

```

protocol ip {          /* declaration of datagram header */
    vershl { ip[0:1] }
    vers   { (vershl & 0xf0) >> 4 }
    tmphl  { (vershl & 0x0f) }
    hlen   { tmphl << 2 }
    totlen { ip[2:2] }
    ident  { ip[4:2] }
    frags  { ip[6:2] }
    ttl    { ip[8:1] }
    proto  { ip[9:1] }
    cksum  { ip[10:2] }
    source { ip[12:4] }
    dest   { ip[16:4] }

    demux {
        ( proto == 6 )      { tcp at hlen }
        ( proto == 17 )    { udp at hlen }
        ( default )        { ipunknown at hlen }

        // note: other protocol types can be added here
    }
}
// end of datagram header declaration

```

Figure 16.1 An example NCL declaration for fields in an IP datagram header with keywords shown in italic. Names that are used, but not declared here, must be declared elsewhere.