NAME
spam – spectral angle mapper

SYNOPSIS
spam –M maskfile [maskvalue] | –r nf ref(1) ref(2) ... ref(nf) [-a] [-d] [-w] [-v]

DESCRIPTION
spam calculates the angle between any pixel vector and a reference spectrum. This is an intensity independent measure. If –a is specified the dot product rather than the angle is calculated. If –d is specified the length of the vector difference is output as frame 0. –r or –M defining the reference spectrum (or vector) is not optional. If –w is specified the reference spectrum is written to stderr.

Input file must be band-interleaved-by-line (BIL, see bil(1)). Input format must be byte, short, unsigned short, int or float. Output format is float. If more than one frame is written, output is BIL.

OPTIONS
–M maskfile [maskvalue]
  use mean of pixels where maskfile (in byte format) has value maskvalue (defaults to 0) as reference spectrum
–r nf ref(1) ref(2) ...
  specification of reference spectrum where nf is the number of input bands (frames)
–a output dot product instead of angle (the angle is the inverse cosine of the dot product)
–d output length of vector difference as frame 0
–w output reference spectrum to stderr.
–v verbose

SEE ALSO
specang(1), bil(1), discrim(1), disc(1), maf(1)

REFERENCES

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