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pt@MBP-di-Pietro-2 ~ % env CC=mpicxx pip3 install repast4py
Collecting repast4py
  Using cached repast4py-1.0.2b1.tar.gz (79 kB)
  Installing build dependencies ... done
  Getting requirements to build wheel ... done
  Preparing metadata (pyproject.toml) ... done
Collecting numba
  Using cached numba-0.54.1-cp39-cp39-macosx_10_14_x86_64.whl (2.3 MB)
Requirement already satisfied: mpi4py in /Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages (from repast4py) (3.1.1)
Collecting torch
  Using cached torch-1.10.0-cp39-none-macosx_10_9_x86_64.whl (147.1 MB)
Requirement already satisfied: pyyaml in /Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages (from repast4py) (5.4.1)
Collecting Cython
  Using cached Cython-0.29.24-cp39-cp39-macosx_10_9_x86_64.whl (1.9 MB)
Collecting networkx>=2.6.2
  Using cached networkx-2.6.3-py3-none-any.whl (1.9 MB)
Requirement already satisfied: numpy>=1.18 in /Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages (from repast4py) (1.20.2)
Requirement already satisfied: setuptools in /Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages (from numba->repast4py) (57.4.0)
Collecting llvmlite<0.38,>=0.37.0rc1
  Using cached llvmlite-0.37.0-cp39-cp39-macosx_10_9_x86_64.whl (19.1 MB)
Requirement already satisfied: typing-extensions in /Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages (from torch->repast4py) (3.7.4.3)
Building wheels for collected packages: repast4py
  Building wheel for repast4py (pyproject.toml) ... error
  ERROR: Command errored out with exit status 1:
   command: /Library/Frameworks/Python.framework/Versions/3.9/bin/python3.9 /Library/Frameworks/Python.framework/Versions/3.9/lib/python3.9/site-packages/pip/_vendor/pep517/in_process/_in_process.py build_wheel /var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/tmp7af1a0k2
   cwd: /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-install-n43zsc1y/repast4py_148ead6716674a089a669fc7a5d1a81e
  Complete output (915 lines):
  running bdist_wheel
  running build
  running build_py
  creating build
  creating build/lib.macosx-10.9-x86_64-3.9
  creating build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/logging.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/util.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/__init__.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/core.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/random.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/value_layer.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/context.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/geometry.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/network.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/parameters.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  copying src/repast4py/schedule.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
```

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y
  copying src/repast4py/space.py -> build/lib.macosx-10.9-x86_64-3.9/repast4py
  running build_ext
  building 'repast4py._core' extension
  creating build/temp.macosx-10.9-x86_64-3.9
  creating build/temp.macosx-10.9-x86_64-3.9/src
  creating build/temp.macosx-10.9-x86_64-3.9/src/repast4py
  mpicxx -Wno-unused-result -Wsign-compare -Wunreachable-code -fno-common -dynamic
-DNDEBUG -g -fwrapv -O3 -Wall -arch x86_64 -g -I/private/var/folders/_b/dtpcfk
kf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-pa
ckages/numpy/core/include -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000
gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/mpi4py/include -
I/Library/Frameworks/Python.framework/Versions/3.9/include/python3.9 -c src/repas
t4py/coremodule.cpp -o build/temp.macosx-10.9-x86_64-3.9/src/repast4py/coremodu
le.o -std=c++11
  g++ -bundle -undefined dynamic_lookup -arch x86_64 -g build/temp.macosx-10.9-x
86_64-3.9/src/repast4py/coremodule.o -o build/lib.macosx-10.9-x86_64-3.9/repast4
py/_core.cpython-39-darwin.so -L/opt/local/lib -L/opt/local/lib/mpich-mp -lmpicx
x -lmpi -lmpi
  ld: warning: dylib (/opt/local/lib/mpich-mp/libmpicxx.dylib) was built for new
er macOS version (11.0) than being linked (10.9)
  ld: warning: dylib (/opt/local/lib/mpich-mp/libmpi.dylib) was built for newer
macOS version (11.0) than being linked (10.9)
  ld: warning: dylib (/opt/local/lib/mpich-mp/libmpmpi.dylib) was built for newer
macOS version (11.0) than being linked (10.9)
  building 'repast4py._space' extension
  mpicxx -Wno-unused-result -Wsign-compare -Wunreachable-code -fno-common -dynamic
-DNDEBUG -g -fwrapv -O3 -Wall -arch x86_64 -g -I/private/var/folders/_b/dtpcfk
kf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-pa
ckages/numpy/core/include -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000
gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/mpi4py/include -
I/Library/Frameworks/Python.framework/Versions/3.9/include/python3.9 -c src/repas
t4py/SpatialTree.cpp -o build/temp.macosx-10.9-x86_64-3.9/src/repast4py/Spatial
Tree.o -std=c++11
  In file included from src/repast4py/SpatialTree.cpp:7:
  In file included from src/repast4py/SpatialTree.h:13:
  In file included from src/repast4py/geometry.h:21:
  In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T
/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/n
umpy/arrayobject.h:4:
  In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T
/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/n
umpy/ndarrayobject.h:21:
  /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzop
f/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/__multiarray_api.
h:1464:1: warning: unused function '_import_array' [-Wunused-function]
  _import_array(void)
  ^
  1 warning generated.
  mpicxx -Wno-unused-result -Wsign-compare -Wunreachable-code -fno-common -dynamic
-DNDEBUG -g -fwrapv -O3 -Wall -arch x86_64 -g -I/private/var/folders/_b/dtpcfk
kf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-pa
ckages/numpy/core/include -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000
gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/mpi4py/include -
I/Library/Frameworks/Python.framework/Versions/3.9/include/python3.9 -c src/repas
t4py/distributed_space.cpp -o build/temp.macosx-10.9-x86_64-3.9/src/repast4py/d
istributed_space.o -std=c++11
  In file included from src/repast4py/distributed_space.cpp:10:

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In file included from src/repast4py/distributed_space.h:17:
In file included from src/repast4py/space.h:19:
src/repast4py/borders.h:7:9: warning: 'SRC_BORDERS_H_' is used as a header guard here, followed by #define of a different macro [-Wheader-guard]
#ifdef SRC_BORDERS_H_
    ^~~~~~
src/repast4py/borders.h:8:9: note: 'SRC_BORDERS_H_' is defined here; did you mean 'SRC_BORDERS_H_'?
#define SRC_BORDERS_H_
    ^~~~~~
    SRC_BORDERS_H_
In file included from src/repast4py/distributed_space.cpp:10:
In file included from src/repast4py/distributed_space.h:17:
In file included from src/repast4py/space.h:18:
In file included from src/repast4py/geometry.h:21:
In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/arrayobject.h:4:
In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/ndarrayobject.h:21:
/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/__multiarray_api.h:1464:1: warning: unused function '_import_array' [-Wunused-function]
_import_array(void)
^
2 warnings generated.
mpicxx -Wno-unused-result -Wsign-compare -Wunreachable-code -fno-common -dynamic -DNDEBUG -g -fwrapv -O3 -Wall -arch x86_64 -g -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/mmpi4py/include -I/Library/Frameworks/Python.framework/Versions/3.9/include/python3.9 -c src/repast4py/geometry.cpp -o build/temp.macosx-10.9-x86_64-3.9/src/repast4py/geometry.o -std=c++11
In file included from src/repast4py/geometry.cpp:7:
In file included from src/repast4py/geometry.h:21:
In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/arrayobject.h:4:
In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/ndarrayobject.h:21:
/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/__multiarray_api.h:1464:1: warning: unused function '_import_array' [-Wunused-function]
_import_array(void)
^
1 warning generated.
mpicxx -Wno-unused-result -Wsign-compare -Wunreachable-code -fno-common -dynamic -DNDEBUG -g -fwrapv -O3 -Wall -arch x86_64 -g -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/mmpi4py/include -I/Library/Frameworks/Python.framework/Versions/3.9/include/python3.9 -c src/repast4py/space.cpp -o build/temp.macosx-10.9-x86_64-3.9/src/repast4py/space.o -std=c++11
In file included from src/repast4py/space.cpp:7:

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In file included from src/repast4py/space.h:19:
src/repast4py/borders.h:7:9: warning: 'SRC_BORDERS_H_' is used as a header guard here, followed by #define of a different macro [-Wheader-guard]
#ifdef SRC_BORDERS_H_
    ^~~~~~

src/repast4py/borders.h:8:9: note: 'SRC_BORDERS_H_' is defined here; did you mean 'SRC_BORDERS_H_'?
#define SRC_BORDERS_H_
    ^~~~~~
    SRC_BORDERS_H_

In file included from src/repast4py/space.cpp:7:
In file included from src/repast4py/space.h:18:
In file included from src/repast4py/geometry.h:21:
In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/arrayobject.h:4:
In file included from /private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/ndarrayobject.h:21:
/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include/numpy/__multiarray_api.h:1464:1: warning: unused function '_import_array' [-Wunused-function]
_import_array(void)
^
2 warnings generated.
mpicxx -Wno-unused-result -Wsign-compare -Wunreachable-code -fno-common -dynamic -DNDEBUG -g -fwrapv -O3 -Wall -arch x86_64 -g -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/numpy/core/include -I/private/var/folders/_b/dtpcfkf97sdgy3yn0y6t1s140000gn/T/pip-build-env-yzfpzopf/overlay/lib/python3.9/site-packages/mmpi4py/include -I/Library/Frameworks/Python.framework/Versions/3.9/include/python3.9 -c src/repast4py/spacemodule.cpp -o build/temp.macosx-10.9-x86_64-3.9/src/repast4py/spacemodule.o -std=c++11
In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:19:
src/repast4py/borders.h:7:9: warning: 'SRC_BORDERS_H_' is used as a header guard here, followed by #define of a different macro [-Wheader-guard]
#ifdef SRC_BORDERS_H_
    ^~~~~~

src/repast4py/borders.h:8:9: note: 'SRC_BORDERS_H_' is defined here; did you mean 'SRC_BORDERS_H_'?
#define SRC_BORDERS_H_
    ^~~~~~
    SRC_BORDERS_H_

In file included from src/repast4py/spacemodule.cpp:25:
src/repast4py/distributed_space.h:439:23: warning: 'name' overrides a member function but is not marked 'override' [-Winconsistent-override]
    const std::string name() const;
    ^

src/repast4py/spacemodule.cpp:2003:31: note: in instantiation of template class 'repast4py::SharedContinuousSpace<repast4py::DistributedCartesianSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>>>' requested here
        self->space = new SharedContinuousSpace<DistributedCartesianSpace<MOSCSpace>>(name, box, buffer_size,

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^
src/repast4py/distributed_space.h:410:31: note: overridden virtual function is
here
    virtual const std::string name() const = 0;
^
src/repast4py/distributed_space.h:439:23: warning: 'name' overrides a member f
unction but is not marked 'override' [-Winconsistent-missing-override]
    const std::string name() const;
^
src/repast4py/spacemodule.cpp:2006:31: note: in instantiation of template clas
s 'repast4py::SharedContinuousSpace<repast4py::DistributedCartesianSpace<repast4
py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repa
st4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repa
st4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::Stic
kyBorders<repast4py::R4Py_ContinuousPoint>>>' requested here
    self->space = new SharedContinuousSpace<DistributedCartesianSpace<
SOSCSpace>>(name, box, buffer_size,
^
src/repast4py/distributed_space.h:410:31: note: overridden virtual function is
here
    virtual const std::string name() const = 0;
^
src/repast4py/distributed_space.h:439:23: warning: 'name' overrides a member f
unction but is not marked 'override' [-Winconsistent-missing-override]
    const std::string name() const;
^
src/repast4py/spacemodule.cpp:2014:31: note: in instantiation of template clas
s 'repast4py::SharedContinuousSpace<repast4py::DistributedCartesianSpace<repast4
py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repa
st4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>
, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Contin
uousPoint>, repast4py::PeriodicBorders<repast4py::R4Py_ContinuousPoint>>>' requ
ested here
    self->space = new SharedContinuousSpace<DistributedCartesianSpace<
MOPCSpace>>(name, box, buffer_size,
^
src/repast4py/distributed_space.h:410:31: note: overridden virtual function is
here
    virtual const std::string name() const = 0;
^
src/repast4py/distributed_space.h:439:23: warning: 'name' overrides a member f
unction but is not marked 'override' [-Winconsistent-missing-override]
    const std::string name() const;
^
src/repast4py/spacemodule.cpp:2017:31: note: in instantiation of template clas
s 'repast4py::SharedContinuousSpace<repast4py::DistributedCartesianSpace<repast4
py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repa
st4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repa
st4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::Peri
odicBorders<repast4py::R4Py_ContinuousPoint>>>' requested here
    self->space = new SharedContinuousSpace<DistributedCartesianSpace<
SOPCSpace>>(name, box, buffer_size,
^
src/repast4py/distributed_space.h:410:31: note: overridden virtual function is
here
    virtual const std::string name() const = 0;
^
In file included from src/repast4py/spacemodule.cpp:21:

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In file included from src/repast4py/space.h:12:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1091:30: warning: the specified comparat
or type does not provide a viable const call operator [-Wuser-defined-warnings]
    static_assert(sizeof(__diagnose_non_const_comparator<_Key, _Compare>()
), "");
    ^
src/repast4py/space.h:60:5: note: in instantiation of member function 'std::ma
p<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<rep
ast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>::~~m
ap' requested here
    BaseSpace(const std::string& name, const BoundingBox& bounds);
    ^
src/repast4py/grid.h:40:5: note: in instantiation of member function 'repast4p
y::BaseSpace<repast4py::R4Py_DiscretePoint, repast4py::MultiOccupancyAccessor<st
d::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<std::lis
t<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>
>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_Disc
retePoint>>::~BaseSpace' requested here
    BaseSpace<R4Py_DiscretePoint, AccessorType, BorderType>(name, bounds) {}
    ^
src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast
4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast
4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, r
epast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoi
nt>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::~BaseGrid' request
ed here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
    ^
src/repast4py/spacemodule.cpp:805:30: note: in instantiation of member functio
n 'repast4py::Grid<repast4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::ma
p<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<rep
ast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, r
epast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscreteP
oint>>>::~Grid' requested here
    self->grid = new Grid<MOSGrid>(name, box);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:970:5: note: from 'diagnose_if' attri
bute on '__diagnose_non_const_comparator<repast4py::Point<repast4py::R4Py_Discr
etePoint>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>':
    _LIBCPP_DIAGNOSE_WARNING(!__invokable<_Compare const&, _Tp const&, _Tp con
st&>::value,
    ^
~~~~~
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__config:1385:21: note: expanded from macro
'_LIBCPP_DIAGNOSE_WARNING'
    __attribute__((diagnose_if(__VA_ARGS__, "warning")))
    ^
~~~~~
In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:518:17: error: no matching function for
call to object of type 'const repast4py::PointComp<repast4py::R4Py_DiscretePoint
>'
    {return static_cast<const _Compare&>(*this)(__x.__get_value().first, _
_y);}

