plaintiff filed an amended complaint. The amended complaint asserts claims against certain of the Company's current and former officers and directors for alleged breaches of their fiduciary duties, unjust enrichment, abuse of control, gross mismanagement, waste of corporate assets, alleged violations of Section 14(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), and for contribution under Section 10(b) and 21D of the Exchange Act based upon the conduct alleged in the Securities Action described above. The plaintiff in the Gonzalez Action seeks monetary damages in favor of the Company in an unstated amount, reforms to the Company's corporate governance and internal procedures, restitution including disgorgement of any compensation, profits or other benefits received, and reimbursement of the plaintiff's reasonable fees and costs, including attorney's fees. On February 17, 2023, the Gonzalez Action was transferred to the United States District Court for the Northern District of California under Case No. 3:23-cv-00713. Defendants filed a motion to dismiss the amended complaint on April 18, 2023. The Company believes that the case is without merit and intends to defend it vigorously. Due to the early stage of the case, neither the likelihood that a loss, if any, will be realized, nor an estimate of the possible loss or range of loss, if any, can be determined.

The Company has tendered defense of each of the foregoing claims under its Directors' and Officers' policy. The retention under this policy is $20.0 million.

Indemnification Obligations to former Company Board Members

On May 20, 2022, a putative class action was filed in the Court of Chancery of the State of Delaware styled Newbold v. McCaw et. al., Case No. 2022-0439 (the "Newbold Action"). The complaint alleges that Pendrell Corporation, X-icity Holdings Corporation f/k/a Pendrell Holicity Holdings and certain former officers, directors or controlling stockholders of Holicity, Inc. n/k/a Astra Space, Inc., breached their fiduciary duties to the Company in closing on the Business Combination. The complaint seeks unspecified damages on behalf of a purported class of stockholders of the Company's securities from June 28, 2021 through June 30, 2021.

Neither the Company nor any of its board members are parties in this action. Mr. McCaw, who served as a former member of the Company's board, is a defendant in this action, but the allegations relate to periods prior to the Business Combination. Astra is obligated to indemnify certain of the defendants in the Newbold Action. The Company has tendered defense of this action under its Directors' and Officers' Policy. The Company also tendered defense of this claim under the tail policy it was required to purchase in connection with the Business Combination. The retention under the tail policy is $1.5 million. Due to the early stage of this case, neither the likelihood that a loss, if any, will be realized, nor an estimate of the possible loss or range of loss, if any, can be determined.

Delaware Court of Chancery Approval of Petition relating to Amendment to Increase Authorized Shares

On March 1, 2023, the Company filed a petition in the Delaware Court of Chancery (the "Court of Chancery") seeking validation of the amendment of its certificate of incorporation in connection with the Business Combination to increase its authorized shares of Common Stock (the "Charter Amendment") as a result of uncertainty regarding the validity of such amendment given a recent decision of the Court of Chancery.

On March 14, 2023, the Court of Chancery validated and declared effective the Charter Amendment, increasing the Company's authorized Common Stock from 220,000,000 to 465,000,000, thereby permitting the Company to issue additional shares of Class A and Class B common stock in connection with the Business Combination and thereafter.

Purchase Commitments

In order to reduce manufacturing lead times and to have access to an adequate supply of components, the Company enters into agreements with certain suppliers to procure component inventory based on the Company's production needs. A significant portion of the Company's purchase commitments arising from these agreements consist of firm and non-cancelable commitments. As of March 31, 2023, the Company had $28.4 million outstanding purchase commitments whose terms run through May 2026. Payments will be made against these supplier contracts as deliveries occur throughout the term.

Note 8 — Stockholders' Equity

Common and Preferred Stock

As of March 31, 2023, the Company had authorized a total of 466,000,000 shares of stock, consisting of (i) 400,000,000 shares of Class A common stock, par value $0.0001 per share ("Class A common stock"), (ii) 65,000,000 shares of Class B common stock, par value $0.0001 per share ("Class B common stock"), and (iii) 1,000,000 shares of preferred stock, par value $0.0001 per share ("Preferred Stock"). As of March 31, 2023, the Company had 215,286,444 and 55,539,188 shares of Class A and Class B common stock issued and outstanding, respectively. There were no shares of preferred stock outstanding as of March 31, 2023.

Holders of the Class A and Class B common stock have identical distribution rights, except that holders of the Class A common stock are entitled to one vote per share and holders of the Class B common stock are entitled to ten votes per share. Each share of Class B common stock can be converted into one share of Class A common stock at any time at the option of the stockholder and automatically convert upon sale or transfer, except for certain transfers specified in the Company's amended and restated certificate of incorporation.

Common Stock Purchase Agreement

On August 2, 2022, the Company entered into a Common Stock Purchase Agreement and a Registration Rights Agreement (the “Registration Rights Agreement”) with B. Riley. Pursuant to the Purchase Agreement, the Company will have the right to sell to B. Riley up to the lesser of (i) $100.0 million of newly issued shares (the “Shares”) of the Class A Common Stock, and (ii) 53,059,650 Shares of Class A common stock, which number of shares is equal to 19.99% of the sum of Class A common stock and Class B common stock issued and outstanding immediately prior to the execution of the Purchase Agreement (subject to certain conditions and limitations), from time to time during the term of the Purchase Agreement. However, the Purchase Agreement prohibits the Company from issuing or selling any shares of Class A common stock to B. Riley if such a sale, when aggregated with all other shares of Class A common stock then beneficially owned by B. Riley and its affiliates, would result in B. Riley beneficially owning more than 4.99% of the outstanding shares of Class A common stock.

Sales of the Shares pursuant to the Purchase Agreement, and the timing of any sales, are solely at the option of the Company beginning on September 13, 2022. Actual sales of Shares to B. Riley under the Purchase Agreement will depend on a variety of factors including, among other things: market conditions, the trading price of the Class A common stock, and determinations by the Company as to the appropriate sources of funding for the Company and its operations. An amendment to the Common Stock Purchase Agreement is required to sell shares at a price less than the Threshold Price (as defined in the Purchase Agreement).

The purchase price of the Class A common stock that the Company may sell to B. Riley pursuant to the Purchase Agreement will be 97% of the average of the volume weighted average price of the Company’s Class A common stock as calculated per the terms set forth in the Purchase Agreement. The net proceeds from sales, if any, under the Purchase Agreement, will depend on the frequency and prices at which the Company sells the Shares of Class A common stock. To the extent the Company sells the Shares of Class A common stock under the Purchase Agreement, the Company currently plans to use any proceeds for working capital and general corporate purposes.

Note 9 — Stock-based Compensation

Stock-based incentive awards are provided to employees under the terms of Astra's 2021 Omnibus Incentive Plan (the “2021 Plan”) and 2021 Employee Stock Purchase Plan (the “2021 ESPP”).

Under the 2021 Plan, the Company grants restricted stock units (“RSUs”), Performance-Based Units ("PSUs"), time-based stock options and performance stock options ("PSOs") to its executive officers. RSUs and time-based stock options granted have service-based vesting conditions only. PSUs granted have service and performance conditions. The service conditions vary for each executive officer and is based on their continued service to the Company. Stock option holders have a 10-year period to exercise their options before options expire. In July 2022, the PSU agreements were amended to remove the performance-based vesting conditions and only retain the time-based vesting condition. Forfeitures are recognized in the period of occurrence and stock-based compensation costs are recognized based on grant-date fair value as RSUs and time-based stock options vest.

The 2021 ESPP, which is maintained by the Company, allows employees to purchase the Company’s common stock at a discount of up to 15% of the lesser of the fair market value at the beginning of the offering period or the end of each six-month purchase period. 0.8 million shares were issued under the 2021 ESPP during the three months ended March 31, 2023. As of March 31, 2023, 9.1 million shares remain available for issuance under the 2021 ESPP. As of March 31, 2023, the Company had $0.4 million of unrecognized stock-based compensation expense related to the 2021 ESPP. This cost is expected to be recognized over a weighted-average period of 0.77 years.

