(a)

2D stress = 0.17

Regions
- Antarctic
- Arctic
- Tibetan Plateau

Habitats
- □ Cryoconite
- ○ Cryoconite water
- ▽ Ice
- △ Snow

NMDS2

NMDS1

(b)

Log transformed
relative abundance

OTU1037 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
OTU433 (Cyanobacteria;Cyanobacteriia;Cyanobacteriia_unclassified)
OTU10331 (Proteobacteria;Gammaproteobacteria;Burkholderiales)
OTU1855 (Bacteroidota;Bacteroidia;Sphingobacteriales)
OTU43616 (Proteobacteria;Gammaproteobacteria;Burkholderiales)
OTU2564 (Bacteroidota;Bacteroidia;Flavobacteriales)
OTU47186 (Proteobacteria;Gammaproteobacteria;Pseudomonadales)
OTU677 (Proteobacteria;Alphaproteobacteria;Sphingomonadales)
OTU1424 (Proteobacteria;Alphaproteobacteria;Sphingomonadales)
OTU2385 (Bacteroidota;Bacteroidia;Bacteroidia_unclassified)
OTU1205 (Proteobacteria;Gammaproteobacteria;Burkholderiales)
OTU13604 (Proteobacteria;Gammaproteobacteria;Pseudomonadales)
OTU37239 (Cyanobacteria;Cyanobacteriia;Cyanobacteriia_unclassified)
OTU1600 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
OTU1019 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)
OTU2432 (Actinobacteriota;Actinobacteria;Micrococcales)
OTU14938 (Cyanobacteria;Cyanobacteriia;Cyanobacteriales)

Cryoconite sediment (Arctic)
Cryoconite sediment (Antarctic)
Cryoconite water (Antarctic)
Snow (Arctic)
Snow (Tibetan Plateau)
Ice (Tibetan Plateau)
Cryoconite sediment (Tibetan Plateau)
Cryoconite water (Tibetan Plateau)