



High Energy Physics - Theory

How universal is the Wigner distribution?

[Mthokozisi Masuku](#), [João P. Rodrigues](#)

(Submitted on 19 Jul 2011 (v1), last revised 23 Aug 2011 (this version, v2))

We consider Gaussian ensembles of $m \times N \times N$ complex matrices. We identify an enhanced symmetry in the system and the resultant closed subsector, which is naturally associated with the radial sector of the theory. The density of radial eigenvalues is obtained in the large N limit. It is of the Wigner form only for $m=1$. For $m \geq 2$, the new form of the density is obtained.

Comments: 16 pages; references added

Subjects: **High Energy Physics - Theory (hep-th)**; Statistical Mechanics (cond-mat.stat-mech); Probability (math.PR); Data Analysis, Statistics and Probability (physics.data-an); Applications (stat.AP)

Report number: WITS-CTP-077

Cite as: [arXiv:1107.3681 \[hep-th\]](#)
(or [arXiv:1107.3681v2 \[hep-th\]](#) for this version)

Submission history

From: João P Rodrigues [[view email](#)]

[\[v1\]](#) Tue, 19 Jul 2011 10:50:34 GMT (11kb)

[\[v2\]](#) Tue, 23 Aug 2011 15:51:32 GMT (12kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

hep-th

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[cond-mat](#)

[cond-mat.stat-mech](#)

[math](#)

[math.PR](#)

[physics](#)

[physics.data-an](#)

[stat](#)

[stat.AP](#)

References & Citations

- [INSPIRE HEP](#)
([refers to](#) | [cited by](#))
- [NASA ADS](#)

Bookmark (what is this?)

