Kinematic Factor

1.0

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Chapter 1

Modules Index

1.1 Modules List

Here is a list of all modules with brief descriptions:

Chapter 2

Data Type Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 3

Data Type Index

3.1 Data Types List

Here are the data types with brief descriptions:

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

Chapter 5

Module Documentation

5.1 IrrepName Namespace Reference

Functions

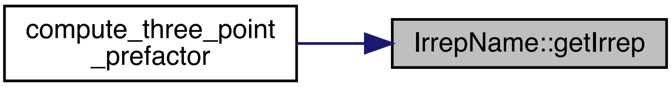
- std::vector< std::string > getIrrep (int &twoJ, int &P, string &lg)
- int irrepRows (string &irrep)

5.1.1 Function Documentation

5.1.1.1 getIrrep()

```
std::vector< std::string > IrrepName::getIrrep (
             int & twoJ,
             int & P,
             string & lg )
```

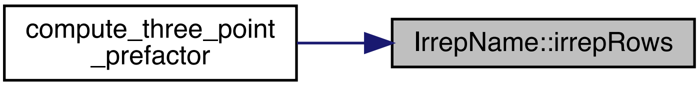
Here is the caller graph for this function:



5.1.1.2 irrepRows()

```
int IrrepName::irrepRows (
             string & irrep )
```

Here is the caller graph for this function:



5.2 iter Namespace Reference

Functions

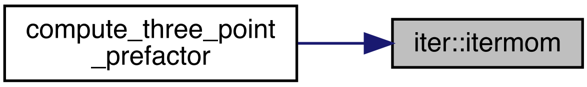
- std::vector< Vector3d > itermom (double max_mom, double min_mom, ADAT::Array1dO< ADAT::↩ Array1dO< int >> omit_mom, bool canonical)

5.2.1 Function Documentation

5.2.1.1 itermom()

```
std::vector< Vector3d > iter::itermom (
             double max_mom,
             double min_mom,
             ADAT::Array1dO< ADAT::Array1dO< int >> omit_mom,
             bool canonical )
```

Here is the caller graph for this function:



5.3 KFactorEnv Namespace Reference

Functions

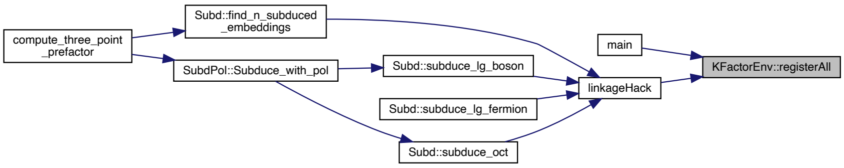
- bool registerAll ()

5.3.1 Function Documentation

5.3.1.1 registerAll()

```
bool KFactorEnv::registerAll ( )
```

Here is the caller graph for this function:



5.4 KfUt Namespace Reference

Data Structures

- class ToArray

Functions

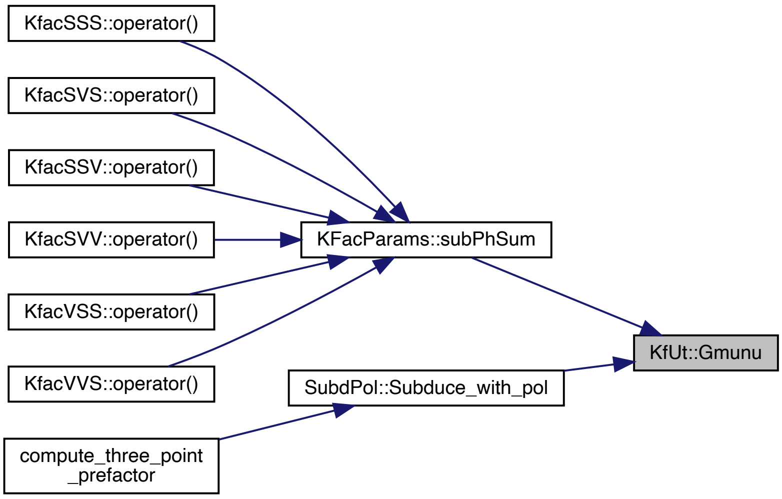
- double truncate (double num, int precision)
- Eigen::MatrixXcd Gmunu ()

5.4.1 Function Documentation

5.4.1.1 Gmunu()

```
Eigen::MatrixXcd KfUt::Gmunu ( )
```

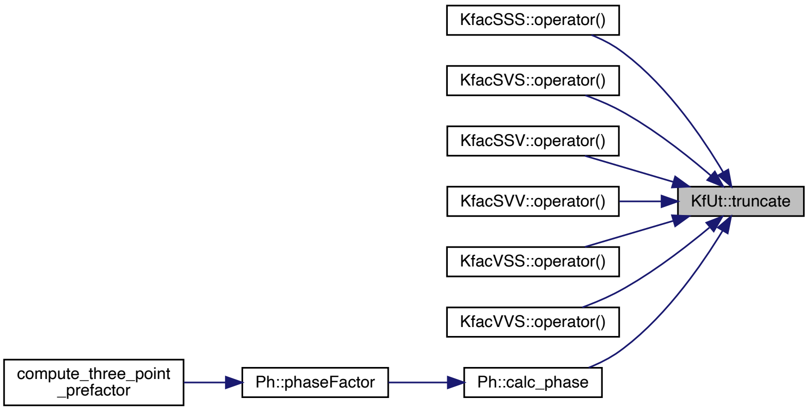
Here is the caller graph for this function:



5.4.1.2 truncate()

```
double KfUt::truncate (
             double num,
             int precision )
```

Here is the caller graph for this function:



5.5 LevCiv Namespace Reference

Functions

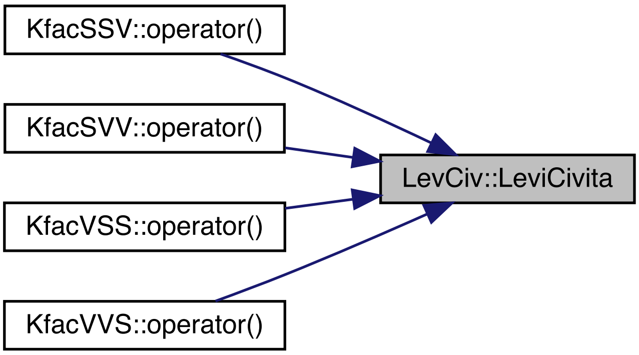
- double LeviCivita (int arr[ ], int n)

5.5.1 Function Documentation

5.5.1.1 LeviCivita()

```
double LevCiv::LeviCivita (
             int arr[ ],
             int n )
```

Here is the caller graph for this function:



5.6 LittleGrp Namespace Reference

Functions

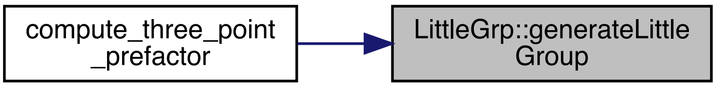
- string generateLittleGroup (Eigen::Vector3d &mom_)
- std::vector< double > refAngles (Eigen::Vector3d mom1)

5.6.1 Function Documentation

5.6.1.1 generateLittleGroup()

```
string LittleGrp::generateLittleGroup (
            Eigen::Vector3d & mom_ )
```

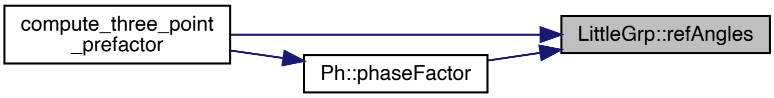
Here is the caller graph for this function:



5.6.1.2 refAngles()

```
std::vector< double > LittleGrp::refAngles (
            Eigen::Vector3d mom1 )
```

Here is the caller graph for this function:



5.7 naming Namespace Reference

Functions

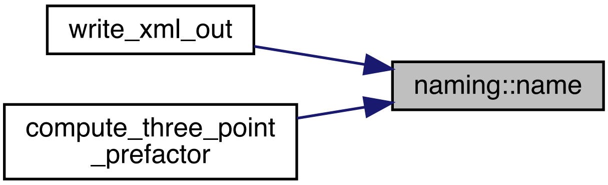
- string name (int npt, Ph::tripKey two_abs_lam, Vector3d mom1, Vector3d mom_curr, Vector3d mom3, irrep_label rep1, irrep_label rep_curr, irrep_label rep3, string LG1, string LG_curr, string LG3, string lev1, string lev3)

5.7.1 Function Documentation

5.7.1.1 name()

```
string naming::name (
             int npt,
             Ph::tripKey two_abs_lam,
             Vector3d mom1,
             Vector3d mom_curr,
             Vector3d mom3,
             irrep_label rep1,
             irrep_label rep_curr,
             irrep_label rep3,
             string LG1,
             string LG_curr,
             string LG3,
             string lev1,
             string lev3 )
```

Here is the caller graph for this function:



5.8 Ph Namespace Reference

Data Structures

- struct phChars

Typedefs

- typedef std::tuple< int, int, int > tripKey

Functions

- Ph::phChars phaseFactor (int twoJ1, int twoJ2, int twoJCurr, Eigen::Vector3d mom1, Eigen::Vector3d mom2, bool compute)
- std::complex< double > comp_Wigner_d (int twoJ, int twolam1, int twolam2, double a1, double b1, double c1, double a2, double b2, double c2, int n)
- map< Ph::tripKey, complex< double > > calc_phase (int twoJ1, int twoJ2, int twoJCurr, double mom1_sq, double mom2_sq, double mom_curr_sq, vector< double > r_mom1, vector< double > r_n_mom1, vector< double > r_mom2, vector< double > r2, vector< double > r_mom_curr, vector< double > r_n_mom_curr)
- map< Ph::tripKey, complex< double > > cnst_phase (int twoJ1, int twoJ2, int twoJCurr)

5.8.1 Typedef Documentation

5.8.1.1 tripKey

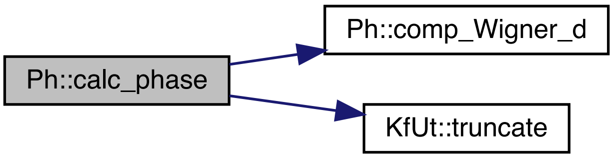
```
typedef std::tuple<int, int, int> Ph::tripKey
```

5.8.2 Function Documentation

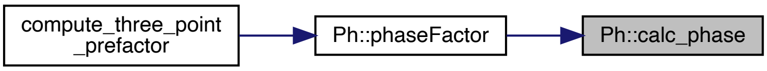
5.8.2.1 calc_phase()

```
map< Ph::tripKey, complex< double > > Ph::calc_phase (
             int twoJ1,
             int twoJ2,
             int twoJCurr,
             double mom1_sq,
             double mom2_sq,
             double mom_curr_sq,
             vector< double > r_mom1,
             vector< double > r_n_mom1,
             vector< double > r_mom2,
             vector< double > r2,
             vector< double > r_mom_curr,
             vector< double > r_n_mom_curr )
```

Here is the call graph for this function:



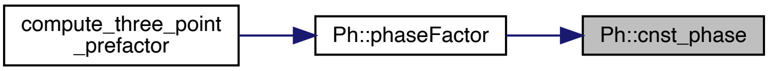
Here is the caller graph for this function:



5.8.2.2 cnst_phase()

```
map< Ph::tripKey, complex< double > > Ph::cnst_phase (
             int twoJ1,
             int twoJ2,
             int twoJCurr )
```

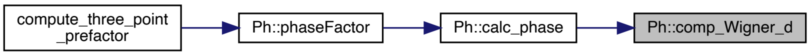
Here is the caller graph for this function:



5.8.2.3 comp_Wigner_d()

```
std::complex< double > Ph::comp_Wigner_d (
             int twoJ,
             int twolam1,
             int twolam2,
             double a1,
             double b1,
             double c1,
             double a2,
             double b2,
             double c2,
             int n )
```

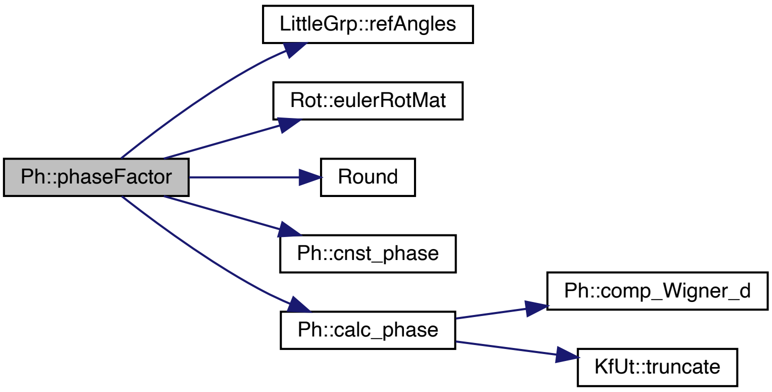
Here is the caller graph for this function:



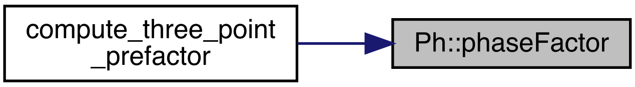
5.8.2.4 phaseFactor()

```
Ph::phChars Ph::phaseFactor (
             int twoJ1,
             int twoJ2,
             int twoJCurr,
             Eigen::Vector3d mom1,
             Eigen::Vector3d mom2,
             bool compute )
```

Here is the call graph for this function:



Here is the caller graph for this function:



5.9 PolVec Namespace Reference

Functions

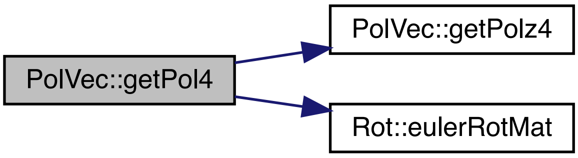
- Eigen::MatrixXcd getPolz4 (double &mom_sq, const int &two_helicity, double &mass_sq, bool &curr)
- Eigen::MatrixXcd getPol4 (double &mom_sq, const int &two_helicity, double &mass_sq, double &phi, double &theta, double &psi, bool curr)

5.9.1 Function Documentation

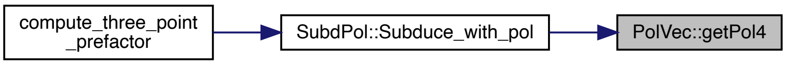
5.9.1.1 getPol4()

```
Eigen::MatrixXcd PolVec::getPol4 (
             double & mom_sq,
             const int & two_helicity,
             double & mass_sq,
             double & phi,
             double & theta,
             double & psi,
             bool curr )
```

Here is the call graph for this function:



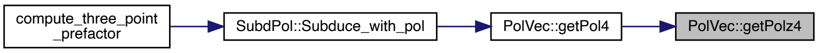
Here is the caller graph for this function:



5.9.1.2 getPolz4()

```
Eigen::MatrixXcd PolVec::getPolz4 (
             double & mom_sq,
             const int & two_helicity,
             double & mass_sq,
             bool & curr )
```

Here is the caller graph for this function:



5.10 Rot Namespace Reference

Functions

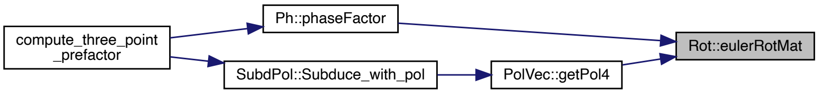
- Eigen::MatrixXd eulerRotMat (double alpha, double beta, double gamma)

