

CHAPTER III

**THE STUDY OF ISLAMIC ASTRONOMY AT CONCENTRATION OF
ISLAMIC ASTRONOMY OF FAMILY LAW MAJOR OF SHARIAH
FACULTY OF WALISONGO STATE INSTITUTE
FOR ISLAMIC STUDIES**

**A. The History of Concentration of Islamic Astronomy of Family Law
Major of Shariah Faculty of Walisongo State Institute for Islamic Studies**

The background and emergence of Concentration of Islamic Astronomy can not be separated from the the background and emergence of “Program Beasiswa Santri Berprestasi (PBSB)”. PBSB is one of Ministry of Religious Affairs’ programs, which has some purposes for boarding communities. They are; *First*, not only to catch up in science and technology but also to improve the quality of boarding schools; *Second*, to expand access for students of boarding schools to obtain the educational opportunities in the famous universities in the country; *Third*, to build the synergistic relationship between boarding schools with the higher education to empower the boarding school.¹ To realize these purposes, Ministry of Religious Affairs through Directorate of *Diniyah* Education and Islamic Boarding School (PD Pontren) of Directorate General of Islamic Education (Dirjen Pendidikan Islam) collaborates with several universities in Indonesia, included Walisongo State Institute for Islamic Studies to develop ‘*Ilm al-Falak*’ study in the archipelago, especially in boarding schools.

¹ An interview result with Ruchman Bashori who was a staff in Directorate of *Diniyah* Education and Islamic Boarding School of Ministry of Religious Affairs via facebook on April 20, 2012.

Actually, PD Pontren's ide to collaborate with Walisongo State Institute for Islamic Studies (IAIN Walisongo) for organizing Concentration of Islamic Astronomy came from PD Pontren's concern about the lack of the experts of Islamic Astronomy.² Most of them have died such as KH. Muḥammad Manṣūr ibn 'Abdulḥamīd Damirī al-Batawī from Jakarta, KH. 'Abduljalīl from Kudus, KH. 'Abdurrahīm from Yogyakarta, KH. Zubair 'Umar al-Jailanī from Salatiga, Turaiḥān al-Juhrī al-Sharafī from Kudus, Muḥammad Khalīl from Gresik, KH. Ma'ṣūm ibn 'Alī from Gresik, Sa'adoeddin Djambek etc.

That concern affected PD Pontren's commitment to encourage *'Ilm al-Falak* for the students of Islamic boarding schools.³ Therefore, PD Pontren did some *'Ilm al-Falak* training in some boarding schools in Indonesia. One of them is National Education and Training of Islamic Astronomy in al-Hikmah Boarding School, Sirampog, Benda in May 2005.⁴ This training was held in corporation of al-Hikmah Boarding School with PD Pontren for all Ma'had Ali all over Indonesia.

² An interview result with Amin Haedari who was a Director of Directorate of *Diniyah* Education and Islamic Boarding School of Ministry of Religious Affairs via phone on April 28, 2012.

³ The reason why this program is intended for students of Islamic boarding schools is that Islamic Astronomy was developed from Islamic boarding schools. Now, there are a few Islamic boarding schools, which give the material about this science. As the recognition of Amin Haedari who was a Director of Directorate of *Diniyah* Education and Islamic Boarding School of Ministry of Religious Affairs that when he was a student of Islamic boarding school, he got the material about how to use *Rubu' al-Mujayyab*. However, now, it was very difficult to find Islamic boarding schools, which gave this material. Ibid

⁴ <http://www.suaramerdeka.com/harian/0505/18/nas20.htm> accessed on on April 12, 2012

This training was attended by officials of Ministry of Religious Affairs⁵, H. Habib Toha who was a head office of Ministry of Religious Affairs of Central Java.⁶ The participants of this training are the leaders of Ma'had Ali all over Indonesia.⁷ The coreinstructors of this training are Drs. H. Slamet Hambali, M.Si and Dr. H. Ahmad Izzuddin, M.Ag. They are senior lecturers at Shariah Faculty of Walisongo State Institute for Islamic Studies. There were also Muhyiddin Khazin⁸ and Yefri Alfiani⁹ who helped to be instructors.

Many people assume that National Education and Training of Islamic Astronomy in al-Hikmah Boarding School has a connection with the emergence of the idea to organize Concentration of Islamic Astronomy of Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies. Actually, when PD Pontren was organizing this training, it had not Program Beasiswa Santri Berprestasi (PBSB)¹⁰, included the planning to open

⁵ They are Dr. H. A. Qodri Azizi, MA who was a Director General of Islamic Guidance Society (Dirjen Bimas Islam), H. Amin Haedari, M.Pd who was a Director of *Diniyah* Education and Boarding School and heads of Directorate of *Diniyah* Education and Boarding School's sub-sections.

⁶ An interview result with Ahmad Izzuddin who is a senior lecturer of Islamic Astronomy in Shariah Faculty of Walisongo State Institute for Islamic Studies on April 13, 2012.

⁷ Ibid

⁸ He is a head Sub Directorate of Islamic Law Consideration and Hisab Rukyat of Ministry of Religious Affairs.

⁹ He is a teacher in al-Hikmah Islamic Boarding School. An interview result with Slamet Hambali who is a senior lecturer of Islamic Astronomy in Shariah Faculty of Walisongo State Institute for Islamic Studies on April 17, 2012.