The following table summarizes stock-based compensation expense that the Company recorded in the unaudited condensed consolidated statements of operations for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,	
in thousands	**2023**	**2022**
Cost of revenues	$ —	$ 241
Research and development	2,359	6,736
Sales and marketing	380	1,580
General and administrative	2,589	8,484
Stock-based compensation expense	$ 5,328	$ 17,041

The Company recognized $0.1 million and $1.0 million compensation costs related to PSUs for the three months ended March 31, 2023 and 2022, respectively, to reflect the PSUs that satisfied the time-based vesting condition on the time-vesting dates.

As of March 31, 2023, the Company had $56.4 million of unrecognized stock-based compensation expense related to all of the Company's stock-based awards. This cost is expected to be recognized over a weighted-average period of 3.0 years.

Stock Options Awards

The following is a summary of stock option activity for the three months ended March 31, 2023 and 2022:

	No. of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Term (in Years)	Aggregate Intrinsic Value
Outstanding - December 31, 2021	20,326,384	$ 7.52	9.4	$ 22,782,654
Granted	1,142,027	5.21	9.8	
Exercised	(176,774)	0.45	4.4	783,216
Forfeited	(24,661)	2.93	—	—
Expired	(1,465)	6.75	—	—
Outstanding - March 31, 2022	21,265,511	$ 7.46	9.2	$ 11,290,701
Outstanding – December 31, 2022	16,248,601	$ 7.11	8.4	$ 9,630
Granted	10,535,783	0.55	1.5	—
Exercised	(180,923)	0.46	0.4	—
Forfeited	(878,620)	0.65	—	—
Expired	(23,330)	1.65	—	—
Outstanding – March 31, 2023	25,701,511	$ 4.69	8.8	$ 10,124
Unvested – March 31, 2023	22,171,996	$ 4.94	9.2	$ 2,184
Exercisable – March 31, 2023	3,529,515	$ 3.14	7.5	$ 7,940

The Company uses the Black-Scholes option pricing-model to calculate the grant date fair value of time-based options. The following table summarizes the assumptions used in estimating the fair value of options granted in the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,	
	2023	2022
Expected terms (years)(1)	6.71	5.81
Expected volatility(2)	98.2%	68.9%
Risk-free interest rate(3)	3.46%	1.70%
Expected dividend rate(4)	—	—
Grant-date fair value	$0.42 - $0.56	$3.20

(1) The expected term is the length of time the grant is expected to be outstanding before it is exercised or terminated. This number is calculated as the midpoint between the vesting term and the original contractual term (contractual period to exercise). If the option contains graded vesting, then the vesting term would be based on the vesting pattern.
(2) Expected volatility, or the standard deviation of annualized returns, was calculated based on comparable companies’ reported volatilities.
(3) Risk-free interest was obtained from U.S. treasury notes for the expected terms noted as of the valuation date.
(4) The Company has assumed a dividend yield of zero as it has no plans to declare dividends in the foreseeable future.

Restricted Stock Units Awards

The following is a summary of restricted stock units for the three months ended March 31, 2023 and 2022:

	Number of RSUs Outstanding	Weighted- Average Grant Date Fair Value Per Share
Outstanding - December 31, 2021	10,678,818	$ 9.20
Granted	3,937,226	4.25
Vested	(828,680)	8.64
Forfeited	(328,562)	9.23
Outstanding - March 31, 2022	13,458,802	$ 7.78
Outstanding – December 31, 2022	16,121,844	$ 3.35
Granted	990,959	0.52
Vested	(627,185)	6.51
Forfeited	(1,944,250)	3.71
Outstanding – March 31, 2023	14,541,368	$ 2.97

Total fair value as of the respective vesting dates of restricted stock units vested for the three months ended March 31, 2023 was approximately $0.8 million. As of March 31, 2023, the aggregate intrinsic value of unvested restricted stock units was $6.2 million.

Note 10 — Loss per Share

The Company computes earnings per share of Common Stock using the two-class method required for participating securities. Basic and diluted earnings per share were the same for the periods presented as the inclusion of all potential Common Stock outstanding would have been anti-dilutive. Earnings per share calculations for all periods prior to the Business Combination have been retrospectively restated to the equivalent number of shares reflecting the exchange ratio established in the BCA. Subsequent to the Business Combination, earnings per share was calculated based on weighted average number of shares of common stock then outstanding.

The following tables set forth the computation of basic and diluted loss for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,			
	2023		2022	
(in thousands, except share and per share amounts)	Class A Common	Class B Common	Class A Common	Class B Common
Net loss attributed to common stockholders	$ (35,667)	$ (9,226)	$ (67,657)	$ (18,056)
Basic weighted average common shares outstanding	214,706,779	55,539,188	208,112,630	55,539,188
Dilutive weighted average common shares outstanding	214,706,779	55,539,188	208,112,630	55,539,188
Loss per share attributable to common stockholders:				
Basic and Diluted loss per share	$ (0.17)	$ (0.17)	$ (0.33)	$ (0.33)

There were no preferred dividends declared or accumulated as of March 31, 2023. The following Class A securities were not included in the computation of diluted shares outstanding because the effect would be anti-dilutive:

	March 31,	
	2023	2022
Stock options	15,939,378	8,249,326
RSUs	14,533,186	13,359,326
Warrants	25,000	—
Total	30,497,564	21,608,652

There were no Class B securities that were excluded in the computation of diluted shares outstanding for the three months ended March 31, 2023 and 2022.

Note 11 — Segment Information

The Company reports segment information based on a "management" approach to reflect the operating segments for which the Company's Chief Executive Officer, as the Chief Operating Decision Maker ("CODM"), makes decisions and assesses performance. Prior to the current reporting period, the Company had a single operating and reportable segment. Following commencement of revenue-generating activities for Space Products (as defined below) during the third quarter of fiscal year 2022, the Company restructured the management, operations, and periodic management and internal reporting packages to address the shift in strategy. As a result of these changes, the Company determined that its reportable segments had changed and that beginning in the third quarter of 2022 the Company has two operating and reportable segments: Launch Services and Space Products. The Company recast prior period information related to the change in segments.

Launch Services segment provides launch services to satellite operators and governments in partnership with third-party spaceport providers globally.

Space Products consist of designing and providing space products based on the customers' needs for a successful satellite launch and other products that the Company may sell in the future.

The following table shows revenue by reportable segment for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Revenues:		
Launch services	$ —	$ 3,911
Space products	—	—
Total revenues:	$ —	$ 3,911
Cost of revenues:		
Launch services	$ —	$ 11,014
Space products	—	—
Total cost of revenues:	$ —	$ 11,014
Gross profit (loss):		
Launch services	$ —	$ (7,103)
Space products	—	—
Total gross profit (loss):	$ —	$ (7,103)

The Company evaluates the performance of its reportable segments based on segment gross profit. Segment gross profit is segment revenue less segment cost of revenue. Unallocated expenses include operating expenses related to research and development, selling and marketing and general and administrative expenses as they are not considered when management evaluates segment performance.

The following table reconciles segment gross profit to loss before income taxes for the three months ended March 31, 2023 and 2022:

	Three Months Ended March 31,	
(in thousands)	**2023**	**2022**
Gross profit (loss)	$ —	$ (7,103)
Research and development	31,082	37,927
Selling and marketing	2,484	4,764
General and administrative	15,682	20,986
Loss (Gain) on change in fair value of contingent consideration	(2,765)	15,500
Interest (income) expense, net	(1,330)	(174)
Other expense (income), net	(260)	(393)
Loss before taxes	**$ (44,893)**	**$ (85,713)**

The Company does not evaluate performance or allocate resources based on reporting segment's total assets or operating expenses, and therefore such information is not presented.

All of the Company's long-lived assets are located in the United States. The Company is subject to International Traffic in Arms Regulations ("ITAR") and generates all of its revenue in the United States.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of the financial condition and results of operations of Astra Space, Inc. should be read together with our audited consolidated financial statements as of and for the years ended December 31, 2022 and 2021 and unaudited interim condensed consolidated financial statements as of and for the three months ended March 31, 2023 and 2022, together with related notes thereto. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those projected in these forward-looking statements as a result of various factors, including those set forth in the risk factors previously disclosed in our annual report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 30, 2023, as updated by factors disclosed in the section titled "Risk Factors" in this Quarterly Report on Form 10-Q ("Quarterly Report"). Certain amounts may not foot due to rounding. Unless the context otherwise requires, all references in this section to "the Company" "Astra," "us," "our" or "we" refer to Astra Space, Inc.

