



- (51) International Patent Classification:
G01T 1/29 (2006.01)
- (21) International Application Number:
PCT/EP2014/068378
- (22) International Filing Date:
29 August 2014 (29.08.2014)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
P.405187 30 August 2013 (30.08.2013) PL
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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))

- (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,

[Continued on next page]

- (54) Title: A METHOD FOR DETERMINING PARAMETERS OF A REACTION OF A GAMMA QUANTUM WITHIN A SCINTILLATOR OF A PET SCANNNER

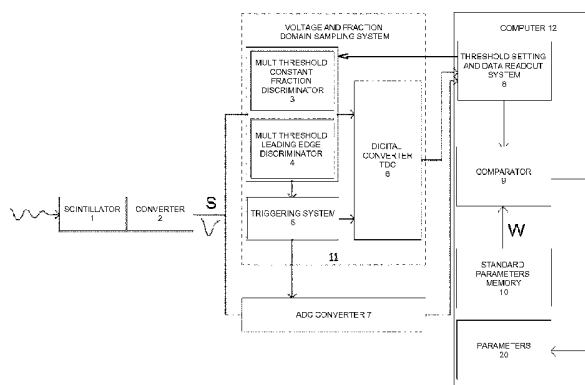


Fig. 1

- (57) Abstract: A method for determining parameters of a reaction of a gamma quantum within a scintillator of a PET scanner, comprising transforming a signal measured in the scintillator using at least one converter into an electric measurement signal, wherein the method comprises the steps of: obtaining access to a reference parameters memory (10) comprising reference signals represented in a time-voltage (Wt-v) coordinate system and in a time-amplitude fraction (Wt-f) coordinate system and having associated reaction parameters; sampling the electric measurement signal (S) measured in the time-voltage (PT-V) coordinate system and in the time-amplitude fraction (Pt-f) coordinate system; comparing results of the sampling (PT-V, PM) of the electric measurement signal (S) with the reference signals (Wt-V, Wt-f) and selecting reference shape parameters so that the reference (W) is best fitted to the results of the sampling (PT-V, PM) of the electric measurement signal (S); and determining the parameters of the reaction of the gamma quantum within the scintillator (1) for the electric measurement signal (S) based on pre-calibrated functions that determine the values of parameters of signal shape depending on the parameters of the reaction of gamma quantum within the scintillator.