5.10.1 Function Documentation

5.10.1.1 eulerRotMat()

```
Eigen::MatrixXd Rot::eulerRotMat (
             double alpha,
             double beta,
             double gamma )
```

Here is the caller graph for this function:



5.11 Subd Namespace Reference

Functions

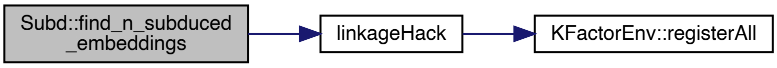
- map< int, complex< double > > subduce_lg_boson (const irrep_label &irrep, const string &little_group)
- map< int, complex< double > > subduce_lg_fermion (const irrep_label &irrep, const string &little_group)
- map< int, complex< double > > subduce_oct (const irrep_label &irrep)
- int find_n_subduced_embeddings (const string &group, const string &irrep, int twoJ, int eta_tilde)

5.11.1 Function Documentation

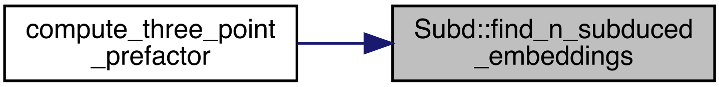
5.11.1.1 find_n_subduced_embeddings()

```
int Subd::find_n_subduced_embeddings (
             const string & group,
             const string & irrep,
             int twoJ,
             int eta_tilde )
```

Here is the call graph for this function:



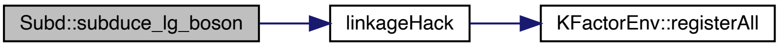
Here is the caller graph for this function:



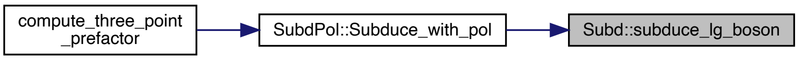
5.11.1.2 subduce_lg_boson()

```
map< int, complex< double > > Subd::subduce_lg_boson (
             const irrep_label & irrep,
             const string & little_group )
```

Here is the call graph for this function:



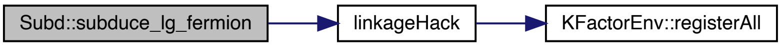
Here is the caller graph for this function:



5.11.1.3 subduce_lg_fermion()

```
map< int, complex< double > > Subd::subduce_lg_fermion (
            const irrep_label & irrep,
            const string & little_group )
```

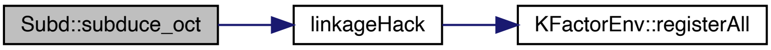
Here is the call graph for this function:



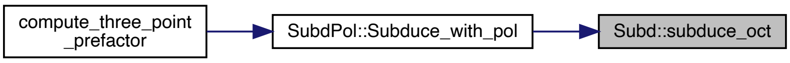
5.11.1.4 subduce_oct()

```
map< int, complex< double > > Subd::subduce_oct (
            const irrep_label & irrep )
```

Here is the call graph for this function:



Here is the caller graph for this function:



5.12 SubdPol Namespace Reference

Functions

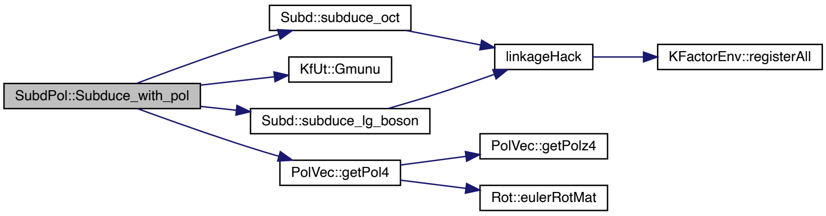
- map< int, Eigen::MatrixXcd > Subduce_with_pol (double &mom_sq, double &mass_sq, int &twoJ, const irrep_label &irrep, const string &little_group, double R1_phi, double R1_theta, double R1_psi, bool curr)

5.12.1 Function Documentation

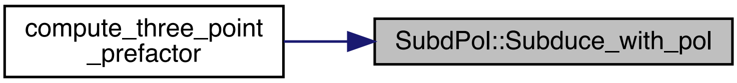
5.12.1.1 Subduce_with_pol()

```
map< int, Eigen::MatrixXcd > SubdPol::Subduce_with_pol (
             double & mom_sq,
             double & mass_sq,
             int & twoJ,
             const irrep_label & irrep,
             const string & little_group,
             double R1_phi,
             double R1_theta,
             double R1_psi,
             bool curr )
```

Here is the call graph for this function:



Here is the caller graph for this function:



Chapter 6

Data Type Documentation

6.1 flavour Struct Reference

```
#include <compute_kfactor_xml_read_write.h>
```

Data Fields

- int threeY
- int twoIz
- int twoI

6.1.1 Field Documentation

6.1.1.1 threeY

```
int flavour::threeY
```

6.1.1.2 twoI

```
int flavour::twoI
```

6.1.1.3 twoIz

```
int flavour::twoIz
```

The documentation for this struct was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h

6.2 irrep_label Struct Reference

```
#include <subduction.h>
```

Public Member Functions

- bool operator< (const irrep_label &rhs) const

Data Fields

- string irrep
- int row
- int twoJ
- int n
- int P

6.2.1 Member Function Documentation

6.2.1.1 operator<()

```
bool irrep_label::operator< (
            const irrep_label & rhs ) const
```

6.2.2 Field Documentation

6.2.2.1 irrep

```
string irrep_label::irrep
```

6.2.2.2 n

```
int irrep_label::n
```

6.2.2.3 P

```
int irrep_label::P
```

6.2.2.4 row

```
int irrep_label::row
```

6.2.2.5 twoJ

```
int irrep_label::twoJ
```

The documentation for this struct was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h

6.3 IrrepLam_t Struct Reference

```
#include <compute_kfactor_xml_read_write.h>
```

Data Fields

- string irrep
- int row
- Eigen::Vector3d mom
- double mom_sq
- string lev
- int two_lam

6.3.1 Field Documentation

6.3.1.1 irrep

```
string IrrepLam_t::irrep
```

6.3.1.2 lev

```
string IrrepLam_t::lev
```

6.3.1.3 mom

```
Eigen::Vector3d IrrepLam_t::mom
```

6.3.1.4 mom_sq

```
double IrrepLam_t::mom_sq
```

6.3.1.5 row

```
int IrrepLam_t::row
```

6.3.1.6 two_lam

```
int IrrepLam_t::two_lam
```

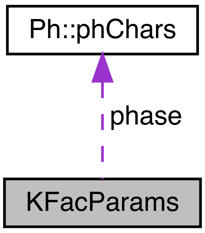
The documentation for this struct was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h

6.4 KFacParams Class Reference

```
#include <kfac_params.h>
```

Collaboration diagram for KFacParams:



Public Member Functions

- virtual ∼KFacParams ()
- KFacParams (map< int, Eigen::MatrixXcd >, map< int, Eigen::MatrixXcd >, map< int, Eigen::MatrixXcd >, Ph::phChars, VectorXd, VectorXd)
- virtual vector< MatrixXcd > subPhSum () const
- virtual Ph::tripKey two_abs_lam () const

Data Fields

- map< int, Eigen::MatrixXcd > Sub1
- map< int, Eigen::MatrixXcd > SubCurr
- map< int, Eigen::MatrixXcd > Sub3
- Ph::phChars phase
- VectorXd qp
- VectorXd qm

6.4.1 Constructor & Destructor Documentation

6.4.1.1 ∼KFacParams()

```
virtual KFacParams::∼KFacParams ( )  [inline], [virtual]
```

6.4.1.2 KFacParams()

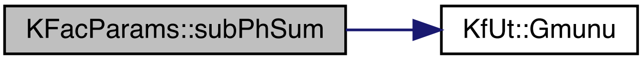
```
KFacParams::KFacParams (
             map< int, Eigen::MatrixXcd > Sub1_,
             map< int, Eigen::MatrixXcd > SubCurr_,
             map< int, Eigen::MatrixXcd > Sub3_,
             Ph::phChars phase_,
             VectorXd qp_,
             VectorXd qm_ )
```

6.4.2 Member Function Documentation

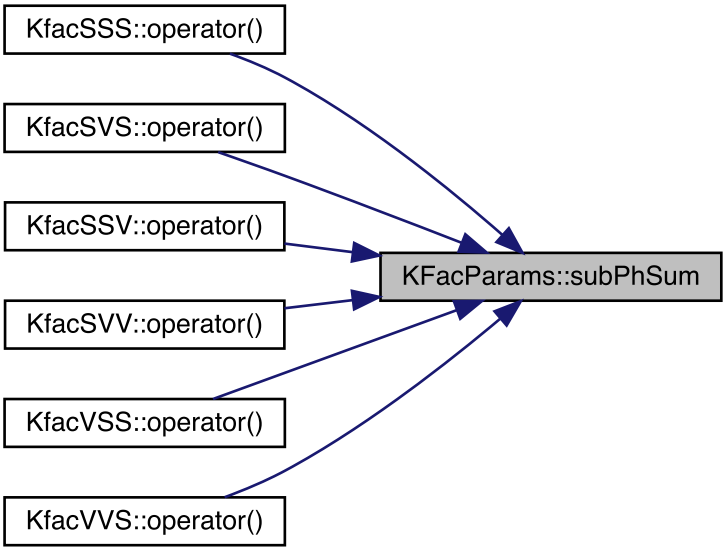
6.4.2.1 subPhSum()

```
vector< MatrixXcd > KFacParams::subPhSum ( ) const  [virtual]
```

Here is the call graph for this function:



Here is the caller graph for this function:



6.4.2.2 two_abs_lam()

```
Ph::tripKey KFacParams::two_abs_lam ( ) const  [virtual]
```

6.4.3 Field Documentation

6.4.3.1 phase

```
Ph::phChars KFacParams::phase
```

6.4.3.2 qm

```
VectorXd KFacParams::qm
```

6.4.3.3 qp

```
VectorXd KFacParams::qp
```

6.4.3.4 Sub1

```
map< int, Eigen::MatrixXcd > KFacParams::Sub1
```

6.4.3.5 Sub3

```
map< int, Eigen::MatrixXcd > KFacParams::Sub3
```

6.4.3.6 SubCurr

```
map< int, Eigen::MatrixXcd > KFacParams::SubCurr
```

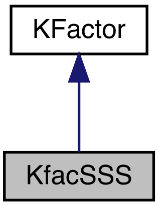
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.cc

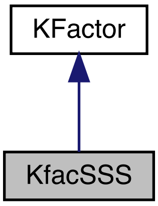
6.5 KfacSSS Class Reference

```
#include <kfactor_pigammapi.h>
```

Inheritance diagram for KfacSSS:



Collaboration diagram for KfacSSS:



Public Member Functions

- vector$<$ complex$<$ double $>$ $>$ operator() (const KFacParams &params) const
- string name () const

6.5.1 Member Function Documentation

6.5.1.1 name()

```
string KfacSSS::name ( ) const  [inline], [virtual]
```

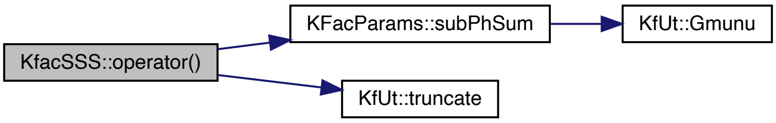
Implements KFactor.

6.5.1.2 operator()()

```
vector< complex< double > > KfacSSS::operator() (
            const KFacParams & params ) const  [virtual]
```

Implements KFactor.

Here is the call graph for this function:



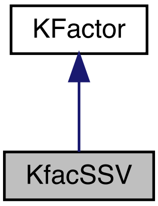
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc

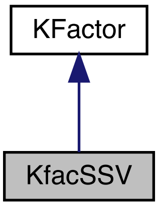
6.6 KfacSSV Class Reference

```
#include <kfactor_pigammarho.h>
```

Inheritance diagram for KfacSSV:



Collaboration diagram for KfacSSV:



Public Member Functions

- vector< complex< double > > operator() (const KFacParams &params) const
- string name () const

6.6.1 Member Function Documentation

6.6.1.1 name()

```
string KfacSSV::name ( ) const  [inline], [virtual]
```

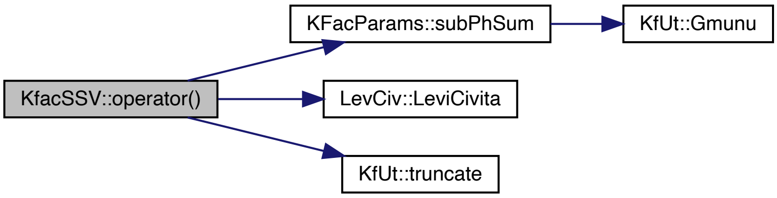
Implements KFactor.

6.6.1.2 operator()()

```
vector< complex< double > > KfacSSV::operator() (
             const KFacParams & params ) const  [virtual]
```

Implements KFactor.

Here is the call graph for this function:



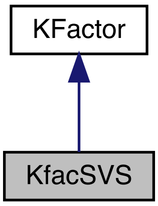
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc

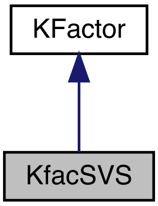
6.7 KfacSVS Class Reference

```
#include <kfactor_pigammapi.h>
```

Inheritance diagram for KfacSVS:



Collaboration diagram for KfacSVS:



Public Member Functions

- vector< complex< double > > operator() (const KFacParams &params) const
- string name () const

6.7.1 Member Function Documentation

6.7.1.1 name()

```
string KfacSVS::name ( ) const  [inline], [virtual]
```

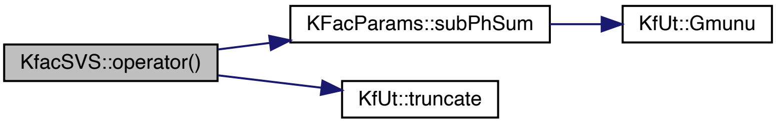
Implements KFactor.

6.7.1.2 operator()()

```
vector< complex< double > > KfacSVS::operator() (
            const KFacParams & params ) const  [virtual]
```

Implements KFactor.

Here is the call graph for this function:



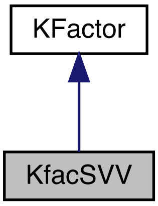
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc

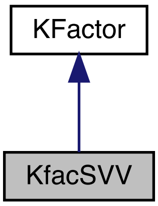
6.8 KfacSVV Class Reference

```
#include <kfactor_pigammarho.h>
```

Inheritance diagram for KfacSVV:



Collaboration diagram for KfacSVV:



Public Member Functions

- vector< complex< double > > operator() (const KFacParams &params) const
- string name () const

6.8.1 Member Function Documentation

6.8.1.1 name()

```
string KfacSVV::name ( ) const  [inline], [virtual]
```

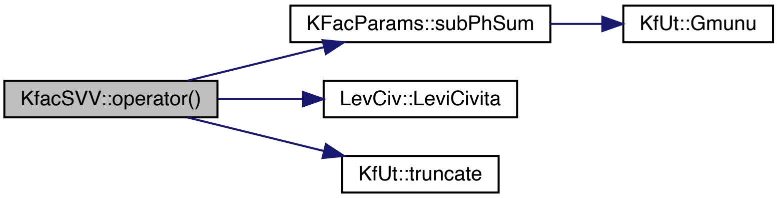
Implements KFactor.

