

Coll 1: A2-Collaboration

SAM ABT⁵, PATRICK ACHENBACH¹, PATRIK ADLARSON¹, FARAH AFZAL²⁰, JÜRGEN AHRENS¹, CHANDRASEKHAR AKONDI¹⁸, JOHN ANNAND⁴, HANS-JÜRGEN AREND¹, WILLIAM BARNES²⁴, MIKHAIL BASHKANOV⁶, REINHARD BECK¹⁹, ARON BERNSTEIN²⁶, MAIK BIROTH¹, NIKOLAI BORISOV¹⁷, ALESSANDRO BRAGHIERI³, DEREK BRANFORD⁶, WILLIAM BRISCOE⁷, FEDERICO CIVIDINI¹, CRISTINA COLLICOTT²¹, SUSANNA COSTANZA³, ACHIM DENIG¹, MIKHAIL DENISSENYA²⁰, MANUEL DIETERLE⁵, EVANGELINE DOWNIE^{1,4,7}, PETER DREXLER¹⁰, MARIA ISABEL FERRETTI BONDY¹, LEV FILKOV², ALEXANDER FIX²³, SIMON GARDNER⁴, STEFANIE GARNI⁵, SERGO BORISOVICH GERASIMOV¹⁷, DEREK GLAZIER⁶, DOMINIKA GLOWA⁶, PETER GRABMAYR⁹, WOLFGANG GRADL¹, RALF GREGOR¹¹, MANUEL GÜNTHER⁵, GRIGORY GUREVICH¹³, DAVID HAMILTON⁴, MARTIN HATTEMER¹, DAVID HORNIDGE¹², DAVID HOWDLE⁴, GARTH HUBER²⁰, LENNART ISAKSSON²², OLIVER JAHN¹, PETER JENNEWINE¹, TOM JUDE⁶, ALEXANDER KAESER⁵, VIKTOR KASHEVAROV², STEPHEN KAY⁶, RUDOLF KONDRAKIEV¹³, MILONRAD KOROLJA¹⁴, BERND KRUSCHE⁵, MICHAEL LANG¹⁹, ALEXANDER LAZAREV¹⁷, VALERY LISIN¹³, KEN LIVINGSTON⁴, SEBASTIAN LUTTERER⁵, DOUGLAS MACGREGOR⁴, YASSER MAGHRBI⁵, MARK MANLEY¹⁹, PHILIPPE MARTEL^{1,26}, JOHN CAMERON MCGEORGE⁴, RODDY MACRAE⁴, VOLKER METAG¹⁰, WERNER MEYER¹⁵, RORY MISKIMEN²⁴, EDUARDO MONARCCHI¹, ANDREAS NEISER¹, ALEXANDER NEGANOV¹⁷, RAINER NOVOTNY¹⁰, MARKUS OBERLE⁵, MICHAEL OSTRICK¹, PATRIK OTT¹, PETER-BERND OTTE¹, DILLI PAUDYAL²⁰, PAOLO PEDRONI³, ANDREI POLONSKI¹³, SERGEI PRAKHOV⁸, GERHARD REICHERZ¹⁵, GUY RON¹⁶, GÜNTHER ROSNER^{4,25}, TIGRAN ROSTOMYAN⁵, ADAM SARTY²¹, BENT SCHRÖDER²², SVEN SCHUMANN^{1,26}, BJOERN SEITZ⁴, CONCETTINA SFIENTI¹, VAHE SOKHOYAN⁷, KARSTEN SPIEKER¹⁹, OLIVER STEFFEN¹, IGOR STRAKOVSKY⁷, THOMAS STRUB⁵, IVAN SUPEK¹⁴, ANNICKA THIEL¹⁹, MICHAELA THIEL¹, LOTHAR TIATOR¹, ANDREAS THOMAS¹, MARC UNVERZAGT^{1,19}, YURI USOV¹⁷, SASCHA WAGNER¹, NATALIE WALFORT⁵, DAN WATTS⁶, JENNIFER WETTIG¹, LILIAN WITTHAUER⁵, DOMINIK WERTHMÜLLER⁴, MARTIN WOLFES¹, and LORENZO ZANA⁶ — ¹Institut für Kernphysik, Universität Mainz, Mainz, Germany — ²Lebedev Physical Institute, Leninsky Prospekt 53, Moscow, Russia — ³INFN Sezione di Pavia, Via Bassi, Pavia, Italy — ⁴Department of Physics and Astronomy, Glasgow University, Glasgow, United Kingdom — ⁵Institut für Physik, Universität Basel, Basel, Switzerland — ⁶Department of Physics, University of Edinburgh, Edinburgh, United Kingdom — ⁷George Washington University, Washington DC, U.S.A. — ⁸University of California (UCLA), Los Angeles CA, U.S.A. — ⁹Physikalischches Institut, Universität Tübingen, Auf der Morgenstelle, Tübingen, Germany — ¹⁰II. Physikalischses Institut, Universität Giessen, Heinrich-Buff-Ring, Gie"sen, Germany — ¹¹Forschungszentrum Jülich, Jülich, Germany — ¹²Department of Physics, Mount Allison University, Sackville, Canada — ¹³Institute for Nuclear Research (INR), Moscow, Russia — ¹⁴Rudjer Boskovic Institute, Zagreb, Croatia — ¹⁵Institut für Experimentalphysik, Ruhr-Universität, Bochum, Germany — ¹⁶Racah Institute of Physics, Hebrew University of Jerusalem, Israel — ¹⁷Joint Institute for Nuclear Research (JINR), Dubna, Russia — ¹⁸Kent State University, Kent, OH, USA — ¹⁹Helmholtz-Institut für Strahlen- und Kernphysik, Universität Bonn, Bonn, Germany — ²⁰Dept. of Physics, Univ. of Regina, Regina, Canada — ²¹Dept. of Astronomy and Physics, Saint Mary's University, Halifax, Canada — ²²MAX-lab, Lund University, Lund, Sweden — ²³Tomsk Polytechnic University, Tomsk, Russia — ²⁴Department of Physics, University of Massachusetts, Amherst, USA — ²⁵GSI FAIR, Darmstadt, Germany — ²⁶Massachusetts Institute of Technology, Department of Physics, Cambridge, MA, USA

Coll 2: ALICE Germany-Collaboration

M. AL-TURANY⁹, T. ALT⁴, I. ALTSYBEEV⁸, A. ANDRONIC¹⁰, V. ANGUELOV⁷, H. APPELSHAUSER⁴, D. ATEYEH⁴, R. AVERBECK⁹, R. BAILHACHE⁴, L. BARIOGLIO⁸, E. BARTSCH⁴, D. BATTISTINI⁸, P. BECHT⁹, A.D.C. BELL HECHAVARRIA¹⁰, A. BERDNIKOVA⁷, L. BERGMANN⁷, A. BILANDZIC⁸, M.B. BLIDARU⁹, N. BLUHME¹, C. BLUME⁴, A.G. BORQUEZ CARCAMO⁷, Y.E.M. BOUZIANI⁴, L. BRATRUD⁴, P. BRAUN-MUNZINGER⁹, H. BUESCHING⁴, A. CALIVA⁹, M.A. CALMON BEHLING⁴, A.G.B. CARCAMO⁷, T. CHENG^{9,7}, E.S. CHIZZALI⁸, M.R. CIUPEK⁹, J. CRKOVSKÁ⁷, M.C. DANISCH⁷, A.R. DASH¹⁰, J. DE CUVELAND¹, R. DEL GRANDE⁸, J. DITZEL⁴, B. DÖNIGUS⁴, A. DUBLA⁹, T.M. EDER¹⁰, E. EGE⁴, F. EISENHUT⁴, L. FABBIEtti⁸, V.J.G. FEUILLARD⁷, I. FOKIN⁷, C. GARABATOS⁹, K. GARNER¹⁰, P. GASIK⁹, T. GEIGER⁴, P. GIUBELLINO⁹, P. GLÄSSEL⁷, S. GORBUNOV¹, R. GROSSO⁹, T. GUNDEM⁴, M.K. HABIB⁹, M. HARTUNG⁴, P. HAUER², S.T.

HECKEL⁸, E. HELLBÄR⁹, M. HEMMER⁴, F. HERRMANN¹⁰, M. HERZER⁴, B. HEYBECK⁴, M. HORST⁸, P. HUHN⁴, D. HUTTER¹, M. IVANOV⁹, J. JÄGER⁴, T. JANSON⁵, J.M. JOWETT⁹, J. JUNG⁴, M. JUNG⁴, A.S. KALTEYER⁹, U. KEBSCHULL⁵, R. KEIDEL³, B. KETZER², J. KEUL⁴, M. KIM⁷, S. KIRSCH⁴, I. KISEL¹, C. KLEIN-BÖSING¹⁰, M. KLEINER⁴, T. KLEMENZ⁸, T. KOLLEGGER⁹, J. KONIG⁴, S.A. KONIGSTORFER⁸, L. KREIS⁹, M. KROESEN⁷, M. KRÜGER⁴, S.L. LA POINTE¹, L. LAUTNER⁸, G. LEGRAS¹⁰, J. LEHRBACH¹, M.M. LESCH⁸, M. LETTRICH⁸, V. LINDENSTRUTH¹, C. LIPPmann⁹, J.A. LOPEZ⁷, P. LU⁹, J.R. LUHDER¹⁰, T. MAHMoud², A. MARIN⁹, S. MASCIOCCHI⁹, A.F. MECHLER⁴, R. MICHEL⁹, D.L. MIHAYLOV⁸, D. Miškowiec⁹, Z. MOMTAZ⁴, C. MORDASINI⁸, D.A. MOREIRA DE GODOY¹⁰, S. MROZINSKI⁴, R.H. MUNZER⁴, A. NATH⁷, G. NESKOVIC¹, Y. PACHMAYER⁷, C. PETER⁴, C. PINTO⁸, F. PLIQUETT⁴, A.R. REDELBACH¹, C. REETZ⁹, K. REYGERS⁷, A.A. RIEDEL⁸, T.S. ROGOSCHINSKI⁴, M.P. SALVAN⁹, I. SANNA⁸, V.M. SARTI⁸, H.S. SCHEID⁴, R. SCHICKER⁷, D. SCHLEDEWITZ⁹, F. SCHLEPPER⁷, A. SCHMAH^{9,7}, C. SCHMIDT⁹, H.R. SCHMIDT⁶, M. SCHMIDT⁶, J. SCHÖNGARTH⁴, A. SCHRÖTER¹, K. SCHWARZ⁹, K. SCHWEDA⁹, I. SELYUZHENKOV⁹, L. SERKSNTY⁸, B. SINGH⁸, G. SKORODUMOV⁷, J. STACHEL⁷, P. STAHLHUT⁹, S.F. STIEFELMAIER⁷, N. STRANGMANN⁴, P. STRATMANN¹⁰, S.F. TAGHAVI⁸, G. TAILLEPIED⁹, L.A. TARASOVICCOVA¹⁰, A. TOIA⁴, B. ULUKUTLU⁸, C.A. VAN VEEN⁷, L. VERMUNT⁹, M.A. VÖLKL⁷, I. VOROBYEV⁸, M. WALDE⁴, J.P. WESSELS¹⁰, C. WEIDLICH⁴, J. WIECHULA⁴, F. WEIGLHOFER¹, J. WILKINSON⁹, G.A. WILLEMS¹⁰, B. WINDELBAND⁷, A. YADAV², A. YILDIZ⁴, A. YUNCU⁷, F. ZANONE⁷, and J. ZHU⁹ — ¹Frankfurt Institute for Advanced Studies, Johann Wolfgang Goethe-Universität Frankfurt, Frankfurt, Germany — ²Helmholtz-Institut für Strahlen- und Kernphysik, Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn, Germany — ³Hochschule Worms, Zentrum für Technologietransfer und Telekommunikation (ZTT), Worms, Germany — ⁴Institut für Kernphysik, Johann Wolfgang Goethe-Universität Frankfurt, Frankfurt, Germany — ⁵Johann-Wolfgang-Goethe Universität Frankfurt Institut für Informatik, Fachbereich Informatik und Mathematik, Frankfurt, Germany — ⁶Physikalisches Institut, Eberhard-Karls-Universität Tübingen, Tübingen, Germany — ⁷Physikalisches Institut, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany — ⁸Physik Department, Technische Universität München, Munich, Germany — ⁹Research Division and ExtreMe Matter Institute EMMI, GSI Helmholtzzentrum für Schwerionenforschung GmbH, Darmstadt, Germany — ¹⁰Westfälische Wilhelms-Universität Münster, Institut für Kernphysik, Münster, Germany

Coll 3: ALPS-Collaboration

DANIEL BROTHERTON², SANDY CROATTO³, KARSTEN GADOW³, JOSEPH GLEASON², HARTMUT GROTE¹, AYMAN HALLAL², HAROLD HOLLIS², ALASDAIR JAMES¹, KATHARINA-SOPHIE ISLEIF^{3,7}, FRIEDERIKE JANUSCHEK³, KANIOAR KARAN¹, TODD KOZLOWSKI², AXEL LINDNER³, MANUEL MEYER⁴, GUIDO MUELLER^{2,5}, RYAN NETRALV², ISABELLA OCEANO³, GULDEN OTHMAN⁴, JAN PÖLD⁵, DAVID REUTHER³, ANDREAS RINGWALD³, JOSÉ ALEJANDRO RUBIERA GIMENO³, JOERN SCHAFFRAN³, UWE SCHNEEKLOTH³, MATTHIAS SCHOTT⁶, CHRISTINA SCHWEMMBAUER³, DETLEF SELLMANN³, RIKHAV SHAH⁶, AARON DEAN SPECTOR³, DAVID TANNER², DIETER TRINES³, ADA UMINSKA², LI-WEI WEI³, and BENNO WILLKE⁵ — ¹Cardiff University, Cardiff, United Kingdom — ²University of Florida, Florida, United States — ³Deutsches Elektronen-Synchrotron, Hamburg, Germany — ⁴Universität Hamburg, Hamburg, Germany — ⁵Leibniz Universität Hannover, Hanover, Germany — ⁶Universität Mainz, Mainz, Germany — ⁷Helmut Schmidt Universität, Hamburg, Germany

Coll 4: AMBER-Collaboration

At CERN — Geneva, Switzerland

Coll 5: ANTARES-KM3NET-ERLANGEN-Collaboration

YARA DARRAS, ALBA DOMI, THOMAS EBERL, MAXIMILIAN EFF, TAMAS GAL, NICOLE GEISSELBRECHT, RODRIGO GRACIA RUIZ, KAY GRAF, LUKAS HENNIG, JÜRGEN HÖSSL, OLEG KALEKIN, ULI KATZ, ROBERT LAHMANN, MARKUS PIRKER, JUTTA SCHNABEL, JOHANNES SCHUMANN, BASTIAN SETTER, and MIKHAIL SMIRNOV — Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen Centre for Astroparticle Physics (ECAP), Nikolaus-Fiebiger-Str. 2, 91058 Erlangen, Deutschland

Coll 6: ATLANTIS-Collaboration

DANIEL BURDETTE¹, ALEX BRINSTON^{3,5}, JASON CLARK¹, ADAM DOCKERY³, MAX HORST^{2,4}, PHILLIP IMGRAM², KRISTIAN KÖNIG², BERNHARD MAASS¹, SIMON RAUSCH^{2,4}, KEI MINAMISONO³, PATRICK MÜLLER², PETER MÜLLER¹, WILFRIED NÖRTERSHÄUSER^{2,4}, SKY PINEDA³, LAURA RENTH², BROOKE RICKEY³, DANIEL SAGNTIAGO-GONZALES¹, GUY SAVARD¹, FELIX SOMMER², and ADRIAN VALVERDE^{1,6} — ¹Physics Division, Argonne National Laboratory, Lemont, IL 60439, USA — ²Institut für Kernphysik, Technische Universität Darmstadt, Darmstadt, Germany — ³Facility for Rare Isotope Beams, Michigan State University, East Lansing 48824, USA — ⁴Helmholtz Forschungsakademie Hessen für FAIR, Darmstadt, Germany — ⁵Massachusetts Institute of Technology, Cambridge, MA, USA — ⁶Department of Physics & Astronomy, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada

Coll 7: CALICE-D-Collaboration

OLE BACH¹, VLADIMIR BOCHARNIKOV¹, KARSTEN GADOW¹, PETER GOTTLICHER¹, DANIEL HEUCHEL¹, KATJA KRÜGER¹, JIA-HAO LI¹, OLIN PINTO¹, MATHIAS REINECKE¹, FELIX SEFKOW¹, DARIA SELIVANOVA¹, MALINDA DE SILVA¹, STAN LAI², JULIAN UTEHS², ANDRÉ WILHAHN², ERIK BUHMANN³, ERIKA GARUTTI³, GREGOR KASIECKZA³, MICHAEL MATYSEK³, STEPHAN MARTENS³, JACK ROLPH³, CARMEN VILLALBA³, KONRAD BRIGGL⁴, YONATHAN MUNWES⁴, HANS CHRISTIAN SCHULTZ-COULON⁴, WEI SHEN⁴, RAINER STAMEN⁴, ERIK WARTTMANN⁴, ZHENXIONG YUAN⁴, ANDREA BROGNA⁵, VOLKER BÜSCHER⁵, ASMA HADEF⁵, ANTOINE LAUDRAIN⁵, LUCIA MASETTI⁵, SEBASTIAN RITTER⁵, MARISOL ROBLES-MANZANO⁵, ANNA ROSMANITZ⁵, ULRICH SCHÄFER⁵, CHRISTIAN SCHMITT⁵, ALFONS WEBER⁵, QUIRIN WEITZEL⁵, LORENZ EMBERGER⁶, FABIAN HUMMER⁶, IVAN POPOV⁶, SWATHI SASIKUMAR⁶, FRANK SIMON^{6,7}, MALTE WAGNER⁶, HENDRIK WINDEL⁶, and CHRISTIAN ZEITNITZ⁸ — ¹Deutsches Elektronen Synchrotron DESY — ²Universität Göttingen — ³Universität Hamburg — ⁴Universität Heidelberg — ⁵Universität Mainz — ⁶Max-Planck Institut für Physik, München — ⁷Institute for Data Processing and Electronics, Karlsruhe Institute of Technology — ⁸Universität Wuppertal

