

Table A3. Updated CRISM Browse Product Definitions and Descriptions [Viviano-Beck et al. (2014)]

Code	RGB Components	Significance and Interpretation
VNIR Browse Products (<i>parameters derived from VNIR data</i>)		
TRU	R600 R530 R440	From “true color”. An enhanced true color representation of the scene, derived from I/F after correction for atmospheric and photometric effects.
VNA	R770 R770 R770	From “VNIR albedo”. Shows photometrically-corrected I/F at 770 nm and may be used to correlate spectral variations with morphology.
FEM	BD530_2 SH600_2 BDI1000VIS	From “Fe minerals”. Shows information related to Fe minerals and represents the curvature in the visible and near-infrared wavelengths related to iron. FEM is particularly sensitive to ferric and ferrous mineral absorptions, as well as negative slopes due to dust coatings or compacted dust texture. Red colors indicate nanophase or crystalline ferric oxides, green colors are usually a result of textural effects, and blue colors are usually dust-free or more mafic surfaces.
FM2	BD530_2 BD920_2 BDI1000VIS	From “Fe minerals, 2 nd version”. Shows complementary information related to Fe minerals. The FM2 browse product is particularly sensitive to olivine and pyroxene, as well as nanophase ferric oxide and crystalline ferric or ferrous minerals. Red colors indicate the presence of nanophase ferric oxides, green colors suggest coarser-grained Fe minerals (particularly low-Ca pyroxene), and blue colors are often dust-free or more mafic surfaces.
Joined Browse Product (<i>combination of VNIR and IR parameters</i>)		
TAN	R2529 IRA R770	From “tandem”. An enhanced visible to infrared false color representation of the scene.
IR Browse Products (<i>parameters derived from IR data</i>)		
IRA	R1300 R1300 R1300	From “IR albedo”. Shows photometrically-corrected I/F at 1330 nm and may be used to correlate spectral variations with morphology.
FAL	R2529 R1506 R1080	From “false color”. An enhanced infrared false color representation of the scene. The wavelengths chosen highlight differences between key mineral groups. Red/orange colors are usually characteristic of olivine-rich material, blue/green colors often indicate clay, green colors may indicate carbonate, and gray/brown colors often indicate basaltic material.
MAF	OLINDEX3 LCPINDEX2 HCPINDEX2	From “mafic mineralogy”. Shows information related to mafic mineralogy. Olivine and Fe-phyllsilicate share a 1.0-1.7 μm bowl-shaped absorption and will appear red in the MAF browse product. Low- and high-Ca pyroxene display additional \sim 2.0- μm absorptions and appear green/cyan and blue/magenta, respectively.
HYD	SINDEX2 BD2100_2 BD1900_2	From “hydrated mineralogy”. Shows information related to bound water in minerals. Polyhydrated sulfates have strong 1.9 μm and 2.4 μm absorption bands, and thus appear magenta in the HYD browse product. Monohydrated sulfates have a strong 2.1- μm absorption and a weak 2.4- μm absorption band, and thus appear yellow/green in the HYD browse product. Blue colors are indicative of other hydrated minerals (such as clays, hydrated silica, carbonate, or zeolite).
PHY	D2300 D2200 BD1900r2	From “phyllsilicates”. Shows information related to hydroxylated minerals including phyllsilicates. Fe/Mg-OH bearing minerals (e.g., Fe/Mg-phyllsilicates) will appear red, or magenta when hydrated. Al/Si-OH bearing minerals (e.g., Al-phyllsilicates or hydrated silica) will appear green, or cyan when hydrated. Blue colors are indicative of other hydrated minerals (such as sulfates, hydrated silica, carbonate, or water ice).
PFM	BD2355 D2300 BD2290	From “phyllsilicates with Fe and Mg”. Shows information related to cation composition of hydroxylated minerals including Fe/Mg-phyllsilicate. Red/yellow colors indicate the presence of prehnite, chlorite, epidote, or Ca/Fe carbonate, while cyan colors indicate the presence of Fe/Mg-smectites or Mg-carbonate.
PAL	BD2210_2 BD2190 BD2165	From “phyllsilicates with Al”. Shows information related to cation composition of hydroxylated minerals including Al-phyllsilicate and hydrated silica. Red/yellow colors indicate the presence of Al-smectites or hydrated silica, cyan colors may indicate the alunite, and light/white colors indicate the presence of kaolinite group minerals.
HYS	MIN2250 BD2250 BD1900r2	From “hydrated silica”. Shows information related to Si/Al-hydroxylated minerals that can be used to differentiate between hydrated silica and Al-phyllsilicates. Light red/yellow colors indicate the presence of hydrated silica, whereas cyan colors indicate Al-OH minerals. Additionally, jarosite will appear yellow. Blue colors are indicative of other hydrated minerals (such as sulfates, clays, hydrated silica, carbonate, or water ice).
ICE	BD1900_2 BD1500_2 BD1435	From “ices”. Shows information related to water or carbon dioxide frost or ice. CO ₂ frost or ice displays a sharp 1.435- μm absorption and thus appears blue in the ICE browse product. Water ice or frost has a strong 1.5 μm absorption and thus appears green in the ICE browse product. Red colors are indicative of hydrated minerals (such as sulfates, clays, hydrated silica, carbonate, or water ice).
IC2	R3920 BD1500_2 BD1435	From “ices, version 2”. Shows complementary information related to water or carbon dioxide frost or ice. CO ₂ frost or ice displays a sharp 1.435- μm absorption and thus appears blue in the IC2 browse product. Water ice or frost has a strong 1.5- μm absorption and thus appears green in the IC2 browse product. The reflectance at 3920 nm is a proxy for silicates, which are more reflectance than ices at 3.9 μm , so red colors represent ice-free surfaces.
CHL	ISLOPE BD3000 IRR2	From “chloride”. Shows information related to inferred chloride deposits detected from THEMIS data and spatially associated hydrated mineral deposits. Of the THEMIS-based chloride detections studied to date, these surfaces have a relatively positive near-infrared spectral slope and are comparatively desiccated, so chlorides appear blue in the CHL browse product. Yellow/green colors are indicative of hydrated minerals, especially phyllsilicates.
CAR	D2300 BD2500H2 BD1900_2	From “carbonates”. Shows information related to Mg-carbonate minerals. Blueish- or yellowish-white colors indicate Mg-carbonates, while red/magenta colors indicate Fe/Mg-phyllsilicates. Blue colors are indicative of other hydrated minerals (such as sulfates, clays, hydrated silica, or carbonate).
CR2	MIN2295_2480 MIN2345_2537 CINDEX2	From “carbonates, version 2”. Shows information distinguishing carbonate minerals. Red/magenta colors indicate Mg-carbonates, while green/cyan colors indicate Fe/Ca-carbonates.