A discussion regarding our financial condition and results of operations for the three months ended March 31, 2023 and 2022 is presented below.

Overview

Our mission is to launch a new generation of Launch Services and Space Products to Improve Life on Earth from Space®. These services and products are enabled by new constellations of small satellites in Low Earth Orbit ("LEO"), which have rapidly become smaller, cheaper, and many times more numerous than legacy satellites. Launch vehicles, however, have not evolved in the same way—most rockets remain focused on serving legacy satellites and human spaceflight missions and we aim to provide the world's first mass-produced orbital launch system. Our primary focus remains the growth and development of our Launch Services and Space Products offerings to support our overall mission to Improve Life on Earth from Space®. We manage our business and report our financial results in two segments: Launch Services and Space Products.

Launch Services

On April 25, 2023, Astra hosted its second annual Spacetech Day at both our Alameda Skyhawk factory and Sunnyvale Oakmead facility where we unveiled Rocket 4.

As part of the development cycle for Rocket 4, we expect to conduct a test launch of this new launch system in the later part of 2023, and, at this time, we do not expect that we will be able to conduct paid commercial launches until 2024 using this new launch system. Our ability to conduct paid commercial launches in 2024 will depend in part upon the success of test launches.

Our new launch system is intended to support launch vehicles that will serve a market focused on populating mega constellations. We have designed this launch system to support more payload capacity, greater reliability, and a more frequent launch cadence, which we believe will allow us to offer our customers more dependable services. We recently announced an agreement with the U.S. Space Force for an order valued at $11.5 million for a launch of an ESPA-class space vehicle and additional cubesats through the Orbital Services Program (OSP-4) contract, which is intended to fly on Rocket 4 when our commercial launch services restart.

Space Products

The Astra Spacecraft Engine™ is a propulsion engine that assists satellites in achieving and maintaining targeted orbits. During our Spacetech Day, on April 25, 2023, we introduced the Spacecraft Propulsion Kit, a new product offering. The Spacecraft Propulsion Kit disaggregates the four subsystems of the Astra Spacecraft Engine™ module, enabling satellite builders to take advantage of shorter lead times to access key components of their propulsion system that they can customize for their unique missions. We announced on April 27, 2023, we had entered into a contract with Apex Technology, Inc. to initially provide 5 Spacecraft Propulsion Kits for Apex's satellite bus platform, to be delivered in 2023.

Segments

Our reportable segments changed during the year ended December 31, 2022. The segment reporting for prior periods was recast to conform to the current period presentation.

We identify our reporting segments based on the organizational units used by management to monitor performance and make operating decisions. The Company previously had one operating, as well as one reportable, segment. Following the realignment of our management and internal reporting in the third quarter of 2022, the Company now has the following two operating and reportable segments: (i) Launch Services and (ii) Space Products. The Company reclassified corresponding assets, including goodwill, and liabilities to the reporting units for all prior year periods.

Refer to Note 11 – Segment Information to our consolidated financial statements for more information regarding our segment reporting.

Key Components of Results of Operations

We are an early-stage company and our historical results may not be indicative of our future results for reasons that may be difficult to anticipate. Accordingly, the drivers of our future financial results, as well as the components of such results, may not be comparable to our historical or future results of operations.

Revenues

We commenced our first paid commercial launch in February 2022, followed by subsequent paid commercial launches in March 2022 and June 2022. These launches represented the start of our paid commercial launch operations. In August 2022, we discontinued the production of launch vehicles supported by our Launch System 1. Therefore, we did not conduct any further commercial launches in late 2022 as we shifted resources to the development of our Launch System 2.

We also commenced delivery of Space Products to our customers during the year ended December 31, 2022. The Company did not record any Space Products revenue for the three months ended March 31, 2023.

As we are in the very early stages of developing our space services offering and have decided to put these development activities on hold for the near future, we do not expect to generate revenues by delivering space services to our customers at this time.

Cost of Revenues

Cost of revenues consist primarily of direct material, direct labor, manufacturing overhead, other personnel-related expenses, which include salaries, bonuses, benefits, stock-based compensation expense, and depreciation expense. Cost of revenues also includes inventory write-downs to reduce the carrying value of inventory related to Launch Services when the carrying value exceeds its estimated net realizable value. We anticipate recording write-downs to our inventory over the foreseeable future as we continue to ramp production of launch vehicles supported by our new launch system. We expect our cost of revenues to increase in future periods as we sell more Launch Services and Space Products. As we grow into our current capacity and execute on cost-reduction initiatives, we expect our gross margins to improve over time.

Operating Expenses

Research and Development ("R&D") Expense

Our R&D expenses consist primarily of internal and external expenses incurred in connection with our research activities and development programs. These expenses include, but are not limited to, development supplies, testing materials, personnel and personnel-related costs (including salaries, bonuses, benefits, and stock-based compensation expense), depreciation expense, amortization of intangible assets, overhead allocation (consisting of various support and facility costs), and consulting fees. R&D costs are expensed as incurred.

We allocate R&D costs by function rather than by project, as a significant majority of our historical R&D spending was related to the initial development and testing of our underlying technology, including preparation for multiple test launches.

A change in the outcome of any of these variables could delay the development of our launch systems and Space Products, which in turn could impact the timing of commercialization of our offerings.

As we are developing and building our Launch Services, we have expensed all R&D costs associated with developing and building our Launch Services offering. We expect that our R&D expenses will increase in the short-term as we invest in improving and further reducing the costs of our launch system.

R&D is and will continue to be an important part of our business as we invest in improving our existing products and services, as well as potentially in developing new products or services. We make choices on where to invest resources into R&D based on our view of the market and how it will evolve, and by identifying those opportunities for new or improved products and services where Astra is well positioned to be successful.

Currently, our Launch Services business is investing in the R&D activities necessary to complete the design, build, and qualification of Launch System 2, which we expect will bring significantly more capability to the market as compared to the prior version of our Launch System.

Our Space Products business is focused on scaling our new production facility, though some R&D activities will continue to further improve the current product, develop and potentially introduce other versions of the Astra Spacecraft Engine™, and potentially develop and introduce other Space Products to the marketplace.

Prior to January 1,2023, we invested some resources in R&D activities to support a future Space Services business, and we may do so again in the future.

Sales and Marketing Expense

Sales and marketing expenses consist of personnel and personnel-related expenses (including stock-based compensation expense) for our business development team as well as advertising and marketing expenses. We expect to increase our sales and marketing activities in order to grow our customer base and increase market share in the future.

General and Administrative Expense

General and administrative expenses consist primarily of personnel and personnel-related costs (including salaries, bonuses, benefits, and stock-based compensation expense) for personnel in executive, finance, accounting, corporate development and other administrative functions. General and administrative expenses also include legal fees, professional fees paid for accounting, auditing, consulting, tax, and investor relations services, insurance costs, facility costs not otherwise included in research and development expenses and costs associated with compliance with the rules and regulations of the SEC and the stock exchange.

We manufacture and assemble nearly all of our products in house, and as a result relies on a number of supplier partnerships for components and raw materials for the launch system and spacecraft engine products. We obtain these components in accordance with internal quality and traceability policies to ensure that our products can meet rigorous reliability requirements. Our design team goes to great effort to ensure that our components and assemblies are designed with simple, short lead time and commodity-based supply chains whenever possible. We engage into long term supplier contracts for those components that are critical to function or have a limited supply base in order to protect our ability to scale production. Astra has two manufacturing facilities and two test facilities, totaling over 300,000 square feet where engineering and manufacturing are co-located with their respective products. Each facility is maintained under a long-term lease and is designed with scaled operations in mind. Please refer to Item 2. Properties section for more details. Our headquarters is located in Alameda, CA and is where we conduct rocket and launch vehicle assembly and test, as well as machining and metal forming operations for all products. In 2022, Astra began work on its second factory in Sunnyvale, CA for spacecraft components which is expected to begin operations of producing spacecraft engines in the second quarter of 2023. Additionally, we maintain two primary launch locations with the unique ability to expand and bring up new sites with little infrastructure requirement.

