

| sample number | island | reef exposure | reef zone | reef type | ALCC-cat | colony depth-cat | time         |
|---------------|--------|---------------|-----------|-----------|----------|------------------|--------------|
| F4.1          | Totoya | intermediate  | forereef  | barrier   | 30-40    | 10-15            | after 14:00  |
| F5.2          | Totoya | intermediate  | forereef  | barrier   | 30-40    | .                | after 14:00  |
| F6.1          | Totoya | intermediate  | forereef  | barrier   | 30-40    | <5               | after 14:00  |
| F7.1          | Totoya | intermediate  | forereef  | barrier   | 40-50    | <5               | 10:00-14:00  |
| F10.1         | Totoya | protected     | lagoonal  | patch     | 30-40    | 10-15            | after 14:00  |
| F15.1         | Totoya | intermediate  | forereef  | barrier   | 40-50    | 5-10             | before 10:00 |
| F16.1         | Totoya | intermediate  | forereef  | barrier   | 30-40    | 5-10             | 10:00-14:00  |
| F17.1         | Totoya | intermediate  | forereef  | barrier   | 30-40    | 10-15            | 10:00-14:00  |
| F20.1         | Totoya | intermediate  | forereef  | barrier   | 30-40    | 5-10             | 10:00-14:00  |
| F21.1         | Matuku | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F22.1         | Matuku | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F23.1         | Matuku | intermediate  | forereef  | barrier   | 40-50    | 5-10             | 10:00-14:00  |
| F24.1         | Matuku | exposed       | forereef  | barrier   | 20-30    | 5-10             | before 10:00 |
| F25.1         | Matuku | exposed       | forereef  | barrier   | 20-30    | 5-10             | before 10:00 |
| F26.1         | Matuku | exposed       | forereef  | barrier   | 20-30    | 5-10             | before 10:00 |
| F27.1         | Matuku | exposed       | forereef  | barrier   | 20-30    | 5-10             | before 10:00 |
| F28.1         | Matuku | exposed       | forereef  | barrier   | 20-30    | 10-15            | before 10:00 |
| F30.1         | Matuku | exposed       | forereef  | barrier   | 30-40    | 10-15            | 10:00-14:00  |
| F33.1         | Moala  | intermediate  | forereef  | barrier   | 30-40    | <5               | after 14:00  |
| F34.1         | Moala  | intermediate  | forereef  | barrier   | 30-40    | <5               | after 14:00  |
| F37.1         | Moala  | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F39.1         | Moala  | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F40.1         | Moala  | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F41.1         | Moala  | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F42.1         | Moala  | intermediate  | forereef  | barrier   | >50      | 5-10             | after 14:00  |
| F44.1         | Moala  | intermediate  | forereef  | barrier   | 30-40    | 5-10             | after 14:00  |
| F45.1         | Moala  | protected     | lagoonal  | patch     | 20-30    | 15-20            | before 10:00 |
| F47.1         | Moala  | protected     | lagoonal  | patch     | 20-30    | 10-15            | before 10:00 |
| F48.1         | Fulaga | protected     | lagoonal  | patch     | 40-50    | <5               | before 10:00 |
| F49.1         | Fulaga | intermediate  | forereef  | barrier   | 40-50    | 20-25            | 10:00-14:00  |
| F50.1         | Fulaga | intermediate  | forereef  | barrier   | 40-50    | 5-10             | 10:00-14:00  |
| F51.2         | Fulaga | intermediate  | forereef  | barrier   | 40-50    | 5-10             | 10:00-14:00  |
| F55.1         | Fulaga | intermediate  | forereef  | barrier   | 20-30    | <5               | after 14:00  |
| F56.1         | Fulaga | intermediate  | forereef  | barrier   | 20-30    | <5               | after 14:00  |
| F60.1         | Kabara | protected     | lagoonal  | pinnacles | 30-40    | 10-15            | 10:00-14:00  |
| F66.2         | Kabara | protected     | lagoonal  | pinnacles | 30-40    | 10-15            | after 14:00  |
| F68.1         | Kabara | protected     | lagoonal  | pinnacles | 30-40    | 10-15            | after 14:00  |
| F69.1         | Kabara | protected     | lagoonal  | pinnacles | 30-40    | 15-20            | after 14:00  |
| F84.1         | Tuvuca | intermediate  | forereef  | barrier   | 20-30    | 10-15            | before 10:00 |
| F86.1         | Tuvuca | intermediate  | forereef  | barrier   | 20-30    | 10-15            | before 10:00 |
| F87.1         | Tuvuca | intermediate  | forereef  | barrier   | 20-30    | 10-15            | before 10:00 |
| F89.1         | Tuvuca | intermediate  | forereef  | barrier   | 30-40    | 25-30            | 10:00-14:00  |
| F93.1         | Cicia  | intermediate  | forereef  | barrier   | 40-50    | 10-15            | 10:00-14:00  |
| F99.1         | Cicia  | intermediate  | forereef  | barrier   | 40-50    | <5               | 10:00-14:00  |
| F101.2        | Cicia  | exposed       | forereef  | barrier   | 40-50    | <5               | before 10:00 |
| F104.1        | Mago   | intermediate  | forereef  | barrier   | 40-50    | 5-10             | 10:00-14:00  |
| F105.1        | Mago   | intermediate  | forereef  | barrier   | 40-50    | 5-10             | 10:00-14:00  |

|        |              |              |          |          |       |       |              |
|--------|--------------|--------------|----------|----------|-------|-------|--------------|
| F106.1 | Mago         | intermediate | forereef | barrier  | 40-50 | 5-10  | 10:00-14:00  |
| F107.1 | Mago         | intermediate | forereef | barrier  | 40-50 | 5-10  | 10:00-14:00  |
| F110.1 | Mago         | intermediate | forereef | fringing | 40-50 | 5-10  | 10:00-14:00  |
| F111.1 | Mago         | intermediate | forereef | barrier  | 40-50 | 5-10  | 10:00-14:00  |
| F112.2 | Vanua Balavu | intermediate | forereef | barrier  | 40-50 | 15-20 | before 10:00 |
| F113.1 | Vanua Balavu | intermediate | forereef | barrier  | 40-50 | 10-15 | 10:00-14:00  |
| F115.1 | Vanua Balavu | intermediate | forereef | barrier  | 40-50 | 5-10  | 10:00-14:00  |
| F116.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 5-10  | 10:00-14:00  |
| F117.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 10-15 | 10:00-14:00  |
| F118.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 5-10  | 10:00-14:00  |
| F119.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 25-30 | before 10:00 |
| F120.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 20-25 | before 10:00 |
| F123.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 5-10  | 10:00-14:00  |
| F124.1 | Vanua Balavu | intermediate | forereef | barrier  | 20-30 | 5-10  | 10:00-14:00  |
| F130.1 | Vanua Balavu | intermediate | forereef | barrier  | 10-20 | 15-20 | before 10:00 |
| F131.1 | Vanua Balavu | intermediate | forereef | barrier  | 10-20 | 10-15 | before 10:00 |
| F134.1 | Vanua Balavu | intermediate | forereef | barrier  | 10-20 | >30   | 10:00-14:00  |
| F138.1 | Vanua Balavu | protected    | lagoonal | patch    | 30-40 | 5-10  | after 14:00  |
| F146.1 | Vanua Balavu | protected    | lagoonal | patch    | 20-30 | 5-10  | before 10:00 |
| F147.1 | Vanua Balavu | protected    | lagoonal | patch    | 20-30 | 5-10  | before 10:00 |
| F151.1 | Vanua Balavu | protected    | lagoonal | patch    | 10-20 | 25-30 | 10:00-14:00  |
| F153.1 | Vanua Balavu | protected    | lagoonal | fringing | 20-30 | 20-25 | after 14:00  |

| temp.-cat | salinity-cat | PAR-cat | host species         | color     | site   | ALCC | date      | colony depth | temp. | salinity |
|-----------|--------------|---------|----------------------|-----------|--------|------|-----------|--------------|-------|----------|
| 27-28     | 35-35.3      | 50-100  | <i>P. damicornis</i> | normal    | FJTO02 | 36   | 2013-6-03 | 10.6         | 27.2  | 35.3     |
| 27-28     | 35-35.3      | 100-200 | <i>P. damicornis</i> | .         | FJTO02 | 36   | 2013-6-03 |              | 27.2  | 35.3     |
| 27-28     | 35-35.3      | <50     | <i>P. damicornis</i> | very pale | FJTO03 | 34   | 2013-6-03 | 4.5          | 27.2  | 35.2     |
| 27-28     | 35-35.3      | >200    | <i>P. damicornis</i> | normal    | FJTO05 | 46   | 2013-6-04 | 3.7          | 27.1  | 35.3     |
| 26-27     | 35-35.3      | 100-200 | <i>P. damicornis</i> | normal    | FJTO06 | 38   | 2013-6-04 | 10.5         | 27.3  | 35.3     |
| 27-28     | 35-35.3      | 100-200 | <i>P. damicornis</i> | normal    | FJTO07 | 42   | 2013-6-05 | 7            | 27.2  | 35.2     |
| 27-28     | 35.4-35.6    | >200    | <i>P. meandrina</i>  | normal    | FJTO08 | 36   | 2013-6-05 | 10           | 27.4  | 35.6     |
| 27-28     | 35.4-35.6    | >200    | <i>P. meandrina</i>  | normal    | FJTO08 | 36   | 2013-6-05 | 11           | 27.4  | 35.6     |
| 27-28     | 35.4-35.6    | >200    | <i>P. damicornis</i> | .         | FJTO08 | 36   | 2013-6-05 | 7.5          | 27.4  | 35.6     |
| 26-27     | 34.7-35      | 100-200 | <i>P. verrucosa</i>  | normal    | FJMT10 | 42   | 2013-6-06 | 11.5         | 26.9  | 34.8     |
| 26-27     | 34.7-35      | 100-200 | <i>P. verrucosa</i>  | normal    | FJMT10 | 42   | 2013-6-06 | 11.3         | 26.9  | 34.8     |
| 26-27     | 34.7-35      | 100-200 | <i>P. verrucosa</i>  | normal    | FJMT10 | 42   | 2013-6-06 | 8            | 26.9  | 34.8     |
| 26-27     | 35-35.3      | 50-100  | <i>P. damicornis</i> | normal    | FJMT13 | 28   | 2013-6-07 | 9            | 26.8  | 35.2     |
| 26-27     | 35-35.3      | 50-100  | <i>P. verrucosa</i>  | normal    | FJMT13 | 28   | 2013-6-07 | 10           | 26.8  | 35.2     |
| 26-27     | 35-35.3      | 50-100  | <i>P. meandrina</i>  | very pale | FJMT13 | 28   | 2013-6-07 | 7.5          | 26.8  | 35.2     |
| 26-27     | 35-35.3      | 50-100  | <i>P. damicornis</i> | normal    | FJMT13 | 28   | 2013-6-07 | 8.5          | 26.8  | 35.2     |
| 26-27     | 35-35.3      | 50-100  | <i>P. damicornis</i> | normal    | FJMT13 | 28   | 2013-6-07 | 11           | 26.8  | 35.2     |
| 26-27     | 35-35.3      | 50-100  | <i>P. damicornis</i> | bleached  | FJMT14 | 32   | 2013-6-07 | 10.8         | 26.8  | 35.2     |
| 27-28     | 35-35.3      | 50-100  | <i>P. verrucosa</i>  | normal    | FJML17 | 33   | 2013-6-08 | 4            | 27.2  | 35.3     |
| 27-28     | 35-35.3      | <50     | <i>P. meandrina</i>  | normal    | FJML17 | 33   | 2013-6-08 | 4.4          | 27.2  | 35.3     |
| 27-28     | 35-35.3      | 100-200 | <i>P. verrucosa</i>  | normal    | FJML18 | 40   | 2013-6-09 | 11.8         | 27.1  | 35.3     |
| 27-28     | 35-35.3      | 100-200 | <i>P. verrucosa</i>  | normal    | FJML18 | 40   | 2013-6-09 | 11.3         | 27.1  | 35.3     |
| 27-28     | 35-35.3      | .       | <i>P. verrucosa</i>  | normal    | FJML18 | 40   | 2013-6-09 | 10.8         | 27.1  | 35.3     |
| 27-28     | 35-35.3      | >200    | <i>P. verrucosa</i>  | normal    | FJML18 | 40   | 2013-6-09 | 10.3         | 27.1  | 35.3     |
| 27-28     | 34.7-35      | <50     | <i>P. verrucosa</i>  | normal    | FJML19 | 51   | 2013-6-09 | 5.6          | 27.2  | 34.8     |
| 27-28     | 35-35.3      | <50     | <i>P. acuta</i>      | normal    | FJML20 | 37   | 2013-6-09 | 6.6          | 27.2  | 35.3     |
| 26-27     | 35-35.3      | .       | <i>P. verrucosa</i>  | normal    | FJML21 | 22   | 2013-6-10 | 15.4         | 26.9  | 35.2     |
| 26-27     | 35-35.3      | .       | <i>P. verrucosa</i>  | normal    | FJML21 | 22   | 2013-6-10 | 14.2         | 26.9  | 35.2     |
| 26-27     | 35.4-35.6    | .       | <i>P. damicornis</i> | normal    | FJFL24 | 42   | 2013-6-11 | 4.2          | 26.7  | 35.5     |
| 26-27     | 35-35.3      | .       | <i>P. acuta</i>      | normal    | FJFL25 | 45   | 2013-6-11 | 23           | 26.5  | 35.2     |
| 26-27     | 35-35.3      | .       | <i>P. damicornis</i> | normal    | FJFL25 | 45   | 2013-6-11 | 9.4          | 26.5  | 35.2     |
| 26-27     | 35-35.3      | .       | <i>P. damicornis</i> | pale      | FJFL25 | 45   | 2013-6-11 | 9.4          | 26.5  | 35.2     |
| 26-27     | 35-35.3      | .       | <i>P. acuta</i>      | normal    | FJFL30 | 25   | 2013-6-12 | 2.3          | 26.5  | 35.2     |
| 26-27     | 35-35.3      | .       | <i>P. acuta</i>      | pale      | FJFL30 | 25   | 2013-6-12 | 2.5          | 26.5  | 35.2     |
| 27-28     | 35.4-35.6    | 100-200 | <i>P. acuta</i>      | very pale | FJKB31 | 39   | 2013-6-13 | 12.6         | 27.2  | 35.4     |
| 26-27     | 35-35.3      | <50     | <i>P. acuta</i>      | pale      | FJKB31 | 39   | 2013-6-14 | 14.4         | 26.7  | 35.1     |
| 26-27     | 35-35.3      | <50     | <i>P. acuta</i>      | pale      | FJKB31 | 39   | 2013-6-14 | 14.4         | 26.7  | 35.1     |
| 26-27     | 35-35.3      | <50     | <i>P. acuta</i>      | pale      | FJKB31 | 39   | 2013-6-14 | 15.3         | 26.7  | 35.1     |
| 26-27     | 34.7-35      | <50     | <i>P. verrucosa</i>  | normal    | FJTV41 | 28   | 2013-6-17 | 12.8         | 26.8  | 34.7     |
| 26-27     | 34.7-35      | 50-100  | <i>P. verrucosa</i>  | pale      | FJTV41 | 28   | 2013-6-17 | 11.2         | 26.8  | 34.7     |
| 26-27     | 34.7-35      | <50     | <i>P. verrucosa</i>  | normal    | FJTV41 | 28   | 2013-6-17 | 11.1         | 26.8  | 34.7     |
| 27-28     | 35.4-35.6    | 100-200 | <i>P. acuta</i>      | normal    | FJTV42 | 37   | 2013-6-17 | 25.5         | 27    | 35.4     |
| 27-28     | 35.4-35.6    | 50-100  | <i>P. verrucosa</i>  | pale      | FJCC44 | 42   | 2013-6-18 | 13           | 27.1  | 35.5     |
| 27-28     | 35.4-35.6    | >200    | <i>P. verrucosa</i>  | normal    | FJCC44 | 42   | 2013-6-18 | 4.5          | 27.1  | 35.5     |
| 27-28     | 35.4-35.6    | 100-200 | <i>P. damicornis</i> | normal    | FJCC47 | 41   | 2013-6-19 | 4            | 27.1  | 35.5     |
| 27-28     | 35.4-35.6    | .       | <i>P. verrucosa</i>  | normal    | FJMG50 | 42   | 2013-6-20 | 9.5          | 27.1  | 35.5     |
| 27-28     | 35.4-35.6    | .       | <i>P. damicornis</i> | normal    | FJMG50 | 42   | 2013-6-20 | 10           | 27.1  | 35.5     |