Coll 8: CBELSA/TAPS-Collaboration

FARAH AFZAL³, ALEXEI ANISOVICH^{3,5}, REINHARD BECK³, PHILIPP BIELEFELDT³, KAI-TOMAS BRINKMANN⁶, VOLKER CREDE⁷, SEBASTIAN CIUPKA³, NAOMI DAVIS³, HARTMUT DUTZ⁴, DANIEL ELSNER⁴, FRANK FROMMBERGER⁴, DEPDEEP GHOSAL¹, STEFAN GOERTZ⁴, MARTIN GRÄF³, MARCUS GRÜNER³, JAN HARTMANN³, WOLFGANG HILLERT⁴, PHILIPP HOFFMEISTER³, CHRISTIAN HONISCH³, NICOLAS JERMANN¹, TOM JUDE⁴, FLORIAN KALISCHEWSKI³, BERNHARD KETZER³, PETER KLASSEN³, FRIEDRICH KLEIN⁴, NICOLAS KOLANUS³, FRANZ LUDWIG KRÄMER³, PHILIPP KRÖNERT³, BERND KRUSCHE¹, MICHAEL LANG³, PHILIPP MAHLBERG³, VOLKER METAG⁶, WERNER MEYER², JOHANNES MÜLLERS³, MARIANA NANOV⁶, KIRILL NIKONOV³, JEAN NOËL³, BENEDIKT OTTO³, GERHARD REICHERZ², NADIA REINARTZ³, LISA RICHTER³, STEFAN RUNKEL⁴, BEN SALISBURY³, ANDREI SARANTSEV^{3,5}, DIMITRI SCHaab³, ANDREAS SCHECTEL³, CHRISTOPH SCHMIDT³, HARTMUT SCHMIEDEN⁴, JAN SCHULTES³, TOBIAS SEIFEN³, MATTHIAS STEINKE², NILS STAUSBERG³, FLORIAN TAUBERT³, ANNICK THIEL³, ULRIKE THOMA³, GEORG URFF³, HARALD VAN PEE³, CHRISTOPH WENDEL³, ULRICH WIEDNER², YANNICK WUNDERLICH³, and HANS-GEORG ZAUNICK⁶ — ¹Institut für Physik, Klingelbergstraße 82, CH-4056 Basel — ²Institut für Experimentalphysik, Universitätsstraße 150, D-44780 Bochum — ³Helmholtz-Institut für Strahlen- und Kernphysik, Nussallee 14-16, D-53115 Bonn — ⁴Physikalischs Institut, Nussallee 12, D-53115 Bonn — ⁵Petersburg Nuclear Physics Institute, Gatchina, Leningrad District, 188300 Russia — ⁶II. Physikalisches Institut, Heinrich-Buff-Ring 16, D-35392 Gießen — ⁷Florida State University, Tallahassee, FL 32306, USA

Coll 9: CBM-Collaboration

ALEXANDER ADLER¹, APAR AGARWAL², KSHITIJ AGARWAL³, ZUBAYER AHAMMED², ARSHAD AHMAD⁴, NAZEER AHMAD⁵, VALENTINA AKISHINA^{6,7}, MOHAMMAD AL-TURANY^{7,48}, JULIO ANDARY⁶, ANTON ANDRONIC⁸, HARALD APPELSHÄUSER⁶, BENEDICT ARNOLDI-MEADOWS⁶, MOHD. DANISH AZMI⁵, MARCEL BAJDEL⁷, GÁBOR BALASSA⁹, MATTHIAS BALZER¹⁰, JÜRGEN BECKER¹⁰, KARL-HEINZ BECKER¹¹, MARTEN BECKER¹², ARTEMY BELOUSOV¹³, ALEXANDRU BERCUCH¹⁴, ROLAND BERENDES⁸, DENIS BERTINI⁷, OLGA BERTINI⁷, MARTIN BEYER¹², OLEG BEZHYYKO¹⁵, PARTHA PRATIM BHADURI², SHANTANU BHALERAO³, ANUJU BHASIN¹⁶, SHABIR AHMAD BHAT⁴, TOWSEEF AHMAD BHAT⁴, WASEEM AHMAD

BHAT⁴, BUDDHADEB BHATTACHARjee¹⁷, ABHIJIT BHATTACHARYYA¹⁸, SAIKAT BISWAS¹⁹, THOMAS BLANK¹⁰, NORA BLUHME¹³, CHRISTOPH BLUME^{6,7}, DANIEL BONAVENTURA⁸, JANUSZ BRZYCHCZYK²⁰, MARIUS CĂLIN²¹, MICHELE CASELLE¹⁰, AMLAN CHAKRABARTI¹⁸, PETR CHALOUPKA²², SAYAK CHATTERJEE¹⁹, SOUVIK CHATTOPADHYAY², SUBHASIS CHATTOPADHYAY^{2,19}, HAMDA CHERIF^{6,7}, LUKÁS CHLAD^{3,7}, PETR CHUDOBA²³, EOIN CLERKIN²⁴, LADY MARYANN COLLAZO SÁNCHEZ^{7,6}, MÁTÉ CSANÁD²⁵, PATRICK DAHM⁷, HASAN DARWISH^{7,6}, RUDRAPRIYA DAS¹⁹, SUPRIYA DAS¹⁹, SUSOVAN DAS³, JAN DE CUVELAND¹³, ZHI DENG²⁶, HARALD DEPPE⁷, INGO DEPPNER²⁷, MICHAEL DEVEAUX^{7,6}, SHENG DONG^{28,27}, ANAND KUMAR DUBEY², ANDREA DUBLA⁷, MICHAEL DÜRR¹², RADIM DVOŘÁK²², ILYA ELIZAROV⁷, DAVID EMSCHERMANN⁷, JÜRGEN ESCHKE^{24,7}, MURAT ESEN⁶, CORNELIUS FEIER-RIESEN¹², SHENG-QIN FENG²⁹, FELIX FIDORRA⁸, PETER FISCHER³⁰, HOLGER FLEMMING⁷, JÖRG FÖRTSCH¹¹, PANAGIOTA FOKA⁷, ULRICH FRANKENFELD⁷, VOLKER FRIESE⁷, INGO FRÖHLICH^{6,7}, JOCHEN FRÜHAUF⁷, TETYANA GALATYUK^{31,7}, RAJESH GANAI¹⁸, GAUTAM GANGOPADHYAY¹⁸, PIOTR GASIK^{24,7}, CHANDRASEKHAR GHOSH², SANJAY K. GHOSH¹⁹, DANIEL GIANG⁶, DAMIAN GIL²⁰, SUSANNE GLÄSSEL⁶, LARISA GOLINKA-BEZSHYYKO¹⁵, SOMEN GOPE¹⁷, SERGEY GORBUNOV⁷, MAREK GUMIŃSKI³², ANIK GUPTA¹⁶, BENEDIKT GUTSCHE⁶, ROBIN HAAS¹², KRISTÝNA HAISMANOVÁ²², DONG HAN²⁶, HELVI HARTMANN¹³, NORBERT HEINE⁸, NORBERT HERRMANN^{27,7}, JOHANN M. HEUSER⁷, CLAUDIA HÖHNE^{12,7,49}, ONDŘEJ HOFMAN²², ROMAIN HOLZMANN⁷, DONGDONG HU³³, KILIAN HUNOLD¹³, DIRK HUTTER¹³, KHALED ISMAIL⁷, THOMAS JANSON¹, ALEXANDRU JIPA²¹, IGOR KADENKO¹⁵, PHILIPP KÄHLER⁸, BURKARD KÄMPFER^{34,50}, KARL-HEINZ KAMPERT¹¹, RALF KAPEL⁷, RADOSLAW KARABOWICZ⁷, VARCHASWI K.S. KASHYAP³⁵, KRZYSZTOF KASIŃSKI³⁶, UDO KEBSCHULL¹, VADYM KEDYCH³¹, OLIVER KELLER²⁴, IRAKLI KESHELASHVILI⁷, M. MOHSIN KHAN⁵, SHAHID KHAN³, MLADEN KIŠ⁷, IVAN KISEL¹³, RAFAL KLECZEK³⁶, CHRISTIAN KLEIN-BÖSING⁸, VIKTOR KLOCHKOV³, KARSTEN KOCH⁷, PIOTR KOCZON⁷, MARTIN KOHN⁸, MICHAL KOZIEL⁶, GRIGORY KOZLOV¹³, DMYTRO KRESAN⁷, WILHELM KRUEGER³¹, MICHAL KRUSZEWSKI³², OLEKSANDR KSHYVANSKY³⁷, WOJCIECH KUCEWICZ³⁶, ANDREJ KUGLER²³, AJAY KUMAR³⁸, LOKESH KUMAR³⁹, SUMIT KUMAR KUNDU⁴⁰, VOLODYMYR KYVA³⁷, ROBIN LAKOS¹³, PAWEŁ LASKO²⁰, OLHA LAVORYK¹⁵, IONEL LAZANU²¹, JÖRG LEHNERT⁷, YUE HANG LEUNG²⁷, YUANJING LI²⁶, VOLKER LINDENSTRUTH^{13,7}, FRÉDÉRIC LINZ^{7,31}, FENG LIU²⁸, SVEN LÖCHNER⁷, PIERRE-ALAIN LOIZEAU²⁴, OLEKSI LUBYNETS^{7,6}, XIAOFENG LUO²⁸, ANTON LYMANETS⁷, SANJAY MAHAJAN¹⁶, ZBIGNIEW MAJKA²⁰, BISWAJIT MALLICK⁴¹, MITALI MANDAL², OSNAN MARAGOTO RODRÍGUEZ^{7,6}, ANA MARIA MARIN GARCIA⁷, JOCHEN MARKERT⁷, TOMASZ MATULEWICZ⁴², SHAIFALI MEHTA³, ADRIAN MEYER-AHRENS⁸, JAN MICHEL⁶, PIOTR MIEDZIK³², VICTOR MILITSJA³⁷, M. FAROOQ MIR⁴, DARIUSZ MISKOWIEC⁷, BEDANGADAS MOHANTY³⁵, HANNES MORGENWECK⁸, DANIEL AARON MÜLLER²⁷, WALTER F.J. MÜLLER²⁴, CHRISTIAN MÜNTZ⁶, PHILIPP MUNKES⁸, EKATA NANDY², FREDERIKE NICKELS⁷, PIOTR OTFINOWSKI³⁶, JAN HENDRIK OTTO¹², LIANG-MING PAN⁴³, IAROSLAV PANASENKO^{3,37}, SARASWATI PANDEY³⁸, VIVEK PATEL¹¹, CHRISTIAN PAULY¹¹, VOJTEČH PETRÁČEK²², MARIANA PETRIŠ¹⁴, MIHAI PETROVICI¹⁴, DENNIS PFEIFER¹¹, KRZYSZTOF PIASECKI⁴², JERZY PIETRASZKO⁷, ROMAN PLANETA²⁰, VLADIMÍR PLUJKO¹⁵, JAN PLUTA⁴⁴, TETIANA POVAR¹¹, KRZYSZTOF POŽNIAK^{32,42}, SIDHARTH KUMAR PRASAD¹⁹, ALEXANDER PROZOROV²³, MYKHAILO PUGACH³⁷, VALERY PUGATCH³⁷, AXEL PUNTKE⁸, LAURA RADULESCU¹⁴, SIBAJI RAHA¹⁹, DARIO RAMIREZ^{7,6}, RAJARSHI RAY¹⁹, ANDREAS REDELBACH¹³, ALEXANDER REINEFELD⁴⁵, OANA RISTEA²¹, DAIRON RODRÍGUEZ GARCES^{7,6}, ADRIAN RODRÍGUEZ RODRÍGUEZ^{6,7}, FLORIAN ROETHER⁶, RYSZARD ROMANIUK³², ADRIAN ROST^{24,31}, ANKHI ROY⁴⁰, SHREYA ROY^{19,7}, ESTEBAN RUBIO²⁷, ANAR RUSTAMOV⁷, RAGHUNATH SAHOO⁴⁰, PRADIP KUMAR SAHU⁴¹, SANJIB KUMAR SAHU⁴¹, JOGENDER SAINI², FAROUK SALEM⁴⁵, SANJEEV SINGH SAMBYAL¹⁶, CLAUDIO SCHIAUA¹⁴, HENRIK SCHILLER⁸, FLORIAN SCHINTKE⁴⁵, DAVID SCHLEDT¹, CHRISTIAN JOACHIM SCHMIDT⁷, HANS RUDOLF SCHMIDT^{3,7}, PATRICK SCHNEIDER⁸, KERSTIN SCHÜNEMANN^{24,7}, FLORIAN SECK³¹, ILYA SELYZHENKOV⁷, ARINDAM SEN¹⁹, ANNA SENGER²⁴, PETER SENGER^{24,6}, ABHISHEK KUMAR SHARMA⁵, SHUSU SHI²⁸, MEHULKUMAR SHIROYA^{7,6}, VLADIMÍR SIDORENKO¹⁰, CARMEN SIMONS⁷, AJAY KUMAR SINGH⁴⁶, BHARTENDU KUMAR SINGH³⁸, CHANDRA PRAKASH SINGH³⁸, OMVEER SINGH⁵, RANBIR SINGH³⁵, VIKAS SINGHAL², DOMINIK SMITH²⁴, YANNICK SÖHNGEN²⁷, DENNIS SPICKER⁶, DANIEL STACH³⁴, PAWEŁ STASZEL²⁰, DMYTRO STOROZHYK³⁷, JOACHIM STROTH^{6,7}, CHRISTIAN

STURM⁷, PAVISH SUBRAMANI¹¹, YONGJIE SUN³³, ZHENGYANG SUN³³, ROBERT SZCZYGIEL³⁶, MAKSYM TEKLISHYN^{7,37}, JENS THAUFELDER⁷, ALBERICA TOIA^{7,6}, MICHAEL TRAXLER⁷, EKATERINA TRIFONOVA¹⁰, NICOLAE GEORGE TUTURAS²¹, FLORIAN UHLIG⁷, KAI LUKAS UNGER¹⁰, IOURI VASSILIEV⁷, OLEG VASYLYEV⁷, ROBERT VISINKA⁷, ELENA VOLKOVA³, LUKAS WAHMES⁸, BOTAN WANG²⁶, KAIYANG WANG³³, TIANXING WANG³³, XINJIAN WANG³³, YI WANG²⁶, MARC WEBER¹⁰, RUBEN WEBER⁸, PHILIPP WEIDENKAFF²⁷, FELIX WEIGLHOFER¹³, JOHANNES P. WESSELS⁸, DANIEL WIELANEK⁴⁴, ANDRZEJ WIELOCH²⁰, ANDREA WILMS⁷, MARCIN WOJKOWSKI³², GYÖRGY WOLF⁹, KE-JUN WU²⁹, QIQI WU⁴³, TAO XIONG²⁹, JUN-FENG YANG³³, ZHONGBAO YIN²⁸, IN-KWON YOO⁴⁷, WOJCIECH ZABOLOTNY^{32,42}, HANNA ZBROSCZYK⁴⁴, QIUNAN ZHANG^{26,27}, XI-AOMING ZHANG²⁸, YU ZHANG²⁸, SERGEY ZHARKO⁷, SHENG ZHENG²⁹, DAICUI ZHOU²⁸, JIAN ZHOU³³, WENXIONG ZHOU⁴³, XIANGLEI ZHU²⁶, GIANNA ZISCHKA¹³, FALK ZORN¹², WERONIKA ZUBRZYCKA³⁶, and PETER ZUMBRUCH⁷ — ¹Institute for Computer Science, Goethe-Universität Frankfurt, Frankfurt, Germany — ²Variable Energy Cyclotron Centre (VECC), Kolkata, India — ³Physikalisches Institut, Eberhard Karls Universität Tübingen, Tübingen, Germany — ⁴Department of Physics, University of Kashmir, Srinagar, India — ⁵Department of Physics, Aligarh Muslim University, Aligarh, India — ⁶Institut für Kernphysik, Goethe-Universität Frankfurt, Frankfurt, Germany — ⁷GSI Helmholtzzentrum für Schwerionenforschung GmbH (GSI), Darmstadt, Germany — ⁸Institut für Kernphysik, Westfälische Wilhelms-Universität Münster, Münster, Germany — ⁹Institute for Particle and Nuclear Physics, Wigner Research Centre for Physics, Hungarian Academy of Sciences, Budapest, Hungary — ¹⁰Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany — ¹¹Fakultät für Mathematik und Naturwissenschaften, Bergische Universität Wuppertal, Wuppertal, Germany — ¹²Justus-Liebig-Universität Giessen, Giessen, Germany — ¹³Frankfurt Institute for Advanced Studies, Goethe-Universität Frankfurt (FIAS), Frankfurt, Germany — ¹⁴Horia Hulubei National Institute of Physics and Nuclear Engineering (IFIN-HH), Bucharest, Romania — ¹⁵Department of Nuclear Physics, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine — ¹⁶Department of Physics, University of Jammu, Jammu, India — ¹⁷Nuclear and Radiation Physics Research Laboratory, Department of Physics, Gauhati University, Guwahati, India — ¹⁸Department of Physics and Department of Electronic Science, University of Calcutta, Kolkata, India — ¹⁹Department of Physics, Bose Institute, Kolkata, India — ²⁰Marian Smoluchowski Institute of Physics, Jagiellonian University, Kraków, Poland — ²¹Atomic and Nuclear Physics Department, University of Bucharest, Bucharest, Romania — ²²Czech Technical University (CTU), Prague, Czech Republic — ²³Nuclear Physics Institute of the Czech Academy of Sciences, Řež, Czech Republic — ²⁴Facility for Antiproton and Ion Research in Europe GmbH (FAIR), Darmstadt, Germany — ²⁵Eötvös Loránd University (ELTE), Budapest, Hungary — ²⁶Department of Engineering Physics, Tsinghua University, Beijing, China — ²⁷Physikalisches Institut, Universität Heidelberg, Heidelberg, Germany — ²⁸College of Physical Science and Technology, Central China Normal University (CCNU), Wuhan, China — ²⁹College of Science, China Three Gorges University (CTGU), Yichang, China — ³⁰Institut für Technische Informatik, Universität Heidelberg, Heidelberg, Germany — ³¹Institut für Kernphysik, Technische Universität Darmstadt, Darmstadt, Germany — ³²Institute of Electronic Systems, Warsaw University of Technology, Warsaw, Poland — ³³Department of Modern Physics, University of Science & Technology of China (USTC), Hefei, China — ³⁴Institut für Strahlenphysik, Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Dresden, Germany — ³⁵National Institute of Science Education and Research (NISER), Bhubaneswar, India — ³⁶AGH University of Science and Technology (AGH), Kraków, Poland — ³⁷High Energy Physics Department, Kiev Institute for Nuclear Research (KINR), Kyiv, Ukraine — ³⁸Department of Physics, Banaras Hindu University (BHU), Varanasi, India — ³⁹Department of Physics, Panjab University, Chandigarh, India — ⁴⁰Indian Institute of Technology Indore, Indore, India — ⁴¹Institute of Physics, Bhubaneswar, India — ⁴²Faculty of Physics, University of Warsaw, Warsaw, Poland — ⁴³Chongqing University, Chongqing, China — ⁴⁴Faculty of Physics, Warsaw University of Technology, Warsaw, Poland — ⁴⁵Zuse Institute Berlin (ZIB), Berlin, Germany — ⁴⁶Indian Institute of Technology Kharagpur, Kharagpur, India — ⁴⁷Pusan National University (PNU), Pusan, Korea — ⁴⁸also: European Organization for Nuclear Research (CERN), Geneva, Switzerland — ⁴⁹also: Helmholtz Research Academy Hesse for FAIR, Frankfurt, Germany — ⁵⁰also: Technische Universität Dresden, Dresden, Germany