¹⁰ Program Beasiswa Santri Berprestasi (PBSB) is the scholarship program for outstanding students. It is one of Ministry of Religious Affairs' programs, which has some purposes for boarding communities. They are; *First*, not only to catch up in science and technology but also to improve the quality of boarding schools; *Second*, to expand access for students of boarding schools to obtain the educational opportunities in the famous universities in the country; *Third*, to build the synergistic relationship between boarding schools with the higher education to empower the boarding school. There are some study fields offered to the students of boarding schools, namely Medical and Health Sciences, pure sciences such as Mathematics, Physics, Biology, Chemistry etc., Engineering, Information Technology, Agriculture,

a program of Islamic Astronomy. Nevertheless, this training has inspired to organize Concentration of Islamic Astronomy of Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies. As H. Amin Haedari's¹¹ recognition:

“Waktu di al-Hikmah pikiran untuk mendirikan program falak belum ada. Cuma ada ide bahwa para santri harus mengembangkan itu (ilmu falak). Untuk mendirikan program falak datangnya belakangan. Adapun jika adanya program falak tersebut banyak dikaitkan dengan diklat di Pondok Pesantren al-Hikmah, semacam yang mengilhami ya setuju, tapi tidaklah besar dan itu bukan merupakan rekomendasi, Jadi diklat tersebut memang mengilhami berdirinya program falak di Semarang.”¹²

A few months later, PD Pontren held PBSB as an effort both to catch up of boarding school in science and technology and to strengthen Islamic studies (*tafaqquh fiddīn*).¹³ There are some study fields offered by PD Pontrento the students of boarding schools, namely Medical and Health Sciences, pure sciences such as Mathematics, Physics, Biology, Chemistry etc., Engineering, Information Technology, Agriculture, Agribusiness, Social

Agribusiness, Social Humanities, and Islamic studies. To implement this program, Ministry of Religious Affairs cooperates with 13 prestigious colleges in Indonesia, which are Bogor Agriculture Institute (IPB), Syarif Hidayatullah State Islamic University (UIN) Jakarta, Bandung Institut of Technology (ITB) Sepuluh Nopember Institute of Technology (ITS), Gadjah Mada University (UGM), Sunan Ampel State Institute for Islamic Studies (IAIN Sunan Ampel), Air Langga University, State Islamic University of Sunan Kalijaga Yogyakarta, Walisongo State Institute for Islamic Studies, Indonesia University of Education (UPI) Bandung, Maulana Malik Ibrahim State Islamic University of Malang, University of Mataram and University of Indonesia as the learning place for PBSB's participants.

¹¹ He was a Director of Directorate *Diniyah* Education and Boarding School of Ministry of Religious Affairs.

¹² “When the training was being organized in al-Hikmah Boarding School, PD Pontren had not idea to organize Islamic Astronomy Program. In that time, PD Pontren just had ide to encourage *‘Ilm al-Falak* for the students of Islamic boarding schools. PD Pontren had ide to organize Islamic Astronomy Program after this training had finished. If the existence of this program is connected to National Islamic Astronomy Education and Training in al-Hikmah Boarding School, it just inspired. Nevertheless, it doesn't capitalize. It is not a recommendation. Therefore, this training has inspired to organize this program.” An interview result with Amin Haedari via phone on April 28, 2012.

¹³ Directorate of *Diniyyah* Education and Islamic Boarding School, *Panduan Pelaksanaan Pengabdian Alumni Program Beasiswa Santri Berprestasi (PBSB)*, Ebook, p. i

Humanities, and Islamic studies. Alumnuses of this program are expected to be the pioneers of community development in the boarding school environment.¹⁴

One of PD Pontren's desires in Islamic Studies is to develop Islamic Astronomy in archipelago, especially in boarding school by organizing the program of Islamic Astronomy. At that time, Imam Syafi'i¹⁵ got opportunity to research in Dutch. He was in a team with Dr. H. Musahadi, M.Ag¹⁶. In an informal discussion between both of them, Musahadi asked Imam Syafi'i in order to involve Walisongo State Institute for Islamic Studies (IAIN Walisongo) in PD Pontren's programs. Imam Syafi'i received Musahadi's request well because at that time, PD Pontren was opening PBSB up. He asked Musahadi about the special characteristics of IAIN Walisongo.¹⁷ As Dean Assistent 1 of Shariah Faculty, Musahadi explained that Shariah Faculty of IAIN Walisongo had two special characteristics which was Islamic Astronomy and Advocate Provection.¹⁸ In Advocate Provection, Shariah Faculty of IAIN Walisongo is the founder of Indonesian Syaria Law Association (APSI). In addition, it has successfully improved the birth the law on the Advocate Provection (Act No. 18 Year 2003).¹⁹ In Islamic

¹⁴ Ibid

¹⁵ He was a Head of Section (Kasi) in Directorate of *Diniyyah* Education and Islamic Boarding School of Ministry of Religious Affairs.

¹⁶ Dean Assistant I of Shariah Faculty of Walisongo State Institute for Islamic Studies, period 2006 – 2010

¹⁷ An interview result with Musahadi who was Dean Assistant I of Shariah Faculty of Walisongo State Institute for Islamic Studies, period 2006 – 2010 on April 28, 2012.

¹⁸ Ibid

¹⁹ People who played an important role to promulgate the law on the advocates' profession (Act No. 18 Year 2003) before being formally promulgated are Dr. Musahadi, M.Ag.,

Astronomy, it has both national experts of that and Islamic Astronomy laboratory.