6.8.1.2 operator()()

```
vector< complex< double > > KfacSVV::operator() (
              const KFacParams & params ) const  [virtual]
```

Implements KFactor.

Here is the call graph for this function:



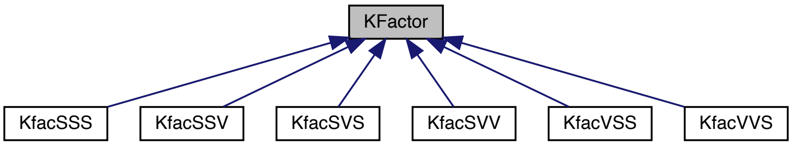
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc

6.9 KFactor Class Reference

```
#include <kfactor_pigammarho.h>
```

Inheritance diagram for KFactor:



Public Member Functions

- virtual ∼KFactor ()
- virtual vector< complex< double > > operator() (const KFacParams &params) const =0
- virtual string name () const =0

6.9.1 Constructor & Destructor Documentation

6.9.1.1 ∼KFactor()

```
virtual KFactor::∼KFactor ( ) [inline], [virtual]
```

6.9.2 Member Function Documentation

6.9.2.1 name()

```
virtual string KFactor::name ( ) const [pure virtual]
```

Implemented in KfacVSS, KfacVVS, KfacSSV, KfacSVV, KfacSSS, and KfacSVS.

6.9.2.2 operator()()

```
virtual vector<complex<double> > KFactor::operator() (
            const KFacParams & params ) const  [pure virtual]
```

Implemented in KfacVSS, KfacVVS, KfacSSV, KfacSVV, KfacSSS, and KfacSVS.

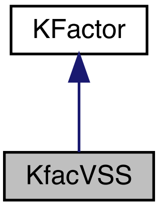
The documentation for this class was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h

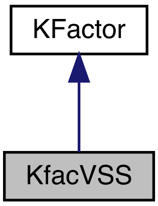
6.10 KfacVSS Class Reference

```
#include <kfactor_pigammarho.h>
```

Inheritance diagram for KfacVSS:



Collaboration diagram for KfacVSS:



Public Member Functions

- vector< complex< double > > operator() (const KFacParams &params) const
- string name () const

6.10.1 Member Function Documentation

6.10.1.1 name()

```
string KfacVSS::name ( ) const  [inline], [virtual]
```

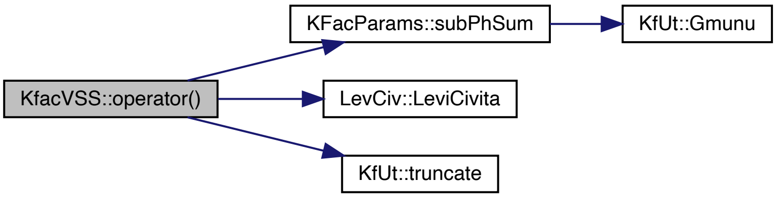
Implements KFactor.

6.10.1.2 operator()()

```
vector< complex< double > > KfacVSS::operator() (
             const KFacParams & params ) const  [virtual]
```

Implements KFactor.

Here is the call graph for this function:



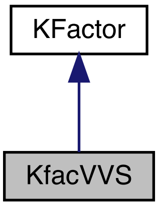
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc

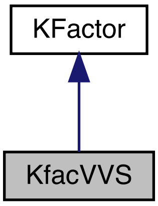
6.11 KfacVVS Class Reference

```
#include <kfactor_pigammarho.h>
```

Inheritance diagram for KfacVVS:



Collaboration diagram for KfacVVS:



Public Member Functions

- vector< complex< double > > operator() (const KFacParams &params) const
- string name () const

6.11.1 Member Function Documentation

6.11.1.1 name()

```
string KfacVVS::name ( ) const  [inline], [virtual]
```

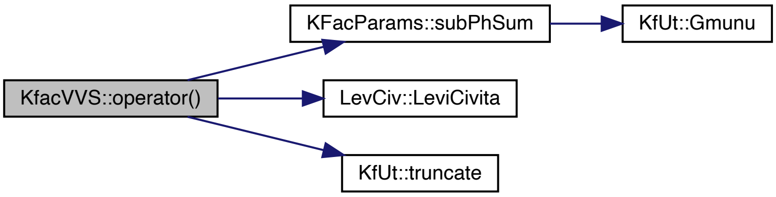
Implements KFactor.

6.11.1.2 operator()()

```
vector< complex< double > > KfacVVS::operator() (
            const KFacParams & params ) const  [virtual]
```

Implements KFactor.

Here is the call graph for this function:



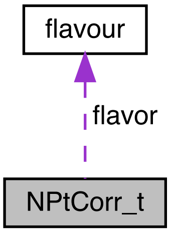
The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc

6.12 NPtCorr_t Struct Reference

```
#include <compute_kfactor_xml_read_write.h>
```

Collaboration diagram for NPtCorr_t:



Data Fields

- string name
- Array1dO< string > levels
- int twoJ
- int P
- int ell
- ADAT::Array1dO< string > elab
- double max_mom
- double min_mom
- bool canonical
- ADAT::Array1dO< ADAT::Array1dO< int > > omit_mom
- flavour flavor
- bool projected
- bool smearedP
- int t_slice
- bool creation_op

6.12.1 Field Documentation

6.12.1.1 canonical

```
bool NPtCorr_t::canonical
```

6.12.1.2 creation_op

```
bool NPtCorr_t::creation_op
```

6.12.1.3 elab

```
ADAT::Array1dO<string> NPtCorr_t::elab
```

6.12.1.4 ell

```
int NPtCorr_t::ell
```

6.12.1.5 flavor

```
flavour NPtCorr_t::flavor
```

6.12.1.6 levels

```
Array1dO<string> NPtCorr_t::levels
```

6.12.1.7 max_mom

```
double NPtCorr_t::max_mom
```

6.12.1.8 min_mom

```
double NPtCorr_t::min_mom
```

6.12.1.9 name

```
string NPtCorr_t::name
```

6.12.1.10 omit_mom

```
ADAT::Array1dO<ADAT::Array1dO<int> > NPtCorr_t::omit_mom
```

6.12.1.11 P

```
int NPtCorr_t::P
```

6.12.1.12 projected

```
bool NPtCorr_t::projected
```

6.12.1.13 smearedP

```
bool NPtCorr_t::smearedP
```

6.12.1.14 t_slice

```
int NPtCorr_t::t_slice
```

6.12.1.15 twoJ

```
int NPtCorr_t::twoJ
```

The documentation for this struct was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h

6.13 NPtIrrepLam_t Struct Reference

```
#include <compute_kfactor_xml_read_write.h>
```

Data Fields

- vector< IrrepLam_t > Npt
- Array1dO< Complex > kfac

6.13.1 Field Documentation

6.13.1.1 kfac

```
Array1dO<Complex> NPtIrrepLam_t::kfac
```

6.13.1.2 Npt

```
vector<IrrepLam_t> NPtIrrepLam_t::Npt
```

The documentation for this struct was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h

6.14 Ph::phChars Struct Reference

```
#include <phase.h>
```

Public Member Functions

- bool operator< (const phChars &rhs) const

Data Fields

- Eigen::Vector3d mom2
- Eigen::Vector3d mom1
- map< Ph::tripKey, complex< double > > lam_phase
- Eigen::MatrixXcd r

6.14.1 Member Function Documentation

6.14.1.1 operator<()

```
bool Ph::phChars::operator< (
            const phChars & rhs ) const
```

6.14.2 Field Documentation

6.14.2.1 lam_phase

```
map< Ph::tripKey , complex<double> > Ph::phChars::lam_phase
```

6.14.2.2 mom1

```
Eigen::Vector3d Ph::phChars::mom1
```

6.14.2.3 mom2

```
Eigen::Vector3d Ph::phChars::mom2
```

6.14.2.4 r

```
Eigen::MatrixXcd Ph::phChars::r
```

The documentation for this struct was generated from the following file:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.h

6.15 KfUt::ToArray Class Reference

```
#include <kfac_utils.h>
```

Static Public Member Functions

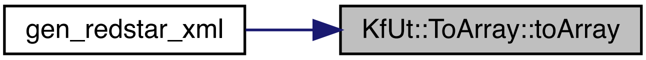
- static XMLArray::Array< int > toArray (Eigen::Vector3d input)
- static XMLArray::Array< int > toArray (Array1dO< int > input)

6.15.1 Member Function Documentation

6.15.1.1 toArray() [1/2]

```
XMLArray::Array< int > KfUt::ToArray::toArray (
            Eigen::Vector3d input )  [static]
```

Here is the caller graph for this function:



6.15.1.2 toArray() [2/2]

```
XMLArray::Array< int > KfUt::ToArray::toArray (
            Array1dO< int > input )  [static]
```

The documentation for this class was generated from the following files:

- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h
- /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.cc

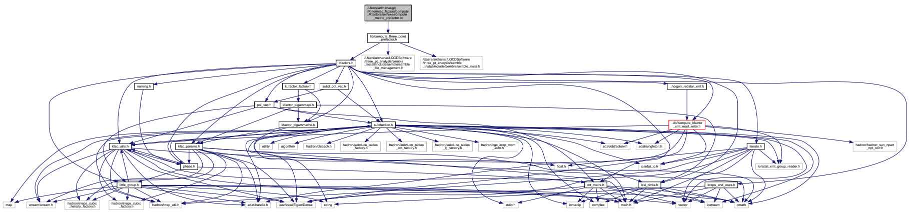
Chapter 7

File Documentation

7.1 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_↩ prefactor.cc File Reference

```
#include "lib/compute_three_point_prefactor.h"
```

Include dependency graph for compute_matrix_prefactor.cc:


/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/exe/compute _matrix_prefactor.cc
lib/compute_three_point _prefactor.h
kfactors.h
/Users/archanar/LQCDSoftware /three_pt_analysis/semble _install/include/semble/semble _file_management.h
/Users/archanar/LQCDSoftware /three_pt_analysis/semble _install/include/semble/semble_meta.h
naming.h
k_factor_factory.h
subd_pol_vec.h
../io/gen_redstar_xml.h
pol_vec.h
kfactor_pigammapi.h
kfactor_pigammarho.h
subduction.h
../io/compute_kfactor _xml_read_write.h
kfac_utils.h
kfac_params.h
utility
algorithm
hadron/clebsch.h
hadron/subduce_tables _factory.h
hadron/subduce_tables _oct_factory.h
hadron/subduce_tables _lg_factory.h
hadron/cgc_irrep_mom _auto.h
adat/objfactory.h
adat/singleton.h
iterate.h
hadron/hadron_sun_npart _npt_corr.h
phase.h
float.h
io/adat_io.h
io/adat_xml_group_reader.h
little_group.h
rot_matrix.h
levi_civita.h
irreps_and_rows.h
map
ensem/ensem.h
hadron/irreps_cubic _helicity_factory.h
hadron/irreps_cubic _factory.h
hadron/irrep_util.h
adat/handle.h
/usr/local/Eigen/Dense
string
stdio.h
iomanip
complex
math.h
vector
iostream
cmath

Functions

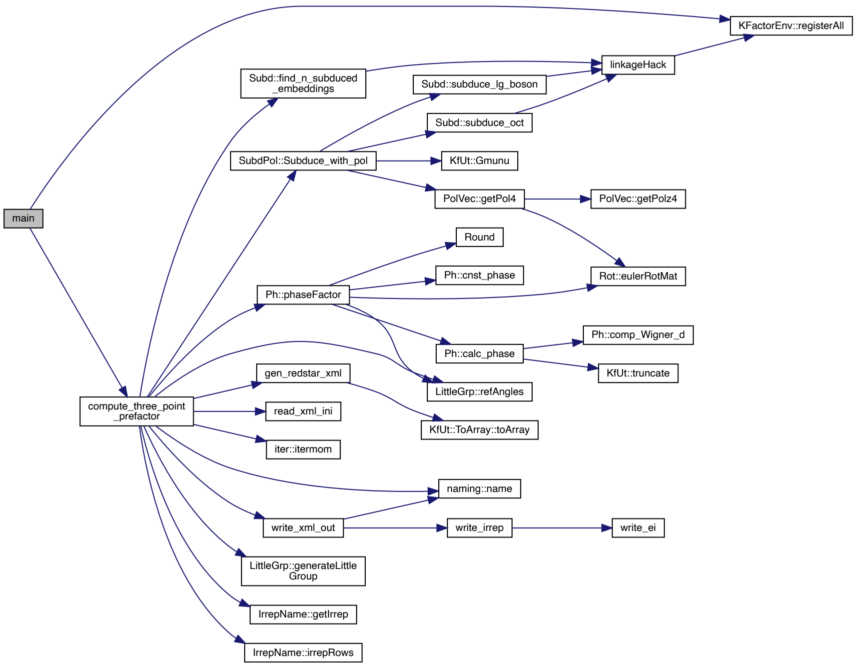
- int main (int argc, char ∗∗argv)

7.1.1 Function Documentation

7.1.1.1 main()

```
int main (
            int argc,
            char ** argv )
```

Here is the call graph for this function:



7.2 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_↩ xml_read_write.cc File Reference

```
#include "compute_kfactor_xml_read_write.h"
```

Functions

- void read_xml_ini (XMLReader &xml_in, int &npt, int &L, double &Xi, double &XiE, std::vector< NPtCorr_t > &had, int &num_matrix_elem, string &matrix_type, Array1dO< string > &matrix_name, string &print_zero, string &compute_phase, string &elab_dir, bool &make_redstar_xml, string &redstar_xml)
- void write_ei (XMLWriter &xml, const std::string &path, const Eigen::Vector3d &input)
- void write_irrep (XMLWriter &xml_out, IrrepLam_t &irrep_lam)
- void write_xml_out (XMLWriter &xml_out, int &npt, int &L, double &Xi, double &XiE, std::vector< NPtCorr_t > &had, int &num_matrix_elem, string &matrix_type, Array1dO< string > &matrix_name, string &print_zero, string &compute_phase, string &elab_dir, bool &make_redstar_xml, vector< NPtIrrepLam_t > &irreps, int &count)

7.2.1 Function Documentation

7.2.1.1 read_xml_ini()

```
void read_xml_ini (
            XMLReader & xml_in,
            int & npt,
            int & L,
            double & Xi,
            double & XiE,
            std::vector< NPtCorr_t > & had,
            int & num_matrix_elem,
            string & matrix_type,
            Array1dO< string > & matrix_name,
            string & print_zero,
            string & compute_phase,
            string & elab_dir,
            bool & make_redstar_xml,
            string & redstar_xml )
```

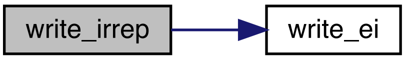
7.2.1.2 write_ei()

```
void write_ei (
            XMLWriter & xml,
            const std::string & path,
            const Eigen::Vector3d & input )
```

7.2.1.3 write_irrep()

```
void write_irrep (
            XMLWriter & xml_out,
            IrrepLam_t & irrep_lam )
```