|       |           |         |                      |           |        |              |      |      |      |
|-------|-----------|---------|----------------------|-----------|--------|--------------|------|------|------|
| 27-28 | 35.4-35.6 | .       | <i>P. meandrina</i>  | normal    | FJMG50 | 42 2013-6-20 | 6.6  | 27.1 | 35.5 |
| 27-28 | 35.4-35.6 | .       | <i>P. meandrina</i>  | normal    | FJMG50 | 42 2013-6-20 | 5.6  | 27.1 | 35.5 |
| 27-28 | 35.4-35.6 | .       | <i>P. acuta</i>      | pale      | FJMG51 | 47 2013-6-20 | 7.8  | 27.4 | 35.4 |
| 27-28 | 35.4-35.6 | .       | <i>P. acuta</i>      | normal    | FJMG51 | 47 2013-6-20 | 5.6  | 27.4 | 35.4 |
| 27-28 | 35.4-35.6 | <50     | <i>P. acuta</i>      | normal    | FJVB52 | 47 2013-6-21 | 18.9 | 27.2 | 35.5 |
| 27-28 | 35.4-35.6 | 50-100  | <i>P. acuta</i>      | normal    | FJVB52 | 47 2013-6-21 | 13.9 | 27.2 | 35.5 |
| 27-28 | 35.4-35.6 | 100-200 | <i>P. damicornis</i> | pale      | FJVB52 | 47 2013-6-21 | 7    | 27.2 | 35.5 |
| 27-28 | 35.4-35.6 | 100-200 | <i>P. acuta</i>      | normal    | FJVB53 | 29 2013-6-21 | 8    | 27.3 | 35.5 |
| 27-28 | 35.4-35.6 | 100-200 | <i>P. acuta</i>      | pale      | FJVB53 | 29 2013-6-21 | 11   | 27.3 | 35.5 |
| 27-28 | 35.4-35.6 | >200    | <i>P. acuta</i>      | pale      | FJVB53 | 29 2013-6-21 | 8.2  | 27.3 | 35.5 |
| 27-28 | 35.4-35.6 | <50     | <i>P. acuta</i>      | normal    | FJVB55 | 29 2013-6-22 | 27.1 | 27.1 | 35.4 |
| 27-28 | 35.4-35.6 | <50     | <i>P. acuta</i>      | normal    | FJVB55 | 29 2013-6-22 | 25.5 | 27.1 | 35.4 |
| 27-28 | 35.4-35.6 | 100-200 | <i>P. acuta</i>      | normal    | FJVB55 | 29 2013-6-22 | 8.7  | 27.1 | 35.4 |
| 27-28 | 35.4-35.6 | 100-200 | <i>P. acuta</i>      | normal    | FJVB55 | 29 2013-6-22 | 6    | 27.1 | 35.4 |
| 26-27 | 35.4-35.6 | 50-100  | <i>P. damicornis</i> | bleached  | FJVB60 | 11 2013-6-23 | 16.3 | 27   | 35.4 |
| 26-27 | 35.4-35.6 | <50     | <i>P. damicornis</i> | .         | FJVB60 | 11 2013-6-23 | 10.9 | 27   | 35.4 |
| 27-28 | 35.4-35.6 | <50     | <i>P. acuta</i>      | normal    | FJVB61 | 15 2013-6-23 | 31.7 | 27.1 | 35.6 |
| 26-27 | 35.4-35.6 | <50     | <i>P. acuta</i>      | normal    | FJVB62 | 33 2013-6-23 | 8.5  | 27   | 35.4 |
| 26-27 | 35.4-35.6 | 100-200 | <i>P. acuta</i>      | normal    | FJVB63 | 29 2013-6-24 | 9.6  | 26.8 | 35.5 |
| 26-27 | 35.4-35.6 | 50-100  | <i>P. acuta</i>      | bleached  | FJVB63 | 29 2013-6-24 | 9.9  | 26.8 | 35.5 |
| 26-27 | 35-35.3   | 50-100  | <i>P. acuta</i>      | very pale | FJVB66 | 12 2013-6-25 | 27.4 | 26.6 | 35.3 |
| 26-27 | 35.4-35.6 | <50     | <i>P. acuta</i>      | normal    | FJVB67 | 22 2013-6-25 | 21.1 | 26.8 | 35.4 |

| PAR Sym assemblage | max length (max; cm) | planar SA (cm <sup>2</sup> ) | RNA/DNA     | Sym GCP     |
|--------------------|----------------------|------------------------------|-------------|-------------|
| 72 clade C only    | 21                   | 204                          | 0.555555556 | 25.23853504 |
| 117 clade C only   | 14                   | 139                          | 0           | 18.21543993 |
| 8 clade C only     | 8                    | 30                           | 0.714285714 | 16.24040678 |
| 411 clade C only   | 21                   | 226                          | 0.923076923 | 26.5687113  |
| 168 clade C only   | 6                    | 25                           | 0.777777778 | 40.86187105 |
| 121 clade C only   | 7                    | 36                           | 0.44        | 22.71349677 |
| 331 clade C only   | 8                    | 29                           | 0.909090909 | 35.9479805  |
| 364 clade C only   | 11                   | 60                           | 0.724137931 | 31.06420746 |
| 460 clade C only   |                      |                              | 1           | 50.86634726 |
| 144 clade C only   | 19                   | 230                          | 0.628571429 | 20.37224212 |
| 127 clade C only   |                      |                              | 0.730769231 | 61.89757387 |
| 195 clade C only   | 12                   | 88                           | 0.604651163 | 24.37663149 |
| 83 clade C only    | 15                   | 117.5                        | 0.727272727 | 39.19808922 |
| 82 clade C only    | 7                    | 38                           | 0.510638298 | 16.55715708 |
| 90 clade C only    | 18                   | 155                          | 0.397260274 | 27.47995747 |
| 59 clade C only    | 8                    | 37                           | 1.292682927 | 20          |
| 74 clade C only    | 16                   | 118                          | 0.568181818 | 42.5468557  |
| 86 clade C only    | 12                   | 70                           | 0.578571429 | 31.31213542 |
| 59 clade C only    | 16                   | 125                          | 0.692307692 | 41.98306363 |
| 31 clade C only    | 10                   | 47                           | 0.25        | 26.79470597 |
| 136 clade C only   | 19                   | 127                          | 1.636363636 | 38.10242613 |
| 109 clade C only   | 61                   | 1555                         | 1.642857143 | 35.9479805  |
| clade C only       | 58                   | 1371                         | 0.642857143 | 27.94279069 |
| 277 clade C only   | 56                   | 1549                         | 0.093333333 | 35.15392725 |
| 39 clade C only    | 12                   | 89                           | 0.26        | 19.27088049 |
| 39 clade C only    | 15                   | 140                          | 0.280701754 | 48.84496023 |
| clade C only       | 41                   | 644                          | 1.647058824 | 37.55902694 |
| clade C only       | 39                   | 529                          | 1.172413793 | 37.01874262 |
| clade C only       | 14                   | 87                           | 0.836734694 | 7.950292292 |
| clade C only       |                      |                              | 0.92        | 30.81736183 |
| clade C only       | 11                   | 63                           | 0.186486486 | 26.5687113  |
| clade C only       |                      |                              | 0.75        | 12.30437619 |
| clade C only       | 18.5                 | 200                          | 0.86        | 32.82188323 |
| clade C only       | 16                   | 122                          | 0.54        | 14.4417049  |
| 140 clade C only   | 8                    | 23                           | 0.393939394 | 7.299691848 |
| 33 clade C only    | 17                   | 116                          | 0.476470588 | 15.6215833  |
| 17 clade C only    | 16.5                 | 135                          | 0.454545455 | 13.07206089 |
| 25 clade C only    | 12.5                 | 86                           | 0.172413793 | 10.23059784 |
| 47 clade C only    | 15                   | 96                           | 1.263157895 | 42.5468557  |
| 53 clade C only    | 19                   | 181                          | 1.625       | 18.21543993 |
| 27 clade C only    | 20                   | 166                          | 1.375       | 31.31213542 |
| 173 clade C only   | 15                   | 107                          | 0.803571429 | 47.69115256 |
| 91 clade C only    | 35                   | 250                          | 0.506849315 | 50          |
| 508 clade C only   | 37                   | 651                          | 2.225806452 | 31.31213542 |
| 118 clade C only   | 11                   | 88                           | 0.642857143 | 12.30437619 |
| clade C only       | 7                    | 29                           | 1.125       | 16.87884029 |
| clade C only       | 10                   | 45                           | 0.892307692 | 27.94279069 |

|                  |    |     |             |             |
|------------------|----|-----|-------------|-------------|
| clade C only     | 11 | 77  | 0.714285714 | 30.0834107  |
| clade C only     | 13 | 57  | 0.777777778 | 22.31046132 |
| clade C only     | 23 | 325 | 0.806451613 | 36.48168943 |
| clade C only     | 18 | 174 | 0.391304348 | 12.30437619 |
| 37 clade C only  | 12 | 81  | 0.214285714 | 13.88006146 |
| 66 clade C only  | 26 | 219 | 0.487179487 | 21.51976935 |
| 123 clade C only | 11 | 70  | 0.290322581 | 13.33685574 |
| 165 clade C only | 9  | 44  | 0.535714286 | 26.1203875  |
| 140 clade C only | 7  | 29  | 1.333333333 | 21.13212411 |
| 411 clade C only | 10 | 47  | 0.909090909 | 11.34136637 |
| 17 clade C + A   | 12 | 86  | 0.551724138 | 52.30884744 |
| 41 clade C only  | 22 | 229 | 0.475       | 49.42240304 |
| 178 clade C only | 19 | 172 | 0.294871795 | 44.2493334  |
| 154 clade C only | 16 | 86  | 0.487804878 | 28.88262794 |
| 74 clade C only  | 8  | 42  | 1           | 22.31046132 |
| 49 clade C only  |    |     | 0.857142857 | 54.60786947 |
| 49 clade C only  | 17 | 144 | 1.08        | 13.60617486 |
| 8 clade C only   |    |     | 0.964285714 | 29.3595214  |
| 140 clade C only | 17 | 168 | 0.18        | 4.232371232 |
| 82 clade C only  | 15 | 142 | 0.319148936 | 3.873219278 |
| 58 clade C only  | 20 | 167 | 1.368421053 | 14.72954287 |
| 49 clade C only  | 12 | 71  | 1.722222222 | 10.66285308 |

