

Correction

Correction: Topuz et al. DOME: Discrete Oriented Muon Emission in GEANT4 Simulations. *Instruments* 2022, 6, 42

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In the original publication [1], there was a mistake in the legend for Figure 2. The spherical variables were misdefined by using latitude and longitude. The correct legend and figure appear below:

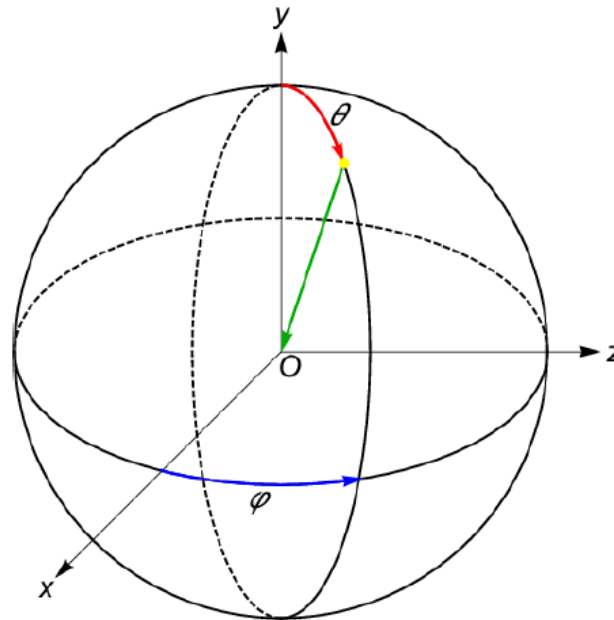


Figure 2. Spherical variables consisting of θ and φ with respect to the Cartesian coordinates (x,y,z) .

There was an inconsistency between the spherical variables defined in Figure 2 and Equations (13)–(15). A correction was made to **2. Central Focus Scheme, 2.2. Generation via Coordinate Transformation:**

$$x_i = R \sin \theta \cos \varphi \tag{13}$$

$$y_i = R \cos \theta = R |\cos \theta| = R \text{ABS}(\cos \theta) \tag{14}$$

$$z_i = R \sin \theta \sin \varphi \tag{15}$$

The obtained code by means the coordinate transformation, which is shown in Appendix B, was also changed:

```
...
G4double theta = acos (2*rand1 -1);
G4double phi = 2*3.14159265359*rand2;
//Coordinates on sphere
```



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```
G4double x0 = radius*sin (theta)*cos (phi);  
G4double y0 = radius*abs (cos (theta));  
G4double z0 = radius*sin (theta)*sin (phi);  
...
```

Some typos were also corrected: In Abstract, “a Gaussian distributions” has been corrected to “a Gaussian distribution”. In Keywords, “discreet energy spectra” has been corrected to “discrete energy spectra”. In Introduction, “azimuth and longitude” has been corrected to “azimuth and zenith”.

The authors state that the scientific conclusions are unaffected. These corrections were approved by the Academic Editor. The original publication has also been updated.

Reference

1. Topuz, A.I.; Kiisk, M.; Giammanco, A. DOME: Discrete Oriented Muon Emission in GEANT4 Simulations. *Instruments* **2022**, *6*, 42. [[CrossRef](#)]

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