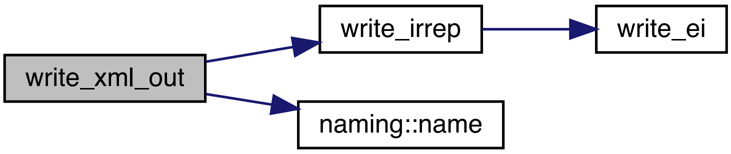
Here is the call graph for this function:



7.2.1.4 write_xml_out()

```
void write_xml_out (
            XMLWriter & xml_out,
            int & npt,
            int & L,
            double & Xi,
            double & XiE,
            std::vector< NPtCorr_t > & had,
            int & num_matrix_elem,
            string & matrix_type,
            Array1dO< string > & matrix_name,
            string & print_zero,
            string & compute_phase,
            string & elab_dir,
            bool & make_redstar_xml,
            vector< NPtIrrepLam_t > & irreps,
            int & count )
```

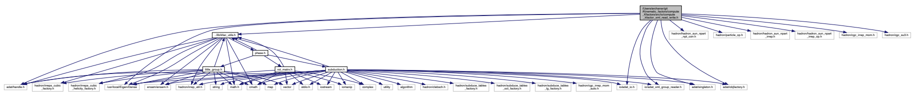
Here is the call graph for this function:



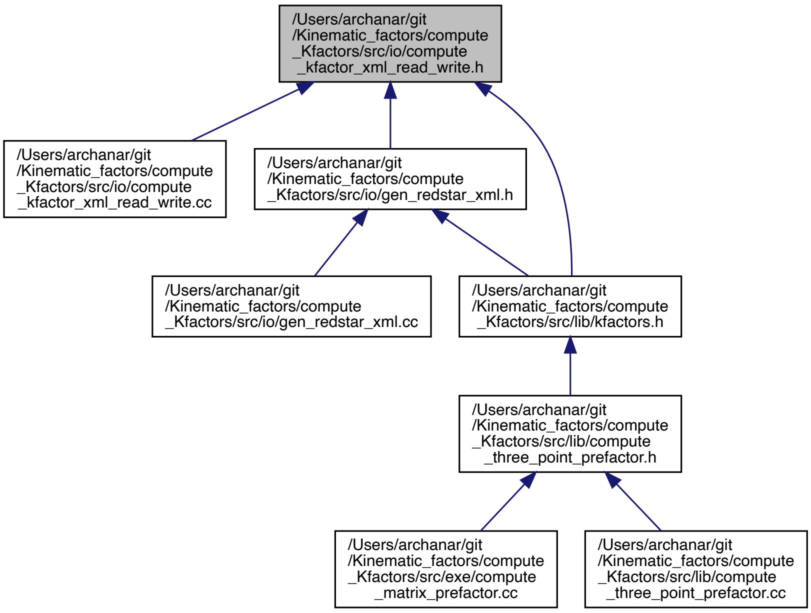
7.3 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h File Reference

```
#include </usr/local/Eigen/Dense>
#include "io/adat_io.h"
#include "io/adat_xml_group_reader.h"
#include "hadron/hadron_sun_npart_npt_corr.h"
#include "hadron/particle_op.h"
#include "hadron/hadron_sun_npart_irrep.h"
#include "hadron/hadron_sun_npart_irrep_op.h"
#include "adat/singleton.h"
#include "adat/objfactory.h"
#include <adat/handle.h>
#include "hadron/cgc_irrep_mom.h"
#include "hadron/cgc_su3.h"
#include "../lib/kfac_utils.h"
```

Include dependency graph for compute_kfactor_xml_read_write.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Data Structures

- struct IrrepLam_t
- struct NPtIrrepLam_t
- struct flavour
- struct NPtCorr_t

Functions

- void read_xml_ini (XMLReader &xml_in, int &npt, int &L, double &Xi, double &XiE, std::vector< NPtCorr_t > &had, int &num_matrix_elem, string &matrix_type, Array1dO< string > &matrix_name, string &print_zero, string &compute_phase, string &elab_dir, bool &make_redstar_xml, string &redstar_xml)
- void write_ei (XMLWriter &xml, const std::string &path, const Eigen::Vector3d &input)
- void write_irrep (XMLWriter &xml_out, IrrepLam_t &irrep_lam)
- void write_xml_out (XMLWriter &xml_out, int &npt, int &L, double &Xi, double &XiE, std::vector< NPtCorr_t > &had, int &num_matrix_elem, string &matrix_type, Array1dO< string > &matrix_name, string &print_zero, string &compute_phase, string &elab_dir, bool &make_redstar_xml, vector< NPtIrrepLam_t > &irreps, int &count)

7.3.1 Function Documentation

7.3.1.1 read_xml_ini()

```
void read_xml_ini (
            XMLReader & xml_in,
            int & npt,
            int & L,
            double & Xi,
            double & XiE,
            std::vector< NPtCorr_t > & had,
            int & num_matrix_elem,
            string & matrix_type,
            Array1dO< string > & matrix_name,
            string & print_zero,
            string & compute_phase,
            string & elab_dir,
            bool & make_redstar_xml,
            string & redstar_xml )
```

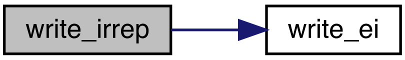
7.3.1.2 write_ei()

```
void write_ei (
            XMLWriter & xml,
            const std::string & path,
            const Eigen::Vector3d & input )
```

7.3.1.3 write_irrep()

```
void write_irrep (
            XMLWriter & xml_out,
            IrrepLam_t & irrep_lam )
```

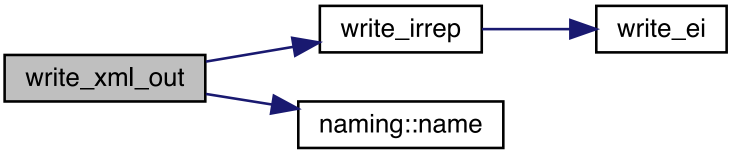
Here is the call graph for this function:



7.3.1.4 write_xml_out()

```
void write_xml_out (
             XMLWriter & xml_out,
             int & npt,
             int & L,
             double & Xi,
             double & XiE,
             std::vector< NPtCorr_t > & had,
             int & num_matrix_elem,
             string & matrix_type,
             Array1dO< string > & matrix_name,
             string & print_zero,
             string & compute_phase,
             string & elab_dir,
             bool & make_redstar_xml,
             vector< NPtIrrepLam_t > & irreps,
             int & count )
```

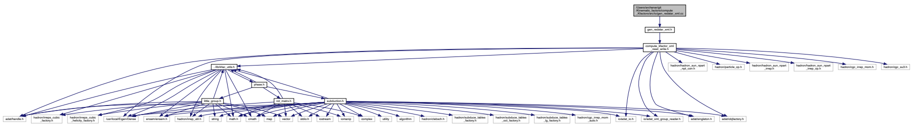
Here is the call graph for this function:



7.4 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc File Reference

`#include "gen_redstar_xml.h"`

Include dependency graph for gen_redstar_xml.cc:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
gen_redstar_xml.h
compute_kfactor_xml_read_write.h
../lib/kfac_utils.h
phase.h
little_group.h
rot_matrix.h
subduction.h
hadron/hadron_sun_npart_npt_corr.h
hadron/particle_op.h
hadron/hadron_sun_npart_irrep.h
hadron/hadron_sun_npart_irrep_op.h
hadron/cgc_irrep_mom.h
hadron/cgc_su3.h
adat/handle.h
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h
/usr/local/Eigen/Dense
ensem/ensem.h
hadron/irrep_util.h
string
math.h
cmath
map
vector
stdio.h
iostream
iomanip
complex
utility
algorithm
hadron/clebsch.h
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h

Functions

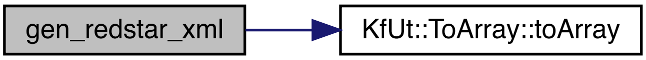
- void gen_redstar_xml (vector< NPtCorr_t > &had, vector< NPtIrrepLam_t > &irreps, XMLWriter &red_xml)

7.4.1 Function Documentation

7.4.1.1 gen_redstar_xml()

```
void gen_redstar_xml (
            vector< NPtCorr_t > & had,
            vector< NPtIrrepLam_t > & irreps,
            XMLWriter & red_xml )
```

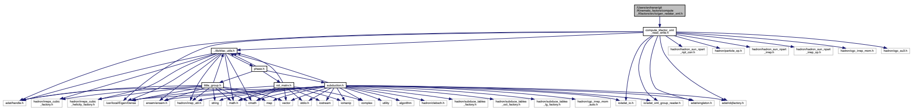
Here is the call graph for this function:



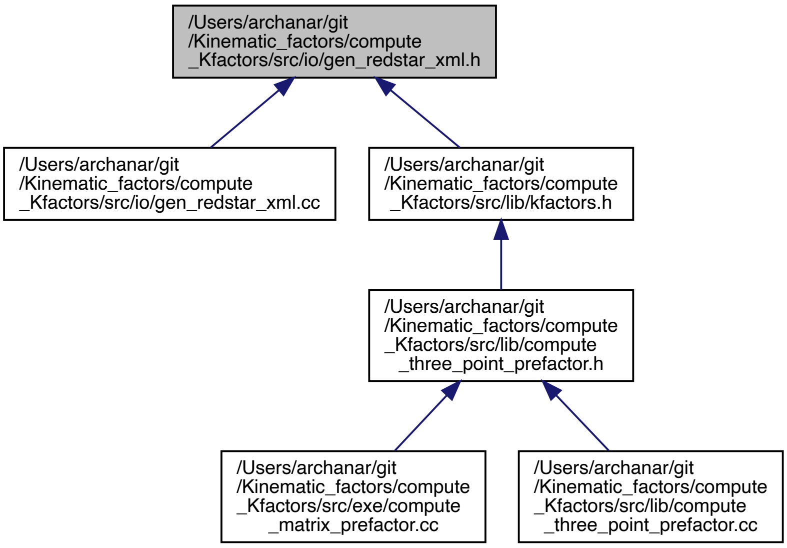
7.5 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h File Reference

```
#include "compute_kfactor_xml_read_write.h"
```

Include dependency graph for gen_redstar_xml.h:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
compute_kfactor_xml_read_write.h
../lib/kfac_utils.h
phase.h
little_group.h
rot_matrix.h
subduction.h
hadron/hadron_sun_npart_npt_corr.h
hadron/particle_op.h
hadron/hadron_sun_npart_irrep.h
hadron/hadron_sun_npart_irrep_op.h
hadron/cgc_irrep_mom.h
hadron/cgc_su3.h
adat/handle.h
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h
/usr/local/Eigen/Dense
ensem/ensem.h
hadron/irrep_util.h
string
math.h
cmath
map
vector
stdio.h
iostream
iomanip
complex
utility
algorithm
hadron/clebsch.h
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h

This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Functions

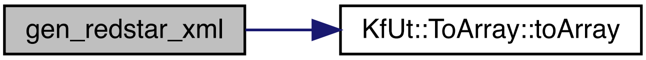
- void gen_redstar_xml (vector< NPtCorr_t > &had, vector< NPtIrrepLam_t > &irreps, XMLWriter &red_xml)

7.5.1 Function Documentation

7.5.1.1 gen_redstar_xml()

```
void gen_redstar_xml (
             vector< NPtCorr_t > & had,
             vector< NPtIrrepLam_t > & irreps,
             XMLWriter & red_xml )
```

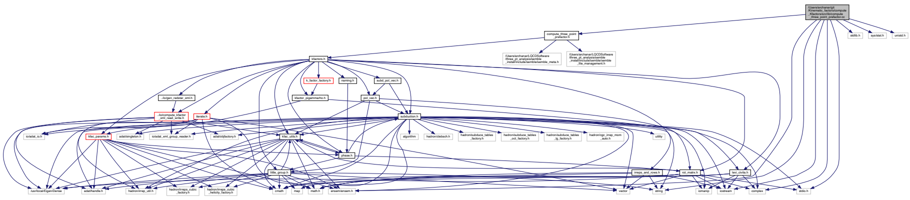
Here is the call graph for this function:



7.6 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc File Reference

```
#include "compute_three_point_prefactor.h"
```

Include dependency graph for compute_three_point_prefactor.cc:



Functions

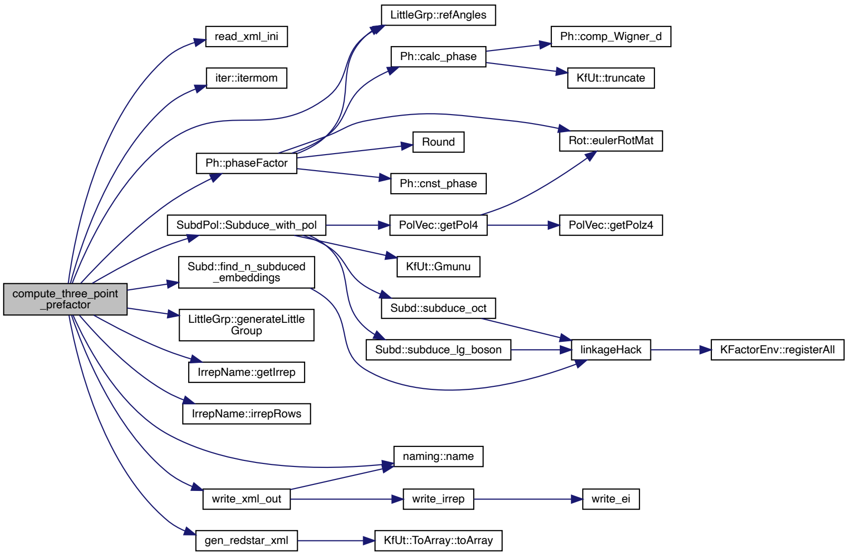
- void compute_three_point_prefactor (string &in, string &out)

7.6.1 Function Documentation

7.6.1.1 compute_three_point_prefactor()

```
void compute_three_point_prefactor (
             string & in,
             string & out )
```

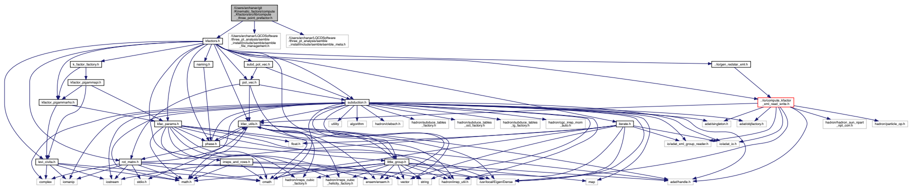
Here is the call graph for this function:



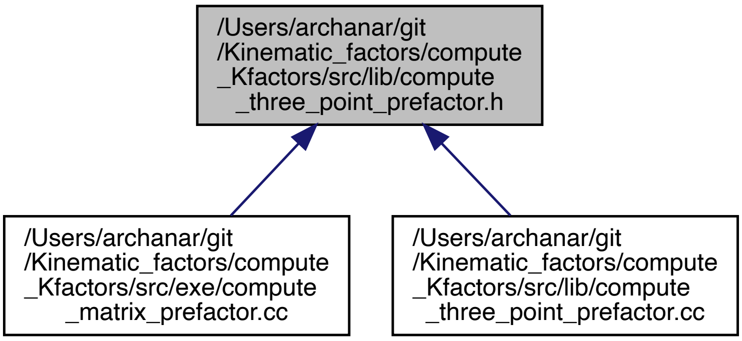
7.7 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h File Reference

```
#include "kfactors.h"
#include "/Users/archanar/LQCDSoftware/three_pt_analysis/semble_install/include/semble/s
_file_management.h"
#include "/Users/archanar/LQCDSoftware/three_pt_analysis/semble_install/include/semble/s
_meta.h"
```

