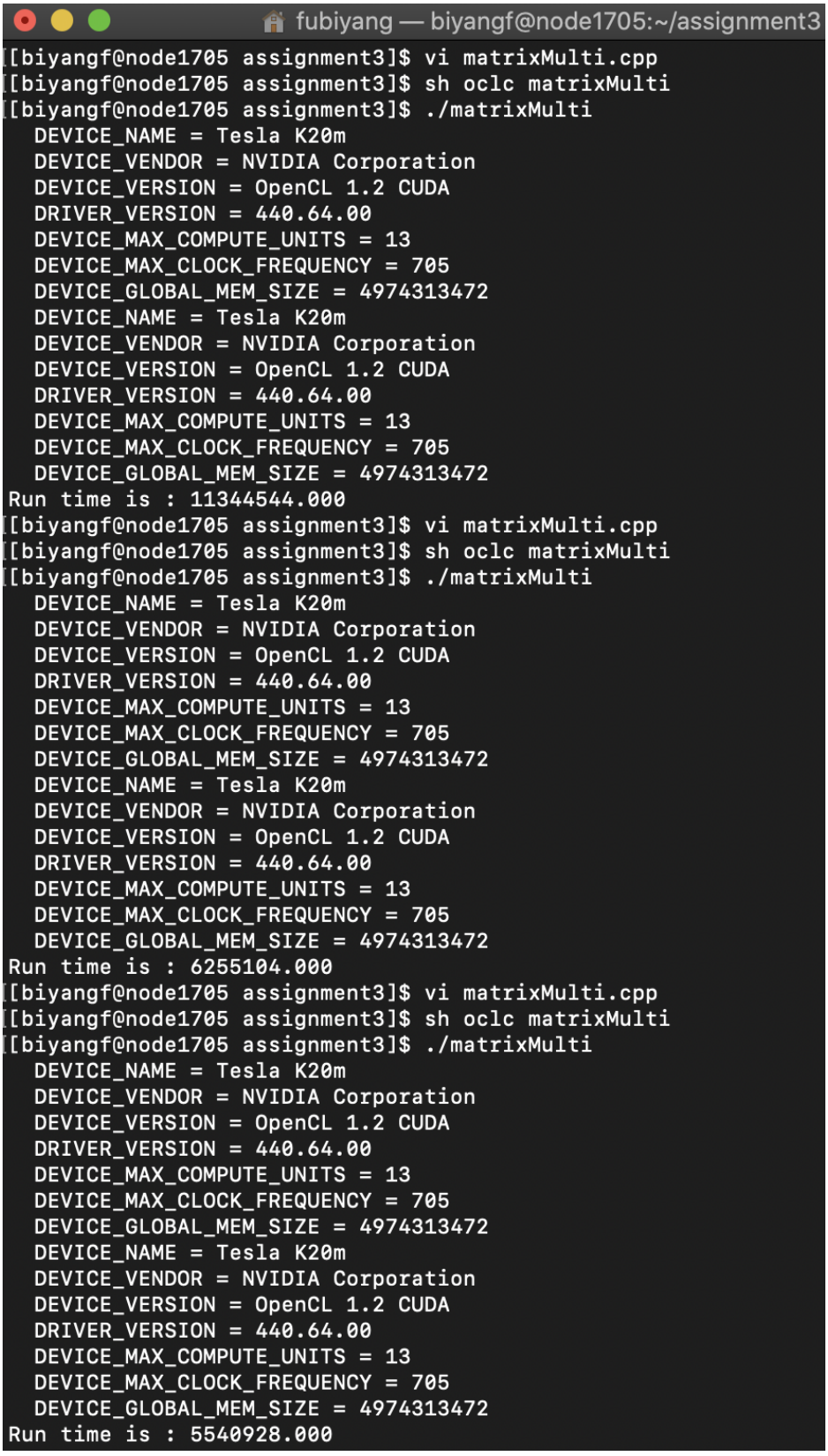
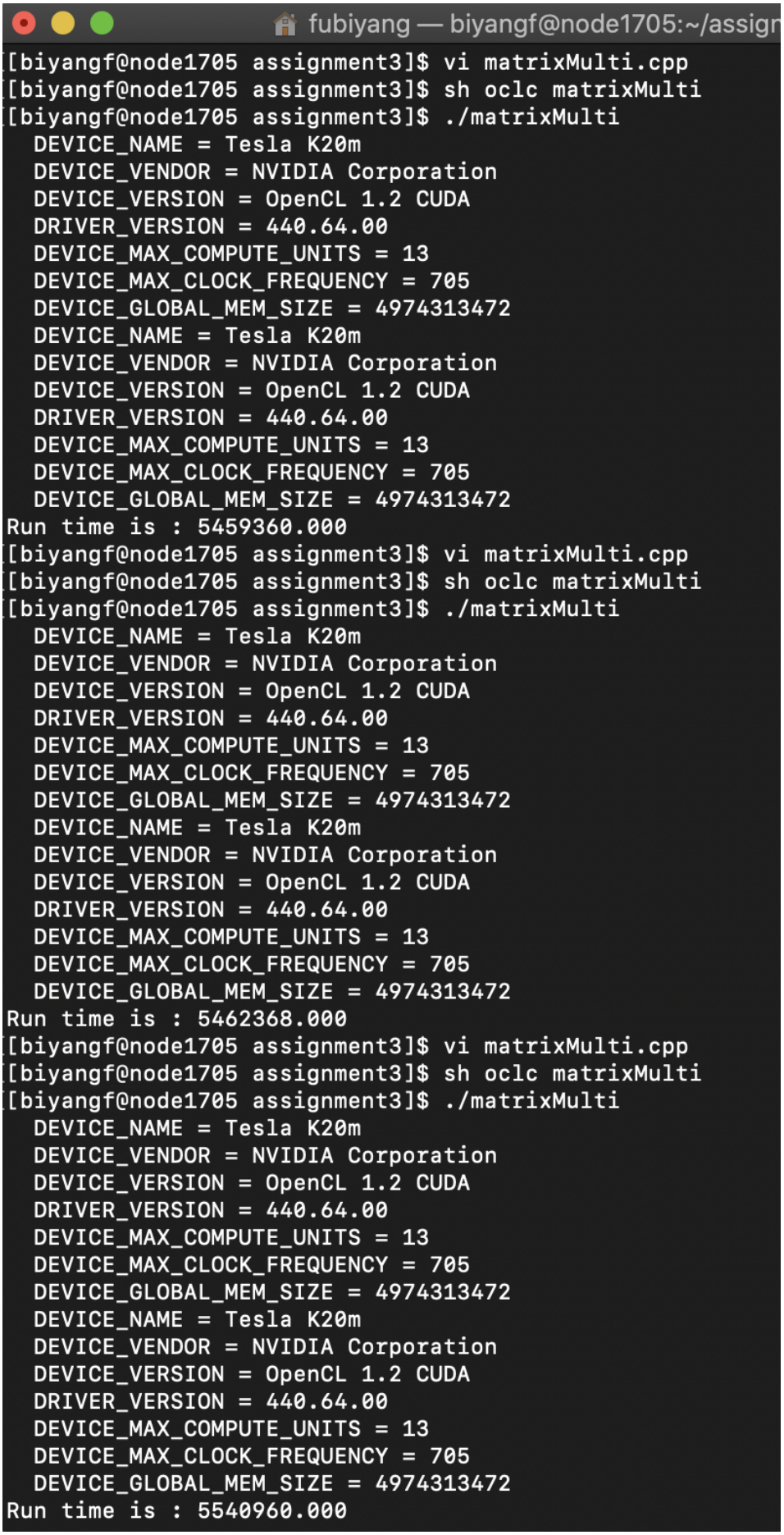
Assignment #3: OpenCL Matrix Multiplication




fubiyang — biyangf@node1705:~/assign
[biyangf@node1705 assignment3]$ vi matrixMulti.cpp
[biyangf@node1705 assignment3]$ sh oclc matrixMulti
[biyangf@node1705 assignment3]$ ./matrixMulti
DEVICE_NAME = Tesla K20m
DEVICE_VENDOR = NVIDIA Corporation
DEVICE_VERSION = OpenCL 1.2 CUDA
DRIVER_VERSION = 440.64.00
DEVICE_MAX_COMPUTE_UNITS = 13
DEVICE_MAX_CLOCK_FREQUENCY = 705
DEVICE_GLOBAL_MEM_SIZE = 4974313472
DEVICE_NAME = Tesla K20m
DEVICE_VENDOR = NVIDIA Corporation
DEVICE_VERSION = OpenCL 1.2 CUDA
DRIVER_VERSION = 440.64.00
DEVICE_MAX_COMPUTE_UNITS = 13
DEVICE_MAX_CLOCK_FREQUENCY = 705
DEVICE_GLOBAL_MEM_SIZE = 4974313472
Run time is : 5459360.000
[biyangf@node1705 assignment3]$ vi matrixMulti.cpp
[biyangf@node1705 assignment3]$ sh oclc matrixMulti
[biyangf@node1705 assignment3]$ ./matrixMulti
DEVICE_NAME = Tesla K20m
DEVICE_VENDOR = NVIDIA Corporation
