

Solar Radio Burst Classifications

TYPE	CHARACTERISTICS	DURATION	FREQUENCY RANGE	ASSOCIATED PHENOMENA
I	Short, narrow-bandwidth bursts. Usually occur in large numbers with underlying continuum.	Single burst: ~ 1 second Storm: hours - days	80 – 200 MHz	Active regions, flares, eruptive prominences.
II	Slow frequency drift bursts. Usually accompanied by a (usually stronger intensity) second harmonic.	3- 30 minutes	Fundamental: 20 – 150 MHz	Flares, proton emission, magnetohydrodynamic shockwaves.
III	Fast frequency drift bursts. Can occur singularly, in groups, or storms (often with underlying continuum). Can be accompanied by a second harmonic	Single burst: 1 - 3 seconds Group: 1 -5 minutes Storm: minutes - hours	10 kHz – 1 GHz	Active regions, flares.
IV	Stationary Type IV: Broadband continuum with fine structure	Hours - days	20 MHz – 2 GHz	Flares, proton emission.
	Moving Type IV: Broadband, slow frequency drift, smooth continuum.	30 – 2 hours	20 – 400 MHz	Eruptive prominences, magnetohydrodynamic shockwaves.
	Flare Continua: Broadband, smooth continuum.	3 – 45 minutes	25 – 200 MHz	Flares, proton emission.
V	Smooth, short-lived continuum. Follows some type III bursts. Never occur in isolation.	1-3 minutes	10 - 200 MHz	Same as type III bursts.

NOTES: In nearly all cases, drifting bursts drift from high to low frequencies.
The Frequency Range is the typical range in which the bursts appear – not their bandwidth.
The sub-types of type IV are not universally agreed upon and are thus open to debate.