Starting from National Education and Training of Islamic Astronomy and the informal discussion between Dr. H. Musahadi, M.Ag and Imam Syafi'i, PD Pontren considers that Semarang is the city that has the potential to develop this program because it has some human resources who are experts of Islamic Astronomy in the national level. They are Drs. H. Slamet Hambali, M.Si, Dr. H. Ahmad Izzuddin, M.Ag, Ahmad Syifa'ul Anam, SHI, MH, etc. There are also some experts of Islamic Astronomy in boarding schools where are in Central Java, such as KH. Wahid Zuhdi (al-Ma'ruf Boarding School of Bandungsari, Purwodadi), KH. Noor Ahmad (Boarding School of Islamic Astronomy of Sitinggil, Jepara), KH. Masruri Mughni (al-Hikmah Boarding School of Brebes), etc. In addition, Semarang has some laboratories of Islamic Astronomy, which are necessary for practical work, such us NU Regional Board (PWNU) of Central Java's laboratory and IAIN Walisongo's laboratory.²⁰

Therefore, as a head of section in Directorate of *Diniyyah* Education and Boarding School (Direktorat PD Pontren), Imam Syafi'i proposed to Drs. H. Amin Haedari, M.Pd in order that IAIN Walisongo was involved in PBSB.²¹ After Amin Haedari had approved it, Imam Syafi'i called Dr. H.

Prof. Dr. H. Muhiibn, M.Ag., Drs. H. Nur Khoirin, M.Ag., Drs. Eman Sulaeman, MH, and Drs. Taufik, MH. They are the officials of Walisongo State Institute for Islamic Studies. Ibid

²⁰ An interview result with Amin Haedari on April 28, 2012. In addition, read Shariah Faculty, "Proyek Proposal Program Beasiswa Santri Berprestasi Di Fakultas Syari'ah IAIN Walisongo Semarang Tahun Akademik 2007," Proposal Project, Semarang: IAIN Walisongo, p. 1

²¹ An interview result with Ruchman Bashori on April 20, 2012

Musahadi, M.Ag²² to offer a new program implementation project being uniqueness of IAIN Walisongo. This offer was also communicated by Ruchman Bashori, M.Ag²³ to officials of Shariah Faculty by asking them to submit the proposal to PD Pontren for holding a new program as the target of PBSB.²⁴

That offer was immediately followed by Prof. Dr. H. Abdul Djamil, MA²⁵ and Drs. H. Muhyiddin, M.Ag²⁶ by offering not only the program of Islamic Astronomy but also the advocate program.²⁷ Next, Drs. H. Nur Khoirin, M.Ag²⁸ immediately made two proposals after Dr. H. Musahadi, M.Ag had informed him about the offer for holding the new program. Musahadi gave some additions related to the proposal completeness after Nur Khoirin had done those proposals. So, who were involved in making those proposals are Drs. H. Nur Khoirin and Dr. H. Musahadi, M.Ag.²⁹

²² He was Assistant Dean I of Shariah Faculty of Walisongo State Institute for Islamic Studies

²³ He was a staff in Directorate of *Diniyyah* Education and Boarding School of Ministry of Religious Affairs.

²⁴ An interview result with Ruchman Bashori on April 20, 2012

²⁵ He was Rector of Walisongo State Institute for Islamic Studies, period 2003 – 2007 and 2007 – 2010

²⁶ Dean of Shariah Faculty of Walisongo State Institute for Islamic Studies, period 2006 – 2010

²⁷ An interview result with Muhyiddin who was Dean of Shariah Faculty of Walisongo State Institute for Islamic Studies, period 2006 – 2010 on April 12, 2012.

²⁸ He was Dean Assistant III of Shariah Faculty of Walisongo State Institute for Islamic Studies, period 2006-2010

²⁹ An interview result with Nur Khoirin who was Dean Assistant III of Shariah Faculty of Walisongo State Institute for Islamic Studies, period 2006 – 2010 on April 9, 2012.

Because of some considerations,³⁰ PD Pontren responded the program of Islamic Astronomy better than Advocate Program.³¹ It is reasonable because PD Pontren has committed to encourage Islamic Astronomy (*'Ilm al-Falak*) for the students of Islamic boarding schools before IAIN Walisongo proposed both of these programs.³² Therefore, on Monday, January 22, 2007, Walisongo State Institute for Islamic Studies (IAIN Walisongo) has entered into cooperation agreement with Directorate of *Diniyyah* Education and Boarding School (PD Pontren) of Ministry of Religious Affairs of Indonesia by Letter of Agreement No. In.06.0/R/PP.00.9/0108-A/2007 and No. DT.I.III/5/HM.01/7A/2007 in the implementation of Program Degree (S1) through the special way of Islamic boarding schools at Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies.³³

³⁰ These considerations are: Islamic Astronomy is more necessary than advocates profession because it almost lost. No schools or colleges, which specifically examines this science. An interview result with Eman Sulaeman who was a chief of Islamic Astronomy Concentration on April 11, 2012; PD Pontren has committed to encourage Islamic Astronomy (*'Ilm al-Falak*) for the students of Islamic boarding schools before IAIN Walisongo proposed both of these programs. An interview result with Amin Haedari on April 28, 2012; Islamic Astronomy is closer to the boarding schools because it is suitable with the second purpose of PBSB, which is to expand access for students of boarding schools to obtain the educational opportunities in the famous universities in Indonesia. An interview result with Musahadi on April 28, 2012.

³¹ An interview result with Muhyiddin on April 12, 2012.

³² An interview result with Amin Haedari on April 28, 2012.

³³ Read the Letter of Agreement No. In.06.0/R/PP.00.9/0108-A/2007 and No. DT.I.III/5/HM.01/7A/2007 in the implementation of Program Degree (S1) through the special way of Islamic boarding schools at Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies. It is attached.