Include dependency graph for compute_three_point_prefactor.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/compute _three_point_prefactor.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/exe/compute _matrix_prefactor.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/compute _three_point_prefactor.cc

Functions

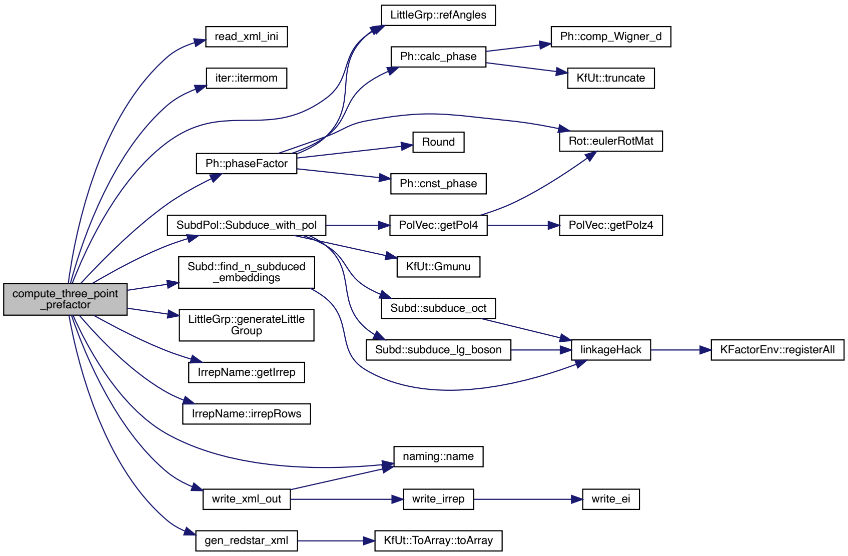
- void compute_three_point_prefactor (string &in, string &out)

7.7.1 Function Documentation

7.7.1.1 compute_three_point_prefactor()

```
void compute_three_point_prefactor (
             string & in,
             string & out )
```

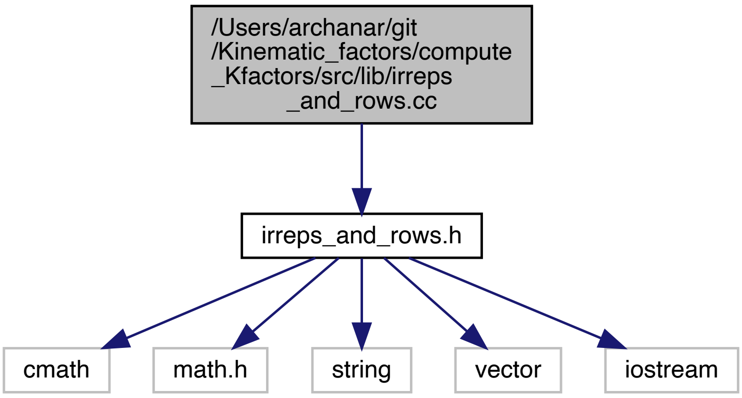
Here is the call graph for this function:



7.8 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/irreps_and_rows.cc File Reference

```
#include "irreps_and_rows.h"
```

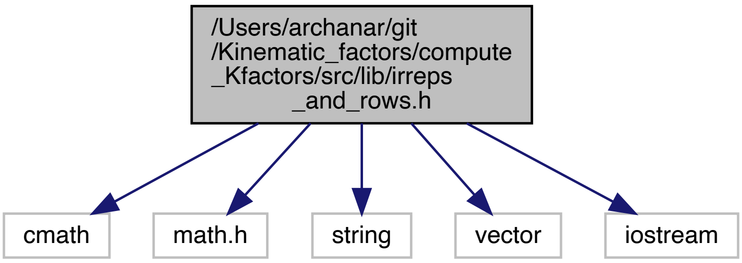
Include dependency graph for irreps_and_rows.cc:



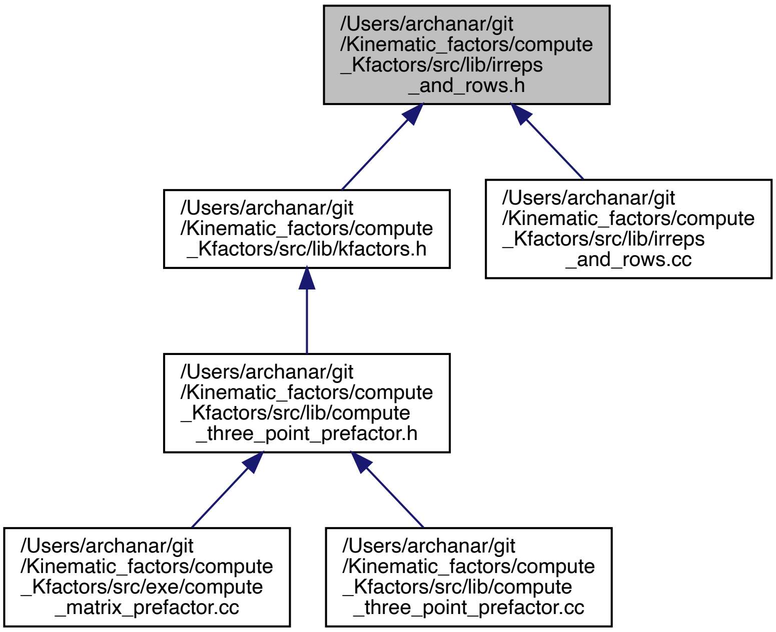
7.9 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/irreps_and_rows.h File Reference

```
#include <cmath>
#include "math.h"
#include <string>
#include <vector>
#include <iostream>
```

Include dependency graph for irreps_and_rows.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/irreps_and_rows.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/irreps_and_rows.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Namespaces

- IrrepName

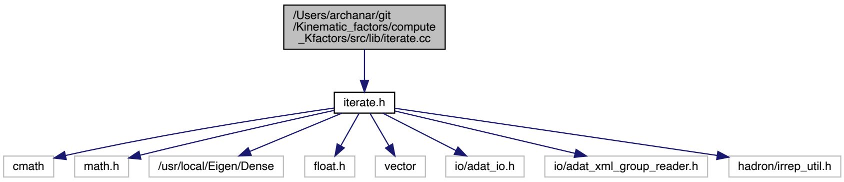
Functions

- std::vector< std::string > IrrepName::getIrrep (int &twoJ, int &P, string &lg)
- int IrrepName::irrepRows (string &irrep)

7.10 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/iterate.cc File Reference

```
#include "iterate.h"
```

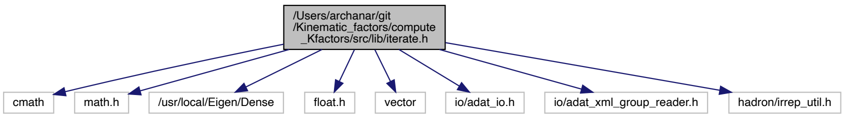
Include dependency graph for iterate.cc:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/iterate.cc
iterate.h
cmath
math.h
/usr/local/Eigen/Dense
float.h
vector
io/adat_io.h
io/adat_xml_group_reader.h
hadron/irrep_util.h

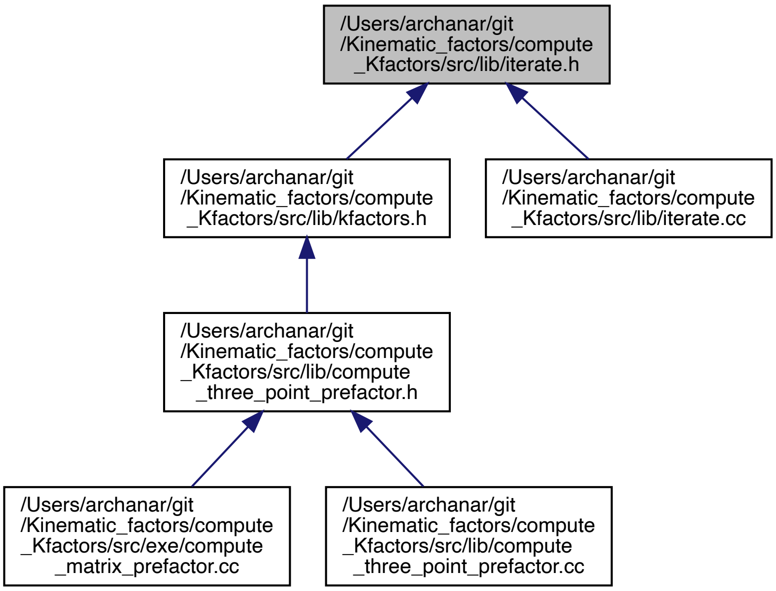
7.11 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/iterate.h File Reference

```
#include <cmath>
#include "math.h"
#include </usr/local/Eigen/Dense>
#include <float.h>
#include <vector>
#include "io/adat_io.h"
#include "io/adat_xml_group_reader.h"
#include "hadron/irrep_util.h"
```

Include dependency graph for iterate.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/iterate.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/kfactors.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/iterate.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/exe/compute
_matrix_prefactor.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.cc

Namespaces

- iter

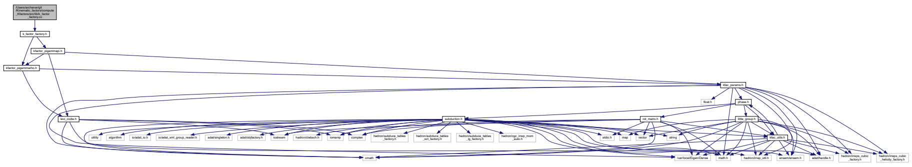
Functions

- std::vector< Vector3d > iter::itermom (double max_mom, double min_mom, ADAT::Array1dO< ADAT::↩ Array1dO< int >> omit_mom, bool canonical)

7.12 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc File Reference

```
#include "k_factor_factory.h"
```

Include dependency graph for k_factor_factory.cc:



Namespaces

- KFactorEnv

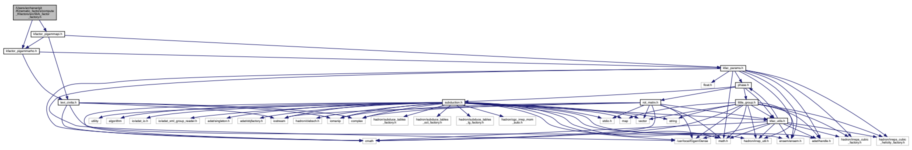
Functions

- bool KFactorEnv::registerAll ()

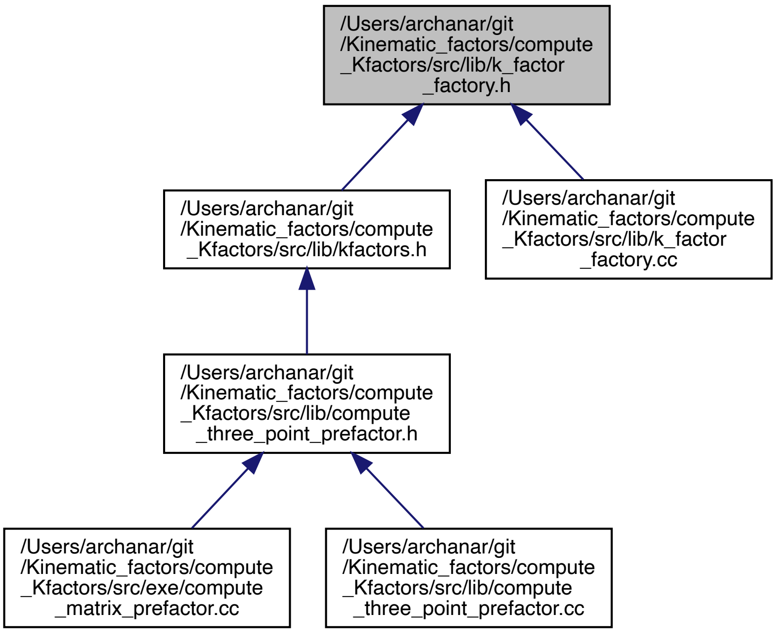
7.13 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h File Reference

```
#include "kfactor_pigammarho.h"
#include "kfactor_pigammapi.h"
```

Include dependency graph for k_factor_factory.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Namespaces

- KFactorEnv

Typedefs

- typedef SingletonHolder< ObjectFactory< KFactor, string, TYPELIST_2(XMLReader &, const string &), KFactor ∗(∗)(XMLReader &, const string &), StringFactoryError > > TheKFactorFactory

Functions

- bool KFactorEnv::registerAll ()

7.13.1 Typedef Documentation

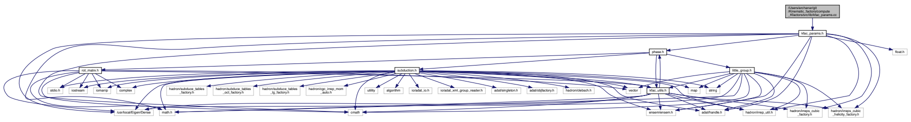
7.13.1.1 TheKFactorFactory

```
typedef SingletonHolder< ObjectFactory<KFactor, string, TYPELIST_2( XMLReader&, const string&),
KFactor* (*)(XMLReader&, const string&), StringFactoryError> > TheKFactorFactory
```

7.14 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.cc File Reference

```
#include "kfac_params.h"
```

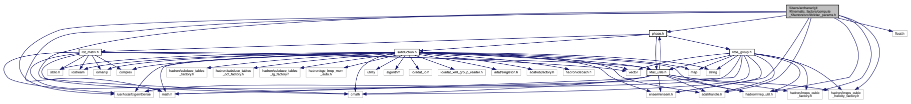
Include dependency graph for kfac_params.cc:



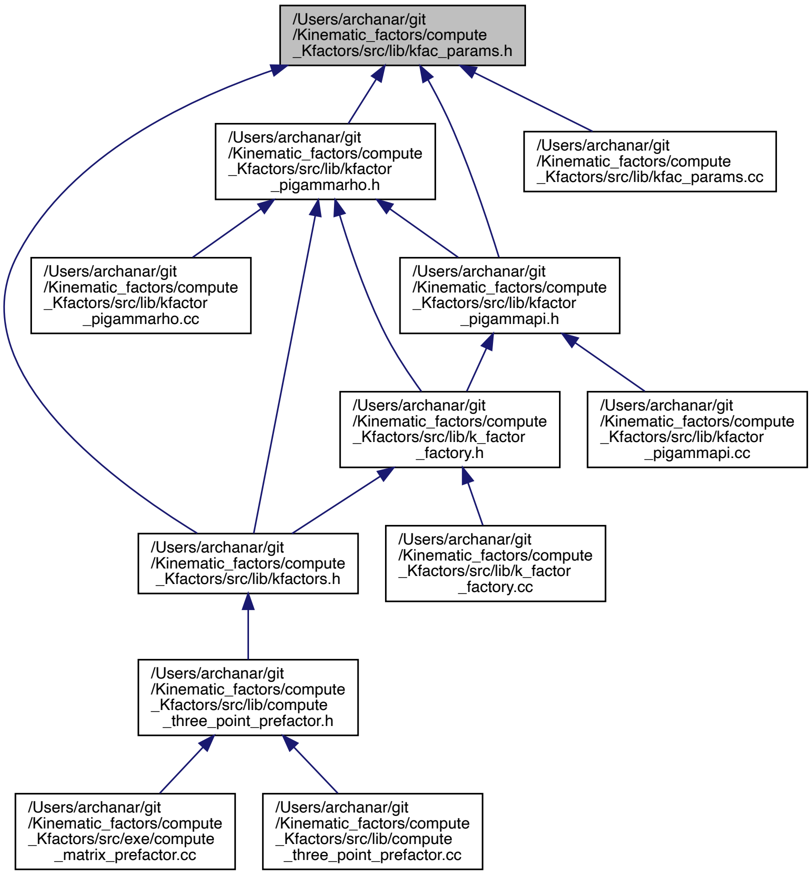
7.15 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.h File Reference

```
#include <cmath>
#include "math.h"
#include </usr/local/Eigen/Dense>
#include <float.h>
#include "phase.h"
#include <adat/handle.h>
#include "hadron/irreps_cubic_factory.h"
#include "hadron/irreps_cubic_helicity_factory.h"
#include "hadron/irrep_util.h"
#include "ensem/ensem.h"
```

Include dependency graph for kfac_params.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfac_params.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammarho.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfac_params.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammarho.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammapi.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/k_factor _factory.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammapi.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactors.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/k_factor _factory.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/compute _three_point_prefactor.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/exe/compute _matrix_prefactor.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/compute _three_point_prefactor.cc

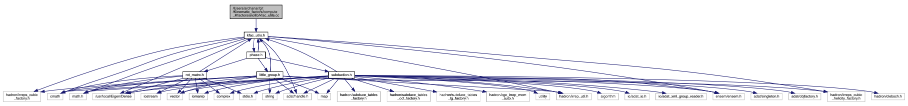
Data Structures

- class KFacParams

7.16 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.cc File Reference

```
#include "kfac_utils.h"
```

Include dependency graph for kfac_utils.cc:


/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfac_utils.cc
kfac_utils.h
phase.h
rot_matrx.h
little_group.h
subduction.h
hadron/irreps_cubic _factory.h
cmath
math.h
/usr/local/Eigen/Dense
iostream
vector
iomanip
complex
stdio.h
string
adat/handle.h
map
hadron/subduce_tables _factory.h
hadron/subduce_tables _oct_factory.h
hadron/subduce_tables _lg_factory.h
hadron/cgc_irrep_mom _auto.h
utility
hadron/irrep_util.h
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
ensem/ensem.h
adat/singleton.h
adat/objfactory.h
hadron/irreps_cubic _helicity_factory.h
hadron/clebsch.h

Namespaces

- KfUt

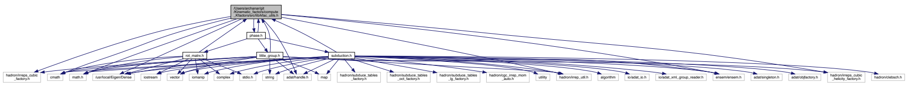
Functions

- double KfUt::truncate (double num, int precision)
- Eigen::MatrixXcd KfUt::Gmunu ()

7.17 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h File Reference

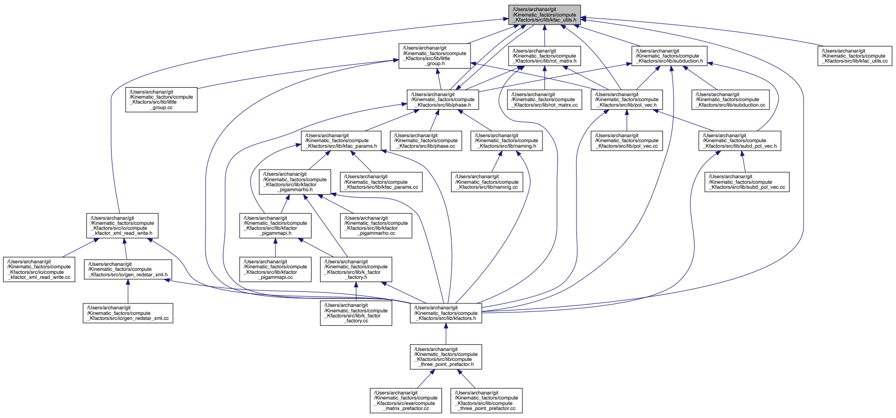
```
#include <cmath>
#include "math.h"
#include </usr/local/Eigen/Dense>
#include "phase.h"
#include <adat/handle.h>
#include "hadron/irreps_cubic_factory.h"
#include "hadron/irreps_cubic_helicity_factory.h"
#include "hadron/irrep_util.h"
#include "ensem/ensem.h"
```

Include dependency graph for kfac_utils.h:



/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h
phase.h
rot_matrx.h
little_group.h
subduction.h
hadron/irreps_cubic_factory.h
cmath
math.h
/usr/local/Eigen/Dense
iostream
vector
iomanip
complex
stdio.h
string
adat/handle.h
map
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
utility
hadron/irrep_util.h
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
ensem/ensem.h
adat/singleton.h
adat/objfactory.h
hadron/irreps_cubic_helicity_factory.h
hadron/clebsch.h

This graph shows which files directly or indirectly include this file:



/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Data Structures

- class KfUt::ToArray

Namespaces

- KfUt

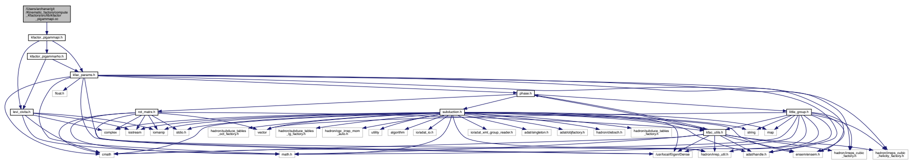
Functions

- double KfUt::truncate (double num, int precision)
- Eigen::MatrixXcd KfUt::Gmunu ()

7.18 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc File Reference

```
#include "kfactor_pigammapi.h"
```

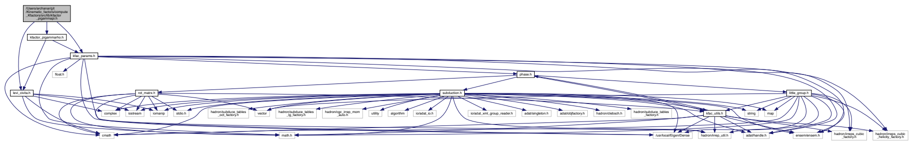
Include dependency graph for kfactor_pigammapi.cc:



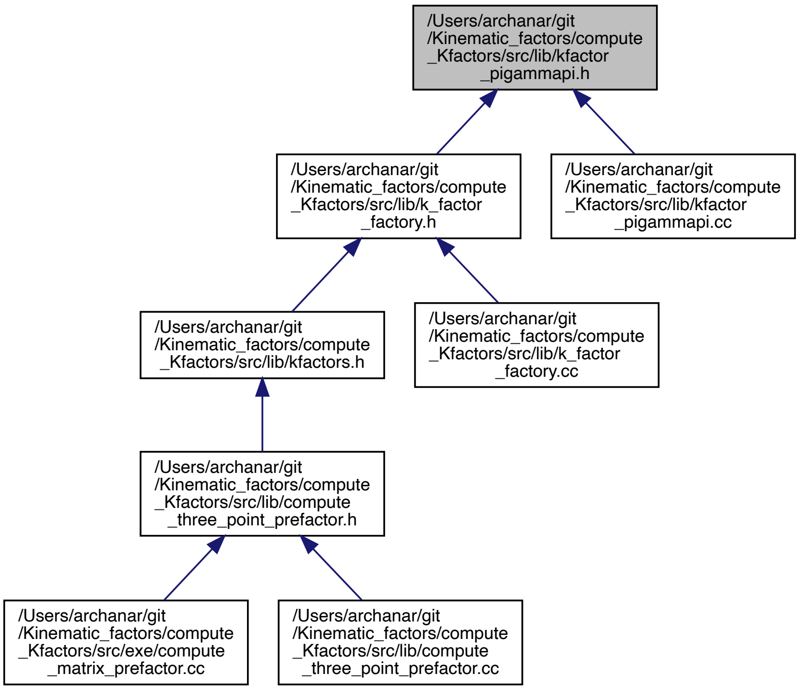
7.19 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h File Reference

```
#include "kfac_params.h"
#include "levi_civita.h"
#include "kfactor_pigammarho.h"
```

Include dependency graph for kfactor_pigammapi.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

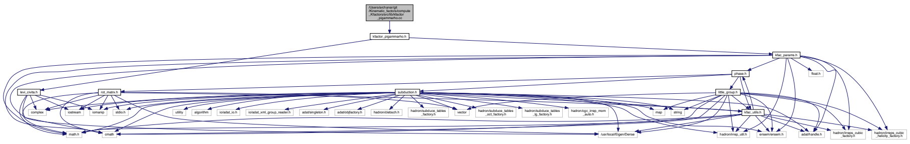
Data Structures

- class KfacSVS
- class KfacSSS

7.20 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc File Reference

```
#include "kfactor_pigammarho.h"
```

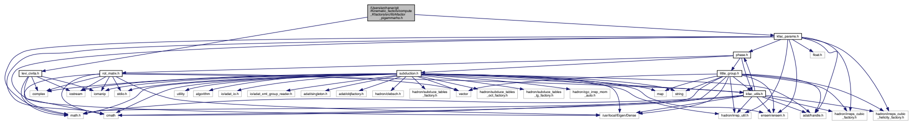
Include dependency graph for kfactor_pigammarho.cc:



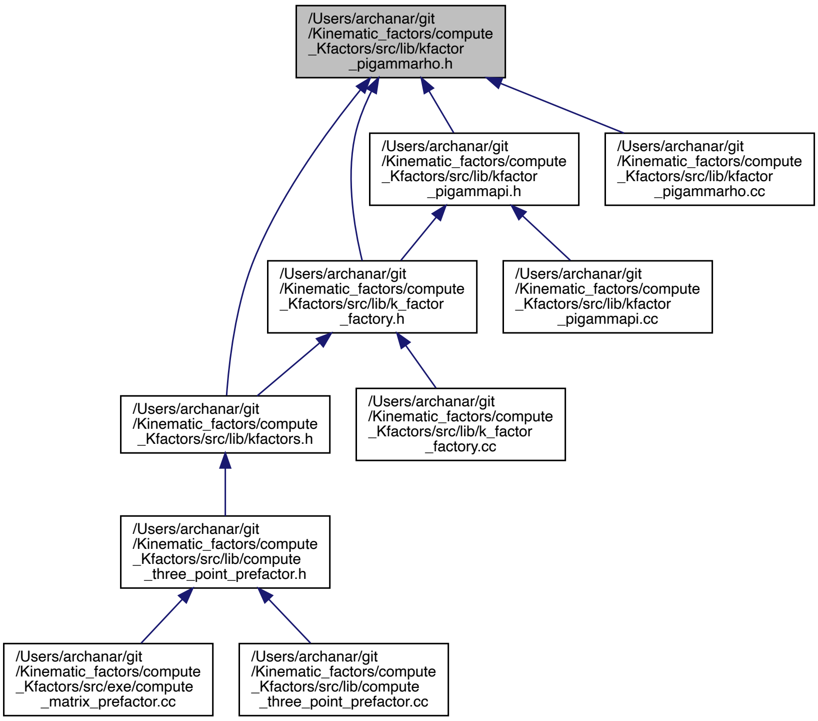
7.21 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h File Reference

```
#include "kfac_params.h"
#include "levi_civita.h"
```

Include dependency graph for kfactor_pigammarho.h:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
kfac_params.h
phase.h
float.h
levi_civita.h
rot_matrix.h
subduction.h
little_group.h
complex
iostream
iomanip
stdio.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables_factory.h
vector
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
map
string
kfac_utils.h
math.h
cmath
/usr/local/Eigen/Dense
hadron/irrep_util.h
ensem/ensem.h
adat/handle.h
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h

This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

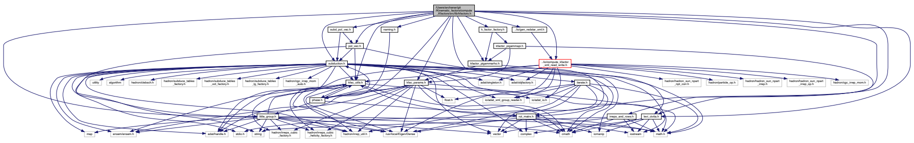
Data Structures

- class KFactor
- class KfacSVV
- class KfacSSV
- class KfacVVS
- class KfacVSS

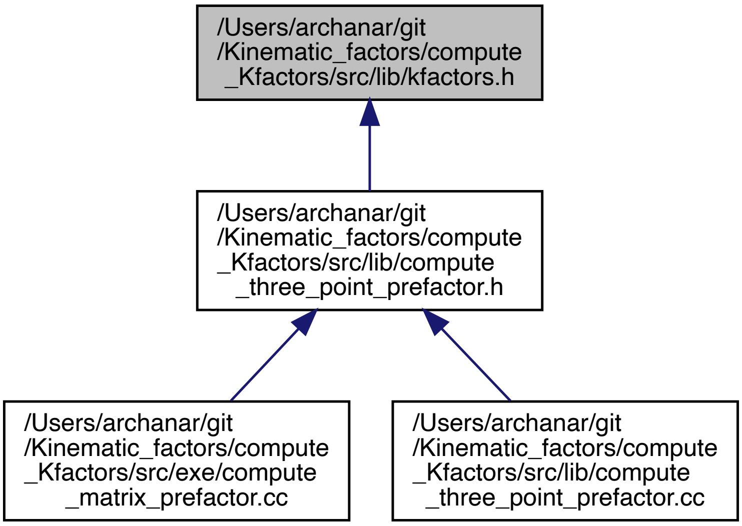
7.22 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h File Reference

```
#include "subduction.h"
#include "subd_pol_vec.h"
#include "pol_vec.h"
#include "little_group.h"
#include "levi_civita.h"
#include "kfac_utils.h"
#include "rot_matrx.h"
#include "irreps_and_rows.h"
#include "phase.h"
#include "k_factor_factory.h"
#include "kfac_params.h"
#include "kfactor_pigammarho.h"
#include "naming.h"
#include "iterate.h"
#include "../io/compute_kfactor_xml_read_write.h"
#include "../io/gen_redstar_xml.h"
```

Include dependency graph for kfactors.h:



