entry: %xmx = alloca i32**, align 8%mmx = alloca i32**, align 8 %imx = alloca i32**, align 8 %dmx = alloca i32**, align 8 %0 = bitcast i32*** %xmx to i8* call void @llvm.lifetime.start.p0i8(i64 8, i8* nonnull %0) #8 %1 = bitcast i32*** %mmx to i8* call void @llvm.lifetime.start.p0i8(i64 8, i8* nonnull %1) #8 %2 = bitcast i32*** %imx to i8* call void @llvm.lifetime.start.p0i8(i64 8, i8* nonnull %2) #8 %3 = bitcast i32*** %dmx to i8* call void @llvm.lifetime.start.p0i8(i64 8, i8* nonnull %3) #8 %M1 = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, i64 0, ... i32 20 %4 = load i32, i32* %M1, align 8, !tbaa !3 call void @ResizePlan7Matrix(%struct.dpmatrix_s* noundef %mx, i32 noundef ... %L, i32 noundef %4, i32*** noundef nonnull %xmx, i32*** noundef nonnull %mmx, ... i32*** noundef nonnull %imx, i32*** noundef nonnull %dmx) %5 = load i32**, i32*** %xmx, align 8, !tbaa !10 %6 = load i32*, i32** %5, align 8, !tbaa !10 %arrayidx2 = getelementptr inbounds i32, i32* %6, i64 4 store i32 0, i32* %arrayidx2, align 4, !tbaa !11 %arrayidx4 = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, ... i64 0, i32 33, i64 0, i64 0 %7 = load i32, i32* %arrayidx4, align 8, !tbaa !11 store i32 %7, i32* %6, align 4, !tbaa !11 %arrayidx8 = getelementptr inbounds i32, i32* %6, i64 3 store i32 -987654321, i32* %arrayidx8, align 4, !tbaa !11 %arrayidx10 = getelementptr inbounds i32, i32* %6, i64 2 store i32 -987654321, i32* %arrayidx10, align 4, !tbaa !11 %arrayidx12 = getelementptr inbounds i32, i32* %6, i64 1 store i32 -987654321, i32* %arrayidx12, align 4, !tbaa !11 %8 = load i32, i32* %M1, align 8, !tbaa !3 %cmp.not546 = icmp slt i32 %8, 0br i1 %cmp.not546, label %for.end, label %for.body.lr.ph F for.body.lr.ph: %9 = load i32**, i32*** %dmx, align 8, !tbaa !10 %10 = load i32*, i32** %9, align 8, !tbaa !10 %11 = load i32**, i32*** %imx, align 8, !tbaa !10 %12 = load i32*, i32** %11, align 8, !tbaa !10 %13 = load i32**, i32*** %mmx, align 8, !tbaa !10 %14 = load i32*, i32** %13, align 8, !tbaa !10 br label %for.body for.body: %indvars.iv = phi i64 [0, %for.body.lr.ph], [%indvars.iv.next, %for.body] %arrayidx15 = getelementptr inbounds i32, i32* %10, i64 %indvars.iv store i32 -987654321, i32* %arrayidx15, align 4, !tbaa !11 %arrayidx18 = getelementptr inbounds i32, i32* %12, i64 %indvars.iv store i32 -987654321, i32* %arrayidx18, align 4, !tbaa !11 %arrayidx21 = getelementptr inbounds i32, i32* %14, i64 %indvars.iv store i32 -987654321, i32* %arrayidx21, align 4, !tbaa !11 %indvars.iv.next = add nuw nsw i64 %indvars.iv, 1 %15 = load i32, i32* %M1, align 8, !tbaa !3%16 = sext i 32 % 15 to i 64%cmp.not.not = icmp slt i64 %indvars.iv, %16 br i1 %cmp.not.not, label %for.body, label %for.end, !llvm.loop !12 for.end: %.lcssa = phi i32 [%8, %entry], [%15, %for.body] %tsc = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, i64 0, ... i32 30 %17 = load i32**, i32*** %tsc, align 