```

^~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:2537:14: note: in instantiation of member function 'std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>::operator()' requested here  
if (!value\_comp().\_\_root->\_\_value\_, \_\_v))  
^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:2466:20: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>>::\_\_lower\_bound<repast4py::Point<repast4py::R4Py\_DiscretePoint>>' requested here  
iterator \_\_p = \_\_lower\_bound(\_\_v, \_\_root(), \_\_end\_node());  
^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>>::\_\_find<repast4py::Point<repast4py::R4Py\_DiscretePoint>>' requested here  
iterator find(const key\_type& \_\_k) {return \_\_tree\_.find(\_\_k);}  
^

src/repast4py/occupancy.h:96:30: note: in instantiation of member function 'std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>::\_\_find' requested here  
auto iter = location\_map.find(pt);  
^

src/repast4py/space.h:113:32: note: in instantiation of member function 'repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>::remove' requested here  
ret\_val = accessor.remove(iter->second->agent, location\_map, wpt);  
^

src/repast4py/grid.h:31:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py\_DiscretePoint, repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py\_DiscretePoint>>::remove' requested here  
BaseGrid(const std::string& name, const BoundingBox& bounds);  
^

src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>' requested here

```

nt>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::BaseGrid' request
ed here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
        ^

src/repast4py/spacemodule.cpp:805:30: note: in instantiation of member functio
n 'repast4py::Grid<repast4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::ma
p<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<rep
ast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>, re
past4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscreteP
oint>>>::Grid' requested here
    self->grid = new Grid<MOSGrid>(name, box);
        ^

src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' ar
gument has type 'const repast4py::PointComp<repast4py::R4Py_DiscretePoint>', but
method is not marked const
    bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
        ^

In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:521:17: error: no matching function for
call to object of type 'const repast4py::PointComp<repast4py::R4Py_DiscretePoint
>'
    {return static_cast<const _Compare&>(*this)(__x, __y.__get_value().fir
st);}
        ^
        ^~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2467:26: note: in instantiation of me
mber function 'std::__map_value_compare<repast4py::Point<repast4py::R4Py_Discret
ePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, std:
:shared_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py
::R4Py_DiscretePoint>, true>::operator()' requested here
    if (__p != end() && !value_comp().__v, *__p))
        ^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of funct
ion template specialization 'std::__tree<std::__value_type<repast4py::Point<repa
st4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>
, std::__map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std:
__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<s
td::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4Py_Discr
etePoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4
Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>>::find<
repast4py::Point<repast4py::R4Py_DiscretePoint>>' requested here
    iterator find(const key_type& __k)                {return __tree_.find(__k);}
        ^

src/repast4py/occupancy.h:96:30: note: in instantiation of member function 'st
d::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<std::lis
t<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>
>::find' requested here
    auto iter = location_map.find(pt);
        ^

src/repast4py/space.h:113:32: note: in instantiation of member function 'repas
t4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscreteP
oint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp
<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>::remove' reques
ted here
    ret_val = accessor.remove(iter->second->agent, location_map, wpt);
        ^

```



src/repast4py/grid.h:31:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py\_DiscretePoint, repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py\_DiscretePoint>>::remove' requested here

```
BaseGrid(const std::string& name, const BoundingBox& bounds);
```

src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py\_DiscretePoint>>::BaseGrid' requested here

```
delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
```

src/repast4py/spacemodule.cpp:805:30: note: in instantiation of member function 'repast4py::Grid<repast4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py\_DiscretePoint>>::Grid' requested here

```
self->grid = new Grid<MOSGrid>(name, box);
```

src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' argument has type 'const repast4py::PointComp<repast4py::R4Py\_DiscretePoint>', but method is not marked const

```
bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
```