Coll 10: CBM-MVD-Collaboration

OLE ARTZ¹, JULIO ANDARY¹, BENEDICT ARNOLDI-MEADOWS¹, JEROME BAUDOT², GREGORY BERTOLONE², AUGUSTE BESSON², NORBERT BIALAS¹, ROMA BUGIEL², GILLES CLAUS², CLAUDE COLLEDANI², HASAN DARWISH^{1,2,3}, MICHAEL DEVEAUX^{1,3,6}, ANDREI DOROKHOV², GUY DOZIERE², ZIAD EL BITAR², INGO FRÖHLICH^{1,3}, MATHIEU GOFFE², BENEDIKT GUTSCHE¹, FABIAN HEBERMEHL¹, ABDELKADER HIMMI², CHRISTINE C. HU-GUO², KIMMO JAASKELAINEN², OLIVER KELLER⁶, MICHAL KOZIEL¹, FRANZ MATEJCEK¹, JAN MICHEL¹, FREDERIC MOREL², CHRISTIAN MÜNTZ¹, HUNG PHAM², CHRISTIAN JOACHIM SCHMIDT³, STEFAN SCHREIBER¹, MATTHIEU SPECHT², DENNIS SPICKER¹, JOACHIM STROTH^{1,3,4}, ISABELLE VALIN², ROLAND WEIRICH¹, YÜE ZHAO², and MARC WINTER⁵ — ¹Goethe University Frankfurt am Main, Germany — ²Université de Strasbourg, CNRS, IPHC UMR 7178, Strasbourg, France. — ³GSI Helmholtzzentrum für Schwerionenforschung GmbH, Germany — ⁴Helmholtz Forschungsakademie Hessen für FAIR, Germany — ⁵IJCLab, UMR9012 - CNRS / Université Paris-Saclay / Université de Paris, France. — ⁶Facility for Antiproton and Ion Research in Europe GmbH, Germany

Coll 11: CMOS Strip Detectors-Collaboration

SPYROS ARGYROPOULOS¹, JAN-HENDRIK ARLING², MARTA BASELGA⁴, NAOMI DAVIS², LENA DIEHL⁵, INGRID-MARIA GREGOR^{2,3}, MARC HAUSER¹, FABIAN HÜGGING³, KARL JAKOBS¹, HANNAH JANSEN⁴, FABIAN LEX¹, SVEN MÄGDEFESSEL¹, ULRICH PARZEFALL¹, SURABHI SHARMA², NIELS SORGENFREI¹, SIMON SPANNAGEL², DENNIS SPERLICH¹, JENS WEINGARTEN⁴, and IVETA ZATOCHILOVA¹ — ¹Physikalisches Institut, Albert-Ludwigs-Universität Freiburg, Hermann-Herder-Straße 3, Freiburg, Germany — ²Deutsches Elektronen Synchrotron DESY, Notkestr. 85, Hamburg, Germany — ³Physikalisches Institut, University of Bonn, Nussallee 12, 53115 Bonn, Germany — ⁴Physik E4, TU Dortmund, Otto-Hahn-Strasse 4a, 44227 Dortmund, Germany — ⁵CERN, European Organization for Nuclear Research 1211 Geneve 23, Switzerland

Coll 12: COMPASS-Collaboration

GUENNADI ALEXEEV⁷, MAXIM ALEKSEEV^{27,28}, ANTONIO AMOROSO^{27,28}, VINCENT ANDRIEUX³², VLADIMIR ANOSOV⁷, KAMIL AUGSTEN²¹, WITOLD AUGUSTYNIAK³³, CARLOS AZEVEDO¹, BARBARA BADELEK³⁴, JENS BARTH³, REINHARD BECK³, YANN BEDFER²³, JOHANNES BERNHARD^{13,10}, MARTIN BODLAK²⁰, FRANCO BRADAMANTE³¹, C. BRAUN⁸, ANDREA BRESSAN^{30,31}, VITALII BURTSEV²⁶, WEN-CHEN CHANG²⁴, CHANDRADYO CHATTERJEE^{30,31}, MICHELA CHIOSSO^{27,28}, ALEXANDR CHUMAKOV²⁶, SUH-URK CHUNG¹⁸, ANDRES CICUTTN^{31,29}, PEDRO CORREIA¹, MARIA CRESPO^{31,29}, DANIELE D'AGO^{30,31}, SILVIA DALLA TORRE³¹, SHUDHA S. DASGUPTA⁶, SHUDDHA DASGUPTA³¹, IGOR DENISENKO⁷, OLEG DENISOV²⁸, SERGEY DONSKOV²², NORIHIRO DOSHITA³⁶, CHRISTIAN DREISBACH¹⁸, WOLFGANG DÜNNWEBER¹⁸, RENAT DUSAEV²⁶, ANATOLI EFREMOV⁷, C. ELIA^{30,31}, DMITRII EREMEEV²², PIETRO FACCIOLI¹², MARTIN FÄSSLER¹⁸, MIROSLAV FINGER²⁰, MICHAEL FINGER JR.²⁰, HORST FISCHER⁹, KARL FLÖTHNER³, WERNER FLORIAN^{31,29}, JAN FRIEDRICH¹⁸, VLADIMIR FROLOV^{7,10}, LUIS GARCIA ORDONEZ^{31,29}, FABRICE GAUTHERON^{2,32}, OLEG GAVRICHTCHOUK⁷, SERGEI GERASSIMOV^{15,18}, JOHANNES GIARRA¹³, DAVIDE GIORDANO^{27,28}, MATTHIAS GORZELLIK⁹, ANTONIO GRASSO^{27,28}, ANDREI GRIDIN⁷, MATTHIAS GROSSE PERDEKAMP³², BORIS GRUBE¹⁸, MARCUS GRÜNER³, ALEXEY GUSKOV⁷, DIETRICH VON HARRACH¹³, MARTIN HOFFMANN³, NAOAKI HORIKAWA¹⁹, NICOLE D'HOSE²³, CHIA-YU HSIEH²⁴, STEFAN HUBER¹⁸, SHIGERU ISHIMOTO³⁶, ARTEM IVANOV⁷, TAKAHIRO IWATA³⁶, MATOUS JANDEK²¹, VLADIMIR JARY²¹, RAINER JOOSTEN³, EVA-MARIA KABUSS¹³, FLORIAN KASPAR¹⁸, ALBI KERBIZI³¹, BERNHARD KETZER³, ANISA KHATUN²³, GUENNADI KHAUSTOV²², YURI KHOKHLOV²², FRIEDRICH KLEIN⁴, JAAKKO KOIVUNIEMI^{2,32}, VLADIMIR KOLOSOV²², KAORI KONDO HORIKAWA³⁶, IGOR KONOROV^{15,18}, VICTOR KONSTANTINOV²², ALEXANDER KORZENEV⁷, ARAM KOTZINIAN²⁸, OLEG KOUZNESOV⁷, ANATOLII KOVAL³³, ZBYNEK KRAL²⁰, FABIAN KRINNER¹⁸, FABIENNE KUNNE²³, KRZYSZTOF KUREK³³, ROBERT KURJATA³⁵, ANTONIN KVETON²⁰, KAROLINA LAVICKOVA²¹, STEFANO LEVORATO^{10,31}, YU-SHIANG LIAN²⁴, JECHIEL LICHTENSTADT²⁵, PO-JU LIN²³, RICCARDO LONGO³², VALERY LYUBOVITSKIJ²⁶, ANGELO MAGGIORA²⁸, ALAIN MAGNON⁶, NAOMI MAKINS³², NOUR MAKKE³¹, GERHARD MALLOT^{10,9}, ANDRII MALTSEV⁷, SERGEI MAMON²⁶, ANNA MARTIN^{30,31}, JANUSZ MARZEC³⁵, JAN MATOUSEK²⁰, TATSURO MATSUDA¹⁴, GREGORY MATTSON³², CHRISTOPHE MENEZES PIRES¹²,

FABIAN METZGER³, MARCO MEYER^{32,23}, WERNER MEYER², YURI MIKHAILOV²², MIKHAIL MIKHALENKO^{16,17}, EVGENIY MITROFANOV⁷, DAISUKE MIURA³⁶, YOSHIYUKI MIYACHI³⁶, ROMINA MOLINA^{31,29}, ANDREA MORETTI^{30,31}, ALEXANDER NAGAYTSEV⁷, DAMIEN NEYRET²³, MALGORZATA NIEMIEC³⁴, JOSEF NOVÝ²¹, WOLF-DIETER NOWAK¹³, GENKI NUKAZUKA³⁶, ALEXANDRE OLSHEVSKY⁷, MICHAEL OSTRICK¹³, DANIELE PANZIERI²⁸, BAKUR PARSAMYAN^{28,7}, STEPHAN PAUL¹⁸, HENRI PEKELER³, JEN-CHIEH PENG³², MICHAEL PESEK²⁰, DMITRI PESHEKHONOV⁷, MARKETA PESKOVA²⁰, STEPHANE PLATCHKOV²³, JOSEF POCHODZALLA¹³, VLADIMIR POLYAKOV²², MARCIA QUARESMA¹², CATARINA QUINTANS¹², GERHARD REICHERZ², CAROLINE RIEDL³², DMITRI RYABCHIKOV^{22,18}, ANDRZEJ RYCHTER³⁵, AIERKE RYMBEKHOVA⁷, VLADIMIR SAMOYLENKO²², ANDRZEJ SANDACZ³³, SABYASACHI SARKAR⁶, IGOR SAVIN⁷, GIULIO SBRIZZAI³¹, HARTMUT SCHMIEDEN⁴, ALEXANDRA SELYUNIN⁷, CONSTANTIN SHARKO²⁶, LILY SINHA⁶, MILOSLAV SLUNECKA^{7,20}, F. SOZZI³¹, DAVID SPÜLBECK³, ALES SRNKA⁵, DOMINIK ECKER¹⁸, MARCIN STOLARSKI¹², ONDREJ SUBRT^{10,21}, MIROSLAV SULC¹¹, JAJIME SUZUKI³⁶, SUSANNA TESSARO³¹, FULVIO TESSAROTTO^{10,31}, ANNICK THIEL³, JAN TOMSA²⁰, FLAVIO TOSELLO²⁸, APRIL TOWNSEND³², TRILOKI TRILOKI³¹, VLADIMIR TSKHAY¹⁵, BRUNO VALINOTTI^{31,29}, MORITZ VEIT¹³, JOAO VELOSO¹, BRIAN VENTURA²³, MIROSLAV VIRIUS²¹, MATTHIAS WAGNER³, STEFAN WALLNER¹⁸, KRZYSZTOF ZAREMBA³⁵, MIKHAIL ZAVERTYAEV¹⁵, MARTIN ZEMKO^{10,20,21}, ELENA ZEMLYANICHKINA⁷, and MARCIN ZIEMBICKI³⁵ — ¹University of Aveiro, I3N, Dept. of Physics, 3810-193 Aveiro, Portugal — ²Universität Bochum, Institut für Experimentalphysik, 44780 Bochum, Germany — ³Universität Bonn, Helmholtz-Institut für Strahlen- und Kernphysik, 53115 Bonn, Germany — ⁴Universität Bonn, Physikalisches Institut, 53115 Bonn, Germany — ⁵Institute of Scientific Instruments of the CAS, 61264 Brno, Czech Republic — ⁶Matravni Institute of Experimental Research & Education, Calcutta-700 030, India — ⁷Joint Institute for Nuclear Research, 141980 Dubna, Moscow region, Russia — ⁸Universität Erlangen-Nürnberg, Physikalisches Institut, 91054 Erlangen, Germany — ⁹Universität Freiburg, Physikalisches Institut, 79104 Freiburg, Germany — ¹⁰CERN, 1211 Geneva 23, Switzerland — ¹¹Technical University in Liberec, 46117 Liberec, Czech Republic — ¹²LIP, 1649-003 Lisbon, Portugal — ¹³Universität Mainz, Institut für Kernphysik, 55099 Mainz, Germany — ¹⁴University of Miyazaki, Miyazaki 889-2192, Japan — ¹⁵Lebedev Physical Institute, 119991 Moscow, Russia — ¹⁶ORIGINS Excellence Cluster, 85748 Garching, Germany — ¹⁷Ludwig-Maximilians-Universität, 80539 München, Germany — ¹⁸Technische Universität München, Physik Dept., 85748 Garching, Germany — ¹⁹Nagoya University, 464 Nagoya, Japan — ²⁰Charles University, Faculty of Mathematics and Physics, 12116 Prague, Czech Republic — ²¹Czech Technical University in Prague, 16636 Prague, Czech Republic — ²²State Scientific Center Institute for High Energy Physics of National Research Center ‘Kurchatov Institute’, 142281 Protvino, Russia — ²³IRFU, CEA, Université Paris-Saclay, 91191 Gif-sur-Yvette, France — ²⁴Academia Sinica, Institute of Physics, Taipei 11529, Taiwan — ²⁵Tel Aviv University, School of Physics and Astronomy, 69978 Tel Aviv, Israel — ²⁶Tomsk Polytechnic University, 634050 Tomsk, Russia — ²⁷University of Torino, Dept. of Physics, 10125 Torino, Italy — ²⁸Torino Section of INFN, 10125 Turin, Italy — ²⁹Abdus Salam ICTP, 34151 Trieste, Italy — ³⁰University of Trieste, Dept. of Physics, 34127 Trieste, Italy — ³¹Trieste Section of INFN, 34127 Trieste, Italy — ³²University of Illinois at Urbana-Champaign, Dept. of Physics, Urbana, IL 61801-3080, USA — ³³National Centre for Nuclear Research, 02-093 Warsaw, Poland — ³⁴University of Warsaw, Faculty of Physics, 02-093 Warsaw, Poland — ³⁵Warsaw University of Technology, Institute of Radioelectronics, 00-665 Warsaw, Poland — ³⁶Yamagata University, Yamagata 992-8510, Japan

Coll 13: ComPol-Collaboration

MARCO CARMINATI⁴, ION COJOCARI³, CARLO FIORINI⁴, GRISELD DEDA⁴, KATRIN GEIGENBERGER^{1,2}, CYNTHIA GLAS^{1,2}, PETER HINDERBERGER^{1,2}, PHILIPPE LAURENT³, PETER LECHNER⁵, MARTIN LOSEKAMM^{1,2}, MATTHIAS MEIER^{1,2}, SUSANNE MERTENS^{1,2}, SEBASTIAN RÜCKERL^{1,2}, CORDULA SCHMITZ-SINN^{1,2}, LORENZO TOSCANO⁴, and MICHAEL WILLERS^{1,2} — ¹Excellence Cluster ORIGINS, Garching, Germany — ²Technical University of Munich (TUM), Munich, Germany — ³Alternative Energies and Atomic Energy Commission (CEA), Paris-Saclay, France — ⁴Politechnico di Milano, Milano, Italy and INFN, Milano, Italy — ⁵Semiconductor Laboratory of the Max Planck Society (HLL), Munich, Germany

Coll 14: CONUS-Collaboration

CHRISTIAN BUCK, AURELIE BONHOMME, WERNER MANESCHG, EDGAR SANCHEZ GARCIA, NICOLA ACKERMANN, JANINE HEMPFLING, SOPHIE ARMBRUSTER, MANFRED LINDNER, GERD HEUSSER, JOSEF STAUBER, JANINA HAKENMÜLLER, KAI FULBER, ROLAND WINK, and HANNES BONET — Max-Planck-Institut für Kernphysik, Heidelberg

Coll 15: CPEDM-Collaboration

JOERG PRETZ^{1,2}, CHRISTIAN CARLI³, and SAAD SIDDIQUE^{2,4} — ¹Forschungszentrum Juelich Germany — ²III. Physikalisches Institut B, RWTH Aachen University Germany — ³CERN, the European Organization for Nuclear Research Geneva Switzerland — ⁴GSI Helmholtzzentrum für Schwerionenforschung Darmstadt Germany

Coll 16: CTA FlashCam-Collaboration

MIQUEL BARCELÓ¹, CHRISTIAN BAUER¹, BAIYANG BI², JACKY CATALANO³, SEBASTIAN DIEBOLD², CHRISTIAN FOEHR¹, FRANK GARRECHT¹, GERMAN HERMANN¹, IRA JUNG³, OLEG KALEKIN³, THOMAS KIHMI¹, FABIAN LEUSCHNER², MARC PFEIFER³, GERD PÜHLHOFER², OLAF REIMER⁴, SIMON SAILER¹, HEIKO SALZMANN², THOMAS SCHANZ², THOMAS SCHWAB¹, SIMON STEINMASSL¹, CHRIS TENZER², and FELIX WERNER¹ — ¹MPIK, 69117 Heidelberg, Germany — ²IAAT, 72076 Tübingen, Germany — ³ECAP, 91058 Erlangen, Germany — ⁴UIBK, 6020 Innsbruck, Austria

Coll 17: Double Alpha IN2P3-CEA-GSI-Collaboration

HEINRICH WILSENACH^{1,4}, OSCAL HALL², LOUIS HEITZ⁵, MAKAR SIMONOV¹, TIMO DICKEL³, MORITZ PASCAL REITER², DALER AMANBAYEV¹, TOM DAVINSON², ILKKA POHALAINEN⁹, NAZARENA TORTORELLI²⁹, LASZLO VARGA³, JIAJUN YU³, JIANWEI ZHAO³, SAMUEL AYET SAN ANDRÉS³, DIMITER BALABANSKI¹¹, SÖNKE BECK¹, JULIAN BERGMANN¹, ZHUANG GE³, HANS GEISSEL³, CHRISTINE HORNUNG³, NASSER KALANTAR-NAYESTANAKI¹⁸, ELIAS KHAN⁵, GABIELLA KRIPKÓ-KONCZ¹, ISRAEL MARDOR^{4,8}, DAVE MORRISSEY²³, MEETIKA NARANG³, WOLFGANG PLASS³, CHRISTOPH SCHEIDENBERGER³, SURAJ KUMAR SINGH³, ALEXANDRU STATE¹¹, CHRISTOPHE THEISEN⁶, MARINE VANDEBROUCK⁶, PHILIP J. WOODS², BEHNAM ASHRAFKHANI⁷, OFER AVIV⁸, JUHA ÄYSTÖ⁹, SOUMYA BAGCHI¹⁰, OLGA BELIUSKINA⁹, ANDREY BLAZHEV¹², ZIGA BRENCIC¹³, SIMONE CANNAROZZO¹⁴, PAUL CONSTANTIN¹¹, DOMINIQUE CURIEN¹⁵, IRENE DEDES¹⁶, TIMO SCHELLHAAS¹, FRANCOIS DIDIERJEAN¹⁵, GILBERT DUCHENE¹⁵, JERZY DUDEK¹⁵, TOMMI ERONEN⁹, TAYEMARE FOWLER-DAVIS², ZHIHAO GAO¹⁴, SIMEON GLÖCKNER³, MAGDALENA GÓRSKA³, TUOMAS GRAHN⁹, FLORIAN GREINER³, LIZZY GRÖF¹, MOHINI GUPTA¹⁷, EMMA HAETTNER³, MUHSIN HARAKEH¹⁸, JAN-PAUL HUCKA³, YUTA ITO¹⁹, ARTHUR JARIES⁹, ARI JOKINEN⁹, BOAZ KAIZER⁸, ANU KANKAINEN⁹, ALEXANDER KARPOV²⁰, YONATAN KEHAT⁴, DARIA KOSTYLEVA³, GABIELLA KRIPKÓ-KONCZ¹, DEEPAK KUMAR³, RINKU KUMAR PRAJAPAT³, KRITI MAHAJAN¹, ALI AKBAR MEHMANDOOST-KHAJEH-DAD²¹, NIKOLAY MINKOV²², ALI MOLLAEBRAHIMI¹, IAIN MOORE⁹, IVAN MUKHA³, GOTTFRIED MÜNZENBERG²⁴, TOBIAS MURBOCK¹, DRAGOS NICHTA¹¹, ZYGMUNT PATYK²⁵, HEIKKI PENTTILÄ⁹, AMICHAY PERRY⁸, STEPHANE PIETRI³, ALEXANDER PIKHTELEV²⁶, STEPHAN POMP¹⁴, SIVAJI PURUSHOTHAMAN³, MIKAEL REPONEN⁹, SAMI RINTA-ANTILA⁹, HEIDI RÖSCH³, ADRIAN ROTARU¹¹, JOUNI RUOTSALAINEN⁹, PETER SCHURY²⁷, AMIR SHRAYER⁴, ANDREAS SOLDERS¹⁴, ANAMARIA SPATARU¹¹, YOSHIKI TANAKA²⁸, PETER THIROLF²⁹, EMANUELE VARDACI³⁰, MATJAZ VENCELJ¹³, VILLE VIRTANEN⁹, MICHIHARU WADA²⁷, HELMUT WEICK³, LEONARD WELDE¹, MICHAEL WIESER⁷, MICHAEL WILL³, MIKHAIL YAVOR³¹, and ALEXANDRA ZADVORNAYA¹ — ¹Justus-Liebig-Universität Gießen, Gießen, Germany — ²University of Edinburgh, United Kingdom — ³GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany — ⁴Tel Aviv University, Tel Aviv, Israel — ⁵IJCLab, Université Paris-Saclay, Orsay Cedex, France — ⁶IRFU, CEA, Université Paris-Saclay, Gif-sur-Yvette, France — ⁷University of Calgary, Canada — ⁸Soreq Nuclear Research Center, Yavne, Israel — ⁹University of Jyväskylä, Jyväskylä, Finland — ¹⁰Indian Institute of Technology, Dhanbad, India — ¹¹ELI-NP, Bucharest, Romania — ¹²Universität zu Köln, Germany — ¹³Jozef Stefan Institute, Ljubljana, Slovenia — ¹⁴Uppsala University, Sweden — ¹⁵Université de Strasbourg, CNRS, Strasbourg, France — ¹⁶Institute of Nuclear Physics, Polish Academy of Sciences, Kraków, Poland — ¹⁷Manipal Centre for Natural Sciences, Karnataka, India — ¹⁸ESRIG, University of Groningen, The Netherlands — ¹⁹JAEA/ASRC, Japan — ²⁰JINR, Dubna, Russia — ²¹University of Sistan and Baluchestan, Iran — ²²Institute for Nuclear Research and Nuclear Energy, Sofia, Bulgaria — ²³MSU, USA — ²⁴Johannes Gutenberg-Universität Mainz, Germany — ²⁵National Centre for Nu-

clear Research, Warszawa, Poland — ²⁶Institute for Energy Problems of Chemical Physics, RAS, Chernogolovka, Russia — ²⁷KEK Wako Nuclear Science Center, Japan — ²⁸RIKEN, Wako, Saitama, Japan — ²⁹Ludwig-Maximilians-Universität München, Germany — ³⁰University of Naples, Italy — ³¹Institute for Analytical Instrumentation, RAS, St. Petersburg, Russia