Income Tax (Benefit) Expense

Our income tax provision consists of an estimate for U.S. federal and state income taxes based on enacted rates, as adjusted for allowable credits, deductions, uncertain tax positions, changes in deferred tax assets and liabilities, and changes in the tax law. We maintain a valuation allowance against the full value of our U.S. and state net deferred tax assets because we believe the recoverability of the tax assets is not more likely than not.

Other Income (Expense), Net

Other income (expense), net primarily consists of income from government research and development contracts.

Critical Accounting Estimates

Our financial statements have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. Preparation of the financial statements requires our management to make a number of judgments, estimates and assumptions relating to the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. We consider an accounting judgment, estimate or assumption to be critical when (1) the estimate or assumption is complex in nature or requires a high degree of judgment and (2) the use of different judgments, estimates and assumptions could have a material impact on our consolidated financial statements. We have made no updates or made additions to our significant accounting policies as described in Note 2 in our 2022 Annual Report.

There were no significant changes in our critical accounting estimates during the three months ended March 31, 2023 compared to those previously disclosed in “Critical Accounting Estimates” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in the 2022 Annual Report.

Results of Operations

Comparison of the Three Months Ended March 31, 2023 and 2022

	Three Months Ended March 31,		Period over period change	
(in thousands, except percentages)	**2023**	**2022**	**($)**	**(%)**
Revenues:				
Launch services	$ -	$ 3,911	$ (3,911)	n.m.
Space products	—	—	-	n.m.
Total revenues	-	3,911	(3,911)	—
Cost of revenues:				
Launch services	-	11,014	(11,014)	n.m.
Space products	-	—	-	n.m.
Total cost of revenues	—	11,014	(11,014)	—
Gross profit (loss):				
Launch services	-	(7,103)	7,103	n.m.
Space products	-	—	-	n.m.
Total gross profit (loss)	-	(7,103)	7,103	—

n.m. = not meaningful.

Revenues

No revenues were recognized for the three months ended March 31, 2023. We do not anticipate any revenues related to Launch Services in 2023 as we work to develop and test the next version of our launch system: Rocket 4 (aka Launch System 2). Revenues were $3.9 million for the three months ended March 31, 2022, all of which related to Launch Services. We commenced paid commercial Launch Services during the three months ended March 31, 2022. We did not recognize any revenues in Space Products for the three months ended March 31, 2023.

Cost of Revenues

No cost of revenues were recognized for the three months ended March 31, 2023. During the second half of 2022, we discontinued paid commercial launches in order to focus on developing our Launch System 2. Cost of revenues were $11.0 million for the three months ended March 31, 2022, which was primarily driven by recording of $5.5 million of cost of launch services related to our launches of launch vehicles: LV0008 and LV0009 and a $5.5 million of inventory net realizable value write downs.

	Three Months Ended March 31,		Period over period change	
(in thousands, except percentages)	**2023**	**2022**	**($)**	**(%)**
Gross profit (loss)	$ -	$ (7,103)	$ 7,103	—
Operating expenses:				
Research and development	31,082	37,927	(6,845)	(18)
Sales and marketing	2,484	4,764	(2,280)	(48)
General and administrative	15,682	20,986	(5,304)	(25)
Loss (Gain) on change in fair value of contingent consideration	(2,765)	15,500	(18,265)	(118)
Total operating expenses	46,483	79,177	(32,694)	(41)
Operating loss	(46,483)	(86,280)	39,797	(46)
Interest income	1,330	174	1,156	664
Other income	260	393	(133)	(34)
Loss before taxes	(44,893)	(85,713)	40,820	(48)
Income tax (benefit) expense	-	-	-	n.m.
Net loss	(44,893)	(85,713)	40,820	(48)
Net loss attributable to common stockholders	$ (44,893)	$ (85,713)	$ 40,820	(48)

n.m. = not meaningful.

Research and Development

R&D costs were $31.1 million and $37.9 million for the three months ended March 31, 2023 and 2022, respectively. The $6.8 million decrease mainly reflected a $4.7 million reduction in stock-based compensation expense, $3.6 million decrease in personnel-related costs due to lower headcount in R&D departments and $2.1 million decrease in professional services. The decreased R&D costs were partially offset by a $1.9 million increase in facilities and other expenses and $1.7 million increased R&D materials costs.

Sales and Marketing

Sales and marketing expenses were $2.5 million and $4.8 million for the three months ended March 31, 2023 and 2022, respectively. The $2.3 million decrease mainly reflected a $1.2 million reduction in stock-based compensation expense, $0.4 million decrease in depreciation and amortization, $0.4 million decrease in professional services expense and $0.3 million decrease in personnel-related expenses reflecting decreased headcount.

General and Administrative

General and administrative expenses were $15.7 million and $21.0 million for the three months ended March 31, 2023 and 2022, respectively. The $5.3 million decrease was primarily due to a $5.9 million reduction in stock-based compensation expense, partially offset by a $0.6 million increase in professional services expense.

Gain/(Loss) on Change in Fair Value of Contingent Consideration

Gain on change in fair value of contingent consideration of $2.8 million for the three months ended March 31, 2023, as compared to the loss of $15.5 million on the change in fair value of contingent consideration three months ended March 31, 2022, was primarily due to lower revenues forecasted in estimating the fair value of contingent consideration.

Interest Income

Interest income was $1.3 million and $0.2 million for the three months ended March 31, 2023 and 2022, respectively. The $1.2 million increase in interest income was primarily due to an increase in interest earned on investments.

Other Income

Other income was $0.3 million and $0.4 million for the three months ended March 31, 2023 and 2022, respectively. The $0.1 million decrease in other income was primarily due to lower income from government research and development contracts for the three months ended March 31, 2023 as compared to the corresponding prior year period.

Income Tax Expense

We did not incur income tax expense for the three months ended March 31, 2023 and 2022.

Liquidity and Capital Resources

Our cash and cash equivalents are maintained in highly liquid investments with remaining maturities of 90 days or less at the time of purchase.

We measure liquidity in terms of our ability to fund the cash requirements of our research and development activities and our current business operations, including our capital expenditure needs, contractual obligations and other commitments. Our current liquidity needs relate to our business operations, research and development activities, mainly in connection with the ongoing development of our technology, products and services, lease obligations and capital expenditures, which primarily relate to the development of our manufacturing facilities.

Given our current liquidity position and historical operating losses, we believe there is substantial doubt that we can continue as a going concern. Substantial doubt about an entity’s ability to continue as a going concern exists when conditions and events, considered in the aggregate, indicate that it is probable that the entity will be unable to meet its obligations as they become due within one year after the date that the financial statements are issued.

We have, however, prepared the unaudited condensed consolidated interim financial statements included elsewhere in this Quarterly Report on a going concern basis, assuming that our financial resources will be sufficient to meet our capital needs over the next twelve months. Accordingly, our financial statements do not include adjustments relating to the recoverability and realization of assets and classification of liabilities that might be necessary should we be unable to continue in operation.

As of March 31, 2023, our existing sources of liquidity included cash and cash equivalents of $16.8 million and marketable securities of $45.9 million. We have a limited history of operations and have incurred negative cash flows from operating activities and loss from operations in the past as reflected in the accumulated deficit of $1.9 billion as of March 31, 2023. We expect to continue to incur operating losses due to the investments we intend to make in our business, including the development of our products and services, although we expect those losses to be offset by revenues recognized through the delivery of our Space Products in 2023. We remain focused on managing cash expenditures, including but not limited to, reducing capital expenditures, consulting services and limiting hiring efforts to key positions within our Space Products business. In addition, we continue to evaluate opportunities to strengthen our financial position, including through the issuance of additional equity securities or by entering into new financing arrangements, as appropriate. We believe that the Company has limited cash resources at the current level to fund commercial scale production and sale of its services and products. However, if we execute on our Space Products deliverables and we are able to obtain additional financing and assuming our plans to manage capital expenditures are effective, we expect that our existing sources of liquidity will be sufficient to fund operating and capital expenditure requirements through at least 12 months from the date of this Quarterly Report, or May 2024 Our current liquidity may not be sufficient to meet the required long-term liquidity needs associated with continued use of cash from operating activities at historical levels, other liquidity needs associated with capital expenditures, as well as other investing needs. We are actively evaluating other sources of liquidity to further support long-term business operations. As of March 31, 2023, the Company is not party to any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on our financial condition, results of operations, liquidity, capital expenditures, or capital resources. The cash requirements for the upcoming 12 months relate to our leases and operating and capital purchase commitments.

