Adopted Levels

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	18-March-2022

S(n)=15320 *CA*; S(p)=−730 *SY*; Q(α)=−1130 *SY* 2021Wa16,2019Mo01
Estimated uncertainties (2021Wa16): 580 for S(p), 660 for Q(α) (2021Wa16).
S(p) and Q(α) from 2021Wa16. S(n) from 2019Mo01 (theory).
Q(ε)=16980 *520*, Q(εp)=18820 *470*, S(2p)=−2890 *300* (syst, 2021Wa16). S(2n)=34350 (theory,2019Mo01).
2016Go26, 2016Bl05: ^{67}Kr produced and identified at RIBF-RIKEN facility in ^{9}Be(^{78}Kr,X) reaction at E=345 MeV/nucleon with beam intensity of up to 250 pnA. Identification of ^{67}Kr was made by determining atomic Z and mass-to-charge ratio A/Q, where Q=charge state of the ions. The selectivity of ions was based on magnetic rigidity, time-of-flight and energy loss using BigRIPS separator and Zero degree spectrometer ZDS. The separated nuclei were implanted in a wide range silicon-strip stopper array for ion and β particle detection WAS3ABi, consisting of three highly-segmented 1 mm thick double-sided silicon detectors, a stack of ten segmented 1 mm thick single-sided silicon strip detectors. The γ rays were detected by EURICA array of 84 HPGe detectors surrounding the WAS3ABi system. A total of 348 nuclei of ^{67}Kr were identified at the BigRIPS spectrometer, 82 at the Zero-Degree Spectrometer (ZDS), and finally 36 implanted at the WAS3ABi detection system.
2020Gi02, 2017GoZT (also 2019Go34): further analysis of experiments at RIBF-RIKEN reported in 2016Go26.
Theoretical calculations for 2p decay of ^{67}Kr, and other structure features: NSR database has 22 references, listed here in document records.
Additional information 1.

^{67}Kr Levels

E(level)	$T_{1/2}$	Comments
0	7.4 ms *30*	%ε+%β^+=63 *14*; %2p=37 *14* (2016Go26) A total of 82 events were assigned in 2016Go26 to ^{67}Kr. Production σ=3.0 fb *8* (2016Bl05) in ^{9}Be(^{78}Kr,X), E=345 MeV/nucleon. Proton peak observed at 1690 keV *17* (2016Go26,2020Gi02). E(level): It is assumed that the observed events correspond to the ground-state. J^π: $5/2^-$ proposed from theory in 2019Mo01; and $3/2^-$ from systematics in 2021Ko07. $T_{1/2}$: measured by 2016Go26 (same $T_{1/2}$ given in 2020Gi02 and 2017GoZT thesis) from correlated decay curve for ^{67}Kr implants and subsequent decays. Several theoretical calculations as cited in Fig. 1 of 2016Go26 predict negative S(2p) value for ^{67}Kr, making this nucleus a possible 2p-emitter.