

# Cyclotomic Root Systems

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We generalize the definition and properties of root systems to complex reflection groups—roots become rank one projective modules over the ring of integers of a number field  $k$ . In the irreducible case, we provide a classification of root systems over the field of definition  $k$  of the reflection representation. In the case of special reflection groups, we generalize as well the definition and properties of bad primes.

*This is joint work with Michel Broué and Ruth Corran.*

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