The OpenMP application implements the same parallel algorithm for computing the dot product of two real vectors *x* and *y* as the Pthreads application.

The source code of the application is as follows:

```
#include <stdio.h>
#include <stdlib.h>
#include <omp.h>

#define MAXTHRDS 124

int main()
{
   double *x, *y, dot_prod;
   int num_of_thrds, vec_len, i;

   num_of_thrds = omp_get_num_procs();
   omp_set_num_threads(num_of_thrds);

   printf("Vector length = ");
   if(scanf("%d", &vec_len)<1) {
     printf("Check input for vector length. Bye.\n");
     return -1;
   }

   x = malloc(vec_len*sizeof(double));
   y = malloc(vec_len*sizeof(double));
   for(i=0; i<vec_len; i++) {
     x[i] = 1.;
     y[i] = 1.;
   }

   dot_prod = 0.;
   #pragma omp parallel for reduction(+: dot_prod)
   for(i=0; i<vec_len; i++) {
     dot_prod += x[i]*y[i];
   }

   printf("Dot product = %f\n", dot_prod);

   free(x);
   free(y);
}
```

One can see that this OpenMP code is significantly simpler and more compact than the Pthreads code.