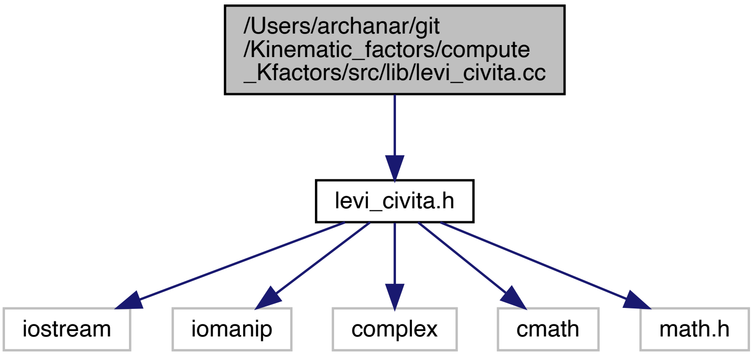
This graph shows which files directly or indirectly include this file:


/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/kfactors.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/exe/compute
_matrix_prefactor.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.cc

7.23 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/levi_civita.cc File Reference

```
#include "levi_civita.h"
```

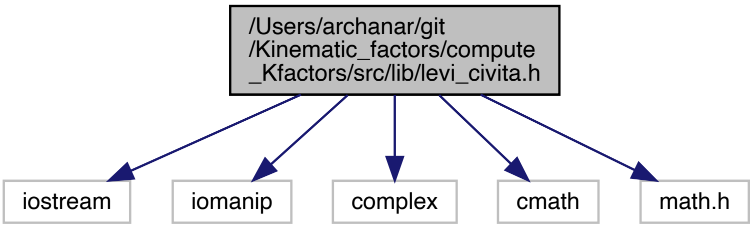
Include dependency graph for levi_civita.cc:



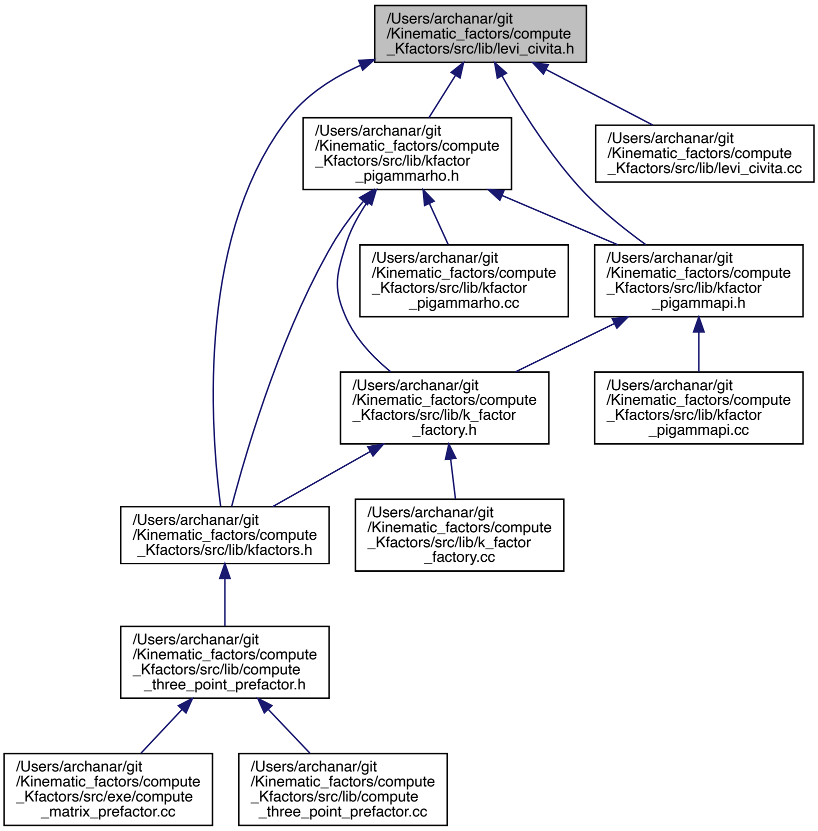
7.24 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/levi_civita.h File Reference

```
#include <iostream>
#include <iomanip>
#include <complex>
#include <cmath>
#include "math.h"
```

Include dependency graph for levi_civita.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/levi_civita.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammarho.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/levi_civita.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammarho.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammapi.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/k_factor _factory.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactor _pigammapi.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/kfactors.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/k_factor _factory.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/compute _three_point_prefactor.h
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/exe/compute _matrix_prefactor.cc
/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/compute _three_point_prefactor.cc

Namespaces

- LevCiv

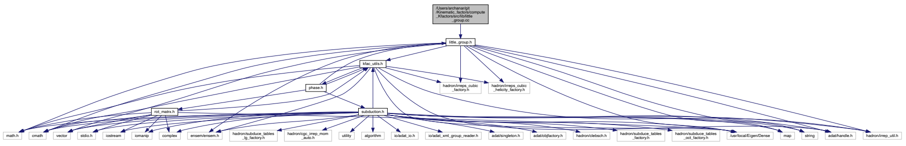
Functions

- double LevCiv::LeviCivita (int arr[ ], int n)

7.25 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.cc File Reference

```
#include "little_group.h"
```

Include dependency graph for little_group.cc:


/Users/archanar/git /Kinematic_factors/compute _Kfactors/src/lib/little _group.cc
little_group.h
kfac_utils.h
phase.h
hadron/irreps_cubic _factory.h
hadron/irreps_cubic _helicity_factory.h
rot_matrx.h
subduction.h
math.h
cmath
vector
stdio.h
iostream
iomanip
complex
ensem/ensem.h
hadron/subduce_tables _lg_factory.h
hadron/cgc_irrep_mom _auto.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables _factory.h
hadron/subduce_tables _oct_factory.h
/usr/local/Eigen/Dense
map
string
adat/handle.h
hadron/irrep_util.h

Namespaces

- LittleGrp

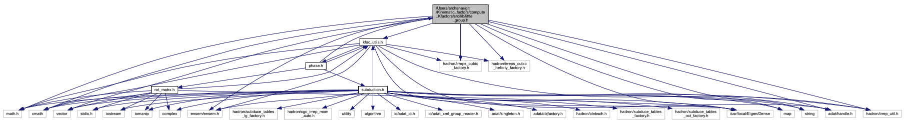
Functions

- string LittleGrp::generateLittleGroup (Eigen::Vector3d &mom_)
- std::vector< double > LittleGrp::refAngles (Eigen::Vector3d mom1)

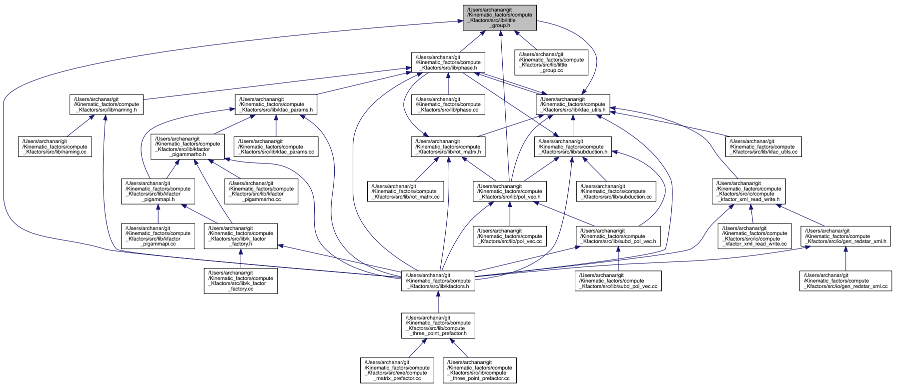
7.26 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.h File Reference

```
#include <vector>
#include <map>
#include <string>
#include <cmath>
#include "math.h"
#include </usr/local/Eigen/Dense>
#include "kfac_utils.h"
#include <adat/handle.h>
#include "hadron/irreps_cubic_factory.h"
#include "hadron/irreps_cubic_helicity_factory.h"
#include "hadron/irrep_util.h"
#include "ensem/ensem.h"
```

Include dependency graph for little_group.h:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.h
kfac_utils.h
phase.h
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h
rot_matrx.h
subduction.h
math.h
cmath
vector
stdio.h
iostream
iomanip
complex
ensem/ensem.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
/usr/local/Eigen/Dense
map
string
adat/handle.h
hadron/irrep_util.h

This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Namespaces

- LittleGrp

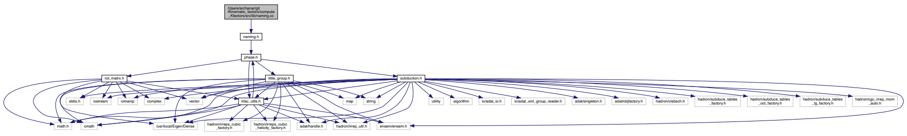
Functions

- string LittleGrp::generateLittleGroup (Eigen::Vector3d &mom_)
- std::vector< double > LittleGrp::refAngles (Eigen::Vector3d mom1)

7.27 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.cc File Reference

`#include "naming.h"`

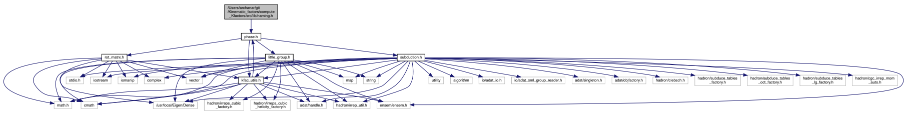
Include dependency graph for naming.cc:



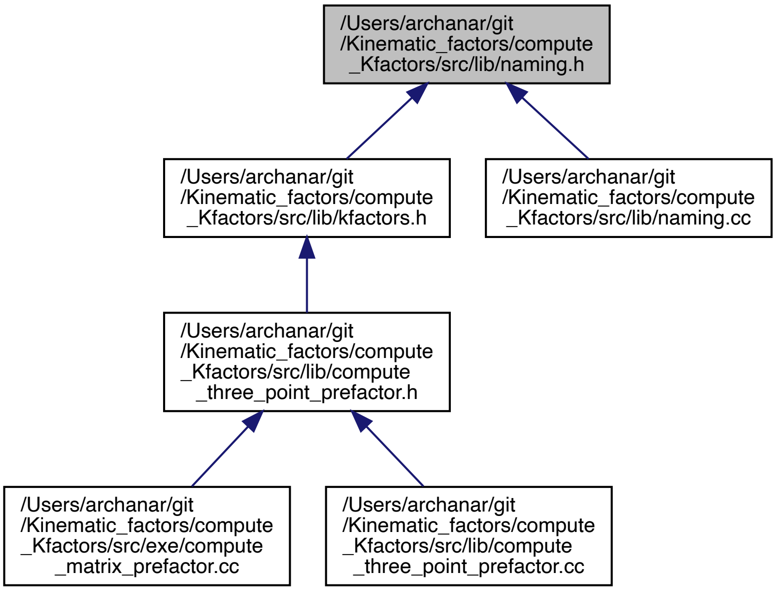
7.28 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.h File Reference

`#include "phase.h"`

Include dependency graph for naming.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/naming.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/kfactors.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/naming.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/exe/compute
_matrix_prefactor.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.cc

Namespaces

- naming

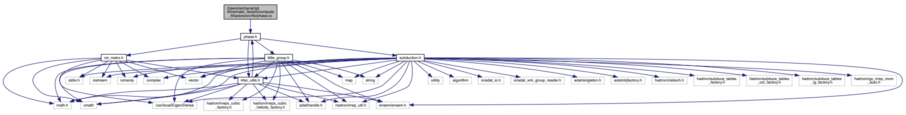
Functions

- string naming::name (int npt, Ph::tripKey two_abs_lam, Vector3d mom1, Vector3d mom_curr, Vector3d mom3, irrep_label rep1, irrep_label rep_curr, irrep_label rep3, string LG1, string LG_curr, string LG3, string lev1, string lev3)

7.29 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.cc File Reference

```
#include "phase.h"
```

Include dependency graph for phase.cc:



Functions

- double Round (double x)

7.29.1 Function Documentation

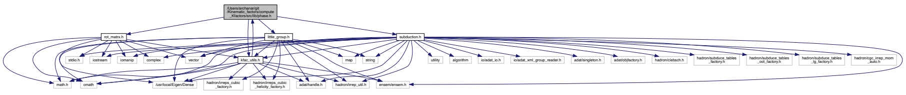
7.29.1.1 Round()

```
double Round (
            double x )
```

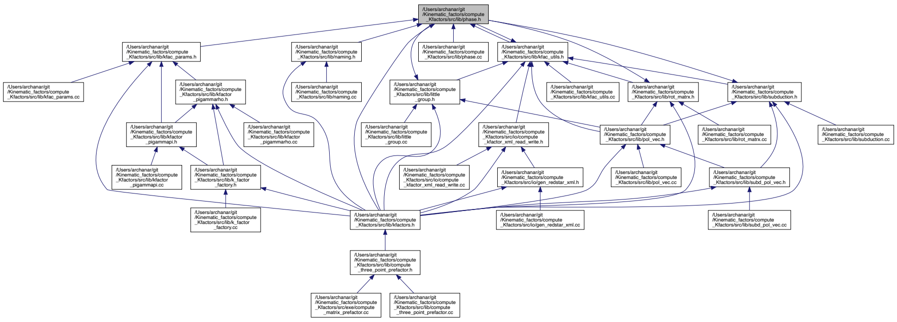
7.30 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.h File Reference

```
#include "rot_matrx.h"
#include "little_group.h"
#include "kfac_utils.h"
#include "subduction.h"
```

Include dependency graph for phase.h:



This graph shows which files directly or indirectly include this file:



Data Structures

- struct Ph::phChars

Namespaces

- Ph

Typedefs

- typedef std::tuple< int, int, int > Ph::tripKey

Functions

- double Round (double x)
- Ph::phChars Ph::phaseFactor (int twoJ1, int twoJ2, int twoJCurr, Eigen::Vector3d mom1, Eigen::Vector3d mom2, bool compute)
- std::complex< double > Ph::comp_Wigner_d (int twoJ, int twolam1, int twolam2, double a1, double b1, double c1, double a2, double b2, double c2, int n)
- map< Ph::tripKey, complex< double > > Ph::calc_phase (int twoJ1, int twoJ2, int twoJCurr, double mom1↩_sq, double mom2_sq, double mom_curr_sq, vector< double > r_mom1, vector< double > r_n_mom1, vector< double > r_mom2, vector< double > r2, vector< double > r_mom_curr, vector< double > r_n_↩mom_curr)
- map< Ph::tripKey, complex< double > > Ph::cnst_phase (int twoJ1, int twoJ2, int twoJCurr)

7.30.1 Function Documentation

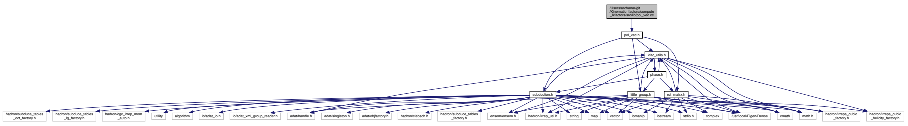
7.30.1.1 Round()

```
double Round (
            double x )
```

7.31 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.cc File Reference

```
#include "pol_vec.h"
```

Include dependency graph for pol_vec.cc:



/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.cc
pol_vec.h
kfac_utils.h
phase.h
subduction.h
little_group.h
rot_matrx.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/handle.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables_factory.h
ensem/ensem.h
hadron/irrep_util.h
string
map
vector
iomanip
iostream
stdio.h
complex
/usr/local/Eigen/Dense
cmath
math.h
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h

