```
  // Extract the parameters of the trigger track.
  SBSsimTrack* trk = new( (*event->fTracks)[0] ) SBSsimTrack();

  // Given Evaristo's hit-only information, getting the parameters of the
  // track is actually quite tricky. The horror!
  //
  // The front of each chamber seems to be at -4.622 mm and no additional
  // hits ever occur until ~ -4.54 mm. So the first hit with z < -4.6
  // should be the first hit of the real track on the first chamber where
  // it actually registers a hit. Usually, that's the very first chamber,
  // but occasionally that chamber is simulated to be inefficient and the
  // hit is missing. Also, the index of this hit must obviously be < nsignal.
  // Finally, we need to select protons via the pID of the hit.
  Int_t i = 0;
  for( ; i < event->fNsignal; ++i ) {
    if( event->fPID[i] == 2212 && event->fHitMZ[i] > 1000. &&
        (!TESTBIT(fFlags, kHasTrack) || event->fHitZ[i] < -4.6) ) {

      trk->fMomentum.SetXYZ( event->fHitMX[i],
                             event->fHitMY[i],
                             event->fHitMZ[i] );
      trk->fMomentum *= 1e-3; // Convert to GeV

      // Set various track parameters
      trk->fPID = event->fPID[i];
      trk->fTimeOffset = event->fTime[i];

      // If this hit is not on the first chamber, the momentum in this way
      // will be slightly off due to energy loss and multiple scattering.
      // To be able to diagnose this effect later, we save the index of the
      // chamber where the parameters were extracted.
      trk->fHit1 = event->fChamber[i];
      assert( trk->fHit1 >= 0 );

      if( TESTBIT(fFlags, kHasTrack) ) {
        // If available, get the track position at the first chamber.
        // The first chamber is assumed to be at z = 0 relative to the
        // entire front tracker system (=detector coordinates)
        if( trk->fHit1 == 0 ) {
          trk->fOrigin.SetXYZ( event->fHitX[i], event->fHitY[i], 0. );
        } else {
          // Chambers are assumed to be 200 mm apart, evenly spaced.
          // FIXME: Get chamber positions from SBSsimParameters
          Float_t z  = trk->fHit1 * 200.;
          Float_t mx = event->fHitMX[i] / event->fHitMZ[i];
          Float_t my = event->fHitMY[i] / event->fHitMZ[i];
          trk->fOrigin.SetXYZ( event->fHitX[i] - z*mx,
                               event->fHitY[i] - z*my,
                               0. );
        }
        trk->fOrigin *= 1e-3; // convert to meters
      }
      break; // found the track, so quit the loop
    }
  }
  // Nothing found!
  if( i == event->fNsignal )
    Warning( "SBSsimRun::ReadEvent", "No trigger track data found for event "
             "number %d", event->fEvtNum );
```