| <b>sym hsp90 mRNA expression</b> | <b>sym apx1 mRNA expression</b> | <b>sym ubiq-lig mRNA expression</b> |
|----------------------------------|---------------------------------|-------------------------------------|
| 12586.8814                       | 85.44866871                     | 402.5339313                         |
| 927.2189593                      | 17.39723078                     | 17.22899037                         |
| 11902.74738                      | 26.96519409                     | 259.9950463                         |
| 6261.097458                      | 24.98319406                     | 310.5897716                         |
| 8048.510848                      | 38.19183542                     | 316.8902574                         |
| 8412.846276                      | 16.40121879                     | 169.4886593                         |
| 10151.11586                      | 20.726006                       | 99.91878555                         |
| 1787.021795                      | 76.14589552                     | 84.64432933                         |
| 3934.278208                      | 10.59934188                     | 52.2931449                          |
| 16143.39798                      | 45.02568064                     | 270.3447743                         |
| 3465.173559                      | 12.03695094                     | 82.06595265                         |
| 7146.870748                      | 26.60788935                     | 262.5465295                         |
| 3610.07084                       | 53.7613559                      | 277.7824092                         |
| 22554.68916                      | 82.05348117                     | 585.8847615                         |
| 1906.725778                      | 15.21653366                     | 71.68246398                         |
| 8914.437768                      | 17.37909376                     | 108.0279957                         |
| 2579.499725                      | 17.92078295                     | 58.33172812                         |
| 5963.207657                      | 7.849273059                     | 93.17511963                         |
| 2223.762983                      | 10.92433458                     | 102.9253097                         |
| 3104.144733                      | 73.38091375                     | 233.3977393                         |
| 846.5072215                      | 56.60004988                     | 82.06595265                         |
| 6933.416457                      | 46.5283103                      | 360.2074068                         |
| 16838.21961                      | 21.16298906                     | 295.3166012                         |
| 9464.051602                      | 8.218803679                     | 99.84204353                         |
| 2656.858364                      | 62.80721784                     | 147.9369819                         |
| 1517.048732                      | 59.62055506                     | 88.46603227                         |
| 3767.61302                       | 26.78687902                     | 230.0975387                         |
| 2096.362078                      | 71.72272458                     | 165.0781694                         |
| 5111.443131                      | 30.91427232                     | 431.3898098                         |
| 4921.394316                      | 30.46056758                     | 345.2548965                         |
| 46.16944578                      | 0.047680815                     | 0.69682414                          |
| 2389.93651                       | 24.59186817                     | 20.47923487                         |
| 3501.935369                      | 7.488220563                     | 65.8268113                          |
| 36994.4277                       | 65.00024335                     | 1029.946507                         |
| 6321.365976                      | 3.116745051                     | 61.50736615                         |
| 4635.108554                      | 30.74770724                     | 219.5472132                         |
| 28567.91554                      | 45.23792989                     | 777.1817176                         |
| 655.1603816                      | 4.766919167                     | 14.14647765                         |
| 2997.496272                      | 51.87239576                     | 178.8833842                         |
| 3304.232729                      | 46.98469928                     | 68.12439415                         |
| 13386.94856                      | 8.810511115                     | 154.9013808                         |
| 1627.234488                      | 17.53573464                     | 75.31540677                         |
| 707.5393945                      | 7.802949271                     | 35.91878555                         |
| 3424.963413                      | 57.25087013                     | 166.0191893                         |
| 6022.262633                      | 87.63545532                     | 231.6960936                         |
| 4289.852451                      | 86.26669813                     | 181.0250633                         |
| 3190.246052                      | 70.36591403                     | 181.7886918                         |

|             |             |             |
|-------------|-------------|-------------|
| 1910.357088 | 15.60186014 | 49.62378771 |
| 6342.669337 | 96.66313882 | 212.4345212 |
| 969.7185157 | 5.225038767 | 27.62856807 |
| 12044.52527 | 118.3385324 | 788.3850327 |
| 2378.078799 | 37.95628771 | 141.9180359 |
| 5099.943256 | 15.42236024 | 187.350863  |
| 15355.94326 | 46.43676937 | 372.1764212 |
| 4011.942264 | 30.57127145 | 208.4299029 |
| 1836.178129 | 14.9960416  | 72.29498362 |
| 5368.612767 | 55.88360377 | 359.6210434 |
| 12574.43926 | 22.61005558 | 241.8898538 |
| 8882.579219 | 18.13597567 | 217.7853251 |
| 7694.46715  | 46.53653512 | 164.2336231 |
| 23037.97163 | 21.94386279 | 324.421603  |
| 869.5997708 | 11.2737372  | 43.13761222 |
| 1237.16244  | 19.74623109 | 75.55660067 |
| 13103.51787 | 120.12168   | 373.3366224 |
| 8994.119336 | 58.30115251 | 379.5377675 |
| 75058.26634 | 116.1417501 | 829.2845174 |
| 2391.427506 | 19.98726542 | 73.02522583 |
| 8363.447851 | 101.16513   | 314.419911  |
| 12099.56796 | 58.08206202 | 522.5171502 |



| Sym rbcL mRNA expression | Sym zif1l mRNA expression | most gfp-cp mRNA expression |
|--------------------------|---------------------------|-----------------------------|
| 23487.95121              | 163.4795752               | 19299.82202                 |
| 2562.671645              | 376.5679108               | 1252.070072                 |
| 14996.52197              | 468.6413116               | 5815.444125                 |
| 35418.11576              | 16523.13525               | 205038.1975                 |
| 35311.23099              | 154.826237                | 70622.46198                 |
| 8220.696601              | 11360.28652               | 111889.2262                 |
| 6469.106298              | 2313.750153               | 12212.04652                 |
| 9764.574844              | 946.6418201               | 462.5102455                 |
| 2656.326183              | 1268.185377               | 6771.297532                 |
| 15237.33868              | 2399.730468               | 4082.743808                 |
| 4365.845109              | 928.470266                | 2947.709354                 |
| 15319.65282              | 167.3157347               | 8209.598672                 |
| 38108.13626              | 10449.48894               | 902.5177101                 |
| 109796.5438              | 10046.97183               | 6783.463936                 |
| 6953.619084              | 9389.819155               | 14232.30445                 |
| 6678.282597              | 14481.54688               | 93020.52283                 |
| 4288.355849              | 8380.819331               | 34306.84679                 |
| 4733.001054              | 6245.232332               | 61510.26316                 |
| 3871.796236              | 80.75356129               | 1806.256812                 |
| 37640.02877              | 51.98343669               | 861.0660581                 |
| 8935.783802              | 558.4864876               | 736.9273385                 |
| 52962.51592              | 1197.672188               | 2627.273547                 |
| 14658.52157              | 1127.922308               | 8615.897168                 |
| 7425.344389              | 876.0739789               | 9574.018585                 |
| 22780.4023               | 99.88334777               | 302.7896899                 |
| 10565.34102              | 62.55493133               | 19715.62348                 |
| 36260.26232              | 5580.202422               | 621.4243981                 |
| 29882.34061              | 3566.612754               | 24839.33394                 |
| 64911.28163              | 21913.23641               | 305.0386599                 |
| 62497.81212              | 1623.454683               | 26582.4182                  |
| 20.80511718              | 2.212278746               | 129.0869941                 |
| 7587.575459              | 4891.597255               | 1194.968255                 |
| 4839.369591              | 480.1262737               | 13687.80422                 |
| 102246.1523              | 5563.15284                | 18074.7369                  |
| 3348.626979              | 578.438844                | 7517.413395                 |
| 21297.36628              | 155.2433232               | 2788.075817                 |
| 78956.74087              | 2706.303928               | 13957.71172                 |
| 844.7443433              | 17.82344498               | 442.347893                  |
| 26301.8303               | 3443.219036               | 2609.472068                 |
| 11243.2091               | 1577.509439               | 3155.018879                 |
| 7173.888106              | 856.2408532               | 2366.500527                 |
| 7830.415313              | 1518.263462               | 14278.33147                 |
| 3033.287787              | 2298.802275               | 2298.802275                 |
| 27399.7073               | 4956.844187               | 317.044058                  |
| 32528.64809              | 4779.873019               | 278.7362014                 |
| 14263.55171              | 3251.100214               | 1382.802095                 |
| 27993.13249              | 4511.689234               | 5303.706832                 |

|             |             |             |
|-------------|-------------|-------------|
| 11059.20418 | 6807.738724 | 23433.63737 |
| 35879.55599 | 6642.64032  | 1779.851404 |
| 2742.778153 | 473.7850571 | 1063.611491 |
| 80094.92674 | 8132.162022 | 8715.835448 |
| 11711.03371 | 3774.964787 | 1334.6516   |
| 23433.18572 | 25115.06659 | 5219.148779 |
| 36947.16839 | 109444.7213 | 12472.90171 |
| 38611.73589 | 1386.038672 | 4011.942264 |
| 11132.50244 | 2596.748013 | 3935.933982 |
| 27370.48982 | 7592.364986 | 31079.31242 |
| 41809.40174 | 568.7062224 | 8106.554313 |
| 27876.52162 | 555.1612012 | 8882.579219 |
| 11396.25646 | 2261.303687 | 7015.218738 |
| 33729.56473 | 27082.23932 | 42990.37518 |
| 3321.32016  | 499.4539131 | 1679.956021 |
| 6838.602841 | 3419.301421 | 7162.028564 |
| 48904.0579  | 8066.161408 | 1393.341543 |
| 35976.47734 | 114.1483591 | 45327.52111 |
| 62391.2754  | 8358.664159 | 1777.610277 |
| 7418.900499 | 17442.5459  | 4673.614453 |
| 66907.58281 | 2043.10661  | 11557.55631 |
| 82341.641   | 2573.176281 | 19655.80614 |

| rost cu-zn-sod mRNA expression | host lectin mRNA expression | most ca mRNA expression | max. length z-score |
|--------------------------------|-----------------------------|-------------------------|---------------------|
| 39.02427494                    | 2803.409125                 | 883.0185421             | 0.2415566449        |
| 167.7419345                    | 54.07036747                 | 3795.566701             | -0.3410151018       |
| 231.6292535                    | 228.9687646                 | 1140.676246             | -0.8403623133       |
| 713.5479194                    | 713.5479194                 | 4855.934262             | 0.2415566449        |
| 1390.292601                    | 5434.153095                 | 18922.82015             | -1.0068113838       |
| 513.7935376                    | 3924.731564                 | 3187.872618             | -0.9235868486       |
| 856.7224221                    | 469.8372766                 | 21262.40796             | -0.8403623133       |
| 315.9038073                    | 163.5220655                 | 14972.29938             | -0.5906887076       |
| 641.4604904                    | 423.2060958                 | 19152.12161             |                     |
| 317.8032334                    | 2632.084322                 | 4275.833595             | 0.0751075744        |
| 886.542038                     | 2312.725884                 | 18716.78772             |                     |
| 388.8570222                    | 2646.303193                 | 2902.531446             | -0.5074641723       |
| 494.9519845                    | 2121.905609                 | 3000.82769              | -0.2577905666       |
| 391.0311648                    | 2692.019447                 | 4080.338473             | -0.9235868486       |
| 1095.126382                    | 55.59493926                 | 31220.69408             | -0.0081169608       |
| 718.3757109                    | 126.9920842                 | 4063.746693             | -0.8403623133       |
| 1000.294372                    | 812.4915004                 | 17964.67951             | -0.1745660313       |
| 711.7398454                    | 2108.312286                 | 6693.474281             | -0.5074641723       |
| 402.2979696                    | 1400.882896                 | 11207.06317             | -0.1745660313       |
| 112.7236777                    | 881.1925231                 | 1217.731297             | -0.6739132428       |
| 279.2432438                    | 136.4326597                 | 31116.20649             | 0.0751075744        |
| 423.4410629                    | 5898.029693                 | 23053.27403             | 3.5705380548        |
| 380.7724571                    | 1790.465059                 | 1540.78728              | 3.3208644449        |
| 243.0162356                    | 2449.450165                 | 1692.463366             | 3.1544153785        |
| 50.52196818                    | 31.4612831                  | 1598.133564             | -0.5074641723       |
| 724.2706221                    | 268.1788614                 | 3105.01613              | -0.2577905666       |
| 340.7969014                    | 3515.307247                 | 22842.53388             | 1.9060473498        |
| 561.7063107                    | 500.4234322                 | 10565.00284             | 1.7395982793        |
| 250.6473124                    | 196.6538955                 | 3146.462328             | -0.3410151018       |
| 775.0710367                    | 1739.975647                 | 14918.87779             |                     |
| 11.67647722                    | 30.11060608                 | 195.6592956             | -0.5906887076       |
| 242.6539571                    | 40.95846975                 | 7587.575459             |                     |
| 2206.081043                    | 120.0315684                 | 5068.24333              | 0.0334953068        |
| 3122.213966                    | 428.0652838                 | 8051.379969             | -0.1745660313       |
| 214.181089                     | 52.32229654                 | 619.9554027             | -0.8403623133       |
| 713.3110001                    | 328.9491432                 | 13416.50004             | -0.0913414961       |
| 3181.389917                    | 2706.303928                 | 1025.497425             | -0.1329537637       |
| 226.3436425                    | 98.52179272                 | 3972.149777             | -0.4658519047       |
| 255.918786                     | 236.0380406                 | 5994.992543             | -0.2577905666       |
| 115.9023699                    | 719.1254159                 | 9345.781478             | 0.0751075744        |
| 214.0602133                    | 3586.944053                 | 1752.509069             | 0.1583321096        |
| 549.3340007                    | 2172.097446                 | 9865.705082             | -0.2577905666       |
| 615.9488185                    | 1123.148779                 | 35940.76093             | 1.4067001384        |
| 251.6380356                    | 2846.959382                 | 28695.55242             | 1.5731492089        |
| 351.1856075                    | 32.13536404                 | 1114.944806             | -0.5906887076       |
| 128.0040498                    | 238.8640031                 | 9195.500031             | -0.9235868486       |
| 678.4593879                    | 1181.266405                 | 21214.82733             | -0.6739132428       |