In file included from src/repast4py/spacemodule.cpp:21:  
In file included from src/repast4py/space.h:12:  
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:  
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:1975:17: error: no matching function for call to object of type 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>>::value\_compare' (aka 'std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>')

```
if (value_comp().__v, __nd->__value__)
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:2091:36: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>>::\_\_

```
find_equal<repast4py::Point<repast4py::R4Py_DiscretePoint>>' requested here
    __node_base_pointer& __child = __find_equal(__parent, __k);
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/_tree:1172:16: note: in instantiation of fu
nction template specialization 'std::_tree<std::_value_type<repast4py::Point<r
epast4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *
>>>, std::_map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, s
td::_value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_pt
r<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4Py_Dis
cretePoint>, true>, std::allocator<std::_value_type<repast4py::Point<repast4py:
:R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>>::_
emplace_unique_key_args<repast4py::Point<repast4py::R4Py_DiscretePoint>, const r
epast4py::Point<repast4py::R4Py_DiscretePoint> &, std::shared_ptr<std::list<repa
st4py::R4Py_Agent *>> &>' requested here
```

```
    return __emplace_unique_key_args(__f, _VSTD::forward<_First>(__f),
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1150:24: note: in instantiation of funct
ion template specialization 'std::_tree<std::_value_type<repast4py::Point<repa
st4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>
, std::_map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std:
::_value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<s
td::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4Py_Discre
tePoint>, true>, std::allocator<std::_value_type<repast4py::Point<repast4py::R4
Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>>::_emp
lace_unique<const repast4py::Point<repast4py::R4Py_DiscretePoint> &, std::shar
ed_ptr<std::list<repast4py::R4Py_Agent *>> &>' requested here
```

```
    return __tree._.emplace_unique(_VSTD::forward<_Args>(__args)...);
    ^
```

```
src/repast4py/occupancy.h:86:22: note: in instantiation of function template s
pecialization 'std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::sh
ared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4
Py_DiscretePoint>>::_emplace<const repast4py::Point<repast4py::R4Py_DiscretePoint
> &, std::shared_ptr<std::list<repast4py::R4Py_Agent *>> &>' requested here
```

```
    location_map.emplace(pt, 1);
    ^
```

```
src/repast4py/grid.h:58:26: note: in instantiation of member function 'repast4
py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoi
nt>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<r
epast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>::put' requested h
ere
```

```
    if (accessor.put(agent, location_map, wpt)) {
    ^
```

```
src/repast4py/grid.h:31:5: note: in instantiation of member function 'repast4p
y::BaseGrid<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4p
y::R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, rep
ast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoi
nt>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::_move' requested h
ere
```

```
    BaseGrid(const std::string& name, const BoundingBox& bounds);
    ^
```

```
src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast
4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast
4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, r
epast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoi
nt>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::_BaseGrid' request
ed here
```

```

    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
    ^
src/repast4py/spacemodule.cpp:805:30: note: in instantiation of member function
'n repast4py::Grid<repast4py::BaseGrid<repast4py::MultiOccupancyAccessor<std::map
p<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::shared_ptr<std::list<rep
ast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, re
past4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscreteP
oint>>>::Grid' requested here
    self->grid = new Grid<MOSGrid>(name, box);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:514:10: note: candidate function not via
ble: no known conversion from 'const repast4py::Point<repast4py::R4Py_DiscretePo
int>' to 'const std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint
>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>' for 1st argument
    bool operator()(const _CP& __x, const _CP& __y) const
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1091:30: warning: the specified comparat
or type does not provide a viable const call operator [-Wuser-defined-warnings]
    static_assert(sizeof(__diagnose_non_const_comparator<_Key, _Compare>()
), "");
    ^
src/repast4py/space.h:60:5: note: in instantiation of member function 'std::ma
p<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repa
st4py::PointComp<repast4py::R4Py_DiscretePoint>>::~~map' requested here
    BaseSpace(const std::string& name, const BoundingBox& bounds);
    ^
src/repast4py/grid.h:40:5: note: in instantiation of member function 'repast4p
y::BaseSpace<repast4py::R4Py_DiscretePoint, repast4py::SingleOccupancyAccessor<s
td::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *
, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_Discrete
Point>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::BaseSpace' req
uested here
    BaseSpace<R4Py_DiscretePoint, AccessorType, BorderType>(name, bounds) {}
    ^
src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast
4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repas
t4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4
py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorde
rs<repast4py::R4Py_DiscretePoint>>::BaseGrid' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
    ^
src/repast4py/spacemodule.cpp:807:30: note: in instantiation of member functio
n 'repast4py::Grid<repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::m
ap<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, rep
ast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoi
nt>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>>::Grid' requested he
re
    self->grid = new Grid<SOSGrid>(name, box);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:970:5: note: from 'diagnose_if' attri
bute on '__diagnose_non_const_comparator<repast4py::Point<repast4py::R4Py_Discre
tePoint>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>':
    _LIBCPP_DIAGNOSE_WARNING(!__invokable<_Compare const&, _Tp const&, _Tp con
st&>::value,
    ^
    ~~~~~

```

~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_\_config:1385:21: note: expanded from macro '\_LIBCPP\_DIAGNOSE\_WARNING'

```
__attribute__((diagnose_if(__VA_ARGS__, "warning")))
      ^
```

In file included from src/repast4py/spacemodule.cpp:21:

In file included from src/repast4py/space.h:12:

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:518:17: error: no matching function for call to object of type 'const repast4py::PointComp<repast4py::R4Py\_DiscretePoint>'

```
{return static_cast<const _Compare&>(*this)(__x.__get_value().first, __y);}
```

^~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_\_tree:2537:14: note: in instantiation of member function 'std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>::operator()' requested here

```
if (!value_comp().__root->__value_, __v))
    ^
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_\_tree:2466:20: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>>>::\_\_lower\_bound<repast4py::Point<repast4py::R4Py\_DiscretePoint>>' requested here

```
iterator __p = __lower_bound(__v, __root(), __end_node());
      ^
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_DiscretePoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*>>>::find<repast4py::Point<repast4py::R4Py\_DiscretePoint>>' requested here

```
iterator find(const key_type& __k) {return __tree_.find(__k);}
      ^
```

src/repast4py/occupancy.h:182:30: note: in instantiation of member function 'std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>::find' requested here

```
auto iter = location_map.find(pt);
      ^
```

src/repast4py/space.h:113:32: note: in instantiation of member function 'repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_DiscretePoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_DiscretePoint>>, repast4py::R4Py\_DiscretePoint>::remove' requested here

```
ret_val = accessor.remove(iter->second->agent, location_map, wpt);
      ^
```

src/repast4py/grid.h:31:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py\_DiscretePoint, repast4py::SingleOccupancyAccessor<s

```
td::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *
, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_Discrete
Point>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::remove' reques
ted here
```

```
    BaseGrid(const std::string& name, const BoundingBox& bounds);
```

```
    ^
```

```
src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast
4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repas
t4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4
py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorde
rs<repast4py::R4Py_DiscretePoint>>::BaseGrid' requested here
```

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
```

```
    ^
```

```
src/repast4py/spacemodule.cpp:807:30: note: in instantiation of member functio
n 'repast4py::Grid<repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::m
ap<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, rep
ast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint
>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>>::Grid' requested he
re
```

```
        self->grid = new Grid<SOSGrid>(name, box);
```

```
        ^
```

```
src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' ar
gument has type 'const repast4py::PointComp<repast4py::R4Py_DiscretePoint>', but
method is not marked const
```

```
        bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
```

```
        ^
```

```
    In file included from src/repast4py/spacemodule.cpp:21:
```

```
    In file included from src/repast4py/space.h:12:
```

```
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:521:17: error: no matching function for
call to object of type 'const repast4py::PointComp<repast4py::R4Py_DiscretePoint
>'
```

```
        {return static_cast<const _Compare&>(*this)(__x, __y.__get_value().fir
st);}
```

```
        ^~~~~~
```

```
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2467:26: note: in instantiation of me
mber function 'std::__map_value_compare<repast4py::Point<repast4py::R4Py_Discret
ePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repa
st4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>, true>
::operator()' requested here
```

```
        if (__p != end() && !value_comp().__v, *__p))
```

```
        ^
```

```
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of funct
ion template specialization 'std::__tree<std::__value_type<repast4py::Point<repa
st4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<r
epast4py::Point<repast4py::R4Py_DiscretePoint>, std::__value_type<repast4py::Poi
nt<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, repast4py::PointCom
p<repast4py::R4Py_DiscretePoint>, true>, std::allocator<std::__value_type<repas
t4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>>>::find<repa
st4py::Point<repast4py::R4Py_DiscretePoint>>' requested here
```

```
        iterator find(const key_type& __k)                {return __tree_.find(__k);}
        ^
```

```
src/repast4py/occupancy.h:182:30: note: in instantiation of member function 's
td::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *
, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>::find' requested here
```

```
        auto iter = location_map.find(pt);
```



```

^
src/repast4py/space.h:113:32: note: in instantiation of member function 'repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>::remove' requested here
    ret_val = accessor.remove(iter->second->agent, location_map, wpt);
                                ^
src/repast4py/grid.h:31:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py_DiscretePoint, repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::remove' requested here
    BaseGrid(const std::string& name, const BoundingBox& bounds);
    ^
src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::BaseGrid' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
                                ^
src/repast4py/spacemodule.cpp:807:30: note: in instantiation of member function 'repast4py::Grid<repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>>::Grid' requested here
    self->grid = new Grid<SOSGrid>(name, box);
                                ^
src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' argument has type 'const repast4py::PointComp<repast4py::R4Py_DiscretePoint>', but method is not marked const
    bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
    ^
In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:1975:17: error: no matching function for call to object of type 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>>::value_compare' (aka 'std::__map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>, true>')
    if (value_comp().__v, __nd->__value__)
        ^~~~~~
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2091:36: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, repast4py::Point