Committed Equity Purchases

On August 2, 2022, we entered into a $100.0 million Class A common stock purchase agreement with B. Riley to support working capital and other general corporate needs. Under the terms of this agreement, we have the right, without obligation, to sell and issue up to $100.0 million of our Class A common stock over a period of 24 months beginning on September 13, 2022 to B. Riley at the Company's sole discretion, subject to certain limitations and conditions including that our per share closing price is above the Threshold Price. As of March 31, 2023, no shares have been sold to B. Riley under this agreement. See Note 8 — Stockholders' Equity to the condensed consolidated financial statements included elsewhere in this Quarterly Report for more details.

Summary Statement of Cash Flows for the Three Months Ended March 31, 2023 and 2022

The following table sets forth the primary sources and uses of cash and cash equivalents for the periods presented below:

	Three Months Ended March 31,		Period over period change	
(in thousands)	**2023**	**2022**	**$**	**%**
Net cash used in operating activities	$ (35,999)	$ (48,274)	$ 12,275	(25)%
Net cash provided by (used in) investing activities	18,719	(115,683)	134,402	(116)
Net cash provided by financing activities	441	471	(30)	(6)
Net decrease in cash and cash equivalents	$ (16,839)	$ (163,486)	$ 146,647	(90)%

Cash Flows used in Operating Activities

Our cash flows from operating activities are significantly affected by our cash expenditures to support the growth of our business in areas such as research and development and general and administrative and working capital. Our operating cash inflows include cash from milestone billing under certain Space Products contracts in 2023 and Launch Services contracts in 2022. These cash inflows are offset by our payments to suppliers for production materials and parts used in our manufacturing process as we ramp up our production for space products, payments to our employees and other operating expenses.

For the three months ended March 31, 2023, net cash used in operating activities was $36.0 million. The primary factors affecting the Company's operating cash flows during the period were a net loss of $44.9 million. This is offset by non-cash charges of $4.4 million including stock-based compensation expense of $5.3 million, depreciation and amortization expense of $1.3 million and non-cash lease expense of $0.9 million, partially offset by a gain on change in fair value of contingent consideration of $2.8 million. Changes in operating working capital items were mainly due to an increase in accounts payable of $7.0 million, partially offset by a decrease in trade accounts receivable of $1.5 million, a decrease in prepaid and other current assets of $1.4 million.

For the three months ended March 31, 2022, net cash used in operating activities was $48.3 million. The primary factors affecting the Company's operating cash flows during the period were a net loss of $85.7 million. This is offset by non-cash charges including stock-based compensation expense of $17.0 million, loss on change in fair value of contingent consideration of $15.5 million, inventory net realizable value write-downs of $5.5 million, depreciation and amortization expense of $2.8 million, non-cash lease expense of $0.4 million and accretion of marketable securities purchased at premium of $0.1 million. Changes in operating working capital items is mainly due to ramp-up of our production and primarily reflect the increase in inventories of $6.5 million, accounts payable of $0.1 million and other non-current liabilities of $0.5 million. Changes in operating working capital items was partially offset by a decrease in trade accounts receivable of $1.4 million, prepaid and other current assets of $1.0 million, other non-current assets of $0.1 million, lease liabilities of $0.3 million and accrued expenses and other current liabilities of $0.1 million.

Cash Flows used in Investing Activities

For the three months ended March 31, 2023, net cash provided by investing activities was $18.7 million, which was comprised mainly of maturities of marketable securities of $23.8 million, partially offset by $5.0 million of purchases of property, plant and equipment related to leasehold improvements at our Sunnyvale manufacturing facility and production equipment at our manufacturing facility and corporate headquarters in Alameda, California.

For the three months ended March 31, 2022, net cash used in investing activities was $115.7 million, which was comprised mainly of purchases of marketable securities of $93.9 million, purchases of property, plant and equipment of $20.9 million mainly related to the construction of our manufacturing facility and acquisition of an indefinite-lived intangible trademark asset of $0.9 million.

Cash Flows from Financing Activities

For the three months ended March 31, 2023, net cash provided by financing activities amounted to $0.4 million and consisted primarily of proceeds from the issuance of shares of Class A common stock under equity plans.

For the three months ended March 31, 2022, net cash provided by financing activities amounted to $0.5 million and consisted primarily of proceeds from employee stock purchase plan of $0.4 million and issuance of stock under equity plans of $0.1 million.

Compliance with the Continued Listing Standards of the Nasdaq Capital Market ("Nasdaq")

On October 6, 2022, we received a deficiency notice from Nasdaq that we were not in compliance with Rule 5450(a)(1) of the listing requirements (the "Minimum Bid Price Requirement") because our per share closing bid price has been below $1.00 for thirty consecutive business days. Currently, our Class A common stock trades on the Nasdaq Capital Market. At the time, our Class A common stock traded on the Nasdaq Global Select Market (see below for transition from Nasdaq Global Select Market to Nasdaq Capital Market effective April 12, 2023). Nasdaq's notice stated that if, at any time before April 4, 2023, the per share closing bid price of Astra's Class A common stock is at least $1.00 for a minimum of ten consecutive business days, Nasdaq's staff will provide us written notice that we comply with the Minimum Bid Price Requirement. As of the date of this quarterly report, our per share closing bid price remains below $1.00. While this notice had no immediate effect on the listing of the Company's Class A common stock, if we are unable to regain compliance with the Minimum Bid Price Requirement or otherwise maintain compliance with the other listing standards for Nasdaq, it could result in the delisting of our Class A common stock from Nasdaq.

On March 13, 2023, we submitted an application to Nasdaq for an additional 180-day period (the "Extended Compliance Period") to comply with the minimum bid price requirement. On April 10, 2023, the Company received a letter from Nasdaq notifying the Company that, while the Company has not regained compliance with the Minimum Bid Price Requirement, the Staff has determined that Astra is eligible for an additional 180 calendar day period, or until October 2, 2023, to regain compliance. Nasdaq's determination was based on (i) Astra meeting the continued listing requirement for market value of publicly held shares and all other applicable requirements for initial listing on Nasdaq, with the exception of the Minimum Bid Price Requirement, and (ii) Astra's written notice to Nasdaq of its intention to cure the deficiency during the Extended Compliance Period. In connection with our request for extension to cure our notice of deficiency, we transferred our Class A Common Stock from the Nasdaq Global Select Market to the Nasdaq Capital Market, effective April 12, 2023. If we are unable to cure the deficiency during the Extended Compliance Period, Nasdaq will give notice that our Class A common stock is subject to delisting and we will be able to appeal that delisting before a Nasdaq hearings panel.