B. The Institutionalization of Concentration of Islamic Astronomy of Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies

The institutionalization of Concentration of Islamic Astronomy of Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies is through several important steps as below:

1. The Confluence of Two Ideas

Concentration of Islamic Astronomy (KIF) was established because of confluence of two ideas of both Directorate of *Diniyyah* Education and Boarding School (Direktorat PD Pontren)'s idea and Shariah Faculty of Walisongo State Institute for Islamic Studies' idea. On one side, PD Pontren has PBSB. On the other side, Shariah Faculty wants to develop its uniquenesses, which are the profession of advocates and Islamic Astronomy.³⁴

Directorate of *Diniyyah* Education and Boarding School (Direktorat PD Pontren) is one of directorates, which take shelter under Directorate General of Islamic Education (Dirjen Pendidikan Islam) of Ministry of Religious Affairs of Indonesia. One of its policy is to expand access and to improve the quality of boarding schools in order that they the high competitive and they will be useful to societies around them. Therefore, to realize it, this directorate has embarked on several programs and activities. One of them is PBSB, which is a PD Pontren's

³⁴ An interview result with Musahadi on April 28, 2012.

effort catching up boarding school in science and technology and strengthening the Islamic studies (*tafaqquh fiddīn*).³⁵ Therefore, the spirit of this program is expanding access for students of boarding schools to obtain the educational opportunities in the famous universities in Indonesia.

There are some study fields offered to the students of boarding schools, namely Medical and Health Sciences, pure sciences such as Mathematics, Physics, Biology, Chemistry etc., Engineering, Information Technology, Agriculture, Agribusiness, Social Humanities, and Islamic studies.³⁶ The alumni of this program are expected to be the pioneers of the community development in the boarding school environment. This program has begun running since 2005. To implement this program, PD Pontren collaborates with famous universities and Institutes in Indonesia.³⁷

Shariah Faculty of Walisongo State Institute for Islamic Studies is one of the faculties at Walisongo State Institute for Islamic Studies. It, which takes shelter under Ministry of Religious Affairs, is the development center of Islamic studies with the competitive and superior

³⁵ Directorate of *Diniyyah* Education and Islamic Boarding School, *Panduan Pelaksanaan Pengabdian Alumni Program Beasiswa Santri Berprestasi (PBSB)*, Ebook, Loc. Cit.

³⁶ Ibid

³⁷ Until the Academic Year 2011/2012, Ministry of Religious Affairs has cooperated with 13 prestigious colleges in Indonesia, which are Bogor Agriculture Institute (IPB), Syarif Hidayatullah State Islamic University (UIN) Jakarta, Bandung Institut of Technology (ITB) Sepuluh Nopember Institute of Technology (ITS), Gadjah Mada University (UGM), Sunan Ampel State Institute for Islamic Studies (IAIN Sunan Ampel), Air Langga University, State Islamic University of Sunan Kalijaga Yogyakarta, Walisongo State Institute for Islamic Studies, Indonesia University of Education (UPI) Bandung, Maulana Malik Ibrahim State Islamic University of Malang, University of Mataram and University of Indonesia as the learning place for PBSB's participants. Ibid

multidisciplinary approach. This faculty has two special characteristics that are Islamic Astronomy and Advocate Profession.³⁸ In Advocate Profession, Shariah Faculty of IAIN Walisongo is the founder of Indonesian Syariah Law Association (APSI). In addition, it has successfully improved the birth the law on the Advocate Profession (Act No. 18 Year 2003). In Islamic Astronomy, Shariah Faculty of IAIN Walisongo has both national experts of Islamic Astronomy and it has the laboratory of Islamic Astronomy. Beside, Islamic Astronomy is prospective and rare applicants. In another meaning is few colleges focus on this science. Generally, Islamic Astronomy is just a course outline in all colleges of Islamic religion (PTAI) all over Indonesia. It was not developed in the form of either major or concentration.³⁹

Confluence of two ideas was started from Imam Syafi'i's oral offer (from PD Pontren) to Dr. Musahadi, M.Ag (from Shariah Faculty of IAIN Walisongo).⁴⁰ This offer was also communicated by Ruchman Bashori, M.Ag to officials of Shariah Faculty of IAIN Walisongo.⁴¹ Then, after Shariah Faculty of IAIN Walisongo had made the proposal submissions of the program of Islamic Astronomy and Advocate Profession, they were submitted to PD Pontren. Because of some considerations, PD Pontren responded the program of Islamic Astronomy better than Advocate Profession Program.

³⁸ An interview result with Musahadi on April 28, 2012.

³⁹ Ibid

⁴⁰ Ibid

⁴¹ An interview result with Ruchman Bashori on April 20, 2012.

2. Formation of Concentration of Islamic Astronomy

After PD Pontren had approved the IAIN Walisongo's proposal submission of program of Islamic Astronomy, Both IAIN Walisongo and PD Pontren committed to implement this program. However, IAIN Walisongo needed times to design it.⁴² At that time, Mr. Zubaidi⁴³ gave some advice related to the design of this program.⁴⁴ He has ever discussed with Drs. H. Amin Haedari, M.Pd related to program design of Islamic Astronomy. He suggested that in order to implement a study program having a high target, an institution had to give the special treatment to its students. Therefore, this program must be designed seriously for the special people.

Then, officials of Shariah Faculty of IAIN Walisongo formulated the program design of Islamic Astronomy. At first, they wanted to formulate this program in the form of study program. Nevertheless, to establish a new study program, an institution must not only meet some minimum requirements⁴⁵ but also go through the processing schedule⁴⁶

⁴² An interview result with Musahadi on April 28, 2012.