```

```
Comp<repast4py::R4Py_DiscretePoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>>>::__find_equal<repast4py::Point<repast4py::R4Py_DiscretePoint>>' requested here
    __node_base_pointer& __child = __find_equal(__parent, __k);
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:1172:16: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>>>::__emplace_unique_key_args<repast4py::Point<repast4py::R4Py_DiscretePoint>, const repast4py::Point<repast4py::R4Py_DiscretePoint> &, repast4py::R4Py_Agent *>' requested here
```

```
    return __emplace_unique_key_args(__f, _VSTD::forward<_First>(__f),
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1150:24: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_DiscretePoint>, std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_DiscretePoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>>>::__emplace_unique<const repast4py::Point<repast4py::R4Py_DiscretePoint> &, repast4py::R4Py_Agent *>' requested here
```

```
    return __tree::__emplace_unique(_VSTD::forward<_Args>(__args)...);
    ^
```

```
src/repast4py/occupancy.h:173:22: note: in instantiation of function template specialization 'std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>::emplace<const repast4py::Point<repast4py::R4Py_DiscretePoint> &, repast4py::R4Py_Agent *>' requested here
```

```
    location_map.emplace(pt, agent);
    ^
```

```
src/repast4py/grid.h:58:26: note: in instantiation of member function 'repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>::put' requested here
```

```
    if (accessor.put(agent, location_map, wpt)) {
    ^
```

```
src/repast4py/grid.h:31:5: note: in instantiation of member function 'repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::move' requested here
```

```
    BaseGrid(const std::string& name, const BoundingBox& bounds);
    ^
```

```
src/repast4py/grid.h:122:48: note: in instantiation of member function 'repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>::BaseGrid' requested here
```

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds))} {}
    ^
```

```
src/repast4py/spacemodule.cpp:807:30: note: in instantiation of member function
```

```
n 'repast4py::Grid<repast4py::BaseGrid<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_DiscretePoint>>, repast4py::R4Py_DiscretePoint>, repast4py::StickyBorders<repast4py::R4Py_DiscretePoint>>>::Grid' requested here
```

```
    self->grid = new Grid<SOSGrid>(name, box);
```

```
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:514:10: note: candidate function not viable: no known conversion from 'const repast4py::Point<repast4py::R4Py_DiscretePoint>' to 'const std::__value_type<repast4py::Point<repast4py::R4Py_DiscretePoint>, repast4py::R4Py_Agent *>' for 1st argument
```

```
    bool operator()(const _CP& __x, const _CP& __y) const
```

```
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1091:30: warning: the specified comparator type does not provide a viable const call operator [-Wuser-defined-warnings]
    static_assert(sizeof(__diagnose_non_const_comparator<_Key, _Compare>())
), "");
```

```
    ^
src/repast4py/space.h:60:5: note: in instantiation of member function 'std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>::~map' requested here
```

```
    BaseSpace(const std::string& name, const BoundingBox& bounds);
```

```
    ^
src/repast4py/cspace.h:45:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseSpace' requested here
```

```
    BaseSpace<R4Py_ContinuousPoint, AccessorType, BorderType>(name, bounds), spatial_tree{} {
```

```
    ^
src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseCSpace' requested here
```

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
```

```
    ^
src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>>::CSpace' requested here
```

```
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
```

```
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:970:5: note: from 'diagnose_if' attribute on '__diagnose_non_const_comparator<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>':
```

```
    _LIBCPP_DIAGNOSE_WARNING(!__invokable<_Compare const&, _Tp const&, _Tp const&>::value,
```

```

^
~~~~~
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__config:1385:21: note: expanded from macro
'_LIBCPP_DIAGNOSE_WARNING'
    __attribute__((diagnose_if(__VA_ARGS__, "warning")))
        ^
In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:518:17: error: no matching function for
call to object of type 'const repast4py::PointComp<repast4py::R4Py_Continuou
sPoint>'
    {return static_cast<const _Compare&>(*this)(__x.__get_value().first, _
_y);}
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2537:14: note: in instantiation of me
mber function 'std::__map_value_compare<repast4py::Point<repast4py::R4Py_Continu
ousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_Continuou
sPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repas
t4py::R4Py_ContinuousPoint>, true>::operator()' requested here
    if (!value_comp().__root->__value_, __v))
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2466:20: note: in instantiation of fu
nction template specialization 'std::__tree<std::__value_type<repast4py::Point<r
epast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint
>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::sha
red_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4
Py_ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<re
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>>>::__lower_bound<repast4py::Point<repast4py::R4Py_ContinuousPoint>>' reques
ted here
    iterator __p = __lower_bound(__v, __root(), __end_node());
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of funct
ion template specialization 'std::__tree<std::__value_type<repast4py::Point<repa
st4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>
>>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>,
std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared
_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4Py_
ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<repas
t4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>
>>::__find<repast4py::Point<repast4py::R4Py_ContinuousPoint>>' requested here
    iterator find(const key_type& __k)          {return __tree_.find(__k);}
        ^
src/repast4py/occupancy.h:96:30: note: in instantiation of member function 'st
d::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::l
ist<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPo
int>>::__find' requested here
    auto iter = location_map.find(pt);
        ^
src/repast4py/space.h:113:32: note: in instantiation of member function 'repas
t4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_Continuou
sPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointCo

```

```

mp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>::remove'
requested here
    ret_val = accessor.remove(iter->second->agent, location_map, wpt);
    ^

src/repast4py/space.h:60:5: note: in instantiation of member function 'repast4
py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::MultiOccupancyAccesso
r<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std
::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_Continuou
sPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::
R4Py_ContinuousPoint>>::remove' requested here
    BaseSpace(const std::string& name, const BoundingBox& bounds);
    ^

src/repast4py/cspace.h:45:5: note: in instantiation of member function 'repast
4py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::MultiOccupancyAccesso
r<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<st
d::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_Continuo
usPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py:
:R4Py_ContinuousPoint>>::BaseSpace' requested here
    BaseSpace<R4Py_ContinuousPoint, AccessorType, BorderType>(name, bounds), s
patial_tree{} {
    ^

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repa
st4py::BaseCspace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<re
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Con
tinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseC
Space' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree
_threshold))} {}
    ^

src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member functi
on 'repast4py::Cspace<repast4py::BaseCspace<repast4py::MultiOccupancyAccessor<st
d::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::l
ist<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPo
int>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4P
y_ContinuousPoint>>>::Cspace' requested here
    self->space = new Cspace<MOSCSpace>(name, box, tree_threshold);
    ^

src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' ar
gument has type 'const repast4py::PointComp<repast4py::R4Py_ContinuousPoint>', b
ut method is not marked const
    bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
    ^

In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:521:17: error: no matching function for
call to object of type 'const repast4py::PointComp<repast4py::R4Py_ContinuousPoi
nt>'
    {return static_cast<const _Compare&>(*this)(__x, __y.__get_value().fir
st);}
    ^
    ^~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2467:26: note: in instantiation of me
mber function 'std::__map_value_compare<repast4py::Point<repast4py::R4Py_Continu
ousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>,
std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repas
t4py::R4Py_ContinuousPoint>, true>::operator()' requested here

```



```
if (__p != end() && !value_comp().__v, *__p))
```

^

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>>>::find<repast4py::Point<repast4py::R4Py_ContinuousPoint>>' requested here
```

```
iterator find(const key_type& __k) {return __tree_.find(__k);}
```

^

```
src/repast4py/occupancy.h:96:30: note: in instantiation of member function 'std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>::find' requested here
```

```
auto iter = location_map.find(pt);
```

^

```
src/repast4py/space.h:113:32: note: in instantiation of member function 'repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>::remove' requested here
```

```
ret_val = accessor.remove(iter->second->agent, location_map, wpt);
```

^

```
src/repast4py/space.h:60:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::remove' requested here
```

```
BaseSpace(const std::string& name, const BoundingBox& bounds);
```

^

```
src/repast4py/cspace.h:45:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseSpace' requested here
```

```
BaseSpace<R4Py_ContinuousPoint, AccessorType, BorderType>(name, bounds), spatial_tree{} {
```

^

```
src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseCSpace' requested here
```

```
delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
```