On April 17, 2023, our Board adopted resolutions approving, declaring advisable, and recommending to our stockholders for their approval at our upcoming annual meeting of stockholders on June 8, 2023, a Certificate of Amendment to the Charter (the "Reverse Stock Split Charter Amendment") to effect a reverse stock split of our issued and outstanding Class A Common Stock and Class B Common Stock (the "Reverse Stock Split") with a ratio in the range between and including 1-for-5 shares and 1-for-15 shares of each of our Class A Common Stock and Class B Common Stock, such ratio to be determined by our Board in its discretion. If the Reverse Stock Split Charter Amendment is passed by stockholders at the annual meeting, the Board may determine that it is in the best interests of stockholders to effectuate the Reverse Stock Split in order to cure the deficiency.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We have not, to date, been exposed to material market risks given our early stage of operations. As we expand our commercial operations, we expect to be exposed to foreign currency exchange rate and commodity price risks, particularly related to rocket propellants, helium, and aluminum, among others, and potentially other market risks, including those related to interest rates or valuation of financial instruments, among others. There were no material changes in the Company's market risk since the year ended December 31, 2022.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures

We maintain disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer, who serves as our principal executive officer, and Chief Financial Officer, who serves as our principal financial officer, as appropriate, to allow for timely decisions regarding required disclosures. In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints, and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of March 31, 2023, due to the material weaknesses in our internal control over financial reporting described below.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Management, with the participation of our Chief Executive Officer and Chief Financial Officer, has assessed the effectiveness of our internal control over financial reporting as of March 31, 2023 based on the criteria described in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, management has concluded that our internal control over financial reporting as of March 31, 2023 was not effective due to the material weaknesses identified below. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. Specifically, material weaknesses identified are:

Control Environment

We did not design and maintain an effective control environment to enable the identification and mitigation of risks of material misstatement which contributed to the following material weaknesses:

- We did not design and maintain effective information technology ("IT") general controls for information technology systems that are relevant to the preparation of our financial statements. Specifically, we did not design and maintain:
  - program change management controls to ensure that program and data changes are identified, tested, authorized and implemented appropriately,
  - user access controls to ensure appropriate segregation of duties and to adequately restrict user and privileged access to appropriate personnel,
  - computer operations controls to ensure that processing and transfer of data, and data backups and recovery are monitored, and
  - program development controls to ensure that new software development is tested, authorized and implemented appropriately.
- We did not design and maintain effective controls over formalizing certain policies and procedures.
- We did not design and maintain effective controls over business processes related to and including the preparation and recording of journal entries within our accounting systems related thereto.
- We did not design and maintain effective controls over accounting for complex transactions and instruments, including, the inaccurate accounting for Public and Private Placement Warrants and the inaccurate application of conversion accounting related to our convertible instruments.

Risk Assessment

We did not design and maintain controls over an effective risk assessment, including: (i) identifying, assessing, and communicating appropriate objectives, (ii) identifying and analyzing risks to achieve these objectives, and (iii) identifying and assessing changes in the business that could impact our internal control over financial reporting.

Control Activities

We did not design and maintain effective control activities as the control activities did not adequately (i) address relevant risks, (ii) provide evidence of performance, (iii) provide appropriate segregation of duties, or (iv) operate at a sufficient level of precision.

Information and Communication

We did not design and maintain controls over information and communication relating to communicating accurate information internally and externally, including providing information pursuant to objectives, responsibilities, and functions of internal control.

Monitoring Activities

We did not design and maintain effective monitoring controls to ascertain whether the components of internal control are present and functioning.

These material weaknesses resulted in a restatement to additional paid-in-capital, accumulated deficit and adjustment to redemption value on convertible preferred stock for the quarterly period ended June 30, 2021. These material weaknesses also resulted in audit adjustments and immaterial errors to our accounts and disclosures, as of and for the years ended December 31, 2022 and 2021.

Additionally, these material weaknesses could result in a misstatement of substantially all of our account balances or disclosures that would result in a material misstatement to the annual or interim consolidated financial statements that would not be prevented or detected.

Remediation Plan

Our management, including our Chief Executive Officer and Chief Financial Officer, continue to work to design and implement both a short-term and a long-term remediation plan to correct the material weaknesses in our internal control over financial reporting as described below. We are focused on enhancing the design and implementation of effective internal control measures to improve our internal control over financial reporting and remediate these material weaknesses.

To address the material weaknesses, management has completed, or is in the process of:

- Expanding the management and governance over IT system controls including the strengthening of;
  - program change management controls to ensure that program and data changes are identified, tested, authorized and implemented appropriately and aligned with business and IT requirements,
  - user access controls to ensure appropriate segregation of duties and to adequately restrict user and privileged access to appropriate personnel,
  - computer operations controls to ensure that processing and transfer of data, and data backups and recovery are monitored, and
  - program development controls to ensure that new software development is tested, authorized and implemented appropriately.
- We are in the process of formalizing accounting, and other key business process policies and procedures.
- We are implementing and enhancing comprehensive business process controls over the preparation and review of journal entries, including the recent deployment of a new ERP system in the third quarter of 2022, and establishing additional controls to verify transactions are properly classified in the financial statements.
- We are enhancing our processes to identify and appropriately apply applicable accounting requirements to better evaluate and understand the nuances of the complex accounting standards for complex transactions and instruments as well as the hiring of additional experienced internal resources. We have provided enhanced access to accounting literature, research materials, and documents as well as increased communication with third party consultants and specialists with whom we consult regarding the application of accounting standards over complex transactions and instruments to supplement our internal resources.
- We are in the process of enhancing and have completed some enhancements to our implementation of all of the components of the “Internal Control—Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). This includes improvements to our Sarbanes-Oxley program, an overall Company-wide risk assessment process and assessing the effectiveness of control activities to contribute to the mitigation of risks and support achievement of objectives facilitated by Internal Audit. In addition, the Company has completed the assignment of responsibilities, internal and external, associated with the performance of internal controls over financial reporting and will

continue to monitor the need to hire additional resources, contracting external resources, and continue providing additional training to existing resources as appropriate.

As we continue our evaluation and assess the effectiveness of our internal control over financial reporting going forward, management may modify the actions described above or identify and take additional measures to address control deficiencies. While we prioritize achieving the effectiveness of our internal control over financial reporting and disclosure controls and procedures, until our remediation efforts, including any additional measures management identifies as necessary, are completed, validated and tested over a sustained period, the material weaknesses described above will continue to exist and management will not be able to conclude that they are remediated. We are committed to continuous improvement and will continue to diligently review our internal control over financial reporting.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as that term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended March 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings

Discussion of legal matters is incorporated by reference from Part I, Item 1, Note 7- Commitments and Contingencies, of this Quarterly Report on Form 10-Q, and should be considered an integral part of Part II, Item 1, “Legal Proceedings.”

Item 1A. Risk Factors

Except for the risk factors set forth below, there have been no material changes from the risk factors previously disclosed in our Annual Report on Form 10-K for the period ended December 31, 2022, filed with the SEC on March 30, 2023 (as amended on March 31, 2023).

In addition, certain risk factors were disclosed in our Definitive Proxy Statement on Schedule 14A for the 2023 Annual Stockholders' Meeting, filed with the SEC on April 28, 2023, in connection with Proposal 2, pursuant to which the Company is seeking approval of a certificate of amendment to the Company’s charter to effect a reverse stock split. The reverse stock split, if approved by our stockholders and then subsequently implemented by our Board, is intended to increase the trading price of our Class A Common Stock to address the deficiency notice that we have received from Nasdaq, described in more detail below. Investors are encouraged to review these additional risk factors prior to making an investment in the Company and in conjunction with their review of this Quarterly Report on Form 10-Q and the additional risk factors set forth below.

Risk Factors Related to Compliance with the Continued Listing Standards of the Nasdaq Capital Market (“Nasdaq”)

We currently fail to satisfy certain continued listing requirements of the National Association of Securities Dealers Automated Quotations (“Nasdaq”) Capital Market, have failed to satisfy certain of these requirements in the past and could fail to satisfy those requirements again in the future, which could negatively affect the market price of our Class A common stock, our liquidity and our ability to raise capital. Our failure to meet the continued listing requirements of Nasdaq Capital Market could result in a delisting of our Class A common stock.

On October 6, 2022, we received a deficiency notice from Nasdaq that we were not in compliance with Rule 5450(a)(1) of the listing requirements (the “Minimum Bid Price Requirement”) because our per share closing bid price has been below $1.00 for thirty consecutive business days. Currently, our Class A common stock trades on the Nasdaq Capital Market. At the time, our Class A common stock traded on the Nasdaq Global Select Market (see below for transition to Nasdaq Capital Market effective April 12, 2023). Nasdaq’s notice stated that if, at any time before April 4, 2023, the per share closing bid price of Astra’s Class A common stock is at least $1.00 for a minimum of ten consecutive business days, Nasdaq’s staff will provide us written notice that we comply with the Minimum Bid Price Requirement. As of the date of this quarterly report, our per share closing bid price remains below $1.00. While this notice had no immediate effect on the listing of the Company’s Class A common stock, if we are unable to regain compliance with the Minimum Bid Price Requirement or otherwise maintain compliance with the other listing standards for Nasdaq, it could result in the delisting of our Class A common stock from Nasdaq, which could have a material impact on your ability to sell shares of our Class A common stock.

