Milestones M5 and M6

M5: comparison of detector technologies (WP1)

M6: choice of detector technology (WP1, WP2)

WP1: **Description of work -** Study and development of the GEM detector technology for neutron spectrometry, dosimetry and microdosimetry; characterization and calibration of a TEPC to determine absorbed dose and dose equivalent in complex radiation fields; study of a miniaturized version of a TEPC for use in cancer radiation therapy; study and construction of neutron detectors based on proportional counters for operation in mixed and pulsed radiation fields; use of Monte Carlo simulation codes to study detector response, development, optimization and characterization of a novel ionization chamber detector array for the measurement of absorbed dose from photon, electron and proton radiation

Milestones M5 and M6

M5: comparison of detector technologies (WP1)

M6: choice of detector technology (WP1, WP2)

WP2: **Description of work -** Study and development of the Medipix technology for neutron spectrometry, dosimetry and for characterising therapeutic ion beams at hadron-therapy facilities; development of a universal portable mixed-field radiation detector for environmental monitoring based on Medipix; development and utilization of Medipix/Timepix based hand-held public security radiation detector; optimization and improvement of Medipix data evaluation procedures; adaptation of a single photon detection system for QA of radiological imaging systems; development of silicon detectors and instrumentation for microdosimetry; use of Monte Carlo simulation codes to study detector response; application of the Medipix technology in medical imaging for cancer treatment planning

Milestones M5 and M6

M5: comparison of detector technologies (WP1)

CR39/Medipix, GEM/Medipix/GEMPIX, Medipix/GM-tube, Si-microsimeter/TEPC , LUPIN/Passive LINUS

M6: choice of detector technology (WP1, WP2)

Discussion:

- Does it make sense to maintain M5/M6 in the frame of WP1/WP2 or need we to extend it to the whole ARDENT (see TTB minutes)?
- M5 comparison against what kind of activities/measurements?
- M6 choice of detector technology aiming at what purpose?

WP1

Study and development of the GEM detector technology for neutron spectrometry, dosimetry and microdosimetry ESR1-4

Characterization and calibration of a TEPC to determine absorbed dose and dose equivalent in complex radiation fields ESR5

Design and construction of an avalanche confinement TEPC ESR14

Study and construction of neutron detectors based on proportional counters for operation in mixed and pulsed radiation fields ESR15 DONE, see deliverable D3.1

Use of Monte Carlo simulation codes to study detector response ESR1, ESR3, ESR4, ESR5, ESR6, ESR8, ESR9, ESR10, ESR11, ESR13, ESR14, ESR15

Development, optimization and characterization of a novel ionization chamber detector array for the measurement of absorbed dose from photon, electron and proton radiation ESR11

WP2

Study and development of the Medipix technology for neutron spectrometry, dosimetry and for characterising therapeutic ion beams at hadron-therapy facilities ESR1, ESR2, ESR4, ESR7, ESR9

Development of a universal portable mixed-field radiation detector for environmental monitoring based on Medipix / GM-tube based (WP1) ESR7 / ESR12

Development and utilization of Medipix/Timepix based hand-held public security radiation detector GM-tube based (WP1) ESR12

Optimization and improvement of Medipix data evaluation procedures ESR9

Adaptation of a single photon detection system for QA of radiological imaging systems ESR10

Development of silicon detectors and instrumentation for microdosimetry ESR14

Use of Monte Carlo simulation codes to study detector response ESR1, ESR3, ESR4, ESR5, ESR6, ESR8, ESR9, ESR10, ESR11, ESR13, ESR14, ESR15

Application of the Medipix technology in medical imaging for cancer treatment planning ESR8