Namespaces

- PolVec

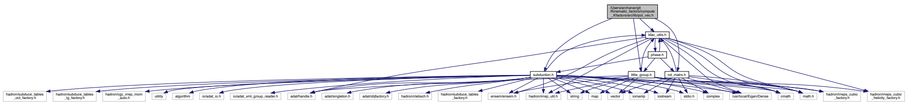
Functions

- Eigen::MatrixXcd PolVec::getPolz4 (double &mom_sq, const int &two_helicity, double &mass_sq, bool &curr)
- Eigen::MatrixXcd PolVec::getPol4 (double &mom_sq, const int &two_helicity, double &mass_sq, double &phi, double &theta, double &psi, bool curr)

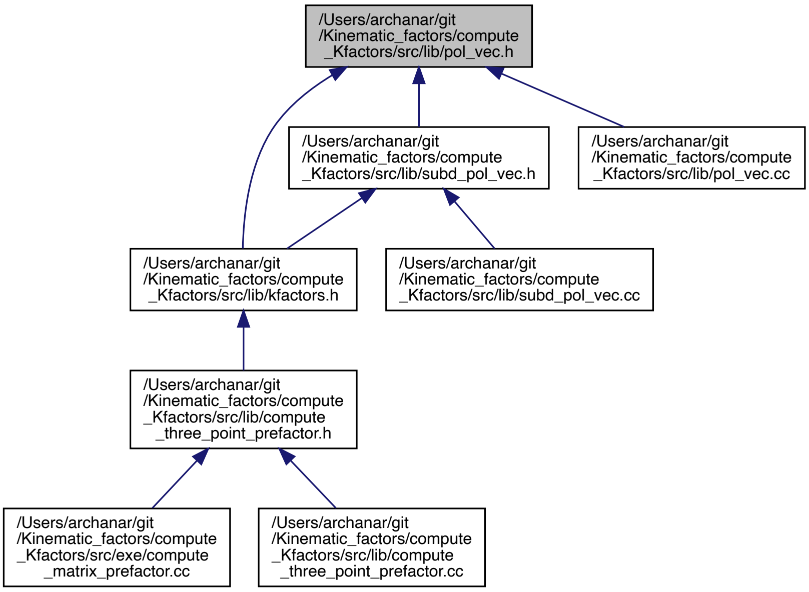
7.32 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.h File Reference

```
#include "kfac_utils.h"
#include "rot_matrx.h"
#include "little_group.h"
#include "subduction.h"
```

Include dependency graph for pol_vec.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/pol_vec.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/subd_pol_vec.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/pol_vec.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/kfactors.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/subd_pol_vec.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/exe/compute
_matrix_prefactor.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.cc

Namespaces

- PolVec

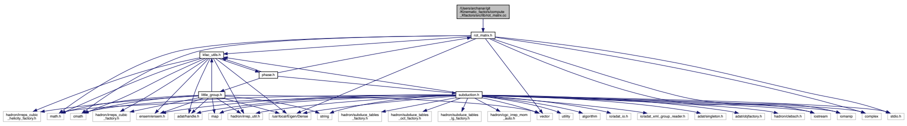
Functions

- Eigen::MatrixXcd PolVec::getPolz4 (double &mom_sq, const int &two_helicity, double &mass_sq, bool &curr)
- Eigen::MatrixXcd PolVec::getPol4 (double &mom_sq, const int &two_helicity, double &mass_sq, double &phi, double &theta, double &psi, bool curr)

7.33 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.cc File Reference

```
#include "rot_matrx.h"
```

Include dependency graph for rot_matrx.cc:



Namespaces

- Rot

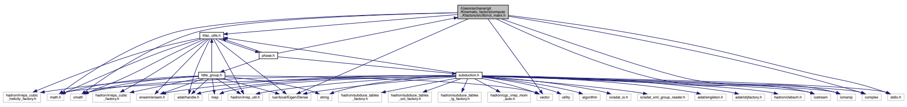
Functions

- Eigen::MatrixXd Rot::eulerRotMat (double alpha, double beta, double gamma)

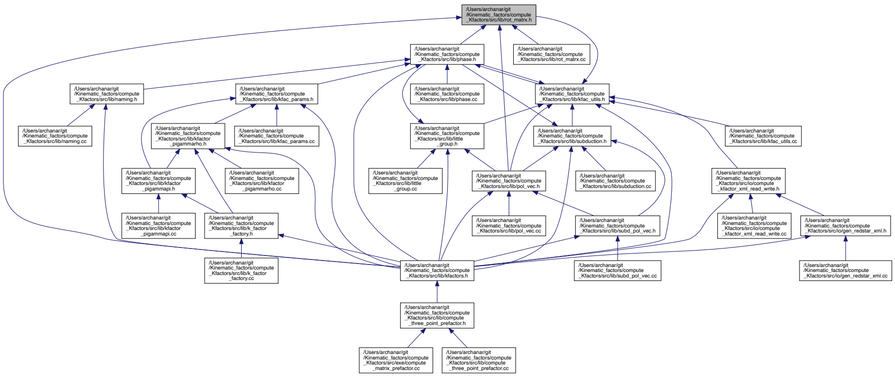
7.34 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.h File Reference

```
#include "kfac_utils.h"
#include <iostream>
#include <iomanip>
#include <complex>
#include <cmath>
#include "math.h"
#include <stdio.h>
#include </usr/local/Eigen/Dense>
#include <vector>
```

Include dependency graph for rot_matrx.h:



This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Namespaces

- Rot

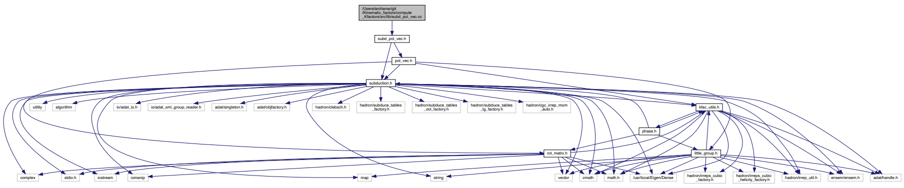
Functions

- Eigen::MatrixXd Rot::eulerRotMat (double alpha, double beta, double gamma)

7.35 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.cc File Reference

```
#include "subd_pol_vec.h"
```

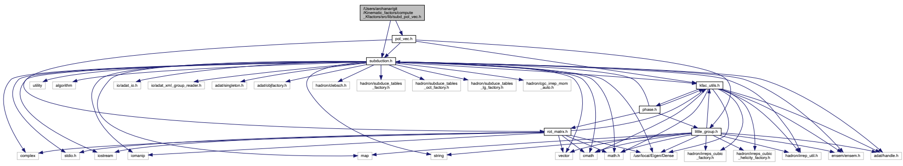
Include dependency graph for subd_pol_vec.cc:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.cc
subd_pol_vec.h
pol_vec.h
subduction.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
kfac_utils.h
phase.h
rot_matrx.h
little_group.h
complex
stdio.h
iostream
iomanip
map
string
vector
cmath
math.h
/usr/local/Eigen/Dense
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h
hadron/irrep_util.h
ensem/ensem.h
adat/handle.h

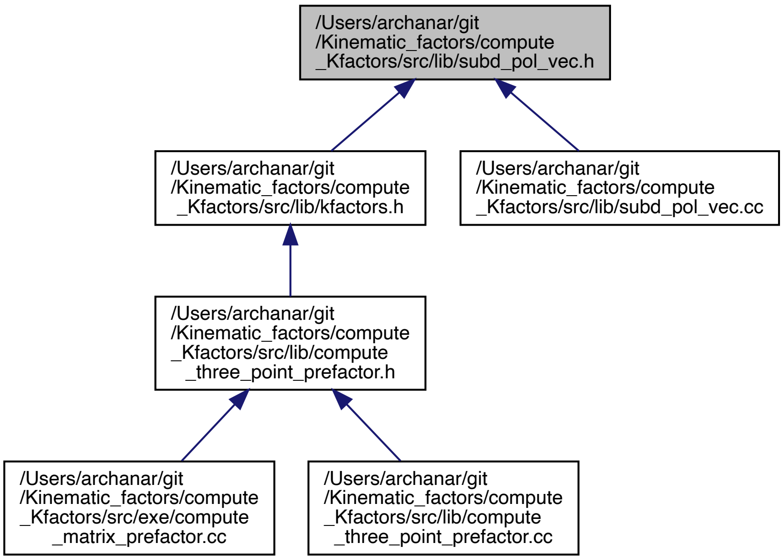
7.36 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.h File Reference

```
#include "subduction.h"
#include "pol_vec.h"
```

Include dependency graph for subd_pol_vec.h:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.h
pol_vec.h
subduction.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
kfac_utils.h
phase.h
rot_matrx.h
little_group.h
complex
stdio.h
iostream
iomanip
map
string
vector
cmath
math.h
/usr/local/Eigen/Dense
hadron/irreps_cubic_factory.h
hadron/irreps_cubic_helicity_factory.h
hadron/irrep_util.h
ensem/ensem.h
adat/handle.h

This graph shows which files directly or indirectly include this file:


/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/subd_pol_vec.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/kfactors.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/subd_pol_vec.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.h
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/exe/compute
_matrix_prefactor.cc
/Users/archanar/git
/Kinematic_factors/compute
_Kfactors/src/lib/compute
_three_point_prefactor.cc

Namespaces

- SubdPol

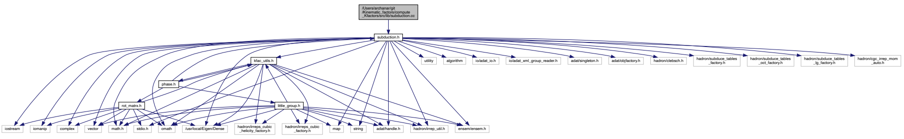
Functions

- map< int, Eigen::MatrixXcd > SubdPol::Subduce_with_pol (double &mom_sq, double &mass_sq, int &twoJ, const irrep_label &irrep, const string &little_group, double R1_phi, double R1_theta, double R1_psi, bool curr)

7.37 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.cc File Reference

```
#include "subduction.h"
```

Include dependency graph for subduction.cc:



Functions

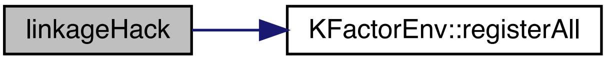
- bool linkageHack (void)

7.37.1 Function Documentation

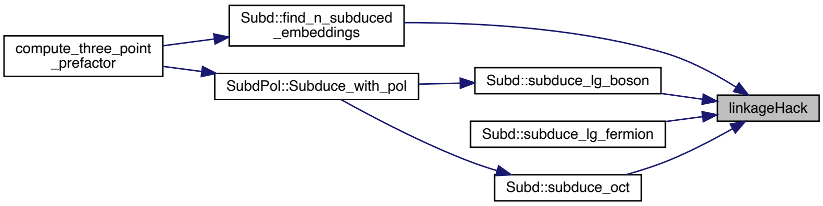
7.37.1.1 linkageHack()

```
bool linkageHack (
             void  )
```

Here is the call graph for this function:



Here is the caller graph for this function:

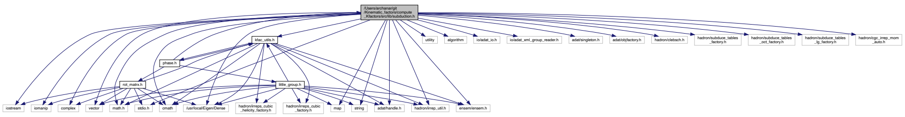

compute_three_point_prefactor
Subd::find_n_subduced_embeddings
SubdPol::Subduce_with_pol
Subd::subduce_lg_boson
Subd::subduce_lg_fermion
Subd::subduce_oct
linkageHack

7.38 /Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h File Reference

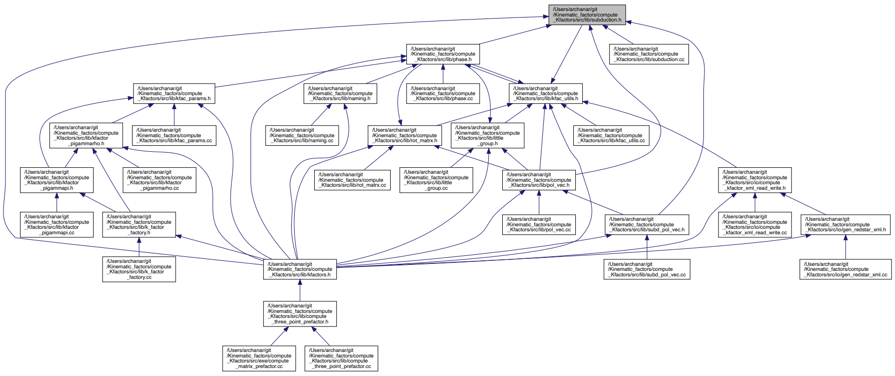
```
#include <vector>
#include <iostream>
#include <iomanip>
#include <map>
#include <string>
#include <complex>
#include <utility>
#include <algorithm>
#include <cmath>
#include "math.h"
#include <stdio.h>
#include </usr/local/Eigen/Dense>
#include "io/adat_io.h"
#include "io/adat_xml_group_reader.h"
```

```
#include "adat/singleton.h"
#include "adat/objfactory.h"
#include <adat/handle.h>
#include "hadron/clebsch.h"
#include "hadron/subduce_tables_factory.h"
#include "hadron/subduce_tables_oct_factory.h"
#include "hadron/subduce_tables_lg_factory.h"
#include "hadron/cgc_irrep_mom_auto.h"
#include "hadron/irrep_util.h"
#include "ensem/ensem.h"
#include "kfac_utils.h"
```

Include dependency graph for subduction.h:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h
kfac_utils.h
utility
algorithm
io/adat_io.h
io/adat_xml_group_reader.h
adat/singleton.h
adat/objfactory.h
hadron/clebsch.h
hadron/subduce_tables_factory.h
hadron/subduce_tables_oct_factory.h
hadron/subduce_tables_lg_factory.h
hadron/cgc_irrep_mom_auto.h
phase.h
rot_matrx.h
little_group.h
iostream
iomanip
complex
vector
math.h
stdio.h
cmath
/usr/local/Eigen/Dense
hadron/irreps_cubic_helicity_factory.h
hadron/irreps_cubic_factory.h
map
string
adat/handle.h
hadron/irrep_util.h
ensem/ensem.h

This graph shows which files directly or indirectly include this file:


/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subduction.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/phase.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_params.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/naming.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfac_utils.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammarho.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/rot_matrx.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/little_group.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactor_pigammapi.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/compute_kfactor_xml_read_write.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/k_factor_factory.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/kfactors.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/subd_pol_vec.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/io/gen_redstar_xml.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.h
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/exe/compute_matrix_prefactor.cc
/Users/archanar/git/Kinematic_factors/compute_Kfactors/src/lib/compute_three_point_prefactor.cc

Data Structures

- struct irrep_label

Namespaces

- Subd

Functions

- map< int, complex< double > > Subd::subduce_lg_boson (const irrep_label &irrep, const string &little_↩ group)
- map< int, complex< double > > Subd::subduce_lg_fermion (const irrep_label &irrep, const string &little_↩ group)
- map< int, complex< double > > Subd::subduce_oct (const irrep_label &irrep)
- int Subd::find_n_subduced_embeddings (const string &group, const string &irrep, int twoJ, int eta_tilde)

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