1 Type $(2, 0)$ geometry

1.1 Datasets

Name: 20180608
Dimension: 20×20
Range g_2: $[-4 : -1.5]$ 51 values
Samples: 2200

Name: 20180610
Dimension: 25×25
Range g_2: $[-4 : -1.5]$ 51 values
Samples: 1152

Name: 20180611
Dimension: 30×30
Range g_2: $[-4 : -1.5]$ 51 values
Samples: 1152

1.2 A modes matrix elements

Table: 1, 2
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_NAexp_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_A2exp.txt" u (log($1)):(log($2)) via m, q
fit f(x) "20_varN_A2exp.txt" u (log($1)):(log($6)) via m, q
fit f(x) "20_varN_A2exp.txt" u (log($1)):(log($10)) via m, q
fit f(x) "20_varN_A2exp.txt" u (log($1)):(log($4)) via m, q
fit f(x) "20_varN_A2exp.txt" u (log($1)):(log($8)) via m, q
fit f(x) "20_varN_A2exp.txt" u (log($1)):(log($12)) via m, q
```

Table: 3, 4
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_NAexp_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_A4exp.txt" u (log($1)):(log($2)) via m, q
fit f(x) "20_varN_A4exp.txt" u (log($1)):(log($6)) via m, q
fit f(x) "20_varN_A4exp.txt" u (log($1)):(log($10)) via m, q
fit f(x) "20_varN_A4exp.txt" u (log($1)):(log($4)) via m, q
fit f(x) "20_varN_A4exp.txt" u (log($1)):(log($8)) via m, q
fit f(x) "20_varN_A4exp.txt" u (log($1)):(log($12)) via m, q
```

Table: 5, 6
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_NAij_ik_l_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_Aij_ik_l.txt" u (log($1)):(log($2)) via m, q
fit f(x) "20_varN_Aij_ik_l.txt" u (log($1)):(log($6)) via m, q
fit f(x) "20_varN_Aij_ik_l.txt" u (log($1)):(log($10)) via m, q
fit f(x) "20_varN_Aij_ik_l.txt" u (log($1)):(log($4)) via m, q
fit f(x) "20_varN_Aij_ik_l.txt" u (log($1)):(log($8)) via m, q
fit f(x) "20_varN_Aij_ik_l.txt" u (log($1)):(log($12)) via m, q
```

Table: 7
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_NAstatind_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_Astatind.txt" u (log($1)):(log(abs($2))) via m, q
fit f(x) "20_varN_Astatind.txt" u (log($1)):(log(abs($4))) via m, q
fit f(x) "20_varN_Astatind.txt" u (log($1)):(log(abs($6))) via m, q
```

Table: 8
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_N4Aexp_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_4Aexp.txt" u (log($1)):(log(abs($2))) via m, q
fit f(x) "20_varN_4Aexp.txt" u (log($1)):(log(abs($6))) via m, q
fit f(x) "20_varN_4Aexp.txt" u (log($1)):(log(abs($10))) via m, q
```

Table: 9
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_NABijij_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_ABijij.txt" u (log($1)):(log($2)) via m, q
fit f(x) "20_varN_ABijij.txt" u (log($1)):(log($4)) via m, q
fit f(x) "20_varN_ABijij.txt" u (log($1)):(log($6)) via m, q
```

Table: 10
Dataset: 20180608, 20180610, 20180611
Data analysis script: `20_NABijkl_monitoring.py`
Gnuplot script:

```
f(x) = m*x + q
fit f(x) "20_varN_ABijkl.txt" u (log($1)):(log($2)) via m, q
fit f(x) "20_varN_ABijkl.txt" u (log($1)):(log($4)) via m, q
fit f(x) "20_varN_ABijkl.txt" u (log($1)):(log($6)) via m, q
```

g_2	Slope	Error
-1.5	-0.94	0.01
-2.7	-0.95	0.03
-4	-0.94	0.06

Table 1: Linear fit of $\log(N)$ vs $\log(E[|A_{ii}|^2])$.

g_2	Slope	Error
-1.5	-0.99719	0.00007
-2.7	-0.98	0.03
-4	-0.98	0.02

Table 2: Linear fit of $\log(N)$ vs $\log(E[|A_{ij}|^2])$.

g_2	Slope	Error
-1.5	-1.85	0.09
-2.7	-1.88	0.05
-4	-1.8	0.1

Table 3: Linear fit of $\log(N)$ vs $\log(E[|A_{ii}|^4])$.

g_2	Slope	Error
-1.5	-1.9876	0.0005
-2.7	-1.97	0.02
-4	-1.96	0.02

Table 4: Linear fit of $\log(N)$ vs $\log(E[|A_{ij}|^4])$.

g_2	Slope	Error
-1.5	-1.988	0.001
-2.7	-1.97	0.02
-4	-1.96	0.03

Table 5: Linear fit of $\log(N)$ vs $\log(E[|A_{ij}|^2|A_{il}|^2])$.

g_2	Slope	Error
-1.5	-1.9927	0.0002
-2.7	-1.97	0.02
-4	-1.96	0.03

Table 6: Linear fit of $\log(N)$ vs $\log(E[|A_{ij}|^2|A_{kl}|^2])$.

g_2	Slope	Error
-1.5	-3.6	0.3
-2.7	-4.16	0.01
-4	-0.4	0.6

Table 7: Linear fit of $\log(N)$ vs $\log(|E[|A_{ij}|^2|A_{kl}|^2] - E[|A_{ij}|^2]E[|A_{kl}|^2]|)$.

g_2	Slope	Error
-1.5	-2.93	0.04
-2.7	-2.5	0.2
-4	0	2

Table 8: Linear fit of $\log(N)$ vs $\log(|E[A_{kl}A_{lm}A_{mn}A_{nk}]|)$.

g_2	Slope	Error
-1.5	-1.979	0.005
-2.7	-1.997	0.022
-4	-1.96	0.03

Table 9: Linear fit of $\log(N)$ vs $\log(E[|A_{ij}|^2|B_{ij}|^2])$.

g_2	Slope	Error
-1.5	-2.000	0.004
-2.7	-1.97	0.01
-4	-1.98	0.02

Table 10: Linear fit of $\log(N)$ vs $\log(E[|A_{ij}|^2|B_{kl}|^2])$.