Application from	**Prouve, Claire**
E-mail Address	claire.prouve@cern.ch
Job	Fellowship Programmes / Programme des Boursiers / AFC-2017-1/FELL
Application date	23/02/2017 17:24

Personal Details

Title	Ms.
Family Name	Prouve
First Name(s)	Claire
Maiden Name (if applicable)	
Gender	Female / Femme
Date of birth	16/03/1987
Nationality	German (DE)
Second Nationality (if applicable)	
Country of Birth	FRANCE
Town of Birth	Nancy
Home Address (line 1 - max 32 chars)	1762 Grand Route
Home Address (line 2 - max 32 chars)	
City	Saint Jean de Gonville
Country	FRANCE
Postal Code	01630
Landline Phone Number (with international prefix)	
Mobile Phone Number (with international prefix)	0041754117909
What is your mother tongue?	German
Please rate your level of English	C2
Please rate your level of French	C2
Please select any other languages you may speak	

Education

Country	UNITED KINGDOM
Level of Education	UNITED KINGDOM - PhD
Title of Diploma/Qualification Note: Please give the full title in their original language (using Latin characters)	Doctor of Philosophy
Attended From	09/2013
Attended To (planned end date for current studies)	09/2017
School/University Name	University of Bristol

Country	GERMANY
Level of Education	GERMANY - Master
Title of Diploma/Qualification Note: Please give the full title in their original language (using Latin characters)	Master of Science
Attended From	04/2012
Attended To (planned end date for current studies)	06/2013
School/University Name	RWTH Aachen Univeristy

Country	GERMANY
Level of Education	GERMANY - Bachelor
Title of Diploma/Qualification Note: Please give the full title in their original language (using Latin characters)	Bachelor of Science
Attended From	10/2006
Attended To (planned end date for current studies)	04/2012
School/University Name	RWTH Aachen Univeristy

Country	GERMANY
Level of Education	GERMANY - Abitur
Title of Diploma/Qualification Note: Please give the full title in their original language (using Latin characters)	Abitur
Attended From	09/1997
Attended To (planned end date for current studies)	08/2006
School/University Name	Gymnasium Horkesgath

Employment

Specific Information (Fellows)

When would you like to start working at CERN?	10/2017
What is your motivation for applying for this job?	mimimi
Have you ever worked at CERN before?	Yes - as a Doctoral Student
If you selected "Yes - as a Fellow", please indicate for how long have you been a Fellow (in months)?	
Do you wish to also be considered for a COFUND Fellowship?	Yes
Main field of study	Experimental Physics / Physique Expérimentale
Please indicate for which type of Fellowship you wish to be considered	Research (Experimental physics)
Secondary field of study	
Tertiary field of study	
Applied physics	
Describe the projects where you used the selected applied physics topics and/or any others that are not listed	
Architecture	
Describe the projects where you used the selected architecture topics and/or any others that are not listed	
Surveying	
Describe the projects where you used the selected surveying topics and/or any others that are not listed	
Chemistry	

Describe the projects where you used the selected chemistry topics and/or any others that are not listed	
Civil engineering	
Describe the projects where you used the selected civil engineering topics and/or any others that are not listed	
Programming Languages	
Describe the projects where you used the selected programming languages and/or any others that are not listed	
Databases	
Describe the projects where you used the selected databases and/or any others that are not listed	
Information Technologies	
Describe the projects where you used the selected information technologies and/or any others that are not listed	
Theory of electrical engineering	
Describe the projects where you used the selected theory of electrical engineering topics and/or any others that are not listed	
Networks and systems	
Describe the projects where you used the selected networks and systems and/or any others that are not listed	
Low and high frequency engineering	
Describe the projects where you used the selected low and high frequency engineering topics and/or any others that are not listed	
Experimental Physics	Data reduction and numerical analysis Physics simulation Alignment techniques
Describe the projects where you used the selected experimental physics topics and/or any others that are not listed	Data reduction and numerical analysis: I have been involved in 5 physics analyses where I developed and applied several data reduction algorithms and optimised the selections. I have also used multivariate analysis tools. I have also written my own fitters from scratch, where I fitted in several dimensions and applied Gaussian constraints on various input parameters. Physics simulation: I am a developer for MINT, the only program capable of simulating generic n-body decays. Notably, I implemented the principle of Markov Chain Monte Carlo in a way that allows the extremely fast generation of multi-body decays following an arbitrarily complex decay amplitude as well as the first-time generation of quantum-correlated ¿(3770)¿DD decays while avoiding the duplication of events, a bias usually introduced when using the Markov Chain principle. Alignment techniques: I implemented the automated alignment of the RICH mirror system into the online (real-time) data taking framework of LHCb for Run II. I also optimised and stabilised the alignment algorithm in different ways. Hereby I reduced the time the RICH mirror alignment needed to complete from several days to 20 minutes.
Materials and experimental techniques	