8, !tbaa !14 %18 = load i32*, i32** %17, align 8, !tbaa !10 %arrayidx25 = getelementptr inbounds i32*, i32** %17, i64 3 %19 = load i32*, i32** %arrayidx25, align 8, !tbaa !10 %arrayidx27 = getelementptr inbounds i32*, i32** %17, i64 5 %20 = load i32*, i32** %arrayidx27, align 8, !tbaa !10 %arrayidx29 = getelementptr inbounds i32*, i32** %17, i64 2 %21 = load i32*, i32** %arrayidx29, align 8, !tbaa !10 %arrayidx31 = getelementptr inbounds i32*, i32** %17, i64 6 %22 = load i32*, i32** %arrayidx31, align 8, !tbaa !10 %arrayidx33 = getelementptr inbounds i32*, i32** %17, i64 1 %23 = load i32*, i32** %arrayidx33, align 8, !tbaa !10 %arrayidx35 = getelementptr inbounds i32*, i32** %17, i64 4 %24 = load i32*, i32** %arrayidx35, align 8, !tbaa !10 %bsc = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, i64 0, ... i32 34 %25 = load i32*, i32** %bsc, align 8, !tbaa !15 %cmp37.not554 = icmp slt i32 %L, 1 br i1 %cmp37.not554, label %for.end351, label %for.body38.lr.ph for.body38.lr.ph: %msc = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, i64 0, ... i32 31 %isc = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, i64 0, ... i32 32 %cmp70.not548 = icmp slt i32 %.lcssa, 1 %arrayidx214 = getelementptr inbounds %struct.plan7_s, %struct.plan7_s* ... %hmm, i64 0, i32 33, i64 0, i64 1 %esc = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* %hmm, i64 0, %arrayidx254 = getelementptr inbounds %struct.plan7_s, %struct.plan7_s* ... %hmm, i64 0, i32 33, i64 3, i64 1 %arrayidx268 = getelementptr inbounds %struct.plan7 s, %struct.plan7 s* ... %hmm, i64 0, i32 33, i64 1, i64 1 %arrayidx302 = getelementptr inbounds %struct.plan7_s, %struct.plan7_s* ... %hmm, i64 0, i32 33, i64 3, i64 0 %arrayidx323 = getelementptr inbounds %struct.plan7_s, %struct.plan7_s* ... %hmm, i64 0, i32 33, i64 2, i64 1 %arrayidx337 = getelementptr inbounds %struct.plan7_s, %struct.plan7_s* ... %hmm, i64 0, i32 33, i64 1, i64 0 %26 = sext i32 %.lcssa to i64 %27 = add i32 %.lcssa, 1%28 = add nuw i32 %L, 1%wide.trip.count574 = zext i32 %28 to i64 %wide.trip.count = zext i32 %27 to i64 br label %for.body38 for.bodv38: %29 = phi i32* [%6, %for.body38.lr.ph], [%.pre, ... %if.end313.for.body38 crit edge] %indvars.iv570 = phi i6 $\overline{4}$ [1, %for.body38.lr.ph], [%indvars.iv.next571, .. %if.end313.for.body38 crit edge] %30 = load i32**, i32*** %mmx, align 8, !tbaa !10 %arrayidx40 = getelementptr inbounds i32*, i32** %30, i64 %indvars.iv570 %31 = load i32*, i32** %arrayidx40, align 8, !tbaa !10 %32 = load i32**, i32*** %dmx, align 8, !tbaa !10 %arrayidx42 = getelementptr inbounds i32*, i32** %32, i64 %indvars.iv570 %33 = load i32*, i32** %arrayidx42, align 8, !tbaa !10 %34 = load i32**, i32*** %imx, align 8, !tbaa !10 %arrayidx44 = getelementptr inbounds i32*, i32** %34, i64 %indvars.iv570 %35 = load i32*, i32** %arrayidx44, align 8, !tbaa !10 %36 = add nsw i64 %indvars.iv570, -1 %arrayidx46 = getelementptr inbounds i32*, i32** %30, i64 %36 %37 = load i32*, i32** %arrayidx46, align 8, !tbaa !10 %arrayidx49 = getelementptr inbounds i32*, i32** %32, i64 %36 %38 = load i32*, i32** %arrayidx49, align 8, !tbaa !10 %arrayidx52 = getelementptr inbounds i32*, i32** %34, i64 %36 %39 = load i32*, i32** %arrayidx52, align 8, !tbaa !10 %40 = load i32, i32* %29, align 4, !tbaa !11 %41 = load i32**, i32*** %msc, align 8, !tbaa !16 %arrayidx58 = getelementptr inbounds i8, i8* %dsq, i64 %indvars.iv570 %42 = load i8, i8* %arrayidx58, align 1, !tbaa !17 %idxprom59 = sext i8 %42 to i64%arrayidx60 = getelementptr inbounds i32*, i32** %41, i64 %idxprom59 %43 = load i32*, i32** %arrayidx60, align 8, !tbaa !10 %44 = load i32**, i32*** %isc, align 8, !tbaa !18 %arrayidx65 = getelementptr inbounds i32*, i32** %44, i64 %idxprom59 %45 = load i32*, i32** %arrayidx65, align 8, !tbaa !10 store i32 -987654321, i32* %31, align 4, !tbaa !11 store i32 -987654321, i32* %33, align 4, !tbaa !11 store i32 -987654321, i32* %35, align 4, !tbaa !11 call void asm sideeffect "nop", "~{dirflag},~{fpsr},~{flags}"() #8, !srcloc br i1 %cmp70.not548, label %for.end204, label %for.body72 for.body72: %indvars.iv561 = phi i64 [%indvars.iv.next562, %for.inc202], [1, ... %for.body38] %46 = add nsw i64 %indvars.iv561, -1 %arrayidx75 = getelementptr inbounds i32, i32* %37, i64 %46 %47 = load i32, i32* %arrayidx75, align 4, !tbaa !11 %arrayidx78 = getelementptr inbounds i32, i32* %18, i64 %46 %48 = load i32, i32* %arrayidx78, align 4, !tbaa !11 %add = add nsw i32 %48, %47 %arrayidx80 = getelementptr inbounds i32, i32* %31, i64 %indvars.iv561 store i32 %add, i32* %arrayidx80, align 4, !tbaa !11 %arrayidx83 = getelementptr inbounds i32, i32* %39, i64 %46 %49 = load i32, i32* %arrayidx83, align 4, !tbaa !11 %arrayidx86 = getelementptr inbounds i32, i32* %19, i64 %46 %50 = load i32, i32* %arrayidx86, align 4, !tbaa !11 %add87 = add nsw i32 %50, %49 %cmp90 = icmp sgt i32 %add87, %add %spec.store.select = select i1 %cmp90, i32 %add87, i32 %add store i32 %spec.store.select, i32* %arrayidx80, align 4 %arrayidx96 = getelementptr inbounds i32, i32* %38, i64 %46 %51 = load i32, i32* %arrayidx96, align 4, !tbaa !11 %arrayidx99 = getelementptr inbounds i32, i32* %20, i64 %46 %52 = load i32, i32* %arrayidx99, align 4, !tbaa !11 %add100 = add nsw i32 %52, %51 %cmp103 = icmp sgt i32 %add100, %spec.store.select %spec.store.select539 = select i1 %cmp103, i32 %add100, i32 ... %spec.store.select store i32 %spec.store.select539, i32* %arrayidx80, align 4 %arrayidx110 = getelementptr inbounds i32, i32* %25, i64 %indvars.iv561 %53 = load i32, i32* %arrayidx110, align 4, !tbaa !11 %add111 = add nsw i32 %53, %40 %cmp114 = icmp sgt i32 %add111, %spec.store.select539 %spec.store.select542 = select i1 %cmp114, i32 %add111, i32 ... %spec.store.select539 store i32 %spec.store.select542, i32* %arrayidx80, align 4 %arrayidx121 = getelementptr