

Step	<b>Algorithm:</b> $[C] := \text{SYRK\_AC\_UNB\_VAR2}(A, C)$
1a	$\{C = \widehat{C}$ <span style="float: right;"><math>\}</math></span>
4	$A \rightarrow \begin{pmatrix} A_T \\ A_B \end{pmatrix}$ <p style="text-align: center;">where <math>A_T</math> has 0 rows</p>
2	$\{C = A_T^T A_T + \widehat{C}$ <span style="float: right;"><math>\}</math></span>
3	<b>while</b> $m(A_T) < m(A)$ <b>do</b>
2,3	$\left\{ \begin{array}{l} C = A_T^T A_T + \widehat{C} \wedge m(A_T) < m(A) \end{array} \right\}$
5a	$\begin{pmatrix} A_T \\ A_B \end{pmatrix} \rightarrow \begin{pmatrix} A_0 \\ a_1^T \\ A_2 \end{pmatrix}$ <p style="text-align: center;">where <math>a_1</math> has 1 row</p>
6	$\left\{ \begin{array}{l} C = A_0^T A_0 + \widehat{C} \end{array} \right\}$
8	$C = a_1^T a_1 + C$
7	$\left\{ \begin{array}{l} C = A_0^T A_0 + a_1^T a_1 + \widehat{C} \end{array} \right\}$
5b	$\begin{pmatrix} A_T \\ A_B \end{pmatrix} \leftarrow \begin{pmatrix} A_0 \\ a_1^T \\ A_2 \end{pmatrix}$
2	$\left\{ \begin{array}{l} C = A_T^T A_T + \widehat{C} \end{array} \right\}$
	<b>endwhile</b>
2,3	$\{C = A_T^T A_T + \widehat{C} \wedge \neg(m(A_T) < m(A))$ <span style="float: right;"><math>\}</math></span>
1b	$\{[C] = \text{syrk\_ac}(A, \widehat{C})$ <span style="float: right;"><math>\}</math></span>

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**endwhile**