

Corrigendum to: “Quantizations of conical symplectic resolutions I and II”

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In this corrigendum, we fix 4 minor errors in [BPW16, BLPW16]. These do not affect any of the major results of these articles. We thank Lewis Topley, Shilin Yu and Ivan Losev for pointing out the issues 1., 2. and 3-4. respectively.

1. In [BPW16, §3.3], we claimed that “Any quantization of a resolution of a Slodowy slice to a nilpotent orbit in \mathfrak{g} has its invariant section ring A isomorphic to a central quotient of a finite W -algebra.” Work of Ambrosio, Carnovale, Esposito and Topley [ACET] shows that this does not hold in all cases, and classifies which Slodowy slices it holds for.

2. The proof of [BPW16, Prop. 3.11] had a hole. We have added a corrected proof in the current arXived version [BPW, Prop. 3.11].

3. In [BLPW16, §5.3], we constructed an object Θ_α . There is a mistake in [BLPW16, Prop. 5.21]: under the same conditions, this module is costandard, not standard as claimed in the published version of the paper. As a consequence, all appearances of standard and costandard modules in section [BLPW16, §5.3-6.2] should be reversed. The interested reader can refer to the arXiv version [BLPW] where we have implemented this switch.

4. In [BLPW16, Lemma 6.11], we make a claim which is too strong. We can weaken this to proving “The quotient of $R(A)_s^\wedge$ by the annihilator I_s^\wedge of the module $R(N)_s^\wedge$ is a finite extension of W_0^\wedge , i.e. finitely generated as a W_0^\wedge -module.” Based on this, the proof of

¹Supported by NSA grants H98230-08-1-0097 and H98230-11-1-0180.

²Supported by an ARC Discovery Early Career fellowship.

³Supported by NSF grant DMS-0950383.

⁴Supported by NSERC through a Discovery Grant. This research was supported in part by Perimeter Institute for Theoretical Physics. Research at Perimeter Institute is supported in part by the Government of Canada through the Department of Innovation, Science and Economic Development Canada and by the Province of Ontario through the Ministry of Colleges and Universities.

[BLPW16, Theorem 6.8] carries through with only minor changes. The interested reader can refer to arXiv version of the paper [BLPW, §6.3] for the corrected version.

References

- [ACET] Filippo Ambrosio, Giovanna Carnovale, Francesco Esposito, and Lewis Topley, *Universal filtered quantizations of nilpotent Slodowy slices*.
- [BLPW] Tom Braden, Anthony Licata, Nicholas Proudfoot, and Ben Webster, *Quantizations of conical symplectic resolutions II: category \mathcal{O} and symplectic duality*, with an appendix by I. Losev. arXiv version [arXiv:1407.0964](https://arxiv.org/abs/1407.0964).
- [BLPW16] ———, *Quantizations of conical symplectic resolutions II: category \mathcal{O} and symplectic duality*, *Astérisque* (2016), no. 384, 75–179, with an appendix by I. Losev. MR 3594665
- [BPW] Tom Braden, Nicholas Proudfoot, and Ben Webster, *Quantizations of conical symplectic resolutions I: local and global structure*, arXiv version [arXiv:1208.3863](https://arxiv.org/abs/1208.3863).
- [BPW16] ———, *Quantizations of conical symplectic resolutions I: local and global structure*, *Astérisque* (2016), no. 384, 1–73. MR 3594664