Coll 18: ELI-NP Pair Spectrometer-Collaboration

ILJA HOMM¹, THORSTEN KRÖLL¹, GIACOMO COLOMBI³, FELIX DUNKEL², CHRISTOPH FRANSEN², VASIL KARAYONCHEV², CATERINA MICHELAGNOLI³, RICHARD POMMIER³, HAN-BUM RHEE¹, DIANDRA RICHTER¹, MATTHIAS RUDIGIER¹, FRANZISKUS SPEE², and MARTIN VON TRESCKOW¹ — ¹Technische Universität Darmstadt, Germany — ²Universität zu Köln — ³Institut Laue-Langevin, Grenoble, France

Coll 19: Fermium-Collaboration

THOMAS E. ALBRECHT-SCHÖNZART¹, BRANKICA ANDELIC^{2,3,4}, BENJAMIN BALLY⁵, MICHAEL BENDER⁶, SEBASTIAN BERNDT⁷, MICHAEL BLOCK^{2,3,7}, PIERRE CHAVEAU^{2,3}, BRADLEY CHEAL⁸, PREMADITYA CHHETRI^{2,3}, ARNO CLAESSENS⁹, ANTOINE DE ROUBIN⁹, CHARLIE DEVLIN⁸, HOLGER DORRER⁷, CHRISTOPH E. DÜLLMANN^{2,3,7}, JULIE G. EZOLD¹⁰, RAFAEL FERRER⁹, VADIM GADELSHIN⁷, ALYSSA GAISER¹, FRANCESCA GIACOPPO^{2,3}, STEPHANE GORIELY¹¹, MANUEL J. GUTIÉRREZ^{2,3}, ASHLEY L. HARVEY¹⁰, REINHARD HEINKE⁷, FRITZ-PETER HESSBERGER², STEPHANE HILAIRE¹², MAGDALENA KAJA⁷, OLIVER KALEJA^{2,13}, TOM KIECK^{2,3,7}, EUNGANG KIM⁷, NINA KNEIP⁷, ULLI KÖSTER¹⁴, SANDRO KRAEMER⁹, MUSTAPHA LAATIAOUI⁷, JEREMY LANTIS⁷, NATHALIE LECESNE¹⁵, ANDREW MISTRY^{2,16}, CHRISTOPH MOKRY⁷, IAIN MOORE¹⁷, DANNY MÜNZBERG^{2,3,7}, STEVEN NOTHELPER^{2,3,7}, SOPHIE PERUDESÉNFANTS¹², SEBASTIAN RAEDER^{2,3}, ANDREA RAGGIO¹⁷, DENNIS RENISCH^{3,7}, EMMANUEL REY-HERME¹⁸, ELISABETH RICKERT^{2,3,7}, JEKABS ROMANS⁹, ELISA ROMERO ROMERO⁷, JÖRG RUNKE^{2,7}, FABIAN SCHNEIDER^{2,3}, JOE SPERLING¹, MATOU STEMMLER⁷, DOMINIK STUDER⁷, HERVÉ SVAJOLS¹⁵, PETRA THÖRLE-POSPIECH^{3,7}, NORBERT TRAUTMANN⁷, SHELLEY M. VAN CLEVE¹⁰, PIET VAN DUPPEN⁹, MARINE VANDEBROUCK¹⁸, ELISE VERSTRAELEN⁹, THOMAS WALther¹⁶, JESSICA WARBINEK^{2,7}, FELIX WEBER⁷, and KLAUS WENDT⁷ — ¹Florida State University, USA — ²GSI Helmholtzzentrum für Schwerionenforschung, Germany — ³Helmholtz-Institut Mainz, Germany — ⁴University of Groningen, The Netherlands — ⁵CEA ESNT, France — ⁶IP2I Lyon, France — ⁷Johannes Gutenberg-Universität Mainz, Germany — ⁸University of Liverpool, UK — ⁹KU Leuven, Belgium — ¹⁰Oak Ridge National Laboratory, USA — ¹¹Université Libre de Bruxelles, Belgium — ¹²CEA DAM, France — ¹³Universität Greifswald, Germany — ¹⁴Institut Laue Langevin, France — ¹⁵GANIL, France — ¹⁶Technische Universität Darmstadt, Germany — ¹⁷University of Jyväskylä, Finland — ¹⁸CEA Université Paris-Saclay, France

Coll 20: FRS Ion Catcher-Collaboration

DALER AMANBAYEV¹, BEHNAM ASHRAFKHANI², OFER AVIV³, SAMUEL AYET SAN ANDRÉS⁴, JUHA ÄYSTÖ⁵, SOUMYA BAGCHI⁶, DIMITER BALABANSKI⁷, SÖNKE BECK¹, OLGA BELIUSKINA⁵, JULIAN BERGMANN¹, ANDREY BLAZHEV⁸, ZIGA BRENCÍK⁹, SIMONE CANNAROZZO¹⁰, PAUL CONSTANTIN⁷, DOMINIQUE CURIEN¹¹, IRENE DEDES¹², TIMO DICKEL⁴, FRANCOIS DIDIERJEAN¹³, GILBERT DUCHENE¹³, JERZY DUDEK¹³, TOMMI ERONEN⁵, TAYEMARE FOWLER-DAVIS¹⁴, ZHIHAO GAO¹⁰, ZHUANG GE⁴, HANS GEISSEL⁴, SIMEON GLÖCKNER⁴, MAGDALENA GÓRSKA⁴, TUOMAS GRAHN⁵, FLORIAN GREINER⁴, LIZZY GRÖF¹, MOHINI GUPTA¹⁵, EMMA HAETTNER⁴, OSCAL HALL¹⁴, MUHSIN HARAKEH¹⁶, CHRISTINE HORNUNG⁴, JAN-PAUL HUCKA⁴, YUTA ITO¹⁷, ARTHUR JARIES⁵, ARI JOKINEN⁵, BOAZ KAIZER³, NASSER KALANTAR-NAYESTANAKI¹⁶, ANU KANKAINEN⁵, ALEXANDER KARPOV¹⁸, YONATAN KEHAT¹⁹, LUKE KILMARTIN⁴, DARIA KOSTYLEVA⁴, GABIELLA KRIPKÓ-KONCZ¹, DEEPAK KUMAR⁴, RINKU KUMAR PRAJAPAT⁴, KRITI MAHajan¹, ISRAEL MARDOR¹⁹, ALI AKBAR MEHMDOOST-KHAJEH-DAD²⁰, NIKOLAY MINKOV²¹, ALI MOLLAEBRAHIMI¹, IAIN MOORE⁵, DAVE MORRISSEY²², IVAN MUKHA⁴, GOTTFRIED MÜNZENBERG²³, TOBIAS MURBOCK¹, MEETIKA NARANG⁴, DRAGOS NICHTA⁷, ZYGMUNT PATYK²⁴, HEIKKI PENTTILÄ⁵, AMICHAY PERRY³, STEPHANE PIETRI⁴, ALEXANDER PIKHTELEV²⁵, WOLFGANG PLASS⁴, ILKKA POHJALAINEN⁵, STEPHAN POMP¹⁰, SIVAJI PURUSHOTHAMAN⁴, MORITZ PASCAL REITER¹⁴, MIKAEL REPONEN⁵, SAMI RINTA-ANTILA⁵, HEIDI RÖSCH⁴, ADRIAN ROTARU⁷, JOUNI RUOTSALAINEN⁵, CHRISTOPH SCHEIDENBERGER⁴, TIMO SCHELLHAAS¹, PETER SCHURY²⁶, AMIR SHRAYER¹⁹, MAKAR SIMONOV¹, SURAJ KUMAR SINGH⁴, ANDREAS SOLDERS¹⁰, ANA-

MARIA SPATARU⁷, ALEXANDRU STATE⁷, LISA SUETTE⁴, YOSHIKI TANAKA²⁷, PETER THIROLF²⁸, NAZARENA TORTORELLI²⁸, EMANUELE VARDACI²⁹, LASZLO VARGA⁴, MATJAZ VENCELJ⁹, VILLE VIRTANEN⁵, MICHIHARU WADA²⁶, HELMUT WEICK⁴, LEONARD WELDE¹, MICHAEL WIESER², MICHAEL WILL⁴, HEINRICH WILSENACH¹, MIKHAIL YAVOR³⁰, JIAJUN YU⁴, ALEXANDRA ZADVORNAYA¹, and JIANWEI ZHAO⁴ — ¹Justus-Liebig-Universität Gießen, Gießen, Germany — ²University of Calgary, Canada — ³Soreq Nuclear Research Center, Yavne, Israel — ⁴GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany — ⁵University of Jyväskylä, Jyväskylä, Finland — ⁶Indian Institute of Technology, Dhanbad, India — ⁷ELI-NP, Bucharest, Romania — ⁸Universität zu Köln, Germany — ⁹Jozef Stefan Institute, Ljubljana, Slovenia — ¹⁰Uppsala University, Sweden — ¹¹Université de Strasbourg, CNRS, Strasbourg, France — ¹²Institute of Nuclear Physics, Polish Academy of Sciences, Kraków, Poland — ¹³Université de Strasbourg, CNRS, Strasbourg, France — ¹⁴University of Edinburgh, United Kingdom — ¹⁵Manipal Centre for Natural Sciences, Karnataka, India — ¹⁶ESRIG, University of Groningen, The Netherlands — ¹⁷JAEA/ASRC, Japan — ¹⁸JINR, Dubna, Russia — ¹⁹Tel Aviv University, Israel — ²⁰University of Sistan and Baluchestan, Iran — ²¹Institute for Nuclear Research and Nuclear Energy, Sofia, Bulgaria — ²²MSU, USA — ²³Johannes Gutenberg-Universität Mainz, Germany — ²⁴National Centre for Nuclear Research, Warszawa, Poland — ²⁵Institute for Energy Problems of Chemical Physics, RAS, Chernogolovka, Russia — ²⁶KEK Wako Nuclear Science Center, Japan — ²⁷RIKEN, Wako, Saitama, Japan — ²⁸Ludwig-Maximilians-Universität München, Germany — ²⁹University of Naples, Italy — ³⁰Institute for Analytical Instrumentation, RAS, St. Petersburg, Russia

Coll 21: GERDA-Collaboration

MATTEO AGOSTINI¹⁰, ABIGAIL ALEXANDER¹⁰, GABRIELA R ARAUJO²¹, ALEXANDER M BAKALYAROV¹⁵, MARCO BALATA¹, IGOR BARABANOV¹³, LAURA BAUDIS²¹, CHRISTIAN BAUER⁹, SERGEJ BELOGUROV^{14,13}, ALESSANDRO BETTINI^{18,19}, LEONID BEZRUKOV¹³, VALENTINA BIANCACCI^{18,19}, ELISABETTA BOSSIO¹⁷, VIKAS BOTHE⁹, RICCARDO BRUGNERA^{18,19}, NINA BURLAC³, ALLEN CALDWELL¹⁶, SOFIA CALGARO^{18,19}, CARLA CATTADORI¹¹, ANDREY CHERNOGOROV^{14,15}, PIN-JUNG CHIU²¹, TOMMASO COMELLATO¹⁷, VALERIO D'ANDREA³, ELENA V DEMIDOV¹⁴, ATTILIO Di GIACINTO¹, NATALIA DI MARCO², EVGENY DOROSHKIEVICH¹³, FELIX FISCHER¹⁶, MARIA FOMINA⁷, ALBERT GANGAPSHEV^{13,9}, ALBERTO GARFAGNINI^{18,19}, CHRIS GOOCHE¹⁶, PETER GRABMAYR²⁰, VALERY GURENTSOV¹³, KONSTANTIN GUSEV^{7,15,17}, SABINE HEMMER¹⁹, WERNER HOFMANN⁹, MIKAEL HULT⁸, LEV V INZHACHEK¹³, JOZSEF JANICKO CSATHY¹⁷, JOSEF JOCHUM²⁰, MATTHIAS JUNKER¹, VLADIMIR KAZALOV¹³, HABIB KHUSHBAKHT²⁰, THOMAS KIHM⁹, KATHARINA KILGUS²⁰, IGOR V KIRPICHNIKOV¹⁴, ALEXANDER KLIMENTKO^{9,7}, KARL T KNÖPFLE⁹, OLEG KOCHETOV⁷, VASILY N KORNOUKHOV^{14,13}, MICHELE KOROSEC¹⁷, PATRICK KRAUSE¹⁷, JAN-MAJAY KUMAR²⁰, VALERY V KUZMINOV¹³, MATTHIAS LAUBENSTEIN¹, MANFRED LINDNER⁹, IVANO LIPPI¹⁹, ALEXEY LUBASHEVSKY⁷, BAYARTO LUBSANDORZHIEV¹³, GUILLAUME LUTTER⁸, CARLA MACOLINO³, SILAS MAISENBACHER²⁰, BELA MAJOROVITS¹⁶, WERNER MANESCHG⁹, LUIS MANZANILLAS¹⁶, GEORGE MARSHALL¹⁰, MICHAEL MILORADOVIC²¹, RIZALINA MINGAZHEVA²¹, MARCIN MISIASZEK⁵, MICHELE MORELLA², YANNICK MÜLLER²¹, IGOR NEMCHENOK⁷, MORITZ NEUBERGER¹⁷, LUCIANO PANDOLA⁴, KRYSZTOF PELCZAR⁸, LUIGI PERTOLDI^{17,19}, PAOLO PISERI¹², ALBERTO PULLIA¹², LUKAS RAUSCHER²⁰, MARIA REDCHUK^{18,19}, STEFANO RIBOLDI¹², NADEZDA RUMYANTSEVA^{15,7}, CINZIA SADA^{18,19}, SIMON SAILER⁹, FRANCESCO SALAMIDA³, STEFAN SCHÖNERT¹⁷, JOCHEN SCHREINER⁹, MARIO SCHÜTT⁹, ANN-KATRIN SCHÜTZ²⁰, OLIVER SCHULZ¹⁶, MARIO SCHWARZ¹⁷, BERNHARD SCHWINGENHEUER⁹, OLEG SELIVANENKO¹³, EGOR SHEVCHIK⁷, MARK SHIRCHENKO⁷, LOLIAN SHTEMBARI¹⁶, HARDY SIMGEN⁹, ANATOLY SMOLNIKOV^{9,7}, DANILA STUKOV¹⁵, SEAN SULLIVAN⁹, ANDREY A VASENKO¹⁴, ANNA VERESNIKOVA¹³, CHIARA VIGNOLI¹, KATHARINA VON STURM^{18,19}, CHRISTOPH WIESINGER¹⁷, MARCIN WOJCIK⁵, VERA HIU SZE WU²¹, EVGENY YANOVICH¹³, BIRGIT ZATSCHLER⁶, IGOR ZHITNIKOV⁷, SERGEY V ZHUKOV¹⁵, DANIYA ZINATULINA⁷, ANNA J ZSIGMOND¹⁶, KAI ZUBER⁶, and GRZEGORZ ZUZEL⁵ — ¹INFN Laboratori Nazionali del Gran Sasso LNGS, Assergi, Italy — ²INFN Laboratori Nazionali del Gran Sasso and Gran Sasso Science Institute, Assergi, Italy — ³INFN Laboratori Nazionali del Gran Sasso and Università degli Studi dell'Aquila, L'Aquila, Italy — ⁴INFN Laboratori Nazionali del Sud, Catania, Italy — ⁵Institute of Physics, Jagiellonian University, Cracow, Poland — ⁶Institut für Kern- und Teilchenphysik, Technische Universität Dresden, Dresden,

Germany — ⁷Joint Institute for Nuclear Research, Dubna, Russia — ⁸European Commission, JRC-Geel, Geel, Belgium — ⁹Max-Planck-Institut für Kernphysik, Heidelberg, Germany — ¹⁰Department of Physics and Astronomy, University College London, London, UK — ¹¹INFN Milano Bicocca, Milan, Italy — ¹²Dipartimento di Fisica, Università degli Studi di Milano and INFN Milano, Milan, Italy — ¹³Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, Russia — ¹⁴Institute for Theoretical and Experimental Physics, Moscow, Russia — ¹⁵National Research Centre “Kurchatov Institute”, Moscow, Russia — ¹⁶Max-Planck-Institut für Physik, Munich, Germany — ¹⁷Physik Department, TU München, Germany — ¹⁸Dipartimento di Fisica e Astronomia, Università degli Studi di Padova, Padua, Italy — ¹⁹INFN Padova, Padua, Italy — ²⁰Physikalischs Institut, Eberhard Karls Universität Tübingen, Tübingen, Germany — ²¹Physik-Institut, Universität Zürich, Zurich, Switzerland

