

$$N = 295 = 5 \cdot 59$$

By the Ibukiyama-Kitayama dimension formula,  
 $\dim(S_4(K(295))) = 189$

By the Skoruppa-Zagier dimension formula and Jacobi restriction,  
the lift dimension of  $S_4(K(295))^+$  is 54  
the nonlift dimension of  $S_4(K(295))^+$  is heuristically 113  
 $\dim(S_4(K(295))^+)$  thus is heuristically 167  
 $\dim(S_4(K(295))^-)$  is heuristically 22

$\dim(J_{\{2,295\}}^{\{\text{cusp}\}}) = 6$  (Skoruppa-Zagier), so need to span to within 5 dimensions

$q = 7$  for TraceDown

After TD( $\text{Grit}(J_{\{4,2065\}}^{\{\text{cusp}\}})$ ) and  $(\text{Grit}(J_{\{2,295\}}^{\{\text{cusp}\}}))^2$ ,  
spanned rank in  $S_4(K(295))^+$  is 167  
spanned rank in  $S_4(K(295))^-$  is 0

After Borcherds products,  
spanned rank in  $S_4(K(295))^-$  is 17

Final spanned rank in  $S_4(K(295))^+$  is 167

Final spanned rank in  $S_4(K(295))^-$  is 17

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 $\dim(S_2(K(295))^+)$  is bounded by Jacobi restriction and the  $H4Nd1(3,+)$  test  
( $\dim(H_4(295,3,1))^+ \leq 5$  and this is less than  $\dim(J_{\{2,295\}}^{\{\text{cusp}\}})+1 = 7$ )  
 $S_2(K(295))^- = 0$  by Jacobi restriction and the  $H4Nd1(1,-)$  test  
( $\dim(H_4(295,1,1))^- \leq 5$  and this is less than  $\dim(J_{\{2,295\}}^{\{\text{cusp}\}}) = 6$ )

So  $\dim(S_2(K(295))^+) \leq \dim(J_{\{2,295\}}^{\{\text{cusp}\}})+1 = 7$  and  $S_2(K(295))^- = 0$