| | Raw Data | | Cleaned Data | |
|------|-----------------|-------|-------------------------------|-------|
| Rank | Bi-gram | Count | Bi-gram | Count |
| 1 | of the | 9287 | separation variable | 53 |
| 2 | in the | 6418 | tree amplitude | 53 |
| 3 | on the | 5342 | dark sector | 53 |
| 4 | and the | 5118 | quantum chromodynamics | 53 |
| 5 | field theory | 3592 | constrained system | 53 |
| 6 | in a | 2452 | clifford algebra | 53 |
| 7 | of a | 2111 | cosmological constraint | 53 |
| 8 | for the | 2051 | black-hole information | 53 |
| 9 | gauge theories | 1789 | black ring | 53 |
| 10 | string theory | 1779 | accelerating universe | 53 |
| 11 | field theories | 1468 | electroweak symmetry-breaking | 53 |
| 12 | to the | 1431 | qcd string | 53 |
| 13 | quantum gravity | 1412 | gravitational instanton | 52 |
| 14 | gauge theory | 1350 | discrete torsion | 52 |
| 15 | quantum field | 1242 | electric-magnetic duality | 52 |