^

```
src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseCSpace' requested here
```

```

y_ContinuousPoint>>>::CSpace' requested here
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
        ^

src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' argument has type 'const repast4py::PointComp<repast4py::R4Py_ContinuousPoint>', but method is not marked const
    bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
        ^

In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:15:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:9: warning: destructor called on non-final 'repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>' that has virtual functions but non-virtual destructor [-Wdelete-non-abstract-non-virtual-dtor]
    __get_elem()->~_Tp();
        ^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2619:14: note: in instantiation of member function 'std::__shared_ptr_emplace<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>>::__on_zero_shared' requested here
    explicit __shared_ptr_emplace(_Alloc __a, _Args&& ...__args)
        ^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of function template specialization 'std::__shared_ptr_emplace<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>>::__shared_ptr_emplace<repast4py::NodePoint &, double &, double &, double &>' requested here
    ::new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD::forward<_Args>(__args)...);
  ^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of function template specialization 'std::allocate_shared<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>, repast4py::NodePoint &, double &, double &, double &, void>' requested here
    return _VSTD::allocate_shared<_Tp>(allocator<_Tp>(), _VSTD::forward<_Args>(__args)...);
        ^

src/repast4py/SpatialTree.h:142:23: note: in instantiation of function template specialization 'std::make_shared<repast4py::Composite3DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, double &, double &, double &, void>' requested here
    parent = std::make_shared<Composite3DNode<BoxType, PointType>>(STNode<BoxType, PointType>::bounds_.min_,
        ^

src/repast4py/SpatialTree.h:92:5: note: in instantiation of member function 'repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>::split' requested here

```

```

ComponentNode(NodePoint& pt, double xextent, double yextent, double zextent
);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: (skipping 7 contexts i
n backtrace; use -ftemplate-backtrace-limit=0 to see all)
    ::new ((void*)__get_elem()) _Tp(_VSTD::forward<_Args>(__args)...);
        ^
src/repast4py/SpatialTree.h:366:21: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box2D,
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const lo
ng &, void>' requested here
    root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.
x_extent_, box.y_extent_);
        ^
src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function
'repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>::Spa
tialTree' requested here
    delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))
    {}
        ^
src/repast4py/cspace.h:50:59: note: in instantiation of member function 'repas
t4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py
_ContinuousPoint>>::CPSpatialTreeImpl' requested here
    spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<Sp
atialTree<Box2D, R4Py_ContinuousPoint>>(tree_threshold, bounds));
        ^
src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repa
st4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<re
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Con
tinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseC
Space' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree
_threshold))} {}
        ^
src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member functi
on 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<st
d::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::l
ist<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPo
int>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4P
y_ContinuousPoint>>::CSpace' requested here
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:24: note: qualify call to silenc
e this warning
    __get_elem()->~_Tp();
        ^
In file included from src/repast4py/spacemodule.cpp:23:
In file included from src/repast4py/cspace.h:14:
src/repast4py/SpatialTree.h:110:25: warning: comparison of integers of differe
nt signs: 'std::map<repast4py::R4Py_AgentID *, std::shared_ptr<repast4py::SpaceI
tem<repast4py::R4Py_ContinuousPoint>>, repast4py::agent_id_comp>::size_type' (ak
a 'unsigned long') and 'int' [-Wsign-compare]
    return items.size() > threshold;
           ~~~~~ ^ ~~~~~
src/repast4py/SpatialTree.h:92:5: note: in instantiation of member function 'r

```

```

epast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>::addItem' requested here
    ComponentNode(NodePoint& pt, double xextent, double yextent, double zextent
);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: in instantiation of me
mber function 'repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py_Conti
uousPoint>::ComponentNode' requested here
    :new ((void*)__get_elem()) _Tp(_VSTD::forward<Args>(__args)...);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of fu
nction template specialization 'std::__shared_ptr_emplace<repast4py::ComponentNo
de<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py:
:ComponentNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>>::__shared_pt
r_emplace<repast4py::NodePoint &, double &, double &, int>' requested here
    :new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD
::forward<Args>(__args)...);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of fu
nction template specialization 'std::allocate_shared<repast4py::ComponentNode<re
past4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Comp
onentNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>, repast4py::NodePo
int &, double &, double &, int, void>' requested here
    return _VSTD::allocate_shared<_Tp>(allocator<_Tp>(), _VSTD::forward<Args>
(__args)...);
    ^
src/repast4py/SpatialTree.h:247:64: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::ComponentNode<repast4py::Box2D, re
past4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, double &, double &, int,
void>' requested here
    CompositeNode<BoxType, PointType>::children.push_back(std::make_shared<Com
ponentNode<BoxType, PointType>>(pt1, half_x, half_y, 0));
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: (skipping 3 contexts i
n backtrace; use -ftemplate-backtrace-limit=0 to see all)
    :new ((void*)__get_elem()) _Tp(_VSTD::forward<Args>(__args)...);
    ^
src/repast4py/SpatialTree.h:366:21: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box2D,
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const lo
ng &, void>' requested here
    root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.
x_extent_, box.y_extent_);
    ^
src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function
'repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>::Spat
ialTree' requested here
    delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))
    {}
    ^
src/repast4py/cspace.h:50:59: note: in instantiation of member function 'repas
t4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py
_ContinuousPoint>>::CPSpatialTreeImpl' requested here
    spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<Sp

```

```
atialTree<Box2D, R4Py_ContinuousPoint>>(tree_threshold, bounds));
```

^

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseCSpace' requested here

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
```

^

src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::CSpace' requested here

```
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
```

^

In file included from src/repast4py/spacemodule.cpp:21:

In file included from src/repast4py/space.h:12:

In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:

In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:15:

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:9: warning: destructor called on non-final 'repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>' that has virtual functions but non-virtual destructor [-Wdelete-non-abstract-non-virtual-dtor]

```
    __get_elem()->~Tp();
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2619:14: note: in instantiation of member function 'std::\_\_shared\_ptr\_emplace<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>, std::allocator<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>>>::\_\_on\_zero\_shared' requested here

```
    explicit __shared_ptr_emplace(_Alloc __a, _Args&& ...__args)
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of function template specialization 'std::\_\_shared\_ptr\_emplace<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>, std::allocator<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>>>::\_\_shared\_ptr\_emplace<repast4py::NodePoint &, double &, double &, int>' requested here

```
        :new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD::forward<_Args>(__args)...);
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of function template specialization 'std::allocate\_shared<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>, std::allocator<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>>, repast4py::NodePoint &, double &, double &, int, void>' requested here

```
    return _VSTD::allocate_shared<Tp>(allocator<Tp>(), _VSTD::forward<_Args>(__args)...);
```

^



src/repast4py/SpatialTree.h:247:64: note: in instantiation of function template specialization 'std::make\_shared<repast4py::ComponentNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>, repast4py::NodePoint &, double &, double &, int, void>' requested here

```
CompositeNode<BoxType, PointType>::children.push_back(std::make_shared<ComponentNode<BoxType, PointType>>(pt1, half_x, half_y, 0));
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: in instantiation of member function 'repast4py::Composite2DNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>::Composite2DNode' requested here

```
::new ((void*)__get_elem()) _Tp(_VSTD::forward<Args>(__args)...);
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: (skipping 2 contexts in backtrace; use -ftemplate-backtrace-limit=0 to see all)

```
::new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD::forward<Args>(__args)...);
```

src/repast4py/SpatialTree.h:366:21: note: in instantiation of function template specialization 'std::make\_shared<repast4py::Composite2DNode<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>, repast4py::NodePoint &, const long &, const long &, void>' requested here

```
root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.x_extent_, box.y_extent_);
```

src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function 'repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>::SpatialTree' requested here

```
delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))  
{}
```

src/repast4py/cspace.h:50:59: note: in instantiation of member function 'repast4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py\_ContinuousPoint>>::CPSpatialTreeImpl' requested here

```
spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<SpatialTree<Box2D, R4Py_ContinuousPoint>>(tree_threshold, bounds));
```

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSPACE<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseCSPACE' requested here

```
delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
```

src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSPACE<repast4py::BaseCSPACE<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::CSPACE' requested here

```
self->space = new CSPACE<MOSCSPACE>(name, box, tree_threshold);
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:24: note: qualify call to silence this warning

```
__get_elem()->~_Tp();  
^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:9: warning: destructor called on  
non-final 'repast4py::Composite2DNode<repast4py::Box2D, repast4py::R4Py_Continu  
ousPoint>' that has virtual functions but non-virtual destructor [-Wdelete-non-a  
bstract-non-virtual-dtor]
```

```
__get_elem()->~_Tp();  
^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2619:14: note: in instantiation of me  
mber function 'std::__shared_ptr_emplace<repast4py::Composite2DNode<repast4py::B  
ox2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Composite2DNod  
e<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>>::__on_zero_shared' reques  
ted here
```

```
explicit __shared_ptr_emplace(_Alloc __a, _Args&& ...__args)  
^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of fu  
nction template specialization 'std::__shared_ptr_emplace<repast4py::Composite2D  
Node<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4p  
y::Composite2DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>>::__share  
d_ptr_emplace<repast4py::NodePoint &, const long &, const long &>' requested her  
e
```

```
::new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD  
::forward<_Args>(__args)...);  
^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of fu  
nction template specialization 'std::allocate_shared<repast4py::Composite2DNode<  
repast4py::Box2D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Co  
mposite2DNode<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>>, repast4py::No  
dePoint &, const long &, const long &, void>' requested here
```