|             |             |             |               |
|-------------|-------------|-------------|---------------|
| 2023.952832 | 164.9966916 | 16570.08389 | -0.5906887076 |
| 643.981046  | 222.4814255 | 2517.089994 | -0.4242396371 |
| 718.12386   | 295.0377102 | 10002.61009 | 0.4080057154  |
| 1896.893865 | 285.2513513 | 2682.61303  | -0.0081169608 |
| 241.4500254 | 271.0184901 | 11182.18221 | -0.5074641723 |
| 1059.816526 | 57.00166465 | 5724.492754 | 0.6576793211  |
| 1632.849582 | 538.6394852 | 28655.20336 | -0.5906887076 |
| 777.8879034 | 914.4444961 | 10587.57911 | -0.7571377781 |
| 605.7128917 | 269.8144194 | 12210.40676 | -0.9235868486 |
| 788.8826872 | 408.3512876 | 15010.31847 | -0.6739132428 |
| 2074.009009 | 2122.486672 | 2866.099763 | -0.5074641723 |
| 1305.237175 | 2930.158387 | 1012.305904 | 0.3247811801  |
| 3937.158397 | 1694.063659 | 37026.54648 | 0.0751075744  |
| 736.7643341 | 2259.403274 | 2506.964898 | -0.1745660313 |
| 62.43173914 | 153.7249737 | 4697.056015 | -0.8403623133 |
| 1488.337389 | 916.1791308 | 20730.76724 |               |
| 449.1333037 | 712.9546787 | 1031.837374 | -0.0913414961 |
| 1518.15107  | 1627.114029 | 5798.375211 |               |
| 738.8085135 | 96.71872676 | 1697.336248 | -0.0913414961 |
| 359.6183952 | 260.2323203 | 10252.27415 | -0.2577905666 |
| 869.0018496 | 2139.733545 | 10061.43715 | 0.1583321096  |
| 1950.102959 | 476.3906365 | 51871.98339 | -0.5074641723 |

planar SA z-scoreRNA/DNA z-scoreSym GCP z-scoreSym hsp90 z-scoreSym apx1 z-scoreSym rbcl z-score

|               |                     |                    |               |               |               |
|---------------|---------------------|--------------------|---------------|---------------|---------------|
| -0.0125276199 | -0.4209439095       | -0.1523044887      | 0.5249827498  | 0.5909420817  | -0.0688020464 |
| -0.2256388281 | -1.6637913517       | -0.6600109206      | -0.644605551  | -0.4065952736 | -0.828900792  |
| -0.5830099311 | -0.0658446403       | -0.8027880036      | 0.4563568226  | -0.2663425308 | -0.3772483299 |
| 0.0596023275  | 0.4012474753        | -0.0561447426      | -0.1095607398 | -0.2953958342 | 0.3645543196  |
| -0.5994031009 | 0.0761950674        | 0.9771217908       | 0.0697358565  | -0.1017759259 | 0.3606717918  |
| -0.5633381272 | -0.6794561775       | -0.3348419811      | 0.1062825796  | -0.4211953937 | -0.6233762895 |
| -0.586288565  | 0.3699590082        | 0.6218918246       | 0.2806495289  | -0.3578001602 | -0.6870017999 |
| -0.4846509119 | -0.043803996        | 0.2688390828       | -0.558358171  | 0.4545766492  | -0.5672958002 |
|               | 0.5733340442        | 1.7003551858       | -0.3429654877 | -0.5062426627 | -0.8254988447 |
| 0.0727168633  | -0.2575982457       | -0.5040935755      | 0.8817392344  | -0.0016014683 | -0.3685008014 |
|               | -0.028968947        | <b>2.497813374</b> | -0.3900216793 | -0.4851693572 | -0.7634015529 |
| -0.3928491607 | -0.3111108797       | -0.2146123415      | -0.0207082466 | -0.2715801105 | -0.3655107876 |
| -0.2961294585 | -0.0367910637       | 0.8568453709       | -0.375486939  | 0.1264511146  | 0.4622677672  |
| -0.5567808593 | -0.5214294474       | -0.7798898139      | 1.5248600104  | 0.5411734581  | 3.0663079414  |
| -0.1731806846 | -0.775070304        | 0.0097301366       | -0.5463505868 | -0.4385611938 | -0.6694021516 |
| -0.5600594932 | 1.2281024528        | -0.5310033233      | 0.1565975474  | -0.4068611365 | -0.6794035911 |
| -0.2944901415 | -0.3926973767       | 1.0989309833       | -0.4788641959 | -0.3989207429 | -0.7662163057 |
| -0.4518645722 | -0.3694545155       | 0.2867620382       | -0.1394422589 | -0.5465547628 | -0.7500648244 |
| -0.2715397037 | -0.1150122314       | 1.0581739017       | -0.5145483792 | -0.5014787316 | -0.7813475941 |
| -0.5272731535 | -1.1045100027       | -0.0398073663      | -0.4262367149 | 0.4140459465  | 0.4452640318  |
| -0.2649824358 | 1.9969592962        | 0.7776388117       | -0.6527017978 | 0.1680623336  | -0.5974011582 |
| 4.4169068762  | <b>2.0114860845</b> | 0.6218918246       | -0.042119985  | 0.0204249468  | 1.0018445652  |
| 3.8136382254  | -0.2256393115       | 0.0431888039       | 0.9514372427  | -0.3513946096 | -0.389526     |
| 4.3972350724  | -1.4549929814       | 0.5644889366       | 0.2117296676  | -0.5411379691 | -0.6522670012 |
| -0.3895705267 | -1.0821387487       | -0.5837120876      | -0.4711043007 | 0.2590505934  | -0.0945033536 |
| -0.2223601941 | -1.0358263283       | 1.5542271353       | -0.585439344  | 0.2123386464  | -0.5382084294 |
| 1.4300713277  | <b>2.020885771</b>  | 0.7383559515       | -0.3596837808 | -0.2689563763 | 0.395144809   |
| 1.053028421   | 0.9590453194        | 0.6992982682       | -0.5273280466 | 0.3897392501  | 0.163470471   |
| -0.3961277947 | 0.2080890816        | -1.4020885088      | -0.2248833109 | -0.208454657  | 1.4358766076  |
|               | 0.3943640126        | 0.2509943702       | -0.2439472307 | -0.2151053236 | 1.3482087157  |
| -0.47481501   | -1.2465976968       | -0.0561447426      | -0.7329841991 | -0.6609150163 | -0.9212326317 |
|               | 0.0140526953        | -1.0873275144      | -0.4978794049 | -0.3011321155 | -0.6463740508 |
| -0.0256421558 | 0.2601364888        | 0.3959031877       | -0.3863340783 | -0.5518472792 | -0.7462010484 |
| -0.2813756056 | -0.4557436379       | -0.9328179262      | 2.9733195476  | 0.2911972303  | 2.7920443125  |
| -0.6059603689 | -0.782499529        | -1.4491210528      | -0.1035151656 | -0.6159268968 | -0.8003514165 |
| -0.3010474095 | -0.5978668983       | -0.8475233598      | -0.2726647412 | -0.2108962643 | -0.1483737841 |
| -0.238753364  | -0.6469161717       | -1.0318308347      | 2.1280506482  | 0.0015098041  | 1.9460698366  |
| -0.3994064286 | -1.2780800765       | -1.2372429848      | -0.6718959234 | -0.5917376898 | -0.8913035132 |
| -0.3666200889 | 1.1620512537        | 1.0989309833       | -0.4369346912 | 0.0987616438  | 0.0334104932  |
| -0.0879362013 | 1.9715374167        | -0.6600109206      | -0.4061657583 | 0.0271149606  | -0.5135852613 |
| -0.1371157109 | 1.4122560677        | 0.2867620382       | 0.6052380055  | -0.5324643791 | -0.661401006  |
| -0.3305551152 | 0.1338986986        | 1.4708172475       | -0.5743865394 | -0.4045650038 | -0.6375530328 |
| 0.1382895428  | -0.529905877        | 1.6377260928       | -0.6666417506 | -0.5472338037 | -0.8118059313 |
| 1.4530217655  | <b>3.3156167876</b> | 0.2867620382       | -0.3940551851 | 0.1776024334  | 0.0732902439  |
| -0.3928491607 | -0.2256393115       | -1.0873275144      | -0.1335184159 | 0.6229972653  | 0.2595960683  |
| -0.586288565  | 0.8529747187        | -0.7566350192      | -0.3072976048 | 0.6029332303  | -0.403873053  |
| -0.5338304215 | 0.3324128477        | 0.0431888039       | -0.4175998358 | 0.369850336   | 0.0948460726  |

|               |               |               |               |               |               |
|---------------|---------------|---------------|---------------|---------------|---------------|
| -0.4289141344 | -0.0658446403 | 0.1979363233  | -0.5459863278 | -0.4329128553 | -0.5202691342 |
| -0.4944868138 | 0.0761950674  | -0.363977809  | -0.1013782117 | 0.7553302739  | 0.3813158706  |
| 0.3841870907  | 0.1403420321  | 0.6604741665  | -0.640342393  | -0.5850223076 | -0.8223585266 |
| -0.1108866391 | -0.7883944576 | -1.0873275144 | 0.4705786547  | 1.0730607355  | 1.9874137837  |
| -0.4157995985 | -1.1844073383 | -0.9734196812 | -0.4990688596 | -0.1052287205 | -0.4965918014 |
| 0.0366518896  | -0.5739097485 | -0.4211377068 | -0.2260368708 | -0.4355440687 | -0.0707913713 |
| -0.4518645722 | -1.0143033335 | -1.0126885554 | 0.8027491407  | 0.0190830869  | 0.420096277   |
| -0.5371090554 | -0.4653313182 | -0.0885545097 | -0.3351749559 | -0.2134825622 | 0.4805607341  |
| -0.586288565  | 1.3190425095  | -0.4491609613 | -0.5534272673 | -0.441793294  | -0.517606617  |
| -0.5272731535 | 0.3699590082  | -1.1569444386 | -0.1990864579 | 0.1575602519  | 0.0722289357  |
| -0.3994064286 | -0.4295152712 | 1.8046349382  | 0.5237346707  | -0.3301826712 | 0.596714107   |
| 0.0694382294  | -0.6011567886 | 1.5959710423  | 0.1534017957  | -0.3957663235 | 0.0906102498  |
| -0.117443907  | -1.0041261708 | 1.2220047656  | 0.0342215036  | 0.020545511   | -0.508025904  |
| -0.3994064286 | -0.5725106707 | 0.1111305602  | 1.5733383884  | -0.3399481107 | 0.3032186745  |
| -0.5436663234 | 0.5733340442  | -0.363977809  | -0.6503853692 | -0.4963569858 | -0.801343321  |
|               | 0.253744702   | 1.970833495   | -0.6135149195 | -0.3721622678 | -0.6735800504 |
| -0.2092456582 | 0.7523040759  | -0.9932192121 | 0.5768068891  | 1.0991991448  | 0.8544234117  |
|               | 0.4934367087  | 0.145605656   | 0.1645904572  | 0.1929980803  | 0.3848364829  |
| -0.1305584429 | -1.2611087804 | -1.6708606678 | 6.7915278864  | 1.0408590294  | 1.3443388306  |
| -0.2158029262 | -0.9498151615 | -1.6968241147 | -0.4977298422 | -0.3686290471 | -0.6525010718 |
| -0.1338370769 | 1.3975381375  | -0.9120098372 | 0.1013273915  | 0.8213230657  | 1.5083910998  |
| -0.4485859382 | 2.189035719   | -1.2059948296 | 0.4761000226  | 0.1897865251  | 2.0690243871  |

