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April 5, 2022
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Rick Danis General Counsel Rigetti Computing, Inc. 775 Heinz Avenue Berkeley, CA 94710

> Re: Rigetti Computing, Registration Filed March 23, File No. 333-263798

Dear Mr. Danis:

Statement on Form S-1

Inc.

2022

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response. After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments. Registration Statement on Form S-1 filed March 23, 2022 Cover Page 1. For each of the shares and warrants being registered for resale, disclose the price that the selling securityholders paid for such shares, warrants, or units overlying such securities. 2 Disclose the likelihood that warrant holders will not exercise their warrants. Provide similar disclosure in the prospectus summary, risk factors, MD&A and use of proceeds section and disclose that cash proceeds associated with the exercises of the warrants are dependent on the stock price. Describe the impact on your liquidity and update the discussion on the ability of your company to fund your operations on a prospective basis with your current cash on hand. Rick Danis FirstName LastNameRick Rigetti Computing, Inc. Danis Comapany April NameRigetti Computing, Inc. 5, 2022 April 25, 2022 Page 2 Page FirstName LastName 3. We note the significant number of redemptions of your common stock in connection with your business combination and that the shares being registered for resale will constitute a considerable percentage of your public float. Highlight the significant negative impact sales of shares on this registration statement could have on the public trading price of the common stock. In this regard, highlight that certain of the shares being registered for

resale were purchased by the selling securityholders for prices below the current market price of the common stock and that such securityholders would have an incentive to sell. Prospectus Summary Background, page 1 In light of the significant number of redemptions and the unlikelihood 4. that the company will receive significant proceeds from exercises of the warrants because of the disparity between the exercise price of the warrants and the current trading price of the common stock, expand your discussion of capital resources to address any changes in the company s liquidity position since the business combination. If the company is likely to have to seek additional capital, discuss the effect of this offering on the company s ability to raise additional capital. Risk Factors Additional Risks Related to Ownership of Our Securities Future sales, or the perception of future sales, by us or our stockholders in the public market..., page 42 5. To illustrate the risk that potential sales of shares pursuant to this registration statement could put negative pressure on the trading price, disclose the purchase price of the securities being registered for resale and the percentage that these shares currently represent of the total number of shares outstanding. Also disclose that even though the current trading price is significantly below the SPAC IPO price, certain private investors may have an incentive to sell because they purchased their shares at prices lower than the public investors. 6. You state on page 42 that future resales of the common stock issued in connection with the Merger may cause the market price of your securities to drop significantly. This statement should be updated given that this prospectus is facilitating those sales. Rick Danis FirstName LastNameRick Rigetti Computing, Inc. Danis Comapany NameRigetti Computing, Inc. April 5, 2022 April 35, 2022 Page 3 Page FirstName LastName We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff. Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement. Please contact Austin Pattan, Staff Attorney, at (202) 551-6756 or Joshua Shainess, Legal Branch Chief, at (202) 551-7951 with any other questions.

Sincerely, Division of Office of Technology

Corporation Finance

cc: Rupa Briggs