```
return _VSTD::allocate_shared<_Tp>(allocator<_Tp>(), _VSTD::forward<_Args>  
(__args)...);  
^
```

```
src/repast4py/SpatialTree.h:366:21: note: in instantiation of function templat  
e specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box2D,  
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const lo  
ng &, void>' requested here
```

```
root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.  
x_extent_, box.y_extent_);  
^
```

```
src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function  
'repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py_ContinuousPoint>::Spat  
ialTree' requested here
```

```
delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))  
{}
```

^

```
src/repast4py/cspace.h:50:59: note: in instantiation of member function 'repas  
t4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box2D, repast4py::R4Py  
_ContinuousPoint>>::CPSpatialTreeImpl' requested here
```

```
spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<Sp  
atialTree<Box2D, R4Py_ContinuousPoint>>(tree_threshold, bounds));  
^
```

```
src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repa  
st4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<re  
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
```

```
*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseC  
Space' requested here  
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree  
_threshold))} {}  
    ^
```

```
src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member functi  
on 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<st  
d::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::l  
ist<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_Continu  
ousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4P  
y_ContinuousPoint>>>::CSpace' requested here
```

```
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);  
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:24: note: qualify call to silenc  
e this warning
```

```
    __get_elem()->~Tp();  
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:9: warning: destructor called on  
non-final 'repast4py::Composite3DNode<repast4py::Box3D, repast4py::R4Py_Contin  
ousPoint>' that has virtual functions but non-virtual destructor [-Wdelete-non-a  
bstract-non-virtual-dtor]
```

```
    __get_elem()->~Tp();  
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2619:14: note: in instantiation of me  
mber function 'std::__shared_ptr_emplace<repast4py::Composite3DNode<repast4py::B  
ox3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Composite3DNod  
e<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>>::__on_zero_shared' reques  
ted here
```

```
    explicit __shared_ptr_emplace(_Alloc __a, _Args&& ...__args)  
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of fu  
nction template specialization 'std::__shared_ptr_emplace<repast4py::Composite3D  
Node<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4p  
y::Composite3DNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>>::__share  
d_ptr_emplace<repast4py::NodePoint &, double &, double &, double &>' requested h  
ere
```

```
    ::new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD  
::forward<_Args>(__args)...);  
    ^
```

```
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of fu  
nction template specialization 'std::allocate_shared<repast4py::Composite3DNode<  
repast4py::Box3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::C  
omposite3DNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>, repast4py::No  
dePoint &, double &, double &, double &, void>' requested here
```

```
    return _VSTD::allocate_shared<Tp>(allocator<Tp>(), _VSTD::forward<_Args>  
(__args)...);  
    ^
```

```
src/repast4py/SpatialTree.h:142:23: note: in instantiation of function templat  
e specialization 'std::make_shared<repast4py::Composite3DNode<repast4py::Box3D,  
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, double &, double &, do  
uble &, void>' requested here
```

```
    parent = std::make_shared<Composite3DNode<BoxType, PointType>>(STNode<
```

```

BoxType, PointType>::bounds_.min_,
      ^
src/repast4py/SpatialTree.h:92:5: note: in instantiation of member function 'repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>::split' requested here
    ComponentNode(NodePoint& pt, double xextent, double yextent, double zextent);
      ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: (skipping 7 contexts in backtrace; use -ftemplate-backtrace-limit=0 to see all)
    ::new ((void*)__get_elem()) _Tp(_VSTD::forward<_Args>(__args)...);
      ^
src/repast4py/SpatialTree.h:366:21: note: in instantiation of function template specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const long &, void>' requested here
    root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.x_extent_, box.y_extent_);
      ^
src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function 'repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>::SpatialTree' requested here
    delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))
    {}
      ^
src/repast4py/cspace.h:52:59: note: in instantiation of member function 'repast4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>::CPSpatialTreeImpl' requested here
    spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<SpatialTree<Box3D, R4Py_ContinuousPoint>>(tree_threshold, bounds));
      ^
src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseCSpace' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
      ^
src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::CSpace' requested here
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
      ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:24: note: qualify call to silence this warning
    __get_elem()->~_Tp();
      ^
In file included from src/repast4py/spacemodule.cpp:23:
In file included from src/repast4py/cspace.h:14:
src/repast4py/SpatialTree.h:110:25: warning: comparison of integers of different signs: 'std::map<repast4py::R4Py_AgentID *, std::shared_ptr<repast4py::SpaceI

```

```

tem<repast4py::R4Py_ContinuousPoint>>, repast4py::agent_id_comp>::size_type' (aka
'a 'unsigned long') and 'int' [-Wsign-compare]
    return items.size() > threshold;
        ~~~~~ ^ ~~~~~
    src/repast4py/SpatialTree.h:92:5: note: in instantiation of member function 'r
epast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>::addI
tem' requested here
        ComponentNode(NodePoint& pt, double xextent, double yextent, double ztent
);
    ^
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: in instantiation of me
mber function 'repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py_Contin
uousPoint>::ComponentNode' requested here
        :new ((void*)__get_elem()) _Tp(_VSTD::forward<_Args>(__args)...);
            ^
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of fu
nction template specialization 'std::__shared_ptr_emplace<repast4py::ComponentNo
de<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py:
:ComponentNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>>::__shared_ptr
_emplace<repast4py::NodePoint &, double &, double &, int>' requested here
        :new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD
::forward<_Args>(__args)...);
            ^
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of fu
nction template specialization 'std::allocate_shared<repast4py::ComponentNode<re
past4py::Box3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Comp
onentNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>, repast4py::NodePo
int &, double &, double &, int, void>' requested here
        return _VSTD::allocate_shared<_Tp>(allocator<_Tp>(), _VSTD::forward<_Args>
(__args)...);
            ^
    src/repast4py/SpatialTree.h:247:64: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::ComponentNode<repast4py::Box3D, re
past4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, double &, double &, int,
void>' requested here
        CompositeNode<BoxType, PointType>::children.push_back(std::make_shared<Com
ponentNode<BoxType, PointType>>(pt1, half_x, half_y, 0));
            ^
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: (skipping 3 contexts i
n backtrace; use -ftemplate-backtrace-limit=0 to see all)
        :new ((void*)__get_elem()) _Tp(_VSTD::forward<_Args>(__args)...);
            ^
    src/repast4py/SpatialTree.h:366:21: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box3D,
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const lo
ng &, void>' requested here
        root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.
x_extent_, box.y_extent_);
            ^
    src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function
'repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>::Spat
ialTree' requested here
        delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))
    {}

```



src/repast4py/cspace.h:52:59: note: in instantiation of member function 'repast4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>>::CPSpatialTreeImpl' requested here  
spatial\_tree = std::unique\_ptr<CPSpatialTree>(new CPSpatialTreeImpl<SpatialTree<Box3D, R4Py\_ContinuousPoint>>(tree\_threshold, bounds));

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent\*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseCSpace' requested here  
delegate{std::unique\_ptr<DelegateType>(new DelegateType(name, bounds, tree\_threshold))} {}

src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent\*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::CSpace' requested here  
self->space = new CSpace<MOSCSpace>(name, box, tree\_threshold);

In file included from src/repast4py/spacemodule.cpp:21:  
In file included from src/repast4py/space.h:12:  
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:  
In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:15:  
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:9: warning: destructor called on non-final 'repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>' that has virtual functions but non-virtual destructor [-Wdelete-non-abstract-non-virtual-dtor]  
\_\_get\_elem()->~\_Tp();

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2619:14: note: in instantiation of member function 'std::\_\_shared\_ptr\_emplace<repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>, std::allocator<repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>>>::\_\_on\_zero\_shared' requested here  
explicit \_\_shared\_ptr\_emplace(\_Alloc \_\_a, \_Args&& ...\_\_args)

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of function template specialization 'std::\_\_shared\_ptr\_emplace<repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>, std::allocator<repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>>>::\_\_shared\_ptr\_emplace<repast4py::NodePoint &, double &, double &, int>' requested here  
:new ((void\*)\_VSTD::addressof(\*\_\_guard.\_\_get())) \_ControlBlock(\_\_a, \_VSTD::forward<\_Args>(\_\_args)...);

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of function template specialization 'std::allocate\_shared<repast4py::ComponentNode<repast4py::Box3D, repast4py::R4Py\_ContinuousPoint>, std::allocator<repast4py::Comp