inbounds i32, i32* %43, i64 %indvars.iv561 %54 = load i32, i32* %arrayidx121, align 4, !tbaa !11 %add124 = add nsw i32 %spec.store.select542, %54 %55 = icmp sgt i32 %add124, -987654321 %spec.select = select i1 %55, i32 %add124, i32 -987654321 store i32 %spec.select, i32* %arrayidx80, align 4, !tbaa !11 %arrayidx135 = getelementptr inbounds i32, i32* %33, i64 %46 %56 = load i32, i32* %arrayidx135, align 4, !tbaa !11 %arrayidx138 = getelementptr inbounds i32, i32* %22, i64 %46 %57 = load i32, i32* %arrayidx138, align 4, !tbaa !11 %add139 = add nsw i32 %57, %56 %arrayidx141 = getelementptr inbounds i32, i32* %33, i64 %indvars.iv561 store i32 %add139, i32* %arrayidx141, align 4, !tbaa !11 %arrayidx144 = getelementptr inbounds i32, i32* %31, i64 %46 %58 = load i32, i32* %arrayidx144, align 4, !tbaa !11 %arrayidx147 = getelementptr inbounds i32, i32* %21, i64 %46 %59 = load i32, i32* %arrayidx147, align 4, !tbaa !11 %add148 = add nsw i32 %59, %58 %cmp151 = icmp sgt i32 %add148, %add139 %spec.store.select540 = select i1 %cmp151, i32 %add148, i32 %add139 $\%60 = icmp \ sgt \ i32 \ \%spec.store.select540, -987654321$ %spec.store.select543 = select i1 %60, i32 %spec.store.select540, i32 ... -987654321 store i32 %spec.store.select543, i32* %arrayidx141, align 4 %cmp165 = icmp slt i64 %indvars.iv561, %26 br i1 %cmp165, label %if.then167, label %for.inc202 F if.then167: %arrayidx169 = getelementptr inbounds i32, i32* %37, i64 %indvars.iv561 %61 = load i32, i32* %arrayidx169, align 4, !tbaa !11 %arrayidx171 = getelementptr inbounds i32, i32* %23, i64 %indvars.iv561 %62 = load i32, i32* %arrayidx171, align 4, !tbaa !11%add172 = add nsw i32 %62, %61 %arrayidx174 = getelementptr inbounds i32, i32* %35, i64 %indvars.iv561 store i32 %add172, i32* %arrayidx174, align 4, !tbaa !11 %arrayidx176 = getelementptr inbounds i32, i32* %39, i64 %indvars.iv561 %63 = load i32, i32* %arrayidx176, align 4, !tbaa !11 %arrayidx178 = getelementptr inbounds i32, i32* %24, i64 %indvars.iv561 %64 = load i32, i32* %arrayidx178, align 4, !tbaa !11 %add179 = add nsw i32 %64, %63 %cmp182 = icmp sgt i32 %add179, %add172 %spec.store.select536 = select i1 %cmp182, i32 %add179, i32 %add172 store i32 %spec.store.select536, i32* %arrayidx174, align 4 %arrayidx189 = getelementptr inbounds i32, i32* %45, i64 %indvars.iv561 %65 = load i32, i32* %arrayidx189, align 4, !tbaa !11 %add192 = add nsw i32 %spec.store.select536, %65 %66 = icmp sgt i32 %add192, -987654321 %spec.store.select541 = select i1 %66, i32 %add192, i32 -987654321 store i32 %spec.store.select541, i32* %arrayidx174, align 4 br label %for.inc202 for.inc202: %indvars.iv.next562 = add nuw nsw i64 %indvars.iv561, 1 %exitcond.not = icmp eq i64 %indvars.iv.next562, %wide.trip.count br i1 %exitcond.not, label %for.end204, label %for.body72, !llvm.loop !20 for.end204: call void asm sideeffect "nop", "~{dirflag},~{fpsr},~{flags}"() #8, !srcloc %67 = load i32**, i32*** %xmx, align 8, !tbaa !10 %arrayidx206 = getelementptr inbounds i32*, i32** %67, i64 %indvars.iv570 %68 = load i32*, i32** %arrayidx206, align 8, !tbaa !10 %arrayidx207 = getelementptr inbounds i32, i32* %68, i64 4 store i32 -987654321, i32* %arrayidx207, align 4, !tbaa !11 %arrayidx210 = getelementptr inbounds i32*, i32** %67, i64 %36 %69 = load i32*, i32** %arrayidx210, align 8, !tbaa !10 %arrayidx211 = getelementptr inbounds i32, i32* %69, i64 4 %70 = load i32, i32* %arrayidx211, align 4, !tbaa !11 %71 = load i32, i32* %arrayidx214, align 4, !tbaa !11 %add215 = add nsw i32 %71, %70 %cmp216 = icmp sgt i32 %add215, -987654321 %spec.store.select556 = select i1 %cmp216, i32 %add215, i32 -987654321 store i32 %spec.store.select556, i32* %arrayidx207, align 4 %72 = load i32**, i32*** %mmx, align 8, !tbaa !10 %arrayidx224 = getelementptr inbounds i32*, i32** %72, i64 %indvars.iv570 %73 = load i32*, i32** %arrayidx224, align 8, !tbaa !10 %74 = load i32*, i32** %esc, align 8, !tbaa !22 %75 = load i32, i32* %M1, align 8, !tbaa !3 %cmp227.not550 = icmp slt i32 %75, 1 br i1 %cmp227.not550, label %for.end241, label %for.body229.preheader for.body229.preheader: %/6 = add nuw 132 %/5, 1%wide.trip.count568 = zext i32 %76 to i64 %77 = add nsw i64 %wide.trip.count568, -1 %min.iters.check = icmp ult i64 %77, 8 br i1 %min.iters.check, label %for.body229.preheader582, label %vector.ph vector.ph: %n.vec = and i64 %77, -8 %ind.end = or i64 %n.vec, 1 %78 = add nsw i64 %n.vec, -8%79 = lshr exact i64 %78, 3%80 = add nuw nsw i64 %79, 1%xtraiter = and i64 %80, 1 %81 = icmp eq i64 %78, 0br i1 %81, label %middle.block.unr-lcssa, label %vector.ph.new vector.ph.new: %unroll iter = and i64 %80, 4611686018427387902 br label wector.body vector.body: %index = phi i64 [0, %vector.ph.new], [%index.next.1, %vector.body] %vec.phi = phi $<4 \times i32>$ [<i32-987654321, i32-987654321, i32-987654321, ... i32 -987654321>, %vector.ph.new], [%108, %vector.body] %vec.phi578 = phi $<4 \times i32 > [<i32 -987654321, i32 -987654321, i32]$... -987654321, i32 -987654321>, %vector.ph.new], [%109, %vector.body] %niter = phi i64 [0, %vector.ph.new], [%niter.next.1, %vector.body] %offset.idx = or i64 %index, 1 %82 = getelementptr inbounds i32, i32* %73, i64 %offset.idx %83 = bitcast i32*%82 to <4 x i32>*%wide.load = load <4 x i32>, <4 x i32>* %83, align 4, !tbaa !11 %84 = getelementptr inbounds i32, i32* %82, i64 4 %85 = bitcast i32*%84 to <4 x i32>*%wide.load579 = load $<4 \times i32>$, $<4 \times i32>* %85$, align 4, !tbaa !11 %86 = getelementptr inbounds i32, i32* %74, i64 %offset.idx %87 = bitcast i32*%86 to <4 x i32>*%wide.load580 = load <4 x i32>, <4 x i32>* %87, align 4, !tbaa !11 %88 = getelementptr inbounds i32, i32* %86, i64 4 %89 = bitcast i 32* %88 to <4 x i 32>*%wide.load581 = load <4 x i32>, <4 x i32>* %89, align 4, !tbaa !11 %90 = add nsw <4 x i32> %wide.load580, %wide.load %91 = add nsw <4 x i32> %wide.load581, %wide.load579 $\%92 = icmp \, sgt < 4 \, x \, i32 > \%90, \, \%vec.phi$ $\%93 = icmp \, sgt < 4 \, x \, i32 > \%91, \, \%vec.phi578$ $\%94 = \text{select} < 4 \times i1 > \%92, < 4 \times i32 > \%90, < 4 \times i32 > \%\text{vec.phi}$ $\%95 = \text{select} < 4 \times i1 > \%93, < 4 \times i32 > \%91, < 4 \times i32 > \%\text{vec.phi} 578$ %offset.idx.1 = or i64 %index, 9 %96 = getelementptr inbounds i32, i32* %73, i64 %offset.idx.1 %97 = bitcast i 32*%96 to <4 x i 32>*%wide.load.1 = load $<4 \times i32>$, $<4 \times i32>* %97$, align 4, !tbaa !11 %98 = getelementptr inbounds i32, i32* %96, i64 4 %99 = bitcast i 32* %98 to <4 x i 32>*%wide.load579.1 = load $<4 \times i32>$, $<4 \times i32>* %99$, align 4, !tbaa !11 %100 = getelementptr inbounds i32, i32* %74, i64 %offset.idx.1 %101 = bitcast i32* %100 to <4 x i32>*%wide.load580.1 = load $<4 \times i32>$, $<4 \times i32>* %101$, align 4, !tbaa !11 %102 = getelementptr inbounds i32, i32* %100, i64 4 %103 = bitcast i32* %102 to <4 x i32>*%wide.load581.1 = load <4 x i32>, <4 x i32>* %103, align 4, !tbaa !11 %104 = add nsw <4 x i32> %wide.load580.1, %wide.load.1 %105 = add nsw < 4 x i32 > %wide.load581.1, %wide.load579.1 $%106 = icmp \, sgt < 4 \, x \, i32 > %104, %94$ $%107 = icmp \, sgt < 4 \, x \, i32 > %105, %95$ %108 = select <4 x i1> %106, <4 x i32> %104, <4 x i32> %94 %109 = select $<4 \times i1> %107, <4 \times i32> %105, <math><4 \times i32> %95$ %index.next.1 = add nuw i64 %index, 16 %niter.next.1 = add i64 %niter, 2 %niter.ncmp.1 = icmp eq i64 %niter.next.1, %unroll iter br i1 %niter.ncmp.1, label %middle.block.unr-lcssa, label %vector.body, ...!llvm.loop!23 F middle.block.unr-lcssa: %.lcssa584.ph = phi < 4 x i32 > [undef, %vector.ph], [%108, %vector.body]%.lcssa583.ph = phi < 4 x i32 > [undef, %vector.ph], [%109, %vector.body]%index.unr = phi i64 [0, %vector.ph], [%index.next.1, %vector.body] %vec.phi.unr = phi <4 x i32> [<i32 -987654321, i32 -987654321, i32 ... -987654321, i32 -987654321>, %vector.ph], [%108, %vector.body] %vec.phi578.unr = phi <4 x i32> [<i32 -987654321, i32 -987654321, i32 -987654321, i32 ... -987654321, i32 -987654321>, %vector.ph], [%109, %vector.body] %lcmp.mod.not = icmp eq i64 %xtraiter, 0 br i1 %lcmp.mod.not, label %middle.block, label %vector.body.epil vector.body.epil: %offset.idx.epil = or i64 %index.unr, 1 %110 = getelementptr inbounds i32, i32* %73, i64 %offset.idx.epil %111 = bitcast i32* %110 to <4 x i32>*%wide.load.epil = load <4 x i32>, <4 x i32>* %111, align 4, !tbaa !11 %112 = getelementptr inbounds i32, i32* %110, i64 4 %113 = bitcast i32*%112 to <4 x i32>*%wide.load579.epil = load $<4 \times i32>$, $<4 \times i32>* %113$, align 4, !tbaa !11 %114 = getelementptr inbounds i32, i32* %74, i64 %offset.idx.epil %115 = bitcast i32*%114 to < 4 x i32>*%wide.load580.epil = load $<4 \times i32>$, $<4 \times i32>* %115$, align 4, !tbaa !11 %116 = getelementptr inbounds i32, i32* %114, i64 4 %117 = bitcast i32*%116 to < 4 x i32>*%wide.load581.epil = load <4 x i32>, <4 x i32>* %117, align 4, !tbaa !11 $%118 = add \, nsw < 4 \, x \, i32 > %wide.load580.epil, %wide.load.epil$ %119 = add nsw < 4 x i32 > %wide.load581.epil, %wide.load579.epil%120 = icmp sgt <4 x i32> %118, %vec.phi.unr %121 = icmp sgt <4 x i32> %119, %vec.phi578.unr %122 = select <4 x i1> %120, <4 x i32> %118, <4 x i32> %vec.phi.unr %123 = select $<4 \times i1> %121, <4 \times i32> %119, <4 \times i32> %vec.phi578.unr$ br label %middle.block middle.block: $\%.lcssa584 = phi < 4 \times i32 > [\%.lcssa584.ph, \%middle.block.unr-lcssa], [$... %122, %vector.body.epil] $\%.lcssa583 = phi < 4 \times i32 > [\%.lcssa583.ph, \%middle.block.unr-lcssa], [$... %123, %vector.body.epil] %rdx.minmax.cmp = icmp sgt <4 x i32> %.lcssa584, %.lcssa583 %rdx.minmax.select = select <4 x i1> %rdx.minmax.cmp, <4 x i32> %.lcssa584, ... <4 x i32> %.lcssa583 %124 = call i32 @llvm.vector.reduce.smax.v4i32(<4 x i32> %rdx.minmax.select) %cmp.n = icmp eq i64 %77, %n.vec br i1 %cmp.n, label %for.end241, label %for.body229.preheader582 for.body229.preheader582: %indvars.iv565.ph = phi i64 [1, %for.body229.preheader], [%ind.end, .. %middle.block] %xme.0551.ph = phi i32 [-987654321, %for.body229.preheader], [%124, ... %middle.block] br label %for.body229 for.body229: %indvars.iv565 = phi i64 [%indvars.iv.next566, %for.body229], [... %indvars.iv565.ph, %for.body229.preheader582] %xme.0551 = phi i32 [%spec.select537, %for.body229], [%xme.0551.ph, ... %for.body229.preheader582] %arrayidx231 = getelementptr inbounds i32, i32* %73, i64 %indvars.iv565 %125 = load i32, i32* %arrayidx231, align 4, !tbaa !11 %arrayidx233 = getelementptr inbounds i32, i32* %74, i64 %indvars.iv565 %126 = load i32, i32* %arrayidx233, align 4, !tbaa !11 %add234 = add nsw i32 %126, %125 %cmp235 = icmp sgt i32 %add234, %xme.0551 %spec.select537 = select i1 %cmp235, i32 %add234, i32 %xme.0551 %indvars.iv.next566 = add nuw nsw i64 %indvars.iv565, 1 %exitcond569.not = icmp eq i64 %indvars.iv.next566, %wide.trip.count568 br i1 %exitcond569.not, label %for.end241, label %for.body229, !llvm.loop !25 for.end241: %xme.0.lcssa = phi i32 [-987654321, %for.end204], [%124, %middle.block], ... [%spec.select537, %for.body229] %arrayidx244 = getelementptr inbounds i32, i32* %68, i64 1 store i32 %xme.0.lcssa, i32* %arrayidx244, align 4, !tbaa !11 %arrayidx247 = getelementptr inbounds i32, i32* %68, i64 3 store i32 -987654321, i32* %arrayidx247, align 4, !tbaa !11 %arrayidx251 = getelementptr inbounds i32, i32* %69, i64 3 %127 = load i32, i32* %arrayidx251, align 4, !tbaa !11 %128 = load i32, i32* %arrayidx254, align 4, !tbaa !11 %add255 = add nsw i32 %128, %127 %cmp256 = icmp sgt i32 %add255, -987654321 %spec.store.select544 = select i1 %cmp256, i32 %add255, i32 -987654321 store i32 %spec.store.select544, i32* %arrayidx247, align 