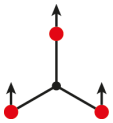
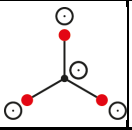
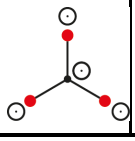
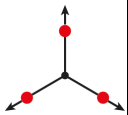
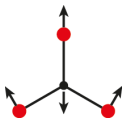
Table 1: *Raman modes for Ca-Mg carbonates. Wavenumber ranges come from the present study. For complete reviews of carbonate modes see Schauble et al. (2006), Valenzano et al. (2007) and Gillet et al. (1993).*

Main notation	Space group notation	Schematic of vibration	Type of vibration	Geometry of vibration	Wavenumber range (cm^{-1})	Comments	Vibration type attribution
T	(E_g)		**External**	In Plane Translation	155-212	Doubly degenerate	(Kastler and Rousset, 1941), (Cabannes and Aynard, 1942), (Couture, 1947)
235 cm^{-1}	(A_g)		**External**	Vertical Translation	230-240	**Only active in dolomite**	(Valenzano et al., 2007)
L	(E_g)		**External**	Libration	282-331	Doubly degenerate	(Kastler and Rousset, 1941), (Cabannes and Aynard, 1942)
335 cm^{-1}	(A_g)		**External**	Vertical Translation	330-340	**Only active in dolomite**	(A_{2g}) mode in magnesite (Valenzano et al., 2007)
v_4	(E_g)		**Internal**	In Plane Bending	711-740	Doubly degenerate	(Kastler and Rousset, 1941), (Cabannes and Aynard, 1942), (Couture, 1947)
v_2	(A_g)		**Internal**	Out of Plane Bending	872-881	**Only active in dolomite**	(A_{2g}) mode in calcite and magnesite (Schauble et al., 2006)
v_1	(A_{1g})		**Internal**	Symmetric Strech	1086-1095	Active as (A_g) mode in dolomite	(Kastler and Rousset, 1941), (Cabannes and Aynard, 1942), (Couture, 1947)
v_3	(E_g)		**Internal**	Anti-Symmectric Strech	1435-1446	Doubly degenerate	(Kastler and Rousset, 1941), (Cabannes and Aynard, 1942), (Couture, 1947)
2 v_2	(A_{2g})		**Internal**	Out of Plane Bending	1748-1763	Overtone of the silent υ2 mode in most Ca-Mg carbonate	(Kastler and Rousset, 1941), (Cabannes and Aynard, 1942), (Couture, 1947)