Describe the projects where you used the selected materials and experimental techniques and/or any others that are not listed	
Mathematics	
Describe the projects where you used the selected mathematics knowledge and/or any others that are not listed	
Mechanical engineering	
Describe the projects where you used the selected mechanical engineering topics and/or any others that are not listed	
Safety	
Describe the projects where you used the selected safety topics and/or any others that are not listed	
List of (up to 5) most important publications in refereed scientific journals: reference, title. In each case summarize in 2 lines maximum your personal contribution.	Phys. Lett. B, Vol. 747, 01.07.2015, p. 9-17 "First determination of the CP content of D->pi+pi-pi+pi- and updated determination of the CP contents of D->pi+pi-pi0 and D->K+K-pi0"" I determined the CP content of D->pi+pi-pi+pi- using D->K_(S,L)pi+pi- decays as tags in Psi(3770)->DD CLEO-c data. J. High Energ. Phys. (2015) 2015: 64. "Angular analysis of the B0->K*0e+e- decay in the low-q^2 region" Evaluating the reconstruction of electrons, and optimisation of signal selection using e.g. multivariate analysis tools and determination of signal yields. J. High Energ. Phys. (2013) 2013: 159. "Measurement of the B0->K*0e+e- branching fraction at low dilepton mass" Investigation of efficiency loss specific to electrons in the final state, testing techniques for rejecting background from B0->K*0 gamma.
Are you a PhD holder or PhD student?	Yes / Oui
Specify submission date, defence date, title of thesis and name of your supervisor; summarize your thesis in maximum 5 lines; give the most significant results obtained.	Submission date: 22/09/2017 "Measurement of the CP even fraction of D0->pi+pi-pi+pi- decays at CLEO-c and a determination of observables related to CP violation in B->DK decays at LHCb" supervisor: Dr. Jonas Rademacker I determined the CP content of D->pi+pi-pi+pi- using D->K_(S,L)pi+pi- decays as tags in Psi(3770)->DD CLEO-c data. Model-independent determination of CKM angle gamma using B->DK decays at LHCb with binned D->pi+pi-pi+pi- phase-space.
List up to 3 experiments that you have participated in. In each case summarize in 2 lines your main contribution (other than your PhD)	
Optionally: List of up to 5 public or internal notes to which you have contributed personally. Indicate the number of authors.	LHCb-ANA-2012-092 (internal analysis note, 5 authors), "Measurement of the B0->K*0e+e¿ branching fraction." LHCb-ANA-2014-009 (internal analysis note, 5 authors), "Angular analysis of B0->K*0e+e¿ at LHCb with 3 fb¿1"

List of (up to 5) presentations at international Conferences (specify talk or poster) or workshops: conference name, date, title of the talk	"Expanding model-independent approaches for measuring the CKM angle gamma at LHCb" Poster: LHCC, 02/2017 "Status of the real-time alignment and calibration activities" Plenary talk: LHCb Week, 09/2016 (Santiago de Compostela) "Novel real-time calibration and alignment procedure for LHCb Run II" Poster: LHCC, 03/2016 "Towrads a model-independent measurement of gamma through B->D(->4pi)K decays with LHCb and CLEO-c" Poster:UK High Energy Physics Forum, 11/2013 (Abingdon) "Photon polarisation in b->s gamma" using B0->K*0e+e- at LHCb Poster: LHC France 2013 conference, 04/2013 (Annecy) "Analysis of the rare decay B0->K*0e+e- at LHCb" Talk: 77. Jahrestagung der DPG und DPG-Fru¿hjahrstagung, 03/2013 (Dresden)
Statement of Research Interest (max 15 lines)	
Additional comments	
Y	