On March 13, 2023, we submitted an application to Nasdaq for an additional 180-day period (the “Extended Compliance Period”) to comply with the minimum bid price requirement.

On April 10, 2023, the Company received a letter from Nasdaq notifying the Company that, while the Company has not regained compliance with the Minimum Bid Price Requirement, the Staff has determined that Astra is eligible for an additional 180 calendar day period, or until October 2, 2023, to regain compliance. Nasdaq’s determination was based on (i) Astra meeting the continued listing requirement for market value of publicly held shares and all other applicable requirements for initial listing on Nasdaq, with the exception of the Minimum Bid Price Requirement, and (ii) Astra’s written notice to Nasdaq of its intention to cure the deficiency during the Extended Compliance Period. In connection with our request for extension to cure our notice of deficiency, we transferred our Class A Common Stock from the Nasdaq Global Select Market to the Nasdaq Capital Market, effective April 12, 2023.

On April 17, 2023, our Board adopted resolutions approving, declaring advisable and recommending to our stockholders for their approval at our upcoming annual meeting of stockholders on June 8, 2023, a Certificate of Amendment to the Charter (the “Reverse Stock Split Charter Amendment”) to effect a reverse stock split of our issued and outstanding Class A Common Stock and Class B Common Stock (the “Reverse Stock Split”) with a ratio in the range between and including 1-for-5 shares and 1-for15 shares of each of our Class A Common Stock and Class B Common Stock, such ratio to be determined by our Board in its discretion. If the Reverse Stock Split Charter Amendment is passed by stockholders at the annual meeting, the Board may determine that it is in the best interests of stockholders to effectuate the Reverse Stock Split in order to cure the deficiency.

While we intend to monitor the per share closing bid price of our Class A common stock and consider available options, including the Reverse Stock Split, if our Class A common stock does not trade at a level likely to result in us regaining compliance with the Minimum Bid Price Requirement by the end of the Extended Compliance Period, we cannot be certain that those available options, including the Reverse Stock Split, would be sufficient to increase the closing per share price of our Class A common stock to more than $1.00 or prevent it from dropping below $1.00 at some point in the future.

There is no guarantee that we will regain compliance with the Minimum Bid Price Requirement, that we will maintain compliance with other Nasdaq listing standards, that the Reverse Stock Split Charger Amendment will be approved by stockholders or that we will be successful in implementing a Reverse Stock Split that cures the deficiency. We have previously failed to comply with listing standards as a result of our late filing of our Annual Report on Form 10-K for the year ended December 31, 2021, and there can be no assurance that we will not violate other Nasdaq listing standards in the future.

If we are unable to cure the deficiency during the Extended Compliance Period, Nasdaq will give notice that our Class A common stock is subject to delisting and we will be able to appeal that delisting before a Nasdaq hearings panel. Such a delisting would likely have a negative effect on the price of our Class A common stock and would impair your ability to sell or purchase our Class A common stock when you wish to do so. In the event of a delisting, we would expect to take actions to restore our compliance with Nasdaq's listing requirements, but we can provide no assurance that any such action taken by us would allow our Class A common stock to become listed again or improve the liquidity of our Class A common stock.

If we are delisted from Nasdaq but obtain a substitute listing for our Class A common stock, it will likely be on a market with less liquidity, and therefore experience potentially more price volatility than experienced on Nasdaq. You may not be able to sell your shares of Class A common stock on any such substitute market in the quantities, at the times, or at the prices that could potentially be available on a more liquid trading market. As a result of these factors, if our Class A common stock is delisted from Nasdaq, the value and liquidity of our Class A common stock would likely be significantly adversely affected. A delisting of our common stock from Nasdaq could also adversely affect our ability to obtain financing for our operations and/or result in a loss of confidence by investors, employees and/or business partners.

Risk Factors Related to the Instability of the U.S. Banking Industry

Instability caused by the closure of Silicon Valley Bank ("SVB") and subsequent events impacting other financial institutions may result in a material adverse effect on the Company.

On March 10, 2023, the Company became aware that SVB was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. The Company is aware that Signature Bank was closed on March 12, 2023 and First Republic Bank was closed on May 1, 2023, creating general instability in the banking industry. As of March 31, 2023, the Company's cash was held on deposit with SVB, a division of First Citizens Bank, which represents approximately 14% of the Company's current cash, cash equivalents and marketable securities. As of March 31, 2023, the majority of Company's cash equivalents and marketable securities are held in securities accounts with an affiliate of SVB, a division of First Citizens Bank. The Company moved expeditiously to diversify its banking relationships and no longer views its relationship with SVB as a material risk, but ongoing instability in the banking system may have an effect on other banking institutions to which the Company has transferred funds. If the Company is unable to access its capital in the short term for any reason, there will be material adverse impacts on its business operations as the Company will be unable to fund working capital, its payment obligations or other cash requirements. In this event, if it is unable to quickly access additional capital, the Company may be required to scale back its business operations to manage its cash flow needs. General instability in the banking industry could have adverse effects on the Company's ability to secure necessary financing on favorable terms and may result in unfavorable terms with vendors and suppliers. Any reduction in the Company's business operations is likely to affect the Company's ability to meet its production deadlines for the Astra Spacecraft Engine™ and the launch targets for Rocket 4, and such delays could expose the Company to late fees, interest, penalties, fines or termination rights to its customers, suppliers, regulators and employees.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

On February 3, 2023, the Company issued 25,000 warrants with a term of five years to Shareholder Intelligence Services, LLC ("ShareIntel") through the execution of a Class A Common Stock Purchase Warrant (the "ShareIntel Warrant"). Each warrant entitles ShareIntel, as the holder of the warrants, to purchase one share of the Company's Class A common stock at an exercise price of $0.67 per share. The warrants were issued in connection with services that were provided to the Company by ShareIntel.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Number	Description	Incorporated by Reference			
		Form	SEC File No.	Exhibit	Filing Date
4.1	Warrant Agreement, dated February 3, 2023, by and between Astra Space, Inc. and ShareIntel-Shareholder Intelligence Services, LLC	10-K	001-39426	4.2	March 30, 2023
10.1*	Form of Performance Stock Option Agreement				
31.1*	Certification of Chief Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2*	Certification of Chief Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1**	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2**	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.				
101.SCH	Inline XBRL Taxonomy Extension Schema Document				
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)				

* Filed herewith.
** Furnished herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

		Astra Space, Inc.
Date: May 15, 2023	By:	/s/ Chris C. Kemp
		Chris C. Kemp
		Chief Executive Officer and Chairman of Board and Principal Executive Officer
Date: May 15, 2023	By:	/s/ Axel Martinez
		Axel Martinez
		Chief Financial Officer, Principal Financial Officer and Principal Accounting Officer

EXHIBIT 10.1

Name: ____________________
ID: ____________________
Grant Number: ____________________
Number of Option Shares: ____________________
Stock Option Type: ____________________
Exercise Price Per Share: ____________________
Date of Grant: ____________________

ASTRA SPACE, INC.
2021 OMNIBUS INCENTIVE PLAN

<u>PERFORMANCE-BASED INCENTIVE STOCK OPTION AGREEMENT</u>

This agreement (this "**Agreement**") evidences a stock option granted by Astra Space, Inc. (the "**Company**") to the individual named above (the "**Participant**"), pursuant to and subject to the terms of the Astra Space, Inc. 2021 Omnibus Incentive Plan (as from time to time amended and in effect, the "**Plan**"). Except as otherwise defined herein, all capitalized terms used herein have the same meaning as in the Plan.