Coll 22: HADES-Collaboration

RAYANE ABOU YASSINE^{6,13}, JÖRN ADAMCZEWSKI-MUSCH⁵, MARTEN BECKER¹⁰, PHILIP BERGMANN⁵, ALBERTO BLANCO¹, CHRISTOPH BLUME⁸, LUKAS CHLAD¹⁴, PETR CHUDOBA¹⁴, IZABELA CIEPAL³, JÖRN DREYER⁷, WALED AHMED ESMAIL⁵, MIROSLAW FIRLEJ², TOMASZ FIUTOWSKI², HENRIK FLOERSHEIMER⁶, PAULO FONTE¹, JÜRGEN FRIESE⁹, INGO FRÖHLICH⁸, JÖRG FÖRTSCH¹⁷, TETYANA GALATYUK^{6,5}, TOMASZ GNIAZDOWSKI¹⁶, ROBERT GREIFENHAGEN⁷, MATEUSZ GRUNWALD¹⁶, DIETER GRZONKA¹¹, MALGORZATA GUMBERIDZE⁵, SZYMON HARABASZ⁶, THORSTEN HEINZ⁵, CLAUDIA HÖHNE^{10,5}, FATIMA HOJEIJ¹³, ROMAIN HOLZMANN⁵, HOLGER HUCK⁸, MAREK IDZIK², BURKHARD KÄMPFER⁷, KARL-HEINZ KÄMPFERT¹⁷, BEHRUZ KARDAN⁸, VADMIR KEDYCH⁶, ILSE KOENIG⁵, WOLFGANG KOENIG⁵, MARVIN KOHLS⁸, JEDRZEJ KOLAS¹⁶, GRZEGORZ KORCYL⁴, GEORGY KORNAKOV¹⁶, ROLAND KOTTE⁷, WILHELM KRUEGER⁶, ANDREJ KUGLER¹⁴, PAWEŁ KULESSA¹¹, RAFAŁ LALIK⁴, SEMEN LEBEDEV¹⁰, THEODOROS LEONTIOU¹², SERGEY LINEV⁵, FREDERIC LINZ^{6,5}, LUÍS LOPES¹, MANUEL LORENZ⁸, AKSHAY MALIGE⁴, JOCHEN MARKERT⁵, TOMASZ MATULEWICZ¹⁵, JOHAN MESSCHENDORP⁵, VOLKER METAG¹⁰, JAN MICHEL⁸, ALEKSANDRA MOLENDA², JAKUB MORON², JEHAD MOUSA¹², CHRISTIAN MÜNTZ⁸, MARVIN NABROTH⁸, LOTHAR NAUMANN⁷, JAN ORLIŃSKI¹⁵, JAN-HENDRIK OTTO¹⁰, YANNIS PARPOTTAS¹², MIRCO PARSCHAU⁸, CHRISTIAN PAULY¹⁷, VLADIMIR PECHENOV⁵, OLGA PECHENOVÁ⁵, GABRIELA PEREZ ANDRADE¹¹, DENNIS PFEIFER¹⁷, KRZYSZTOF PIASECKI¹⁵, JERZY PIETRASZKO⁵, TETIANA POVAR¹⁷, ALEXANDR PROZOROV¹⁴, WITOLD PRZYGODA⁴, KRZYSZTOF PYSZ³, BÉATRICE RAMSTEIN¹³, NARENDRAG RATHOD¹⁶, JAMES RITMAN⁵, ADRIAN ROST^{6,5}, ANAR RUSTAMOV⁵, PIOTR SALABURA⁴, JOAO SARAIVA¹, SUSAN SCHADMAND⁵, NIKLAS SCHILD⁶, ERWIN SCHWAB⁵, FLORIAN SECK⁶, ILYA SELYUZHENKOV⁵, UDAI SINGH⁴, LEON SKORPIL⁸, JERZY SMYRSKI⁴, MANFRED SOBIELLA⁷, STEFANO SPATARO⁵, SIMON SPIES⁸, MARIA STEFANIAK¹⁶, HERBERT STRÖBELE⁸, JOACHIM STROTH^{8,5}, KONRAD SUMARA⁴, ONDŘEJ SVOBODA¹⁴, KRZYSZTOF SWIENTEK², MELANIE SZALA⁸, PAVEL TLUSTÝ¹⁴, MICHAEL TRAXLER⁵, HARALABOS TSERTOS¹², VLADIMIR WAGNER¹⁴, MATEUSZ WASILUK¹⁶, ADRIAN AMATUS WEBER¹⁰, CHRISTIAN WENDISCH⁵, PETER WINTZ¹¹, HANNA ZBROSCZYK¹⁶, ELIZAVETA ZHEREBTSOVA⁵, MARCIN ZIELINSKI⁴, and PETER ZUMBRUCH⁵ — ¹LIP-Laboratório de Instrumentação e Física Experimental de Partículas , 3004-516 Coimbra, Portugal — ²AGH University of Science and Technology, Faculty of Physics and Applied Computer Science, 30-059 Kraków, Poland — ³Institute of Nuclear Physics, Polish Academy of Sciences, 31342 Kraków, Poland — ⁴Smoluchowski Institute of Physics, Jagiellonian University of Cracow, 30-059 Kraków, Poland — ⁵GSI Helmholtzzentrum für Schwerionenforschung GmbH, 64291 Darmstadt, Germany — ⁶Technische Universität Darmstadt, 64289 Darmstadt, Germany — ⁷Institut für Strahlenphysik, Helmholtz-Zentrum Dresden-Rossendorf, 01314 Dresden, Germany — ⁸Institut für Kernphysik, Goethe-Universität, 60438 Frankfurt, Germany — ⁹Physik Department E62, Technische Universität München, 85748 Garching, Germany — ¹⁰II.Physikalisches Institut, Justus Liebig Universität Giessen, 35392 Giessen, Germany — ¹¹Forschungszentrum Juelich, 52428 Juelich, Germany — ¹²Frederick University, 1036 Nicosia, Cyprus — ¹³Laboratoire de Physique des 2 infinis Irène Joliot-Curie, Université Paris-Saclay, CNRS-IN2P3, , F-91405 Orsay , France — ¹⁴Nuclear Physics Institute, The Czech Academy of Sciences, 25068 Rez, Czech Republic — ¹⁵Uniwersytet Warszawski - Instytut Fizyki Doświadczalnej, 02-093 Warszawa, Poland — ¹⁶Warsaw University of Technology, 00-662 Warsaw, Poland — ¹⁷Bergische Universität Wuppertal, 42119 Wuppertal, Germany

Coll 23: HD-HVMAPS-Collaboration

ANDRÉ SCHÖNING, HEIKO AUGUSTIN, DAVID IMMIG, BENJAMIN WEINLÄDER, LUKAS MANDOK, RUBEN KOLB, SEBASTIAN BACHMANN, LUCAS DITTMANN, MAJA LECHER, PAUL WOLF, DANISH ALAM, LUIGI VIGANI, and THOMAS RUDZKI — Physikalisches Institut, Ruprecht-Karls-Universität Heidelberg

Coll 24: HiCARI-Collaboration

K. WIMMER¹, P. DOORNEBAL², N. AOI³, H. BABA², F. BROWNE⁴, C. CAMPBELL⁵, H. CRAWFORD⁵, H. DE WITTE⁶, C. FRANSEN⁷, H. HESS⁸, S. IWAZAKI³, J. KIM², A. KOHDA³, T. KOIWAI^{8,2}, B. MAUSS², B. MOON², T. PARRY⁹, P. REITER⁷, D. SUZUKI², R. TANIUCHI^{10,2}, S. THIEL⁷, and Y. YAMAMOTO³ — ¹GSI, Darmstadt, Germany — ²RIKEN Nishina Center, Japan — ³RCNP, Osaka University, Japan — ⁴CERN, Geneva, Switzerland — ⁵Nuclear Science Division, LBNL, USA — ⁶Instituut voor Kern- en Stralingsfysica, KU Leuven, France — ⁷Institut für Kernphysik, Universität zu Köln, Germany — ⁸Department of Physics, University of Tokyo, Japan — ⁹Department of Physics, University of Surrey, Canada — ¹⁰Department of Physics, University of York, England

Coll 25: IFIN212Po-Collaboration

M. BOROMIZA¹, C. CLISIU¹, C. COSTACHE¹, D. FILIPESCU¹, N.M. FLOREA¹, I. GEORGHE¹, K. GLADNISHKI², A. IONESCU¹, TH. KRÖLL³, D. KOCHEVA², R. LICA¹, N. MARGINEAN¹, R. MARGINEAN¹, K.R. MASHTAKOV^{4,5,6}, C. MIHAI¹, R.E. MIHAI¹, A. NEGRET¹, C.R. NITA¹, A. OLACEL¹, A. OPERA¹, S. PASCU^{1,7}, G. RAINOVSKI², M. RUDIGIER³, T. SAVA¹, M. SCHECK^{4,5}, T.M. SHEIDMAN⁸, P. SPAGNOLETTI^{4,5,9}, C. SOTTY¹, L. STAN¹, I. STIRU¹, S. TOMA¹, A. TURTURICA¹, M. VON TRESCKOW³, and S. UJENIUC¹ — ¹Horia Hulubei National Institute of Physics and Nuclear Engineering (IFIN-HH), R-077125 Bucharest, Romania — ²Faculty of Physics, St. Kliment Ohridski University of Sofia, 1164 Sofia, Bulgaria — ³Institut für Kernphysik, Technische Universität Darmstadt, Schlossgartenstrasse 9, 64289, Darmstadt, Germany — ⁴University of the West of Scotland, PA1 2BE Paisley, United Kingdom — ⁵SUPA, Glasgow G12 8QQ, United Kingdom — ⁶University of Guelph, 50 Stone Road E., Guelph, Ontario, N1G 2W1, Canada — ⁷University of Surrey, United Kingdom — ⁸Joint Institute for Nuclear Research, Dubna 141980, Russia — ⁹Simon Fraser University, 8888 University Drive, Burnaby, B.C., V5A 1S6, Canada

Coll 26: JET L-H Transition Team-Collaboration

GREGOR BIRKENMEIER^{1,2}, EMILIA R. SOLANO³, IVO S. CARVALHO⁴, JON HILLESHEIM⁵, EPHREM DELABIE⁶, ERNESTO LERCHE⁷, DAVID TAYLOR⁵, DANI GALLART⁸, MERVI J. MANTSINEN^{8,9}, CARLOS SILVA⁴, CLEMENTE ANGIONI¹, FRANCOIS RYTER¹, PEDRO CARVALHO⁴, MATTEO FONTANA⁵, EWA PAWELEC¹⁰, SCOTT A. SILBURN⁵, PAULA SIREN⁵, SPYROS ALEIFERIS⁵, JOAO BERNARDO^{5,4}, ALEX BOBOC⁵, DAVID DOUAI¹¹, PAULO PUGLIA⁵, PHILIPPE JACQUET⁵, ERIC LITHERLAND-SMITH⁵, IONUT JEPU⁵, DOMAGOJ KOS⁵, HUAN J. SUN⁵, ANTHONY SHAW⁵, DAMIAN KING⁵, BRUNO VIOLA⁵, RAFAEL HENRIQUES⁴, KRASSIMIR K. KIROV⁵, MATTEO BARUZZO⁵, JERONIMO GARCIA¹¹, ANTTI HAKOLA¹², ALEXANDER HUBER⁵, EMANUEL JOFFRIN¹¹, DAVID KEELING⁵, ATHINA KAPPATOU¹, MORTEN LENNHOLM⁵, PETER LOMAS⁵, ELENA DE LA LUNA³, COSTANZA F. MAGGI⁵, JOELLE MAILLOUX⁵, MICHAEL MASLOV⁵, FERNANDA G. RIMINI⁵, NICOLA VIANELLO¹³, GEERT VERDOOLAEGE^{7,15}, HENRI WEISEN¹⁴, MARCO WISCHMEIER¹, and JET CONTRIBUTORS¹⁶ — ¹Max Planck Institute for Plasma Physics, Boltzmannstr. 2, 85748 Garching, Germany — ²Physik-Department E28, Technische Universität München, James-Franck-Str. 1, 85748 Garching, Germany — ³Laboratorio Nacional de Fusión, CIEMAT, Madrid, Spain — ⁴Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa, Portugal — ⁵CCFE, Culham Science Centre, Abingdon, Oxfordshire, OX14 3DB, United Kingdom of Great Britain and Northern Ireland — ⁶Oak Ridge National Laboratory, Oak Ridge, TN 37831-6169, TN, United States of America — ⁷Laboratory for Plasma Physics Koninklijke Militaire School, Ecole Royale Militaire Renaissancelaan 30 Avenue de la Renaissance B-1000, Brussels, Belgium — ⁸Barcelona Supercomputing Center (BSC), Barcelona, Spain — ⁹ICREA, Barcelona, Spain — ¹⁰Institute of Physics, Opole University, Oleska 48, 45-052 Opole, Poland — ¹¹CEA, IRFM, F-13108, St-Paul-Lez-Durance, France — ¹²VTT, P. O. Box 1000, 02044 VTT, Finland — ¹³Consortio RFX, Padova, Italy — ¹⁴Ecole Polytechnique Federale de Lausanne (EPFL), Swiss Plasma Center (SPC), CH-1015 Lausanne, Switzerland — ¹⁵Department of Applied Physics, Ghent University, 9000, Ghent, Belgium — ¹⁶See the author list in J. Mail-

loux et al 2022 Nucl. Fusion 62 042026

Coll 27: JUNO-Collaboration

APEKSHA SINGHAL — Forschungszentrum Jülich GmbH, Institut für Kernphysik IKP-2, Jülich, Germany — III. Physikalisches Institut B, RWTH Aachen University, Aachen, Germany

Coll 28: LEGEND-Collaboration

N. ABGRALL¹, I. ABT², M. AGOSTINI³, A. ALEXANDER³, C. ANDREOU⁴, G.R. ARAUJO⁵, F.T. AVIGNONE III^{6,7}, M. BABICZ⁵, W. BAE⁸, A. BAKALYAROV⁹, M. BALATA¹⁰, I. BARABANOV¹¹, A.S. BARABASH⁹, P.S. BARBEAU^{12,13}, C.J. BARTON¹⁴, P.J. BARTON¹, L. BAUDIS⁵, C. BAUER¹⁵, E. BERNIERI¹⁶, L. BEZRUKOV¹¹, K.H. BHIMANI^{17,13}, V. BIANCACCI¹⁸, E. BLALOCK^{19,13}, A. BOLOZDYNYA²⁰, S. BORDEN²¹, M. BORRI²², B. BOS^{17,13}, E. BOSSIO²³, A. BOSTON²⁴, V. BOTHE¹⁵, R. BOUABID^{12,13}, R. BRUGNERA¹⁸, N. BURLAC¹⁶, M. BUSCH^{12,13}, A. CALDWELL², T.S. CALDWELL^{17,13}, S. CALGARO¹⁸, R.M.D. CARNEY¹, C. CATTADORI²⁵, Y.-D. CHAN¹, A. CHERNOGOROV⁹, P.-J. CHIU⁵, C.D. CHRISTOFFERSON²⁶, P.-H. CHU²⁷, M. CLARK^{17,13}, T. COHEN^{17,13}, D. COMBS^{19,13}, T. COMELLATO²³, R.J. COOPER¹, I.A. COSTA¹⁶, V. D'ANDREA^{29,10}, R. DECKERT²³, J.A. DETWILER²¹, A. DI GIACINTO¹⁰, N. DI MARCO^{28,10}, J. DOBSON³, A. DROBIZHEV¹, YU. EFREMENKO³⁰, S.R. ELLIOTT²⁷, E. ENGELHARDT^{17,13}, M.T. FEBBRARO⁷, F. FERELLA²⁹, D.E. FIELDS³¹, F. FISCHER², M. FOMINA³², H. FOX³³, J. FRANCHI⁵, N. FUAD³⁴, R. GALA^{19,13}, A. GALINDO-URIBARRI⁷, A. GANGAPSHEV¹¹, A. GARFAGNINI¹⁸, S. GAZZAN¹⁰, A. GERACI³⁵, M. GOLD³¹, C. GOOCH², M.P. GREEN^{19,13,7}, G.F. GRINYER³⁶, A. GROBOV⁹, J. GRUSZKO^{17,13}, I. GUINN^{17,13}, V.E. GUISEPPE⁷, V. GURENTSOV¹¹, Y. GUROV³², K. GUSEV^{32,23}, B. HACKET², F. HAGEMANN², J. HAKENMÜELLER¹⁵, M. HARANCZYK³⁷, L. HAUERTMANN², C.R. HAUFE^{17,13}, C. HAYWARD³³, F. HENKES^{23,2}, R. HENNING^{17,13}, D. HERVAS AGUILAR^{17,13}, J. HINTON¹⁵, R. HODAK³⁸, H. HOFFMANN³⁹, W. HOFMANN¹⁵, A. HOSTIUC²¹, M. HULT⁴⁷, A. IANNI¹⁰, J. JOCHUM⁴⁰, T. JONES²², R. JONES³³, D. JUDSON²⁴, M. JUNKER¹⁰, J. KAIZER⁴¹, V. KAZALOV¹¹, H. KHUSHBAKHT⁴⁰, M. KIDD⁴², T. KIHM¹⁵, K. KILGUS⁴⁰, A. KLIMENTKO³², K.T. KNÖPFLE¹⁵, O. KOCHETOV³², S.I. KONOVALOV⁹, I. KONTUL⁴¹, L.L. KORMOS³³, V.N. KORNOURKHOV²⁰, P. KRAUSE²³, A.-K. KUMAR⁴⁰, V.V. KUZMINOV¹¹, J.M. LÓPEZ-CASTAÑO⁷, M. LABICHE²², K. LANG⁸, M. LAUBENSTEIN¹⁰, I. LAZARUS²², E. LEÓN^{17,13}, B. LEHNERT¹, A. LEONHARDT²³, A. LI¹⁷, M. LINDNER¹⁵, I. LIPPI⁴³, X. LIU², A. LUBASHEVSKY³², B. LUBSANDORZHIEV¹¹, N. LUSARDI³⁵, Y. MÜLLER⁵, M. MACKO³⁸, C. MACOLINO²⁹, B. MAJOROVITS², F. MAMEDOV³⁸, W. MANESCHG¹⁵, L. MANZANILLAS², G. MARSHALL³, R.D. MARTIN⁴⁴, E.L. MARTIN^{17,13}, R. MASSARCZYK²⁷, A. MAZUMDAR²⁷, D. MEI¹⁴, S.P. MEIRELES^{29,10}, S. MERTENS^{23,2}, M. MISIASZEK³⁷, I. MIZRA³⁰, E. MONDRAGON²³, M. MORELLA^{28,10}, B. MORGAN⁴⁵, T. MROZ³⁷, D. MUENSTERMANN³³, C.J. NAVÉ²¹, I. NEMCHENOK³², M. NEUBERGER²³, J. NEWBY⁷, G. OREBI GANN⁴⁶, F. PAISSAN¹⁶, V. PALUSOVA³⁸, R. PANTH¹⁴, P. PAPADAKIS²², L. PAPP²³, L.S. PAUDEL¹⁴, K. PELCZAR⁴⁷, J. PEREZ PEREZ³⁷, L. PERTOLDI^{23,43}, W. PETTUS³⁴, M. PICHOCCA³⁹, P. PISERI³⁵, A.W.P. POON¹, N. POUDYAL¹⁴, P. POVINEC⁴¹, A. PULLIA³⁵, D.C. RADFORD⁷, Y.A. RAMACHERS⁴⁵, L. RAUSCHER⁴⁰, T. RAWLINGS²², A. RAZETO²⁰, M. REDCHUK⁴³, A.L. REINE^{17,13}, S. RIBOLDI³⁵, K. RIELAGE²⁷, N. ROSSI¹⁰, S. ROZOV³², N. RUMYANTSEVA³², J. RUNGE^{12,13}, N.W. RUOF²¹, R. SAAKYAN³, S. SAILER¹⁵, G. SALAMANNA¹⁶, F. SALAMIDA^{29,10}, G. SALEH¹⁸, D.J. SALVAT³⁴, V. SANDUKOVSKY³², S. SCHÖNERT²³, A. SCHÜLTZ¹, D.C. SCHAPER²⁷, J. SCHREINER¹⁵, O. SCHULZ², M. SCHUSTER², M. SCHWARZ²³, B. SCHWINGENHEUER¹⁵, S. SCORZA⁴⁸, O. SELIVANENKO¹¹, E. SHEVCHIK³², M. SHIRCHENKO³², Y. SHITOV³², H. SIMGEN¹⁵, F. SIMKOVIC³⁸, M. SKOROKHATOV⁹, A. SMOLNIKOV³², J.A. SOLOMON^{17,13}, G. SONG²¹, A.C. SOUSA²⁶, I. STEKL³⁸, T. STEZELBERGER¹, M. STODDART⁴⁸, M. STOMMEL⁵⁰, S.A. SULLIVAN¹⁵, R.R. SUMATHI⁴⁹, K. SZCZEPANIEC³⁷, L. TAFFARELLO⁴³, D. TAGNANI¹⁶, R. TAYLOE³⁴, D. TEDESCHI⁶, M. TURQUETI¹, C. UNSWORTH²², E.E. VAN NIEWENHUIZEN^{12,13}, R.L. VARNER⁷, S. VASILYEV³², A. VERESNIKOVA¹¹, K. VETTER^{1,51}, C. VIGNOLI¹⁰, C. VOGL²³, K. VON STURM¹⁸, D. WATERS³, J.C. WATERS^{17,13}, S.L. WATKINS²⁷, W. WEI¹⁵, C. WIESINGER^{23,2}, J.F. WILKERSON^{17,13,7}, M. WILLERS^{23,2}, C. WISEMAN²¹, M. WOJCIK³⁷, W. XU¹⁵, E. YAKUSHEV³², T. YE⁴⁴, C.-H. YU⁷, V. YUMATOV⁹, N. ZARETSKI⁹, J. ZEMAN⁴¹, I. ZHITNIKOV³², D. ZINATULINA³², A.J. ZSIGMOND², K. ZUBER³⁹, and G. ZUZEL³⁷ — ¹Institute for Nuclear and Particle Astrophysics and Nuclear Science Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA — ²Max-Planck-Institut