⁴³ He was Head of Sub Directorate of *Madrasah* Education of Ministry of Religious Affairs. Ibid

⁴⁴ Ibid

⁴⁵ In the minimum requirements, some aspect, which were graded are both total and qualification of the regular lecturers for every new study program, both total and specific of new program studies, both total and qualification of the administration officials, facilities and infrastructure of a new program. It references to Ministry of Religious Affairs' Decision Enclosure No. 394/2003 and Ministry of National Education's Decision No. 234/U/2000. For program degree, the curriculum total minimum should come out at the standard limit defined by Director General of National Education, which is 144 SKS with both the graduate competence formula and syllabus course. In addition, the accreditation value of study program is B, the minimum regular lecturers are 6 lecturers, which have graduated from Stratum in 2 on study program related to that new study program, and the minimum total of student aspirants is 30 students. Read "Panduan Pembukaan Program Studi Di PTAI, Departemen Agama RI Direktorat Jenderal Pendidikan Islam", p. 7-8

that takes a long time. In fact, if a program has been listed in Budget Implementation Form (DIPA)⁴⁷, it should start running.⁴⁸ Based on these considerations, Shariah Faculty of IAIN Walisongo formatted the program of Islamic Astronomy in a concentration form as the legal shortcut by Rector's Decision Letter No. In.06.0/R/PP.00.9/0941/2007. The consequence is that it must have its main office in a particular study program. The most appropriate study program is Family Law Major because one of competencies required by a judge of Religious Court is Islamic Astronomy (*Ilm al-Falak*).⁴⁹ The point is that one of assignments of Religious Court Judge is to decide cases related to the determining of the beginning of Qomariyah months.

Based on Decision Letter of Rector of Walisongo State Institute for Islamic Studies No. In.06.0/R/PP.00.9/0941/2007, Rector of IAIN Walisongo decided the official structure of Concentration of Islamic Astronomy of Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies written below:⁵⁰

⁴⁶ The schedule processing has been designed in order to facilitate the processing, which need almost one year. Its details are: (1) February to Maret 31 is for proposal submission for study program opening, (2) April to Mey is for proposal review, (3) June is for revision the proposal, (4) June 30 is for the deadline of proposal revision, (5) June to September is for proposal evaluation, (6) October is for discussion, (7) November is for Opening Program Decree, and (8) December is for not only the commitment signing of both proposer and Directorate General but also the delivery of Decree. Ibid, p. 9

⁴⁷ Approval Implementation Budget List (DIPA) is the implementation budget document made by institution head and legalized by Direktor Jenderal of Treasury in the name of Treasury Ministry. It functions as the basic to do action effected on revenue expenditure of country.

⁴⁸ An interview result with Musahadi on April 28, 2012.

⁴⁹ Ibid

⁵⁰ Read The Decision Letter of Rector of Walisongo State Institute for Islamic Studies No. In.06.0/R/PP.00.9/0941/2007.

No.	Name/NIP	Work Place Group Position	Job Description	
			In Official	In Program
1.	Prof. Dr. H. Abdul Djamil, MA 150208253	The Main Elder Member	Rector of IAIN Walisongo	Director
2.	Drs. H. Muhyiddin, M.Ag 150216809	Elder Member	Dean of Shariah Faculty	Responsible Person
3.	Drs. H. Eman Sulaeman, M.H. 150254348	Elder Member	Lecturer of Shariah Faculty	Cheaf
4.	Dr. H. Ahmad Izzuddin, M.Ag 150290930	Organizer	Lecturer of Shariah Faculty	Secretary
5.	Drs. Maksun, M.Ag 150263040	Elder Member	Dean Assistant II of Shariah Faculty	Member
6.	Hj. Siti Khotimah, S.Ag 150279721	Organizer	Head of Sub-Section of Officialdom and Finances of Shariah Faculty	Member
7.	H. Suwanto, S.Ag. MM. 150368383	Young Organizer	Lecturer Candidate of Shariah Faculty	Member

**Table 3.1: The official structure of Concentration of Islamic Astronomy of
Family Law Major of Shariah Faculty of Walisongo State Institute for
Islamic Studies**

3. Curriculum Making

After officials of Shariah Faculty had formatted the program of Islamic Astronomy in the concentration form, they began to think about its curriculum design. Because the Islamic worship has relationship with some celestial objects, such as Sun and Moon, Muslims attempted to practice their religion as well as possible. Astronomical science is the science studying these celestial objects. Since that time, Muslims study the astronomical science hard. Next, they, such as Abū Ja'far Muḥammad ibn Mūsā al-Khawarizmi⁵¹, Abū Ma'shar al-Balkhi,⁵² Ibn Jabr al-Battani⁵³, and Ulugh Beik⁵⁴ could discover several theories of Astronomy that are very useful for Astronomical development.⁵⁵ Therefore, they agreed that this program oriented to combine Islamic Astronomy (*'Ilm al-Falak*) in the jurisprudence and pure astronomy perspective.

⁵¹ Abu Ja'far Muhammad Ibn Musa Al-Khawarizmi has changed the India's numbering system to be the basic arithmetical operations. In addition, he has also corrected the astronomical tables of Sind and Hind (*Zaij al-Sindhind*). Then, he wrote it in his book entitled "*al-Mukhtaṣar Fī al-ḥisāb al-Jabr Wa al-Muqābalah*." Muhyiddin Khazin, *Ilmu Falak dalam Teori dan Praktek*, Yogyakarta: Buana Pustaka, Ed. III, p. 23

⁵² Abu Ma'syar Al-Balkhi has discovered the phenomenon of the rising tide and low tide as a result of the moon's movement to the earth. he also became the first Astronomy figure that refute the Aristotle's theory through his monumental work entitled "*al-Madkha al-Kabīr*." Ibid

⁵³ Ibnu Jabr al-Battani has calculated the stars' orbit and eclipses. He has also set the length of both the tropical year and the sidereal year. Ibid, p. 24

⁵⁴ He has successfully compiled the tables of astronomical data, which were used extensively in the astronomy development in the later period. Ibid, p. 25

⁵⁵ Recording result of Moedji Raharjo's presentation on National Seminar "Arah Kiblat Antara Mitos dan Sains," held by Shariah Faculty of Walisongo State Institute for Islamic Studies on April 30, 2012.

