



- (51) **International Patent Classification:**
G01T 1/203 (2006.01) *G01T 1/29* (2006.01)
- (21) **International Application Number:**
PCT/EP2014/068382
- (22) **International Filing Date:**
29 August 2014 (29.08.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
P.405188 30 August 2013 (30.08.2013) PL
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- (81) **Designated States** (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,

OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,
ZW.

- (84) **Designated States** (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,
TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) **Title:** A METHOD AND A SYSTEM FOR DETERMINING PARAMETERS OF A POSITION OF A GAMMA QUANTUM REACTION WITHIN A SCINTILLATOR DETECTOR OF A PET SCANNER

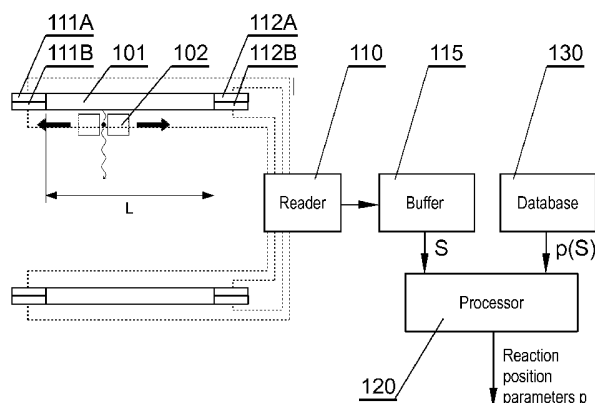


Fig. 3

(57) **Abstract:** A method for determining parameters of a position of a gamma quantum reaction within a scintillator detector of a PET scanner wherein the signal measured in the scintillator is transformed using at least two converters into electric measurement signals, the method comprising the steps of: accessing a database (130) comprising calibration curves $p(S)$ that define the parameters of the reaction position (p) depending on a value of a signal ratio (S); calculating, by means of a processor (120), the parameters of the reaction position (p) based on the value of the signal ratio (S) and the calibration curve $p(S)$; wherein the signal ratio (S) is determined as a ratio of the electric measurement signals measured using at least two converters (111A, 111B; 112A, 112B) having different quantum efficiency spectra.