für Physik, München, Germany — ³University College London, London, United Kingdom — ⁴Department of Chemistry, Simon Fraser University, Burnaby, British Columbia, Canada — ⁵Physik-Institut, University of Zürich, Zürich, Switzerland — ⁶Department of Physics and Astronomy, University of South Carolina, Columbia, SC 29208, USA — ⁷Oak Ridge National Laboratory, Oak Ridge, TN 37830, USA — ⁸Department of Physics, University of Texas at Austin, Austin, TX 78712, USA — ⁹National Research Centre “Kurchatov Institute”, Moscow, Russia — ¹⁰Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali del Gran Sasso, Assergi (AQ), Italy — ¹¹Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, Russia — ¹²Department of Physics, Duke University, Durham, NC 27708, USA — ¹³Triangle Universities Nuclear Laboratory, Durham, NC 27708, USA — ¹⁴Department of Physics, University of South Dakota, Vermillion, SD 57069, USA — ¹⁵Max-Planck-Institut für Kernphysik, Heidelberg, Germany — ¹⁶Roma Tre University and INFN Roma Tre, Rome, Italy — ¹⁷Department of Physics and Astronomy, University of North Carolina, Chapel Hill, NC 27514, USA — ¹⁸Dipartimento di Fisica e Astronomia dell’Università di Padova, Italy — ¹⁹Department of Physics, North Carolina State University, Raleigh, NC 27607, USA — ²⁰National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), 115409 Moscow, Russia — ²¹Center for Experimental Nuclear Physics and Astrophysics, and Department of Physics, University of Washington, Seattle, WA 98195, USA — ²²Science and Technology Facilities Council (STFC) Daresbury Laboratory, Daresbury, Cheshire, UK — ²³Technische Universität, München, Germany — ²⁴University of Liverpool, Liverpool, United Kingdom — ²⁵Istituto Nazionale di Fisica Nucleare, Milano Biocca, Milano, Italy — ²⁶South Dakota Mines, Rapid City, SD, 57701, USA — ²⁷Los Alamos National Laboratory, Los Alamos, NM 87545, USA — ²⁸Gran Sasso Science Institute, L’Aquila, Italy — ²⁹Department of Physical and Chemical Sciences University of L’Aquila, L’Aquila, Italy — ³⁰Department of Physics and Astronomy, University of Tennessee, Knoxville, TN 37916, USA — ³¹Department of Physics and Astronomy, University of New Mexico, Albuquerque, NM 87131, USA — ³²Joint Institute for Nuclear Research, Dubna, Russia — ³³Department of Physics, Lancaster University, Lancaster, United Kingdom — ³⁴Department of Physics, Indiana University, Bloomington, IN 47405, USA — ³⁵Milano Univ. and Milano Istituto Nazionale di Fisica Nucleare, Milano, Italy — ³⁶Department of Physics, University of Regina, Regina, Saskatchewan, Canada — ³⁷M. Smoluchowski Institute of Physics, Jagiellonian University, Cracow, Poland — ³⁸Czech Technical University, Institute of Experimental and Applied Physics, CZ-12800 Prague, Czech Republic — ³⁹Technische Universität Dresden, Dresden, Germany — ⁴⁰University Tübingen, Tübingen, Germany — ⁴¹Department of Nuclear Physics and Biophysics, Comenius University, Bratislava, Slovakia — ⁴²Tennessee Tech University, Cookeville, TN 38505, USA — ⁴³Padova Istituto Nazionale di Fisica Nucleare, Padova, Italy — ⁴⁴Department of Physics, Engineering Physics & Astronomy, Queen’s University, Kingston, Ontario, Canada — ⁴⁵Department of Physics, University of Warwick, Coventry, United Kingdom — ⁴⁶Department of Physics, University of California, Berkeley, CA, 94720, USA — ⁴⁷European Commission, Joint Research Centre, Directorate for Nuclear Safety & Security, Geel, Belgium — ⁴⁸SNOLAB, Creighton Mine #9, Sudbury, ON P3Y 1N2, Canada — ⁴⁹Leibniz Institute for Crystal Growth, Berlin, Germany — ⁵⁰Leibniz-Institute of Polymer Research Dresden e.V., Dresden, Germany — ⁵¹Department of Nuclear Engineering, University of California, Berkeley, CA, 94720, USA

Coll 29: LOFAR Solar and Heliospheric KSP-Collaboration

PIETRO ZUCCA¹, MARIO BISI², CHRISTIAN VOCKS³, BARTOSZ DABROWSKI⁴, DIANA MOROSAN⁵, PETER GALLAGHER⁶, ANDRZEJ KRANKOWSKI⁴, JASMINA MAGDALENIĆ⁷, GOTTFRIED MANN³, CHRISTOPHE MARQUE⁷, HANNA ROTHKAEH⁸, and BARBARA MATYJASIĄK⁸ — ¹ASTRON, Dwingeloo, Netherlands — ²RAL Space, Harwell Campus, UK — ³Leibniz-Institut für Astrophysik Potsdam (AIP), Potsdam, Germany — ⁴University of Warmia and Mazury, Olsztyn, Poland — ⁵University of Helsinki, Helsinki, Finland — ⁶DIAS, Dublin, Ireland — ⁷Royal Observatory of Belgium, Brussels, Belgium — ⁸PAN, Warsaw, Poland

Coll 30: LUNA-Collaboration

MARIALUISA ALIOTTA¹, CHEMSEDDINE ANANNA², FRANCESCO BARILE³, DANIEL BEMMERER⁴, ANDREAS BEST², AXEL BOELTZIG⁴, CARLO BROGGINI⁵, CARLO BRUNO¹, ANTONIO CACIOLLI⁵, MATTEO CAMPOSTRINI⁶, FRANCESCA CAVANNA⁷, GIOVANNI CIANI³, PAOLO COLOMBETTI⁷, ALESSANDRO COMPAGNUCCI⁸, PIETRO CORVISIERO⁹, LASZLO CSEDREKI¹⁰, TOM DAVINSON¹, ROSANNA

DEPALO¹¹, ANTONINO DI LEVA², ZOLTAN ELEKES¹⁰, FEDERICO FERRARO¹¹, E.M. FIORE³, ALBA FORMICOLA¹², ZSOLT FÜLÖP¹⁰, GIANPIERO GERVINO⁷, ALESSANDRA GUGLIELMETTI¹¹, CARLO GUSTAVINO¹², GYÖRGY GYÜRKY¹⁰, GIANLUCA IMBRIANI², MATTHIAS JUNKER⁸, MARIA LUGARO¹³, PAOLA MARIGO⁵, ELIANA MASHA⁴, ROBERTO MENEGAZZO⁵, VINCENZO PATICCHIO³, R PERRINO¹⁴, DENISE PIATTI⁵, PAOLO PRATI⁹, DAVID RAPAGNANI², VALENTINO RIGATO⁶, LUIGI SCHIAVULLI³, RAGANDEEP SINGH SIDHU¹, OSCAR STRANIERO¹⁵, JAKUB SKOWRONSKI⁵, TAMÁS SZÜCS¹⁰, and SANDRA ZAVATARELLI⁹ — ¹University of Edinburgh, United Kingdom — ²Università di Napoli "Federico II", and INFN Sezione di Napoli, Napoli, Italy — ³Università di Bari and INFN Sezione di Bari, Italy — ⁴Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Dresden, Germany — ⁵Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Padova, Padova, Italy — ⁶Laboratori Nazionali di Legnaro, Viale dell'Università 2, 35020, Legnaro (PD), Italy — ⁷Università di Torino and INFN Sezione di Torino, Torino, Italy — ⁸INFN, Laboratori Nazionali del Gran Sasso (LNGS), Assergi, Italy — ⁹Università di Genova and INFN Sezione di Genova, Italy — ¹⁰MTA ATOMKI, Debrecen, Hungary — ¹¹Università di Milano and INFN Sezione di Milano, Italy — ¹²INFN, Sezione di Roma 1, Roma, Italy — ¹³Konkoly Observatory, Budapest, Hungary — ¹⁴INFN, Sezione di Lecce, Lecce, Italy — ¹⁵Osservatorio Astronomico di Collurania, Teramo, and INFN Sezione di Napoli, Napoli, Italy

Coll 31: MADMAX-Collaboration

BERNARDO ARY DOS SANTOS GARCIA¹, DOMINIK BERGERMANN¹, STÉPHAN BEURTHEY², ALLEN CALDWELL³, GIULIO CAPPELLI⁴, VİHAY DABHI², CRISTINEL DIACONU², JOHANNES DIEHL³, GIA DVALI³, JACOB EGGE⁵, ANTONIOS GARDIKIOTIS⁵, ERIKA GARUTTI⁵, STEFAN HEYMINK⁶, FABRICE HUBAUT², ANTON IVANOV³, JOSEF JOCHUM⁷, PIERRE KARST², MICHAEL KRAMER⁶, DAGMAR KREIKEMEYER-LORENZO³, CHRISTOPH KRIEGER⁵, DANIEL LABAT², CHANG LEE³, GWENael LE-GAL⁴, DAVID LEPLLA-WEBER⁸, AXEL LINDNER⁸, MAXIMILIAN LOHMANN¹, BÉLA MAJOROVITS³, STEPHAN MARTENS⁵, MICHAEL MATYSEK⁵, ERDEM ÖZ¹, PASCAL PRALAVORIO², GEORG RAFFELT³, ARPIT RADADIVE⁴, JAVIER REDONDO⁹, OLAF REIMANN³, ANDREAS RINGWALD⁸, NICOLAS ROCH⁴, JÖRN SCHAFFRAN⁸, ALEXANDER SCHMIDT¹, LOLIAN SHTEMBAR³, FRANK STEFFEN³, CHRISTIAN STRANDHAGEN⁷, DEREK STROM³, IGOR USHEROV⁷, HAOTIAN WANG¹, and GUNDOLF WIECHING⁶ — ¹RWTH Aachen — ²CPPM, Marseille, Frankreich — ³MPI für Physik, München — ⁴Institut NEEL, CNRF, Grenoble, Frankreich — ⁵Universität Hamburg — ⁶MPI für Radioastronomie, Bonn — ⁷Eberhard-Karls-Universität Tübingen — ⁸DESY Hamburg — ⁹Universidad de Zaragoza, Spanien

Coll 32: MAGIX-Collaboration

PATRICK ACHENBACH^{1,2,16}, STEPHAN AULENBACHER¹, MARKUS BALL⁴, JAN BERNAUER^{9,10}, MAIK BIROTH¹, PHILIPP BRAND⁶, STEFANO CAIAZZA¹, MIRCO CHRISTMANN^{1,2}, ETHAN CLINE⁹, ACHIM DENIG^{1,2,3}, LUCA DORIA^{1,3}, PETER DREXLER^{1,3}, SARA FECHNER¹, IVICA FRISCIC¹⁴, JENNIFER GEIMER¹, PEPE GÜLKER¹, CHRISTOPHER JANAS¹, ALFONS KHOUKAZ⁶, PASCAL KLAG¹, MICHAEL KOHL¹¹, TIM KOLAR¹⁵, MATTEO LAUSS^{1,2}, MAXIMILIAN LITTICH¹, MICHAEL LUPBERGER⁵, STEFAN LUNKENHEIMER¹, THEODOROS MANOUSSOS¹, DAVID MARKUS¹, MANUEL MAUCH¹, HARALD MERKEL^{1,3}, MIHA MIHOVILOVIC^{7,8}, RICHARD MILNER¹², JULIAN MÜLLER¹, JONAS PÄTSCHKE¹, SASKIA PLURA^{1,3}, JUDITH SCHLAADT¹, SÖREN SCHLIMME¹, CONCETTINA SFIENTI^{1,3}, SIMON SIRCA^{7,8}, DANIEL STEGER¹, SEBASTIAN STENGEL¹, ELZBIETA STEPHAN¹³, CONSTANTIN SZYSZKA¹, SOPHIA VESTRICK⁶, YIMIN WANG¹², and ANDRZEJ WILCZEK¹³ — ¹Institut für Kernphysik, Johannes Gutenberg-Universität, Mainz, Germany — ²Helmholtz Institute Mainz, Germany — ³PRISMA+ Cluster of Excellence, Johannes Gutenberg-Universität, Mainz, Germany — ⁴Helmholtz-Institut für Strahlen- und Kernphysik, Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany — ⁵Physikalisches Institut, Rheinische Friedrich-Wilhelms-Universität, Bonn, Germany — ⁶Institut für Kernphysik, Westfälische Wilhelms-Universität, Münster, Germany — ⁷Jozef Stefan Institute, Ljubljana, Slovenia — ⁸Department of Physics, University of Ljubljana, Slovenia — ⁹Center for Frontiers in Nuclear Science, Department of Physics and Astronomy, Stony Brook University, New York, USA — ¹⁰RIKEN BNL Research Center, Brookhaven National Laboratory, Upton, USA — ¹¹Department of Physics, Hampton University, Hampton, USA — ¹²Laboratory for Nuclear Science, Massachusetts Institute of Technology, Cambridge, USA — ¹³Institute of Physics, University of Silesia, Katowice, Poland — ¹⁴Department of Physics,

University of Zagreb, Croatia — ¹⁵School of Physics and Astronomy, Tel Aviv University, Israel — ¹⁶Thomas Jefferson National Accelerator Facility, Newport News, Virginia, US

Coll 33: MINIBALL IS702-Collaboration

PETER REITER¹, THORSTEN KRÖLL², MAXIMILIAN DROSTE¹, KONRAD ARNSWALD¹, ANDREY BLAZHEV¹, RAMONA BURGGRAF¹, FRANK BROWN³, JOAKIM CEDERKALL⁴, MARCOS LLANO EXPÓSITO⁵, LIAM GAFFNEY⁶, GEORGI GEORGIEV⁷, KALIN GLADNISHKI⁸, CORINNA HENRICH², HERBERT HESS¹, ROUVEN HIRSCH¹, KATHARINA IDE², ANDRES ILLANA⁹, DIANA KOCHEVA⁸, RADOMIRA LOZEGA⁷, DARIUS LUYKEN¹, PAWEŁ J. NAPIORKOWSKI¹⁰, BRUNO OLAIZOLA³, JANNE PAKARINEN⁹, IWONA PIĘTKA¹⁰, GEORGI RAINOVSKI⁸, CARLA SCHLADT¹, TIM STETZ², KONSTANTIN STOYCHEV⁷, NIGEL WARR¹, and KATARZYNA WRZOSEK-LIPSKA¹⁰ — ¹Institut für Kernphysik, Universität zu Köln, Germany — ²Institut für Kernphysik, Technische Universität Darmstadt, Germany — ³Physics Department, ISOLDE, CERN, Switzerland — ⁴Department of Physics, Lund University, Sweden — ⁵Universidad Complutense de Madrid, Spain — ⁶Department of Physics, University of Liverpool, United Kingdom — ⁷IJCLab, Orsay, France — ⁸Department of Atomic Physics, University of Sofia, Bulgaria — ⁹University of Jyväskylä, Finland — ¹⁰UW HIL Warsaw, Poland

Coll 34: MONUMENT-Collaboration

DHANURDHAR BAJPAI¹, LAURA BAUDIS², VIACHESLAV BELOV³, ELISABETTA BOSSIO⁴, THOMAS E. COCOLIOS⁵, HIROYASU EJIRI⁶, EVGENII SUSHENOK³, MARIA FOMINA³, IZYAN H. HASHIM⁷, MICHAEL HEINES⁵, KONSTANTIN GUSEV^{3,4}, SERGEJ KAZARTSEV³, ANDREAS KNECHT⁸, ELIZABETH MONDRAGON⁴, NG ZHENG WEI⁷, FAIZNUR OTHMAN⁷, IGOR OSTROVSKY¹, GABRIELA R. ARAUJO², NADYIA RUMYANTSEVA³, MARIO SCHWARZ⁴, STEFAN SCHOENERT⁴, MARK SHIRCHENKO³, EGOR SHEVCHIK³, YURY SHITOV^{3,11}, JOUNI SUHONEN⁹, STERGIANI M. VOGLIATZI^{8,10}, CHRISTOPH WIESINGER³, IGOR ZHITNIKOV³, and DANIYA ZINATULINA³ — ¹The University of Alabama, Tuscaloosa, Alabama 35487, The United States of America — ²University of Zurich, Rämistrasse 71, 8006 Zürich, Switzerland — ³Joint Institute for Nuclear Research, 6 Joliot-Curie St Dubna Moscow Region 141980 Russia — ⁴Technical University of Munich, 85748 Garching, Germany — ⁵Katholieke Universiteit Leuven, Oude Markt 13, 3000 Leuven, Belgium — ⁶Osaka University, 1-1 Yamadaoka, Suita, Osaka 565-0871, Japan — ⁷Universiti Teknologi Malaysia, Jalan Iman, 81310 Johor Bahru, Johor, Malaysia — ⁸Paul Scherrer Institute, Forschungsstrasse 111, 5232 Villigen, Switzerland — ⁹University of Jyväskylä, Seminaarinkatu 15, 40014 Jyväskylän yliopisto, Finland — ¹⁰ETH Zurich, Rämistrasse 101, 8092 Zürich, Switzerland — ¹¹IEAP CTU, Institute of Experimental and Applied Physics Czech Technical University in Prague Husova 240/5 110 00 Prague

