

Gradi di shock delle meteoriti

Simbolo	Descrizione
S1	Unshocked (sharp extinction of olivine grains), peak shock pressure <4-5 GPa, where 1 GPa = 10,000 bars; min. temp. increase 10°C.
S2	Very weakly shocked (weak undulose extinction of olivine grains), peak shock pressure 5-10 GPa; min. temp. increase 20°C.
S3	Weakly shocked (strong undulose extinction in olivine grains with planar fracture and melt pockets; silicate darkening; irregular FeS in Fe-Ni metal; chromite veinlets and chromite-plagioclase assemblages; metallic Cu grains), peak shock pressure 10-15 GPa; min. temp. increase 100°C.
S4	Moderately shocked (mosaicism in olivine grains; some maskelynitization of feldspar; mobilization of metal and FeS in shock veins; narrow silicate melt veins; metal and sulfide nodules; polycrystalline troilite; melt pockets; mechanical twinning in Ca-rich clinopyroxene; martensite/plesite), peak shock pressure 25-30 GPa; min. temp. increase 300°C.
S5	Strongly shocked (presence of large impact melt clasts), peak shock pressure 45-60 GPa; min. temp. increase 600°C.
S6	Very strongly shocked (localized melt veins and maskelynite present), peak shock pressure 60-75 GPa; min. temp. increase 1500°C (whole rock impact melting occurs at 75-90 GPa; temp. increase >1500°C).
	*shock stage is determined by the highest indicated stage by at least 25% of the indicator grains.

Gradi di alterazione delle meteoriti

Simbolo	Descrizione
W0	No visible oxidation of metal or sulfide but a limonitic staining may be noticeable in transmitted light. Fresh falls are usually of this grade, although some are already W1.
W1	Minor oxide rims around metal and troilite and minor oxide veins.
W2	Moderate oxidation of metal, about 20-60% being affected.
W3	Heavy oxidation of metal and troilite, 60-95% being replaced.
W4	Complete (>95%) oxidation of metal and troilite, but no alteration of silicates.
W5	Beginning alteration of mafic silicates, mainly along cracks.
W6	Massive replacement of silicates by clay minerals and oxides.