1. <u>Grant of Stock Option</u>. The Company hereby grants to the Participant on the date set forth above (the "**Date of Grant**") an option (the "**Stock Option**") to purchase, pursuant to and subject to the terms set forth in this Agreement and in the Plan, up to the number of shares of Stock set forth above (the "**Shares**") with an exercise price per Share as set forth above, in each case 7subject to adjustment pursuant to Section 8 of the Plan in respect of transactions described therein occurring after the date hereof.

The Stock Option evidenced by this Agreement is designated as an incentive stock option under the Code and is granted to the Participant in connection with the Participant's Employment. If the aggregate fair market value of the Shares on the date of the grant with respect to which incentive stock options are exercisable for the first time by the Participant during any calendar year, under the Plan or any other stock option plan of the Company or a subsidiary of the Company, exceeds $100,000, then the Stock Option, as to the excess, shall be treated as a nonqualified stock option that does not meet the requirements of Section 422 of the Code. If and to the extent that the Stock Option fails to qualify as an incentive stock option under the Code, the Stock Option shall remain outstanding according to its terms as a nonqualified stock option.

The Participant understands that favorable incentive stock option tax treatment is available only if the Stock Option is exercised while the Participant is an employee of the Company or a subsidiary of the Company or within a period of time specified in the Code after the Participant ceases to be an employee. The Participant understands that the Participant is responsible for the income tax consequences of the Stock Option, and, among other tax consequences, the Participant understands that he or she may be subject to the alternative minimum tax under the Code in the year in which the Stock Option is exercised. The Participant will consult with Participant's tax adviser regarding the tax consequences of the Stock Option.

The Participant agrees that the Participant shall immediately notify the Company in writing if the Participant sells or otherwise disposes of any Shares acquired upon the exercise of the Stock Option and such sale or other disposition occurs on or before the later of (i) two years after the Date of Grant or (ii) one year after the exercise of the Stock Option. The Participant also agrees to provide the Company with any information requested by the Company with respect to such sale or other disposition.

2. Vesting. The term "**vest**" as used herein with respect to the Stock Option or any portion thereof means that the Stock Option (or portion thereof) is then exercisable. The Stock Option shall be eligible to vest, if at all, in accordance with the terms set forth on Exhibit A hereto.

The right of exercise shall be cumulative so that to the extent the Stock Option is not exercised in any period to the maximum extent permissible it shall continue to be exercisable, in whole or in part, with respect to all Shares for which it is vested until the earlier of the Final Exercise Date (as defined below) or the termination of this Stock Option under Section 3 hereof or the Plan.

3. Exercise of the Stock Option. No portion of the Stock Option may be exercised until such portion vests. Each election to exercise any vested portion of the Stock Option will be subject to the terms and conditions of the Plan and must be in written or electronic form acceptable to the Administrator, signed (including by electronic signature) by the Participant or, if at the relevant time the Stock Option has passed to a beneficiary or permitted transferee, the beneficiary or permitted transferee. Each such written or electronic exercise election must be received by the Company at its principal office or by such other party as the Administrator may prescribe and be accompanied by payment in full of the exercise price by cash or check, or if acceptable to the Administrator, through a broker-assisted exercise program or such other means as prescribed by the Administrator. The latest date on which the Stock Option or any portion thereof may be exercised is the tenth (10th) anniversary of the Date of Grant (the "**Final Exercise Date**") and, if not exercised by such date, the Stock Option or any remaining portion thereof will thereupon immediately terminate.

4. Cessation of Employment. If the Participant's Employment ceases, except as expressly provided for in any agreement between the Participant and the Company or its Affiliates that is in effect at the time of such termination or as otherwise set forth on Exhibit A, the Stock Option, to the extent not then vested, will be immediately forfeited for no consideration, and any vested portion of the Stock Option that is then outstanding will remain exercisable until the earlier of (i) the Final Exercise Date or (ii) the expiration of the period described in Section 6.4 of the Plan; provided, however, that if the Participant's Employment is terminated for Cause or occurs in circumstances that in the determination of the Administrator would have constituted grounds for the Participant's Employment to be terminated for Cause (in each case, without regard to the lapsing of any required notice or cure periods in connection therewith), any vested portion of the Stock Option that is then outstanding will be immediately terminated for no consideration.

5. <u>Restrictions on Transfer</u>. The Stock Option may not be transferred except as expressly permitted under Section 6.3 of the Plan.

6. Forfeiture; Recovery of Compensation.

(a) The Stock Options, and the proceeds from the exercise and/or disposition of the Shares, are subject to forfeiture and disgorgement to the Company, with interest and related earnings, if at any time the Participant is not in compliance with all applicable provisions of this Agreement and the Plan, including, without limitation, engaging at any time in conduct which would give rise to the Company's right to terminate the Participant's Employment for Cause.

(b) By accepting, or being deemed to have accepted, the Stock Option, the Participant expressly acknowledges and agrees that his or her rights, and those of any permitted transferee, with respect to the Stock Option, including the right to any Shares acquired under the Stock Option or proceeds from the disposition thereof, are subject to Section 6.6 of the Plan (including any successor provisions). The Participant further agrees to be bound by the terms of any clawback or recoupment policy of the Company that applies to incentive compensation that includes Awards such as the Stock Option. Nothing in the preceding sentence will be construed as limiting the general application of Section 9 of this Agreement.

7. Withholding. The Participant expressly acknowledges and agrees that, pursuant to Section 6.7 of the Plan, the Participant's rights hereunder, including the right to be issued Shares upon exercise of the Stock Option, are subject to the Participant promptly paying to the Company in cash or by check (or by such other means as may be acceptable to the Administrator) all taxes required to be withheld, if any. No Shares will be issued pursuant to the exercise of the Stock Option unless and until the person exercising the Stock Option has remitted to the Company an amount in cash sufficient to satisfy all such withholding tax requirements or has made other arrangements satisfactory to the Company with respect to such taxes. The Participant authorizes the Company and its subsidiaries to withhold such amount from any amounts otherwise owed to the Participant, but nothing in this sentence will be construed as relieving the Participant of any liability for satisfying his or her obligation under the preceding provisions of this Section 8.

8. Effect on Employment. This grant of the Stock Option will not give the Participant any right to be retained in the Employment of the Company or any of its subsidiaries, affect the right of the Company or any of its subsidiaries to terminate the Participant's Employment at any time, or affect any right of the Participant to terminate his or her Employment with the Company at any time.

9. Provisions of the Plan. This Agreement is subject in its entirety to the provisions of the Plan, which are incorporated herein by reference. A copy of the Plan as in effect on the Date of Grant has been made available to the Participant. By accepting, or being deemed to have accepted, the Stock Option, the Participant agrees to be bound by the terms of the Plan and this Agreement. In the event of any conflict between the terms of this Agreement and the Plan, the terms of the Plan will control.

10. Entire Agreement. This Agreement and the Plan constitute the entire agreement and understanding among the parties hereto in respect of the subject matter hereof and supersede all prior and contemporaneous arrangements, agreements and understandings, whether oral or written, whether express or implied and whether in term sheets, presentations or otherwise, among the parties hereto, or between any of them, with respect to the subject matter hereof (including any description of any equity award that may have been contained in any offer letter or otherwise).

11. Acknowledgements. The Participant acknowledges and agrees that (a) this Agreement may be executed in two or more counterparts, each of which will be an original and all of which together will constitute one and the same instrument, (b) this Agreement may be executed and exchanged using facsimile, portable document format (PDF) or electronic signature or DocuSign, which, in each case, will constitute an original signature for all purposes hereunder, and (c) the Participant must execute and return a copy of this Agreement to the Company within ninety (90) days after the Agreement is made available to the Participant.

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Chris Kemp, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Astra Space, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 15, 2023	By: /s/ Chris C. Kemp
	Chris C. Kemp
	Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Axel Martinez, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Astra Space, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 15, 2023	By: /s/ Axel Martinez
	Axel Martinez
	Chief Financial Officer

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Astra Space, Inc. (the “Company”) on Form 10-Q for the period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 15, 2023	By: /s/ Chris C. Kemp
	Chris C. Kemp
	Chief Executive Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Astra Space, Inc. (the “Company”) on Form 10-Q for the period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 15, 2023

By: /s/ Axel Martinez
Axel Martinez
Chief Financial Officer