| Sym ubiq-lig z-score | Sym zifl1l z-score | host gfp-cp z-score | host cu-zn-sod z-score | host lectin z-score |
|----------------------|--------------------|---------------------|------------------------|---------------------|
| 0.8898962083         | -0.4347260589      | 0.1591103586        | -0.9672977975          | 1.3939926594        |
| -0.9851362059        | -0.4181550173      | -0.4662172646       | -0.790390928           | -0.8016803333       |
| 0.196250731          | -0.4109948311      | -0.308103176        | -0.7025855279          | -0.6620032251       |
| 0.4424628603         | 0.8375000063       | 6.5946673863        | -0.0402465545          | -0.2750093125       |
| 0.4731232901         | -0.4353989949      | 1.9373631048        | 0.8898572357           | 3.4949536522        |
| -0.244185898         | 0.4360055705       | 3.3671947904        | -0.3147848149          | 2.2895015845        |
| -0.5827379239        | -0.2675079749      | -0.0864704661       | 0.1565294989           | -0.469641158        |
| -0.6570689212        | -0.3738226119      | -0.4935743322       | -0.5867603371          | -0.7142701745       |
| -0.8145014195        | -0.3488174344      | -0.2749842845       | -0.1393220149          | -0.506881685        |
| 0.2466162296         | -0.260821624       | -0.3681386516       | -0.5841498054          | 1.2571694899        |
| -0.6696162294        | -0.3752357422      | -0.4074658985       | 0.1975129577           | 1.0021239101        |
| 0.2086671659         | -0.4344277358      | -0.2251493003       | -0.4864949585          | 1.2685249443        |
| 0.2828104359         | 0.3651764257       | -0.4783287314       | -0.3406802529          | 0.8497312946        |
| 1.7821472887         | 0.3338742535       | -0.2745627368       | -0.4835068622          | 1.3050347938        |
| -0.7201460196        | 0.2827700751       | -0.0164715491       | 0.4841869342           | -0.800462782        |
| -0.5432755909        | 0.6787337101       | 2.7134224277        | -0.0336113384          | -0.743443696        |
| -0.7851155018        | 0.2043041281       | 0.6790813311        | 0.3538517955           | -0.1959911311       |
| -0.6155550276        | 0.0382279282       | 1.6216390386        | -0.0427315337          | 0.8388754144        |
| -0.5681070961        | -0.4411593355      | -0.4470155226       | -0.4680220005          | 0.2739091651        |
| 0.0668186696         | -0.443396675       | -0.4797649691       | -0.8660068739          | -0.1411252184       |
| -0.6696162294        | -0.4040079252      | -0.4840661902       | -0.6371458517          | -0.7359042771       |
| 0.6839201177         | -0.3543009678      | -0.4185685202       | -0.4389633736          | 3.8654141186        |
| 0.3681381202         | -0.3597251415      | -0.2110716648       | -0.4976062164          | 0.5850367158        |
| -0.5831113782        | -0.3793103954      | -0.1778741901       | -0.686935497           | 1.1113144602        |
| -0.3490641111        | -0.4396716873      | -0.4991084107       | -0.9514956074          | -0.819736368        |
| -0.6384711402        | -0.4425745714      | 0.1735172576        | -0.0255094953          | -0.6306893136       |
| 0.0507587066         | -0.0134888317      | -0.4880681944       | -0.5525477872          | 1.9625277211        |
| -0.2656489281        | -0.170077779       | 0.351046165         | -0.2489344978          | -0.4452144861       |
| 1.0303192909         | 1.2566669696       | -0.4990304872       | -0.676447504           | -0.6878104797       |
| 0.6111558251         | -0.3211895381      | 0.4114414286        | 0.0443095361           | 0.5447149337        |
| -1.0655876725        | -0.4472671821      | -0.5051269494       | -1.0048840408          | -0.8208150437       |
| -0.9693193473        | -0.0670389467      | -0.4681957572       | -0.687433405           | -0.8121517383       |
| -0.7486417315        | -0.4101016908      | -0.0353376681       | 2.0110598731           | -0.7490024932       |
| 3.9431114453         | -0.0148147106      | 0.1166629907        | 3.2701738744           | -0.5030010473       |
| -0.769661705         | -0.4024563089      | -0.2491324853       | -0.7265659217          | -0.8030763752       |
| -0.0005829716        | -0.4353665598      | -0.4129969619       | -0.0405721714          | -0.5821570379       |
| 2.7130670754         | -0.2369806121      | -0.0259857767       | 3.3515040685           | 1.3164426456        |
| -1.0001368214        | -0.4460531631      | -0.4942729276       | -0.7098499616          | -0.7661805995       |
| -0.1984677879        | -0.1796736231      | -0.4191853148       | -0.6692025005          | -0.65635757         |
| -0.737460867         | -0.324762519       | -0.4002829334       | -0.8616381455          | -0.2705550202       |
| -0.3151728414        | -0.3808527395      | -0.4276039155       | -0.7267320507          | 2.0197382048        |
| -0.7024668134        | -0.3293698455      | -0.0148767817       | -0.2659387429          | 0.8898154278        |
| -0.894184941         | -0.2686704126      | -0.4299495587       | -0.1743847252          | 0.0521055412        |
| -0.2610695868        | -0.0619649495      | -0.4986145181       | -0.6750858747          | 1.4287727035        |
| 0.0585378497         | -0.075727301       | -0.4999418281       | -0.538269766           | -0.8191980344       |
| -0.1880456072        | -0.1946139481      | -0.4616875955       | -0.8450058488          | -0.6541007039       |
| -0.1843295163        | -0.096582899       | -0.3258341082       | -0.0884715011          | 0.0985193566        |

|               |               |               |               |               |
|---------------|---------------|---------------|---------------|---------------|
| -0.8274914716 | 0.0819718375  | 0.3023408804  | 1.7607466546  | -0.7130925107 |
| -0.0351958889 | 0.0691327841  | -0.4479304305 | -0.1358578158 | -0.6671841346 |
| -0.9345281207 | -0.4105948223 | -0.4727470727 | -0.0339574771 | -0.6092393381 |
| 2.7675864358  | 0.1849670273  | -0.2076089528 | 1.5861194577  | -0.6170549061 |
| -0.378354467  | -0.153875061  | -0.4633559381 | -0.6890880637 | -0.6284215334 |
| -0.1572619908 | 1.5056607072  | -0.3287639183 | 0.4356578038  | -0.7993393449 |
| 0.7421656464  | 8.0636462128  | -0.0774322237 | 1.2232224966  | -0.4146944364 |
| -0.0546838018 | -0.3396524473 | -0.3705918192 | 0.048180979   | -0.1145695752 |
| -0.7171652788 | -0.2455003446 | -0.3732253926 | -0.1884527698 | -0.6293831266 |
| 0.6810666625  | 0.1429891353  | 0.5672520904  | 0.0632919807  | -0.5187450108 |
| 0.1081443529  | -0.4032131766 | -0.2287196333 | 1.8295428213  | 0.8501953423  |
| -0.0091569527 | -0.4042665196 | -0.2018315304 | 0.7729588303  | 1.495216974   |
| -0.2697587941 | -0.2715865303 | -0.2665327794 | 4.3902165207  | 0.5080487674  |
| 0.5097735264  | 1.6586399918  | 0.9799526077  | -0.0083383978 | 0.9595394835  |
| -0.8590555342 | -0.4085986563 | -0.4513916562 | -0.9351270664 | -0.722094314  |
| -0.7012930772 | -0.1815336019 | -0.2614460384 | 1.0246079495  | -0.1131842638 |
| 0.7478116026  | 0.1798344192  | -0.4613224194 | -0.4036524931 | -0.2754830855 |
| 0.7779886049  | -0.4385623535 | 1.0609312201  | 1.0655832515  | 0.4545815495  |
| 2.9666180376  | 0.2025812075  | -0.4480080822 | -0.0055289203 | -0.7676205615 |
| -0.7136116575 | 0.9089989557  | -0.3476658671 | -0.5266799183 | -0.6370355689 |
| 0.4611016961  | -0.2885548586 | -0.1091475734 | 0.1734060882  | 0.8639690154  |
| 1.4737777024  | -0.2473334255 | 0.1714444672  | 1.6592489278  | -0.4644075231 |



| host ca z-score | Ranked max length | Ranked planar SA | root RNA/DNA | sym GCP (untransformed) | log Sym hsp90 |
|-----------------|-------------------|------------------|--------------|-------------------------|---------------|
| -0.960545083    | 64                | 51               | 0.7453559925 | 25.23853504             | 9.440410392   |
| -0.683492747    | 38                | 39               | 0            | 18.21543993             | 6.83218974    |
| -0.936035731    | 12                | 6                | 0.8451542547 | 16.24040678             | 9.384524525   |
| -0.58262667     | 65                | 53               | 0.9607689228 | 26.5687113              | 8.742110762   |
| 0.7554674575    | 1                 | 2                | 0.8819171037 | 40.86187105             | 8.993242365   |
| -0.741298853    | 2                 | 7                | 0.6633249581 | 22.71349677             | 9.037515135   |
| 0.9780176889    | 10                | 4                | 0.9534625892 | 35.9479805              | 9.225338915   |
| 0.3796793347    | 23                | 16               | 0.8509629434 | 31.06420746             | 7.488305712   |
| 0.7772794591    |                   |                  | 1            | 50.86634726             | 8.277482715   |
| -0.637807987    | 58                | 55               | 0.7928249672 | 20.37224212             | 9.689266451   |
| 0.735868892     |                   |                  | 0.8548504143 | 61.89757387             | 8.150518      |
| -0.768441558    | 27                | 27               | 0.7775931859 | 24.37663149             | 8.874429882   |
| -0.759091257    | 44                | 33               | 0.8528028654 | 39.19808922             | 8.191482674   |
| -0.656404205    | 7                 | 9                | 0.714589601  | 16.55715708             | 10.02369827   |
| 1.9252866353    | 55                | 43               | 0.6302858669 | 27.47995747             | 7.553142798   |
| -0.657982476    | 11                | 8                | 1.1369621484 | 20                      | 9.095427462   |
| 0.664325582     | 47                | 34               | 0.7537783614 | 42.5468557              | 7.855350754   |
| -0.407833078    | 29                | 19               | 0.7606388293 | 31.31213542             | 8.693363813   |
| 0.0215161634    | 46                | 36               | 0.8320502943 | 41.98306363             | 7.706956077   |
| -0.92870597     | 17                | 14               | 0.5          | 26.79470597             | 8.040493508   |
| 1.9153473899    | 61                | 37               | 1.2792042981 | 38.10242613             | 6.741118733   |
| 1.1483714822    | 81                | 63               | 1.2817398889 | 35.9479805              | 8.844107966   |
| -0.897975692    | 80                | 61               | 0.8017837257 | 27.94279069             | 9.731406558   |
| -0.883547702    | 79                | 62               | 0.3055050463 | 35.15392725             | 9.155255858   |
| -0.892520701    | 26                | 29               | 0.5099019514 | 19.27088049             | 7.884899638   |
| -0.749180468    | 40                | 40               | 0.5298129428 | 48.84496023             | 7.324522103   |
| 1.128325101     | 77                | 59               | 1.2833778958 | 37.55902694             | 8.234196929   |
| -0.039558986    | 75                | 58               | 1.082780584  | 37.01874262             | 7.647958778   |
| -0.745237952    | 35                | 26               | 0.9147320339 | 7.950292292             | 8.539237056   |
| 0.3745976758    |                   |                  | 0.9591663047 | 30.81736183             | 8.501347167   |
| -1.025929232    | 21                | 17               | 0.4318408115 | 26.5687113              | 3.832318233   |
| -0.322782873    |                   |                  | 0.8660254038 | 12.30437619             | 7.77902208    |
| -0.562431047    | 57                | 50               | 0.9273618495 | 32.82188323             | 8.161071057   |
| -0.278664075    | 48                | 35               | 0.7348469228 | 14.4417049              | 10.51852258   |
| -0.98556862     | 9                 | 1                | 0.6276459145 | 7.299691848             | 8.751690599   |
| 0.2316859567    | 53                | 32               | 0.69026849   | 15.6215833              | 8.441414898   |
| -0.946991965    | 50                | 38               | 0.6741998625 | 13.07206089             | 10.26003953   |
| -0.666695513    | 32                | 24               | 0.4152273993 | 10.23059784             | 6.484880063   |
| -0.47427524     | 43                | 30               | 1.1239029739 | 42.5468557              | 8.005532643   |
| -0.155535824    | 59                | 49               | 1.2747548784 | 18.21543993             | 8.102959571   |
| -0.877835933    | 62                | 44               | 1.17260394   | 31.31213542             | 9.502035523   |
| -0.106078771    | 42                | 31               | 0.896421457  | 47.69115256             | 7.39463722    |
| 2.3742768228    | 72                | 56               | 0.7119335047 | 50                      | 6.561793309   |
| 1.6850858366    | 74                | 60               | 1.4919136877 | 31.31213542             | 8.138846068   |
| -0.9384834      | 20                | 28               | 0.8017837257 | 12.30437619             | 8.70321832    |
| -0.16983115     | 3                 | 3                | 1.0606601718 | 16.87884029             | 8.364007618   |
| 0.9734916437    | 19                | 12               | 0.9446203959 | 27.94279069             | 8.067853325   |

|              |    |                 |             |             |
|--------------|----|-----------------|-------------|-------------|
| 0.5316664971 | 25 | 21 0.8451542547 | 30.0834107  | 7.555045461 |
| -0.805106173 | 33 | 15 0.8819171037 | 22.31046132 | 8.75505499  |
| -0.093055861 | 67 | 57 0.8980265101 | 36.48168943 | 6.877005839 |
| -0.78936101  | 56 | 48 0.6255432422 | 12.30437619 | 9.396365501 |
| 0.0191493946 | 28 | 22 0.4629100499 | 13.88006146 | 7.774048213 |
| -0.500006179 | 69 | 52 0.6979824405 | 21.51976935 | 8.536984692 |
| 1.681247685  | 22 | 18 0.5388159061 | 13.33685574 | 9.639257861 |
| -0.037411448 | 14 | 11 0.7319250547 | 26.1203875  | 8.297030758 |
| 0.1169579105 | 6  | 5 1.1547005384  | 21.13212411 | 7.515441587 |
| 0.3832958509 | 15 | 13 0.9534625892 | 11.34136637 | 8.588324824 |
| -0.771907075 | 31 | 23 0.7427813527 | 52.30884744 | 9.439421402 |
| -0.948246792 | 66 | 54 0.6892024376 | 49.42240304 | 9.091847246 |
| 2.4775607535 | 60 | 47 0.5430209893 | 44.2493334  | 8.948256798 |
| -0.806069309 | 49 | 25 0.6984302958 | 28.88262794 | 10.04489907 |
| -0.597739755 | 8  | 10 1            | 22.31046132 | 6.768033072 |
| 0.9274460605 |    | 0.9258200998    | 54.60786947 | 7.120575681 |
| -0.946388886 | 51 | 42 1.0392304845 | 13.60617486 | 9.480636013 |
| -0.492978207 |    | 0.9819805061    | 29.3595214  | 9.104326236 |
| -0.883084176 | 52 | 46 0.4242640687 | 4.232371232 | 11.22601998 |
| -0.069306894 | 39 | 41 0.5649326829 | 3.873219278 | 7.779645749 |
| -0.087460014 | 63 | 45 1.1697953037 | 14.72954287 | 9.031626043 |
| 3.8897135287 | 30 | 20 1.3123346457 | 10.66285308 | 9.400925025 |