```

onentNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>, repast4py::NodePo
int &, double &, double &, int, void>' requested here
    return _VSTD::allocate_shared<_Tp>(allocator<_Tp>(), _VSTD::forward<_Args>
(__args)...);
        ^
    src/repast4py/SpatialTree.h:247:64: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::ComponentNode<repast4py::Box3D, re
past4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, double &, double &, int,
void>' requested here
        CompositeNode<BoxType, PointType>::children.push_back(std::make_shared<Com
ponentNode<BoxType, PointType>>(pt1, half_x, half_y, 0));
  ^
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2627:37: note: in instantiation of me
mber function 'repast4py::Composite2DNode<repast4py::Box3D, repast4py::R4Py_Cont
inuousPoint>::Composite2DNode' requested here
        ::new ((void*)__get_elem()) _Tp(_VSTD::forward<_Args>(__args)...);
  ^
    /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: (skipping 2 contexts i
n backtrace; use -ftemplate-backtrace-limit=0 to see all)
        ::new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD
::forward<_Args>(__args)...);
  ^
    src/repast4py/SpatialTree.h:366:21: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box3D,
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const lo
ng &, void>' requested here
        root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.
x_extent_, box.y_extent_);
        ^
    src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function
'repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>::Spa
tialTree' requested here
        delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))
{}
        ^
    src/repast4py/cspace.h:52:59: note: in instantiation of member function 'repas
t4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py
_ContinuousPoint>>::CPSpatialTreeImpl' requested here
        spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<Sp
atialTree<Box3D, R4Py_ContinuousPoint>>(tree_threshold, bounds));
  ^
    src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repa
st4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<re
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Con
tinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseC
Space' requested here
        delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree
_threshold))} {}
        ^
    src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member functi
on 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<st
d::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::l
ist<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::R4Py_ContinuousPo
int>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4P
y_ContinuousPoint>>>::CSpace' requested here

```

```

        self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:24: note: qualify call to silenc
e this warning
    __get_elem()->~_Tp();
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:9: warning: destructor called on
non-final 'repast4py::Composite2DNode<repast4py::Box3D, repast4py::R4Py_Continu
ousPoint>' that has virtual functions but non-virtual destructor [-Wdelete-non-a
bstract-non-virtual-dtor]
    __get_elem()->~_Tp();
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2619:14: note: in instantiation of me
mber function 'std::__shared_ptr_emplace<repast4py::Composite2DNode<repast4py::B
ox3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::Composite2DNod
e<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>>::__on_zero_shared' reques
ted here
    explicit __shared_ptr_emplace(_Alloc __a, _Args&& ...__args)
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3385:55: note: in instantiation of fu
nction template specialization 'std::__shared_ptr_emplace<repast4py::Composite2D
Node<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4p
y::Composite2DNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>>::__share
d_ptr_emplace<repast4py::NodePoint &, const long &, const long &>' requested her
e
    ::new ((void*)_VSTD::addressof(*__guard.__get())) _ControlBlock(__a, _VSTD
::forward<_Args>(__args)...);
        ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:3394:19: note: in instantiation of fu
nction template specialization 'std::allocate_shared<repast4py::Composite2DNode<
repast4py::Box3D, repast4py::R4Py_ContinuousPoint>, std::allocator<repast4py::C
omposite2DNode<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>>, repast4py::No
dePoint &, const long &, const long &, void>' requested here
    return _VSTD::allocate_shared<_Tp>(allocator<_Tp>(), _VSTD::forward<_Args>
(__args)...);
        ^
src/repast4py/SpatialTree.h:366:21: note: in instantiation of function templat
e specialization 'std::make_shared<repast4py::Composite2DNode<repast4py::Box3D,
repast4py::R4Py_ContinuousPoint>, repast4py::NodePoint &, const long &, const lo
ng &, void>' requested here
    root = std::make_shared<Composite2DNode<BoxType, PointType>>(min, box.
x_extent_, box.y_extent_);
        ^
src/repast4py/SpatialTree.h:420:48: note: in instantiation of member function
'repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py_ContinuousPoint>::Spat
ialTree' requested here
    delegate(std::unique_ptr<DelegateType>(new DelegateType(threshold, box)))
    {}
        ^
src/repast4py/cspace.h:52:59: note: in instantiation of member function 'repas
t4py::CPSpatialTreeImpl<repast4py::SpatialTree<repast4py::Box3D, repast4py::R4Py
_ContinuousPoint>>::CPSpatialTreeImpl' requested here
    spatial_tree = std::unique_ptr<CPSpatialTree>(new CPSpatialTreeImpl<Sp

```

```
atialTree<Box3D, R4Py_ContinuousPoint>>(tree_threshold, bounds));
```

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseCSpace' requested here

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
```

src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::CSpace' requested here

```
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/memory:2644:24: note: qualify call to silence this warning

```
    __get_elem()->~Tp();
```

In file included from src/repast4py/spacemodule.cpp:21:

In file included from src/repast4py/space.h:12:

In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:1975:17: error: no matching function for call to object of type 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>>::value\_compare' (aka 'std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>, true>')

```
    if (value_comp().__v, __nd->__value_)
```

```
        ^~~~~~
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:2091:36: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>>::\_\_find\_equal<repast4py::Point<repast4py::R4Py\_ContinuousPoint>>' requested here

```
    __node_base_pointer& __child = __find_equal(__parent, __k);
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:1172:16: note: in instantiation of fu

```

nction template specialization 'std::__tree<std::__value_type<repast4py::Point<re
epast4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint
>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::sha
red_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4
Py_ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<re
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>>>>::__emplace_unique_key_args<repast4py::Point<repast4py::R4Py_ContinuousPoi
nt>, const repast4py::Point<repast4py::R4Py_ContinuousPoint> &, std::shared_ptr<
std::list<repast4py::R4Py_Agent *>> &>' requested here
    return __emplace_unique_key_args(__f, _VSTD::forward<_First>(__f),
        ^

```

```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1150:24: note: in instantiation of funct
ion template specialization 'std::__tree<std::__value_type<repast4py::Point<repa
st4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *
>>>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>,
std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::shared
_ptr<std::list<repast4py::R4Py_Agent *>>>, repast4py::PointComp<repast4py::R4Py_
ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<repas
t4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *
>>>>>::__emplace_unique<const repast4py::Point<repast4py::R4Py_ContinuousPoint> &,
std::shared_ptr<std::list<repast4py::R4Py_Agent *>> &>' requested here
    return __tree::__emplace_unique(_VSTD::forward<_Args>(__args)...);
        ^

```

```

src/repast4py/occupancy.h:86:22: note: in instantiation of function template s
pecialization 'std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std:::
shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointComp<repast4py::
R4Py_ContinuousPoint>>::__emplace<const repast4py::Point<repast4py::R4Py_Continuou
sPoint> &, std::shared_ptr<std::list<repast4py::R4Py_Agent *>> &>' requested her
e

```

```

    location_map.emplace(pt, l);
        ^

```

```

src/repast4py/cspace.h:88:26: note: in instantiation of member function 'repas
t4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_Continuou
sPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *>>, repast4py::PointCo
mp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>::put' req
uested here

```

```

    if (accessor.put(agent, location_map, wpt)) {
        ^

```

```

src/repast4py/cspace.h:34:5: note: in instantiation of member function 'repast
4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repa
st4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent *
>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Conti
nuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::__move' r
equested here

```

```

    BaseCSpace(const std::string& name, const BoundingBox& bounds, int tree_th
reshold);
        ^

```

```

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repa
st4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<re
past4py::R4Py_ContinuousPoint>, std::shared_ptr<std::list<repast4py::R4Py_Agent
*>>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Con
tinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::__BaseC
Space' requested here

```

```

    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree
_threshold))} {}

```

^



src/repast4py/spacemodule.cpp:1626:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::MultiOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>>::CSpace' requested here

```
    self->space = new CSpace<MOSCSpace>(name, box, tree_threshold);
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:514:10: note: candidate function not viable: no known conversion from 'const repast4py::Point<repast4py::R4Py\_ContinuousPoint>' to 'const std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::shared\_ptr<std::list<repast4py::R4Py\_Agent \*>>>' for 1st argument

```
    bool operator()(const _CP& __x, const _CP& __y) const
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1091:30: warning: the specified comparator type does not provide a viable const call operator [-Wuser-defined-warnings]

```
    static_assert(sizeof(__diagnose_non_const_comparator<_Key, _Compare>())  
, "");
```

^

src/repast4py/space.h:60:5: note: in instantiation of member function 'std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>::~~map' requested here

```
    BaseSpace(const std::string& name, const BoundingBox& bounds);
```

^

src/repast4py/cspace.h:45:5: note: in instantiation of member function 'repast4py::BaseSpace<repast4py::R4Py\_ContinuousPoint, repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseSpace' requested here

```
    BaseSpace<R4Py_ContinuousPoint, AccessorType, BorderType>(name, bounds), spatial_tree{} {
```

^

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseCSpace' requested here

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
```

^

src/repast4py/spacemodule.cpp:1628:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>>::CSpace' requested here

```
    self->space = new CSpace<SOSCSpace>(name, box, tree_threshold);
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:970:5: note: from 'diagnose\_if' attribute on '\_\_diagnose\_non\_const\_comparator<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>':

```
    _LIBCPP_DIAGNOSE_WARNING(!__invokable<_Compare const&, _Tp const&, _Tp const&>::value,
```

^

~~~~~

~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_\_config:1385:21: note: expanded from macro '\_LIBCPP\_DIAGNOSE\_WARNING'

```
__attribute__((diagnose_if(__VA_ARGS__, "warning")))
      ^
```

In file included from src/repast4py/spacemodule.cpp:21:

In file included from src/repast4py/space.h:12:

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:518:17: error: no matching function for call to object of type 'const repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>'

```
{return static_cast<const _Compare&>(*this)(__x.__get_value().first, __y);}
```

^~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_\_tree:2537:14: note: in instantiation of member function 'std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>, true>::operator()' requested here

```
if (!value_comp().__root->__value_, __v))
    ^
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_\_tree:2466:20: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>>::\_\_lower\_bound<repast4py::Point<repast4py::R4Py\_ContinuousPoint>>' requested here