Based on that orientation, the discussion to formulate the curriculum involved not only officials of Shariah Faculty, such as Drs. H. Slamet Hambali, M.Si, and Dr. H. Ahmad Izzuddin, M.Ag but also the experts of pure astronomy, such as Hendro Setyanto, M.Si, and Dr. Thomas Djamaluddin.⁵⁶ The result of this discussion is that the purpose of the Concentration of Islamic Astronomy's curriculum is students of Concentration of Islamic Astronomy can deeply examine the classical books of Islamic Astronomy after they have been professional doing the observation based on astronomical science.⁵⁷ Finally, they will be able to preserve the classical material⁵⁸ and the modern breakthrough, which can result in better accuracy.

⁵⁶ It was stated by each of them based on interview results with them. Interview results with Thomas Djamaluddin on April 5 to June 13, 2012, with Ahmad Izzuddin on April 28, 2012, with Slamet Hambali on April 17, 2012 and with Hendro Setyanto at 6:38 – 6:52 am, June 13, 2012.

⁵⁷ An interview result with Hendro Setyanto who was actively involved to design the Concentration of Islamic Astronomy's curriculum and he is an external lecturer of Concentration of Islamic Astronomy in instrumental course via Skype at 6:38 – 6:52 am, on June 13, 2012

⁵⁸ The classical material are Islamic jurisprudence book and classical Islamic astronomy book.

NO.	COURSES	SKS
1.	Fiqh Hisab Rukyah I	2
2.	Fiqh Hisab Rukyah II	2
3.	Pengantar Ilmu Falak	2
4.	Astronomi I (Tata Surya)	2
5.	Astronomi II (Hukum-Hukum Ilmu Orbit)	2
6.	Matematika I	2
7.	Matematika II	2
8.	Metodologi Studi Sains	2
9.	Astronomi Bola I (Dasar-Dasar)	2
10.	Astronomi Bola II (Aplikasi Praktis)	2
11.	Sistem Penanggalan	2
12.	Hisab Awal Bulan Qamariyah Kontemporer	2
13.	Hisab Gerhana Bulan	4
14.	Hisab Gerhana Matahari	2
15.	Perangkat Rukyat I (Rubu al-Mujayyab, Sundial)	2
16.	Perangkat Rukyat II (Sistem Optik dan Teleskop)	2
17.	Kajian Kitab Falak I	2
18.	Kajian Kitab Falak II	2
19.	Algoritma dan Dasar Pemrograman Hisab I	2
20.	Algoritma dan Dasar Pemrograman Hisab II	2
21.	Laboratorium Falak I (Astrofotografi, Arah Kiblat)	4

22.	Laboratorium Falak II (Praktek Rukyatul Hilal)	4
Total		48

Table 3.2: Islamic Astronomy Concentration's Courses⁵⁹

4. Implementation of the Program

The implementation of Concentration of Islamic Astronomy is for eight semesters for every generation. The first generation started in 2007/2008 academic year. All program activities centered at Shariah Faculty of Walisongo State Institute for Islamic Studies.⁶⁰ The implementation stages of this program are:

a) The Socialization Stage

According to the Corporation Agreement of Implementing Degree Program between Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies and Directorate of *Diniyyah* Education and Boarding School, who socializes this program to the Islamic boarding schools and decides the criteria for scholarship applicants, is Directorate of *Diniyyah* Education and Boarding School (PD Pontren).⁶¹ The boarding schools taking shelter

⁵⁹ Paper “*Pengembangan Kurikulum Ilmu Falak Di PTAI (Belajar Pada Prodi AS Konsentrasi Ilmu Falak IAIN Walisongo)*” presented by Ahmad Izzuddin in the national seminar of development of Islamic astronomy and the meeting of lecturers of Islamic astronomy all over Indonesia held by Shariah Faculty of Walisongo State Institute for Islamic Studies on Tuesday to Wednesday, 2 to 3 of December 2009 in Walisongo State Institute for Islamic Studies, p. 7-8.

⁶⁰ Firstly, Program activities not only centered at Shariah Faculty of Walisongo State Institute for Islamic Studies but also at Islamic Astronomy Concentration's dormitory in the form of *ḥalaqah* (the name of Islamic boarding school meeting tradition). It is consisted of 15 non-SKS. Eventhough, all of Islamic Astronomy Contretaion's students must be granted by certificate, which was as the proof. Shariah Faculty, “Proyek Proposal Program Beasiswa Santri Berprestasi Di Fakultas Syari'ah IAIN Walisongo Semarang Tahun Akademik 2007”, Op. Cit., p. 5

⁶¹ The Letter of Agreement No. In.60.0/R/PP.00.9/1199-A/2008 and No. Dt.I.III/91d/2008 in the implementation of Program Degree (S1) through the special way of

in Senior High School or the equal are the the socialization objects of this program.⁶²

b) The Selection Stage

This selection is for third grade students of Senior High School or the aqual. Their status should be as the active students living and studying in the boarding school for at least two years. In addition, their achievements should be good for five consecutive semesters with a minimum score is 70 (scale of 100) for the subjects of Arabic Languge, *'Ilm al-Ḥadīth*, *'Ilm al-Tafsīr*, *'Ilm al-Fiqh*, and English.⁶³ The candidates who were received as the Concentration of Islamic Astronomy's students in the first generation were 30 students. This selection has done by both Shariah Faculty of IAIN Walisongo and PD Pontren.⁶⁴