Coll 35: NA64-Collaboration

BERNHARD KETZER¹, MICHAEL HÖSGEN¹, BENJAMIN BANTO OBERHAUSER², SERGEY DONSKOV³, SERGEI GNINENKI⁴, PAOLO CRIVELLI⁵, VICTOR METVEEV⁶, VLADIMIR VOLKOV⁷, SERGEY KULESHOV⁸, RENAT DUSAEV⁹, VLADIMIR TIKHOMIROV¹⁰, and ANDREA CELENTANO¹¹ — ¹Universität Bonn, Helmholtz-Institut für Strahlen- und Kernphysik, Bonn, Germany — ²Departamento de Física — ³Institute for High Energy Physics of NRC Kurchatov Institute — ⁴Institute for Nuclear Research — ⁵Institute for Particle Physics and Astrophysics (IPA) — ⁶Joint Institute for Nuclear Research — ⁷M.V. Lomonosov Moscow State University — ⁸Millennium Institute for Subatomic Physics at High Energy Frontier — ⁹National Research Tomsk Polytechnic University — ¹⁰P.N. Lebedev Institute of Physics — ¹¹Sezione di Genova

Coll 36: NewSUBARU-Collaboration

SERGEY BELYSHEV¹, TOMAS ERIKSEN², FRANK L. BELLO GARROTE², VETLE WEGNER INGEBERG², WANJA PAULSEN², LINE G. PEDERSEN², FARDOUS RAEZ², and SHUJI MIYAMOTO³ — ¹Lomonosov Moscow State University — ²Department of Physics, University of Oslo, N-0316 Oslo, Norway — ³LASTI, University of Hyogo

Coll 37: nu-Ball2 N-SI-120-Collaboration

J.N. WILSON¹, A. ALGORÀ², D. BITTNER³, A. BLAZHEV³, J.A. BRIZ MONAGO⁴, A. BRUCE⁵, L. CANETE⁶, C. CHATEL⁷, G. DE ANGELIS⁸, P. DESSAGNE⁷, F. DIDIERJEAN⁷, G. DUCHÈNE⁷, A. ESMAYLZADEH³, G. EUGENIO⁹, J. FISCHER³, L.M. FRAILE⁴, R. FRANCESCO¹⁰, N. FRITZ¹¹, G. GEORGIEV¹, K. GLADNISHKI¹², K. GREGOR¹³, A. HARTER³, K. HAUSCHILD¹, J. HEERY⁶, G. HENNING⁷, C. HIVER¹, L. ISKRA¹⁴, B. JAIME¹⁰, L. JOA¹, J. JOLIE³, N. JOVANCEVIC¹⁵,

D. KALAYDJEVA¹⁶, M. KERVENO⁷, L. KNAFLA³, D. KNEZEVIC¹⁷, D. KOCHIVA¹², D. KORGUL¹⁸, T. KRÖLL¹⁹, M. KRZYSZTOF¹⁸, M. LEBOIS¹, M. LEY³, M. LLANOS⁴, A. LOPEZ-MARTENS¹, R. LOZEGA¹, M. MARKOVA¹¹, A. MESSINGSCHLAGER¹⁹, T. MILANOVIC²⁰, M. MOUKADAM⁷, A. PABLO¹⁰, S. PASCU⁶, G. PASQUALATO¹, W. PAULSEN¹¹, Z. PODOLYAK⁶, W. POKLEPA¹⁸, P. REGAN⁶, K. REZYNKINA¹⁰, M. RUDIGIER¹⁹, E. SEME¹³, J. SHAHEEN⁶, B. SIMONE⁹, K. SOLAK¹⁸, K. STOYCHEV¹, M. STRYJCZYK²¹, G. TORVUND¹¹, J. VESIC¹³, M. von TRESCROW¹⁹, N. WARF³, and G. ZHANG¹⁰ — ¹CNRS/IN2P3 IJCLab Orsay, France — ²IFIC, CSIC-University of Valencia, Spain — ³IKP, University of Cologne, Germany — ⁴Grupo de Fisica Nuclear & IPARCOS, Complutense University of Madrid, Spain — ⁵University of Brighton, United Kingdom — ⁶University of Surrey, United Kingdom — ⁷IPHC, Strasbourg, France — ⁸INFN Legnaro National Laboratory, Italy — ⁹INFN Milan, Italy — ¹⁰INFN Padova, Italy — ¹¹University of Oslo, Norway — ¹²INRNE, Bulgarian Academy of Sciences, Sofia, Bulgaria — ¹³IJS, Ljubljana, Slovenia — ¹⁴IFJ, Polish Academy of Sciences, Krakow, Poland — ¹⁵University of Novi Sad, Serbia — ¹⁶IRFU, CEA, Universite Paris-Saclay, France — ¹⁷IPB Belgrade, Serbia — ¹⁸University of Warsaw, Poland — ¹⁹IKP, TU Darmstadt, Germany — ²⁰Vinča Institute of Nuclear Science, University of Belgrade, Serbia — ²¹JYFL, University of Jyväskylä, Finland

Coll 38: PUMA-Collaboration

ALEXANDRE OBERTELLI¹, THOMAS AUMANN¹, WOLFGANG BARTMANN², OLIVER BOINE-FRANKENHEIM¹, AYMERIC BOUARD², ALEXANDRE BROCHE², FRANÇOIS BUTIN², JAUME CARBONELL⁴, PAOLO CHIGGIATO², HERBERT DE GERSEM¹, RUI DE OLIVERIA², TOBIAS DOBERS², FELIX EHM², JOSE FERREIRA SOMOZA², JONAS FISCHER¹, MATTHEW FRASER², JEAN-Louis GRENAUD², GUILLAUME HUPIN⁴, PAUL INDELICATO⁵, KARL JOHNSTON², CLARA KLINK², RIMANTAS LAZAUŠKAS³, STEPHAN MALBRUNOT-ETTENAUER⁶, NICOLAS MARSIC¹, WOLFGANG MÜLLER¹, RENE NECCA², SERGIO PASINELLI², NANCY PAUL⁵, LUISA RIJK¹, DOMINIC ROSSI¹, HEIKO SCHEIT¹, MORITZ SCHLAICH¹, ALEXANDER SCHMIDT¹, SIMON SELS², ERWIN SISSLING², FRANK WIENHOLTZ¹, CHRISTINA XANTHOPOULOU¹, and SABRINA ZACARIAS¹ — ¹Technische Universität Darmstadt, Germany — ²CERN, Switzerland — ³Institut Hubert Curien, CNRS, France — ⁴Irène Joliot Curie Laboratory, Orsay, CNRS, France — ⁵Laboratoire Kastler Brossel, CNRS, France — ⁶TRIUMF, Canada

Coll 39: R3B-Collaboration

MARIALUISA ALIOTTA^{1,2}, GEORGY ALKHAZOV³, TAHANI ALMUSIDI^{4,5}, HECTOR ALVAREZ-POL⁶, PAUL ANDRÉ⁷, MARLENE ASSIÉ⁸, LEYLA ATAR⁹, LIAM ATKINS⁴, LAURENT AUDOUIN⁸, THOMAS AUMANN^{9,10}, YASSID AYYAD⁶, MARTIN BAJZEK^{10,11}, ANTOINE BARRIERE¹², SAUL BECERO-NONO¹³, SERGEY BELOGUROV^{14,15}, DANIEL BEMMERER¹⁶, JOSE BENLIURE⁶, CARLOS A. BERTULANI¹⁷, ANDREY BEZBAKH¹⁴, GUILLAUME BLANCHON¹⁸, CARL GEORG BOOS⁹, KONSTANZE BORETZKY¹⁰, MARÍA JOSÉ GARCÍA BORGE¹⁹, IVAN NICK BORZOV²⁰, LUKAS THOMAS BOTT¹, BENJAMIN BRÜCKNER¹, PABLO CABANELAS⁶, CHRISTOPH CAESAR¹⁰, STEFANA CALINESCU²¹, ENRIQUE CASAREJOS²², WILTON CATFORD²³, JOAKIM CEDERKALL²⁴, AUDREY CHATILLON¹⁸, MADALIN ILIE CHERCIU²⁵, M MAJID RAUF CHISHTY²⁴, LEONID CHULKOV²⁰, ANDREEA CIRSTIAN²⁵, ANNA CORSI⁷, DOLORES CORTINA-GIL⁶, EDGAR CRAVO^{26,27}, RAQUEL NUNES PEREIRA CRESPO²⁸, ANDREY NICOLAEVICH DANILOV²⁰, ENRICO DE FILIPPO²⁹, ALEXIS DIAZ-TORRES²³, TIMO DICKEL^{10,11}, ALEXANDER DOBROVOLSKY³, PIETER DOORNENBAL³⁰, MEYTAL DUER⁹, PETER EGELHOF¹⁰, ZOLTAN ELEKES³¹, JOACHIM ENDERS^{9,32}, PHILIPP ERBACHER¹, SONIA ESCRIBANO RODRIGUEZ⁴, CLAES FAHLANDER²⁴, ASHTON FALDUTO⁹, MARTINA FEIJOO⁶, DANIEL FERNANDEZ RUIZ¹⁹, ANDREY FOMICHEV¹⁴, ZSOLT FULOP³¹, DANIEL GALAVIZ^{33,27}, ELISABET GALIANA^{33,6}, GABRIEL GARCÍA⁶, VICENTE GARCÍA TÁVORA¹⁹, IGOR GASPARIC³⁴, ZHUANG GE^{10,35}, HANS GEISSEL¹⁰, ELENAIRENE GERACI^{36,29}, JÜRGEN GERL¹⁰, ROMAN GERNHÄUSER³⁷, ALAIN GILLIBERT⁷, JAN GLORIUS¹⁰, BRUNILDE GNOFFO^{36,29}, MIKHAIL GOLOVKOV¹⁴, VICTOR GOLOVTSON³, PAVEL GOLUBEV²⁴, DAVID GONZÁLEZ CAAMAÑO⁶, ALEXANDER GORSHKOV¹⁴, ANTIA GRAÑA GONZÁLEZ⁶, ANATOLY BORISOVICH GRIDNEV³, NIKOLAI GRUZINSKII³, VALDIR GUIMARAES³⁸, KATHRIN GöBEL¹, MUHSIN N. HARAKEH³⁹, ANNA-LENA HARTIG⁹, TANJA HEFTRICH¹, HENNING HEGGEN¹⁰, MICHAEL HEIL¹⁰, ANDREAS HEINZ⁴⁰, OR HEN⁴¹, CORINNA HENRICH⁹, ANA HENRIQUES⁴², THOMAS HENSEL^{16,43}, MATTHIAS HOLL⁴⁰, ILJA HOMM⁹, ANDREA HORVAT³⁴, ÁKOS HORVÁTH⁴⁴, JAN-PAUL ALEXANDER HUCKA⁹, ALEXANDER INGLESI³,

ANDREA JEDELE⁹, DESA JELAVIC MALENICA³⁴, TOBIAS JENECKER³⁷, LIANCHENG JI⁹, HÅKAN TORBJÖRN JOHANSSON⁴⁰, BJÖRN JONSON⁴⁰, BEATRIZ JURADO⁴⁵, JULIAN KAHLBOW^{46,41}, NASSER KALANTAR-NAYESTANAKI³⁹, ARMEL KAMENYERO¹², ERIKA KAZANTSEVA¹⁰, ALEKSANDRA KELIC-HEIL¹⁰, ALEXEY KHANZADEEV³, OLEG ANATOLIEVICH KISELEV¹⁰, PHILIPP KLENZE³⁷, ALEXANDER KNYAZEV¹⁴, KARSTEN KOCH¹⁰, KEI KOKUBUN⁴⁷, GUERMAN ALEXANDROVICH KOROLEV³, ALEXEY A. KORSHENINNIKOV²⁰, WOLFRAM KORTEN⁷, NIKOLAI GEORGIEVICH KOZLENKO³, SABINA KRALOVSKAJA^{1,10}, DMYTRO KRESAN¹⁰, ANATOLY KRIVSHICH³, SERGEY KRUPKO¹⁴, THORSTEN KRÖLL⁹, ELEONORA KUDAIBERGENOVA⁹, DOROTTYA KUNNE SOHLER³¹, DENIZ KURTULGIL¹, NIKOLAUS KURZ¹⁰, EUGENY KUZMIN²⁰, VIACHESLAV KUZNETSOV³, DANIEL KÖRPER¹⁰, MARC LABICHE⁴⁸, ANDREA LAGNI⁷, CHRISTOPH LANGER⁴⁹, ARNAUD LE FÈVRE¹⁰, YVONNE LEIFELS¹⁰, MAREK LEWITOWICZ¹², IVANA LIHTAR³⁴, BUI DUY LINH⁵⁰, YURI LITVINOV¹⁰, HONGNA LIU⁹, BETTINA LOMMEL¹⁰, ENIS LORENZ^{9,10}, JERZY LUKASIK⁵¹, ZSOMBOR LÁNYI⁴⁴, ALINKA LÉPINE-SZILY³⁸, BASTIAN LÖHER¹⁰, AUGUSTO OSVALDO MACCHIAVELLI⁵², EUGENY MIKHAILOVICH MAEV³, DMITRII MAISUENKO³, ADAM MAJ⁵¹, NUNZIA SIMONA MARTORANA^{53,36}, BENOÎT MAUSS¹⁸, LEANDRO MILHOMENS DA FONSECA⁹, PIERRE MORFOUACE¹⁸, NIKHIL MOZUMDAR⁹, SILVIA MURILLO MORALES⁴, DENNIS MÜCHER⁵⁴, ENRIQUE NACHER^{55,19}, EVGENII YUR'EVICH NIKOLSKII^{20,14}, THOMAS NILSSON⁴⁰, CHIARA NOCIFORO¹⁰, FRITZ NOLDEN¹⁰, GÖRAN HUGO NYMAN⁴⁰, ALEXANDRE OBERTELLI⁹, EMANUELE VINCENZO PAGANO⁵³, VALERII PANIN¹⁰, JOOCHUN PARK⁵⁶, STEFANOS PASCHALIS⁴, JUNCHEN PEI⁵⁷, ANGEL PEREA¹⁹, MARINA PETRI⁴, ELI PIASETZKY⁴⁶, STEPHANE BAPTISTE PIETRI¹⁰, SARA PIRNONE²⁹, GIUSEPPE POLITI^{36,29}, EMMANUEL CARMEL POLLACCO⁷, LUKAS PONNATH³⁷, PETRU-MIHAI POTLOG²⁵, RINKU KUMAR PRAJAPAT^{58,10}, ROMAN PRITULA^{15,14}, HANG QI⁴¹, CHRISTOPHE RAPPOLD¹⁹, RENE REIFARTH¹, ALDRIC REVEL⁷, HAN-BUM RHEE⁹, FABIO RISITANO^{29,59}, JOSE LUIS RODRIGUEZ SANCHEZ^{6,10}, LUKE ROSE⁴, DOMINIC MICHEL ROSSI^{9,10}, MATTHIAS RUDIGIER⁹, PAOLO RUSSOTTO⁵³, SHAHAB SANJARI¹⁰, CLEMENTINE SANTAMARIA⁵², VICTOR VLADIMIROVICH SARANTSEV³, DENIZ SAVRAN¹⁰, CHRISTOPH SCHEIDENBERGER^{10,11}, HEIKO SCHEIT⁹, KONRAD SCHMIDT⁴³, HAIK SIMON¹⁰, JOHANNES PETER SIMON⁹, ZUZANA SLAVKOVSKÁ¹, ROMAN SLEPNEV¹⁴, OLIVIER SORLIN¹², TOMÁS SOUSA³³, ALEXANDRA SPIRIDON²¹, EMIL STAN²⁵, MIHAI STANOIU²¹, ALEXANDRA IONELA STEFANESCU²¹, IONUT CATALIN STEFANESCU²¹, SONJA STORCK-DUTINE⁹, AARON MATTHEW STOTT⁴, BAOHUA SUN⁶⁰, YELEI SUN⁹, ÁNGEL-MIGUEL SÁNCHEZ-BENÍTEZ⁶¹, CHRISTIAN SÜRDER⁹, JULIEN TAIEB¹⁸, JUNKI TANAKA³⁰, ISAO TANIHATA^{62,60}, RYO TANIUCHI⁴, OLOF TENGBLAD¹⁹, PAVEL NIKOLAEVICH TEREKHIN²⁰, PAMELA TEUBIG³³, LIVIUS TRACHE²¹, WOLFGANG TRAUTMANN¹⁰, MARINA TRIMARCHI^{29,59}, STEFAN TYPEL^{9,10}, HANS TOSHIHIDE TÖRNQVIST⁹, TOMOHIRO UESAKA³⁰, LEV UVAROV³, MARINE VANDEBROUCK⁷, LASZLO VARGA³⁷, SIMONE VELARDITA⁹, PAULO JORGE FERNANDES VELHO⁴², MATJAZ VENCELJ⁶³, MEIKO NIKLAS VOLKNANDT¹, SERGEI VOLKOV³, ANDREAS WAGNER¹⁶, FELIX WAMERS¹⁰, YANZHAO WANG⁶⁴, MATTHEW WHITEHEAD⁴, FRANK WIENHOLTZ⁹, KATHRIN WIMMER^{10,47}, MARTIN WINKLER¹⁰, MANUEL ANTÓNIO TAVARES XAREPE³³, YANLIN YE⁵⁷, SABRINA MILAGROS ZACARIAS⁹, JUAN CARLOS ZAMORA CARDONA¹³, WEI ZHANG⁴, ANDREY ZHDANOV³, MIKHAIL ZHUKOV⁴⁰, ANDREAS ZILGES⁶⁴, KAI ZUBER⁴³, GIACOMO DE ANGELIS⁶⁵, and MARTIN VON TRESCROW⁹ — ¹Goethe-Universität Frankfurt, Max-von-Laue Str. 1, 60438, Frankfurt am Main, Germany — ²University of Edinburgh, EH8 9YL, Edinburgh, United Kingdom — ³NRC Kurchatov Institute - Petersburg Nuclear Physics Institute (PNPI) Gatchina, Orlova Roscha, Leningrad district 188300, Gatchina, Russia — ⁴University of York, Department of Physics, Heslington, YO10 5DD, York, United Kingdom — ⁵King Saudi University, Saudi Arabia — ⁶Universidade de Santiago de Compostela, Instituto Gallego de Física de Altas Energías (IGFAE), Rúa de Xoaquín Díaz de Rábago, s/n., 15782, Santiago de Compostela, Spain — ⁷CEA Saclay, IRFU/DPhN, Centre de Saclay, 91191, Gif-sur-Yvette, France — ⁸Université Paris Saclay - IJCLab, France — ⁹Technische Universität Darmstadt, Fachbereich Physik, Institut für Kernphysik, 64289, Darmstadt, Germany — ¹⁰GSI Helmholtzzentrum für Schwerionenforschung, Planckstraße 1, 64291, Darmstadt, Germany — ¹¹Justus-Liebig-Universität Gießen, Gießen, Gießen, Germany — ¹²GANIL, Bd Henri Becquerel, 14076, Caen, France — ¹³Facility for Rare Isotope Beams / Michigan State University, United States of America — ¹⁴Joint Institute for Nuclear Research Dubna, 141980 Moscow region, Dubna, Russia — ¹⁵National Research Nuclear University, Moscow Engineering Physics Institute, Kashirskoe shosse 31,