DEVICE_VERSION = OpenCL 1.2 CUDA
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DRIVER_VERSION = 440.64.00
DEVICE_MAX_COMPUTE_UNITS = 13
DEVICE_MAX_CLOCK_FREQUENCY = 705
DEVICE_GLOBAL_MEM_SIZE = 4974313472
Run time is : 5462368.000
[biyangf@node1705 assignment3]$ vi matrixMulti.cpp
[biyangf@node1705 assignment3]$ sh oclc matrixMulti
[biyangf@node1705 assignment3]$ ./matrixMulti
DEVICE_NAME = Tesla K20m
DEVICE_VENDOR = NVIDIA Corporation
DEVICE_VERSION = OpenCL 1.2 CUDA
DRIVER_VERSION = 440.64.00
DEVICE_MAX_COMPUTE_UNITS = 13
DEVICE_MAX_CLOCK_FREQUENCY = 705
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DEVICE_NAME = Tesla K20m
DEVICE_VENDOR = NVIDIA Corporation
DEVICE_VERSION = OpenCL 1.2 CUDA
DRIVER_VERSION = 440.64.00
DEVICE_MAX_COMPUTE_UNITS = 13
DEVICE_MAX_CLOCK_FREQUENCY = 705
DEVICE_GLOBAL_MEM_SIZE = 4974313472
Run time is : 5540960.000

BLOCK_SIZE	1	2	4	8	10	20
Run_time	11.344544	6.255104	5.540928	5.45936	5.462368	5.54096