In the first recruitment of the first gengeration, the students who have passed from this selection misunderstood about study program that they took when they were signing up PBSB. This misunderstanding occurred because the handbook of Scholarship Program for Outstanding Students (*Program Beasiswa Santri Berprestasi / PBSB*) only mentioned Family Law Major (*Program*

Islamic boarding schools in Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies. It is attached

⁶² Directorate of *Diniyyah* Education and Islamic Boarding School, *Panduan Pelaksanaan Pengabdian Alumni Program Beasiswa Santri Berprestasi (PBSB)*, Op. Cit., p. 4

⁶³ Ibid, p. 3-4

⁶⁴ It based on The Letter of Agreement No. In.06.0/R/PP.00.9/0108-A/2007 and No. DT.I.III/5/HM.01/7A/2007 in the implementation of Program Degree (S1) through a special way of Islamic boarding schools in Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies. It is attached

Studi al-Aḥwāl al-Shakhṣiyyah) without mentioned Concentration of Islamic Astronomy (*Konsentrasi Ilmu Falak*).⁶⁵

c) The New Student Orientation Stage

New Student Orientation (OMB) was held after the stage of selection had been held. Shariah Faculty of Walisongo State Institute for Islamic Studies is fully responsible for the implementation of this stage.⁶⁶ The purpose of this orientation is to prepare a spiritual strength and mental-physic of new students. The other purposes are to develop the critical thinking and to open mind to the new things related to the science.

d) The Stage of Teaching and Learning Activities Process

Shariah Faculty of Walisongo State Institute for Islamic Studies is fully responsible for the implementation of academic activities for program participants. The process of teaching and learning activities is managed specifically separated from the regular degree program. It corresponded to the initial demand of this program, that it must be designed seriously for the special people.⁶⁷

⁶⁵ An interview result with Musahadi on April 28, 2012.

⁶⁶ The Letter of Agreement No. In.60.0/R/PP.00.9/1199-A/2008 and No. Dt.I.III/91d/2008 in the implementation of Program Degree (S1) through the special way of Islamic boarding schools in Family Law Major of Shariah Faculty of Walisongo State Institute for Islamic Studies.

⁶⁷ An interview result with Musahadi on April 28, 2012.

Producing a scientific work is the final process of teaching and learning activities. Until now, there are 29 scientific works of students of Concentration of Islamic Astronomy. They are:⁶⁸

1) Qibla Direction

- i. Pergulatan mitos dan sains dalam penentuan arah kiblat (studi kasus pelurusan arah kiblat Masjid Agung Demak)
- ii. Studi analisis metode penentuan arah kiblat Masjid Agung At-Taqwa Bondowoso Jawa Timur
- iii. Studi analisis penentuan arah kiblat masjid Sunan Ampel Surabaya Jawa Timur
- iv. Sistem hisab arah kiblat Dr. Ing. Khafid dalam program Mawaaqit
- v. Studi analisis fatma MUI No. 3 tahun 2010 tentang kiblat (kiblat umat Islam Indonesia menghadap ke arah barat)
- vi. Hisab arah kiblat menggunakan Rubu' Mujayyab (studi pemikiran KH. Ma'shum bin Ali dalam kitab Ad-Durusul Falakiyah)
- vii. Studi analisis metode penentuan arah kiblat masjid Menara Kudus
- viii. Studi analisis arah kiblat masjid Baitussalam dukuh Girikusuma desa Banyumeneng kec. Meranggen kab. Demak

⁶⁸ It was taken from Concentration of Islamic Astronomy's document

- ix. Studi analisis hisab arah kiblat dalam kitab Syawariqul Anwar
- x. Studi komparasi tentang keakurasian hisab arah kiblat menurut Syekh Muhammad Thahir Jalaluddin Al-Minangkabawi dalam kitab Pati Kiraan Pada Menentukan Waktu Yang Lima dan Hala Kiblat Dengan Logaritma dan KH. Zubaer Umar Al-Jailani dalam kitab Al-Khulashah Al-Wafiyah.
- xi. Akurasi arah kiblat masjid-masjid di desa Sruni kec. Jenggawah kab. Jember Jawa Timur
- xii. Studi analisis sejarah pengukuran arah kiblat masjid Al-Ijabah Gunung Pati Semarang
- xiii. Studi analisis metode penentuan arah kiblat maqbarah BHRD kabupaten rembang

2) Prayer Times

- i. Studi Analisis Ketinggian Matahari Waktu Shalat Ashar (Uji Akurasi Dalam Perspektif Astronomi)
- ii. Studi Analisis Awal Waktu Shalat Subuh (Kajian Atas Konsep Fajar Shadiq Dalam Perspektif Fiqh Ketinggian Matahari Dan Perspektif Astronomi)
- iii. Studi Analisis Metode Penentuan Awal Waktu Shalat Dengan Jam Istiwa' Dalam Kitab Syawariq Al-Anwar

- iv. The Prayer Times Concept Of Itsna Ashariyah (Critical Study Of Three Prayer Times Applied By Shia Itsna Ashariyah)
- v. Studi Analisis Penentuan Waktu Salat Dalam Kitab Ad-Durus Al-Falakiyah Karya Ma'sum Bin Ali
- vi. Formulasi Penentuan Awal Waktu Shalat Yang Ideal (Analisis Terhadap Urgensi Ketinggian Tempat dan Penggunaan Waktu Ikhtiyat)