115409, Moscow, Russia — ¹⁶Helmholtz-Zentrum Dresden-Rossendorf, Institute of Radiation Physics, Bautzner Landstraße 400, 01328, Dresden, Germany — ¹⁷Texas A&M University-Commerce, 75428, Commerce, TX, United States of America — ¹⁸CEA Bruyères le Chatel, Chemin du Ru, 91297, Bruyères-le-Châtel, France — ¹⁹Spanish National Research Council Madrid, Instituto de Estructura de la Materia, Serrano 113bis, 28006, Madrid, Spain — ²⁰NRC Kurchatov Institute - Moscow, pl. Akademika Kurchatova, Moscow, Russia — ²¹IFIN-HH Bucharest, Romania — ²²Universidad de Vigo, Escola de Enxeñería Industrial - CAMPUS, Campus Universitario Lagoas-Marcosende, E-36310, Vigo, Spain — ²³University of Surrey, GU2 7XH, Surrey, United Kingdom — ²⁴Lund University, Lund, Sweden — ²⁵Institute of Space Sciences, 409, Atomistilor Street, Magurele, Romania — ²⁶Center for Theoretical and Computational Physics, Faculdade de Ciencias, University of Lisbon, 1749-016, Lisbon, Portugal — ²⁷University of Lisbon - Faculdade de Ciencias, Campo Grande, 1649-016, Lisbon, Portugal — ²⁸Instituto Superior Técnico, University of Lisbon, Lisboa, Portugal — ²⁹INFN Sezione di Catania, Via Santa Sofia 64, 95123, Catania, Italy — ³⁰RIKEN, Nishina Center for Accelerator-Based Science, 2-1 Hirosawa, 351-0198, Wako, Saitama, Japan — ³¹ATOMKI Debrecen, Bem tér 18/c, 4026, Debrecen, Hungary — ³²Helmholtz Forschungsakademie Hessen für FAIR (HFHF) - Campus Darmstadt, Darmstadt, Germany — ³³Laboratory for Instrumentation and Experimental Particle Physics, Av. Prof. Gama Pinto 2, 1649-003, Lisbon, Portugal — ³⁴RBI Zagreb, Bijenicka cesta 54, HR10000, Zagreb, Croatia — ³⁵University of Jyväskylä, Finland — ³⁶Università di Catania, Dipartimento di Fisica e Astronomia "Ettore Majorana", Via S. Sofia 64, 95123, Catania, Italy — ³⁷Technische Universität München, James-Franck-Str 1, 85748, Garching, Germany — ³⁸Universidade de São Paulo, Rua do Matao, 1371, Departamento de Física Nuclear, 05508-090, São Paulo, Brazil — ³⁹University of Groningen - ESRIG, Nuclear Energy Group, Groningen, Netherlands — ⁴⁰Chalmers University of Technology, Department of Physics, Kemivägen 9, 412 96, Göteborg, Sweden — ⁴¹Massachusetts Institute of Technology, United States of America — ⁴²Nuclear Physics Center, University of Lisbon, Lisboa, Portugal — ⁴³Technische Universität Dresden, Institut für Kern- und Teilchenphysik, Zellescher Weg 19, 01069, Dresden, Germany — ⁴⁴Eötvös Loránd University, Eötvös Loránd University, Department of Atomic Physics, 1117, Budapest, Hungary — ⁴⁵LP2i Bordeaux, France — ⁴⁶Tel Aviv University, School of Physics and Astronomy, 69978, Tel Aviv, Israel — ⁴⁷University of Tokyo, Japan — ⁴⁸Science and Technology Facilities Council - Daresbury Laboratory, WA4 4AD, Warrington, United Kingdom — ⁴⁹University of Applied Science Aachen, Fachbereich 10 - Energietechnik, Physik / Kernphysik, Heinrich-Mußmann-Straße 1, 52428, Jülich, Germany — ⁵⁰Institute for Nuclear Science and Technology, 179 Hoang Quoc Viet, Nghia Do, Ha Noi, Vietnam — ⁵¹Institute of Nuclear Physics PAN Krakow, Poland — ⁵²Lawrence Berkeley National Laboratory, 1 Cyclotron Rd, 94720, Berkeley, CA, United States of America — ⁵³INFN Laboratori Nazionali del Sud, Via Santa Sofia 62, 95123, Catania, Italy — ⁵⁴University of Guelph, 50 Stone Road E, N1G 2W1, Guelph, ON, Canada — ⁵⁵Instituto de Física Corpuscular Valencia, Spain — ⁵⁶Institute for Basic Science, Center for Exotic Nuclear Studies, 34126, Daejeon, Korea (Republic of) — ⁵⁷Peking University, 5 Yiheyuan Rd, Haidian Qu, 100080, Beijing, China — ⁵⁸Indian Institute of Technology Roorkee, India — ⁵⁹Università degli studi di Messina, Italy — ⁶⁰Beihang University, China — ⁶¹Universidad de Huelva, Fac. CC. EE. Avda. de las Fuerzas Armadas s/n, 21071, Huelva, Spain — ⁶²RCNP Osaka, Japan — ⁶³Jozef Stefan Institute, Slovenia — ⁶⁴Universität zu Köln, Institut für Kernphysik, Zülpicher Straße 77, 50937, Köln, Germany — ⁶⁵INFN Legnaro, Italy

Coll 40: S530-Collaboration

ALI AL-ADIL⁶, ANDREAS OBERSTEDT⁷, ANDREAS SOLDERS⁶, ANU KANKAINEN¹², OLGA CZERVIAKOVA⁸, LORANT CSIGE⁹, DIMITER BALABANSKI⁷, DOMINIQUE CURIEN¹⁰, EMMA HAETTNER¹, ERIKA KAZANTSEVA¹, FARAZ AMJAD¹, FLORIAN GREINER¹, FRANCOIS DIDIERJEAN¹⁰, GOTTFRIED MUENZENBERG¹, GILBERT DUCHENE¹⁰, HELMUT WEICK², IVAN MUKHA¹, IIAN MOORE^{12,28}, IRENE DEDES¹¹, IVAN MISKUN², JAN-PAUL HUCKA¹⁵, JUERGEN GERL¹, JANWEI ZHAO², JANUSZ SKALSKI⁸, JERZY DUDEK¹⁰, KRASZNAHORKAY ATTILA⁹, MAGDALENA GORSKA-OTT¹, MUSHIN HARAKEH¹⁴, MATTIAS LANTZ⁶, MICHAL KOWAL⁸, MICHIHARU WADA⁵, MOHINI GUPTA¹³, MORITZ PASCAL REITER³, NICOLAS HUBBARD^{1,15}, NATALIA KUZMINCHUK¹, NIKOLAY MINKOV¹⁹, OSCAR HALL³, PAVEL JACHIMOWICZ²⁷, PAUL CONSTANTIN⁷, PETER THIROLF⁴, PHIL WOODS³, RONJA KNÖBEL¹, PRATAP ROY²⁵, SAMUEL AYET SAN ANDRES¹, STEPHANE PIETRI¹, SOUMYA BAGCHI²⁴, PETER H.

SCHURY⁵, STEPHAN OBERSTEDT²⁰, STEPHAN POMP⁶, THOMAS DAVISON³, TOBIAS MURBOEK², TOMEK CAP⁸, TUOMAS GRAHN^{12,28}, VOLKER METAG², YOSHIKI TANAKA^{1,21}, ZYGMUNT PATYK⁸, SURAJ KUMAR SINGH^{1,23}, ALEXANDRU STATE^{1,7}, ALI MOLLAEBRAHIMI^{1,2,30}, ANNAMARIA SPATARU^{1,7}, CHRISTINE HORNUNG¹, CHRISTOPH SCHEIDENBERGER^{1,2}, DALER AMANBAYEV², DEEPAK KUMAR¹, DEBAJYOTI DAS¹, DRAGOS NICHTA^{1,7}, GABRIELLA KRIJKO-KONCZ², HANS GEISSEL^{1,2}, HEINRICH WILSENACH², ILKKA POHJALAINEN¹², YU JIAJUN^{1,29}, JIANWEI ZHAO^{1,26}, JULIAN BERGMANN², LASZLO VARGA¹, LIZZY GROEF², LUKE KILMARTIN¹, MEETIKA NARANG¹, MICHAEL WILL¹, MARDOR ISRAEL^{17,18}, MASOUMEH DEHGHAN¹, MATJAZ VENCELJ²², MAX WASSERHESS², NAZARENA TORTORELLI⁴, NASSER KALANTAR-NAYESTANAKI³⁰, SOENKE BECK², SIMEON GLOECKNER¹, SHIVA PURUSHOTAMAN¹, TIMO DICKEL^{1,2}, WOLFGANG PLASS^{1,2}, ZHUANG GE¹, ZIGA BRENCIC²², TOSHITAKA NIWASE²¹, STEFAN LALKOVSKI¹⁶, VIRTANEN VILLE¹², DAVE J. MORRISSEY³¹, and TAYEMAR FOWLER-DAVIS³ — ¹GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany — ²JLU Gießen, Germany — ³University of Edinburgh, UK — ⁴LMU Munich, Germany — ⁵Wako Nuclear Science Center, Japan — ⁶University Uppsala, Sweden — ⁷IFIN-HH/ELI-NP, Magurele, Romania — ⁸National Centre for Nuclear Research, Warsaw, Poland — ⁹ATOMKI, Hungary — ¹⁰IPHC Strasbourg, France — ¹¹UMCS Lublin, Poland — ¹²University of Jyväskylä, Finland — ¹³MAHE, Manipal, India — ¹⁴KVI-CART, University of Groningen, Netherlands — ¹⁵TU Darmstadt, Germany — ¹⁶University of Sofia, Bulgaria — ¹⁷TAU, Tel-Aviv, Israel — ¹⁸Soreq NRC, Yavne, Israel — ¹⁹INRNE Sofia, Bulgaria — ²⁰EU-JRC Geel, Belgium — ²¹RIKEN, Nishina Center, Wako, Japan — ²²Jozef Stefan Institute, Ljubljana, Slovenia — ²³Sardar Vallabhbhai National Institute of Technology, Surat, India — ²⁴Indian Institute of Technology (Indian School of Mines) Dhanbad, India — ²⁵Variable Energy Cyclotron Centre, Kolkata, India — ²⁶Peking University, Beijing, China — ²⁷University of Zielona Gora, Poland — ²⁸Helsinki Institute of Physics, Helsinki, Finland — ²⁹Jinan University, Guangzhou, China — ³⁰Nuclear Energy Group, ESRIG, University of Groningen, 9747 AA Groningen, The Netherlands — ³¹NSCL/MSU, East Lansing, MI 48823, USA

Coll 41: SAMURAI-Collaboration

TAKASHI NAKAMURA¹, YOSUKE KONDO¹, TOMOHIRO UESAKA², HIDEAKI OTSU², NIGEL ORR³, LYNDA ACHOURI³, SATOSHI ADACHI⁴, HIDETOSHI AKIMUNE⁴, THOMAS AUMANN⁵, HIDETADA BABA², FRANCK DELAUNAY³, MEYTAL DUER⁵, FREDDY FLAVIGNY³, NAOKI FUKUDA², IGOR GASPARIC⁶, ROMAN GERNHÄUSER⁷, JULIEN GIBELIN³, KOSHI HIGUCHI², TADAAKI ISOBE², MARCO KNÖSEL⁵, TOSHIO KOBAYASHI⁴, YUKI KUBOTA², MIZUKI NISHIMURA², MIGUEL MARQUES³, ADRIEN MATTIA³, KENJIRO MIKI⁴, ALEXANDRE OBERTELLI⁵, SHINSUKE OTA⁸, VALERI PANIN⁹, STEFANOS PASCHALIS¹⁰, DOMINIC ROSSI⁵, MASAKI SASANO², YOSHITERU SATO¹, HIROMI SATO², SUSUMU SHIMOURA², LASZLO STUHL¹¹, HIROSHI SUZUKI², HIROYUKI TAKEDA², JUNKI TANAKA², RYO TANIUCHI¹⁰, HE WANG², TOGANO YASUHIRO², SHIMIZU YOHEI², KENICHIRO YONEDA², KOICHI YOSHIDA², MASAHIRO YOSHIMOTO², JUZO ZENIHIRO¹², and MARINA PETRI¹⁰ — ¹Tokyo Institute of Technology, Tokyo, Japan — ²RIKEN Nishina Center for Accelerator-Based Science, Wako, Saitama, Japan — ³LPC Caen, Caen, France — ⁴Tohoku University, Japan — ⁵TU Darmstadt, Germany — ⁶Ruder Boskovic Institute, Croatia — ⁷TU Munich, Germany — ⁸Osaka University, Japan — ⁹GSI, Germany — ¹⁰University of York, UK — ¹¹CENS, IBS, Korea — ¹²Kyoto University, Japan

Coll 42: SHiP-SBT-Collaboration

THOMAS BRETZ¹, FLORIAN REHBEIN¹, ALESSIA BRIGNOLI², ANDREW CONABOY², CONSTANTIN ECKART², HEIKO LACKER², ANUPAMA REGHUNATH², CHRISTIAN SCHAFER², JAKOB SCHMIDT², JOHANNES ALT³, HORST FISCHER³, MAHYAR JADIDI³, FAIRHURST LYONS³, TIM MOLZBERGER³, ANNE-SOPHIE MÜLLER³, SANTIAGO OCHOA³, SANI PATEL³, MARC SCHUMANN³, HANY TEKESTE³, HARALD GLÜCKLER⁴, GHALEB NATOUR^{4,1}, MICHAEL SCHAAF⁴, DAVID ARUTINOV⁵, CHRISTIAN GREWING⁵, LUKAS KRYSIOFIAK⁵, FLORIAN RÖSSING⁵, STEFAN VAN WAASEN⁵, ANDRÉ ZAMBANINI⁵, MANUEL BÖHLES⁶, PATRICK DEUCHER⁶, ANNIKA HOLLNAGEL⁶, MICHAEL WURM⁶, CRISTIANA DI CRISTO⁷, ORESTE FECAROTTA⁷, ANTIMO FIORILLO⁷, GIUSEPPE DEL GIUDICE⁷, ANDREA MIANO⁷, FRANCESCO DE PAOLA⁷, ANDREA PROTÀ⁷, ANTONIO SALZANO⁷, OLEG BEZSHYYKO⁸, VLADYSLAV ORLOV⁸, and ANDRII KOTENKO⁸ — ¹RWTH Aachen (DE) — ²HU Berlin (DE) — ³ALU Freiburg (DE) — ⁴FZ Jülich, ZEA-1 (DE) — ⁵FZ Jülich, ZEA-2 (DE) — ⁶JGU Mainz (DE) — ⁷Uni Napoli Federico

II (IT) — ⁸TSNU Kyiv (UA)

Coll 43: STEPSEC-Collaboration

ALMUT ARNETH², CHRISTIAN BAATZ³, DANIEL BAMPOH², CALUM BROWN², JOAO DARELA⁴, SABINE EGERER¹, STEFANIE FALK¹, MATTHIAS GARSCHAGEN¹, DIETER GERTEN⁵, FELIX GULDE¹, THOMAS HICKLER⁶, ANDREAS KRAUSE², TOBIAS LAIMER², SABINE MATHESIUS⁵, FREDERIKE NEUBER³, TOBIAS NÜTZEL¹, CONOR O'BEOLAIN⁶, WOLFGANG OBERMEIER¹, JULIA PONGRATZ¹, ANJA RAMMIG⁴, MARK ROUNSEVELL², BUMSUK SEO², LIESKE VOGET-KLESCHIN³, KARINA WINKLER², and MAXIMILIAN WITTING¹ — ¹Ludwig-Maximilians-Universität München (LMU) — ²Karlsruher Institut für Technologie (KIT) — ³Christian-Albrechts-Universität zu Kiel (CAU) — ⁴Technische Universität München (TUM) — ⁵Potsdam-Institut für Klimafolgenforschung (PIK) — ⁶Senckenberg Gesellschaft für Naturforschung

Coll 44: SuperCDMS-Collaboration

MATTHEW WILSON — Karlsruher Institut für Technologie

Coll 45: Tangerine-Collaboration

JUSTUS BRAACH^{5,6}, ERIC BUSCHMANN⁵, ANKUR CHAUHAN¹, DOMINIK DANNHEIM⁵, MANUEL DEL RIO VIERA^{1,2}, KATHARINA DORT^{5,7}, DORIS ECKSTEIN¹, FINN FEINDT¹, INGRID-MARIA

GREGOR^{1,2}, KARSTEN HANSEN¹, LENNART HUTH¹, LARISSA MENDES^{1,3}, BUDI MULYANTO¹, DANIIL RASTORGUEV^{1,4}, CHRISTIAN RECKLEBEN¹, SARA RUIZ DAZA^{1,2}, PAUL SCHÜTZE¹, ADRIANA SIMANCAS^{1,2}, WALTER SNOEYS⁵, SIMON SPANNAGEL¹, MARCEL STANITZKI¹, ANASTASIA VELYKA¹, GIANPIERO VIGNOLA^{1,2}, and HÅKAN WENNLOF¹ — ¹Deutsches Elektronen-Synchrotron, Hamburg, Deutschland — ²Universität Bonn, Deutschland — ³University of Campinas, São Paulo, Brazil — ⁴Bergische Universität Wuppertal, Deutschland — ⁵Conseil Européen pour la Recherche Nucléaire CERN, Switzerland — ⁶Universität Hamburg, Deutschland — ⁷Justus-Liebig-Universität Gießen, Deutschland

Coll 46: tauSPECT-Collaboration

EVAN ADAMEK¹, JULIAN AULER¹, PETER BLÜMLER¹, MARTIN ENGLER², VIKTORIA ERMUTH¹, MARTIN FERTL¹, KONRAD FRANZ², WERNER HEIL¹, SIMON KAUFMANN², NIKLAS PFEIFFER¹, DIETER RIES¹, KIM ROSS², ALEXANDRA TSVETKOV², BERND ULLMANN³, and NOAH YAZDANNOOST² — ¹Institut für Physik, Johannes Gutenberg-Universität Mainz — ²Department of Chemistry, TRIGA site, Johannes Gutenberg University Mainz — ³Hochschule für Ökonomie und Management, Frankfurt

Coll 47: University of Hamburg-Collaboration

VIDHYA THARA HARIHARAN — Hamburg, Germany