|  |  |  |
| --- | --- | --- |
| Element | Idealized | Observed |
| La | 5d16s2 | 5d16s2 |
| Ce | 4f15d16s2 | 4f15d16s2 |
| Pr | 4f25d16s2 | 4f3 6s2 |
| Nd | 4f35d16s2 | 4f4  6s2 |
| Pm | 4f45d16s2 | 4f5  6s2 |
| Sm | 4f55d16s2 | 4f6  6s2 |
| Eu | 4f65d16s2 | 4f7  6s2 |
| Gd | 4f75d16s2 | 4f75d16s2 |
| Tb | 4f85d16s2 | 4f9  6s2 or 4f85d16s2 |
| Dy | 4f95d16s2 | 4f10 6s2 |
| Ho | 4f105d16s2 | 4f11  6s2 |
| Er | 4f115d16s2 | 4f12  6s2 |
| Tm | 4f125d16s2 | 4f13  6s2 |
| Yb | 4f135d16s2 | 4f14  6s2 |
| Lu | 4f145d16s2 | 4f145d16s2 |

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