| root Sym apx14th | root Sym rbcL4th | root Sym ubiq-lig4th | root Sym zifl1log | host gfp-cp4th | root host cu-zn-sod |
|------------------|------------------|----------------------|-------------------|----------------|---------------------|
| 9.243844909      | 12.3797331679    | 4.4792017452         | 3.5757395256      | 9.867851153    | 2.4993881745        |
| 4.170998775      | 7.1149727468     | 2.0373467792         | 4.4051512784      | 7.132553518    | 3.5988223738        |
| 5.192802142      | 11.0661776291    | 4.015515146          | 4.6527545495      | 8.668272438    | 3.9012012247        |
| 4.998319123      | 13.7184916501    | 4.1980420783         | 11.3376517886     | 12.23095157    | 5.1683960516        |
| 6.179954322      | 13.7081300026    | 4.2191719174         | 3.5274522181      | 11.16510353    | 6.106277724         |
| 4.049841823      | 9.52197759       | 3.6081547946         | 10.3239839626     | 11.62526461    | 4.7609887951        |
| 4.552582344      | 8.9683195013     | 3.1616354079         | 6.9355213841      | 9.410178163    | 5.4101590561        |
| 8.726161557      | 9.9406168481     | 3.0331889632         | 5.5468499993      | 6.136668709    | 4.2158846044        |
| 3.255663048      | 7.179105752      | 2.6891262385         | 5.967544762       | 8.820448007    | 5.0326007499        |
| 6.710117781      | 11.1103382271    | 4.0548938982         | 6.9990745016      | 8.314524543    | 4.2222075488        |
| 3.469430925      | 8.1286248569     | 3.0098215947         | 5.5200371434      | 7.988783658    | 5.4566341092        |
| 5.158283566      | 11.1253128087    | 4.0253307459         | 3.5965342146      | 9.013059318    | 4.4406596311        |
| 7.332213574      | 13.9718665005    | 4.0824999215         | 10.1105262867     | 6.805188313    | 4.7167272941        |
| 9.05833766       | 18.2031759678    | 4.9198634663         | 10.0117223294     | 8.822243155    | 4.446853714         |
| 3.900837559      | 9.1317228934     | 2.9097336148         | 9.8438345793      | 9.563269621    | 5.7526249474        |
| 4.168824026      | 9.0399535336     | 3.2239186872         | 10.9699270273     | 11.44057542    | 5.1771161664        |
| 4.233294574      | 8.0923135898     | 2.7636065334         | 9.5680099796      | 10.44310023    | 5.6238270501        |
| 2.801655414      | 8.2943842394     | 3.106883651          | 8.8897009158      | 11.02695932    | 5.1651188592        |
| 3.305198115      | 7.8882038144     | 3.1851548111         | 2.9977155521      | 7.499011923    | 4.4785451841        |
| 8.566266033      | 13.9287610056    | 3.9086264021         | 2.6851357509      | 6.758171224    | 3.2583954256        |
| 7.523300465      | 9.7226166664     | 3.0098215947         | 4.8613083331      | 6.602489296    | 4.0878567508        |
| 6.821166345      | 15.1702295317    | 4.3565044271         | 5.8828055186      | 7.873701913    | 4.5362631773        |
| 4.600324886      | 11.0032895778    | 4.1454527115         | 5.7952182534      | 9.061364284    | 4.4173964886        |
| 2.866845597      | 9.2828033493     | 3.1610281643         | 5.4404546598      | 9.166808311    | 3.9482879855        |
| 7.925100494      | 12.285429593     | 3.4875399291         | 3.1613550396      | 5.713038472    | 2.6660608976        |
| 7.72143478       | 10.1384340363    | 3.0668613147         | 2.8123242256      | 9.88916667     | 5.1877043497        |
| 5.175604218      | 13.7993215743    | 3.8947357167         | 8.6429597064      | 6.432014259    | 4.2965899607        |
| 8.468927003      | 13.1478170687    | 3.5844490453         | 7.7279444133      | 10.12018372    | 4.8682999194        |
| 5.56006046       | 15.9617331525    | 4.5574033845         | 12.166807338      | 5.720438522    | 3.9789250914        |
| 5.51910931       | 15.8112499253    | 4.3105725765         | 6.3476071778      | 10.18800531    | 5.276371636         |
| 0.218359371      | 2.1357112805     | 0.913651974          | 1.2195790677      | 4.86048655     | 1.848536197         |
| 4.959018872      | 9.3330964901     | 2.1272984894         | 8.3630110989      | 7.085874899    | 3.9468156763        |
| 2.736461321      | 8.3405981578     | 2.8483982122         | 4.6810024461      | 9.524260512    | 6.8533887239        |
| 8.06227284       | 17.8818210093    | 5.6650489557         | 8.6363502692      | 9.802270491    | 7.4750769117        |
| 1.765430557      | 7.6070573945     | 2.800475532          | 4.9041569694      | 8.924977394    | 3.8255623148        |
| 5.545061518      | 12.0804044609    | 3.8493019721         | 3.5298254717      | 7.933106966    | 5.1679669826        |
| 6.725914799      | 16.7628285613    | 5.27996014           | 7.2126381052      | 9.543787446    | 7.5102470793        |
| 2.183327545      | 5.3911488521     | 1.9393762795         | 2.0546975944      | 6.092096661    | 3.8787525593        |
| 7.202249354      | 12.7349279684    | 3.6571477019         | 7.660218589       | 7.866903207    | 3.9996827201        |
| 6.85453859       | 10.2972811817    | 2.872934094          | 6.302211758       | 8.056749759    | 3.2811272905        |
| 2.968250514      | 9.2031955414     | 3.5278801461         | 5.4093986249      | 7.769167572    | 3.8250224498        |
| 4.187569061      | 9.4068928946     | 2.9459200517         | 6.2421871475      | 9.566498385    | 4.8412679481        |
| 2.793375963      | 7.4212729355     | 2.4481070867         | 6.9242924881      | 7.740143516    | 4.9817984895        |
| 7.566430475      | 12.8657906651    | 3.5895464051         | 8.3907603419      | 5.759040748    | 3.9828511098        |
| 9.361381058      | 13.4297059453    | 3.9014826318         | 8.3148436992      | 5.63026582     | 4.3289660241        |
| 9.287986764      | 10.9284084954    | 3.6680451858         | 7.551054228       | 7.231867223    | 3.3636122659        |
| 8.388439308      | 12.934894025     | 3.6719073635         | 8.1956762518      | 8.576161257    | 5.1036509463        |

|             |               |              |               |             |              |
|-------------|---------------|--------------|---------------|-------------|--------------|
| 3.949919004 | 10.2548891225 | 2.6541317518 | 9.0834476977  | 10.06192776 | 6.7073365277 |
| 9.831741393 | 13.7629573803 | 3.8177393389 | 9.0278676644  | 7.484285159 | 5.0375372586 |
| 2.28583437  | 7.2368183294  | 2.292659685  | 4.6654693408  | 6.969425463 | 5.1766623534 |
| 10.87835155 | 16.8229150589 | 5.2988862008 | 9.4962361431  | 9.072896817 | 6.5994958178 |
| 6.160867448 | 10.4027654779 | 3.4515120823 | 7.838414513   | 7.196425563 | 3.9419109932 |
| 3.927131299 | 12.3725105737 | 3.699677978  | 12.5887782481 | 8.560089598 | 5.7056834289 |
| 6.814452977 | 13.8642151717 | 4.392251642  | 18.1885762441 | 9.431313707 | 6.356770684  |
| 5.529129357 | 14.0177991078 | 3.7996186138 | 6.1016014549  | 8.297030758 | 5.2811591399 |
| 3.872472285 | 10.271838907  | 2.9159296431 | 7.1385080236  | 8.277903485 | 4.9609711822 |
| 7.475533678 | 12.862359457  | 4.3547304105 | 9.3345689809  | 10.34429768 | 5.2997222106 |
| 4.755003216 | 14.2994221707 | 3.9437049269 | 4.8833965833  | 9.000428188 | 6.7484286362 |
| 4.258635423 | 12.9214022227 | 3.8415558645 | 4.8540559366  | 9.091847246 | 6.0106627177 |
| 6.821769207 | 10.3321464541 | 3.5798556784 | 6.8958804333  | 8.855837174 | 7.92128651   |
| 4.684427691 | 13.5519778825 | 4.2440201917 | 12.828360116  | 10.66873154 | 5.2099331226 |
| 3.357638635 | 7.5915015564  | 2.5627959295 | 4.7274163731  | 7.426522894 | 2.8109385933 |
| 4.443673153 | 9.0937256044  | 2.9482757657 | 7.6468812623  | 8.876548539 | 6.2111976299 |
| 10.96000365 | 14.8708647668 | 4.3956706854 | 9.4769093629  | 7.239460129 | 4.6035600748 |
| 7.635519138 | 13.7722424401 | 4.4138111727 | 3.268642462   | 10.72166966 | 6.2420716222 |
| 10.77690819 | 15.804507463  | 5.3663116312 | 9.5616803068  | 7.4830252   | 5.2135431558 |
| 4.470711959 | 9.2807887344  | 2.9232652715 | 11.4921812959 | 8.449688024 | 4.3547223936 |
| 10.05808779 | 16.0830656633 | 4.2109250364 | 6.7231493238  | 9.355094728 | 5.4294417133 |
| 7.621158837 | 16.9396674194 | 4.7810703865 | 7.1222528041  | 9.886128052 | 6.6452968404 |

| ranked host lectin | log host ca | variability index | Mahal. Distances | Ranked Mahal. Distances | heat map score |
|--------------------|-------------|-------------------|------------------|-------------------------|----------------|
| 62                 | 6.783346199 | 0.7489831084      | 4.204694987      | 50                      | 0              |
| 6                  | 8.241589007 | 0.3510200126      | 2.4958051895     | 13                      | 0              |
| 19                 | 7.039376564 | 0.4257465658      | 2.9291404612     | 27                      | 0              |
| 37                 | 8.487956795 | 2.009474602       | 13.1584717069    | 68                      | 1              |
| 68                 | 9.848123888 | 1.1084186081      | 5.612428635      | 57                      | 1              |
| 67                 | 8.067109082 | 1.3377623983      | 6.9358866858     | 61                      | 2              |
| 32                 | 9.964695908 | 0.5312629147      | 2.9993109677     | 30                      | 0              |
| 15                 | 9.613957065 | 0.4436087187      | 2.5551129062     | 14                      | 0              |
| 30                 | 9.860168778 | 0.7727146637      | 2.7714240881     | 19                      | 0              |
| 58                 | 8.360734355 | 0.6159694985      | 3.1960696115     | 33                      | 0              |
| 56                 | 9.837176139 | 0.9691930918      | 2.8631037669     | 23                      | 1              |
| 59                 | 7.973338548 | 0.5320806045      | 2.884911916      | 24                      | 0              |
| 51                 | 8.006643426 | 0.5366676178      | 3.2014844542     | 34                      | 0              |
| 60                 | 8.313935223 | 1.2463197253      | 8.0452565164     | 65                      | 1              |
| 7                  | 10.34883643 | 0.810873089       | 3.358815865      | 37                      | 0              |
| 12                 | 8.309860658 | 1.0686562099      | 6.2958050313     | 60                      | 1              |
| 39                 | 9.79616286  | 0.6373083613      | 2.2589930455     | 6                       | 0              |
| 50                 | 8.808888343 | 0.7057454554      | 3.4052058411     | 38                      | 0              |
| 45                 | 9.324299499 | 0.5206636644      | 2.0187670233     | 3                       | 0              |
| 40                 | 7.104744814 | 0.5216033483      | 2.9129921407     | 25                      | 0              |
| 13                 | 10.34548407 | 1.040385924       | 3.4958105677     | 40                      | 1              |
| 69                 | 10.04556308 | 1.2921453073      | 5.3933696618     | 56                      | 2              |
| 49                 | 7.340048786 | 0.5339206195      | 3.1718387429     | 32                      | 0              |
| 57                 | 7.43394036  | 0.7145761539      | 2.9543974262     | 28                      | 0              |
| 2                  | 7.376591705 | 0.3946573149      | 2.3571613114     | 10                      | 0              |
| 23                 | 8.040774189 | 0.7137075672      | 3.3059949258     | 36                      | 0              |
| 65                 | 10.0363796  | 0.9339792319      | 3.6447796524     | 44                      | 1              |
| 34                 | 9.265302199 | 0.4776825801      | 2.5855696347     | 16                      | 0              |
| 17                 | 8.05403403  | 0.9228673478      | 6.0679582699     | 58                      | 0              |
| 48                 | 9.610382656 | 0.4791955476      | 4.4498273746     | 51                      | 0              |
| 1                  | 5.276374859 | 0.3402626403      | 2.607466062      | 17                      | 0              |
| 4                  | 8.93426738  | 0.3510026195      | 2.2400528116     | 5                       | 0              |
| 11                 | 8.530749553 | 0.8170555301      | 4.7085664574     | 55                      | 1              |
| 31                 | 8.99359878  | 1.816007172       | 9.4398220379     | 67                      | 4              |
| 5                  | 6.429647544 | 0.3647539516      | 2.7986934318     | 22                      | 0              |
| 28                 | 9.504240575 | 0.3115292587      | 2.2973346813     | 7                       | 0              |
| 61                 | 6.932933067 | 1.562220535       | 7.0764681827     | 63                      | 3              |
| 10                 | 8.287062733 | 0.2781201514      | 2.7960357877     | 21                      | 0              |
| 20                 | 8.698679824 | 0.6382327962      | 3.2164360019     | 35                      | 0              |
| 38                 | 9.142680342 | 0.7685896797      | 2.9827800171     | 29                      | 0              |
| 66                 | 7.468803794 | 0.9462875729      | 4.0378055209     | 48                      | 1              |
| 54                 | 9.196819889 | 0.6730998164      | 1.9802686903     | 2                       | 0              |
| 43                 | 10.48962733 | 1.0529336077      | 4.0204537334     | 47                      | 1              |
| 63                 | 10.26449742 | 1.2075737572      | 4.1805582996     | 49                      | 1              |
| 3                  | 7.016560181 | 0.5263542358      | 2.3474270703     | 9                       | 0              |
| 21                 | 9.126469516 | 0.5290147897      | 2.7716621177     | 20                      | 0              |
| 44                 | 9.962455619 | 0.3858915851      | 2.1962989357     | 4                       | 0              |

