

VDIF Extended Data Version 0xab: Mark 5B-format data transformed into VDIF by Mark 6

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The Mark 6 VLBI data system transforms each Mark5B-over-Ethernet data frames, on the fly, into VDIF-format data frames.

Each original Mark 5B packet consists of a 16-byte header followed by 10000 bytes of data. The transformation to Mark 5B-over-Ethernet splits the original 10016-byte into two successive Ethernet frames of 5008 bytes each.

The Mark 6 reconstitutes the original 10016-byte Mark 5B data frame and prefaces it by a 16-byte VDIF header. The result is a 10032-byte packet structured as follows:

Bytes 0-15: VDIF header (created from information pulled from the Mark 5B frame header)

Bytes 15-31: Original Mark 5B frame header in the position of the 16-byte VDIF Extended Data field. The Extended Data Version (EDV) automatically becomes the EDV Version 0xab (first byte of the Mark 5B sync word 0xabaddeed).

Bytes 32-10031: 10000 bytes of data.

The Mark 6 then writes these 10016-byte VDIF-format data frames to disk.