```
iterator __p = __lower_bound(__v, __root(), __end_node());
              ^
```

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of function template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>, std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>, true>, std::allocator<std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>>::\_\_find<repast4py::Point<repast4py::R4Py\_ContinuousPoint>>' requested here

```
iterator find(const key_type& __k) {return __tree_.find(__k);}
                                   ^
```

src/repast4py/occupancy.h:182:30: note: in instantiation of member function 'std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>::\_\_find' requested here

```
auto iter = location_map.find(pt);
          ^
```

src/repast4py/space.h:113:32: note: in instantiation of member function 'repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>::remove' requested here

```
ret_val = accessor.remove(iter->second->agent, location_map, wpt);
          ^
```

src/repast4py/space.h:60:5: note: in instantiation of member function 'repast4

py::BaseSpace<repast4py::R4Py\_ContinuousPoint, repast4py::SingleOccupancyAccesso  
r<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Ag  
ent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_C  
ontinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::rem  
ove' requested here

```
    BaseSpace(const std::string& name, const BoundingBox& bounds);
```

^

src/repast4py/cspace.h:45:5: note: in instantiation of member function 'repast  
4py::BaseSpace<repast4py::R4Py\_ContinuousPoint, repast4py::SingleOccupancyAccess  
or<std::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_A  
gent \*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_  
ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::Ba  
seSpace' requested here

```
    BaseSpace<R4Py_ContinuousPoint, AccessorType, BorderType>(name, bounds), s  
patial_tree{} {
```

^

src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repa  
st4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<r  
epast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*, repast4py::PointComp<r  
epast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_ContinuousPoint>, repast4py::S  
tickyBorders<repast4py::R4Py\_ContinuousPoint>>::BaseCSpace' requested here

```
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree  
_threshold))} {}
```

^

src/repast4py/spacemodule.cpp:1628:31: note: in instantiation of member functi  
on 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<s  
td::map<repast4py::Point<repast4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent  
\*, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>>, repast4py::R4Py\_Cont  
inuousPoint>, repast4py::StickyBorders<repast4py::R4Py\_ContinuousPoint>>::CSpac  
e' requested here

```
    self->space = new CSpace<SOSCSpace>(name, box, tree_threshold);
```

^

src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' ar  
gument has type 'const repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>', b  
ut method is not marked const

```
    bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
```

^

In file included from src/repast4py/spacemodule.cpp:21:

In file included from src/repast4py/space.h:12:

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:521:17: error: no matching function for  
call to object of type 'const repast4py::PointComp<repast4py::R4Py\_ContinuousPoi  
nt>'

```
    {return static_cast<const _Compare&>(*this)(__x, __y.__get_value().fir  
st);}
```

^~~~~~

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/\_\_tree:2467:26: note: in instantiation of me  
mber function 'std::\_\_map\_value\_compare<repast4py::Point<repast4py::R4Py\_Continu  
ousPoint>, std::\_\_value\_type<repast4py::Point<repast4py::R4Py\_ContinuousPoint>  
, repast4py::R4Py\_Agent \*>, repast4py::PointComp<repast4py::R4Py\_ContinuousPoint>  
, true>::operator()' requested here

```
    if (__p != end() && !value_comp().__v, *__p))
```

^

/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer  
/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1380:68: note: in instantiation of funct  
ion template specialization 'std::\_\_tree<std::\_\_value\_type<repast4py::Point<repa  
st4py::R4Py\_ContinuousPoint>, repast4py::R4Py\_Agent \*>, std::\_\_map\_value\_compare

```

<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py:
:Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, repast4py::Po
intComp<repast4py::R4Py_ContinuousPoint>, true>, std::allocator<std::__value_typ
e<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>>>:
:find<repast4py::Point<repast4py::R4Py_ContinuousPoint>>' requested here
    iterator find(const key_type& __k)                {return __tree_.find(__k);}
                ^
    src/repast4py/occupancy.h:182:30: note: in instantiation of member function 's
td::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent
*, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>::find' requested here
    auto iter = location_map.find(pt);
                ^
    src/repast4py/space.h:113:32: note: in instantiation of member function 'repas
t4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_Continuo
usPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_Continuo
usPoint>>, repast4py::R4Py_ContinuousPoint>::remove' requested here
    ret_val = accessor.remove(iter->second->agent, location_map, wpt);
                ^
    src/repast4py/space.h:60:5: note: in instantiation of member function 'repast4
py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::SingleOccupancyAccesso
r<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Ag
ent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_C
ontinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::rem
ove' requested here
    BaseSpace(const std::string& name, const BoundingBox& bounds);
    ^
    src/repast4py/cspace.h:45:5: note: in instantiation of member function 'repast
4py::BaseSpace<repast4py::R4Py_ContinuousPoint, repast4py::SingleOccupancyAccess
or<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_A
gent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_
ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::Ba
seSpace' requested here
    BaseSpace<R4Py_ContinuousPoint, AccessorType, BorderType>(name, bounds), s
patial_tree{} {
    ^
    src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repas
t4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<r
epast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<r
epast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::S
tickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseCSpace' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree
_threshold))} {}
                ^
    src/repast4py/spacemodule.cpp:1628:31: note: in instantiation of member functi
on 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<s
td::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent
*, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_Cont
inuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>>::CSpac
e' requested here
    self->space = new CSpace<SOSCSpace>(name, box, tree_threshold);
                ^
    src/repast4py/geometry.h:76:10: note: candidate function not viable: 'this' ar
gument has type 'const repast4py::PointComp<repast4py::R4Py_ContinuousPoint>', b
ut method is not marked const
    bool operator()(const Point<PointType>& p1, const Point<PointType>& p2) {
    ^
In file included from src/repast4py/spacemodule.cpp:21:
In file included from src/repast4py/space.h:12:

```

```

In file included from /Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:481:
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:1975:17: error: no matching function
for call to object of type 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<
repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>, true>, std::allocator<std::__value_type
<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>>::__value_compare' (aka 'std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>, true>')
    if (value_comp().__v, __nd->__value__)
        ^~~~~~
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:2091:36: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>>::__find_equal<repast4py::Point<repast4py::R4Py_ContinuousPoint>>' requested here
    __node_base_pointer& __child = __find_equal(__parent, __k);
                                   ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/__tree:1172:16: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>>::__emplace_unique_key_args<repast4py::Point<repast4py::R4Py_ContinuousPoint>, const repast4py::Point<repast4py::R4Py_ContinuousPoint> &, repast4py::R4Py_Agent *&>' requested here
    return __emplace_unique_key_args(__f, _VSTD::forward<_First>(__f),
                                   ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:1150:24: note: in instantiation of function template specialization 'std::__tree<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, std::__map_value_compare<repast4py::Point<repast4py::R4Py_ContinuousPoint>, std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>, true>, std::allocator<std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>>::__emplace_unique<const repast4py::Point<repast4py::R4Py_ContinuousPoint> &, repast4py::R4Py_Agent *&>' requested here
    return __tree._.emplace_unique(_VSTD::forward<_Args>(__args)...);
                                   ^
src/repast4py/occupancy.h:173:22: note: in instantiation of function template specialization 'std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>::emplace<const repast4py::Point<repast4py::R4Py_ContinuousPoint> &, repast4py::R4Py_Agent *&>' requested here

```



```

    location_map.emplace(pt, agent);
    ^
src/repast4py/cspace.h:88:26: note: in instantiation of member function 'repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>::put' requested here
    if (accessor.put(agent, location_map, wpt)) {
    ^
src/repast4py/cspace.h:34:5: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::move' requested here
    BaseCSpace(const std::string& name, const BoundingBox& bounds, int tree_threshold);
    ^
src/repast4py/cspace.h:157:48: note: in instantiation of member function 'repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>::BaseCSpace' requested here
    delegate{std::unique_ptr<DelegateType>(new DelegateType(name, bounds, tree_threshold))} {}
    ^
src/repast4py/spacemodule.cpp:1628:31: note: in instantiation of member function 'repast4py::CSpace<repast4py::BaseCSpace<repast4py::SingleOccupancyAccessor<std::map<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *, repast4py::PointComp<repast4py::R4Py_ContinuousPoint>>, repast4py::R4Py_ContinuousPoint>, repast4py::StickyBorders<repast4py::R4Py_ContinuousPoint>>>::CSpace' requested here
    self->space = new CSpace<SOSCSpace>(name, box, tree_threshold);
    ^
/Applications/Xcode.app/Contents/Developer/Platforms/MacOSX.platform/Developer/SDKs/MacOSX.sdk/usr/include/c++/v1/map:514:10: note: candidate function not viable: no known conversion from 'const repast4py::Point<repast4py::R4Py_ContinuousPoint>' to 'const std::__value_type<repast4py::Point<repast4py::R4Py_ContinuousPoint>, repast4py::R4Py_Agent *>' for 1st argument
    bool operator()(const _CP& __x, const _CP& __y) const
    ^
17 warnings and 12 errors generated.
error: command '/opt/local/bin/mpicxx' failed with exit code 1
-----
ERROR: Failed building wheel for repast4py
Failed to build repast4py
ERROR: Could not build wheels for repast4py, which is required to install pyproject.toml-based projects
pt@MBP-di-Pietro-2 ~ %

```