

Integrality properties for quantum sl_2 -invariants of lens spaces

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Abstract: The quantum sl_2 -invariants of a homology sphere can be defined in a completion of the polynomial ring $Z[q]$. This completion is an integral domain which injects in the product of cyclotomic fields and in the ring $Z[[q - 1]]$ of formal series also. In the case of lens spaces the situation is completely different but some integral domain can be defined in such a way that modified quantum sl_2 -invariants of lens spaces are actually defined in this ring.