



Figure 2. The Polycomb complex composition and localization changes dynamically at *FLC* during different phases of vernalization. (A) Before the onset of cold, which triggers vernalization, the PRC2 core complex is already associated with chromatin over the length of the active *FLC* locus. The exon–intron structure is indicated beneath the chromatin fiber as black bars for each exon. (B) Prolonged cold leads to the accumulation and nucleation of an alternative Polycomb complex containing plant homeodomain (PHD) proteins (VIN3, VRN5) at a specific intragenic site near the beginning of the first intron. (C) In plants returned to warm conditions, the cold-induced VIN3 PHD protein is lost. A modified PHD-PRC2 complex associates across the whole locus, inducing high levels of H3K27me3, which blanket the locus and provide repressive epigenetic stability (maintenance).