Crystal rules for $(\ell,0)$-JM partitions

Chris Berg

(Submitted on 19 Jul 2011)

Vazirani and the author \cite{BV} gave a new interpretation of what we called ℓ-partitions, also known as $(\ell,0)$-Carter partitions. The primary interpretation of such a partition λ is that it corresponds to a Specht module S^{λ} which remains irreducible over the finite Hecke algebra $H_n(q)$ when q is specialized to a primitive ℓ^{th} root of unity. To accomplish this we relied heavily on the description of such a partition in terms of its hook lengths, a condition provided by James and Mathas. In this paper, I use a new description of the crystal reg_ℓ which helps extend previous results to all $(\ell,0)$-JM partitions (similar to $(\ell,0)$-Carter partitions, but not necessarily ℓ-regular), by using an analogous condition for hook lengths which was proven by work of Lyle and Fayers.

Subjects:	**Combinatorics (math.CO)**; Representation Theory (math.RT)
MSC classes:	05E10, 20C08
Journal reference:	Electronic Journal of Combinatorics, Volume 17 (1), 2010
Cite as:	**arXiv:1107.3613 [math.CO]**
	(or **arXiv:1107.3613v1 [math.CO]** for this version)

Submission history

From: Chris Berg [view email]
[v1] Tue, 19 Jul 2011 02:51:28 GMT (13kb)

Which authors of this paper are endorsers?