By sheer mass of pages, the practitioners of polari-
metric radar techniques tend to overwhelm those em-
ploying simpler techniques involving only reflectiv-
ity (and sometimes Doppler velocity) data. For example,
compare Bringi and Chandrasekar (2001) with Doviak
and Zrnić (1984, 1993), especially before the latter
added polarization sections. Careful analysis has re-
vealed a key factor in this situation: the subscripting
procedures adopted in the notation for polarimetric
quantities. Two basic rules appear to be at work:

1. Never use one subscript when two (or pre-
sumeably even more) will do.

2. Use redundancy freely.

To demonstrate this, consider the quantity known as
differential reflectivity; apart from the unfortunate choice
of \( Z \) as the primary symbol (because differential reflec-
tivity does not have the same dimensions as \( Z \)), already
noted by others, a single subscript would serve quite
nicely: \( Z_d \); for instance. But instead we have \( Z_{dr} \), as dic-
tected by Rule 1; and surely the \( Z \) stands for reflectivity
(what else could it be?) and the subscript \( r \) merely re-
peats that, in accordance with Rule 2. The notation for
differential phase, \( \phi_{dp} \), parallels this example quite
closely; the \( \phi \) indicates phase, the subscript \( d \) conveys
useful information, and the subscript \( p \) is redundant with
the primary symbol.

It appears that the utility of ordinary reflectivity
measurements could be greatly enhanced (or at least
the mass of pages could be increased) by following the
same basic rules. Intensive research has already identi-
ﬁed one highly promising candidate: we usually mea-
ure the equivalent (e) radar reﬂectivity factor (Z) at hori-
zontal (h) linear (l) polarization (p). Slight rearrangement
of the subscripts as a memory aid leads to the very ap-
pealing notation

\[ Z_{helpr} \]

This clearly meets the dictates of Rule 1 (in spades!) but
the redundancy (Rule 2) of \( h \) and \( l \) (\( p \)) is a bit wimpy.
Adding a truly redundant subscript, in the style of the
polarimetric notation, thusly

\[ Z_{helpr} \]

is a possibility. Work continues to try to improve this,
and a team has been assigned to investigate the value
of capitalizing most or all of the subscripts.

Another team is investigating how the LDR has
managed to escape the purview of these rules. The
assistance of the community in these ongoing efforts
would be most welcome.

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**References**

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