

$$N = 210 = 2 \cdot 3 \cdot 5 \cdot 7$$

By the Ibukiyama-Kitayama dimension formula,
 $\dim(S_4(K(210))) = 92$

By the Skoruppa-Zagier dimension formula and Jacobi restriction,
the lift dimension of $S_4(K(210))^+$ is 29
the nonlift dimension of $S_4(K(210))^+$ is heuristically 48
 $\dim(S_4(K(210))^+)$ thus is heuristically 77
 $\dim(S_4(K(210))^-)$ is heuristically 15

The heuristic dimensions are correct by the spanning results to follow

$\dim(J_{\{2,210\}}^{\{\text{cusp}\}}) = 1$ (Skoruppa-Zagier), so need to span completely

$q = 11$ for TraceDown

After TD($\text{Grit}(J_{\{4,2310\}}^{\{\text{cusp}\}})$) and $(\text{Grit}(J_{\{2,210\}}^{\{\text{cusp}\}}))^2$,
spanned rank in $S_4(K(210))^+$ is 77
spanned rank in $S_4(K(210))^-$ is 0

Hecke operators applied: $\{\{2, 2\}\}, \{\{2, 2\}, \{2, 1\}\}, \{\{3, 2\}\}, \{\{2, 2\}, \{3, 1\}\}$

After Hecke spreading,
spanned rank in $S_4(K(210))^-$ is 4

After Borcherds products,
spanned rank in $S_4(K(210))^-$ is 15

Final spanned rank in $S_4(K(210))^+$ is 77

Final spanned rank in $S_4(K(210))^-$ is 15

$S_2(K(210))^+$ is determined by Jacobi restriction and the $H4Nd1(1,+)$ test
($\dim(H_4(210,1,1)^+) \leq 1$ and this is less than $\dim(J_{\{2,210\}}^{\{\text{cusp}\}})+1 = 2$)
 $S_2(K(210))^- = 0$ by Jacobi restriction and the $H4Nd1(1,-)$ test
($\dim(H_4(210,1,1)^-) \leq 0$ and this is less than $\dim(J_{\{2,210\}}^{\{\text{cusp}\}}) = 1$)

So $S_2(K(210)) = \text{Grit}(J_{\{2,210\}}^{\{\text{cusp}\}})$ (dimension 1)