|    |             |              |               |    |   |
|----|-------------|--------------|---------------|----|---|
| 16 | 9.715354173 | 0.7395357414 | 3.5884810603  | 42 | 0 |
| 18 | 7.830858749 | 0.4511354513 | 2.9208629169  | 26 | 0 |
| 27 | 9.210601347 | 0.4708982917 | 1.9253910018  | 1  | 0 |
| 26 | 7.89454661  | 1.283592902  | 6.9523930085  | 62 | 1 |
| 25 | 9.322076916 | 0.361365425  | 2.3207199419  | 8  | 0 |
| 8  | 8.652509223 | 0.6329777397 | 4.487938279   | 53 | 0 |
| 35 | 10.26309032 | 2.5110602179 | 20.2099283267 | 70 | 1 |
| 41 | 9.267436811 | 0.2614862447 | 2.4166927046  | 12 | 0 |
| 24 | 9.41004388  | 0.5672215031 | 2.5680064834  | 15 | 0 |
| 29 | 9.616493142 | 0.5236751391 | 3.7493384839  | 45 | 0 |
| 52 | 7.960707417 | 0.8903792658 | 4.4793742653  | 52 | 0 |
| 64 | 6.919986081 | 0.8255711826 | 3.0762479701  | 31 | 0 |
| 47 | 10.51939041 | 1.5812544474 | 8.6440942265  | 66 | 2 |
| 55 | 7.826828096 | 0.8264226639 | 6.2347141947  | 59 | 0 |
| 14 | 8.454691212 | 0.4083776369 | 2.4043290317  | 11 | 0 |
| 42 | 9.939374216 | 0.8537439154 | 2.674156435   | 18 | 0 |
| 36 | 6.93909635  | 0.7514082172 | 3.53907489    | 41 | 0 |
| 46 | 8.665333021 | 0.5163792467 | 3.4429364354  | 39 | 0 |
| 9  | 7.436815388 | 2.4280010666 | 18.7181379807 | 69 | 2 |
| 22 | 9.235254828 | 0.6272246723 | 3.6164640916  | 43 | 0 |
| 53 | 9.216465291 | 0.7370828646 | 4.6117698579  | 54 | 0 |
| 33 | 10.8565341  | 1.4728264591 | 7.9289994593  | 64 | 3 |

| outlier? | Ranked Prin1 | Dimension 1  | Dimension 2  | PCO1-PRIMER (28%) | PCO2-PRIMER (17%) | MDS axis 1   |
|----------|--------------|--------------|--------------|-------------------|-------------------|--------------|
| no       | 60           | 0.4624326579 | 0.2534582278 | 0.6568933219      | 0.3610181494      | 2.1151150636 |
| no       | 12           | 0.0396121078 | -0.939975476 | -1.3711149301     | 2.2022448495      | -1.157627117 |
| no       | 44           | 0.3072115697 | -0.365315182 | 0.0307275134      | 1.5453813731      | 0.4390349345 |
| yes      | 51           | 0.5309044015 | 2.0653150357 | 0.8649729346      | -0.7653296156     | 3.0830903232 |
| no       | 50           | -0.326830593 | 1.2731515049 | 0.6027951244      | -3.2018863702     | -0.200752755 |
| yes      | 34           | 0.2666669136 | 1.2331052039 | 0.1310785153      | -0.6069995181     | 1.1689745964 |
| no       | 20           | -0.520437263 | -0.12421407  | -0.9266786585     | -0.496411989      | -1.844576301 |
| no       | 27           | -0.2324222   | -0.390258507 | -1.3304585019     | 0.5092367461      | -0.550215907 |
| no       | 2            | -0.781627698 | -0.148887823 | -1.8667990636     | -0.8027617351     | -2.926187931 |
| no       | 52           | 0.3207890589 | 0.1394543814 | 0.422800738       | 0.4162219861      | 0.9865757006 |
| no       | 3            | -0.951422714 | 0.1598667958 | -1.7489094207     | -1.7435589951     | -3.398489065 |
| no       | 36           | 0.1278156719 | 0.0989653599 | -0.1532546736     | 0.2385180459      | 0.2373830013 |
| no       | 47           | -0.007301803 | 0.1900604351 | -0.045224257      | -0.1910592225     | 0.4237818027 |
| yes      | 66           | 1.2138501992 | 0.5186851342 | 3.4438850393      | 0.1454432177      | 4.6553287822 |
| no       | 14           | -0.711079592 | -0.688060818 | -1.0682399769     | -0.1903246606     | -3.132088481 |
| no       | 30           | 0.2723211728 | 0.8547226465 | -0.2887598227     | 0.2227625815      | 1.0174242536 |
| no       | 10           | -0.6292286   | -0.16624554  | -1.2840123374     | -0.5629037232     | -2.376217732 |
| no       | 17           | -0.241282461 | 0.3283295793 | -0.7208918203     | -0.2525448122     | -1.499511213 |
| no       | 6            | -0.44187498  | -0.165538573 | -1.5659807508     | -0.170127431      | -1.922229371 |
| no       | 49           | 0.3667458505 | -0.343328475 | -0.1802592604     | 1.3328824242      | 1.2911146576 |
| no       | 13           | -1.118054348 | -0.106769459 | -1.9150633071     | -1.2448555116     | -3.105828584 |
| yes      | 53           | -0.845304819 | 1.2309718819 | 0.3419011841      | -3.4186452638     | -1.098929858 |
| no       | 46           | 0.2351229957 | 0.0691963009 | 0.308675182       | 0.5490448632      | 0.4439823437 |
| no       | 18           | -0.21159509  | -0.746491204 | -0.7890023274     | 0.6656939274      | -1.865142242 |
| no       | 38           | 0.2662797043 | -0.632493941 | -0.623692149      | 1.9960576971      | 0.7670300587 |
| no       | 22           | -0.456213633 | -0.681677628 | -1.3124326735     | 0.5259209916      | -1.983661817 |
| no       | 32           | -0.758134891 | 0.668119333  | -0.6191791523     | -2.3532676227     | -1.632880032 |
| no       | 37           | -0.264154818 | 0.0453018442 | -0.7372263055     | -0.3747567944     | -0.244459024 |
| no       | 61           | 0.875368736  | -0.30248493  | 1.375991509       | 1.4504999801      | 2.6439732128 |
| no       | 54           | 0.0399208182 | 0.4052527872 | 0.598378326       | -0.9705919652     | 0.5123699139 |
| no       | 4            | -0.091198297 | -0.937915112 | -1.7790668365     | 2.0349561115      | -1.720447531 |
| no       | 21           | 0.0396662187 | -0.650955266 | -1.1603905453     | 1.5222764241      | -0.630978274 |
| no       | 19           | -0.743948804 | -0.497860501 | -0.7075490557     | -0.1917395488     | -2.854106218 |
| yes      | 69           | 1.8564709801 | 1.0396186884 | 6.144347811       | -0.5727978936     | 6.7444419238 |
| no       | 23           | 0.2406301917 | -0.821377615 | -0.7903086406     | 2.2800832419      | -0.600973535 |
| no       | 39           | 0.1105420985 | -0.402667418 | -0.2013499127     | 0.9061599198      | -0.079884285 |
| yes      | 68           | 1.4007839127 | 1.0524484301 | 4.8270821065      | -0.9218343903     | 5.0883329794 |
| no       | 11           | 0.1142648961 | -0.931935877 | -1.3061897673     | 2.2444320801      | -1.058977475 |
| no       | 29           | -0.356913755 | -0.005014337 | -1.0332055858     | -0.0272316051     | -0.790762278 |
| no       | 25           | -0.28651924  | -0.500752648 | -1.2406877069     | 0.2149003939      | -0.642813954 |
| no       | 26           | -0.454162112 | 0.6090284489 | -0.584198121      | -0.7581557771     | -1.401362163 |
| no       | 8            | -0.566475886 | 0.1112418237 | -1.5613844464     | -0.8345568472     | -2.061058892 |
| no       | 1            | -1.107927724 | -0.370646953 | -2.0708920109     | -1.338483667      | -4.048869009 |
| no       | 33           | -1.069843788 | 0.7618308735 | -1.0137122445     | -2.5734271928     | -2.276152195 |
| no       | 56           | 0.4634753307 | -0.387718275 | 0.2345916004      | 1.7272291264      | 1.8389550619 |
| no       | 45           | 0.0801214943 | -0.334173085 | -0.6375215903     | 0.8847321101      | 1.2769531502 |
| no       | 43           | -0.207564073 | -0.040467603 | -0.4744468238     | -0.5197156663     | -0.16814011  |

|     |    |              |              |               |               |              |
|-----|----|--------------|--------------|---------------|---------------|--------------|
| no  | 24 | -0.708582449 | -0.38973521  | -0.6859061795 | -0.4714033976 | -2.658393067 |
| no  | 57 | 0.2875030881 | -0.222032968 | 0.1957194763  | 1.0147626292  | 1.856191374  |
| no  | 5  | -0.434959255 | -0.370161158 | -1.6983677157 | 0.2595542601  | -2.009326079 |
| yes | 67 | 1.3505779321 | 0.1650272523 | 3.5971118853  | 0.6436237554  | 5.203749706  |
| no  | 31 | 0.1519627166 | -0.665745204 | -0.7029662523 | 1.6404888135  | -0.210123307 |
| no  | 40 | 0.4423201349 | -0.534629147 | 0.1796402634  | 1.1431656949  | 0.1345801831 |
| yes | 64 | 2.0184842237 | -1.869412756 | 2.9880395647  | 0.506725622   | 4.6536756523 |
| no  | 41 | 0.0259798195 | -0.146173866 | -0.0981180227 | 0.3185049875  | -0.058778147 |
| no  | 15 | -0.268910363 | -0.309052968 | -1.2089029548 | 0.1760521285  | -1.268434301 |
| no  | 55 | 0.4011940766 | -0.067871226 | 0.5561625532  | 0.3272331922  | 1.3394398749 |
| no  | 48 | -0.23120743  | 0.7348365452 | 0.602135605   | -1.2690278715 | -0.391083854 |
| no  | 35 | -0.287415021 | 0.5323663767 | -0.058191187  | -0.9265701969 | -0.906001486 |
| yes | 42 | -1.768547344 | 0.2901341492 | 0.3638104866  | -2.9219756815 | -5.01095498  |
| no  | 59 | 0.6891320242 | 0.4523621809 | 1.6496890831  | 0.1640359162  | 1.7799233209 |
| no  | 9  | -0.120652131 | -0.583814965 | -1.6238145827 | 1.129440951   | -1.173010831 |
| no  | 7  | -0.896849232 | -0.044121687 | -1.5171359125 | -1.4979474324 | -3.124326184 |
| no  | 63 | 0.7023755959 | -0.038130046 | 1.3248420744  | 0.9284808651  | 3.3060159061 |
| no  | 58 | 0.1478757214 | 0.4923228918 | 0.9409970566  | -0.8505363549 | 1.0831818328 |
| yes | 70 | 2.5468026179 | 0.281919393  | 6.3861361566  | 2.2616679293  | 8.5131513526 |
| no  | 28 | 0.3528295618 | -0.826474121 | -0.5537752413 | 1.9472039629  | -0.139068041 |
| no  | 62 | 0.424691136  | 0.5330194714 | 1.2068737592  | -0.7345465615 | 2.8122985402 |
| yes | 65 | -0.533966129 | 1.7499083547 | 2.135880299   | -2.8725172695 | 1.1764745313 |



| <b>MDS axis 2</b> | <b>Prin1</b> | <b>Prin2</b> |
|-------------------|--------------|--------------|
| 0.4741432781      | 1.122657712  | -0.481777133 |
| -2.989200275      | -1.495180085 | -2.223521491 |
| -1.499121699      | -0.027866242 | -1.503769379 |
| 5.8403055814      | 0.4081812464 | 0.5632193447 |
| 4.1589594603      | 0.3688145162 | 2.9305184515 |
| 3.6163313363      | -0.413083233 | 0.2970535488 |
| 0.0117650547      | -1.152333226 | 0.5368037963 |
| -1.000656697      | -0.80192635  | -0.507669242 |
| 0.1265202621      | -2.109350817 | 0.8634758648 |
| 0.1888335128      | 0.4204764686 | -0.492301824 |
| 0.9624624083      | -2.077636034 | 1.7121951917 |
| 0.0676105871      | -0.262386151 | -0.328707104 |
| 0.7914891729      | 0.1780502938 | 0.1957986311 |
| 1.0941524575      | 3.9691385697 | -0.032624512 |
| -1.169093317      | -1.36522316  | 0.2307210962 |
| -3.393101767      | -0.6585459   | -0.290055672 |
| -0.145369436      | -1.609345864 | 0.5307219303 |
| 0.8426521051      | -1.198575289 | 0.1042459494 |
| -0.234637817      | -1.78624415  | 0.1606612164 |
| -1.409586205      | 0.3483626564 | -1.337285253 |
| 1.7422712902      | -1.476593097 | 1.3338443635 |
| 4.727991589       | 0.5878121473 | 3.3238166863 |
| -0.114229787      | 0.049334667  | -0.563103875 |
| -2.07922185       | -1.180537826 | -0.75752963  |
| -2.068209263      | -0.200819302 | -1.991068962 |
| -1.592700992      | -1.109960141 | -0.571979071 |
| 2.9031649999      | -0.547825491 | 2.3651414525 |
| 0.7406856978      | -0.254255842 | 0.3875141892 |
| -1.741643216      | 1.4921666242 | -1.257758644 |
| 1.5226203709      | 0.6575840006 | 1.0202405023 |
| -2.93623991       | -2.04732264  | -2.029017413 |
| -2.152238067      | -1.15076912  | -1.50261966  |
| -1.461892317      | -1.162085456 | 0.1532344865 |
| 2.3212214792      | 6.002572582  | 0.758587869  |
| -3.089937039      | -1.076691452 | -2.287525834 |
| -1.351995885      | -0.198848568 | -0.881136029 |
| 2.7006525631      | 4.4733123759 | 0.9023043194 |
| -3.200429132      | -1.535762969 | -2.266107402 |
| 0.4803713718      | -0.691757655 | 0.1154163994 |
| -0.339136344      | -0.897886479 | -0.200024705 |
| 2.20593369        | -0.875508881 | 0.6746224723 |
| 0.6380316083      | -1.753969781 | 0.7715521891 |
| -0.03441938       | -2.363585539 | 1.3790537073 |
| 3.7243808346      | -0.545421677 | 2.5922366233 |
| -1.516919865      | 0.8905724259 | -1.707493532 |
| -1.102977622      | 0.0470137681 | -0.876854673 |
| 0.4462555764      | -0.038615081 | 0.5232263344 |