4 %129 = load i32, i32* %arrayidx268, align 4, !tbaa !11 %add269 = add nsw i32 %129, %xme.0.lcssa %cmp273 = icmp sgt i32 %add269, %spec.store.select544 %spec.store.select545 = select i1 %cmp273, i32 %add269, i32 ... %spec.store.select544 store i32 %spec.store.select545, i32* %arrayidx247, align 4 store i32 -987654321, i32* %68, align 4, !tbaa !11 %130 = load i32, i32* %arrayidx4, align 8, !tbaa !11 %add289 = add nsw i32 %130, %spec.store.select556 %cmp290 = icmp sgt i32 %add289, -987654321 %spec.store.select538 = select i1 %cmp290, i32 %add289, i32 -987654321 store i32 %spec.store.select538, i32* %68, align 4 %131 = load i32**, i32*** %xmx, align 8, !tbaa !10 %arrayidx298 = getelementptr inbounds i32*, i32** %131, i64 %indvars.iv570 %132 = load i32*, i32** %arrayidx298, align 8, !tbaa !10 %arrayidx299 = getelementptr inbounds i32, i32* %132, i64 3 %133 = load i32, i32* %arrayidx299, align 4, !tbaa !11 %134 = load i32, i32* %arrayidx302, align 8, !tbaa !11 %add303 = add nsw i32 %134, %133 %135 = load i32, i32* %132, align 4, !tbaa !11 %cmp307 = icmp sgt i32 %add303, %135 br i1 %cmp307, label %if.then309, label %if.end313 F if.then309: store i32 %add303, i32* %132, align 4, !tbaa !11 br label %if.end313 if.end313: %arrayidx316 = getelementptr inbounds i32, i32* %132, i64 2 store i32 -987654321, i32* %arravidx316, align 4, !tbaa !11 %arrayidx319 = getelementptr inbounds i32*, i32** %131, i64 %36 %136 = load i32*, i32** %arrayidx319, align 8, !tbaa !10 %arrayidx320 = getelementptr inbounds i32, i32* %136, i64 2 %137 = load i32, i32* %arrayidx320, align 4, !tbaa !11 %138 = load i32, i32* %arrayidx323, align 4, !tbaa !11 %add324 = add nsw i32 %138, %137 %cmp325 = icmp sgt i32 %add324, -987654321 %spec.store.select557 = select i1 %cmp325, i32 %add324, i32 -987654321 store i32 %spec.store.select557, i32* %arrayidx316, align 4 %arrayidx334 = getelementptr inbounds i32, i32* %132, i64 1 %139 = load i32, i32* %arrayidx334, align 4, !tbaa !11 %140 = load i32, i32* %arrayidx337, align 8, !tbaa !11 %add338 = add nsw i32 %140, %139 %cmp342 = icmp sgt i32 %add338, %spec.store.select557 %spec.store.select558 = select i1 %cmp342, i32 %add338, i32 .. %spec.store.select557 store i32 %spec.store.select558, i32* %arrayidx316, align 4 %indvars.iv.next571 = add nuw nsw i64 %indvars.iv570, 1 %exitcond575.not = icmp eq i64 %indvars.iv.next571, %wide.trip.count574 br i1 %exitcond575.not, label %for.end351, label ... %if.end313.for.body38 crit edge, !llvm.loop !27 Τ F for.end351: call void @llvm.lifetime.end.p0i8(i64 8, i8* nonnull %3) #8 if.end313.for.body38 crit edge: call void @llvm.lifetime.end.p0i8(i64 8, i8* nonnull %2) #8 %.pre = load i 32^* , i 32^* %arrayidx298, align 8, !tbaa !10 call void @llvm.lifetime.end.p0i8(i64 8, i8* nonnull %1) #8 br label %for.body38 call void @llvm.lifetime.end.p0i8(i64 8, i8* nonnull %0) #8 ret i32 0

CFG for 'P7Viterbi' function