3) The Beginning of Qamariyah Months

- i. Sistem Hisab Awal Bulan Kamariah Dr. Ing Khafid Dalam Program Mawaqit
- ii. Studi Analisis Hisab Awal Bulan Qomariyah Syekh Muhammad Salman Jalil Arsyadi Al-Banjari Dalam Kitab Mukhtashar Al-Awqat Fi 'Ilmi Al-Miqat
- iii. Metode Penetapan Awal Bulan Qamariyah Jama'ah Muslimin (Hizbullah)
- iv. Studi Analisis Penentuan Awal Bulan Kamariyah Sistem Aboge Di Desa Kracak Kec. Ajibarang Kab. Banyumas Jawa Tengah
- v. Studi Analisis Penentuan Awal Bulan Qamariyah Dalam Kitab Sair Al-Qomar

- vi. Pemikiran Hisab KH Ma'shum bin Ali Al-Maskumambang
(Analisis Terhadap Kitab Badi'ah Al-Mitsal Fi Hisab Al-Sinin Wa Al-Hilal)
- vii. Studi Analisis Hisab Awal Bulan Kamariyah Dalam Kitab Al-Irsyaad Al-Muriid
- viii. Studi Analisis Hisab Rukyat Lajnah Falakiyah Al-Husiniyah Cakung Jakarta Timur Dalam Penetapan Awal Bulan Kamariyah
- ix. Posisi Penggunaan Penanggalan Jawa Islam Dalam Pelaksanaan Ibadah Di Keraton Ngayogyakarta Hanidiningrat

4) Eclipses

- x. Studi Komparatif Hisab Gerhana Bulan Dalam Kitab Al-Khulashah Al-Wafiyah dan Ephemeris

e) **The Evaluation Stage**

After Islamic Astronomy Concentration had been running for one year, jurisprudence perspective dominated this concentration. In fact, curriculum framework has been designed to cover not only the substansif courses but also the supporting courses. Therefore, when the annual evaluation meeting was held, Musahadi said,

“Kalau kita menyelenggarakan pendidikan falak yang dominannya pada perspektif fiqih, maka kajian kita tidaklah berbeda dengan pesantren. Kita sedang mengkaji ilmu falak pada level perguruan tinggi, maka perangkat analisis dalam hal astronomi harus mewarnai program ini. Kalau perlu astronomi menjadi bagian yang tidak bisa dipisahkan dari ilmu falak. Falak perlu dikembangkan sebagaimana epistemologi astronomi. Yang terpenting setelah adanya eveluasi pada tahun pertama adalah untuk menyeimbangkan persepektif fiqih dan astronomi, kita tidak hanya bisa berbicara tentang bagaimana struktur kurikulum itu disusun, tapi juga beberapa sarana pendukung kurikulum itu sendiri, salah satunya adalah tenaga pengajar.”⁶⁹

The evaluation result was followed up in the form of reorganizing the teaching staff structure in the second generation. Since that time, the lecturers involved in teaching and learning activities are from not only the internal lecturers but also the external lecturers of Shariah Faculty of IAIN Walisongo. Therefore, Shariah Faculty cooperate several parties. They are:

⁶⁹ “If we implement the study of Islamic Astronomy dominated by jurisprudence perspective, our study is same as Islamic boarding’s study. We are organizing Islamic Astronomy in the college level. Therefore, we also must use the astronomical tool of analysis. Islamic Astronomy need to be developed as the epistemology of Astronomy. After the fist evaluation, the important thing is how to balance the jurisprudence perspective and astronomical perspective. We can’t talk about how to arrange not only the curriculum structure, but also the supporting of it, such as teaching staff.” Ibid

- 1) Tarbiyah Faculty of Walisongo State Institute for Islamic Studies in Mathematics which includes the basic materials, especially trigonometry and Methodology of Science which includes the understanding basic motion and interactions between two objects
- 2) Geodetic Engineering Department of Engineering Faculty of Diponegoro University in Astronomy which includes the historical development of astronomy, solar system, basic concepts of astronomy about times and position, and celestial coordinate system.
- 3) Experts of Computing in programming algorithm, and
- 4) Bandung Institute of Technology (ITB) and Bosscha Observatory in Instrumentations include the basic of both optical and non-optical devices in astronomical observations.

Detail external lecturers of Shariah Faculty of IAIN

Walisongo mentioned below:⁷⁰

No.	External Lecturers' Names	Institutions	Courses
1.	Hj. Minhayati Saleh, M.Pd	Tarbiyah Faculty of IAIN Walisongo	Mathematics
2.	Wenti Dwi Yuniarti, M.Kom	Tarbiyah Faculty of IAIN Walisongo	Methodology of Science
3.	Arief Laila Nugroho, ST	Geodetic Engineering Department of Engineering Faculty of Diponegoro University	Astronomy
4.	Ir. H. Bambang Sudarsono, MS	Geodetic Engineering Department of Engineering Faculty of Diponegoro University	Astronomy
5.	LM Sabri, M.T	Geodetic Engineering Department of Engineering Faculty of Diponegoro University	Astronomy
6.	Alex Burhani, ST	Experts of Computing	programming algorithm
7.	Drs. Hendro Setyanto, M.Si	Bandung Institute of Technology (ITB) and Bosscha Observatory	Instrumentations

Table 3.3: The External Lecturers of Shariah Faculty of Walisongo State Institute for Islamic Studies

⁷⁰ Islamic Astronomy Concentration's document