-0.715020867 -1.057986078 0.4476387253  
-0.870809751 0.8997977344 -0.995661902  
-0.889001235 -1.958064241 -0.234186593  
-0.185802225 4.3539912559 -0.571733364  
-2.162892596 -0.612158295 -1.638603811  
-2.181705207 -0.160765967 -1.051855825  
-7.154738699 2.3220666378 -0.217606359  
-0.546644254 -0.073704448 -0.282749193  
-0.906202092 -1.273885396 -0.129036095  
-0.396756053 0.7701383056 -0.317576717  
2.4896881532 0.2321603509 1.2451510875  
1.8673334649 -0.405169938 0.8453515371  
2.875519314 -0.040107897 2.801407738  
1.6311965461 1.1158069637 -0.15849827  
-1.876569695 -1.69466533 -1.098874083  
0.5142135445 -1.776545058 1.5066887241  
-0.557884299 2.2808187341 -0.89376281  
1.3549249137 1.0433509167 0.766489706  
-0.980766458 6.5497426567 -2.049056888  
-3.016004669 -0.72543283 -1.932183929  
1.2513333786 2.0469190829 0.7164359878  
5.9659256468 2.4702239364 3.0700797327



New Image(Char To Blob( "81570672eJycu3k8m2nbP5xu01VNq8u0iqdFtbFN1dKqZTraIqqmiFjjVvuaEkpsmU47IE4ZIVGUtA

| Canon[1]     | Canon[2]     | Canon[3]     | DModX       | Lin[no]      | Prob[no]     | Prob[yes]      |
|--------------|--------------|--------------|-------------|--------------|--------------|----------------|
| -2.537097232 | -0.413935195 | 0.9764744634 | 5952.211312 | 66.050642418 |              | 1 2.063338E-29 |
| 1.0910349143 | -1.019512035 | -1.677512225 | 2852.899727 | 19.202894723 | 0.999999995  | 4.573922E-09   |
| -0.287504195 | 0.1866083892 | 0.8215057935 | 3184.165794 | 18.771741555 | 0.999999993  | 0.000000007    |
| 0.3143110751 | -2.244887832 | 1.5311628252 | 62381.35769 | -59.40571798 | 1.586443E-26 | 1              |
| 0.4702997421 | 1.4668393208 | 0.2879241799 | 14647.56136 | 18.734880983 | 0.999999993  | 7.303728E-09   |
| -0.35763053  | -1.866964223 | 2.1473341447 | 32274.35577 | -75.8447061  | 1.150966E-33 | 1              |
| -0.763797961 | 0.3914328171 | -1.317312308 | 4583.298816 | 18.670154887 | 0.999999992  | 7.792104E-09   |
| -0.913349664 | 0.3174243513 | -2.223025276 | 5205.109484 | 57.19441823  | 1            | 1.448037E-25   |
| -1.701907976 | -0.046784002 | -1.257550853 | 4369.328712 | 69.105570141 | 1            | 9.723715E-31   |
| -1.426237851 | 0.709472785  | 0.6541694613 | 6275.492027 | 55.500660083 | 1            | 7.877158E-25   |
| -2.036308256 | 0.7146256573 | -0.600651405 | 6630.347908 | 55.500660083 | 1            | 7.877158E-25   |
| -0.417876011 | 1.0193283867 | 1.7439510712 | 3971.388153 | 16.97639674  | 0.999999958  | 4.238816E-08   |
| -1.20028971  | -0.399925218 | 0.4946165886 | 7162.404116 | 16.96173314  | 0.999999957  | 0.000000043    |
| -0.458921648 | 0.4537835156 | -0.037079913 | 12804.3884  | -16.19734037 | 9.238137E-08 | 0.999999908    |
| 1.0989713209 | -1.379966112 | -0.801573065 | 6525.162721 | 17.753489232 | 0.999999981  | 1.948757E-08   |
| 0.4426730667 | -2.302190283 | 0.2338165727 | 26732.18438 | 16.96173314  | 0.999999957  | 0.000000043    |
| -0.188840623 | -1.697827106 | -0.540039192 | 6372.296348 | 55.485996483 | 1            | 7.993517E-25   |
| -0.233941885 | -1.315821053 | 0.9690933051 | 15687.00356 | 58.13360645  | 1            | 5.661031E-26   |
| -1.563023795 | 1.124200608  | 0.7374649125 | 4724.161425 | 18.98160538  | 0.999999994  | 5.706811E-09   |
| -0.505039087 | 0.6486647202 | -0.452051182 | 6529.793193 | 19.277884008 | 0.999999996  | 4.243472E-09   |
| -1.690351033 | 0.3380088125 | -1.343149754 | 7838.40509  | 1.260389E-09 | 0.5          | 0.5            |
| -2.133039704 | 2.1172218776 | 0.4541401342 | 9657.344279 | 1.260389E-09 | 0.5          | 0.5            |
| -1.028963196 | 0.3896603141 | 1.3721645413 | 5253.374138 | 17.644001431 | 0.999999978  | 2.17424E-08    |
| -1.054839276 | -0.263878982 | 0.1270123608 | 3351.094044 | 39.415528723 | 1            | 7.621727E-18   |
| -0.704500031 | 0.2708921314 | -1.587383113 | 4619.565708 | 19.202894779 | 0.999999995  | 4.573922E-09   |
| 1.014280195  | -1.1259193   | -1.712742945 | 3316.246784 | 17.443427508 | 0.999999973  | 2.657148E-08   |
| -2.721151183 | 1.4825807839 | 0.7494954935 | 8673.473002 | 73.684803326 | 1            | 9.979218E-33   |
| -0.150660137 | -1.232393194 | -0.819874552 | 3644.390519 | 55.758475583 | 1            | 6.086978E-25   |
| -0.540982822 | -0.040318112 | 1.5364185162 | 10883.00688 | 19.183107559 | 0.999999995  | 4.665329E-09   |
| 0.3274233742 | 0.7106867375 | 0.6056224113 | 8873.612335 | 18.286148662 | 0.999999989  | 1.144001E-08   |
| 0.2512355524 | -2.438074481 | 1.8792663846 | 3495.846321 | 40.226710998 | 1            | 3.38658E-18    |
| 0.4550755933 | -0.648098111 | -2.270456432 | 3014.170951 | 17.558506035 | 0.999999976  | 2.368305E-08   |
| 2.7495669735 | 0.2576669683 | -0.24117082  | 3755.082552 |              |              |                |
| 2.8745157868 | 1.6481128257 | 0.7812954853 | 4238.965278 | -17.57646951 | 2.326142E-08 | 0.999999977    |
| 1.1493612301 | -0.785456768 | 0.724519578  | 2020.315193 | 48.70793281  | 1            | 7.021236E-22   |
| 1.1186384052 | 1.8427588517 | 0.1196781715 | 4594.209155 | 4.201226E-10 | 0.5          | 0.5            |
| 3.804776888  | 1.7065367308 | 2.4553766032 | 6070.233789 | 4.201226E-10 | 0.5          | 0.5            |
| 1.4316542268 | 0.482154834  | 0.1686674374 | 2943.49515  | 17.926327743 | 0.999999984  | 1.639437E-08   |
| -1.865222724 | -0.724054976 | -1.051873243 | 5735.414725 | 37.92106714  | 1            | 3.396955E-17   |
| -1.563252928 | 0.0659302068 | -0.795111084 | 4016.268171 | 19.247017161 | 0.999999996  | 4.376497E-09   |
| -2.46691072  | 1.1247390354 | 1.7280171494 | 8429.262846 | 37.92106714  | 1            | 3.396955E-17   |
| -0.954800097 | -0.698278355 | 0.2755863575 | 2583.569413 | 17.683007451 | 0.999999979  | 2.091065E-08   |
| -1.221122799 | -0.35149177  | -0.22741654  | 8078.008694 | 141.47914701 | 1            | 3.600702E-62   |
| -2.960243094 | 1.6048628221 | -0.152964074 | 8758.598372 | 93.212107768 | 1            | 3.299863E-41   |
| 0.6440348934 | -0.115825228 | -1.113966275 | 4198.129113 | 17.683007385 | 0.999999979  | 2.091065E-08   |
| -1.85645815  | -0.26007046  | -0.830094915 | 5039.434635 | 15.903325856 | 0.999999876  | 0.000000124    |
| -0.159524008 | 0.0817792958 | -0.750990335 | 5177.304985 | 49.062399365 | 1            | 4.925731E-22   |

|              |              |              |             |              |              |              |
|--------------|--------------|--------------|-------------|--------------|--------------|--------------|
| 2.67592236   | -1.012477262 | -1.040060622 | 2889.757665 | 20.193759468 | 0.999999998  | 1.698094E-09 |
| 0.7406238333 | -0.52143147  | -1.576678806 | 4363.890474 | 20.193759468 | 0.999999998  | 1.698094E-09 |
| 0.3735882655 | 0.5152894508 | -0.089059236 | 4374.498581 | 19.202894471 | 0.999999995  | 4.573923E-09 |
| 2.8035525877 | -0.050916718 | 0.5813004314 | 6529.090729 | -16.06157556 | 1.058148E-07 | 0.999999894  |
| -0.362448025 | -0.277259683 | 0.0383990478 | 4080.699387 | 19.641933971 | 0.999999997  | 2.948604E-09 |
| 1.1621658703 | -1.366152634 | 0.209971241  | 6705.771058 | 17.154099135 | 0.999999965  | 3.548701E-08 |
| 0.573411545  | -1.683335696 | 0.1253513879 | 34174.66117 | -16.32002531 | 8.171523E-08 | 0.999999918  |
| 0.8281369445 | 1.0379431289 | -0.114593812 | 6480.766908 | 0.6931471806 | 0.666666667  | 0.333333333  |
| 0.5753896953 | 0.0871163145 | 0.2620377916 | 3632.412731 | 16.549205561 | 0.999999935  | 0.000000065  |
| 0.7307139268 | -0.632026889 | 1.1617342218 | 6474.039634 | 17.440470939 | 0.999999973  | 2.665015E-08 |
| 1.2266823472 | 1.445115661  | -0.810678812 | 7316.104043 | 130.81121233 | 1            | 1.546722E-57 |
| 0.7589491777 | 0.7027108129 | 0.5848924755 | 6281.238596 | 65.843697921 | 1            | 2.537729E-29 |
| 1.8252489128 | 1.3272795479 | -1.583406865 | 11537.58814 | 0.6931471806 | 0.666666667  | 0.333333333  |
| -0.479087753 | -1.483910138 | 0.9631699111 | 11757.23633 | 0.6931471806 | 0.666666667  | 0.333333333  |
| -1.391034615 | -0.754765073 | 0.6218560025 | 3263.285405 | 19.559482303 | 0.999999997  | 3.202025E-09 |
| -0.083556221 | -0.555160304 | -0.216946637 | 4821.405161 | 18.113741176 | 0.999999986  | 1.359259E-08 |
| 0.1601376318 | -0.147578425 | -0.293964455 | 4768.25388  | 19.202894723 | 0.999999995  | 4.573922E-09 |
| 1.684164428  | 1.1945049121 | 0.4566954713 | 9504.116577 | 19.246666621 | 0.999999996  | 4.378032E-09 |
| 0.8437762171 | 0.6140759751 | -1.070202561 | 17622.99545 | -20.66132112 | 1.063904E-09 | 0.999999999  |
| 0.6543442635 | -1.575128111 | 0.4318320798 | 5102.566003 | 17.836343701 | 0.999999982  | 1.793801E-08 |
| 1.164129386  | 1.1349791048 | -0.566070715 | 6647.809904 | 25.083249457 | 1            | 1.27786E-11  |
| 1.9611243082 | 2.2168275117 | 0.1536380183 | 11116.05582 | -19.20289433 | 4.573924E-09 | 0.999999995  |



